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Your Success. Our Passion.

PNEUMATIC MOTION AND FLUID CONTROL



store.norgren.com

PNEUMATIC MOTION AND FLUID CONTROL



WELCOME TO NORGREN EXPRESS

Allow me to be your guide through the wide range of core products available with same-day shipping through Norgren Express. I'm here to ensure accurate order processing and prompt delivery for minimum down time and maximum productivity. Because at Norgren, your success is our passion.

Within this catalogue, you'll also find detailed technical specs, helpful hints and online ordering information.

Regards,

Speedy



EXPRESS ADVANTAGE

Norgren Express offers thousands of the industry's most proven, high performance products in stock ready to ship the same day when ordered by 2pm.

You'll enjoy these Express Advantages:

- Thousands of part numbers in stock and ready to ship the same day
- Overnight delivery available on entire Norgren Express inventory
- Secure online ordering 24/7 with instant email confirmation and easy order tracking
- Accurate online pricing and delivery times
- Online quotes and access to previous quotes and descriptions



Registration is easy, visit
store.norgren.com
and follow the links in the login panel



ONLINE ADVANTAGE

You can easily browse, select and buy pneumatic components at store.norgren.com and enjoy the user-friendly benefits available to you online **24 hours a day, seven days a week.**

With the Norgren Express interactive toolbox, you can:

- Find products quickly using the online catalogue
- Check prices and availability instantly
- Buy online securely using your Norgren trade account
- Check the status of ALL orders (phone, fax, online)
- >> Download 2 and 3D CAD drawing in 15 formats
- Get the latest Norgren literature, including technical datasheets and new product colour brochures
- Take advantage of free and easy access to training modules and application examples



10 EASY STEPS TO ONLINE ORDERING

1. BROWSE

Click on product tabs to see comprehensive product sections. Navigate to our detailed product information pages.

2. SEARCH

Enter complete or partial part number in search box. Search over 10,000 stocked catalogue items, as well as our full, extended range.

3. PRODUCTS

Product information pages provide detailed technical information, accessories, datasheets, CAD drawings and automatic price and availability.

4. QUICKBASKET

Already know the part numbers? Add up to 10 items directly to your **Quickbasket** in one click.

5. PASTEBASKET

Copy large lists of items from your purchasing system, spreadsheet, e-mail or word document, and paste directly into Pastebasket. With Norgren item numbers and quantities, use the Copy and Paste functions in the Edit menu of most computer programs to add to basket.



CONTROL YOUR ACCOUNT

Set up access levels, spend limits and get full visibility of your account activity through "My Account"

E A S Y S T E P S



6. QUOTES

Create a quote online, save with useful description, use again whenever you need it.

7. ORDER

Order online securely 24/7 and be acknowledged instantly by email. You can also control your account by setting up access levels and spend limits through the 'My Account' page.

8. PARCEL TRACKING

Track order directly with carrier using tracking link in Order History. You will be notified by email when Webstore orders have been shipped.

9. ORDER HISTORY

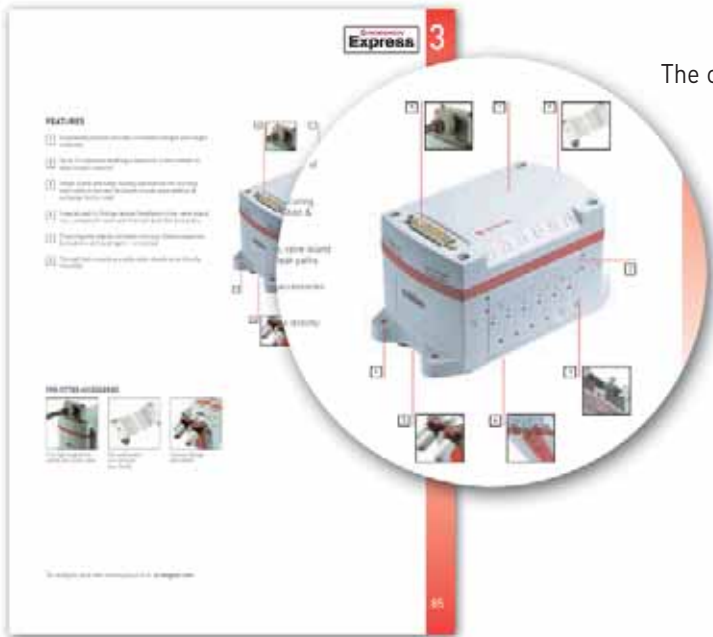
Find orders quickly, get detailed line-by-line status, and re-order items from any order – including web, fax and telephone orders.

10. HELP

For further help visit help section by clicking link in the top right of the screen. Alternatively call your local customer services.

HELPFUL ADVANTAGES

Within the Norgren Express catalogue, you'll find much more than just the individual products you're seeking. We make it simple for you to select the products you need, as well the accessories that accompany them.



The catalogue also gives you easy-to-read diagrams and descriptions of our products and their features, like our preconfigured valve islands complete with pre-fitted accessories.



Within each product section, product model numbers and identifying visuals coincide with the accessories that were designed for them.

SOLENOID VALVE MODELS

3/2 VALVES - solenoid actuated, internal pilot supply

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	MODELS		ACCESSORIES			
				24 DC Push only M/D	220 AC Push only M/D	Straight Fitting	Glove fitting	Silencer	Bank plug
No/1 sol. spring	1/8"	750	1, 6	VA611(A-A11)	VA612(A-A11)	11111016	11111018	T421101	11111019
	1/4"	1300	1, 6	VA611(A-A11)	VA612(A-A11)	11111016	11111018	T421101	11111019
No/2 sol. spring	1/8"	750	1, 6	VA611(A-A11)	VA612(A-A11)	11111016	11111018	T421101	11111019
	1/4"	1300	1, 6	VA611(A-A11)	VA612(A-A11)	11111016	11111018	T421101	11111019
No/2 sol.	1/8"	750	1, 6	VA611(A-A11)	VA612(A-A11)	11111016	11111018	T421101	11111019
	1/4"	1300	1, 6	VA611(A-A11)	VA612(A-A11)	11111016	11111018	T421101	11111019

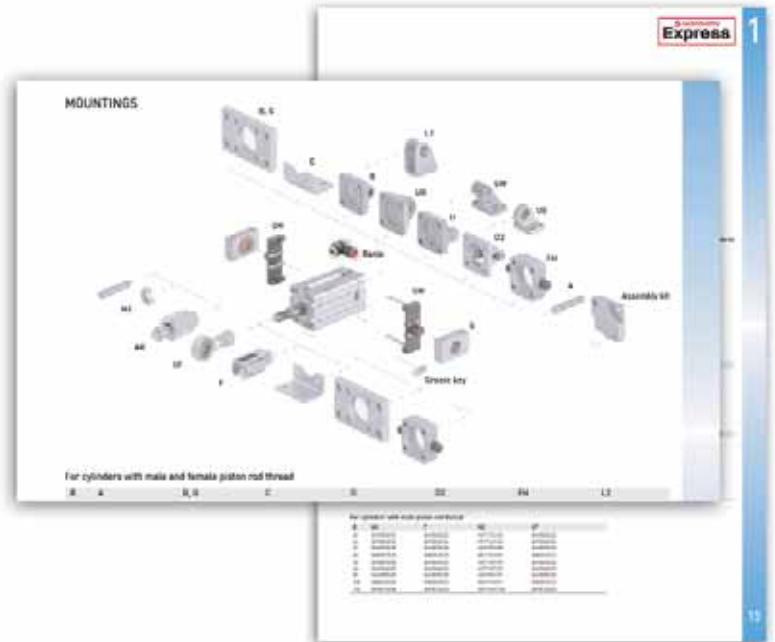


The catalogue then gives you an up-close look at the product with its accessories in place.



HELPFUL ADVANTAGES

The right mountings for your applications are easy to choose via diagrams that clearly outline all possibilities in relation to a particular type of cylinder.



We've ensured that you'll find a complete solution within a single part number.



At the bottom of the catalogue's product pages are a group of icons to help you determine what additional information is available. Below the icons, you'll see a product-specific URL which will link you directly to the technical pages within that product category.

More technical information available online

PDF available online

Product available online

CAD drawing available online

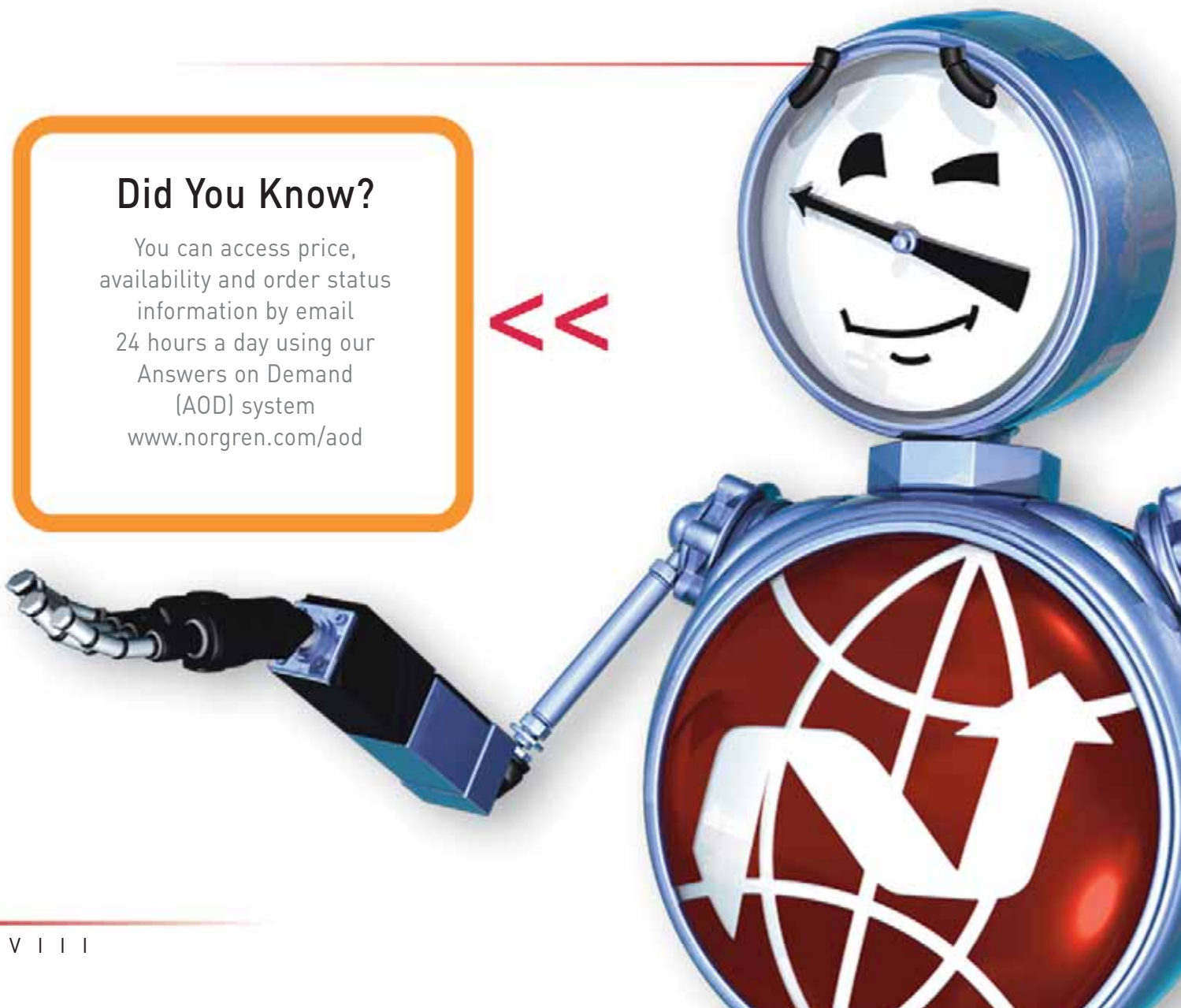
TECHNICAL SERVICE AND SUPPORT

At Norgren, we understand the importance of unparalleled personal service. When you need to talk to someone, our dedicated technical support specialists are available to answer any questions you may have, and can offer help with product selection, installation advice and customization. Our products are all backed with a two-year warranty, and our customer service teams are here to ensure your satisfaction.

You can also find answers 24 hours a day on our FAQ page

Did You Know?

You can access price, availability and order status information by email 24 hours a day using our Answers on Demand (AOD) system www.norgren.com/aod





ACTUATORS	2
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PRESSURE SWITCHES	141



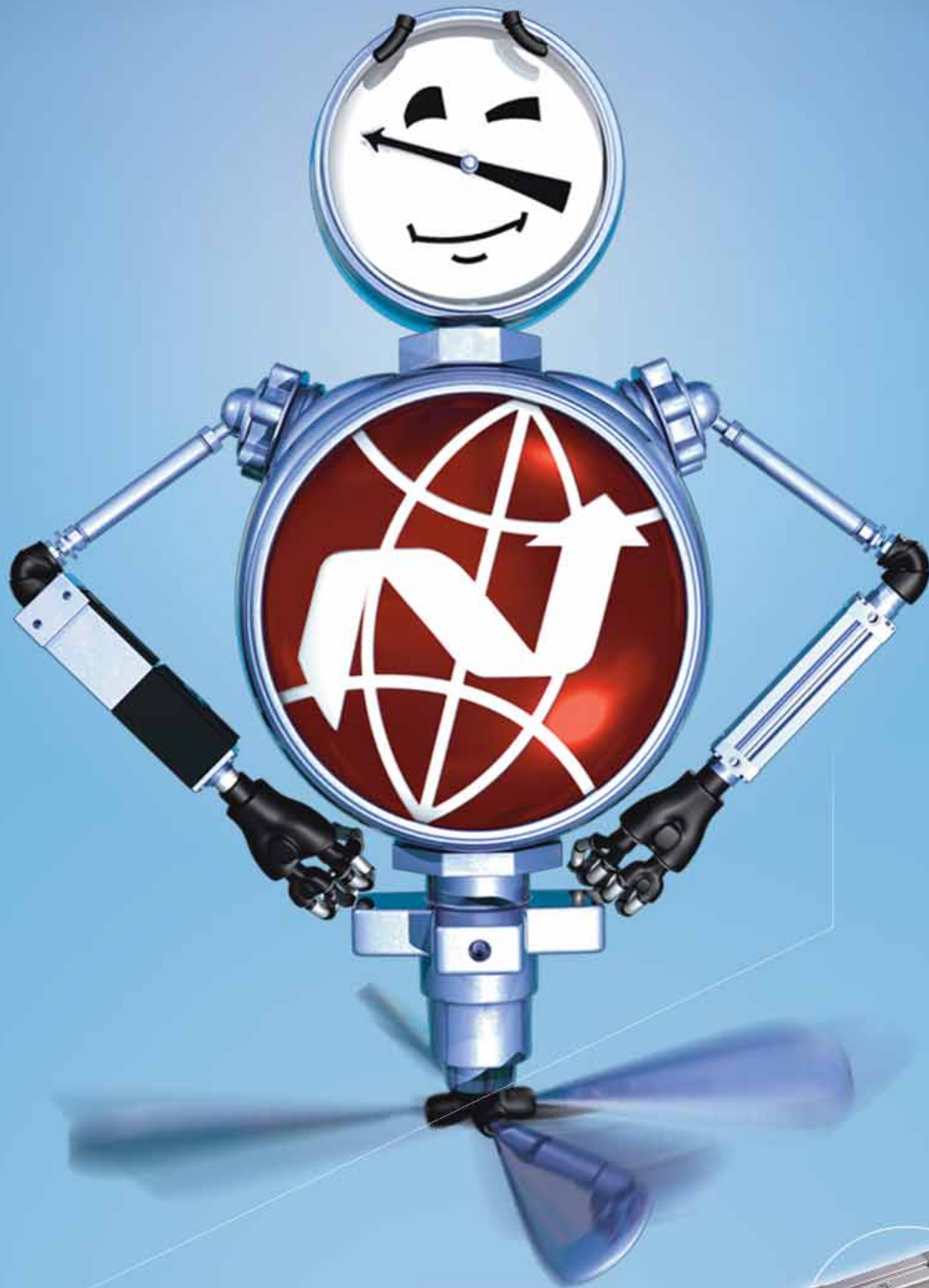
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A C T U A T O R S

A vast array of actuators – from full-size to compact cylinders, grippers, slide tables, rodless cylinders, rotary actuators, switches and more – are available through Norgren Express. At www.norgren.com, you can download additional technical information. For more information on a specific actuator or actuator series, simply go to the web address printed under the online icons at the bottom of the following actuator product pages.

EXPRESS ACTUATORS

Norgren actuators and accessories

Roundline cylinders

(including cylinders conforming to Standard ISO 6432)

RM/28000/M
ISO 6432
Ø 10 ... 25 mm



Page 8

RT/57100/M
Ø 10 ... 40 mm



Page 10

RM/8000/M
ISO 6432
Ø 10 ... 25 mm



Page 12

RT/57200/M
Ø 8 ... 63 mm



Page 14

RM/55401/M
Ø 32 ... 100 mm



Page 16

VSM/55600/N2
Hollow piston rod cylinders
Ø 25 & 40 mm



Page 18

Compact cylinders

(including cylinders conforming to Standards ISO 21287)

RA/191000/M
RA/193000/M
ISO 21287
Ø 20 ... 63 mm



Page 20

RM/91000/M
Ø 20 ... 63 mm



Page 24

M/50100
Ø 8 ... 63 mm



Page 28

RA/192000/M
ISO 21287
Ø 20 ... 125 mm



Page 22

RM/92000
Ø 12 ... 100 mm



Page 26

M/50200
Ø 8 ... 63 mm



Page 28

■ Single Acting
■ Double Acting

EXPRESS ACTUATORS

**Profile cylinders
Tie-rod cylinders**

(all conforming to Standards
ISO 15552
ISO 6431
VDMA 24562
NFE 49 003-1)

PRA/181000/M ■
ISO, VDMA, NFE
Ø 32 ... 100 mm



Page 30

PRA/182000,../M ■
PRA/182000/L2
ISO, VDMA, NFE
Ø 32 ... 125 mm



Page 32 & 34

RA/8000,../M ■
ISO, VDMA, NFE
Ø 32 ... 320 mm

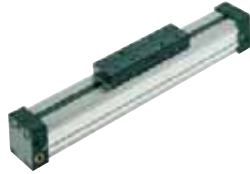


Page 36

LINTRA®

Pneumatic rodless
cylinders

M/46000,../M ■
Internal guided
Ø 16 ... 80 mm



Page 38

M/46100,../M ■
External guided
Ø 16 ... 80 mm



Page 38

M/46200,../M ■
Precision roller guided
Ø 25 ... 63 mm



Page 38

M/146000 ■
Internal guided
Ø 32 ... 50 mm



Page 40

M/146100 ■
External guided
Ø 32 ... 50 mm



Page 40

M/146200 ■
Precision roller guided
Ø 32 ... 50 mm



Page 40

Slide tables

M/61200/M,../MR ■
Slide tables
Ø 16 ... 32 mm



Page 44

EXPRESS ACTUATORS

Cylinders with guiding

M/60100/M
Slide units
Ø 10 ... 40 mm



Page 42

M/61000/M,.. /MR
Guiding and stopper cylinders
Ø 32 ... 100 mm



Page 43

Grippers

M/160300/M/11
M/160300/M/12
Angular grippers
Ø 8 ... 25 mm



Page 45

M/160340/M/11
M/160340/M/12
Parallel grippers
Ø 10 ... 25 mm



Page 47

M/160330/M/12
Angular grippers
Ø 16 ... 20 mm



Page 46

M/160350/M/11
M/160350/M/12
Parallel grippers - precision
Ø 8 ... 50 mm



Page 48

M/160360/M/12
Parallel grippers - low profile
Ø 8 ... 12 mm



Page 49

M/160380/M/12
Parallel grippers - three jaw
Ø 16 ... 20 mm



Page 50

M/160390/M/12
Parallel grippers - long stroke
Ø 12 ... 25 mm



Page 51

■ Single Acting
■ Double Acting

Rotary actuators

(including actuators conforming to Standards ISO 6431 – pitch dimensions VDMA 24562 – pitch dimensions)

M/60210/M

Miniature rotary actuators
0,23 ... 1,0 Nm/6 bar



Page 52

M/60270/M

Compact rotary actuators
1,5 ... 7,4 Nm/6 bar



Page 53

M/60280

Rotary vane actuator
0,2 ... 241,73 Nm/6 bar



Page 54

M/162000/MI

Rack & pinion type,
ISO, VDMA,
7,2 ... 306 Nm/6 bar



Page 56

Stainless steel

Stainless steel materials:
AISI 303
AISI 304
AISI 316

KM/8000/M

Stainless steel,
ISO 6432
Ø 12 ... 25 mm



Page 58

Special products**M/3000**

Impact cylinder
Ø 2 ... 6 inch



Page 60

PM/31000

Compact air bellows
Ø 2 ... 12 inch



Page 61

M/31000

Air bellows, serviceable
Ø 6 ... 26 inch



Page 62

E X P R E S S A C T U A T O R S

Switches

(Reed and solid state)

M/50 (Reed)
M/50/EA.. (Solid state)



Page 63

QM/32 (Reed)
QM/132 (Solid state)
TQM/31 (Reed)



Page 64

M/345 (Solid state)
M/346 (Reed & Solid state)
M/344 (Solid state)



Page 65

Vacuum products

M/58112
Single stage vacuum pumps



Page 67

M/58102
Vacuum pumps
-0,85 ... -0,9 bar



Page 68

M/58300, M/58400
Flat and bellows cups
Ø 6 ... 150 mm



Page 69

M/58028/VB, ... /VF
M/58027/VAP/P, ... /VAN/P
M/58024/VB, ... /VF
Vacuum switches



Page 70

VACUUM ACCESORIES



Page 71

RM/28000/M Roundline cylinders (ISO)

Single acting, ISO 6432 - Ø 10 to 25 mm



- Magnetic piston as standard
- Generally conforms to ISO 6432
- High strength, double crimped end cap design
- Corrosion resistant
- Nose mounting nut and piston rod locknut as standard

TECHNICAL DATA

- Medium:**
Compressed air, filtered, lubricated or non-lubricated
- Operation:**
Single acting (sprung in), magnetic piston, buffer cushioning
- Operating pressure:**
2 to 10 bar
- Operating temperature:**
-10°C to +80°C max.
Consult our Technical Service for use below +2°C

STANDARD MODELS

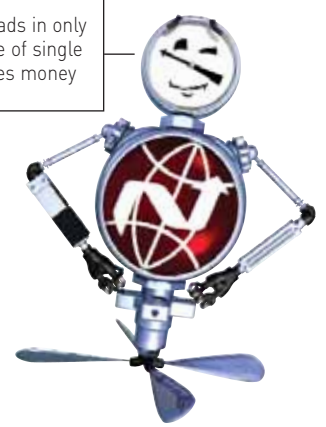
Ø	Piston rod Ø	Port size	MODEL	ACCESSORIES				
				Reed switch with integral 5m cable	Switch mounting >15 mm stroke	Switch mounting <15 mm stroke	Straight Fitting	Elbow Fitting
							Tube diameter in bold	
								
10	4	M5	RM/28010/M/*	M/50/LSU/5V	QM/33/010/22	QM/33/010/23	C02250405	C02470405
12	6	M5	RM/28012/M/*	M/50/LSU/5V	QM/33/012/22	QM/33/010/23	C02250405	C02470405
16	6	M5	RM/28016/M/*	M/50/LSU/5V	QM/33/016/22	QM/33/016/23	C02250405	C02470405
20	8	G1/8	RM/28020/M/*	M/50/LSU/5V	QM/33/020/22	QM/33/020/23	C02250618	C02470618
25	10	G1/8	RM/28025/M/*	M/50/LSU/5V	QM/33/025/22	QM/33/025/23	C02250618	C02470618

* Insert stroke length in mm
Service kits are not available for these cylinders.
For information on additional magnetic switches see page 63

Standard strokes

Ø	10	25	50
10	•	•	•
12	•	•	•
16	•	•	•
20	•	•	•
25	•	•	•

When moving light loads in only one direction, the use of single acting cylinders saves money

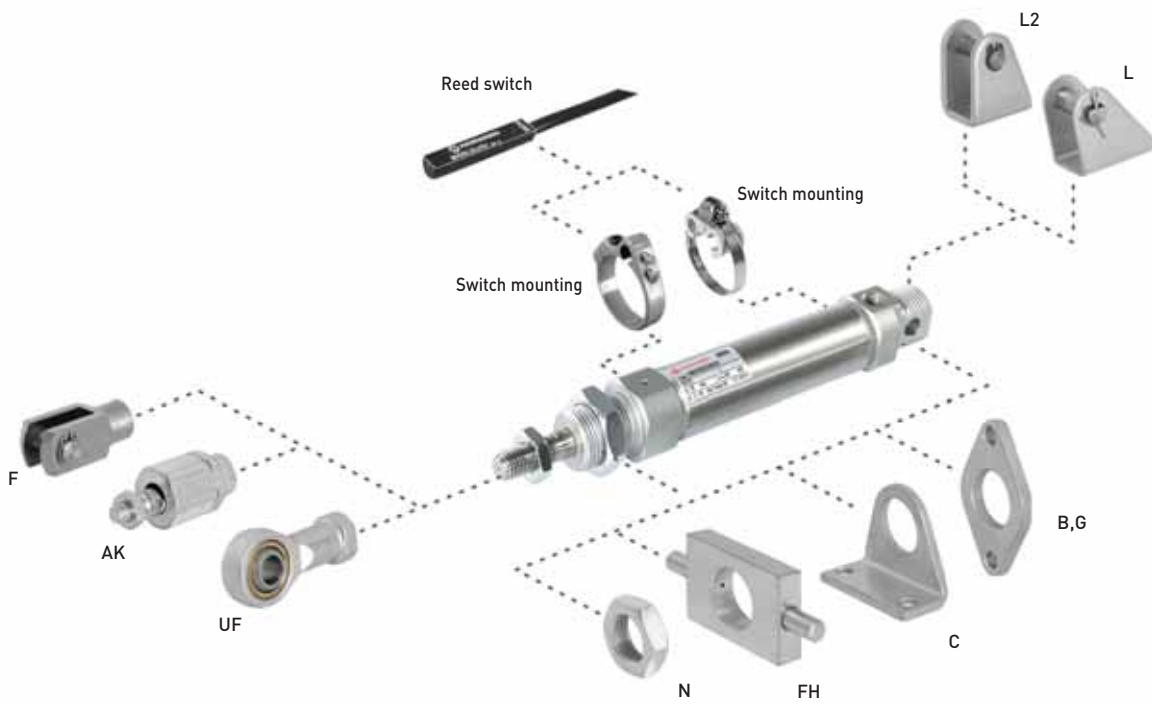


For further information



www.norgren.com/info/nec/en008

MOUNTINGS



Ø	AK	B, G	C	F	FH	L	L2	N	UF
10	QM/8010/38	M/P19407	M/P19369	QM/8010/25	-	QM/947	QM/8010/44	M/P1501/90	QM/8010/32
12	QM/8012/38	M/P19408	M/P19389	QM/8012/25	QM/8012/34	QM/8012/24	QM/8012/44	M/P13834	QM/8012/32
16	QM/8012/38	M/P19408	M/P19389	QM/8012/25	QM/8012/34	QM/8012/24	QM/8012/44	M/P13834	QM/8012/32
20	QM/8020/38	M/P19409	M/P19406	QM/8020/25	QM/8020/34	QM/8020/24	QM/8020/44	M/P13615	QM/8020/32
25	QM/8025/38	M/P19409	M/P19406	QM/8025/25	QM/8020/34	QM/8020/24	QM/8020/44	M/P13615	QM/8025/32

RT/57100/M Roundline cylinders

Single acting - Ø 10 to 40 mm



One fifth shorter than the basic length of a corresponding ISO/VDMA cylinder
 Low friction, long life seals
 High strength, double crimped end cap design
 Standard magnetic piston for full control system versatility

TECHNICAL DATA

Medium:
 Compressed air, filtered, lubricated or non-lubricated

Operation:
 Single acting, sprung in

Operating pressure:
 2 to 10 bar

Operating temperature:
 -5°C to +80°C max.
 Consult our Technical Service for use below +2°C

STANDARD MODELS

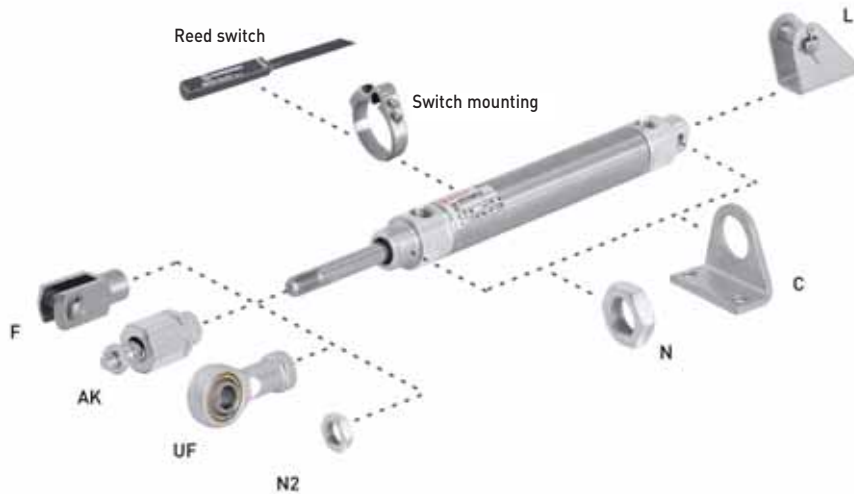
Ø	Piston rod Ø	Port size	MODEL	ACCESSORIES			
				Reed switch with integral 5m cable	Switch mounting	Straight Fitting	Elbow Fitting
						Tube diameter in bold	
							
	10	4	RT/57110/M/*	M/50/LSU/5V	QM/33/010/22	C0225 0405	C0247 0405
	16	6	RT/57116/M/*	M/50/LSU/5V	QM/33/016/22	C0225 0405	C0247 0405
	20	8	RT/57120/M/*	M/50/LSU/5V	QM/33/020/22	C0125 0618	C0147 0618
	25	10	RT/57125/M/*	M/50/LSU/5V	QM/33/025/22	C0125 0618	C0147 0618
	32	12	RT/57132/M/*	M/50/LSU/5V	QM/33/032/22	C0125 0618	C0147 0618
	40	14	RT/57140/M/*	M/50/LSU/5V	QM/33/040/22	C0125 0618	C0147 0618

*Insert stroke length in mm.
 Service kits are not available for these cylinders.
 For information on additional magnetic switches see page 63

Standard strokes

Ø	10	25	50
10	•	•	•
16	•	•	•
20	•	•	•
25	•	•	•
32		•	•
40		•	•

MOUNTINGS



Ø	AK	C	F	L	N	N2	UF
10	QM/8010/38	M/P71273/2	QM/8010/25	QM/947	M/P71364	M/P1501/80	QM/8010/32
16	QM/8012/38	M/P19369	QM/57016/25	QM/946	M/P1501/90	M/P1501/79	QM/8012/32
20	QM/8020/38	M/P19389	QM/57020/25	QM/8012/24	M/P13834	M/P1501/60	QM/8020/32
25	QM/8025/38	M/P40381	QM/57025/25	QM/57025/24	M/P13607	M/P1501/89	QM/8025/32
32	QM/8025/38	M/P19406	QM/57032/25	QM/8020/24	M/P13615	M/P1501/89	QM/8025/32
40	QM/8040/38	M/P71273/3	QM/57040/25	QM/57040/24	M/P29254	M/P1501/90	QM/8040/32

RM/8000/M Roundline cylinders (ISO)

Double acting, ISO 6432 - Ø 10 to 25 mm



Magnetic piston as standard
 Conforms to ISO 6432
 High strength, double crimped end cap design
 Corrosion resistant
 Buffer or adjustable cushioning
 Nose mounting nut and piston rod locknut as standard

TECHNICAL DATA

Medium:
 Compressed air, filtered, lubricated or non-lubricated

Operation:
 Double acting, magnetic piston with buffer or adjustable cushioning

Operating pressure:
 1 to 10 bar

Operating temperature:
 -10°C to +80°C max.

Consult our Technical Service for use below +2°C

STANDARD MODELS

Ø	Piston rod Ø	Port size	MODEL		ACCESSORIES			Banjo Flow control	Straight Fitting	Elbow Fitting
			Buffer cushioning	Adjustable cushioning	Reed switch with integral 5m cable	Switch mounting >15 mm stroke	Switch mounting <15 mm stroke			

*Insert stroke length in mm.
 Service kits are not available for these cylinders.
 For information on additional magnetic switches see page 63

Standard strokes

[buffer cushioning] RM/8010, 12, 16, 20, 25

Ø	10	25	40	50	80	100	125	160	200	250
10	•	•	•	•	•					
12	•	•	•	•	•					
16	•	•	•	•	•					
20	•	•	•	•	•					•
25	•	•	•	•	•					•

Other strokes available

Standard strokes

[adjustable cushioning] RM/8017, 21, 26

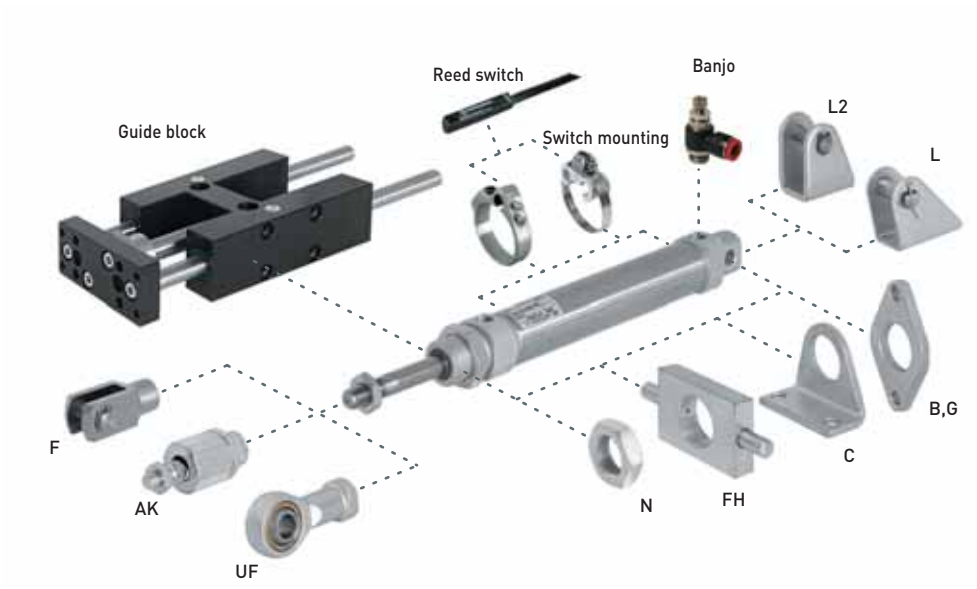
Ø	25	40	50	80	100	125	160	200	250
16	•	•	•	•	•	•	•	•	
20	•	•	•	•	•	•	•	•	
25	•	•	•	•	•	•	•	•	

Other strokes available

Remember ! -
 most applications benefit from fittings flow regulators to set optimum speed of operation



MOUNTINGS



∅	AK	B, G	C	F	FH	L	L2
10	QM/8010/38	M/P19407	M/P19369	QM/8010/25	-	QM/947	QM/8010/44
12	QM/8012/38	M/P19408	M/P19389	QM/8012/25	QM/8012/34	QM/8012/24	QM/8012/44
16	QM/8012/38	M/P19408	M/P19389	QM/8012/25	QM/8012/34	QM/8012/24	QM/8012/44
20	QM/8020/38	M/P19409	M/P19406	QM/8020/25	QM/8020/34	QM/8020/24	QM/8020/44
25	QM/8025/38	M/P19409	M/P19406	QM/8025/25	QM/8020/34	QM/8020/24	QM/8020/44

∅	N	UF	Guide block
10	M/P1501/90	QM/8010/32	-
12	M/P13834	QM/8012/32	QM/8012/61/*
16	M/P13834	QM/8012/32	QM/8012/61/*
20	M/P13615	QM/8020/32	QM/8020/61/*
25	M/P13615	QM/8025/32	QM/8025/61/*

* Insert standard stroke length: ∅ 12 mm: 50, 100, 160, 200 and 250 mm; ∅ 16 to 25 mm: 50, 100, 160, 200, 250, 320, 400 and 500 mm
Other stroke lengths are not available, use nearest standard stroke.

RT/57200/M Roundline cylinders

Double acting - Ø 8 to 63 mm



One fifth shorter than the basic length of a corresponding ISO/VDMA cylinder
 Low friction, long life seals
 High strength, double crimped end cap design
 Standard magnetic piston for full control system versatility

TECHNICAL DATA

Medium:
 Compressed air, filtered, lubricated or non-lubricated

Operation:
 Double acting, buffer cushioning
 RT/57200/M
 Side port, integral eye mounting (Ø 8 to 40 mm), fixing holes in the end cover (Ø 50 and 63 mm)
 RT/57200/MC
 Central rear port (Ø 16 to 25 mm)
 RT/57200/MF
 Flat rear cover (Ø 8 to 32 mm)

Operating pressure:
 1 to 10 bar

Operating temperature:
 -10°C to +80°C
 Consult our Technical Service for use below +2°C

STANDARD MODELS

Ø	Piston rod Ø	Port size	MODEL			ACCESSORIES				
			Side port, integral eye mounting	Central rear port, flat end	Side port, flat end	Reed switch with integral 5m cable	Switch mounting	Banjo Flow control <small>Tube diameter in bold</small>	Straight Fitting	Elbow Fitting
8	3	M3	RT/57208/M/*		RT/57208/MF/*	M/50/LSU/5V	QM/33/010/22	C0K510405	C02250405	C02470405
10	4	M5	RT/57210/M/*		RT/57210/MF/*	M/50/LSU/5V	QM/33/012/22	C0K510405	C02250405	C02470405
12	4	M5	RT/57212/M/*		RT/57212/MF/*	M/50/LSU/5V	QM/33/016/22	C0K510405	C02250405	C02470405
16	6	M5	RT/57216/M/*	RT/57216/MC/*		M/50/LSU/5V	QM/33/020/22	C0TA00618	C01250618	C01470618
20	8	Rc 1/8	RT/57220/M/*	RT/57220/MC/*	RT/57220/MF/*	M/50/LSU/5V	QM/33/025/22	C0TA00618	C01250618	C01470618
25	10	Rc 1/8	RT/57225/M/*	RT/57225/MC/*	RT/57225/MF/*	M/50/LSU/5V	QM/33/032/22	C0TA00618	C01250618	C01470618
32	12	Rc 1/8	RT/57232/M/*		RT/57232/MF/*	M/50/LSU/5V	QM/33/040/22	C0TA00618	C01250618	C01470618
40	14	Rc 1/8	RT/57240/M/*			M/50/LSU/5V	QM/33/050/22	C0TA00828	C01250828	C01470828
50	16	Rc 1/4	RT/57250/M/*			M/50/LSU/5V	QM/33/063/22	C0TA00828	C01250828	C01470828
63	20	Rc 1/4	RT/57263/M/*							

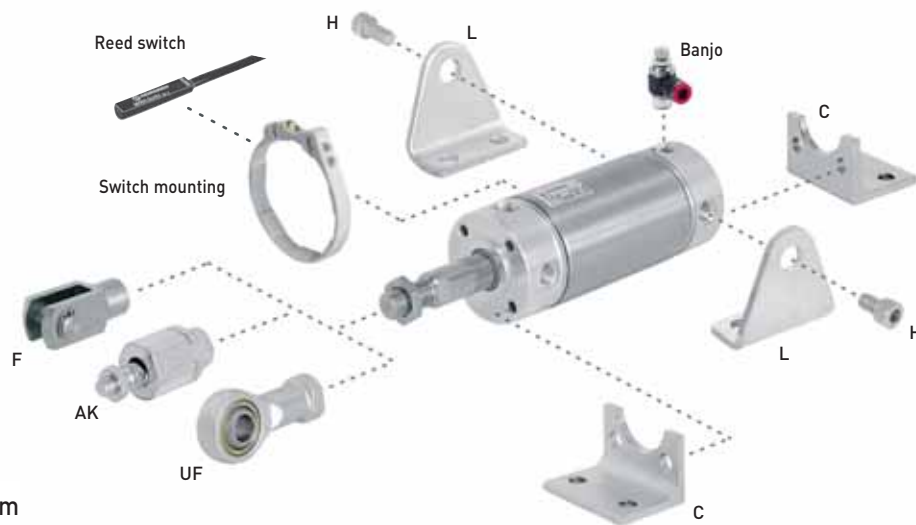
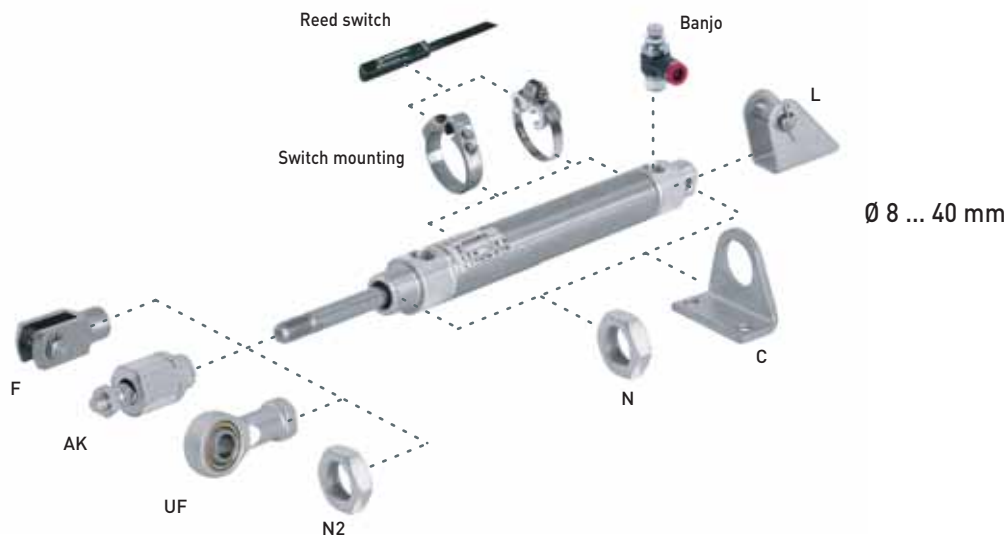
*Insert stroke length in mm.
 Service kits are not available for these cylinders.
 For information on additional magnetic switches see page 63

Standard strokes

Ø	10	25	40	50	80	100	125	160	200	250	320
8	•	•	•	•	•	•					
10	•	•	•	•	•	•					
12	•	•	•	•	•	•					
16	•	•	•	•	•	•					
20	•	•	•	•	•	•	•	•	•	•	•
25	•	•	•	•	•	•	•	•	•	•	•
32	•	•	•	•	•	•	•	•	•	•	•
40		•	•	•	•	•	•	•	•	•	•
50		•	•	•	•	•	•	•	•	•	•
63		•	•	•	•	•	•	•	•	•	•

Other strokes available.

MOUNTINGS



Ø	AK	C	F	H	L	N	N2	UF
8	-	M/P71273/1	QM/57008/25	-	QM/57008/24	M/P71364	M/P1500/111	-
10	QM/8010/38	M/P71273/2	QM/8010/25	-	QM/947	M/P71364	M/P1501/80	QM/8010/32
12	QM/8010/38	M/P71273/2	QM/8010/25	-	QM/947	M/P71364	M/P1501/80	QM/8010/32
16	QM/8012/38	M/P19369	QM/57016/25	-	QM/946	M/P1501/90	M/P1501/79	QM/8012/32
20	QM/8020/38	M/P19389	QM/57020/25	-	QM/8012/24	M/P13834	M/P1501/60	QM/8020/32
25	QM/8025/38	M/P40381	QM/57025/25	-	QM/57025/25	M/P13607	M/P1501/89	QM/8025/32
32	QM/8025/38	M/P19406	QM/57032/25	-	QM/8020/24	M/P13615	M/P1501/89	QM/8025/32
40	QM/8040/38	M/P71273/3	QM/57040/25	-	QM/57040/24	M/P29254	M/P1501/90	QM/8040/32
50	QM/8040/38	QM/57050/21	QM/57040/25	QM/55240/28	QM/57050/24	-	M/P1501/90	QM/8040/32
63	QM/8050/38	QM/57063/21	QM/57063/25	QM/55250/28	QM/57063/24	-	M/P1501/91	QM/8050/32

RM/55401/M Roundline cylinders

Double acting - Ø 32 to 100 mm



Clean line design
 Low friction, long life seals
 Standard magnetic piston for full control system versatility
 Non-lube operation

TECHNICAL DATA

Medium:
 Compressed air, filtered, lubricated or non-lubricated

Operation:
 Double acting, magnetic piston, adjustable cushioning

Operating pressure:
 1 to 10 bar

Operating temperature:
 -20°C to +80°C.

Consult our Technical Service for use below +2°C



Setting air pressure as low as possible to suit the application will save money - always fit pressure regulators

STANDARD MODELS

Ø	Piston rod Ø	Port size	MODEL	ACCESSORIES				
				Reed switch with integral 5m cable	Switch mounting	Banjo Flow control	Straight Fitting	Elbow Fitting
				Tube diameter in bold				

* Insert stroke length in mm.
 For information on additional magnetic switches see page 63

Standard strokes

Ø	25	50	80	100	125	160	200	250	300
32	•	•	•	•	•	•	•	•	•
40	•	•	•	•	•	•	•	•	•
50	•	•	•	•	•	•	•	•	•
63	•	•	•	•	•	•	•	•	•
80	•	•	•	•	•	•	•	•	•
100	•	•	•	•	•	•	•	•	•

Other strokes available

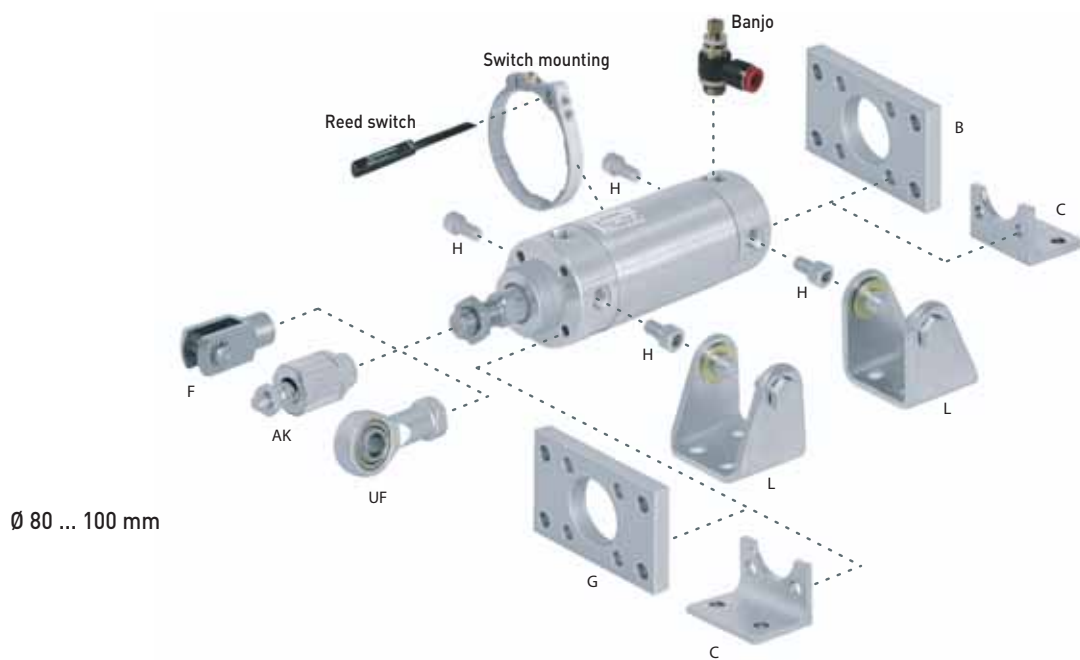
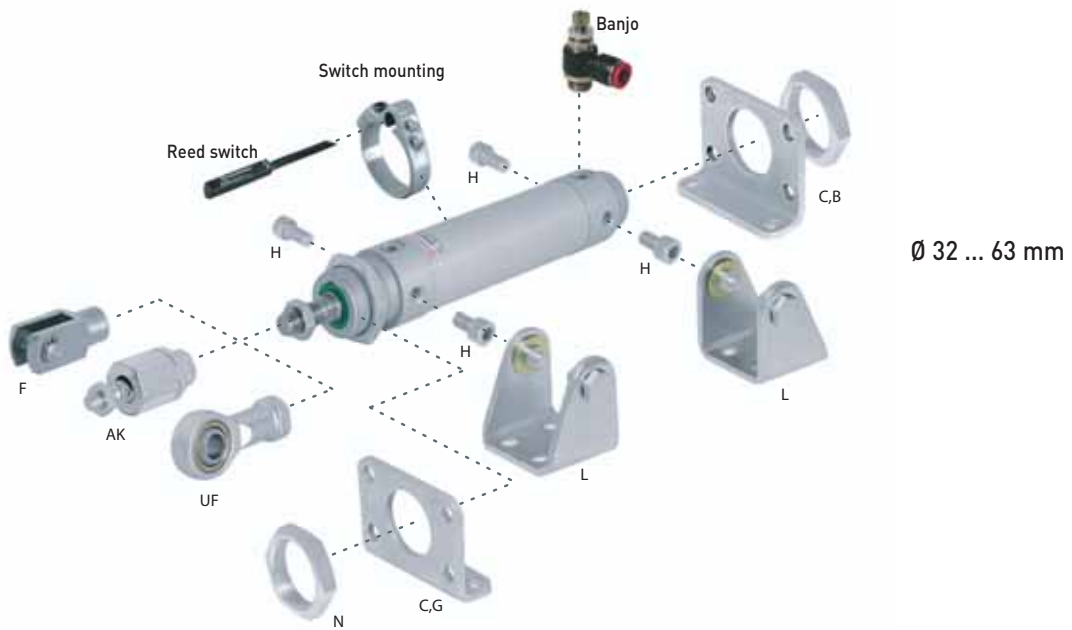


For further information



www.norgren.com/info/nec/en016

MOUNTINGS



Ø	AK	B, G	C	F	H	L	N	UF
32	QM/8025/38	QM/55232/22	QM/55232/21	QM/8025/25	QM/55232/28	QM/55232/24	M/P29254	QM/8025/32
40	QM/8040/38	QM/55240/22	QM/55240/21	QM/8040/25	QM/55240/28	QM/55240/24	M/P29255	QM/8040/32
50	QM/8050/38	QM/55250/22	QM/55250/21	QM/8050/25	QM/55250/28	QM/55250/24	M/P29256	QM/8050/32
63	QM/8050/38	QM/55263/22	QM/55263/21	QM/8050/25	QM/55263/28	QM/55263/24	M/P29256	QM/8050/32
80	QM/8080/38	QM/55480/22	QM/55480/21	QM/8080/25	QM/55480/28	QM/55480/24	M/P34806	QM/8080/32
100	QM/8080/38	QM/55410/22	QM/55410/21	QM/8080/25	QM/55410/28	QM/55410/24	M/P34806	QM/8080/32

VSM/55600/N2 Hollow piston rod cylinders

Double acting - Ø 25 and 40 mm



Ideally suited for vacuum and selected liquid transfer applications through the piston rod

Non-rotating and telescopic piston rod provides accurate, repeatable component orientation

Non-corrosive specification

Magnetic piston as standard

Buffer cushioning

Direct attachment of vacuum pumps and suction cups

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated and non-lubricated

Operation:

Double acting with buffer cushioning

Operating pressure:

1 to 10 bar

Operating temperature:

+80°C max.

Consult our Technical Service for use below +2°C

STANDARD MODELS

Ø	Piston rod Ø	Port size	MODEL	ACCESSORIES				
				Reed switch with integral 5m cable	Switch mounting	Banjo Flow control	Straight Fitting	Elbow Fitting
				Tube diameter in bold				
25	12	G1/8	VCM/55625/N2/*	M/50/LSU/5V	QM/33/025/22	C0K510618	C02250618	C02470618
40	16	G1/4	VCM/55640/N2/*	M/50/LSU/5V	QM/33/440/22	C0K510628	C02250628	C02470628

* Insert stroke length in mm.

Non standard stroke up to 500 mm maximum available

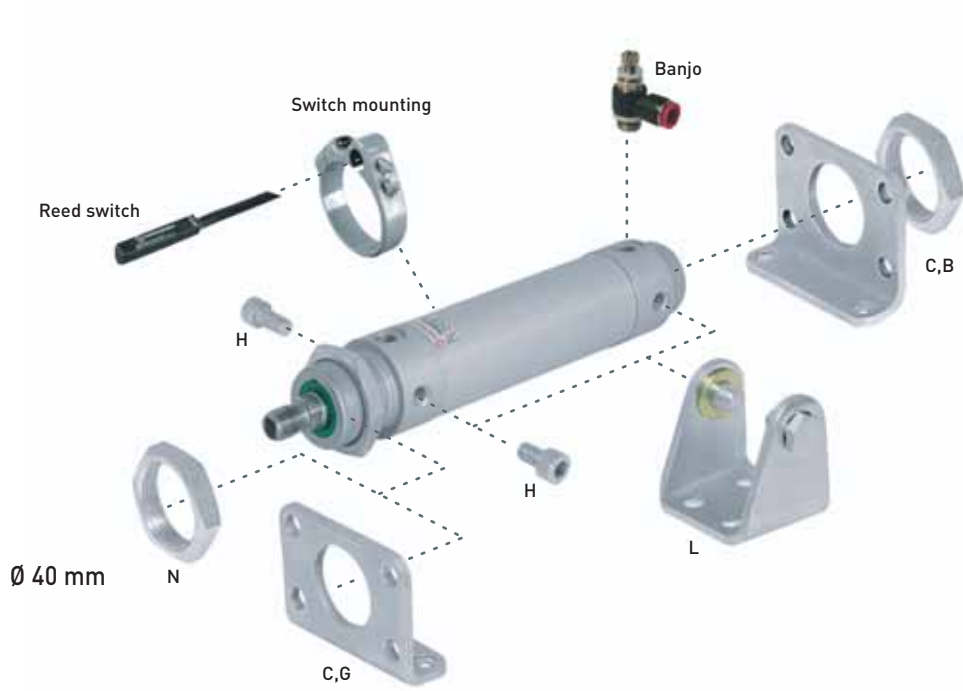
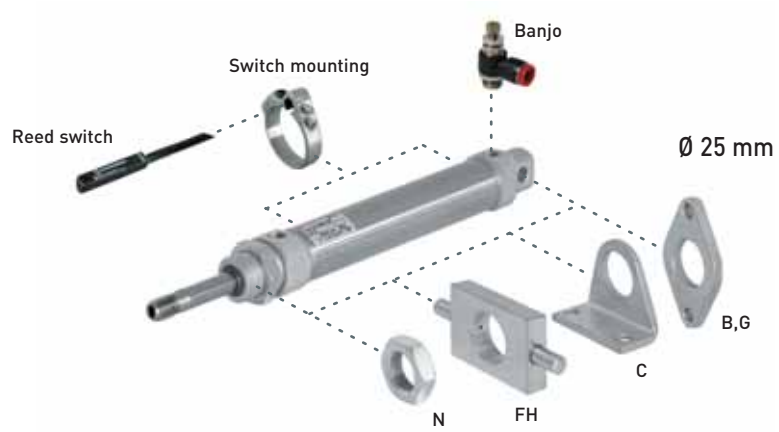
For information on additional magnetic switches see page 63

For further information



www.norgren.com/info/nec/en018

MOUNTINGS



Ø	B, G	C	FH	N	
25	M/P19409	M/P19406	QM/8020/34	M/P13615	
Ø	B, G	C	H	N	L
40	QM/55240/22	QM/55240/21	QM/55240/28	M/P29255	QM/55240/24

RA/191000/MX,.../M; RA/193000/MX,.../M Compact cylinders

Single acting, ISO 21287- Ø 20 to 63 mm



Conforms to ISO21287
Magnetic piston as standard
Low friction, long life seals
Switches can be mounted flush with the profile

TECHNICAL DATA

Medium:
Compressed air, filtered, lubricated or non-lubricated
Operating pressure:
2 to 10 bar
Operating temperature:
-5°C to +80°C
Consult our Technical Service for use below +2°C

STANDARD MODELS

	Ø	Piston rod Ø	Port size	MODEL				ACCESSORIES		
				Female thread Sprung in	Sprung out	Male thread Sprung in	Sprung out	Reed switch with integral 5m cable	Straight Fitting	Elbow Fitting
 Sprung In	20	10	M5	RA/191020/MX/*	RA/193020/MX/*	RA/191020/M/*	RA/193020/M/*	 M/50/LSU/5V	 C02250405	 C02470405
	25	10	M5	RA/191025/MX/*	RA/193025/MX/*	RA/191025/M/*	RA/193025/M/*			
 Sprung Out	32	12	G1/8	RA/191032/MX/*	RA/193032/MX/*	RA/191032/M/*	RA/193032/M/*	 M/50/LSU/5V	 C02250618	 C02470618
	40	16	G1/8	RA/191040/MX/*	RA/193040/MX/*	RA/191040/M/*	RA/193040/M/*			
	50	20	G1/8	RA/191050/MX/*	RA/193050/MX/*	RA/191050/M/*	RA/193050/M/*			
	63	20	G1/8	RA/191063/MX/*	RA/193063/MX/*	RA/191063/M/*	RA/193063/M/*			

*Insert stroke length in mm.
For information on additional magnetic switches see page 63

Standard strokes

Ø	5	10	25
20	•	•	
25	•	•	
32		•	•
40		•	•
50		•	•
63		•	•

When moving light loads in only one direction, the use of single acting cylinders saves money

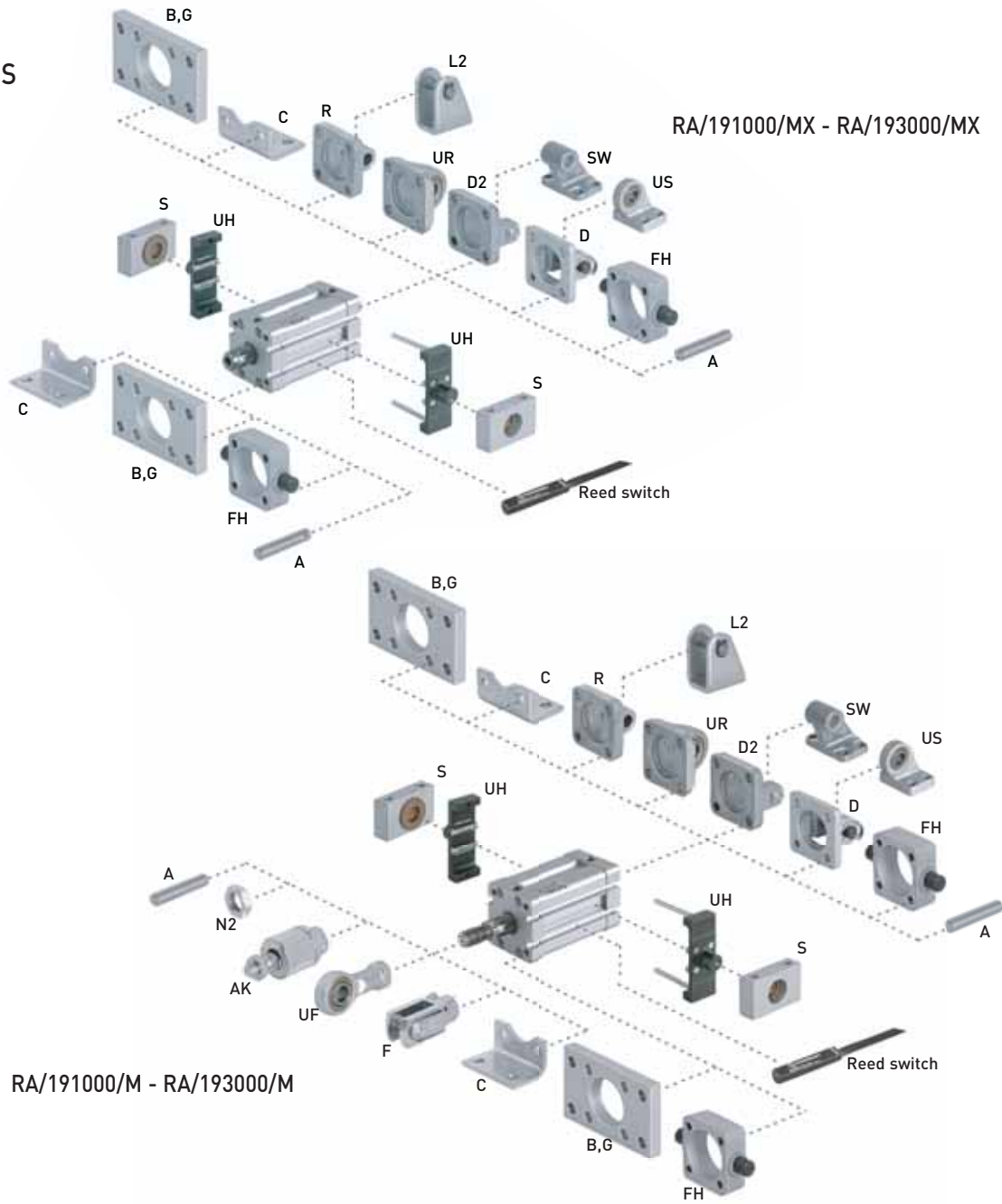


For further information



www.norgren.com/info/nec/en020

MOUNTINGS



RA/191000/M - RA/193000/M

∅	A	B, G	C	D	D2	FH	L2
20	-	QA/192020/22	QM/192020/21	-	-	-	QM/8020/44
25	-	QA/192025/22	QM/192025/21	-	-	-	QM/8020/44
32	QM/8032/35	QA/8032/22	QA/192032/21	QA/8032/23	QA/8032/42	QA/8032/34	-
40	QM/8032/35	QA/8040/22	QA/192040/21	QA/8040/23	QA/8040/42	QA/8040/34	-
50	QM/8050/35	QA/8050/22	QA/192050/21	QA/8050/23	QA/8050/42	QA/8050/34	-
63	QM/8050/35	QA/8063/22	QA/192063/21	QA/8063/23	QA/8063/42	QA/8063/34	-

∅	R	S	SW	UH	UR	US
20	QM/192020/27	-	-	-	-	-
25	QM/192025/27	-	-	-	-	-
32	QA/8032/27	QA/8032/41	M/P19493	PQA/182032/40	QA/8032/33	M/P40310
40	QA/8040/27	QA/8040/41	M/P19494	PQA/182040/40	QA/8040/33	M/P40311
50	QA/8050/27	QA/8040/41	M/P19495	PQA/182050/40	QA/8050/33	M/P40312
63	QA/8063/27	QA/8063/41	M/P19496	PQA/182063/40	QA/8063/33	M/P40313

For cylinders with male piston rod thread

∅	AK	F	N2	UF
20	QM/8020/38	QM/8020/25	M/P1501/60	QM/8020/32
25	QM/8020/38	QM/8020/25	M/P1501/60	QM/8020/32
32	QM/8025/38	QM/8025/25	M/P1501/89	QM/8025/32
40	QM/8025/38	QM/8025/25	M/P1501/89	QM/8025/32
50	QM/8040/38	QM/8040/25	M/P1501/90	QM/8040/32
63	QM/8040/38	QM/8040/25	M/P1501/90	QM/8040/32

RA/192000/MX, .../M Compact cylinders

Double acting - Ø 20 to 125 mm



Conforms to ISO 21287
 Magnetic piston as standard
 Low friction, long life seals
 Switches can be mounted flush with the profile

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

RA/192000/M
 Double acting, magnetic piston, male piston rod thread, buffer cushioning
 RA/192000/MX
 Double acting, magnetic piston, female piston rod thread, buffer cushioning

Operating pressure:

1 to 10 bar

Operating temperature:

-5°C to +80°C max.

Consult our Technical Service for use below +2°C.

STANDARD MODELS

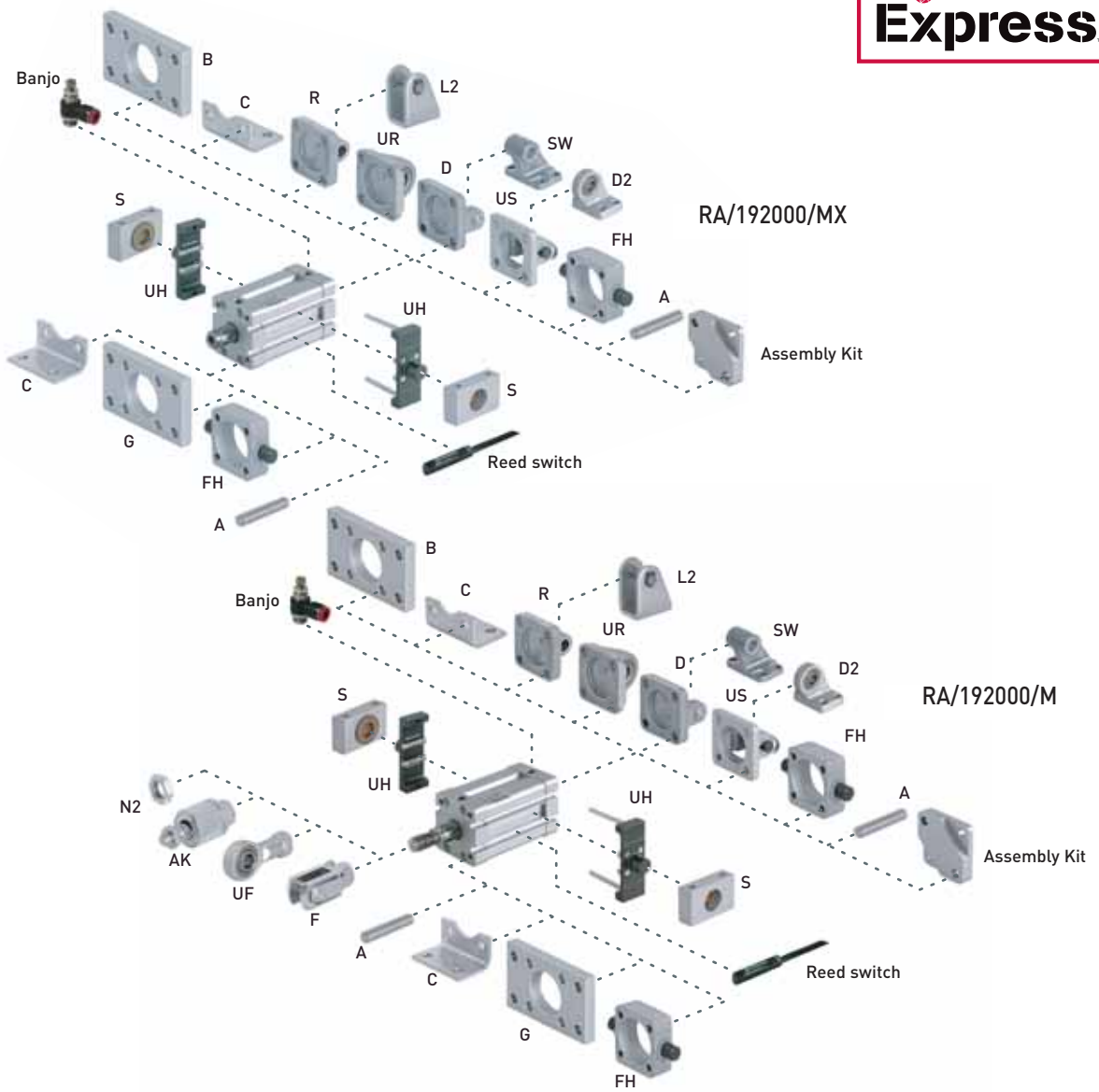
Ø	Piston rod Ø	Port size	MODELS		ACCESSORIES				
			Female thread	Male thread	Reed switch with integral 5m cable	Banjo flow control <small>Tube diameter in bold</small>	Straight Fitting	Elbow Fitting	Service Kit
									
20	10	M5	RA/192020/MX/*	RA/192020/M/*	M/50/LSU/5V	C0K510405	C02250405	C02470405	QM/192020/00
25	10	M5	RA/192025/MX/*	RA/192025/M/*	M/50/LSU/5V	C0K510405	C02250405	C02470405	QM/192025/00
32	12	G1/8	RA/192032/MX/*	RA/192032/M/*	M/50/LSU/5V	C0K510618	C02250618	C02470618	QM/192032/00
40	16	G1/8	RA/192040/MX/*	RA/192040/M/*	M/50/LSU/5V	C0K510618	C02250618	C02470618	QM/192040/00
50	20	G1/8	RA/192050/MX/*	RA/192050/M/*	M/50/LSU/5V	C0K510618	C02250618	C02470618	QM/192050/00
63	20	G1/8	RA/192063/MX/*	RA/192063/M/*	M/50/LSU/5V	C0K510618	C02250618	C02470618	QM/192063/00
80	25	G1/8	RA/192080/MX/*	RA/192080/M/*	M/50/LSU/5V	C0K510818	C02250818	C02470818	QM/192080/00
100	25	G1/8	RA/192100/MX/*	RA/192100/M/*	M/50/LSU/5V	C0K510818	C02250818	C02470818	QM/192100/00
125	32	G1/4	RA/192125/MX/*	RA/192125/M/*	M/50/LSU/5V	C0K510828	C02250828	C02470828	QM/192125/00

*Insert stroke length in mm.
 For information on additional magnetic switches see page 63

Standard strokes

Ø	5	10	15	20	25	30	40	50	60	80	100
20	•	•	•	•	•	•	•	•			
25	•	•	•	•	•	•	•	•			
32	•	•	•	•	•	•	•	•			
40	•	•	•	•	•	•	•	•	•	•	•
50		•	•	•	•	•	•	•	•	•	•
63		•	•	•	•	•	•	•	•	•	•
80			•	•	•	•	•	•	•	•	•
100			•	•	•	•	•	•	•	•	•
125			•	•	•	•	•	•	•	•	•

MOUNTINGS



For cylinders with male and female piston rod thread

∅	A	B, G	C	D	D2	FH	L2
20	-	QA/192020/22	QM/192020/21	-	-	-	QM/8020/44
25	-	QA/192025/22	QM/192025/21	-	-	-	QM/8020/44
32	QM/8032/35	QA/8032/22	QA/192032/21	QA/8032/23	QA/8032/42	QA/8032/34	-
40	QM/8032/35	QA/8040/22	QA/192040/21	QA/8040/23	QA/8040/42	QA/8040/34	-
50	QM/8050/35	QA/8050/22	QA/192050/21	QA/8050/23	QA/8050/42	QA/8050/34	-
63	QM/8050/35	QA/8063/22	QA/192063/21	QA/8063/23	QA/8063/42	QA/8063/34	-
80	QM/8080/35	QA/8080/22	QA/192080/21	QA/8080/23	QA/8080/42	QA/8080/34	-
100	QM/8080/35	QA/8100/22	QA/192100/21	QA/8100/23	QA/8100/42	QA/8100/34	-
125	QM/8125/35	QA/8125/22	QM/8125/21	QM/8125/23	QA/8125/42	QA/8125/34	-

∅	R	S	SW	UH	UR	US	Assembly Kit
20	QM/192020/27	-	-	-	-	-	QA/192020/55
25	QM/192025/27	-	-	-	-	-	QA/192025/55
32	QA/8032/27	QA/8032/41	M/P19493	PQA/182032/40	QA/8032/33	M/P40310	QA/192032/55
40	QA/8040/27	QA/8040/41	M/P19494	PQA/182040/40	QA/8040/33	M/P40311	QA/192040/55
50	QA/8050/27	QA/8040/41	M/P19495	PQA/182050/40	QA/8050/33	M/P40312	QA/192050/55
63	QA/8063/27	QA/8063/41	M/P19496	PQA/182063/40	QA/8063/33	M/P40313	QA/192063/55
80	QA/8080/27	QA/8063/41	M/P19497	PQA/182080/40	QA/8080/33	M/P40314	QA/192080/55
100	QA/8100/27	QA/8100/41	M/P19498	PQA/182100/40	QA/8100/33	M/P40315	QA/192100/55
125	QM/8125/27	QA/8100/41	M/P19499	PQA/182125/40	QM/8125/33	M/P71355	QA/192125/55

For cylinders with male piston rod thread

∅	AK	F	N2	UF
20	QM/8020/38	QM/8020/25	M/P1501/60	QM/8020/32
25	QM/8020/38	QM/8020/25	M/P1501/60	QM/8020/32
32	QM/8025/38	QM/8025/25	M/P1501/89	QM/8025/32
40	QM/8025/38	QM/8025/25	M/P1501/89	QM/8025/32
50	QM/8040/38	QM/8040/25	M/P1501/90	QM/8040/32
63	QM/8040/38	QM/8040/25	M/P1501/90	QM/8040/32
80	QM/8050/38	QM/8050/25	M/P1501/91	QM/8050/32
100	QM/8050/38	QM/8050/25	M/P1501/91	QM/8050/32
125	QM/8125/38	QM/8125/25	M/P1501/105	QM/8125/32

RM/91000/M Short stroke cylinders

Single acting - Ø 20 to 63 mm



One third the basic length of a corresponding ISO/VDMA model
 Low friction, long life seal design
 Fully non-corrodible specification
 Standard magnetic piston

TECHNICAL DATA

Medium:
 Compressed air, filtered, lubricated or non-lubricated

Operation:
 Single acting, non-cushioned, magnetic piston sprung in

Operating pressure:
 2 to 10 bar

Operating temperature:
 -5°C to +80°C.

Consult our Technical Service for use below +2°C

STANDARD MODELS

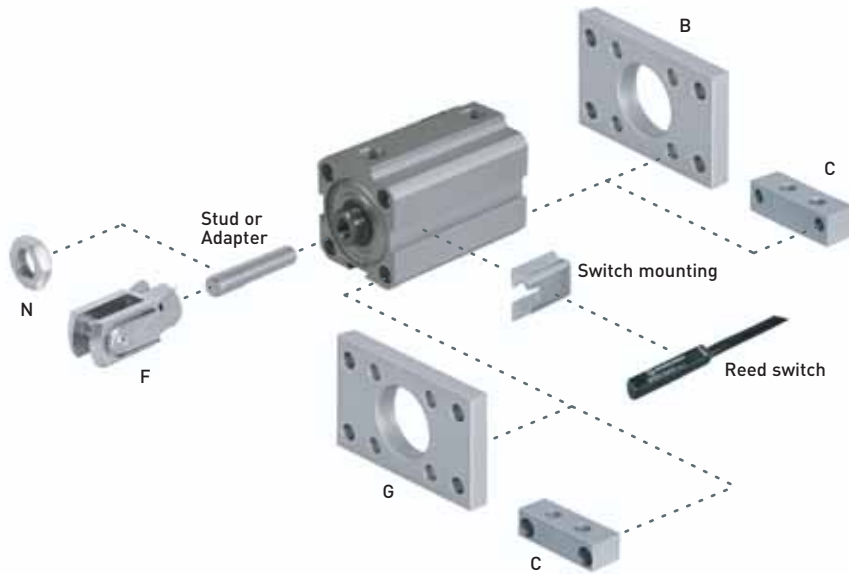
Ø	Piston rod Ø	Port size	MODEL Female thread Sprung in	ACCESSORIES				
				Reed switch with integral 5 m cable	Switch mounting	Straight Fitting	Elbow Fitting	Service Kit
								
				Tube diameter in bold				
	20	10	M5	M/50/LSU/5V	M/P72487	C02250405	C02470405	
	25	12	M5	M/50/LSU/5V	M/P72487	C02250405	C02470405	
	32	16	G1/8	M/50/LSU/5V	M/P72487	C02250618	C02470618	
	40	16	G1/8	M/50/LSU/5V	M/P72487	C02250618	C02470618	
	50	20	G1/8	M/50/LSU/5V	M/P72487	C02250618	C02470618	QM/92050/00
	63	20	G1/4	M/50/LSU/5V	M/P72487	C02250628	C02470628	QM/92063/00

*Insert stroke length in mm.
 For information on additional magnetic switches see page 63

Standard strokes

Ø	10	25
20	•	
25	•	
32	•	•
40	•	•
50	•	•
63	•	•

MOUNTINGS



Ø	B,G	C	F	N	Stud or Adapter*
20	QM/90020/22	QM/90020/21	QM/92020/25	M/P1501/109	M/P1710/20
25	QM/90025/22	QM/90025/21	QM/57016/25	M/P1501/79	M/P1710/21
32	QM/90032/22	QM/90032/21	QM/57020/25	M/P1501/60	M/P1710/22
40	QM/90040/22	QM/90040/21	QM/57020/25	M/P1501/60	M/P1710/22
50	QM/90050/22	QM/90050/21	QM/57025/25	-	M/P71470/1
63	QM/90063/22	QM/90063/21	QM/57040/25	-	M/P71470/2

*For attaching F mounting to female piston rod thread.

RM/92000/M Short stroke cylinders

Double acting - Ø 12 to 100 mm



One third the basic length of a corresponding ISO/VDMA model
 Low friction, long life seal design
 Fully non-corrodible specification
 Standard magnetic piston for full control system versatility

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

Double acting, magnetic piston non-cushioned

Operating pressure:

1 to 10 bar

Operating temperature:

-5°C to +80°C

Consult our Technical Service for use below +2°C

STANDARD MODELS

Ø	Piston rod Ø	Port size	MODEL		ACCESSORIES					
			Magnetic	Guided	Reed switch with integral 5m cable	Switch Mounting	Banjo Flow control <small>Tube diameter in bold</small>	Straight Fitting	Elbow Fitting	Service Kit
										
12	6	M5	RM/92012/M/*		M/50/LSU/5V	M/P72487	C0K510405	C02250405	C02470405	
16	8	M5	RM/92016/M/*	RM/92016/N4/*	M/50/LSU/5V	M/P72487	C0K510405	C02250405	C02470405	
20	10	M5	RM/92020/M/*		M/50/LSU/5V	M/P72487	C0K510405	C02250405	C02470405	
25	12	M5	RM/92025/M/*	RM/92025/N4/*	M/50/LSU/5V	M/P72487	C0K510405	C02250405	C02470405	
32	16	G1/8	RM/92032/M/*	RM/92032/N4/*	M/50/LSU/5V	M/P72487	C0K510618	C02250618	C02470618	
40	16	G1/8	RM/92040/M/*	RM/92040/N4/*	M/50/LSU/5V	M/P72487	C0K510618	C02250618	C02470618	
50	20	G1/8	RM/92050/M/*		M/50/LSU/5V	M/P72487	C0K510618	C02250618	C02470618	QM/92050/00
63	20	G1/4	RM/92063/M/*		M/50/LSU/5V	M/P72487	C0K510628	C02250628	C02470628	QM/92063/00
80	25	G1/4	RM/92080/M/*		M/50/LSU/5V	M/P72487	C0K510628	C02250628	C02470628	QM/92080/00
100	25	G1/4	RM/92100/M/*		M/50/LSU/5V	M/P72487	C0K510628	C02250628	C02470628	QM/92100/00

*Insert stroke length in mm.

For information on additional magnetic switches see page 63

Standard strokes

Ø	5	10	15	20	25	30	40	50	60	80	100
12	•	•	•	•	•	•					
16	•	•	•	•	•	•					
20	•	•	•	•	•	•	•	•			
25	•	•	•	•	•	•	•	•	•		
32	•	•	•	•	•	•	•	•	•	•	
40	•	•	•	•	•	•	•	•	•	•	•
50		•	•	•	•	•	•	•	•	•	•
63		•	•	•	•	•	•	•	•	•	•
80			•	•	•	•	•	•	•	•	•
100			•	•	•	•	•	•	•	•	•

Other strokes available

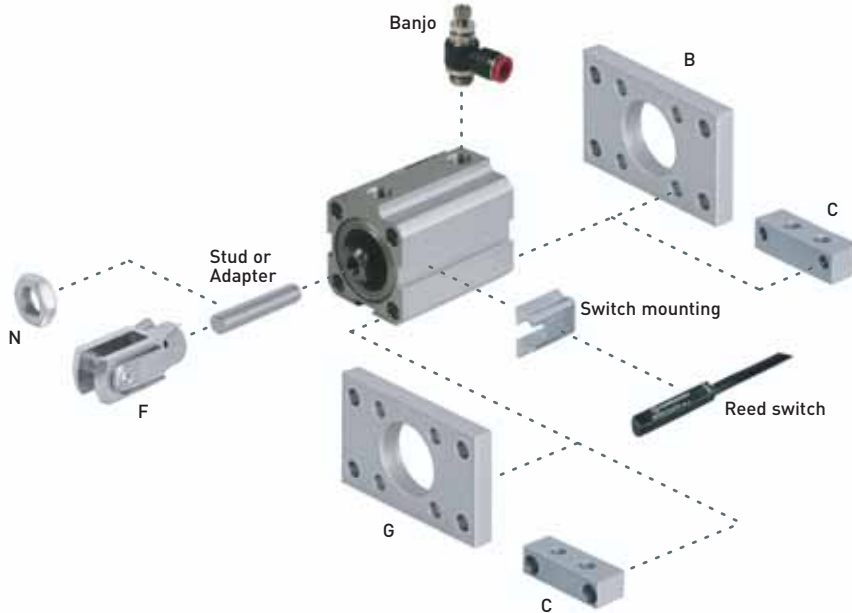


For further information



www.norgren.com/info/nec/en026

MOUNTINGS



Ø	B,G	C	F	N	Stud or Adapter*
12	QM/90012/22	QM/90012/21	QM/57008/25	M/P1500/111	M/P1710/18
16	QM/90016/22	QM/90016/21	QM/8010/25	M/P1501/80	M/P1710/1
20	QM/90020/22	QM/90020/21	QM/92020/25	M/P1501/109	M/P1710/20
25	QM/90025/22	QM/90025/21	QM/57016/25	M/P1501/79	M/P1710/21
32	QM/90032/22	QM/90032/21	QM/57020/25	M/P1501/60	M/P1710/22
40	QM/90040/22	QM/90040/21	QM/57020/25	M/P1501/60	M/P1710/22
50	QM/90050/22	QM/90050/21	QM/57025/25	-	M/P71470/1
63	QM/90063/22	QM/90063/21	QM/57040/25	-	M/P71470/2
80	QM/90080/22	QM/90080/21	QM/57063/25	-	M/P71470/3
100	QM/90100/22	QM/90100/21	QM/57063/25	-	M/P71470/3

*For attaching F mounting to female piston rod thread.

Setting air pressure as low as possible to suit the application will save money - always fit pressure regulators



M/50100, M/50200 Clamping cylinders

Single and double acting - Ø 8 to 63 mm



Enable high thrusts to be achieved in restricted space
 Neat, clean appearance
 One-piece body construction

TECHNICAL DATA

Medium:

Compressed air, filtered and lubricated

Operating pressure:




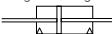
2 to 10 bar (single acting)
 1,5 to 10 bar (double acting)

Operating temperature:

-10°C to +70°C

Consult our Technical Service for use below +2°C

STANDARD MODELS

	Ø	Port size	MODEL		MODEL		ACCESSORIES	
			Piston rod Ø	Single acting	Piston rod Ø	Double acting	Straight fitting	Elbow fitting
								Tube diameter in bold
	8	M5	4	M/50108/*	4	M/50208/*		
	12	M5	6	M/50112/*	5	M/50212/*	C02250405	C02470405
Single acting	20	M5	10	M/50120/*	10	M/50220/*	C02250405	C02470405
	32	G1/8	16	M/50132/*	12	M/50232/*	C02250618	C02470628
	50	G1/4	20	M/50150/*	16	M/50250/*	C02250628	C02470628
Double acting	63	G1/4	20	M/50163/*	16	M/50263/*	C02250628	C02470628

* Insert stroke length in mm.

Standard strokes

Ø	4	5	10	25
8	•			
12	•		•	
20	•		•	
32		•	•	•
50			•	•
63			•	•

Other stroke lengths are not available.

- Remember ! - most applications benefit from fittings flow regulators to set optimum speed of operation
- Setting air pressure as low as possible to suit the application will save money - always fit pressure regulators
- When moving light loads in only one direction, the use of single acting cylinders saves money



PRA/181000/M ISO/VDMA Profile cylinders

Single acting - Ø 32 to 100 mm



Conforms to ISO 15552, ISO 6431, VDMA 24562 and NFE 49-003-1

Profile barrel with concealed tie rods

Polyurethane seals ensure efficient low friction operation and long life

Switches can be mounted flush with the profile barrel

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

magnetic piston, adjustable cushioning

Operating pressure:

2 to 10 bar

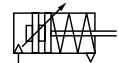
Operating temperature:

-20°C to +80°C max.

Consult our Technical Service for use below +2°C

STANDARD MODELS

Ø	Piston prod Ø	Port size	MODEL Sprung in	ACCESSORIES			
				Reed switch with integral 5m cable	Straight Fitting	Elbow Fitting	Service Kit
							
32	12	G1/8	PRA/181032/M/*	M/50/LSU/5V	C0225 0618	C0247 0618	QA/8032/00
40	16	G1/4	PRA/181040/M/*	M/50/LSU/5V	C0225 0628	C0247 0628	QA/8040/00
50	20	G1/4	PRA/181050/M/*	M/50/LSU/5V	C0225 0828	C0247 0828	QA/8050/00
63	20	G3/8	PRA/181063/M/*	M/50/LSU/5V	C0225 0838	C0247 0838	QA/8063/00
80	25	G3/8	PRA/181080/M/*	M/50/LSU/5V	C0225 1038	C0247 1038	QA/8080/00
100	25	G1/2	PRA/181100/M/*	M/50/LSU/5V	C0225 1248	C0247 1248	QA/8100/00



* Insert stroke length in mm

For information on additional magnetic switches see page 63

Standard strokes

Ø	25	50	80	100
32	•	•	•	•
40	•	•	•	•
50	•	•	•	•
63	•	•	•	•
80	•	•	•	•
100	•	•	•	•

When moving light loads in only one direction, the use of single acting cylinders saves money

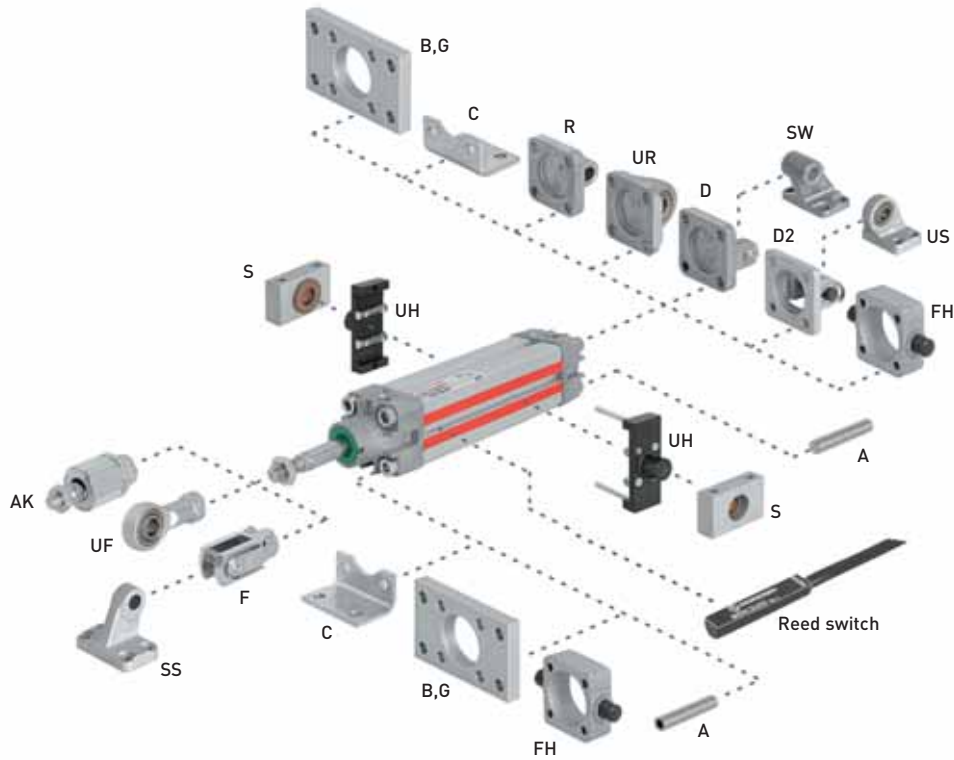


For further information



www.norgren.com/info/nec/en030

MOUNTINGS



∅	A	AK	B, G	C	D	D2	F	FH
32	QM/8032/35	QM/8025/38	QA/8032/22	QA/8032/21	QA/8032/23	QA/8032/42	QM/8025/25	QA/8032/34
40	QM/8032/35	QM/8040/38	QA/8040/22	QA/8040/21	QA/8040/23	QA/8040/42	QM/8040/25	QA/8040/34
50	QM/8050/35	QM/8050/38	QA/8050/22	QA/8050/21	QA/8050/23	QA/8050/42	QM/8050/25	QA/8050/34
63	QM/8050/35	QM/8050/38	QA/8063/22	QA/8063/21	QA/8063/23	QA/8063/42	QM/8050/25	QA/8063/34
80	QM/8080/35	QM/8080/38	QA/8080/22	QA/8080/21	QA/8080/23	QA/8080/42	QM/8080/25	QA/8080/34
100	QM/8080/35	QM/8080/38	QA/8100/22	QA/8100/21	QA/8100/23	QA/8100/42	QM/8080/25	QA/8100/34

∅	R	S	SS	SW	UF	UH	UR	US
32	QA/8032/27	QA/8032/41	M/P19931	M/P19493	QM/8025/32	PQA/182032/40	QA/8032/33	M/P40310
40	QA/8040/27	QA/8040/41	M/P19932	M/P19494	QM/8040/32	PQA/182040/40	QA/8040/33	M/P40311
50	QA/8050/27	QA/8040/41	M/P19933	M/P19495	QM/8050/32	PQA/182050/40	QA/8050/33	M/P40312
63	QA/8063/27	QA/8063/41	M/P19934	M/P19496	QM/8050/32	PQA/182063/40	QA/8063/33	M/P40313
80	QA/8080/27	QA/8063/41	M/P19935	M/P19497	QM/8080/32	PQA/182080/40	QA/8080/33	M/P40314
100	QA/8100/27	QA/8100/41	M/P19936	M/P19498	QM/8080/32	PQA/182100/40	QA/8100/33	M/P40315

PRA/182000, PRA/182000/M ISO/VDMA Profile cylinders

Double acting - Ø 32 to 125 mm



Conforms to ISO 15552, ISO 6431, VDMA 24562 and NFE 49-003-1

Profile barrel with concealed tie rods

High performance, stability and reliability

Polyurethane seals ensure efficient low friction operation and long life

Switches can be mounted flush with the profile barrel

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

PRA/182000: Adjustable cushioning

PRA/182000/M: Magnetic piston, adjustable cushioning

Operating pressure:

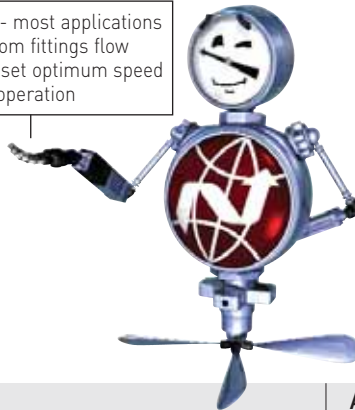
1 to 16 bar

Operating temperature:

-20°C to +80°C max.

Consult our Technical Service for use below +2°C

Remember ! - most applications benefit from fittings flow regulators to set optimum speed of operation



STANDARD MODELS

Ø	Piston Port rod Ø size	MODEL			ACCESSORIES						
		Non-Magnetic	Magnetic	Magnetic Non-rotating	Reed switch with integral 5m cable	Banjo Flow Control Tube diameter in bold	Straight Fitting	Elbow Fitting	Service Kit		
 Non-magnetic	32	12	G1/8	PRA/182032/*	PRA/182032/M/*	PRA/182032/N2/*	M/50/LSU/5V	C0K510618	C02250618	C02470618	QA/8032/00
	40	16	G1/4	PRA/182040/*	PRA/182040/M/*	PRA/182040/N2/*	M/50/LSU/5V	C0K510628	C02250628	C02470628	QA/8040/00
	50	20	G1/4	PRA/182050/*	PRA/182050/M/*	PRA/182050/N2/*	M/50/LSU/5V	C0K510828	C02250828	C02470828	QA/8050/00
 Magnetic	63	20	G3/8	PRA/182063/*	PRA/182063/M/*	PRA/182063/N2/*	M/50/LSU/5V	C0K510838	C02250838	C02470838	QA/8063/00
	80	25	G3/8	PRA/182080/*	PRA/182080/M/*		M/50/LSU/5V	C0K511038	C02251038	C02471038	QA/8080/00
	100	25	G1/2	PRA/182100/*	PRA/182100/M/*		M/50/LSU/5V	C0K511248	C02251248	C02471248	QA/8100/00
	125	32	G1/2	PRA/182125/*	PRA/182125/M/*		M/50/LSU/5V	C0K511248	C02251248	C02471248	QA/8125/00

* Insert stroke length in mm
For combinations of cylinder variants consult our Technical Service.
For information on additional magnetic switches see page 63

Standard strokes

Ø	25	50	80	100	125	160	200	250	320	400	500
32	•	•	•	•	•	•	•	•	•	•	•
40	•	•	•	•	•	•	•	•	•	•	•
50	•	•	•	•	•	•	•	•	•	•	•
63	•	•	•	•	•	•	•	•	•	•	•
80	•	•	•	•	•	•	•	•	•	•	•
100	•	•	•	•	•	•	•	•	•	•	•
125	•	•	•	•	•	•	•	•	•	•	•

Other strokes available.

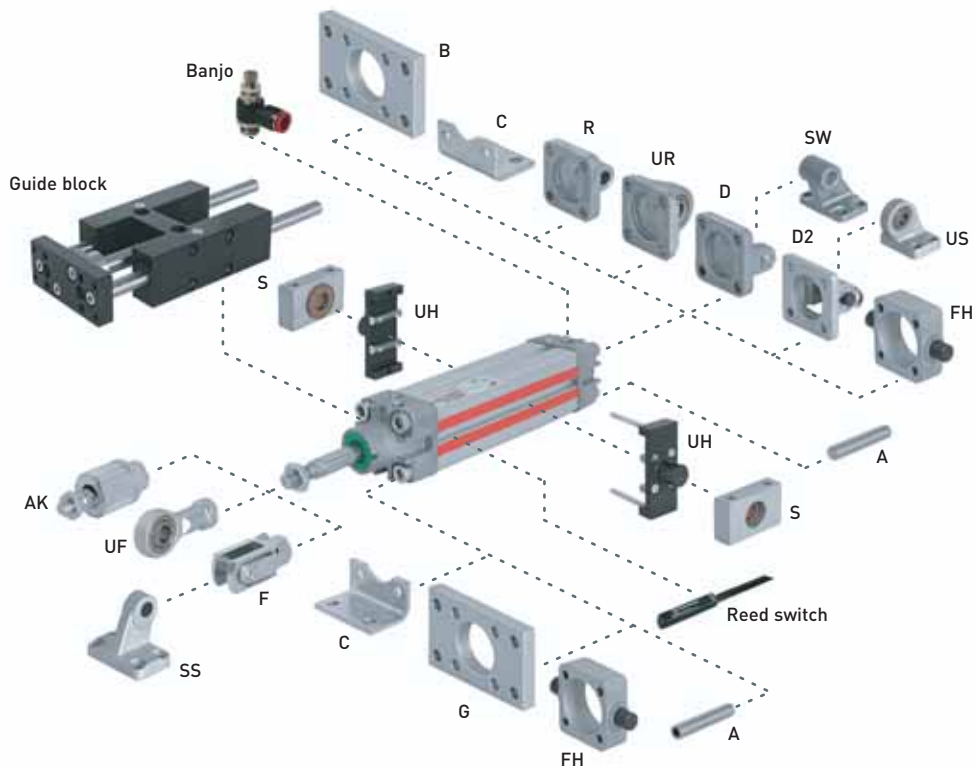


For further information



www.norgren.com/info/nec/en032

MOUNTINGS



∅	A	AK	B, G	C	D	D2	F	FH
32	QM/8032/35	QM/8025/38	QA/8032/22	QA/8032/21	QA/8032/23	QA/8032/42	QM/8025/25	QA/8032/34
40	QM/8032/35	QM/8040/38	QA/8040/22	QA/8040/21	QA/8040/23	QA/8040/42	QM/8040/25	QA/8040/34
50	QM/8050/35	QM/8050/38	QA/8050/22	QA/8050/21	QA/8050/23	QA/8050/42	QM/8050/25	QA/8050/34
63	QM/8050/35	QM/8050/38	QA/8063/22	QA/8063/21	QA/8063/23	QA/8063/42	QM/8050/25	QA/8063/34
80	QM/8080/35	QM/8080/38	QA/8080/22	QA/8080/21	QA/8080/23	QA/8080/42	QM/8080/25	QA/8080/34
100	QM/8080/35	QM/8080/38	QA/8100/22	QA/8100/21	QA/8100/23	QA/8100/42	QM/8080/25	QA/8100/34
125	QM/8125/35	QM/8125/38	QM/8125/22	QM/8125/21	QM/8125/23	QA/8125/42	QM/8125/25	QA/8125/34

∅	R	S	SS	SW	UF	UH	UR	US
32	QA/8032/27	QA/8032/41	M/P19931	M/P19493	QM/8025/32	PQA/182032/40	QA/8032/33	M/P40310
40	QA/8040/27	QA/8040/41	M/P19932	M/P19494	QM/8040/32	PQA/182040/40	QA/8040/33	M/P40311
50	QA/8050/27	QA/8040/41	M/P19933	M/P19495	QM/8050/32	PQA/182050/40	QA/8050/33	M/P40312
63	QA/8063/27	QA/8063/41	M/P19934	M/P19496	QM/8050/32	PQA/182063/40	QA/8063/33	M/P40313
80	QA/8080/27	QA/8063/41	M/P19935	M/P19497	QM/8080/32	PQA/182080/40	QA/8080/33	M/P40314
100	QA/8100/27	QA/8100/41	M/P19936	M/P19498	QM/8080/32	PQA/182100/40	QA/8100/33	M/P40315
125	QM/8125/27	QA/8100/41	M/P19937	M/P19499	QM/8125/32	PQA/182125/40	QM/8125/33	M/P71355

∅	Guide block	Guide block
32	QA/8032/51/*	QA/8032/61/*
40	QA/8040/51/*	QA/8040/61/*
50	QA/8050/51/*	QA/8050/61/*
63	QA/8063/51/*	QA/8063/61/*
80	QA/8080/51/*	QA/8080/61/*
100	QA/8100/51/*	QA/8100/61/*

Standard strokes for guide block

∅	50	100	160	200	250	320	400	500
32	•	•	•	•	•	•	•	•
40	•	•	•	•	•	•	•	•
50	•	•	•	•	•	•	•	•
63	•	•	•	•	•	•	•	•
80	•	•	•	•	•	•	•	•
100	•	•	•	•	•	•	•	•

* Insert stroke length in mm from table on the right.
 Note: QA/8_/_/51* = Plain bearing.
 QA/8_/_/61* = Ball bearing.

Other stroke lengths are not available, use nearest standard stroke.
 Maximum stroke 500 mm.

PRA/182000/L2, PRA/182000/L4 (ISO/VDMA/NFE) Cylinders with piston rod locking units

Double acting - Ø 32 to 125 mm



Magnetic and non-magnetic piston conforms to ISO 6431, VDMA 24562 and NFE 49-003-1

Secure locking of piston rod in any position

Locks when air is removed

Compact, maintenance-free design

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

Passive model – pressure applied to release

Operating pressure:

4,5 to 10 bar

Operating temperature:

0°C to +80°C

Consult our Technical Service for use below +2°C

STANDARD MODELS

Ø	Piston rod Ø	Port size	MODEL		ACCESSORIES					
			Magnetic	Non-Magnetic	Reed switch with integral 5m cable	Banjo Flow Control <small>Tube diameter in bold</small>	Straight Fitting	Elbow Fitting	Service Kit	
 Non-magnetic Passive	32	12	G1/8	PRA/182032/L4/*	PRA/182032/L2/*	M/50/LSU/5V	C0K510618	C02250618	C02470618	QA/8032/00
	40	16	G1/4	PRA/182040/L4/*	PRA/182040/L2/*	M/50/LSU/5V	C0K510628	C02250628	C02470628	QA/8040/00
	50	20	G1/4	PRA/182050/L4/*	PRA/182050/L2/*	M/50/LSU/5V	C0K510828	C02250828	C02470828	QA/8050/00
	63	20	G3/8	PRA/182063/L4/*	PRA/182063/L2/*	M/50/LSU/5V	C0K510838	C02250838	C02470838	QA/8063/00
 Magnetic Passive	80	25	G3/8	PRA/182080/L4/*	PRA/182080/L2/*	M/50/LSU/5V	C0K511038	C02251038	C02471038	QA/8080/00
	100	25	G1/2	PRA/182100/L4/*	PRA/182100/L2/*	M/50/LSU/5V	C0K511248	C02251248	C02471248	QA/8100/00
	125	32	G1/2	PRA/182125/L4/*	PRA/182125/L2/*	M/50/LSU/5V	C0K511248	C02251248	C02471248	QA/8125/00

*Insert stroke length in mm.

For details of mountings see page 33

For information on additional magnetic switches see page 63

Locking unit

Ø	Locking unit	Spare cartridge only
32	QA/8032/59	QA/8032/63
40	QA/8040/59	QA/8040/63
50	QA/8050/59	QA/8050/63
63	QA/8063/59	QA/8063/63
80	QA/8080/59	QA/8100/63
100	QA/8100/59	QA/8100/63
125	QA/8125/59	-

Locking unit includes cartridge

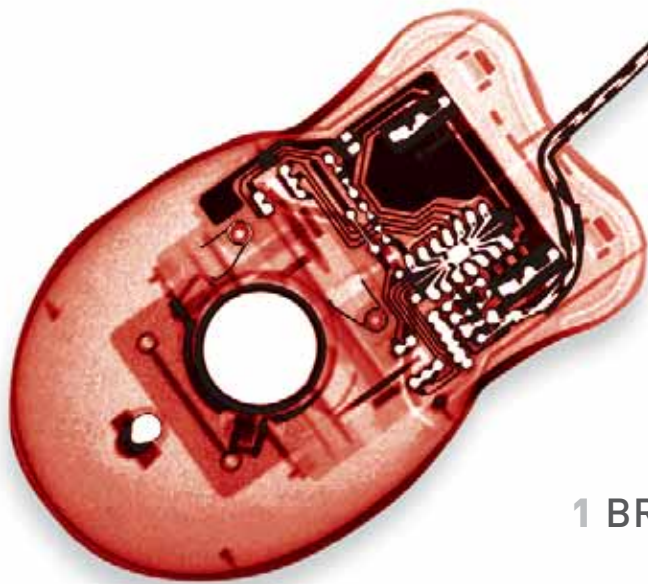
For all applications please consult our Technical Service.

For further information



www.norgren.com/info/nec/en034

10 EASY STEPS TO ONLINE ORDERING



1 BROWSE

2 SEARCH

3 PRODUCTS

4 QUICKBASKET

5 PASTEBASKET

6 QUOTES

7 ORDER

8 PARCEL TRACKING

9 ORDER HISTORY

10 HELP

 **Express**



RA/8000, RA/8000/M ISO/VDMA Cylinders

Double acting - Ø 32 to 320 mm



Conforms to ISO 15552, ISO 6431, VDMA 24562 and NFE 49-003-1

High performance, ruggedness and reliability

Extensive range of mountings

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

RA/8000 double acting, adjustable cushioning

RA/8000/M double acting, magnetic piston, adjustable cushioning

Operating pressure:

1 to 16 bar (1 to 10 bar for Ø 250 and 320 mm)

Operating temperature:

-20°C to +80°C max.

Consult our Technical Service for use below +2°C

STANDARD MODELS

Ø	Piston rod Ø size	Port size	MODEL		ACCESSORIES					
			Magnetic	Non-Magnetic	Reed switch integral with 5m cable	Switch mounting	Banjo Flow control	Straight Fitting	Elbow Fitting	Service Kit
Tube diameter in bold										
32	12	G1/8	RA/8032/M/*	RA/8032/*	M/50/LSU/5V	QM/27/2/1	C0K510618	C02250618	C02470618	QA/8032/00
40	16	G1/4	RA/8040/M/*	RA/8040/*	M/50/LSU/5V	QM/27/2/1	C0K510628	C02250628	C02470628	QA/8040/00
50	20	G1/4	RA/8050/M/*	RA/8050/*	M/50/LSU/5V	QM/27/2/1	C0K510828	C02250828	C02470828	QA/8050/00
63	20	G3/8	RA/8063/M/*	RA/8063/*	M/50/LSU/5V	QM/27/2/1	C0K510838	C02250838	C02470838	QA/8063/00
80	25	G3/8	RA/8080/M/*	RA/8080/*	M/50/LSU/5V	QM/27/2/1	C0K511038	C02251038	C02471038	QA/8080/00
100	25	G1/2	RA/8100/M/*	RA/8100/*	M/50/LSU/5V	QM/27/2/1	C0K511248	C02251248	C02471248	QA/8100/00
125	32	G1/2	RA/8125/M/*	RA/8125/*	M/50/LSU/5V	QM/27/2/1	C0K511248	C02251248	C02471248	QA/8125/00
160	40	G3/4	RA/8160/M/*	RA/8160/*	M/50/LSU/5V	QM/27/2/1	-	-	-	QA/8160/00
200	40	G3/4	RA/8200/M/*	RA/8200/*	M/50/LSU/5V	QM/27/2/1	-	-	-	QA/8200/00
250	50	G1	RA/8250/M/*	RA/8250/*	QM/32/5	QM/31/250/22	-	-	-	QA/8250/00
320	63	G1	RA/8320/M/*	RA/8320/*	QM/32/5	QM/31/320/22	-	-	-	QA/8320/00

* Insert stroke length in mm

For information on additional magnetic switches see page 63

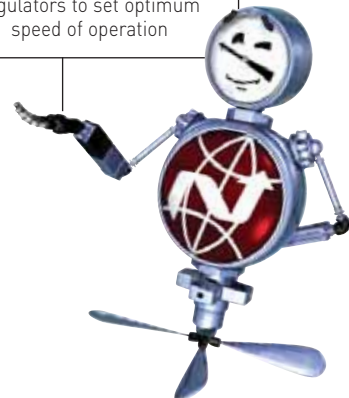
Other fittings available, please contact with our Customer Service.

Standard strokes

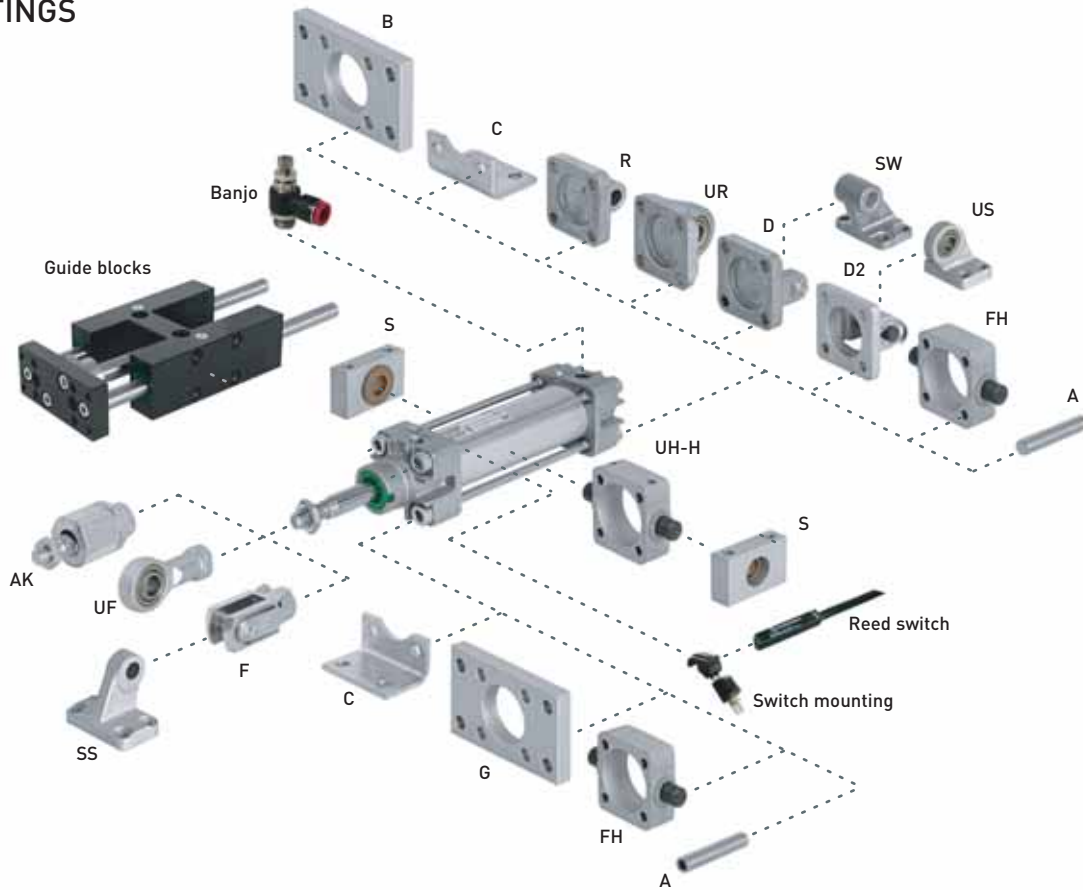
Ø	25	50	80	100	125	160	200	250	320	400	500
32	•	•	•	•	•	•	•	•	•	•	•
40	•	•	•	•	•	•	•	•	•	•	•
50	•	•	•	•	•	•	•	•	•	•	•
63	•	•	•	•	•	•	•	•	•	•	•
80	•	•	•	•	•	•	•	•	•	•	•
100	•	•	•	•	•	•	•	•	•	•	•
125	•	•	•	•	•	•	•	•	•	•	•
160	•	•	•	•	•	•	•	•	•	•	•
200	•	•	•	•	•	•	•	•	•	•	•
250	•	•	•	•	•	•	•	•	•	•	•
320	•	•	•	•	•	•	•	•	•	•	•

Other strokes available.

Remember ! - most applications benefit from fittings flow regulators to set optimum speed of operation



MOUNTINGS



Ø	A	AK	B, G	C	D	D2	F	FH	H
32	QM/8032/35	QM/8025/38	QA/8032/22	QA/8032/21	QA/8032/23	QA/8032/42	QM/8025/25	QA/8032/34	QA/8032/28
40	QM/8032/35	QM/8040/38	QA/8040/22	QA/8040/21	QA/8040/23	QA/8040/42	QM/8040/25	QA/8040/34	QA/8040/28
50	QM/8050/35	QM/8050/38	QA/8050/22	QA/8050/21	QA/8050/23	QA/8050/42	QM/8050/25	QA/8050/34	QA/8050/28
63	QM/8050/35	QM/8050/38	QA/8063/22	QA/8063/21	QA/8063/23	QA/8063/42	QM/8050/25	QA/8063/34	QA/8063/28
80	QM/8080/35	QM/8080/38	QA/8080/22	QA/8080/21	QA/8080/23	QA/8080/42	QM/8080/25	QA/8080/34	QA/8080/28
100	QM/8080/35	QM/8080/38	QA/8100/22	QA/8100/21	QA/8100/23	QA/8100/42	QM/8080/25	QA/8100/34	QA/8100/28
125	QM/8125/35	QM/8125/38	QM/8125/22	QM/8125/21	QM/8125/23	QA/8125/42	QM/8125/25	QA/8125/34	QM/8125/28
160	QM/8160/35	QM/8160/38	QM/8160/22	QM/8160/21	QM/8160/23	QA/8160/42	QM/8160/25	-	QM/8160/28
200	QM/8160/35	QM/8160/38	QM/8200/22	QM/8200/21	QM/8200/23	QA/8200/42	QM/8160/25	-	QM/8200/28
250	QM/8250/35	-	QM/8250/22	QM/8250/21	QM/8250/23	-	QM/8250/25	-	QM/8250/28
320	QM/8320/35	-	QM/8320/22	QM/8320/21	QM/8320/23	-	QM/8320/25	-	QM/8320/28

Ø	R	S	SS	SW	UF	UH	UR	US
32	QA/8032/27	QA/8032/41	M/P19931	M/P19493	QM/8025/32	QA/8032/40	QA/8032/33	M/P40310
40	QA/8040/27	QA/8040/41	M/P19932	M/P19494	QM/8040/32	QA/8040/40	QA/8040/33	M/P40311
50	QA/8050/27	QA/8040/41	M/P19933	M/P19495	QM/8050/32	QA/8050/40	QA/8050/33	M/P40312
63	QA/8063/27	QA/8063/41	M/P19934	M/P19496	QM/8050/32	QA/8063/40	QA/8063/33	M/P40313
80	QA/8080/27	QA/8063/41	M/P19935	M/P19497	QM/8080/32	QA/8080/40	QA/8080/33	M/P40314
100	QA/8100/27	QA/8100/41	M/P19936	M/P19498	QM/8080/32	QA/8100/40	QA/8100/33	M/P40315
125	QM/8125/27	QA/8100/41	M/P19937	M/P19499	QM/8125/32	QA/8125/40	QM/8125/33	M/P71355
160	QM/8160/27	QA/8160/41	M/P19938	M/P19679	QM/8160/32	QA/8160/40	QM/8160/33	M/P71356
200	QM/8200/27	QA/8160/41	M/P19939	M/P19683	QM/8160/32	QA/8200/40	QM/8200/33	M/P71357
250	-	-	-	M/P19446	QM/8250/32	-	QM/8250/33	-
320	-	-	-	M/P19447	QM/8320/32	-	QM/8320/33	-

Ø	Guide blocks	
32	QA/8032/51/*	QA/8032/61/*
40	QA/8040/51/*	QA/8040/61/*
50	QA/8050/51/*	QA/8050/61/*
63	QA/8063/51/*	QA/8063/61/*
80	QA/8080/51/*	QA/8080/61/*
100	QA/8100/51/*	QA/8100/61/*

Standard strokes for guide blocks

Ø	50	100	160	200	320	400	500
32	•	•	•	•	•	•	•
40	•	•	•	•	•	•	•
50	•	•	•	•	•	•	•
63	•	•	•	•	•	•	•
80	•	•	•	•	•	•	•
100	•	•	•	•	•	•	•

* Insert stroke length in mm from table on the right.
 Note: QA/8_/_/51* = Plain bearing.
 QA/8_/_/61* = Roller bearing.

Other stroke lengths are not available, use nearest standard stroke.
 Maximum stroke 500 mm.

M/46000, .../M, M/46100, .../M, M/46200, .../M LINTRA® Rodless cylinders

Internal, external and precision roller guided Double acting - Ø 16 to 80 mm



Well proven, long life sealing technology
Lightweight design extrusion with integral switch mounting slots
Capable of withstanding large bending moments and lateral forces
Non-lube operation

TECHNICAL DATA

Medium:
Compressed air, filtered and lubricated or non-lubricated

Operation:
M/46000, M/46100, M/46200
Double acting, adjustable cushioning, non-magnetic piston
M/46000/M, M/46100/M, M/46200/M
Double acting, adjustable cushioning, magnetic piston

Operating pressure:
1 to 10 bar
(1,5 to 10 bar for Ø 16 mm)









Operating temperature:
-30°C to +80°C.
Consult our Technical Service for use below +2°C

Max. strokes:
Made to order
Ø 16 to 25 mm: 8500 mm max
Ø 63 mm: 7000 mm max
Ø 80: 5500 mm max

STANDARD MODELS

Ø	Port size	MODEL		ACCESSORIES			
		Internal guide Non-magnetic	External guide Non-magnetic	Banjo Flow control	Straight Fitting	Elbow Fitting	Service Kit
				Tube diameter in bold			
							
16	M5	M/46016/*	M/46116/*	C0K510405	C02250405	C02470405	QM/46116/88/*
20	G1/8	M/46020/*	M/46120/*	C0K510618	C02250618	C02470618	QM/46120/88/*
25	G1/8	M/46025/*	M/46125/*	C0K510618	C02250618	C02470618	QM/46125/88/*
63	G1/2	M/46063/*	M/46163/*	C0K511248	C02251248	C02471248	QM/46163/88/*
80	G1/2	M/46080/*	M/46180/*	C0K511248	C02251248	C02471248	QM/46180/88/*

* Insert stroke length in mm
For other diameters see Lintra Models on page 40

Ø	Port size	MODEL			ACCESSORIES				
		Internal guide Magnetic	External guide Magnetic	Precision roller guide Magnetic	Reed switch with integral 5m cable	Banjo Flow control	Straight Fitting	Elbow Fitting	Service Kit
					Tube diameter in bold				
									
16	M5	M/46016/M/*	M/46116/M/*		M/50/LSU/5V	C0K510405	C02250405	C02470405	QM/46116/88/*
20	G1/8	M/46020/M/*	M/46120/M/*		M/50/LSU/5V	C0K510618	C02250618	C02470618	QM/46120/88/*
25	G1/8	M/46025/M/*	M/46125/M/*	M/46225/M/*	M/50/LSU/5V	C0K510618	C02250618	C02470618	QM/46125/88/*
63	G1/2	M/46063/M/*	M/46163/M/*	M/46263/M/*	M/50/LSU/5V	C0K511248	C02251248	C02471248	QM/46163/88/*
80	G1/2	M/46080/M/*	M/46180/M/*		M/50/LSU/5V	C0K511248	C02251248	C02471248	QM/46180/88/*

* Insert stroke length in mm
For information on additional magnetic switches see page 63
For other diameters see Lintra Models on page 40

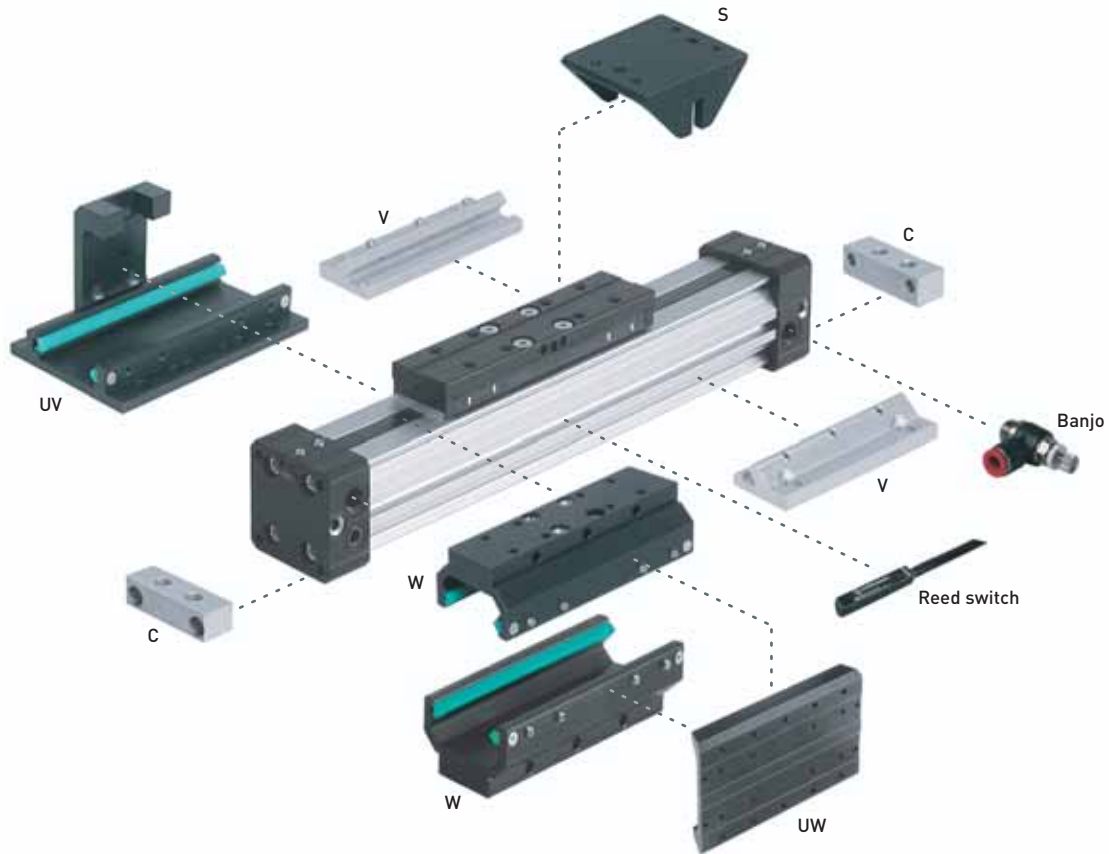


For further information



www.norgren.com/info/nec/en038

MOUNTINGS



Ø	C	S*	UV*	UW**	V	W**
16	QM/46016/21	QM/46016/37	QM/46016/34	-	QM/46016/32	QM/46116/35
20	QM/46020/21	QM/46020/37	QM/46020/34	QM/46120/36	QM/46020/32	QM/46120/35
25	QM/46025/21	QM/46025/37	QM/46025/34	QM/46125/36	QM/46025/32	QM/46125/35
63	QM/46063/21	QM/46063/37	QM/46063/34	QM/46163/36	QM/46063/32	QM/46163/35
80	QM/46080/21	QM/46080/37	QM/46080/34	-	QM/46080/32	QM/46180/35

* Suitable for internally guided models only, ** Suitable for external guided models only.

M/146000, M/146100, M/146200 LINTRA® PLUS rodless cylinders

Double acting - Ø 32 to 50 mm



New lightweight design extrusion with universal mounting grooves
Proven and patented sealing system
Dust protection as standard
Interchangeability with series M/46000

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

M/146000, M/146100, M/146200
Double acting, with adjustable cushioning

M/146000/M, M/146100/M, M/146200/M

Double acting with adjustable cushioning and magnetic piston

Operating pressure:

1 to 8 bar

Operating temperature:

-30°C to +80°C max.

(consult our Technical Service for use below +2°C)


Max strokes:

Made to order

Ø 32 to 40 mm 8500 mm










Ø 50 mm 8000 mm

STANDARD MODELS

Piston rod Ø	Port size	MODEL		ACCESSORIES					
		Internal guide Non-magnetic	External guide Non-magnetic	Banjo Flow control	Straight Fitting	Elbow Fitting	Service Kit		
	32	G1/4	M/146032/*						
Non-magnetic piston	40	G1/4	M/146040/*			C0K510628	C02250628	C02470628	QM/146132/88/*
	50	G3/8	M/146050/*			C0K510628	C02250628	C02470628	QM/146140/88/*
						C0K510838	C02250838	C02470838	QM/146150/88/*

* Insert stroke length in mm

For other diameters see Lintra Models on page 38

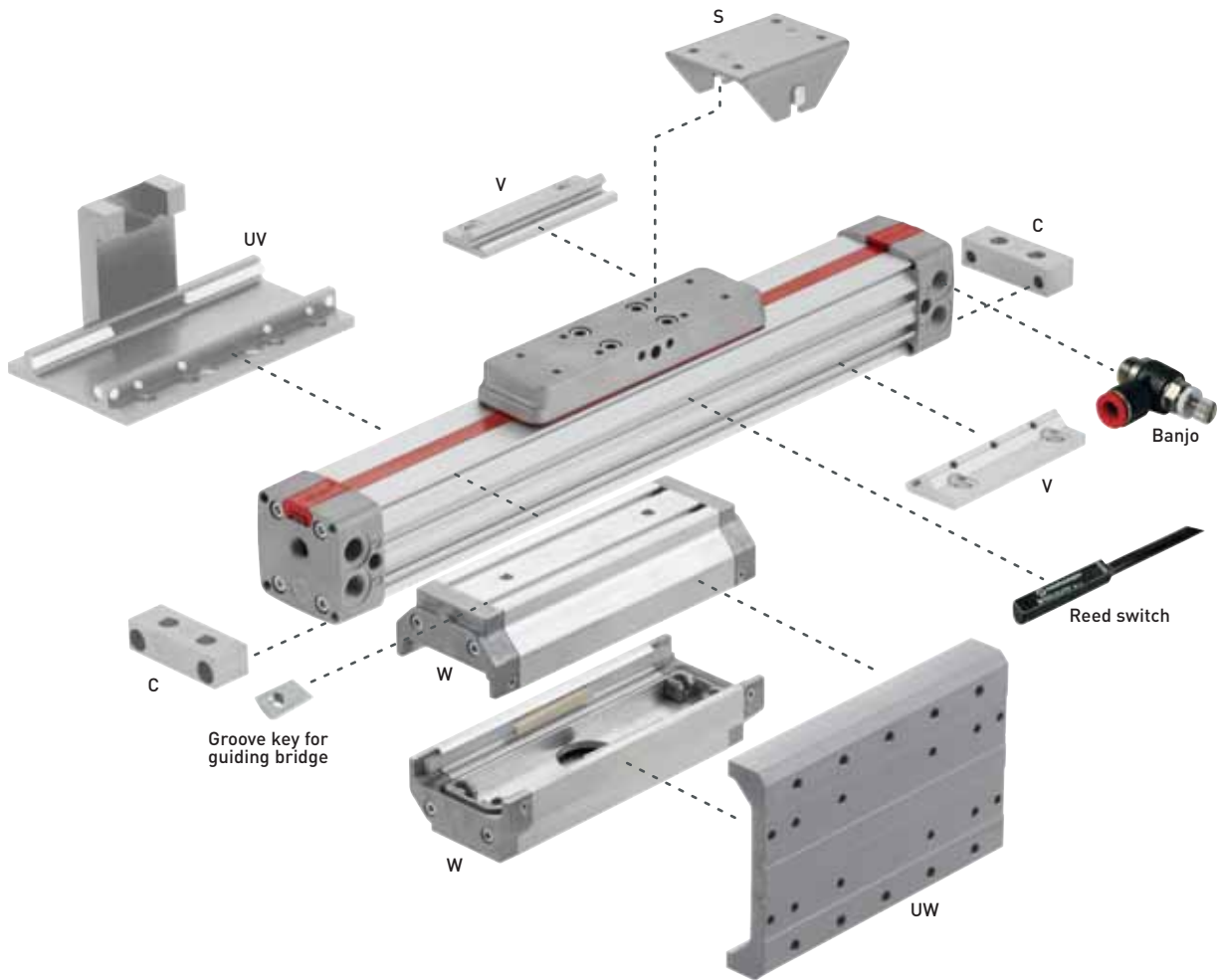
Piston rod Ø	Port size	MODEL			ACCESSORIES						
		Internal guide Magnetic	External guide Magnetic	Precision roller guide Magnetic	Reed switch with integral 5m cable	Banjo Flow control	Straight Fitting	Elbow Fitting	Service Kit		
	32	G1/4	M/146032/M/*								
magnetic piston	40	G1/4	M/146040/M/*				M/50/LSU/5V	C0K510628	C02250628	C02470628	QM/146132/88/*
	50	G3/8	M/146050/M/*				M/50/LSU/5V	C0K510628	C02250628	C02470628	QM/146140/88/*
								C0K510838	C02250838	C02470838	QM/146150/88/*

* Insert stroke length in mm

For other diameters see Lintra Models on page 38

For information on additional magnetic switches see page 63

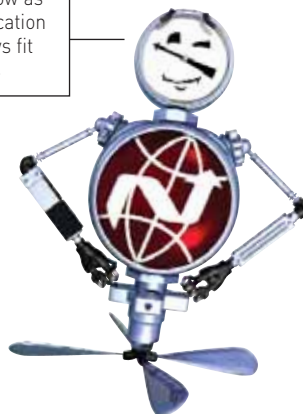
MOUNTINGS



∅	C	S*	UV*	UW**	V	W**	Groove key for guiding bridge
32	QM/46032/21	QM/146032/37	QM/46032/34	QM/46132/36	QM/46032/32	QM/146132/35	M/P74065
40	QM/46040/21	QM/146040/37	QM/46040/34	QM/46140/36	QM/46040/32	QM/146140/35	M/P74066
50	QM/46050/21	QM/146050/37	QM/46050/34	QM/46150/36	QM/46050/32	QM/146150/35	M/P41858

* Suitable for internally guided models only, ** Suitable for external guided models only.

Setting air pressure as low as possible to suit the application will save money - always fit pressure regulators



M/60100/M Slide units

Double acting - Ø 10 to 40 mm



High quality sliding bearings ensure long durable life and high guidance performance

Double piston rod provides high bending and torsional rigidity

Magnetic piston as standard

Easy to install-reduces costly design time

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

Double acting with magnetic piston and buffer cushioning

Operating pressure:

1 to 8 bar

Operating temperature:

0°C to +80°C.

Consult our Technical Service for use below +2°C

STANDARD MODELS

Ø	Port size	MODEL	ACCESSORIES					Service Kit
			Reed switch with integral 5m cable	Switch mounting	Banjo Flow Control <small>Tube diameter in bold</small>	Straight Fitting	Elbow Fitting	
	10	M5						
	16	M5	M/50/LSU/5V	M/P72487	C0K510405	C02250405	C02470405	QM/60111/M/00
	25	M5	M/50/LSU/5V	M/P72487	C0K510405	C02250405	C02470405	QM/60116/M/00
	32	G1/8	M/50/LSU/5V	M/P72487	C0K510405	C02250405	C02470405	QM/60125/M/00
	40	G1/8	M/50/LSU/5V	M/P72487	C0K510618	C02250618	C02470618	QM/60132/M/00
			M/50/LSU/5V	M/P72487	C0K510618	C02250618	C02470618	QM/60140/M/00

* Insert stroke length in mm.

For information on additional magnetic switches see page 63

Standard strokes

Ø	25	50	75	100	125	150	175	200
10	•	•	•					
16	•	•	•	•	•			
25		•	•	•	•	•	•	
32			•	•	•	•	•	•
40				•	•	•	•	•

Other stroke lengths are not available

M/61000/M, M/61000/MR Guiding and stopper cylinder

Double acting - Ø 32 to 100 mm



- Guiding accuracy $\pm 0,02$ mm
- Non-rotation accuracy $\pm 0,02^\circ$
- Integrated heavy duty guide rods
- Linear ball bearing option provides precision guiding for higher speeds
- Plain bearing option offers higher side load capacity
- Easy installation
- Magnetic piston as standard
- Buffer pad for noise reduction

TECHNICAL DATA

- Medium:**
Compressed air, filtered, lubricated or non-lubricated
 - Operating pressure:**
1 to 10 bar
 - Operating temperature:**
-10°C to +80 °C
- Consult our Technical Service for use below +2°C

STANDARD MODELS

Ø	Port size	MODEL		ACCESSORIES			
		Plain bearings	Ball bearings	Reed switch with integral 5m cable	Banjo Flow control <small>Tube diameter in bold</small>	Straight Fitting	Elbow Fitting
32	G1/8	M/61032/M/*	M/61032/MR/*	M/50/LSU/5V	C0K510618	C02250618	C02470618
40	G1/8	M/61040/M/*	M/61040/MR/*	M/50/LSU/5V	C0K510618	C02250618	C02470618
50	G1/4	M/61050/M/*	M/61050/MR/*	M/50/LSU/5V	C0K510628	C02250628	C02470628
63	G1/4	M/61063/M/*	M/61063/MR/*	M/50/LSU/5V	C0K510628	C02250628	C02470628
80	G1/4	M/61080/M/*	M/61080/MR/*	M/50/LSU/5V	C0K510628	C02250628	C02470628
100	G1/4	M/61100/M/*	M/61100/MR/*	M/50/LSU/5V	C0K510628	C02250628	C02470628

* Insert stroke length in mm.
For information on additional magnetic switches see page 63

For further information



www.norgren.com/info/nec/en043

M/61200/M, M/61200/MR Slide tables

Double acting - Ø 16 to 32 mm



M/61200/M: Slide table with adjustable guide
M/61200/MR: Slide table with precision linear ball bearing
 Stroke adjustable at each endposition
 High repeatability
 Compact design

TECHNICAL DATA

Medium:
 Compressed air, filtered, lubricated or non-lubricated

Operation:
 M/61200/M
 Double acting with adjustable guide
 M/61200/MR
 Double acting with precision linear ball bearing

Operating pressure:
 1 to 10 bar

Operating temperature:
 0°C to +80 °C
 Consult our Technical Service for use below +2°C

STANDARD MODELS

Ø	Port size	MODEL		ACCESSORIES				
		Adjustable guide	Precision linear ball bearings	Reed switch with integral 5m cable	Banjo Flow control	Straight Fitting	Elbow Fitting	
					Tube diameter in bold			
	16	M5	M/61216/M/*	M/61216/MR/*	M/50/LSU/5V	C0K510405	C02250405	C02470405
	20	M5	M/61220/M/*	M/61220/MR/*	M/50/LSU/5V	C0K510405	C02250405	C02470405
	25	M5	M/61225/M/*	M/61225/MR/*	M/50/LSU/5V	C0K510405	C02250405	C02470405
	32	G1/8	M/61232/M/*	M/61232/MR/*	M/50/LSU/5V	C0K510618	C02250618	C02470618

* Insert stroke length in mm
 For information on additional magnetic switches see page 63

Standard strokes

Ø	25	50	75	100
16	•	•	•	•
20	•	•	•	•
25	•	•	•	•
32	•	•	•	•

M/160300/M/11, M/160300/M/12 Angular grippers

Single acting, double acting - Magnetic piston - Ø 8 to 25 mm



- Smooth, accurate movement
- Long, uninterrupted service life
- Low weight
- Compact size
- Integral magnets for positional feedback

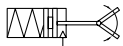
TECHNICAL DATA

- Medium:**
Compressed air, filtered, lubricated or non-lubricated
- Operation:**
Single acting, angular, magnetic piston (M/160300/M/11)
Double acting angular, magnetic piston (M/160300/M/12)
- Operating pressure:**
2 to 7 bar
(Ø 8 mm 3,6 to 7 bar
Ø 10 mm 3 to 7 bar)
- Operating temperature:**
0°C to +60°C
Consult our Technical Service for use below +2°C
- Mounting:**
Mounting holes on three faces

STANDARD MODELS - SINGLE ACTING

Ø	Port size	Effective gripping force (N) at 5 bar*		MODEL	ACCESSORIES			
		Opening	Closing		Switch with straight integral 3m cable	Switch with elbow integral 3m cable	Straight Fitting	Elbow Fitting
8	M3 x 0,5	0,6	1,0	M/160305/M/11				
10	M3 x 0,5	1,0	1,4	M/160306/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250403	M02470403
16	M5 x 0,8	2,8	10,0	M/160307/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
20	M5 x 0,8	6,0	18,0	M/160308/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
25	M5 x 0,8	10,0	38,0	M/160309/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405

Tube diameter in bold



STANDARD MODELS - DOUBLE ACTING

Ø	Port size	Effective gripping force (N) at 5 bar*		MODEL	ACCESSORIES			
		Opening	Closing		Switch with straight integral 3m cable	Switch with elbow integral 3m cable	Straight Fitting	Elbow Fitting
8	M3 x 0,5	2,6	1,6	M/160305/M/12				
10	M3 x 0,5	3,8	2,5	M/160306/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250403	M02470403
16	M5 x 0,8	17,0	12,8	M/160307/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
20	M5 x 0,8	32,0	24,0	M/160308/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
25	M5 x 0,8	62,0	48,0	M/160309/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405

Tube diameter in bold



* Grip point L= 30mm. [see data sheet for details]
For information on additional magnetic switches see page 65

For further information



www.norgren.com/info/nec/en045

M/160330/M/12 180° Angular grippers

Double acting. Magnetic piston - Ø 16 to 20 mm



- Smooth, accurate movement
- Long, uninterrupted service life
- Low weight
- Compact size
- Integral magnets for positional feedback

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

Double acting, angular, magnetic piston

Operating pressure:

2 to 7 bar

Operating temperature:

0°C to +60°C

Consult our Technical Service for use below +2°C

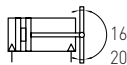
Mounting:

Mounting holes on three surfaces

STANDARD MODELS

Ø	Port size	Effective gripping force (N) at 5 bar*		MODEL	ACCESSORIES			
		Opening	Closing		Switch with straight integral 3m cable	Switch with elbow integral 3m cable	Straight Fitting	Elbow Fitting
16	M5 x 0,8	64/L	55,0/L	 M/160335/M/12	 M/344/EAU/3PV	 M/344/EAU/3APV	 M0225 0 405	 M0247 0 405
20	M5 x 0,8	134,0/L	113,0/L	M/160336/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M0225 0 405	M0247 0 405

Tube diameter in bold



* Example - calculating the effective closing gripping force (N) at 5 bar for the M/160335/M/12
 Establish the approximate grip point in cm (not mm), example 4 cm
 Calculation = 55 / L
 = 55 / 4
 Effective closing gripping force = 13,75N.

For further information



www.norgren.com/info/nec/en046

M/160340/M/11, M/160340/M/12 Parallel grippers

Single acting, double acting.- Magnetic piston - Ø 10 to 25 mm



Ideal for general purpose gripping applications
 Smooth, accurate movement
 Long, uninterrupted service life
 Low weight
 Compact size
 Integral magnets for positional feedback

TECHNICAL DATA

Medium:
 Compressed air, filtered, lubricated or non-lubricated

Operation:
 Single acting, parallel, magnetic piston (M/160340/M/11)
 Double acting, parallel, magnetic piston (M/160340/M/12)

Operating pressure:
 2,5 to 7 bar (Ø 10 mm 3,5 to 7 bar)
 M/160340/M/12: 1 to 7 bar (Ø 10 mm 1,8 to 7 bar Ø 16 mm 1,2 to 7 bar)

Operating temperature:
 0°C to +60°C
 Consult our Technical Service for use below +2°C

Mounting:
 Mounting holes on three faces

Gripping repeatability:
 +/- 0,01 mm

STANDARD MODELS - SINGLE ACTING

Ø	Port size	Effective gripping force (N) at 5 bar*		MODEL	ACCESSORIES			
		Opening	Closing		Switch with straight integral 3m cable	Switch with elbow integral 3m cable	Straight Fitting	Elbow Fitting
10	M3 x 0,5	2	4,9	M/160343/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250403	M02470403
16	M5 x 0,8	3,9	21,0	M/160344/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
20	M5 x 0,8	6,9	36,4	M/160345/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
25	M5 x 0,8	13,7	54,0	M/160346/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405

Tube diameter in bold

STANDARD MODELS - DOUBLE ACTING

Ø	Port size	Effective gripping force (N) at 5 bar*		MODEL	ACCESSORIES			
		Opening	Closing		Switch with straight integral 3m cable	Switch with elbow integral 3m cable	Straight Fitting	Elbow Fitting
10	M3 x 0,5	14,6	9,4	M/160343/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250403	M02470403
16	M5 x 0,8	34,0	25,5	M/160344/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
20	M5 x 0,8	60,9	45,7	M/160345/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
25	M5 x 0,8	87,0	67,0	M/160346/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405

Tube diameter in bold

* Grip point L= 30mm. (see data sheet for details)
 For information on additional magnetic switches see page 65

For further information



www.norgren.com/info/nec/en047

M/160350/M/11, M/160350/M/12 Parallel grippers - precision

Single acting, double acting - Magnetic piston - Ø 8 to 50 mm



Ideal for applications demanding accuracy and precise repeatability

Smooth, accurate movement

Long, uninterrupted service life

Low weight

Compact size

Integral magnets for positional feedback

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

Single acting, parallel, magnetic piston (M/160350/M/11)
Double acting, parallel, magnetic piston (M/160350/M/12)

Operating pressure:

7 bar maximum

Operating temperature:

+0°C to +60°C

Consult our Technical Service for use below +2°C

Mounting:

Mounting holes on three faces






Gripping repeatability:

+/- 0,01 mm

Accuracy to centre:

+/- 0,07 mm

STANDARD MODELS - SINGLE ACTING

Ø	Port size	Effective gripping force (N) at 5 bar*		MODEL	ACCESSORIES			
		Opening	Closing		Switch with straight integral 3m cable	Switch with elbow integral 3m cable	Straight Fitting	Elbow Fitting
								
8	M3 x 0,5	2,7	4,1	M/160354/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250403	M02470403
10	M3 x 0,5	2,4	6,8	M/160355/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250403	M02470403
16	M5 x 0,8	5,4	20,0	M/160356/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
20	M5 x 0,8	7,3	34,0	M/160357/M/11	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405

Tube diameter in bold

STANDARD MODELS - DOUBLE ACTING

Ø	Port size	Effective gripping force (N) at 5 bar*		MODEL	ACCESSORIES			
		Opening	Closing		Switch with straight integral 3m cable	Switch with elbow integral 3m cable	Straight Fitting	Elbow Fitting
								
8	M3 x 0,5	9,9	5,8	M/160354/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250403	M02470403
10	M3 x 0,5	15,0	9,4	M/160355/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250403	M02470403
16	M5 x 0,8	39,0	26,0	M/160356/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
20	M5 x 0,8	60,0	45,0	M/160357/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
32	M5 x 0,8	176,0	157,0	M/160358/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M02250405	M02470405
50	Rc 1/8	414,0	347,0	M/160359/M/12	M/344/EAU/3PV	M/344/EAU/3APV	C01250418	C01470418

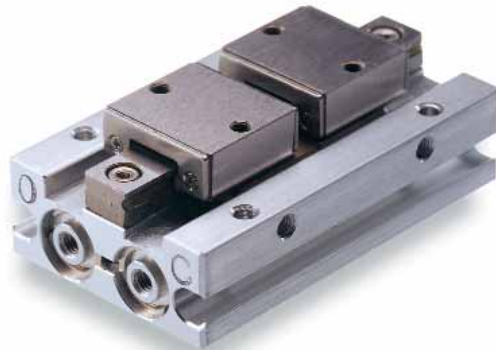
Tube diameter in bold

* Grip point L= 30mm. [see data sheet for details]

For information on additional magnetic switches see page 65

M/160360/M/12 Parallel grippers - low profile

Double acting - Magnetic piston - Ø 8 & 12 mm



Ideal for applications where operating space is restricted
 Smooth, accurate movement
 Long, uninterrupted service life
 Low weight
 Compact size
 Integral magnets for positional feedback

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operating pressure:

M/160364/M/12: 2 to 7 bar
 M/160365/M/12: 1,5 to 7 bar

Operating temperature:

0°C to +60°C
 Consult our Technical Service for use below +2°C

Mounting:

Mounting holes on three faces

Gripping repeatability:

+/- 0,07 mm

Accuracy to centre:

+/- 0,1 mm

STANDARD MODELS

Ø	Port size	Effective gripping force (N) at 5 bar*		MODEL	ACCESSORIES				
		Opening	Closing		Switch with straight integral 3m cable	Switch with elbow integral 3m cable	Straight Fitting	Elbow Fitting	
	8	M3 x 0,5	16,7	16,7	 M/160364/M/12 M/160365/M/12	 M/344/EAU/3PV M/344/EAU/3PV	 M/344/EAU/3APV M/344/EAU/3APV	 M02250403 M02250405	 M02470403 M02470405
	12	M5 x 0,8	44,0	44,0		Tube diameter in bold			

* Grip point L= 30mm. [see data sheet for details]
 For information on additional magnetic switches see page 65

For further information



www.norgren.com/info/nec/en049

M/160380/M/12 Parallel grippers - three jaw

Double acting - Magnetic piston - Ø 16 & 20 mm



Ideal for gripping spheres or components with circular faces
 Smooth, accurate movement
 Long, uninterrupted service life
 Low weight
 Compact size
 Integral magnets for positional feedback

TECHNICAL DATA

Medium:
 Compressed air, filtered, lubricated or non-lubricated

Operation:
 Double acting, three jaw parallel, magnetic piston

Operating pressure:
 2 to 7 bar
 1,5 to 7 bar M/160386/M/12

Operating temperature:
 +0°C to +60°
 Consult our Technical Service for use below +2°C

Mounting:
 Mounting holes on base

Gripping repeatability:
 +/- 0,01 mm

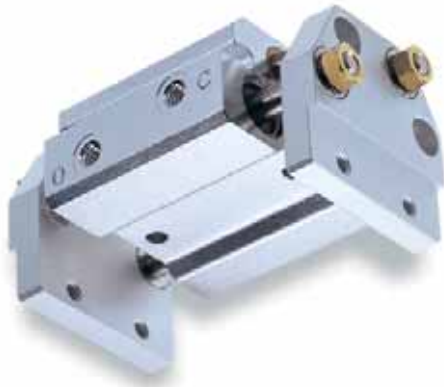
STANDARD MODELS

Ø	Port size	Effective gripping force (N) at 5 bar*		MODEL	ACCESSORIES			
		Opening	Closing		Switch with straight integral 3m cable	Switch with elbow integral 3m cable	Straight Fitting	Elbow Fitting
								
16	M5 x 0,8	27	20,0	M/160385/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M0225 0405	M0247 0405
20	M5 x 0,8	36,0	27,0	M/160386/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M0225 0405	M0247 0405

* Grip point L= 30mm. (see data sheet for details)
 For information on additional magnetic switches see page 65

M/160390/M/12 Parallel grippers - long stroke

Double acting - Magnetic piston - Ø 12 to 25 mm



Ideal for handling wide components
 Smooth, accurate movement
 Long, uninterrupted service life
 Low weight
 Compact size
 Integral magnets for positional feedback

TECHNICAL DATA

Medium:
 Compressed air, filtered, lubricated or non-lubricated

Operating pressure:
 2 to 7 bar

Operating temperature:
 0°C to +60°C
 Consult our Technical Service for use below +2°C

Mounting:
 Mounting holes on two faces

STANDARD MODELS

Ø	Port size	Effective gripping force (N) at 5 bar*		MODEL	ACCESSORIES			
		Opening	Closing		Switch with straight integral 3m cable	Switch with elbow integral 3m cable	Straight Fitting	Elbow Fitting
								
12	M5 x 0,8	27	27	M/160394/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M0225 0 405	M0247 0 405
16	M5 x 0,8	55,0	55,0	M/160395/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M0225 0 405	M0247 0 405
20	M5 x 0,8	85	85	M/160396/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M0225 0 405	M0247 0 405
25	M5 x 0,8	135,0	135,0	M/160397/M/12	M/344/EAU/3PV	M/344/EAU/3APV	M0225 0 405	M0247 0 405

* Grip point L= 30mm. (see data sheet for details)
 For information on additional magnetic switches see page 65

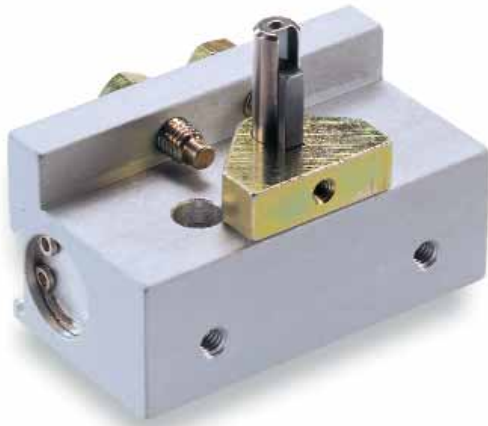
For further information



www.norgren.com/info/nec/en051

M/60210/M Miniature rotary actuators

Double acting - Magnetic piston - 0,23...1,0 Nm/6 bar



Smooth operation with zero backlash
 Lightweight
 Compact envelope dimensions
 Integral magnets for positional feedback

TECHNICAL DATA






Medium:
 Compressed air, filtered, lubricated or non-lubricated

Operating pressure:
 1 to 7 bar

Operating temperature:
 +5°C to +60°C
 Consult our Technical Service for use below +2°C

Mounting:
 Mounting holes in body

STANDARD MODELS

Ø	Port size	Effective torque (Nm) at 6 bar	Angle of rotation	MODEL	ACCESSORIES				
					Switch with straight integral 5m cable	Switch with elbow integral 5m cable	Straight Fitting	Elbow Fitting	
							Tube diameter in bold		
									
	12	M5 x 0,8	0,23	90°	M/60215/M/90	M/346/LAU/5PV	M/346/EAU/5APV	M0225 0405	M0247 0405
	12	M5 x 0,8	0,23	180°	M/60215/M/180	M/346/LAU/5PV	M/346/EAU/5APV	M0225 0405	M0247 0405
	20	M5 x 0,8	1,00	90°	M/60216/M/90	M/346/LAU/5PV	M/346/EAU/5APV	M0225 0405	M0247 0405
	20	M5 x 0,8	1,00	180°	M/60216/M/180	M/346/LAU/5PV	M/346/EAU/5APV	M0225 0405	M0247 0405



For information on additional magnetic switches see page 65

For further information



www.norgren.com/info/nec/en052

M/60270/M Compact rotary actuators

Double acting - Magnetic piston - 1,5...7,4 Nm/6 bar



High torque levels from a compact product
 Minimal radial or thrust shudder means smooth operation
 Adjustable angle of rotation
 Integral magnets for positional feedback

TECHNICAL DATA

Medium:
 Compressed air filtered, lubricated or non-lubricated

Operating pressure:
 1 to 7 bar

Operating temperature:
 +5°C to +60°C
 Consult our Technical Service for use below +2°C

Mounting:
 Mounting holes on three faces

STANDARD MODELS

Ø	Port size	Effective torque (Nm) at 6 bar	Angle of rotation	Angle adjustment range	MODEL	ACCESSORIES			
						Switch with straight integral 5m cable	Switch with elbow integral 5m cable	Straight Fitting	Elbow Fitting
14	M5 x 0,8	1,50	90°	70°...95°	M/60215/M/90	M/346/LAU/5PV	M/346/EAU/5APV	M02250405	M02470405
14	M5 x 0,8	1,50	180°	160°...185°	M/60215/M/180	M/346/LAU/5PV	M/346/EAU/5APV	M02250405	M02470405
16	M5 x 0,8	2,60	90°	70°...95°	M/60216/M/90	M/346/LAU/5PV	M/346/EAU/5APV	M02250405	M02470405
16	M5 x 0,8	2,60	180°	160°...185°	M/60216/M/180	M/346/LAU/5PV	M/346/EAU/5APV	M02250405	M02470405
18	M5 x 0,8	4,60	90°	70°...95°	M/60215/M/90	M/346/LAU/5PV	M/346/EAU/5APV	M02250405	M02470405
18	M5 x 0,8	4,60	180°	160°...185°	M/60215/M/180	M/346/LAU/5PV	M/346/EAU/5APV	M02250405	M02470405
22	M5 x 0,8	7,40	90°	70°...95°	M/60216/M/90	M/346/LAU/5PV	M/346/EAU/5APV	M02250405	M02470405
22	M5 x 0,8	7,40	180°	160°...185°	M/60216/M/180	M/346/LAU/5PV	M/346/EAU/5APV	M02250405	M02470405



For information on additional magnetic switches see page 65

For further information



www.norgren.com/info/nec/en053

M/60280 Rotary vane actuators

Double acting - 30° to 270° rotation angles - 0,2...241,73 Nm/6 bar



Modern, compact design.
 Suitable for torques from 0,058 to 402,46 Nm.
 Fixed and adjustable rotation angles.
 Single and double vane construction.

Operating pressure:
 2 to 10 bar
 3 to 7 bar
 (M/60280, M/60281, M/60281/IE)
 2 to 7 bar
 (M/60282, M/60283, M/60282/IE,)

Operating temperature:
 +5°C to +60°C
 Consult our Technical Service for use below +2°C

TECHNICAL DATA




Medium:
 Compressed air, filtered, lubricated or non-lubricated

Operation:
 Double acting rotary vane with buffer cushioning
 M/60280 – M/60288 and IE models – single vane
 M/60284/TI – M/60288/TI and TE models – double vane

Rotation tolerance:
 0° to +4°: M/60280 - M/60283
 0° to +3°: M/60284 - M/60288, M/60284/TI – M/60288/TI
 -9° to +3°: M/60281/IE – M/60284/IE, M/60284/TE

STANDARD MODELS

Mini rotary vane actuators - Models with fixed or adjustable rotation angles

Torque at 6 bar (Nm)**	Single vane	Double vane	Rotation angle			MODEL	ACCESORIES	
			90°	180°	270°		Straight fitting	Elbow fitting
0,13	•		•	•		 M/60280/* M/60281/* M/60281/IE M/60282/* M/60282/IE M/60283/* M/60283/IE M/60284/* M/60284/IE M/60284/TI M/60284/TE	 C02250405 C02250405 C02250405 C02250405 C02250405 C02250618 C02250618 C02250618 C02250618 C02250618 C02250618 C02250618	 C02470405 C02470405 C02470405 C02470405 C02470405 C02470618 C02470618 C02470618 C02470618 C02470618 C02470618 C02470618
0,35	•		•	•				
0,35	•		•	•***				
1,04	•		•	•				
1,04	•		•	•***				
1,91	•		•	•				
1,91	•		•	•***				
4,02	•		•	•	•			
4,02	•		•	•	•****			
9,31		•	•		•****			
9,31		•	•		•*****			

* Insert rotation angle in degrees. ** Theoretical torque. *** Adjustable from 30° to 180° **** Adjustable from 30° to 270° ***** Adjustable from 30° to 90°

Rotary vane actuators - Models with fixed rotation angles

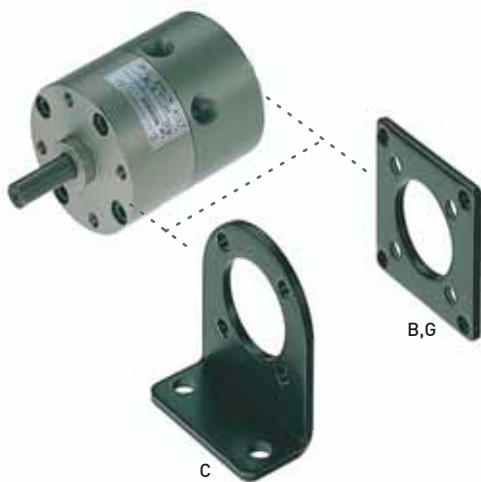
Torque at 6 bar (Nm)**	Single vane	Double vane	Rotation angle			MODEL	ACCESORIES	
			90°	180°	270°		Straight fitting	Elbow fitting
			Tube diameter in bold					
5,78	•		•	•	•			
12,55		•	•	•	•	M/60285/TI	C02250618	C02470618
17,65	•		•	•	•	M/60286/*	C02250628	C02470628
40,69		•	•	•	•	M/60286/TI	C02250628	C02470628
33,83	•		•	•	•	M/60287/*	C02250838	C02470838
87,39		•	•	•	•	M/60287/TI	C02250838	C02470838
120,91	•		•	•	•	M/60288/*	C02250848	C02470848
241,73		•	•	•	•	M/60288/TI	C02250848	C02470848



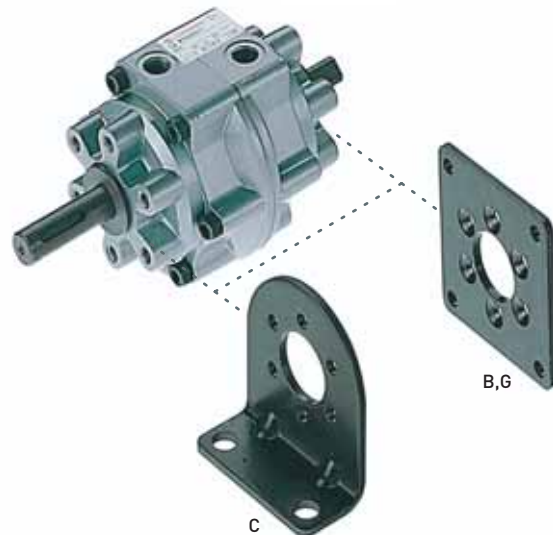
* Insert rotation angle in degrees.
** Theoretical torque

MOUNTINGS

M/60280



M/60285



MODEL	B, G	C
M/60280	QM/60280/22	QM/60280/21
M/60281, .../TI	QM/60281/22	QM/60281/21
M/60282, .../TI	QM/60282/22	QM/60282/21
M/60283, .../TI	QM/60283/22	QM/60283/21
M/60284, .../TI	QM/60284/22	QM/60284/21

MODEL	B, G	C
M/60285, .../TI	QM/60285/22	QM/60285/21
M/60286, .../TI	QM/60286/22	QM/60286/21
M/60287, .../TI	-	QM/60287/21
M/60288, .../TI	-	QM/60288/21

M/162000/MI Rack & pinion version - Rotary cylinders

Double acting - Ø 32 to 125 mm



Suitable torques from 1,2 to 51,0 Nm/bar

Rotation angles 90°, 180°, 270°, 360°

Switches can be mounted flush with the profile

VDMA 24562 pitch to use standard VDMA mountings

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

Double acting, magnetic piston, adjustable cushioning

Operating pressure:

1,5 to 10 bar

Operating temperature:

-5°C to +80°C max.






Consult our Technical Service for use below +2°C

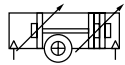
Rotation angles:

90, 180, 270, 360°

Fixed up to +8°

STANDARD MODELS

Ø	Theoretical torque (Nm) at 6 bar	Cushion length (mm)	Initial cushion volume (cm ³)	MODEL	ACCESSORIES			
					Reed switch with integral 5 m cable	Banjo Flow control <small>Tube diameter in bold</small>	Straight Fitting	Elbow Fitting
								
32	7,2	19	12,3	M/162032/MI/*	M/50/LSU/5V	C0K510618	C02250618	C02470618
40	13,8	22	20,7	M/162040/MI/*	M/50/LSU/5V	C0K510628	C02250628	C02470628
50	23,4	24	36	M/162050/MI/*	M/50/LSU/5V	C0K510828	C02250828	C02470828
63	43,8	24	64,0	M/162063/MI/*	M/50/LSU/5V	C0K510838	C02250838	C02470838
80	94,2	27	116	M/162080/MI/*	M/50/LSU/5V	C0K511038	C02251038	C02471038
100	157,8	34	242,0	M/162100/MI/*	M/50/LSU/5V	C0K511248	C02251248	C02471248
125	306	41	451	M/162125/MI/*	M/50/LSU/5V	C0K511248	C02251248	C02471248



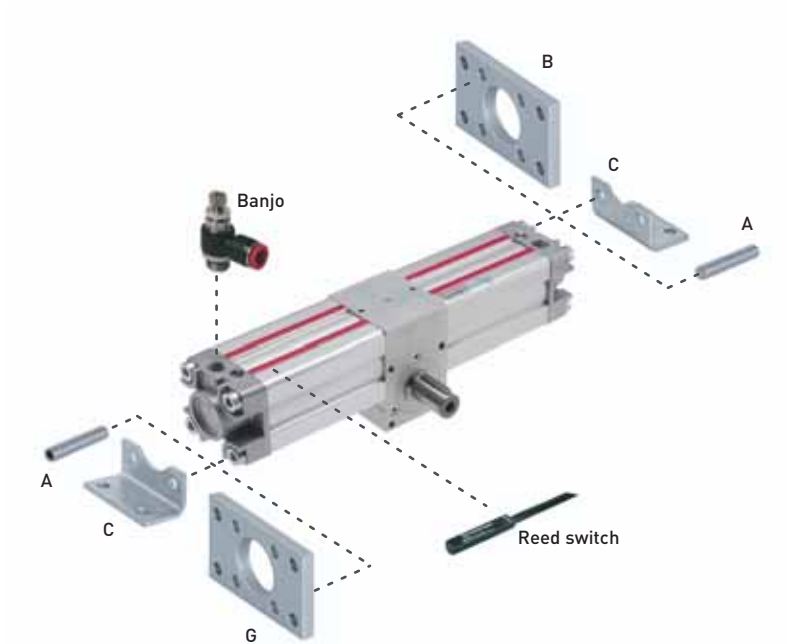
* Insert rotation angle in degrees.

For information on additional magnetic switches see page 63

Rotation angle

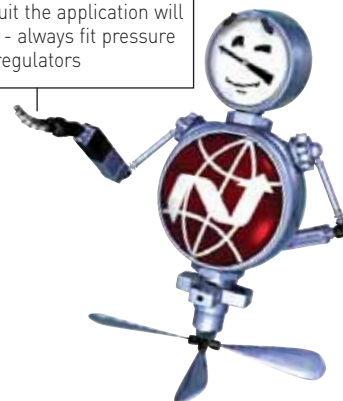
Ø	90°	180°	270°	360°
32	•	•	•	
40	•	•		•
50	•		•	•
63	•	•		
80	•		•	
100	•	•		
125	•	•		•

MOUNTINGS



∅	A	B, G	C
32	QM/8032/35	QA/8032/22	QA/8032/21
40	QM/8032/35	QA/8040/22	QA/8040/21
50	QM/8050/35	QA/8050/22	QA/8050/21
63	QM/8050/35	QA/8063/22	QA/8063/21
80	QM/8080/35	QA/8080/22	QA/8080/21
100	QM/8080/35	QA/8100/22	QA/8100/21
125	QM/8125/35	QM/8125/22	QM/8125/21

Setting air pressure as low as possible to suit the application will save money - always fit pressure regulators



KM/8000/M Stainless steel roundline cylinders (ISO)

Double acting, ISO 6432 - Ø 12 to 25 mm



- High corrosion and acid resistance
- Magnetic piston as standard
- Conforms to ISO 6432
- Suitable for applications in the food industry
- Buffer or adjustable cushioning
- Nose mounting nut and piston rod locknut as standard

TECHNICAL DATA

- Medium:**
Compressed air, filtered, lubricated or non-lubricated
- Operation:**
Double acting, magnetic piston with buffer or adjustable cushioning
- Operating pressure:**
1 to 10 bar
- Operating temperature:**
-10°C to +80°C max.
Consult our Technical Service for use below +2°C

STANDARD MODELS

	Ø	Piston rod Ø	Port size	MODEL		ACCESSORIES					
				Buffer cushioning	Adjustable cushioning	Reed switch with integral 5m cable	Switch mounting > 15 mm stroke	Switch mounting < 15 mm stroke	Banjo Flow control	Straight Fitting	Elbow Fitting
	12	6	M5	KM/8012/M/*							
Adjustable Cushion	16	6	M5	KM/8016/M/*		M/50/LSU/5V	QM/33/012/22	QM/33/010/23	10K51 0405	10225 0405	10247 0405
	20	8	G1/8	KM/8020/M/*	KM/8021/M/*	M/50/LSU/5V	QM/33/016/22	QM/33/016/23	10K51 0405	10225 0405	10247 0405
	25	10	G1/8	KM/8025/M/*	KM/8026/M/*	M/50/LSU/5V	QM/33/020/22	QM/33/020/23	10K51 0618	10225 0618	10247 0618
						M/50/LSU/5V	QM/33/025/22	QM/33/025/23	10K51 0618	10225 0618	10247 0618

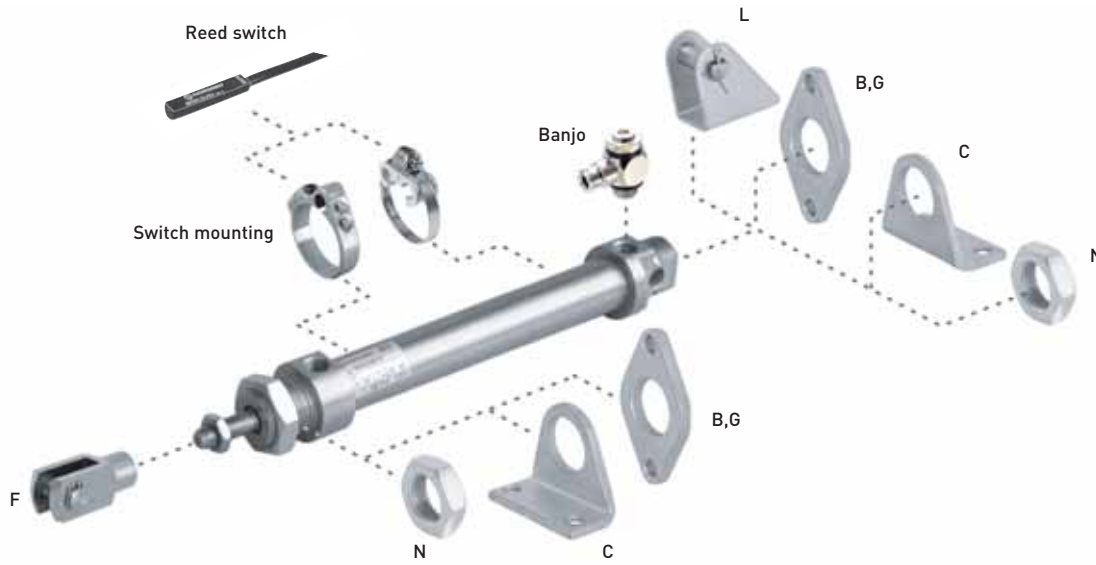
Tube diameter in bold

* Insert stroke length in mm.

For information on additional magnetic switches see page 63

Nickel plated brass fittings

MOUNTINGS



Ø	B, G	C	F	L	N
12	M/P72405	M/P72403	KQM/8012/25	KQM/8012/24	M/P72398
16	M/P72405	M/P72403	KQM/8012/25	KQM/8012/24	M/P72398
20	M/P72406	M/P72404	KQM/8020/25	KQM/8020/24	M/P72399
25	M/P72406	M/P72404	KQM/55433/25	KQM/8020/24	M/P72399

Remember ! - most applications benefit from fittings flow regulators to set optimum speed of operation



M/3000 Series Impact cylinders

Energy at 5,5 bar operating pressure. 24,5-253 Joule



High energy output
Ideally suited to a wide range of marking, piercing and light presswork applications
Rugged, corrosion-resistant construction

For all applications complete guarding must be incorporated, either fixed or interlocked with the control circuit. For further information consult Norgren technical sales. An Impact Cylinder gives an output rated in energy i.e. thrust x distance. This energy is achieved by rapidly accelerating the piston rod and tool assembly over a free stroke of approximately 65 mm, before contacting the work. The rapid acceleration is produced by the differential area arrangement which quickly exposes the full area of the piston to high pressure air built up in the reservoir at rear end of the cylinder.

TECHNICAL DATA






Operating pressure:
 2,7 ... 10bar

Operating temperature:
 -20C to +80C

For use below +5C consult Norgren technical sales.

Mounting position:
 vertical

STANDARD MODELS

Ø	Max. Cycle rate/min	Energy in Joule at 5,5 bar	MODEL	ACCESSORIES			
				Straight Fitting	Elbow Fitting	Service Kit	
				<small>Tube diameter in bold</small>			
	2 inch	60	24,5				
	3 inch	50	63				
	4 inch	40	136				
	6 inch	35	252				
					C02250628 C02250838 C02251038 C02251248	C02470628 C02470838 C02471038 C02471248	QM/3020/00 QM/3030/00 QM/3040/00 QM/3060/00

MOUNTINGS



Ø	B, G
2	QM/871
3	QM/984
4	QM/987
6	QM/990

For further information



www.norgren.com/info/nec/en060

PM/31000 Compact air bellows

Single acting - Ø 2 3/4 to 12 inch



Frictionless operation
 No maintenance or lubrication
 Ideal for short stroke, high-force applications
 High vibration isolation level
 Easy, compact installation

TECHNICAL DATA

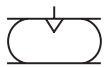
Medium:
 Compressed air, non-lubricated
Operating pressure:
 8 bar maximum
Operating temperature:
 -40°C to +70°C for PM/31000
 Consult our Technical Service for use below +2°C

Important instructions:

The design of these air bellows allows an operation at an angle of 5° to 25°. The top and bottom plate can be out of alignment, depending on the height of the air bellows and the number of convolutions. To avoid damage mechanical stops at both end positions have to be used. To return Air Bellows to their minimum height an external return force must be used. The thrust depends directly on the height of the air bellows: When height increases – the thrust decreases. As the outside diameter varies in operation there must be enough clearance around the air bellows.

STANDARD MODELS

	Nominal ø (inch) x convolutions	Maximum stroke (mm)	Port size	MODEL
	2 3/4 x 1	20	G1/4	PM/31021
	2 3/4 x 2	45	G1/4	PM/31022
	2 3/4 x 3	65	G1/4	PM/31023
	4 1/2 x 1	40	G3/8	PM/31041
	4 1/2 x 2	80	G3/8	PM/31042
	6 x 1	55	G1/2	PM/31061
	6 x 2	115	G1/2	PM/31062
	8 x 1	95	G3/4	PM/31081
	8 x 2	185	G3/4	PM/31082
	9 1/2 x 1	105	G3/4	PM/31091
	9 1/2 x 2	230	G3/4	PM/31092
	12 x 1	105	G3/4	PM/31121
	12 x 2	215	G3/4	PM/31122



Safety note: These actuators must not be pressurised when unrestrained.
 For exact calculation for compact air bellows please contact our Technical Service.

For further information



www.norgren.com/info/nec/en061

M/31000 Serviceable air bellows

Single acting - Ø 6 to 26 inch



Frictionless operation
No maintenance or lubrication
Ideal for short stroke,
high-force applications
High vibration isolation level
Simple to install

TECHNICAL DATA

Medium:

Compressed air, non-lubricated

Operating pressure:

8 bar maximum

Operating temperature:

-40°C to +70°C for M/31000

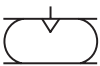
Consult our Technical Service for use below +2°C

Important instructions:

The design of these air bellows allows an operation at an angle of 5° to 25°. The top and bottom plate can be out of alignment, depending on the height of the air bellows and the number of convolutions. To avoid damage mechanical stops at both end positions have to be used. To return Air Bellows to their minimum height an external return force must be used. The thrust depends directly on the height of the air bellows: When height increases – the thrust decreases. As the outside diameter varies in operation there must be enough clearance around the air bellows.

STANDARD MODELS

	Nominal ø (inch) x convolutions	Maximum stroke (mm)	Port size	MODEL
	6 x 1	55	G1/2	M/31061
	6 x 2	115	G1/2	M/31062
	8 x 1	80	G1/2	M/31081
	8 x 2	175	G1/2	M/31082
	10 x 1	100	G1/2	M/31101
	10 x 2	225	G1/2	M/31102
	10 x 3	330	G1/2	M/31103
	12 x 1	100	G1/2	M/31121
	12 x 2	225	G1/2	M/31122
	12 x 3	330	G1/2	M/31123
	14 1/2 x 1	125	G1/2	M/31141
	14 1/2 x 2	265	G1/2	M/31142
	14 1/2 x 3	380	G1/2	M/31143
	16 x 2	315	G1/2	M/31162
	16 x 3	430	G1/2	M/31163
	21 x 2	280	G3/4	M/31212
	26 x 2	410	G3/4	M/31262



Safety note: These actuators must not be pressurised when unrestrained.
For exact calculation for compact air bellows please contact our Technical Service.

For further information



www.norgren.com/info/nec/en062

MAGNETICALLY OPERATED SWITCHES

For roundline, ISO/VDMA, VDMA compact, Lintra® rodless cylinders and slide tables

These switches are delivered with an adaptor as standard.

This combination allows you to use M/50 switches instead of QM/33, QM/34 and QM/134

	MODEL	Type	Voltage V a.c.##	V d.c.##	Current max.	Temperature °C	LED	Features	Cable length	Cable type	Plug-in cable Straight	90°
IP 66	M/50/LSU/*V	Reed	10 ... 240	10 ... 170	180 mA	-20° ... +80°	•	-	2, 5, 10 m	PVC 2 x 0,25	-	-
	M/50/LSU/5U	Reed	10 ... 240	10 ... 170	180 mA	-20° ... +80°	•	-	5 m	PUR 2 x 0,25	-	-
	TM/50/RAU/2S	Reed	10 ... 240	10 ... 170	180 mA	-20° ... +150°	-	High temperature	2 m	Silicon 2 x 0,25	-	-
	M/50/RAC/5V	Reed	10 ... 240	10 ... 170	180 mA	-20° ... +80°	-	Changeover	5 m	PVC 3 x 0,25	-	-
	M/50/LSU/CP	Reed	10 ... 60	10 ... 75	180 mA	-20° ... +80°	•	Plug M8x1	-0,27 m	PVC 3 x 0,25	M/P73001/5	-
IP 66 with plug-in cable	M/50/EAP/*V	Solid state	-	10 ... 30	150 mA	-20° ... +80°	•	PNP	2, 5, 10 m	PVC 3 x 0,25	-	-
	M/50/EAP/CP	Solid state	-	10 ... 30	150 mA	-20° ... +80°	•	PNP, Plug M8x1	-0,27 m	PVC 3 x 0,25	M/P73001/5	-
	M/50/EAN/*V	Solid state	-	10 ... 30	150 mA	-20° ... +80°	•	NPN	2, 5, 10 m	PVC 3 x 0,25	-	-
	M/50/EAN/CP	Solid state	-	10 ... 30	150 mA	-20° ... +80°	•	NPN, Plug M8x1	5 m	PVC 3 x 0,25	M/P73001/5	-

* 5m is the length of the plug-in cable. The switch features an M8 x 1 plug with a 0,3m cable
10 VA, ## Reed 10 W; Solid state 4,5 W

DIRECT MOUNTED SWITCHES

Ø 32 ... 125 mm	Ø 16 ... 80 mm	Ø 32 ... 50 mm	Ø 32 ... 125 mm	Ø 32 ... 100 mm	Ø 20 ... 63 mm	Ø 16 ... 32 mm
PRA/181000/M	M/46000/M	M/146000/M	M/162000/M	M/61000/M, .../MR	RA/191000/M, .../MX	M/61200/M, .../MR
PRA/182000/M	M/46100/M	M/146100/M			RA/193000/M, .../MX	
	M/46200/M	M/146200/M			RA/192000/M, .../MX	

BRACKET MOUNTED SWITCHES

Ø 32 ... 200 mm	Ø 32 ... 100 mm	Ø 10 ... 63 mm	Ø 10 ... 25 mm	Ø 12 ... 100 mm	Ø 10 ... 40 mm
RA/8000/M	RM/55401/M	RT/57100/M	RM/8000/M	RM/91000/M	M/60100/M
		RT/57200/M	RM/28000/M	RM/92000/M	
			KM/8000/M		

				Stroke length ≥15 mm	Stroke length <15 mm		
Ø32 QM/27/2/1	Ø32 QM/33/432/22	Ø10 QM/33/010/22	Ø10 QM/33/010/22	Ø10 QM/33/010/23	Ø12 M/P72487	Ø10 M/P72487	
Ø40 QM/27/2/1	Ø40 QM/33/440/22	Ø12 QM/33/012/22	Ø12 QM/33/012/22	Ø12 QM/33/016/23	Ø16 M/P72487	Ø16 M/P72487	
Ø50 QM/27/2/1	Ø50 QM/33/450/22	Ø16 QM/33/016/22	Ø16 QM/33/016/22	Ø16 QM/33/016/23	Ø20 M/P72487	Ø25 M/P72487	
Ø63 QM/27/2/1	Ø63 QM/33/463/22	Ø20 QM/33/020/22	Ø20 QM/33/020/22	Ø20 QM/33/020/23	Ø25 M/P72487	Ø32 M/P72487	
Ø80 QM/27/2/1	Ø80 QM/33/480/22	Ø25 QM/33/025/22	Ø25 QM/33/025/22	Ø25 QM/33/025/23	Ø32 M/P72487	Ø40 M/P72487	
Ø100 QM/27/2/1	Ø100 QM/33/410/22	Ø32 QM/33/032/22			Ø40 M/P72487		
Ø125 QM/27/2/1		Ø40 QM/33/040/22			Ø50 M/P72487		
Ø160 QM/27/2/1		Ø50 QM/33/050/22			Ø63 M/P72487		
Ø200 QM/27/2/1		Ø63 QM/33/063/22			Ø80 M/P72487		
					Ø100 M/P72487		



For further information



www.norgren.com/info/nec/en063

MAGNETICALLY OPERATED SWITCHES

FOR SERIES RA/8000/M

	Model	Type	Voltage V a. c. #	V d.c. ##	Current max.	Temperature °C	Function	LED	Features	Cable length	Cable type	Plug-in cable
	TQM/31/2	Reed	10 ... 240	10 ... 240	2 A	-20° ... +150°	NO	-	-	2 m	Silicon 2x0,75	-
	TQM/31/5	Reed	10 ... 240	10 ... 240	2 A	-20° ... +150°	NO	-	-	5 m	Silicon 2x0,75	-
	TQM/31/10	Reed	10 ... 240	10 ... 240	2 A	-20° ... +150°	NO	-	-	10 m	Silicon 2x0,75	-
	QM/32/2	Reed	10 ... 240	10 ... 240	1 A	-20° ... +80°	NO	•	-	2 m	PVC 2x0,75	-
	QM/32/5	Reed	10 ... 240	10 ... 240	1 A	-20° ... +80°	NO	•	-	5 m	PVC 2x0,75	-
	QM/32/10	Reed	10 ... 240	10 ... 240	1 A	-20° ... +80°	NO	•	-	10 m	PVC 2x0,75	-
	QM/32/2/PU	Reed	10 ... 240	10 ... 240	1 A	-20° ... +80°	NO	•	-	2 m	PUR 2x0,75	-
	QM/32/P	Reed	10 ... 240	10 ... 240	1 A	-20° ... +80°	NO	•	-	-	-	•
	QM/132/2	Solid state	-	10 ... 30	200 mA	-20° ... +80°	NO	•	PNP	2 m	PVC 3x0,5	-
	QM/132/5	Solid state	-	10 ... 30	200 mA	-20° ... +80°	NO	•	PNP	5 m	PVC 3x0,5	-
	QM/132/10	Solid state	-	10 ... 30	200 mA	-20° ... +80°	NO	•	PNP	10 m	PVC 3x0,5	-
	QM/132/5/PU	Solid state	-	10 ... 30	200 mA	-20° ... +80°	NO	•	PNP	5 m	PUR 3x0,34	-
	QM/132/E/5	Solid state	-	10 ... 30	200 mA	-20° ... +80°	NO	•	PNP, Pulse stretcher	5 m	PUR 3x0,34	-
QM/132/P	Solid state	-	10 ... 30	200 mA	-20° ... +80°	NO	•	PNP	-	-	•	

50 VA ## Reed 50 W; Solid state 6 W

PLUG WITH CABLE FOR QM/32/P AND QM/132/P

Cable type	MODEL
PVC 3x0,34	M/P34692/5
PUR 3x0,34	M/P34694/5

BRACKET MOUNTED SWITCHES QM/31, QM/32 & QM/132



Ø 32 ... 320 mm
RA/8000/M



Ø (mm)	MODEL
Ø 32 ... 63	QM/31/032/22
Ø 80 ... 125	QM/31/080/22
Ø 160 & 200	QM/31/160/22
Ø 250	QM/31/250/22
Ø 320	QM/31/320/22

For further information



www.norgren.com/info/nec/en064

MAGNETICALLY OPERATED SWITCHES

FOR GRIPPERS

MODEL	Type	Voltage V d.c.	Current max.	Temperature °C	LED	Signal output	Cable length	Cable type	Straight cable connection	90° elbow cable connection
M/344/EAU/1APV	2-wire solid state	10 ... 28	20 mA	0° ... +60°	•	-	1 m	PVC	-	•
M/344/EAU/1PV	2-wire solid state	10 ... 28	20 mA	0° ... +60°	•	-	1 m	PVC	•	-
M/344/EAU/3APV	2-wire solid state	10 ... 28	20 mA	0° ... +60°	•	-	3 m	PVC	-	•
M/344/EAU/3PV	2-wire solid state	10 ... 28	20 mA	0° ... +60°	•	-	3 m	PVC	•	-
M/344/EAN/1APV	3-wire solid state	4,5 ... 28	50 mA	0° ... +60°	•	NPN	1 m	PVC	-	•
M/344/EAN/1PV	3-wire solid state	4,5 ... 28	50 mA	0° ... +60°	•	NPN	1 m	PVC	•	-
M/344/EAN/3APV	3-wire solid state	4,5 ... 28	50 mA	0° ... +60°	•	NPN	3 m	PVC	•	•
M/344/EAN/3PV	3-wire solid state	4,5 ... 28	50 mA	0° ... +60°	•	NPN	3 m	PVC	•	-

FOR MINIATURE AND COMPACT ROTARY ACTUATORS

MODEL	Type	Voltage V d.c.	V a.c.	Current max.	Temperature °C	LED	Signal output	Cable length	Cable type	Straight cable connection	90° elbow cable connection
M/346/LAU/1PV	Reed	12 ... 100	12 ... 125	40 mA	-10 ... +60	•	-	1,5 m	PVC	-	•
M/346/LAU/5PV	Reed	12 ... 100	12 ... 125	40 mA	-10 ... +60	•	-	5 m	PVC	-	•
M/346/EAU/1APV	2-wire solid state	4,5 ... 28	-	70 mA	-10 ... +60	•	-	1,5 m	PVC	-	•
M/346/EAU/5APV	2-wire solid state	4,5 ... 28	-	70 mA	-10 ... +60	•	-	5 m	PVC	-	•
M/345/EAU/1PV	2-wire solid state	10 ... 28	-	40 mA	0 ... +60	•	-	1 m	PVC	•	-
M/345/EAU/3PV	2-wire solid state	10 ... 28	-	40 mA	0 ... +60	•	-	3 m	PVC	•	-
M/345/EAN/1PV	3-wire solid state	4,5 ... 28	-	100 mA	0 ... +60	•	NPN	1 m	PVC	•	-
M/345/EAN/3PV	3-wire solid state	4,5 ... 28	-	100 mA	0 ... +60	•	NPN	3 m	PVC	•	-

DIRECT MOUNTED SWITCHES

Ø 16 ... 50 mm	Ø 16 ... 50 mm	Ø 8 ... 12 mm	Ø 12 ... 25 mm	Ø 16 ... 20 mm	Ø 12 & 20 mm	Ø 14 ... 22 mm
M/1603**/M/11	M/1603**/M/12	M/160360/M/12	M/160390/M/12	M/160380/M/12	M/60210/M	M/60270/M

For further details, please consult our Technical Service

For further information



www.norgren.com/info/nec/en065



store.norgren.com

WEBSTORE

Confidence
in a click



store.norgren.com



M/58112 Single stage vacuum pumps



Very high induced air capacity
 14% lower air consumption than comparable single stage units
 No wearing parts
 Compatible with a wide range of vacuum line contaminants
 Allows direct connection of suction cups and piped exhaust facility

TECHNICAL DATA

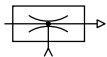
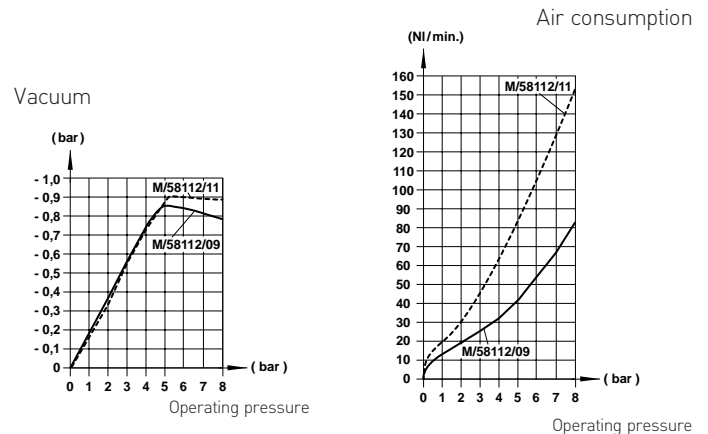
Medium:
 Compressed air, filtered and non-lubricated

Operating pressure:
 5 bar optimum
 8 bar maximum

Operating temperature:
 -20° to +150°C
 Consult our Technical Service for use below +2°C

Vacuum:
 -0,85 bar maximum (M/58112/09)
 -0,90 bar maximum (M/58112/11)

OPERATING CHARACTERISTICS



INDUCED AIR (NL/MIN), FREE AIR

0 bar	-0,1 bar	-0,2 bar	-0,3 bar	-0,4 bar	-0,5 bar	-0,6 bar	-0,7 bar	-0,8 bar	MODEL
28	24	18	14	11	8	5,5	3	1	M/58112/09
55	47	36	28	23	17	12	6	2,5	M/58112/11

TIME (SEC) FOR EVACUATION OF 1 LITRE VOLUME TO VACUUM

-0,1 bar	-0,2 bar	-0,3 bar	-0,4 bar	-0,5 bar	-0,6 bar	-0,7 bar	-0,8 bar	-0,85 bar	-0,9 bar	MODEL
0,27	0,56	0,89	1,44	2,00	2,88	4,31	7,97	14,36	-	M/58112/09
0,15	0,31	0,49	0,72	1,00	1,41	2,08	3,71	5,60	8,11	M/58112/11

Note: Values given in the tables are theoretical and apply to an operating pressure of 5 bar.

RECOMMENDED TUBE DIMENSIONS (INTERNAL DIAMETER)

Compressed air	Vacuum	Exhaust	MODEL
> Ø 3	> Ø 5	> Ø 6	M/58112/09
> Ø 3	> Ø 7	> Ø 9	M/58112/11

For further information



www.norgren.com/info/nec/en067

M/58102 Multi stage vacuum pumps



- Fast response
- Compact, lightweight
- Low sound level
- Compressed air driven
- Simple installation
- Standard and non-return valve types

TECHNICAL DATA

Medium:

Compressed air, filtered and non-lubricated

Operating pressure:

6 bar maximum

Operating temperature:

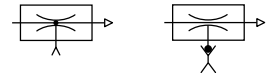
-20°C to +80°C for M/58102/10 to M/58102/30

-20°C to +60°C for M/58102/60 to M/58102/120

Consult our Technical Service for use below +2°C

Vacuum:

-0,87 bar maximum



Type	Silencer**	Induced air (NI/min)*	Air consumption (NI/min)*	kg	MODEL
Standard	Ported	80	49	0,080	M/58102/10
Standard	Ported	160	98	0,095	M/58102/20
Standard	Ported	240	144	0,110	M/58102/30
Standard	Integral	480	285	0,855	M/58102/60
Standard	Integral	708	471	1,105	M/58102/90
Standard	Integral	910	528	1,150	M/58102/120
Non-return valve	Ported	80	49	0,080	M/58102/N/10
Non-return valve	Ported	160	98	0,095	M/58102/N/20
Non-return valve	Ported	240	144	0,110	M/58102/N/30
Non-return valve	Integral	480	285	0,855	M/58102/N/60
Non-return valve	Integral	708	471	1,105	M/58102/N/90
Non-return valve	Integral	910	528	1,150	M/58102/N/120

*Values given are theoretical and apply to an operating pressure of 6 bar.
**For models with ported silencer, use silencer number M/58019

CHARACTERISTICS

Induced air (NI/min), free air

0 bar	-0,1 bar	-0,2 bar	-0,3 bar	-0,4 bar	-0,5 bar	-0,6 bar	-0,7 bar	-0,8 bar	MODEL
80	55	32	28	25	18	13	5	1,5	M/58102/10
160	110	64	56	50	36	26	10	3	M/58102/20
240	165	96	84	75	54	39	15	4,5	M/58102/30
480	270	182	168	150	108	78	30	9	M/58102/60
708	427	273	252	225	162	117	45	13,5	M/58102/90
910	568	355	336	300	216	156	60	18	M/58102/120

TIME (SEC) FOR EVACUATION OF 1 LITRE VOLUME TO VACUUM

0 bar	-0,1 bar	-0,2 bar	-0,3 bar	-0,4 bar	-0,5 bar	-0,6 bar	-0,7 bar	-0,8 bar	-0,85 bar	MODEL
0,070	0,200	0,450	0,750	1,150	1,730	2,610	4,130	5,820		M/58102/10
0,035	0,100	0,230	0,370	0,570	0,860	1,320	2,070	2,920		M/58102/20
0,023	0,070	0,150	0,250	0,380	0,580	0,870	1,380	1,940		M/58102/30
0,012	0,034	0,080	0,120	0,190	0,290	0,440	0,690	0,970		M/58102/60
0,007	0,023	0,050	0,080	0,130	0,190	0,290	0,460	0,650		M/58102/90
0,006	0,017	0,040	0,060	0,100	0,150	0,220	0,350	0,490		M/58102/120

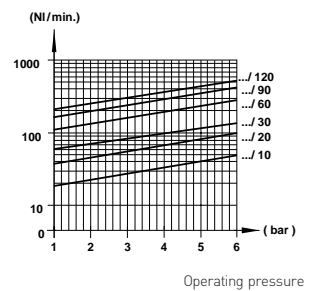
Note: Values given in the tables are theoretical and apply to an operating pressure of 6 bar.

RECOMMENDED TUBE DIMENSIONS (INTERNAL DIAMETER)

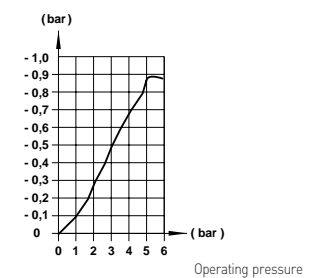
Compressed air	Vacuum	Exhaust	MODEL
> Ø 3	> Ø 7	> Ø 9	M/58102/10
> Ø 3	> Ø 7	> Ø 9	M/58102/20
> Ø 4	> Ø 9	> Ø 9	M/58102/30
> Ø 4	> Ø 19	-	M/58102/60
> Ø 5	> Ø 19	-	M/58102/90
> Ø 5	> Ø 22	-	M/58102/120

OPERATING CHARACTERISTICS

Air consumption



Vacuum



M/58300, M/58400 Suction cups

Ø 6 to 150 mm



Flat cups ideal where minimal movement is required for pliable materials

Bellows cups ideal where level compensation is required

TECHNICAL DATA

Medium:
Vacuum

Operating temperature:

-10°C to +70°C for nitrile rubber cups
-30°C to +200°C for silicone cups

Consult our Technical Service for use below +2°C

MATERIALS

M/58000/01

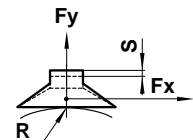
Cups: nitrile rubber
Connection fittings: aluminium

M/58000/02

Cups: silicone
Connection fittings: aluminium

Ø mm	Fy (N)			R (mm)	S (mm)	V (cm ³)	kg	MODEL
	-0,2 bar	-0,6 bar	-0,9 bar					
6	0,5	1,5	2,3	5	1,5	0,017	0,001	M/58301/*
8	1	2,5	3,5	7	1,5	0,041	0,001	M/58302/*
10	1,5	4	6	9	2	0,065	0,001	M/58303/*
15	2,7	8	12	12	4	0,330	0,001	M/58304/*
20	5	15,5	23	13	2	0,500	0,008	M/58305/*
25	9	26,5	40	17,5	2,5	0,750	0,010	M/58306/*
30	11	34	51	26	2,5	1,3	0,012	M/58307/*
40	19	57,5	86	37	3,5	3	0,011	M/58308/*
50	30	91	135	41	4	4,2	0,016	M/58309/*
80	86	260	390	100	6	21	0,058	M/58310/*
120	180	540	810	365	6	82	0,359	M/58311/*
150	280	842	1250	380	9	177	0,59	M/58312/*
Bellows								
10	1,5	3,5	5	3	4	0,225	0,003	M/58403/*
15	3	6	8	5	6	0,750	0,004	M/58404/*
20	6	10	14	8	5	1,40	0,005	M/58405/*
30	12	22	28	15	12	4,75	0,013	M/58407/*
40	22	40	50	30	10	9,25	0,017	M/58408/*
50	34	66	84	40	15	26,25	0,026	M/58409/*
75	75	170	230	70	14	76	0,075	M/58410/*
110	140	350	460	85	36	111	0,386	M/58411/*
150	300	700	900	250	38	260	0,918	M/58412/*

*Insert material code, nitrile: 01, silicone: 02
Note: Theoretical values are given in this table. Always allow a safety factor of > 2.



MATERIAL CHARACTERISTICS

	Nitrile rubber	Silicone
Wear resistance	Good	Fair
Oil resistance	Excellent	Fair
Weather resistance	Good	Excellent
Ozone resistance	Fair	Excellent

$F_x = \mu \times F_y$
where μ is the frictional coefficient of the material being handled.
An approximate guide:
Plastic $\mu = 0,4$ to $0,5$
Steel, oiled $\mu = 0,1$ to $0,3$
Glass $\mu = 0,3$ to $0,5$

For further information



www.norgren.com/info/nec/en069

VACUUM SWITCHES

M/58028/VB, .../VF (Pneumatic) - M/58027/VAP/P../VAN/P (Electronic) - M/58024/VB, .../VF (Electrical)



Quick easy installation.

Converts vacuum signal into pneumatic, electronic or electrical output

Fully adjustable switching points

Digital and analogue output on electronic type

TECHNICAL DATA

Medium:

Vacuum (M/58027, M/58024)

Compressed air filtered and non-lubricated (M/58028/VB, M/58028/VF)

See individual technical details

TECHNICAL DATA (PNEUMATIC)

Operating pressure:

2 to 6 bar (pressure valve)

Adjustment :

-0,3 to -0,85 bar

Operating temperature:

-10°C to +80°C

Consult our Technical Service for use below +2°C

Tube:

Ø 4 mm

TECHNICAL DATA (ELECTRONIC)

Supply voltage (U_b):

10,8 to 30 V d.c.

(reverse polarity protection)

Switching voltage:

(U_b) -0,7 V

Quiescent current consumption:

25 mA

Digital output:

Normally open, 125 mA max.

Switching point:

Adjustable between 0 and -1 bar

Analogue output (0 to -1 bar):

1 to 5 V d.c. (± 0,004 V)

Operating temperature:

+50°C max.

Consult our Technical Service for use below +2°C

TECHNICAL DATA (ELECTRICAL)

Switching voltage:

250 V d.c./a.c.

Switching current:

2 A max.

Adjustment :

-0,2 to -1 bar

Repeatability:

± 0,1 bar

Differential reset pressure:

Up to 0,2 bar

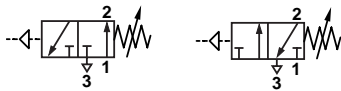
Switching frequency:

200/min.

Operating temperature:

-20°C to +80°C

Consult our Technical Service for use below +2°C



RECOMMENDED TUBE DIMENSIONS (INTERNAL DIAMETER)

Type	Fuction	Kg	MODEL
Pneumatic	Normally open	0,032	M/58028/VB
Pneumatic	Normally closed	0,032	M/58028/VF
Electronic	NPN + LED	0,028	M/58027/VAN/P
Electronic	PNP + LED	0,028	M/58027/VAP/P
Electrical	Normally open	0,090	M/58024/VB
Electrical	Normally closed	0,090	M/58024/VF

ACCESSORIES FOR ELECTRONIC SWITCH

Plug in cable



M/P72014/5

5 m cable length.

For further information



www.norgren.com/info/nec/en070

VACUUM ACCESSORIES

FLEXIBLE CONNECTORS FOR SUCTION CUPS

Type	Size	MODEL
Flexible connector	G1/8	M/58001
Flexible connector	G1/2	M/58002

For use where a vertical offset motion is involved on curved surfaces
Simple to install



LEVEL COMPENSATORS FOR SUCTION CUPS

Type	Size	MODEL
Level compensator	M5	M/58007
Level compensator	G1/8	M/58008
Level compensator	G1/2	M/58009

Allows for variations in product positioning
For use with uneven product forms



VACUUM GAUGES

Range	MODEL
0 ... -1 bar	M/58080

0 to -1 bar calibration
Accurate vacuum level indication



SILENCERS

Port size	MODEL
G3/8	M/58019

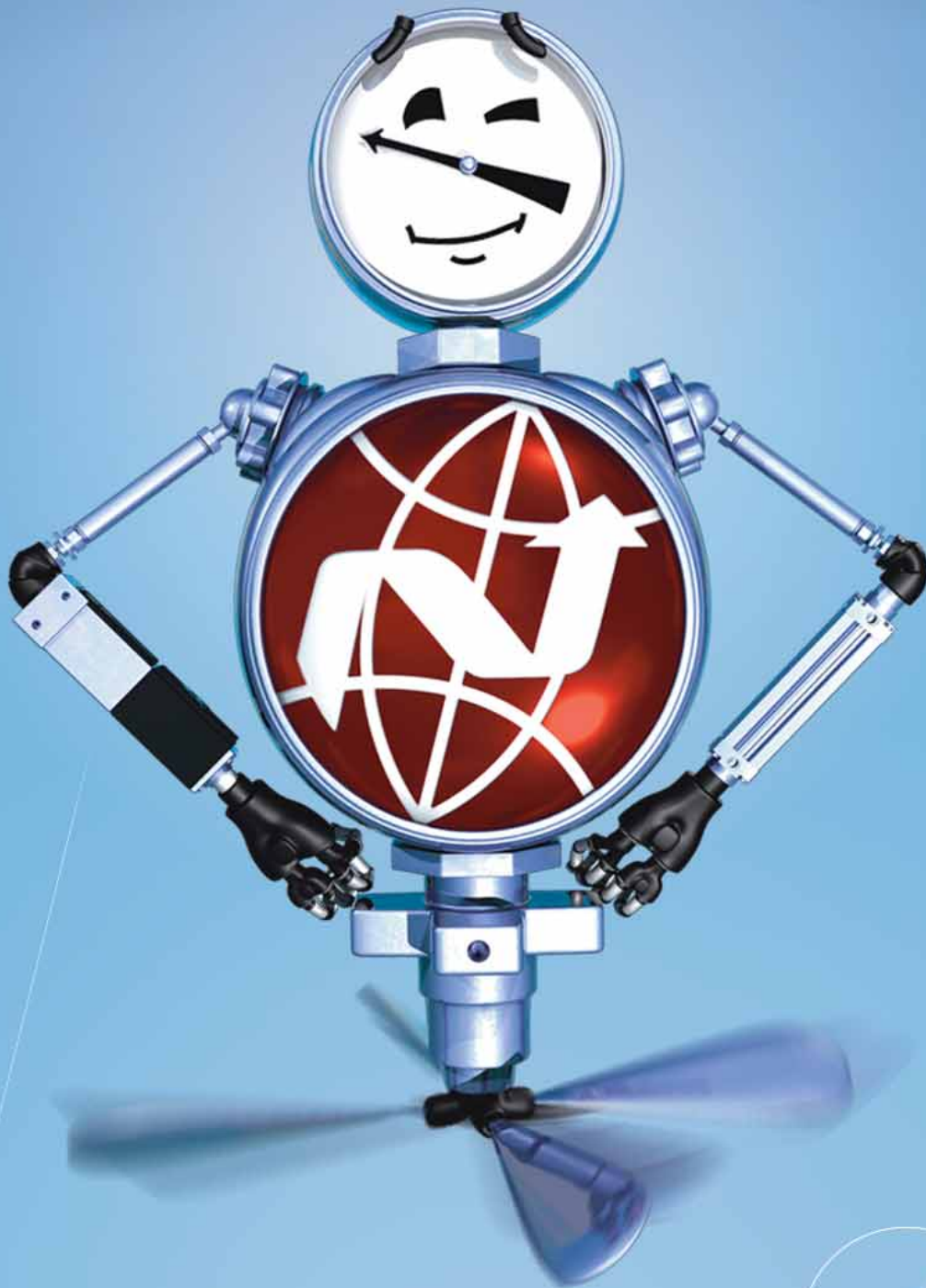
Compact
Optimum air silencing characteristics



For further information



www.norgren.com/info/nec/en071



V A L V E S

Norgren provides a comprehensive inventory of high performance valves and valve islands, to accommodate your applications. At www.norgren.com, you can download additional technical information. For more information on a specific valve or valve series, simply go to the web address printed under the online icons at the bottom of the following valve product pages.

E X P R E S S V A L V E S

Norgren valves and accessories

Valve islands with multipole/Fieldbus

VS18/VS26
2 x 2/2, 2 x 3/2, 5/2, 5/3
18/26 mm Mini ISO Plug-in
≤1350 l/min



Page 80

VM10
2x3/2, 5/2, 5/3
Ø 3, 4, 6 mm
≤430 l/min



Page 78

VM15
2 x 3/2, 5/2, 5/3
Ø 6, 8, 10 mm
≤1000 l/min



Page 78

Manifold and sub-base valves – solenoid and pilot actuated

V40/V41
2x3/2, 5/2, 5/3
18 mm Mini ISO
≤680 l/min



Page 81

V44/V45
2x3/2, 5/2, 5/3
26 mm Mini ISO
≤1200 l/min



Page 86

SXE/P ISO★STAR
5/2, 5/3
ISO#1 ... #3 glandless
≤4400 l/min



Page 92

UM/22000
5/2, 5/3
ISO#4 soft seal
≤5660 l/min



Page 94

Solenoid valves

V60 ... V63
3/2, 5/2, 5/3, 2 x 3/2
G $\frac{1}{8}$... G $\frac{1}{2}$
≤4200 l/min



Page 98

Herion 26230
5/2, 5/3
G $\frac{1}{8}$ G $\frac{1}{2}$
≤3000 l/min



Page 120

VE10/VE15
2/2, 3/2
M5, G $\frac{1}{8}$
≤194 l/min



Page 104

Solenoid valves

Excel 22
3/2
G $\frac{1}{4}$
 ≤ 77 l/min



Page 108

Excel 32
2/2, 3/2
G $\frac{1}{4}$, G $\frac{1}{2}$, Interface
 ≤ 260 l/min



Page 110

80200
3/2
G $\frac{1}{2}$... G1
 ≤ 35000 l/min



Page 131

Special valves

Two-hand control unit
G $\frac{1}{2}$



Page 112

XSz Safety valves
3/2
G $\frac{1}{2}$... G2



Page 131

Manual/
mechanical
valves

Super X
3/2, 5/2, 5/3
G $\frac{1}{4}$, G $\frac{1}{2}$
 ≤ 965 l/min



Page 114

Proportional
valves

VP50
G $\frac{1}{4}$
 ≤ 10 bar
1200 l/min



Page 118

VP51
G $\frac{1}{4}$
 ≤ 10 bar
1200 l/min



Page 119

E X P R E S S V A L V E S

**NAMUR/Process
industry valves**

82400 Click-on®
2/2
G $\frac{1}{4}$... G2
 $\leq 41 \text{ m}^3/\text{h}$



Page 121

82530
2/2
G $\frac{1}{4}$... G $\frac{1}{2}$
 $\leq 1,7 \text{ m}^3/\text{h}$



Page 122

84500
2/2
G $\frac{1}{2}$... G2
 $\leq 37 \text{ m}^3/\text{h}$



Page 123

84520
2/2
G $\frac{1}{2}$... G1
 $\leq 14 \text{ m}^3/\text{h}$



Page 123

97100 NAMUR
3/2, 5/2, 5/3
G $\frac{1}{4}$
 $\leq 750 \text{ l/min}$



Page 124

24011 NAMUR
3/2
G $\frac{1}{4}$, $\frac{1}{8}$ NPT
 $\leq 340 \text{ l/min}$



Page 126

95000
2/2
G $\frac{1}{4}$
 $\leq 550 \text{ l/min}$



Page 128

96000
3/2
G $\frac{1}{4}$
 $\leq 450 \text{ l/min}$



Page 129

Flow control valves

T15
Ø 3 ... 12 mm



Page 134

T1000 Uni-directional
M5, G½ ... G½



Page 135

T1100 Bi-directional
G½, G½



Page 135

M/800
½, ¾, 1" BSPP



Page 137

T20 & 0405
M5, ½ ... ½ BSP



Page 137

Other valves

T55 Non-return
M5, ½ ... ½" BSP



Page 132

T60 Air fuses
½ ... 1½ BSP



Page 132

T51, T52, T53 Non-return
Ø 4 ... 12 mm
5/32 ... ½"



Page 133

**Blocking, pressure reducing
& pneumatic sensor fittings**
Ø 4 ... 12 mm
½ ... ½ BSP



Page 136

T70, S/510 Quick Exhaust
½ ... ½ BSP



Page 138

T50 Non-return
Ø 4 ... 12 mm



Page 139

E X P R E S S V A L V E S

Other valves

M/7200 Sleeve valves
G $\frac{1}{2}$... G $\frac{1}{2}$



Page 139

T65 Shuttle valves
G $\frac{1}{8}$, G $\frac{1}{4}$



Page 139

S/636, M/637
Precision flow regulators
G $\frac{1}{8}$... G $\frac{1}{2}$



Page 139

S/520 Non-return
G $\frac{1}{8}$... G $\frac{1}{2}$



Page 139

Pressure switches

18 D Series
Pneumatic pressure switches
-1 ... 30 bar



Page 140

33 D Series
Electronic pressure switches
(pneumatic/allfluid)
-1 ... 400 bar



Page 141

VM SERIES Valve islands

Valve slices 2 x 3/2, 5/2 and 5/3 with integral push-in fittings - Ø 3 mm, 4 mm, 6 mm, 8 mm, 10 mm



- Multipole or individually wired for installation flexibility
- Interchangeable Fieldbus compatible modules
- Compact and lightweight
- Quick disconnect base (Pneumapole)
- High flow from 10 mm (VM10) and 15 mm (VM15) valve width
- Flexible design concept
- All major Fieldbus protocols available
- Integral push in fittings

TECHNICAL DATA

Medium:

Compressed air, filtered to 40 µm, lubricated or non-lubricated

Operation:

Spool valve indirectly actuated

Ambient temperature:

-5°C to +50°C

Consult our Technical Service for use below +2°C.

Degree of protection:

Individually wired	IP40
Multipole	IP65
Fieldbus	IP65

PRE-CONFIGURED MULTIPOLE VALVE ISLANDS - COMPLETE WITH ACCESORIES

Standard specification for models below

	VM10 Series	VM15 Series
Valves	internal pilot	internal pilot
Flow	up to 430 l/min	up to 1000 l/min
Operating pressure	8 bar maximum	8 bar maximum
Manual override	push only	push only
Outputs	6 mm push in fittings	10 mm push in fittings
Inputs	10 mm push in fittings	12 mm push in fittings
Voltage	24Vdc	24Vdc
Cable length	5 m	5 m
Connection	4 to 12 station - 25 pin D sub 16 station - 44 pin D sub	4 to 12 station - 25 pin D sub 16 station - 44 pin D sub



VM10 Series

Stations	MODEL			
	5/2 Sol/spring	5/2 Sol/sol	2*3/2 N/C	5/2 Sol/sol & 5/2 Sol/spring*
4	VM100402176		VM100402177	VM100402178
6	VM100602211		VM100602212	VM100602213
8	VM100802333		VM100802334	VM100802335
10	VM101002181		VM101002182	VM101002183
12	VM101202149		VM101202150	VM101202151
16	VM101602232		VM101602233	VM101602234

*5/2 sol/sol and 5/2 sol/spring combination islands provide an equal split of valve types



VM15 Series

Stations	MODEL			
	5/2 Sol/spring	5/2 Sol/sol	2*3/2 N/C	5/2 Sol/sol & 5/2 Sol/spring*
4	VM150400038		VM150400039	VM150400040
6	VM150600060		VM150600061	VM150600062
8	VM150800090		VM150800091	VM150800092
10	VM151000036		VM151000037	VM151000038
12	VM151200029		VM151200030	VM151200031
16	VM151600045		VM151600046	VM151600047

*5/2 sol/sol and 5/2 sol/spring combination islands provide an equal split of valve types

To configure your own island please visit vi.norgren.com.

For further information



www.norgren.com/info/nec/en78



FEATURES

- 1 Engineered polymer provides increased strength and weight reduction
- 2 Up to 32 solenoids enabling a reduction in the number of valve islands required
- 3 Single screw and hinge locking mechanism for securing each valve to the next facilitates simple valve addition & exchange (no tie rods)
- 4 Integral push in fittings reduce installation time, valve island size, component count and eliminate potential leak paths
- 5 Preconfigured islands complete with pre-fitted accessories (included in all island types - see below)
- 6 Through hole mounting enable valve islands to be directly mounted

>>430 l/min from a 10mm body width and 1000 l/min from a 15mm body width provides maximum flow to size ratio

>>Balanced spool design enables the valves to be used with both pressure an vacuum

>>Proven spool and seal pack design ensures a high life of 100,000,000 cycles

>>Available as individually wired, multipole and fieldbus versions



PRE-FITTED ACCESSORIES INCLUDED WITH ALL ISLANDS DETAILED ON PAGE 78



5 m right angled low profile pre-wired cable



Din rail/bracket mounting kit (pre-fitted)



Silencers/plugs (pre-fitted)



VS18&26 SERIES VALVE ISLANDS Plug-in Mini ISO Valves

2 x 2/2, 2 x 3/2, 5/2 and 5/3 valves, ISO 15407-2 - Sizes 18 mm and 26 mm



- 24 V d.c. or 115 V a.c. Multipole
- Integrated Fieldbus
- Field expandable with single add-on stations
- Dual spool technology
 - VS18G-VS26G Glandless spool and sleeve for long life
 - VS18S-VS26S Softseal spool for high flow
- Wide range of accessories
- UL and ATEX
- Universal PNP/NPN 24 V d.c. Multipole

TECHNICAL DATA

- Medium:**
Compressed air, filtered to 40 µm, lubricated or non-lubricated
- Operation:**
Spool valve indirectly actuated
- Medium temperature:**
-5°C to +50°C
Consult our Technical Service for use below +2°C.
- Degree of protection:**
- | | |
|-----------|------|
| Multipole | IP65 |
| Fieldbus | IP65 |

PRE-CONFIGURED MULTIPOLE VALVE ISLANDS - SOFTSEAL SPOOL

Standard specification for models below

	VS18	VS26
Valves	internal pilot	internal pilot
Flow	650 l/min	1350 l/min
Operating pressure	10 bar maximum	10 bar maximum
Manual override	push only	push only
Outputs	6 mm push in fittings	10 mm push in fittings
Inputs	G 1/4	G 3/8
Voltage	24Vdc	24Vdc
Cable length	5 m	5 m
Connection	4 to 12 station - 25 pin D sub 16 station - 44 pin D sub	4 to 12 station - 25 pin D sub 16 station - 44 pin D sub



VS18

Stations	MODEL	5/2 Sol/sol	2*3/2 N/C	5/2 Sol/sol & 5/2 Sol/spring*
4	VS180400489			VS180400491
6	VS180600419			VS180600421
8	VS180800588			VS180800590
10	VS181000407			VS181000409
12	VS181200339			VS181200341
16	VS181600363			VS181600365

*5/2 sol/sol and 5/2 sol/spring combination islands provide an equal split of valve types



VS26

Stations	MODEL	5/2 Sol/sol	2*3/2 N/C	5/2 Sol/sol & 5/2 Sol/spring*
4	VS260400532			VS260400534
6	VS260600437			VS260600440
8	VS260800489			VS260800491
10	VS261000342			VS261000344
12	VS261200280			VS261200282
16	VS261600221			VS261600223

*5/2 sol/sol and 5/2 sol/spring combination islands provide an equal split of valve types

To configure your own island please visit vi.norgren.com.



For further information



www.norgren.com/info/nec/en80

V40/V41 SERIES Mini ISO valves

2 x 3/2, 5/2 and 5/3 Valves - Solenoid and pilot actuated - ISO 15407-1/VDMA 24 563 - Size 18 mm



- High performance, compact design
- Flexible sub-base system
- Multipressure system capability
- Wide range of accessories
- Dual spool technology
 - V40 Glandless spool and sleeve (long life)
 - V41 Softseal spool (high flow)
- Collected pilot exhaust with internal pilot air supply
- Easy to convert from internal to external pilot supply
- Valve exchange under pressure

TECHNICAL DATA

Medium:

Compressed air, 40 µm filtered, lubricated or non-lubricated

Operation:

V40: Glandless spool valve, solenoid pilot or air pilot actuated
 V41: Softseal spool valve, solenoid pilot or air pilot actuated

Operating pressure::

See tables for individual details

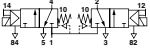

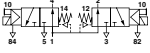

Ambient temperature:

-15°C to +50°C V40/V41 solenoid and V41 air pilot models

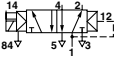

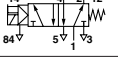
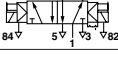
-15°C to +80°C V40 air pilot models

Consult our Technical Service for use below +2°C.

2 X 3/2 VALVES - Solenoid actuated valves (softseal spool), internal pilot supply

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O	Basic plug
 Sol/Spring NC	18 mm	610	2.5...10	V415A11D-C313A	 V10027-D00
 Sol/Spring NO	18 mm	610	2.5...10	V415B11D-C313A	V10027-D00
 Sol/Spring NO/NC	18 mm	610	2.5...10	V415C11D-C313A	V10027-D00

5/2 VALVES - Solenoid actuated valves (softseal spool), internal pilot supply

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O	Basic plug
 Sol/Air spring	18 mm	650	1...10	V415513D-C313A	 V10027-D00
 Sol/Spring	18 mm	650	2...10	V415517D-C313A	V10027-D00
 Sol/Sol	18 mm	650	2...10	V415511D-C313A	V10027-D00

For further information

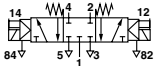


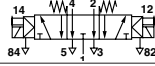
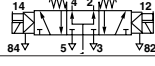


www.norgren.com/info/nec/en081

V40/V41 SERIES Mini ISO Valves

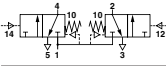

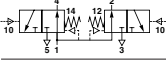
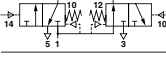
2 x 3/2, 5/2 and 5/3 Valves - Solenoid and pilot actuated - ISO 15407-1/VDMA 24 563 - Size 18 mm

5/3 VALVES - Solenoid actuated valves (softseal spool), internal pilot supply

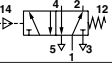

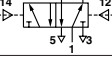
Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O	Basic plug
 APB	18 mm	680	2...10	 V415611D-C313A	 V10027-D00
 COE	18 mm	680	2,5...10	V415711D-C313A	V10027-D00
 COP	18 mm	680	2...10	V415811D-C313A	V10027-D00

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure

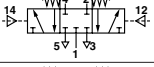

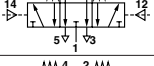
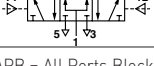
2 X 3/2 VALVES - Pilot actuated valves (softseal spool), internal pilot supply

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O
 Air/Spring NC	18 mm	610	0...10	 V415A33A-X0020
 Air/Spring NO	18 mm	610	0...10	V415B33A-X0020
 Air/Spring NO/NC	18 mm	610	0...10	V415C33A-X0020

5/2 VALVES - Pilot actuated valves (softseal spool)

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS
 Air/Spring	18 mm	650	-0,9...10	 V415537A-X0090
 Air/Air	18 mm	650	-0,9... 10	V415533A-X0020

5/3 VALVES - Pilot actuated valves (softseal spool)

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS
 APB	18 mm	680	-0,9...10	 V415633A-X0020
 COE	18 mm	680	-0,9...10	V415733A-X0020
 COP	18 mm	680	-0,9...10	V415833A-X0020

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure.

5/2 VALVES - Solenoid actuated valves (Glandless spool), internal pilot supply

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O	Basic plug
	Sol/Air spring 18 mm	570	1...10	V405513D-C313A	V10027-D00
	Sol/Spring 18 mm	570	1,6...10	V405516D-C313A	V10027-D00
	Sol/Sol 18 mm	570	2...10	V405511D-C313A	V10027-D00

5/3 VALVES - Solenoid actuated valves (Glandless spool), internal pilot supply

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O	Basic plug
	APB 18 mm	610	2...10	V405611D-C313A	V10027-D00
	COE 18 mm	610	2...10	V405711D-C313A	V10027-D00
	COP 18 mm	610	2...10	V405811D-C313A	V10027-D00

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure

5/2 VALVES - Pilot actuated valves (Glandless spool)

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O
	Air/Spring 18 mm	570	-0,9...16	V405537A-X0090
	Air/Air 18 mm	570	-0,9...16	V405533A-X0020
	Air/Air priority 14 18 mm	570	-0,9...16	V405533A-X0070

Looking for long life valves?
Then select a glandless version which can increase life up to 4 times



V40/V41 SERIES Mini ISO Valves

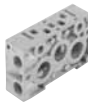



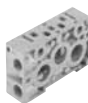
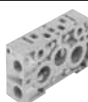
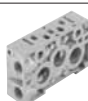

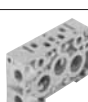




2 x 3/2, 5/2 and 5/3 Valves - Solenoid and pilot actuated - ISO 15407-1/VDMA 24 563 - Size 18 mm

BASES AND ACCESSORIES

Single station

	MODEL	ACCESSORIES Straight fitting Tube diameter in bold	Elbow fitting	Silencer
 Single station side ported with pilot ports - G 1/8	V70401-A5B	 C02250618	 C02470618	 T40C1800

Modular sub-bases and end plates

	MODEL	ACCESSORIES Straight fitting Tube diameter in bold	Elbow fitting	Silencer
 Modular sub-base side ported without pilot ports - G 1/8	V70425-A5F	 C02250618	 C02470618	 -
 Modular sub-base side ported with pilot ports - G 1/8	V70426-A5F	C02250618	C02470618	-
 Modular sub-base side ported (PIF) without pilot ports - Ø6mm	V70425-65F	Included 6 mm	-	-
 Modular sub-base side ported (PIF) with pilot ports - Ø6mm	V70426-65F	Included 6 mm	-	-
 Modular sub-base bottom ported without pilot ports - G1/8	V70425-A5E	C02250618	C02470618	-
 Modular sub-base bottom ported with side pilot ports - G1/8	V70426-A5E	C02250618	C02470618	-
 Doble modular sub-base side ported without pilot ports - G1/8	V70432-A5F	C02250618	C02470618	-
 End plate kit End ported- G1/4	V70424-B5C	C02250828	C02470828	T40C2800
 End plate kit with 2 side ported valve stations without pilot ports - G1/4, G1/8	V70431-A5F	C02250828	C02470828	T40C2800
 Fixed length sub-base Bottom ported - G1/8	V704**-A50	C02250618	C02470618	-

** insert no. of valve stations in sub-base assemblies [02, 04, 06, 08, 10]

ACCESSORIES

Intermediate supply/ exhaust module	Single valve shut-off plate	Single pressure regulator plate	Double pressure regulator plate	Flow regulator plate	Sandwich plate with additional pressure port 1
V70429-A50 (G1/8)	V70430-K50 (Port 1 blocked)	V70427-K51 (Port 1 reg.) V70427-K52 (Port 2 reg.) V70427-K53 (Port 4 reg.)	V70427-K54 (Ports 2+4 reg.)	V70428-K50 (Ports 3+5 reg.)	V70435-A50 (G1/8)

DIN EN 50 022 rail (1 metre)	DIN-rail mounting kit	Blanking plate for unused station	Blanking disk to modular sub-base	Manual override set-up kit	Transition plate #18mm to #26mm*
V10009-C00 (35 x 7,5 mm)	V70531-KA0	V70400-K50	V70422-K50 (Ports 1,3,5)	V70532-K00	V70436-K00

*For technical data on V44/V45 Mini ISO series size 26 mm see page 86

ELECTRICAL DETAILS FOR SOLENOID ACTUATED MODELS

15 mm Plugs according to DIN 43 650 Table C, IP65

	Connector	Cable length	Voltage		Features	Model
			a.c.	d.c.		
	Plug with moulded cable	1000 mm	250 V	250 V	-	V10013-D01
	Plug with moulded cable	3000 mm	250 V	250 V	-	V10013-D03
	Plugs with cable gland	-	-	-	-	V10027-D00
	Plugs with cable gland	-	-	-	-	0588666
	Plugs with cable gland	3000 mm	-	-	-	0102144
	Indicator plug	-	12 ... 24 V	12 ... 24 V	LED,VDR	V10012-D13
	Indicator plug	-	110 V	110 V	LED,VDR	V10012-D18
	Indicator plug	-	220 V	220 V	LED,VDR	V10012-D19
	Indicator plug with moulded cable	1000 mm	24 V	24 V	LED,VDR	V10014-D01
	Indicator plug with moulded cable	3000 mm	24 V	24 V	LED,VDR	V10014-D03
	Indicator plug with moulded cable	1000 mm	110 V	110 V	LED,VDR	V10015-D01
	Indicator plug with moulded cable	3000 mm	110 V	110 V	LED,VDR	V10015-D03
	Indicator plug with moulded cable	1000 mm	220 V	220 V	LED,VDR	V10016-D01
	Indicator plug with moulded cable	3000 mm	220 V	220 V	LED,VDR	V10016-D03

Exhaust air can be noisy and dangerous to ears. Always fit a silencer.



V44/V45 SERIES Mini ISO valves

2 x 3/2, 5/2 and 5/3 Valves - Solenoid and pilot actuated - ISO 15407-1/VDMA 24 563 - Size 26 mm



- High performance, compact design
- Flexible sub-base system
- Multipressure system capability
- Wide range of accessories
- Dual spool technology
- V44 Glandless spool and sleeve (long life)
- V45 Softseal spool (high flow)
- Collected pilot exhaust with internal pilot air supply
- Easy to convert from internal to external pilot supply
- Valve exchange under pressure

TECHNICAL DATA

Medium:

Compressed air, 40 µm filtered, lubricated or non-lubricated

Operation:

V44: Glandless spool valve, solenoid pilot or air pilot actuated
 V45: Softseal spool valve, solenoid pilot or air pilot actuated

Operating pressure:

See tables for individual details

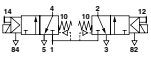


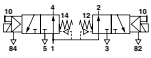
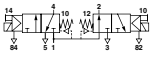
Ambient temperature:

-15°C to +50°C V44/V45 solenoid and V45 air pilot models

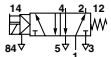


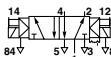
-15°C to +80°C V44 air pilot models

Consult our Technical Service for use below +2°C.

2 X 3/2 VALVES - Solenoid actuated valves (softseal spool), internal pilot supply

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O	Basic plug
 Sol/Spring NC	26 mm	1100	3...10	 V45AA11D-C313A	 V10027-D00
 Sol/Spring NO	26 mm	1100	3...10	V45AB11D-C313A	V10027-D00
 Sol/Spring NO/NC	26 mm	1000/1100	3...10	V45AC11D-C313A	V10027-D00

5/2 VALVES - Solenoid actuated valves (softseal spool), internal pilot supply

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O	Basic plug
 Sol/Spring	26 mm	1200	2...10	 V45A517D-C313A	 V10027-D00
 Sol/Sol	26 mm	1200	2...10	V45A511D-C313A	V10027-D00

5/3 VALVES - Solenoid actuated valves (softseal spool), internal pilot supply

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O	Basic plug	
	APB	26 mm	1150	2,5...10	V45A611D-C313A	
	COE	26 mm	1150	2,5...10	V45A711D-C313A	V10027-D00
	COP	26 mm	1150	2,5...10	V45A811D-C313A	V10027-D00

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure

2 X 3/2 VALVES - Pilot actuated valves (softseal spool)

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O	
	Air/Spring NC	26 mm	1100	0...10	V45AA33A-X0020
	Air/Spring NO	26 mm	1100	0...10	V45AB33A-X0020
	Air/Spring NO/NC	26 mm	1000/1100	0...10	V45AC33A-X0020

5/2 VALVES - Pilot actuated valves (softseal spool)

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS	
	Air/Spring	26 mm	1200	-0,9...10	V45A537A-X0090
	Air/Air	26 mm	1200	-0,9...10	V45A533A-X0020

5/3 VALVES - Pilot actuated valves (softseal spool)

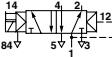


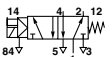
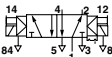
Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS	
	APB	26 mm	1150	-0,9...10	V45A633A-X0020
	COE	26 mm	1150	-0,9...10	V45A733A-X0020
	COP	26 mm	1150	-0,9...10	V45A833A-X0020

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure.

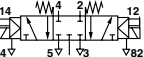


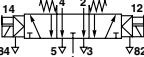
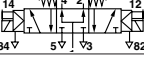
V44/V45 SERIES Mini ISO Valves

2 x 3/2, 5/2 and 5/3 Valves - Solenoid and pilot actuated - ISO 15407-1/VDMA 24 563 - Size 26 mm

5/2 VALVES - Solenoid actuated valves (Glandless spool), internal pilot supply




Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O	Basic plug
 Sol/Air spring	26 mm	900	1...10	 V44A513D-C313A	 V10027-D00
 Sol/Spring	26 mm	900	1,6...10	V44A517D-C313A	V10027-D00
 Sol/Sol	26 mm	900	2...10	V44A511D-C313A	V10027-D00

5/3 VALVES - Solenoid actuated valves (Glandless spool), internal pilot supply

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O	Basic plug
 APB	26 mm	900	2...10	 V44A611D-C313A	 V10027-D00
 COE	26 mm	900	2,5...10	V44A711D-C313A	V10027-D00
 COP	26 mm	900	2...10	V44A811D-C313A	V10027-D00

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure

5/2 VALVES - Pilot actuated valves (Glandless spool)

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODELS 24 DC Push only M/O
 Air/Spring	26 mm	900	-0,9...16	 V44A537A-X0090
 Air/Air	26 mm	900	0,9...16	V44A533A-X0020

Looking for long life valves? Then select a glandless version which can increase life up to 4 times



BASES AND ACCESSORIES

Single station

	MODEL	ACCESSORIES Straight fitting	Elbow fitting	Silencer
Tube diameter in bold				
	Single station side ported with pilot ports - G1/4 V70501-BAB	C0225 0828	C0247 0828	T40C2800

Modular sub-bases and end plates







	MODEL	ACCESSORIES Straight fitting	Elbow fitting	Silencer
Tube diameter in bold				
	Modular sub-base side ported without pilot ports - G1/4 V70525-BAF	C0225 0828	C0247 0828	-
	Modular sub-base side ported with pilot ports - G1/4 V70526-BAF	C0225 0828	C0247 0828	-
	Modular sub-base side ported (PIF) without pilot ports - Ø 8 mm V70525-8AF	Included 8 mm	-	-
	Modular sub-base side ported (PIF) with pilot ports - Ø 8 mm V70526-8AF	Included 8 mm	-	-
	Modular sub-base bottom ported without pilot ports - G1/4 mm V70525-BAE	C0225 0828	C0247 0828	-
	Modular sub-base bottom ported with side pilot ports - G1/4 V70526-BAE	C0225 0828	C0247 0828	-
	End plate kit End ported - G3/8 V70254-CAC	C02251 038	C02471 038	T40C3800
	Fixed length sub-base Bottom ported - G1/4 V705**-A50	C0225 0828	C0247 0828	T40C2800







** insert no. of valve stations in sub-base assemblies {02, 04, 06, 08, 10}

V44/V45 SERIES Mini ISO Valves

2 x 3/2, 5/2 and 5/3 Valves - Solenoid and pilot actuated - ISO 15407-1/VDMA 24 563 - Size 26 mm

ACCESSORIES





Intermediate supply/ exhaust module	Single valve shut-off plate	Single pressure regulator plate	Double pressure regulator plate	Flow regulator plate	Sandwich plate with additional pressure port 1
					
V70529-BA0 (G1/4)	V70530-KA0 (Port 1 blocked)	V70527-KA1 (Port 1 reg.) V70527-KA2 (Port 2 reg.) V70527-KA3 (Port 4 reg.)	V70527-KA4 (Ports 2+4 reg.)	V70528-KA0 (Ports 3+5 reg.)	V70535-BA0 (G1/4)

DIN EN 50 022 rail (1 metre)	DIN-rail mounting kit	Blanking plate for unused station	Blanking disk to modular sub-base	Manual override set-up kit	Transition plate #18mm to #26mm*
					
V10009-C00 (35 x 7,5 mm)	V70531-KA0	V70500-KA0	V70522-K00 (Ports 1,3,5) V70523-K00 (Ports 12+14)	V70532-K00	V70436-K00

*For technical data on V40/V41 Mini ISO series size 18 mm see page 81

ELECTRICAL DETAILS FOR SOLENOID ACTUATED MODELS

15 mm Plugs according to DIN 43 650 Table C, IP65

Connector	Cable length	Voltage		Features	Model	
		a.c.	d.c.			
	Plug with moulded cable	1000 mm	250 V	250 V	-	V10013-D01
	Plug with moulded cable	3000 mm	250 V	250 V	-	V10013-D03
	Plugs with cable gland	-	-	-	-	V10027-D00
	Plugs with cable gland	-	-	-	-	0588666
	Plugs with cable gland	3000 mm	-	-	-	0102144
	Indicator plug	-	12 ... 24 V	12 ... 24 V	LED,VDR	V10012-D13
	Indicator plug	-	110 V	110 V	LED,VDR	V10012-D18
	Indicator plug	-	220 V	220 V	LED,VDR	V10012-D19
	Indicator plug with moulded cable	1000 mm	24 V	24 V	LED,VDR	V10014-D01
	Indicator plug with moulded cable	3000 mm	24 V	24 V	LED,VDR	V10014-D03
	Indicator plug with moulded cable	1000 mm	110 V	110 V	LED,VDR	V10015-D01
	Indicator plug with moulded cable	3000 mm	110 V	110 V	LED,VDR	V10015-D03
	Indicator plug with moulded cable	1000 mm	220 V	220 V	LED,VDR	V10016-D01
	Indicator plug with moulded cable	3000 mm	220 V	220 V	LED,VDR	V10016-D03

Spare pilots

Voltage	Power inrush/hold	Spare pilot valve
24 V d.c.	1,2 W	VZC7L2C1-C313A

Other voltages available on request. Spare pilot valves are delivered with mounting screws.

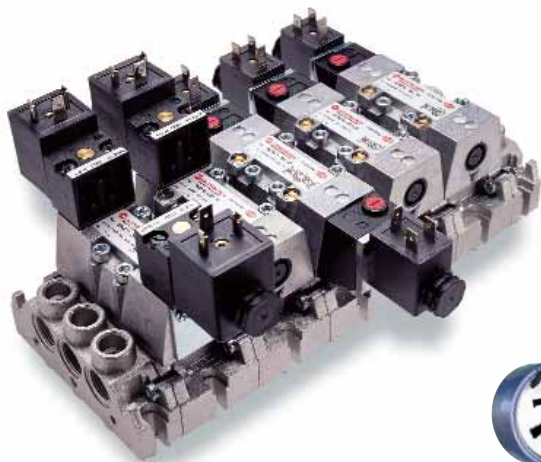


- Save installation time by having a solenoid plug with lead
- Looking for long life valves? Then select a glandless version which can increase life up to 4 times
- Prevent dirt from getting into valves by always fitting silencers into exhaust ports
- Save money on cylinder mounted flow controls by having them Built-in to the valve



ISO★STAR Solenoid & pilot actuated spool valves

Sub-base 5/2 & 5/3, ISO #1 to ISO #3



Specially coated glandless spool and sleeve for extremely long life
 Available with integral flow regulators on ISO #1 and #2 sizes
 Low power solenoids and manual override as standard
 Wide range of sub-bases and accessories

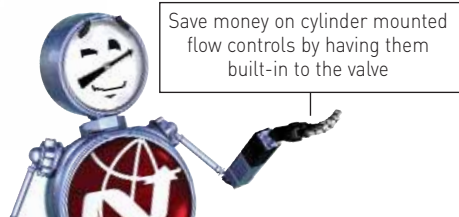
TECHNICAL DATA

Medium:
 Compressed air, filtered, lubricated, non lubricated and dry.

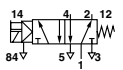
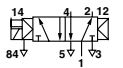
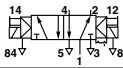
Operation:
 Maximum 16 bar, see table for individual details.

Flow:
 ISO #1 1230 l/min
 ISO #2 2450 l/min
 ISO #3 4400 l/min

Ambient temperature:
 -15°C to +50°C solenoid models
 -15°C to +80°C pilot models.
 Consult our Technical Service for use below +2°C.

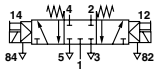
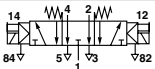
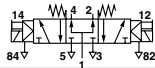


5/2 VALVES - Solenoid actuated, internal pilot supply, industrial standard 22 mm coil

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODEL		Basic plug
				24 DC Push button lockable Manual override	220 AC Push button lockable Manual override	
 Sol/Spring	ISO 1	1230	1.8..10	SXE9573-A81-00/13J	SXE9573-A81-00/19J	0657868000000000
	ISO 2	2450	1.8..10	SXE9574-A81-00/13J	SXE9574-A81-00/19J	0657868000000000
	ISO 3	4400	1.8..10	SXE9575-A71-00/13J	SXE9575-A71-00/19J	0657868000000000
 Sol/Air spring	ISO 1	1230	1..10	SXE9573-A80-00/13J	SXE9573-A80-00/19J	0657868000000000
	ISO 2	2450	1..10	SXE9574-A80-00/13J	SXE9574-A80-00/19J	0657868000000000
	ISO 3	4400	1..10	SXE9575-A70-00/13J	SXE9575-A70-00/19J	0657868000000000
 Sol/Sol	ISO 1	1230	2..10	SXE0573-A60-00/13J	SXE0573-A60-00/19J	0657868000000000
	ISO 2	2450	2..10	SXE0574-A60-00/13J	SXE0574-A60-00/19J	0657868000000000
	ISO 3	4400	2..10	SXE0575-A50-00/13J	SXE0575-A50-00/19J	0657868000000000

Note: ISO 1 and 2 with integral flow regulators.

5/3 VALVES - Solenoid actuated, internal pilot supply, industrial standard 22 mm coil

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODEL		Basic plug
				24 DC Push button lockable Manual override	220 AC Push button lockable Manual override	
 APB	ISO 1	1230	2..10	SXE9673-A60-00/13J	SXE9673-A60-00/19J	0657868000000000
	ISO 2	2450	2..10	SXE9674-A60-00/13J	SXE9674-A60-00/19J	0657868000000000
	ISO 3	4400	2..10	SXE9675-A50-00/13J	SXE9675-A50-00/19J	0657868000000000
 COE	ISO 1	1230	2..10	SXE9773-A60-00/13J	SXE9773-A60-00/19J	0657868000000000
	ISO 2	2450	2..10	SXE9774-A60-00/13J	SXE9774-A60-00/19J	0657868000000000
	ISO 3	4400	2..10	SXE9775-A50-00/13J	SXE9775-A50-00/19J	0657868000000000
 COP	ISO 1	1230	2..10	SXE9873-A60-00/13J	SXE9873-A60-00/19J	0657868000000000
	ISO 2	2450	2..10	SXE9874-A60-00/13J	SXE9874-A60-00/19J	0657868000000000
	ISO 3	4400	2..10	SXE9875-A50-00/13J	SXE9875-A50-00/19J	0657868000000000

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure.
 Note: ISO 1 and 2 with integral flow regulators

Others models, voltages and manual override availables please use the valve configurator.

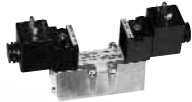
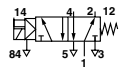
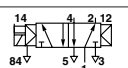
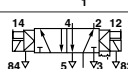


For further information


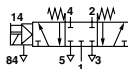

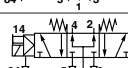


www.norgren.com/info/nec/en092

5/2 VALVES - Solenoid actuated, internal pilot supply, 30 mm coil - CNOMO models


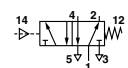
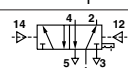
Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODEL		Basic plug
				24 DC Push only Manual override	220 AC Push only Manual override	
						
 Sol/Spring	ISO 1	1230	1,8..16	SXE9573-Z71-81/33N	SXE9573-Z71-81/89N	M/P15737
	ISO 2	2450	1,8..16	SXE9574-Z71-81/33N	SXE9574-Z71-81/89N	M/P15737
	ISO 3	4400	1,8..16	SXE9575-Z71-81/33N	SXE9575-Z71-81/89N	M/P15737
 Sol/Air Spring	ISO 1	1230	1..16	SXE9573-Z70-81/33N	SXE9573-Z70-81/89N	M/P15737
	ISO 2	2450	1..16	SXE9574-Z70-81/33N	SXE9574-Z70-81/89N	M/P15737
	ISO 3	4400	1..16	SXE9575-Z70-81/33N	SXE9575-Z70-81/89N	M/P15737
 Sol/Sol	ISO 1	1230	2..16	SXE0573-Z50-81/33N	SXE0573-Z50-81/89N	M/P15737
	ISO 2	2450	2..16	SXE0574-Z50-81/33N	SXE0574-Z50-81/89N	M/P15737
	ISO 3	4400	2..16	SXE0575-Z50-81/33N	SXE0575-Z50-81/89N	M/P15737

5/3 VALVES - Solenoid actuated, internal pilot supply, 30 mm coil - CNOMO models

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODEL		Basic plug
				24 DC Push only Manual override	220 AC Push only Manual override	
						
 APB	ISO 1	1230	2..16	SXE9673-Z50-81/33N	SXE9673-Z50-81/89N	M/P15737
	ISO 2	2450	2..16	SXE9674-Z50-81/33N	SXE9674-Z50-81/89N	M/P15737
	ISO 3	4400	2..16	SXE9675-Z50-81/33N	SXE9675-Z50-81/89N	M/P15737
 COE	ISO 1	1230	2..16	SXE9773-Z50-81/33N	SXE9773-Z50-81/89N	M/P15737
	ISO 2	2450	2..16	SXE9774-Z50-81/33N	SXE9774-Z50-81/89N	M/P15737
	ISO 3	4400	2..16	SXE9775-Z50-81/33N	SXE9775-Z50-81/89N	M/P15737
 COP	ISO 1	1230	2..16	SXE9873-Z50-81/33N	SXE9873-Z50-81/89N	M/P15737
	ISO 2	2450	2..16	SXE9874-Z50-81/33N	SXE9874-Z50-81/89N	M/P15737
	ISO 3	4400	2..16	SXE9875-Z50-81/33N	SXE9875-Z50-81/89N	M/P15737


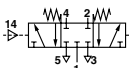


APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure.

5/2 VALVES - Pilot actuated

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODEL
				
 Air/Spring	ISO 1	1230	-0,9..16	SXP9573-180-00
	ISO 2	2450	-0,9..16	SXP9574-180-00
	ISO 3	4400	-0,9..16	SXP9575-170-00
 Air/Air	ISO 1	1230	-0,9..16	SXP0573-180-00
	ISO 2	2450	-0,9..16	SXP0574-180-00
	ISO 3	4400	-0,9..16	SXP0575-170-00

Note: ISO 1 and 2 with integral flow regulators.

5/3 VALVES - Air pilot actuated

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODEL
				
 APB	ISO 1	1230	-0,9..16	SXP9673-180-00
	ISO 2	2450	-0,9..16	SXP9674-180-00
	ISO 3	4400	-0,9..16	SXP9675-170-00
 COE	ISO 1	1230	-0,9..16	SXP9773-180-00
	ISO 2	2450	-0,9..16	SXP9774-180-00
	ISO 3	4400	-0,9..16	SXP9775-170-00
 COP	ISO 1	1230	-0,9..16	SXP9873-180-00
	ISO 2	2450	-0,9..16	SXP9874-180-00
	ISO 3	4400	-0,9..16	SXP9875-170-00

Note: ISO 1 and 2 with integral flow regulators.
APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure.

Others models, voltages and manual override availables please use the valve configurator.

ISO★STAR Solenoid & pilot actuated spool valves

Sub-base 5/2 & 5/3, ISO #1 to ISO #3

OTHER VARIANTS AVAILABLE, PLEASE USE THE VALVE CONFIGURATOR BELOW

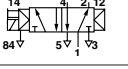

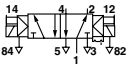
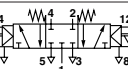
S	X	E	★	★	7	★	-	★	★	★	-	★	★	-	★	★	★
			ISO size			Regulation (digit 9)			Pressure			Voltage code					
			ISO 1		3	Without regulation (double sol valve)			5	10 bar	6	For voltage code please see tables on page 97					
			ISO 2		4	With regulation (double sol valve)			6	16 bar	8						
			ISO 3		5	Without regulation (single sol valve)			7								
						With regulation (single sol valve)			8								
			Valve function			Valve options			Pilot supply (digit 10)			Manual override					
			5/2 BI solenoid/solenoid 05			CNOMO solenoid pilot actuated valves			Internal pilot supply (double sol or air spring return)			Lockable 0					
			5/2 MO solenoid/air spring or solenoid/spring 95			End solenoid pilot actuated valves			A Internal pilot supply (single sol)			Non lockable 1					
			5/3 APB solenoid/solenoid 96														
			5/3 COE solenoid/solenoid 97														
			5/3 COP solenoid/solenoid 98														

NOTE: Not all combinations are stocked. Please check availability with our customer service.

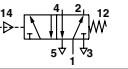
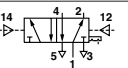
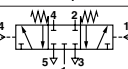
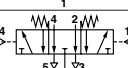
UM/22000 - Complementary range

ISO 4

Solenoid actuated valves

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODEL		Basic plug
				24 DC Push only Manual override	220 AC Push only Manual override	
 Sol/Air Spring	ISO 4	5660	2,5..10	UM/22456/172/61/13J	UM/22456/172/61/19J	 0657868000000000
 Sol/Sol	ISO 4	5660	2..10	UM/22456/123/61/13J	UM/22456/123/61/19J	0657868000000000
 APB	ISO 4	5490	2,8..10	UM/22456/6123/61/13J	UM/22456/6123/61/19J	0657868000000000

Air pilot actuated valves

Actuation	Size	Flow (l/min)	Operating pressure (bar)	MODEL
 Air/Spring	ISO 4	5660	-0,9..16	UM/22456/40
 Air/Air	ISO 4	5660	-0,9..16	UM/22456/3
 APB	ISO 4	5490	-0,9..16	UM/22456/63
 COE	ISO 4	5660	-0,9..16	UM/22456/63

APB = All Ports Blocked, COE = Centre Open Exhaust.



BASES AND ACCESSORIES

VDMA 24345 SUB-BASES

Side ported

Size	MODEL	ACCESSORIES			
		Straight fitting	Elbow fitting	Silencer	
		Tube diameter in bold			
 Side ported	ISO 1	M/P19126	 C0225 0828	 C0247 0828	 T40C2800
	ISO 2	M/P19132	C0225 1038	C0247 1038	T40C3800
	ISO 3	M/P19138	C0225 1248	C0247 1248	T40C4800
	ISO 4	M/P19144	-	-	T40C6800

Manifold and end plates





Size	MODEL	ACCESSORIES					
		Straight fitting	Elbow fitting	Silencer	Blanking disk	Plugs	
		Tube diameter in bold					
 Manifold	ISO 1	CQM/22152/3/21	 C0225 0828	 C0247 0828	 -	 FP 8382	 -
	ISO 2	CQM/22253/3/21	C0225 1038	C0247 1038	-	FP 8482	-
	ISO 3	CQM/22354/3/21	C0225 1248	C0247 1248	-	FP 8582	-
	ISO 4	CQM/22456/3/21	-	-	-	-	-
 End plates	ISO 1	CQM/22152/3/22	C0225 1038	C0247 1038	T40C3800	-	160050038
	ISO 2	CQM/22253/3/22	C0225 1248	C0247 1248	T40C4800	-	160050048
	ISO 3	CQM/22354/3/22	-	-	T40C8800	-	160050088
	ISO 4	CQM/22456/3/22	-	-	T40C8800	-	160050088

Please see section 4 for others fittings

UNIVERSAL BASE OPTIONS

Size	MODEL	ACCESSORIES					
		Straight fitting	Elbow fitting	Silencer	Blanking disk	Plugs	
		Tube diameter in bold					
 Modular base Side&bottom ported	ISO 1	CQM/22152/3/27	 C0225 0828	 C0247 0828	 -	 M/P43173	 -
	ISO 2	CQM/22253/3/27	C0225 1038	C0247 1038	-	M/P43174	-
 End plate End ports open	ISO 1	CQM/22152/3/31	C0225 1038	C0247 1038	T40C3800	-	160050038
	ISO 2	CQM/22253/3/31	C0225 1248	C0247 1248	T40C4800	-	160050048

ACCESSORIES







Size	Single pressure regulator plate Port 1 reg.	Single pressure regulator plate Port 2 reg.	Single pressure regulator plate Port 4 reg.	Double pressure regulator plate Ports 2+4 reg.
ISO #1	 V71010-KB1	 V71012-KB2	 V71012-KB3	 V71012-KB4
ISO #2	V71010-KC1	V71012-KC2	V71012-KC3	V71012-KC4
ISO #3	V71010-KD1	V71012-KD2	V71012-KD3	V71012-KD4

ISO★STAR Solenoid & pilot actuated spool valves






Sub-base 5/2 & 5/3, ISO #1 to ISO #3

ELECTRICAL DETAILS FOR SOLENOID ACTUATED MODEL

22 mm Plugs according to Industrial Standard or DIN 43 650 Table B, IP65

Connector	Type	Cable length	Voltage		Features	MODEL	
			a.c.	d.c.			
	Plug with moulded cable	22 mm Industrial standard	3000 mm	250 V	250 V	-	M/P43313/3
	Plug with cable gland	22 mm Industrial standard	-	12 ... 250 V	12 ... 250 V	-	0657868000000
	Indicator plug	22 mm Industrial standard	-	10 ... 50 V	10 ... 50 V	Lamp	M/P24212/1
	Indicator plug	22 mm Industrial standard	-	70 ... 110 V	70 ... 250 V	Neon	M/P24212/2
	Plug with cable gland and indicator	22 mm Industrial standard	-	150 ... 240 V	150 ... 240 V	Neon	M/P24212/3
	Indicator plug with moulded cable	22 mm Industrial standard	1000 mm	24 V	24 V	LED,VDR	M/P43314/11
	Indicator plug with moulded cable	22 mm Industrial standard	3000 mm	24 V	24 V	LED,VDR	M/P43314/13
	Indicator plug with moulded cable	22 mm Industrial standard	1000 mm	110 V	110 V	LED,VDR	M/P43314/21
	Indicator plug with moulded cable	22 mm Industrial standard	3000 mm	110 V	110 V	LED,VDR	M/P43314/23
	Indicator plug with moulded cable	22 mm Industrial standard	1000 mm	220 V	220 V	LED,VDR	M/P43314/31
	Indicator plug with moulded cable	22 mm Industrial standard	3000 mm	220 V	220 V	LED,VDR	M/P43314/33
	Light emitting gasket	22 mm Industrial standard	-	12 ... 24 V	12 ... 24 V	Green LED	M/P40859
	Light emitting gasket	22 mm Industrial standard	-	110 ... 120 V	110 ... 120 V	Green LED	M/P40886
	Light emitting gasket	22 mm Industrial standard	-	220 ... 240 V	220 ... 240 V	Green LED	M/P40860
	Indicator plug	DIN43650 Form B	-	-	24 V	LED	0664811
	Indicator plug	DIN43650 Form B	-	250 V	-	LED	0664812
	Indicator plug	22 mm Industrial standard	-	-	15 V, 30 V	LED	0680000

30 mm Plugs according to DIN 43 650 Table A, IP65

Connector	Cable length	Voltage		Features	MODEL	
		a.c.	d.c.			
	Plug with moulded cable	1000 mm	250 V	250 V	-	M/P43315/1
	Plug with moulded cable	3000 mm	250 V	250 V	-	M/P43315/3
	Plug with cable gland	-	250 V	300 V	-	M/P15737
	Plug with cable gland	-	-	240 V	-	M/P19117
	Plug with cable gland	-	250 V	300 V	-	0570275
	Plug with cable gland	-	12 ... 250 V	12 ... 250 V	-	0663303
	Plug with cable gland	-	12 ... 240 V	12 ... 240 V	-	0570110
	Indicator plug	-	10 ... 50 V	10 ... 50 V	Lamp	M/P24212/1
	Indicator plug	-	70 ... 115 V	70 ... 115 V	Neon	M/P24212/2
	Plug with cable gland and indicator	-	150 ... 240 V	150 ... 240 V	Neon	M/P24212/3
	Indicator plug with moulded cable	1000 mm	24 V	24 V	LED,VDR	M/P43316/11
	Indicator plug with moulded cable	3000 mm	24 V	24 V	LED,VDR	M/P43316/13
	Indicator plug with moulded cable	3000 mm	110 V	110 V	LED,VDR	M/P43316/23
	Indicator plug with moulded cable	1000 mm	220 V	220 V	LED,VDR	M/P43316/31
	Indicator plug with moulded cable	3000 mm	220 V	220 V	LED,VDR	M/P43316/33
	Light emitting gaskets	-	12 ... 24 V	12 ... 24 V	Green LED	M/P40861
	Light emitting gaskets	-	110 ... 120 V	110 ... 120 V	Green LED	M/P40880
	Light emitting gaskets	-	220 ... 240 V	220 ... 240 V	Green LED	M/P40862

Voltage codes and spare coils for 10 bar solenoid models

Voltage	22 mm Coil with connector interface acc. to Industrial Standard			22 mm Coil with connector interface acc. to DIN 43650 table B			30 mm Coil with connector interface acc. to DIN 43650 table A		
	Code	Power inrush/hold		Code	Power inrush/hold		Code	Power inrush/hold	
12 V d.c.	12J	2 W	QM/48/12J/21						
24 V d.c.	13J	2 W	QM/48/13J/21	13L	2 W	V10626-A13L	23N	1,5 W	V10633-A23N
24 V 50/60 Hz	14J	4/2,5 VA	QM/48/14J/21	28N	2 VA	V10633-A28N			
110/120 V 50/60 Hz	18J	4/2,5 VA	QM/48/18J/21						
220/240 V 50/60 Hz	19J	6/5 VA	QM/48/19J/21						

Voltage codes and spare coils for 16 bar models (CNOMO only)

Voltage	30 mm Coil with connector interface acc. to DIN 43650 table A		
	Code	Power inrush/hold	
24 V d.c.	33N	4 W	V10633-A33N
110/120 V a.c.	88N	8 VA	V10633-A88N
230 V a.c.	89N	8 VA	V10633-A89N



V60 ... 63 SERIES In-line valves

Solenoid and pilot actuated 3/2, 5/2, 5/3 and 2 x 3/2



- High flow rate
- Small volumetric size
- Proven sealing system
- Different manual override options available
- Maintenance-free
- Low power consumption (2 W)

TECHNICAL DATA

Medium:

Compressed air, filtered to 50 µm, lubricated or non lubricated.

Operation:

Electromagnetically or pneumatically controlled

Ambient temperature:

-10°C to +50°C

Fluid temperature:

-10°C to +50°C


Consult our Technical Service for use below +2°C.

Prevent dirt from getting into valves by always fitting silencers into exhaust ports




SOLENOID VALVE MODELS

3/2 VALVES - solenoid actuated, internal pilot supply, industrial standard 22mm coil

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	MODEL		ACCESSORIES				
				24 DC Push only Manual override	220 AC Push only Manual override	Straight fitting	Elbow fitting	Silencer	Basic plug	
										
Sol/Air spring	G1/8	750	2 ... 8	V60A413A-A313J	V60A413A-A319J	C02250618	C02470618	T40C1800	0657868000000000	
	G1/4	1300	2 ... 8	V61B413A-A313J	V61B413A-A319J	C02250828	C02470828	T40C2800	0657868000000000	
	G3/8	2600	2 ... 8	V62C413A-A313J	V62C413A-A319J	C02251038	C02471038	T40C3800	0657868000000000	
Sol/Spring	G1/2	4200	2 ... 8	V63D413A-A313J	V63D413A-A319J	C02251248	C02471248	T40C4800	0657868000000000	
	G1/8	750	2 ... 8	V60A417A-A313J	V60A417A-A319J	C02250618	C02470618	T40C1800	0657868000000000	
	G1/4	1300	2 ... 8	V61B417A-A313J	V61B417A-A319J	C02250828	C02470828	T40C2800	0657868000000000	
Sol/Sol	G3/8	2600	2 ... 8	V62C417A-A313J	V62C417A-A319J	C02251038	C02471038	T40C3800	0657868000000000	
	G1/2	4200	2 ... 8	V63D417A-A313J	V63D417A-A319J	C02251248	C02471248	T40C4800	0657868000000000	
	G1/8	750	1,5 ... 8	V60A411A-A313J	V60A411A-A319J	C02250618	C02470618	T40C1800	0657868000000000	
Sol/Sol	G1/4	1300	1,5 ... 8	V61B411A-A313J	V61B411A-A319J	C02250828	C02470828	T40C2800	0657868000000000	
	G3/8	2600	1,5 ... 8	V62C411A-A313J	V62C411A-A319J	C02251038	C02471038	T40C3800	0657868000000000	
	G1/2	4200	1,5 ... 8	V63D411A-A313J	V63D411A-A319J	C02251248	C02471248	T40C4800	0657868000000000	

Note: Models with 22mm coil DIN EN 175301-803 (DIN 43650B) replace J by L.

2 X 3/2 VALVES - solenoid actuated, internal pilot supply, industrial standard 22mm coil

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	MODEL		ACCESSORIES				
				24 DC Push only Manual override	220 AC Push only Manual override	Straight fitting	Elbow fitting	Silencer	Basic plug	
										
Sol/Spring NC	G1/8	500	2 ... 8	V60AA11A-A313J	V60AA11A-A319J	C02250618	C02470618	T40C1800	0657868000000000	
	G1/4	950	2 ... 8	V61BA11A-A313J	V61BA11A-A319J	C02250828	C02470828	T40C2800	0657868000000000	
	G3/8	1900	2 ... 8	V62CA11A-A313J	V62CA11A-A319J	C02251038	C02471038	T40C3800	0657868000000000	

Note: Models with 22mm coil DIN EN 175301-803 (DIN 43650B) replace J by L.

See page 102 for detailed accessories information and pre-configured options ready to install. Others models, voltages and manual override availables please use the valve configurator.



For further information



www.norgren.com/info/nec/en98

SOLENOID VALVE MODELS

5/2 VALVES - solenoid actuated, internal pilot supply, industrial standard 22mm coil

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	MODEL		ACCESSORIES			
				24 DC Push only Manual override	220 AC Push only Manual override	Straight fitting	Elbow fitting	Silencer	Basic plug
						Tube diameter in bold			
<p>Sol/Air spring</p>	G1/8	750	2 ... 8	V60A513A-A313J	V60A513A-A319J	C02250618	C02470618	T40C1800	0657868000000000
	G1/4	1300	2 ... 8	V61B513A-A313J	V61B513A-A319J	C02250828	C02470828	T40C2800	0657868000000000
	G3/8	2600	2 ... 8	V62C513A-A313J	V62C513A-A319J	C02251038	C02471038	T40C3800	0657868000000000
	G1/2	4200	2 ... 8	V63D513A-A313J	V63D513A-A319J	C02251248	C02471248	T40C4800	0657868000000000
<p>Sol/Spring</p>	G1/8	750	2 ... 8	V60A517A-A313J	V60A517A-A319J	C02250618	C02470618	T40C1800	0657868000000000
	G1/4	1300	2 ... 8	V61B517A-A313J	V61B517A-A319J	C02250828	C02470828	T40C2800	0657868000000000
	G3/8	2600	2 ... 8	V62C517A-A313J	V62C517A-A319J	C02251038	C02471038	T40C3800	0657868000000000
	G1/2	4200	2 ... 8	V63D517A-A313J	V63D517A-A319J	C02251248	C02471248	T40C4800	0657868000000000
<p>Sol/Sol</p>	G1/8	750	2 ... 8	V60A511A-A313J	V60A511A-A319J	C02250618	C02470618	T40C1800	0657868000000000
	G1/4	1300	2 ... 8	V61B511A-A313J	V61B511A-A319J	C02250828	C02470828	T40C2800	0657868000000000
	G3/8	2600	2 ... 8	V62C511A-A313J	V62C511A-A319J	C02251038	C02471038	T40C3800	0657868000000000
	G1/2	4200	2 ... 8	V63D511A-A313J	V63D511A-A319J	C02251248	C02471248	T40C4800	0657868000000000

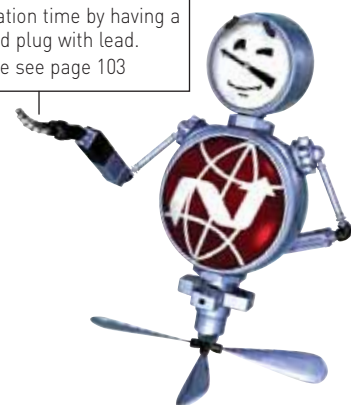
Note: Models with 22mm coil DIN EN 175301-803 (DIN 43650B) replace J by L.

5/3 VALVES - solenoid actuated, internal pilot supply, industrial standard 22mm coil

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	MODEL		ACCESSORIES			
				24 DC Push only Manual override	220 AC Push only Manual override	Straight fitting	Elbow fitting	Silencer	Basic plug
						Tube diameter in bold			
<p>APB</p>	G1/8	500	3 ... 8	V60A611A-A313J	V60A611A-A319J	C02250618	C02470618	T40C1800	0657868000000000
	G1/4	950	3 ... 8	V61B611A-A313J	V61B611A-A319J	C02250828	C02470828	T40C2800	0657868000000000
	G3/8	1900	3 ... 8	V62C611A-A313J	V62C611A-A319J	C02251038	C02471038	T40C3800	0657868000000000
	G1/2	2200	2,5 ... 8	V63D611A-A313J	V63D611A-A319J	C02251248	C02471248	T40C4800	0657868000000000
<p>COE</p>	G1/8	500	3 ... 8	V60A711A-A313J	V60A711A-A319J	C02250618	C02470618	T40C1800	0657868000000000
	G1/4	950	3 ... 8	V61B711A-A313J	V61B711A-A319J	C02250828	C02470828	T40C2800	0657868000000000
	G3/8	1900	3 ... 8	V62C711A-A313J	V62C711A-A319J	C02251038	C02471038	T40C3800	0657868000000000
	G1/2	2200	2,5 ... 8	V63D711A-A313J	V63D711A-A319J	C02251248	C02471248	T40C4800	0657868000000000
<p>COP</p>	G1/8	500	3 ... 8	V60A811A-A313J	V60A811A-A319J	C02250618	C02470618	T40C1800	0657868000000000
	G1/4	950	3 ... 8	V61B811A-A313J	V61B811A-A319J	C02250828	C02470828	T40C2800	0657868000000000
	G3/8	1900	3 ... 8	V62C811A-A313J	V62C811A-A319J	C02251038	C02471038	T40C3800	0657868000000000

Note: Models with 22mm coil DIN EN 175301-803 (DIN 43650B) replace J by L.
 APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure.

Save installation time by having a solenoid plug with lead. Please see page 103



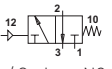




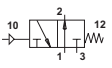

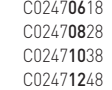


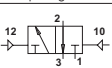

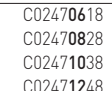


See page 102 for detailed accessories information and pre-configured options ready to install. Others models, voltages and manual override availables please use the valve configurator.

V60 ... 63 SERIES In-line valves

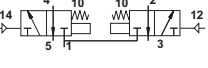




Solenoid and pilot actuated 3/2, 5/2, 5/3 and 2 x 3/2

PILOT VALVE MODELS

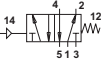




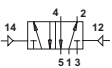

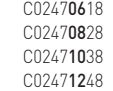


3/2 VALVES - pilot actuated

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	MODEL	ACCESSORIES			
						Straight fitting	Elbow fitting	Valve operator fitting	Silencer
						Tube diameter in bold			
 Pilot / Spring - NC	G1/8	750	-0,9 ... 10	2,5 ... 10	V60A4D7A-XA090				
	G1/4	1300	-0,9 ... 10	2,5 ... 10	V61B4D7A-XA090	C02250828	C02470828	C02250418	T40C2800
	G3/8	2600	-0,9 ... 10	2,5 ... 10	V62C4D7A-XA090	C02251038	C02471038	C02250418	T40C3800
	G1/2	4200	-0,9 ... 16	3 ... 16	V63D4D7A-XA090	C02251248	C02471248	C02250418	T40C4800
 Pilot / Spring - NO	G1/8	750	-0,9 ... 10	2,5 ... 10	V60A3D7A-XA090				
	G1/4	1300	-0,9 ... 10	2,5 ... 10	V61B3D7A-XA090	C02250828	C02470828	C02250418	T40C2800
	G3/8	2600	-0,9 ... 10	2,5 ... 10	V62C3D7A-XA090	C02251038	C02471038	C02250418	T40C3800
	G1/2	4200	-0,9 ... 16	3 ... 16	V63D3D7A-XA090	C02251248	C02471248	C02250418	T40C4800
 Pilot / Pilot	G1/8	750	-0,9 ... 10	1,5 ... 10	V60A4DDA-XA020				
	G1/4	1300	-0,9 ... 10	1,5 ... 10	V61B4DDA-XA020	C02250828	C02470828	C02250418	T40C2800
	G3/8	2600	-0,9 ... 10	2,5 ... 10	V62C4DDA-XA020	C02251038	C02471038	C02250418	T40C3800
	G1/2	4200	-0,9 ... 16	1,5 ... 16	V63D4DDA-XA020	C02251248	C02471248	C02250418	T40C4800

2 X 3/2 VALVES - pilot actuated

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	MODEL	ACCESSORIES			
						Straight fitting	Elbow fitting	Valve operator fitting	Silencer
						Tube diameter in bold			
 NC / NC	G1/8	500	2 ... 10	2 ... 10	V60AADDA-XA020				
	G1/4	950	2 ... 10	2 ... 10	V61BADDA-XA020	C02250828	C02470828	C02250418	T40C2800

5/2 VALVES - pilot actuated

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	MODEL	ACCESSORIES			
						Straight fitting	Elbow fitting	Valve operator fitting	Silencer
						Tube diameter in bold			
 Pilot / Spring	G1/8	750	-0,9 ... 10	2,5 ... 10	V60A5D7A-XA090				
	G1/4	1300	-0,9 ... 10	2,5 ... 10	V61B5D7A-XA090	C02250828	C02470828	C02250418	T40C2800
	G3/8	2600	-0,9 ... 10	2,5 ... 10	V62C5D7A-XA090	C02251038	C02471038	C02250418	T40C3800
	G1/2	4200	-0,9 ... 16	3 ... 16	V63D5D7A-XA090	C02251248	C02471248	C02250418	T40C4800
 Pilot / Pilot	G1/8	750	-0,9 ... 10	1,5 ... 10	V60A5DDA-XA020				
	G1/4	1300	-0,9 ... 10	1,5 ... 10	V61B5DDA-XA020	C02250828	C02470828	C02250418	T40C2800
	G3/8	2600	-0,9 ... 10	1,5 ... 10	V62C5DDA-XA020	C02251038	C02471038	C02250418	T40C3800
	G1/2	4200	-0,9 ... 16	1,5 ... 16	V63D5DDA-XA020	C02251248	C02471248	C02250418	T40C4800

See page 102 for detailed accessories information and pre-configured options ready to install. Others models, voltages and manual override availables please use the valve configurator.

5/3 VALVES - pilot actuated

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	MODEL	ACCESSORIES			
						Straight fitting <small>Tube diameter in bold</small>	Elbow fitting	Valve operator fitting	Silencer
 APB	G1/8	500	-0,9 ... 10	3 ... 10	V60A6DDA-XA020				
	G1/4	950	-0,9 ... 10	3 ... 10	V61B6DDA-XA020	C02250828	C02470828	C02250418	T40C2800
	G3/8	1900	-0,9 ... 10	3 ... 10	V62C6DDA-XA020	C02251038	C02471038	C02250418	T40C3800
 COE	G1/8	500	-0,9 ... 10	3 ... 10	V60A7DDA-XA020	C02250618	C02470618	C02250418	T40C1800
	G1/4	950	-0,9 ... 10	3 ... 10	V61B7DDA-XA020	C02250828	C02470828	C02250418	T40C2800
	G3/8	1900	-0,9 ... 10	3 ... 10	V62C7DDA-XA020	C02251038	C02471038	C02250418	T40C3800
 COP	G1/8	500	-0,9 ... 10	3 ... 10	V60A8DDA-XA020	C02250618	C02470618	C02250418	T40C1800
	G1/4	950	-0,9 ... 10	3 ... 10	V61B8DDA-XA020	C02250828	C02470828	C02250418	T40C2800
	G3/8	1900	-0,9 ... 10	3 ... 10	V62C8DDA-XA020	C02251038	C02471038	C02250418	T40C3800

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure.



MANIFOLD SYSTEM

for 2 x 3/2, 5/2, 5/3 valves, solenoid and pilot operated

Valve ports	MODEL V60		V61		V62	
		kg		kg		kg
2	2221002 0000 00000	0,23	2221102 0000 00000	0,28	2221202 0000 00000	0,50
3	2221003 0000 00000	0,28	2221103 0000 00000	0,45	2221203 0000 00000	0,85
4	2221004 0000 00000	0,61	2221104 0000 00000	0,72	2221204 0000 00000	1,25
6	2221006 0000 00000	0,86	2221106 0000 00000	1,02	2221206 0000 00000	1,79
8	2221008 0000 00000	1,11	2221108 0000 00000	1,32	2221208 0000 00000	2,33
10	2221010 0000 00000	1,36	2221110 0000 00000	1,62	2221210 0000 00000	2,87
12	2221012 0000 00000	1,61	2221112 0000 00000	1,92	2221212 0000 00000	3,41
14	2221014 0000 00000	1,86	2221114 0000 00000	2,22	2221214 0000 00000	3,95
16	2221016 0000 00000	2,11	2221116 0000 00000	2,52	2221216 0000 00000	4,49
18	2221018 0000 00000	2,36	2221118 0000 00000	2,82	2221218 0000 00000	5,03
20	2221020 0000 00000	2,61	2221120 0000 00000	3,12	2221220 0000 00000	5,57

Not suitable for individual 3/2 valves.

See page 102 for detailed accessories information and pre-configured options ready to install. Others models, voltages and manual override availables please use the valve configurator.

V60 ... 63 SERIES In-line valves

Solenoid and pilot actuated 3/2, 5/2, 5/3 and 2 x 3/2

OTHER VARIANTS AVAILABLE, PLEASE USE THE VALVE CONFIGURATOR BELOW

V	6	0	A	5	1	7	A	-	A	2	1	3	J
Valve size			Function			Operator			Voltage code				
V60A G1/8			3 3/2 - NO			A - A 22 mm solenoid coil			12 12 V DC				
V61B G1/4			4 3/2 - NC			D - C 15 mm solenoid coil			13 24 V DC				
V62C G3/8			5 5/2			single connector			14 24 V AC				
V63D G1/2			6 5/3 - APB			24V DC only			15 48 V DC				
				7 5/3 - COE			A - X Air pilot operated			18 110/120 V AC			
				8 5/3 - COP			valves			19 220/240 V AC			
				A 2 X 3/2 - NC						Pilot valves			
				B 2 X 3/2 - NO						02 Air/air			
				C 2 X 3/2 - NO/NC						09 Air/spring			
					Actuation solenoid actuation					Manual override solenoid actuation			
					11 Sol/sol - internal pilot					1 Without Manual override			
					17 Sol/spring - internal pilot					2 Push and lock			
					13 Sol/air spring - internal pilot					Manual override			
					22 Sol/sol - external pilot					3 Push only			
					27 Sol/spring - external pilot					Manual override			
					23 Sol/air spring - external pilot					Air pilot actuation			
					Air pilot actuation					A G 1/8 pilot port			
					D7 Air/spring					5 M5 pilot port			
					DD Air/air					Connector type			
										J 22 mm wide industrial standard			
										A 15 mm wide DIN 43650 type C			
										(for 24V DC operation only)			
										L 22 mm wide DIN 43650 type B			
										Air pilot valves			
										0 Standard			

NOTE: Not all combinations are stocked. Please check availability with our customer service.

PRE-CONFIGURED VALVES, READY TO INSTALL



Valve series	Port/tube Ø size + shape	Fitting part no.	Silencer Metal	Valve operator - solenoid Exhaust diffuser	Basic plug Industrial standard	Complete valve 5/2 Sol/Spring 24DC Push only Manual override	Complete valve 5/2 Sol/Sol 24DC Push only Manual override
V60	1/8" 6 mm/Straight	C02250618	T40C1800	81110800	0657868000000000	V60B517SP313JBAA V60B517SP313JBCA	V60B511SP313JBAA V60B511SP313JBCA
	6 mm/Elbow	C02470618					
V61	1/4" 8 mm/Straight	C02250828	T40C2800	81110800	0657868000000000	V61B517SP313JBEA V61B517SP313JBGA	V61B511SP313JBEA V61B511SP313JBGA
	8 mm/Elbow	C02470828					
V62	3/8" 10 mm/Straight	C02251038	T40C3800	81110800	0657868000000000	V62B517SP313JBJA V62B517SP313JBLA	V62B511SP313JBJA V62B511SP313JBLA
	10 mm/Elbow	C02471038					
V63	1/2" 12 mm/Straight	C02251248	T40C4800	81110800	0657868000000000	V63B517SP313JBNA V63B517SP313JBRA	V63B511SP313JBNA V63B511SP313JBRA
	12 mm/Elbow	C02471248					

For DIN standard plug change J for L



ELECTRICAL DETAILS FOR SOLENOID ACTUATED MODELS 22 mm Plugs according to Industrial Standard

	Connector	Cable length	Voltage		Features	MODEL
			a.c.	d.c.		
	Standard plug	-	-	-	-	0657868000000000
	Plug with moulded cable	1000 mm	250 V	250 V	-	M/P43313/1
	Plug with moulded cable	3000 mm	250 V	250 V	-	M/P43313/3
	Indicator plug	-	10 ... 50 V	10 ... 50 V	Lamp	M/P24121/1
	Indicator plug	-	70 ... 110 V	70 ... 250 V	Neon	M/P24121/2
	Plug with cable gland and indicator	-	150 ... 240 V	150 ... 240 V	Neon	M/P24121/3
	Indicator plug with moulded cable	1000 mm	24 V	24 V	LED,VDR	M/P43314/11
	Indicator plug with moulded cable	3000 mm	24 V	24 V	LED,VDR	M/P43314/13
	Indicator plug with moulded cable	1000 mm	110 V	110 V	LED,VDR	M/P43314/21
	Indicator plug with moulded cable	3000 mm	110 V	110 V	LED,VDR	M/P43314/23
	Indicator plug with moulded cable	1000 mm	220 V	220 V	LED,VDR	M/P43314/31
	Indicator plug with moulded cable	3000 mm	220 V	220 V	LED,VDR	M/P43314/33
	Light emitting gasket	-	12 ... 24 V	12 ... 24 V	Green LED	M/P40859
	Light emitting gasket	-	110 ... 120 V	110 ... 120 V	Green LED	M/P40886
	Light emitting gasket	-	220 ... 240 V	220 ... 240 V	Green LED	M/P40860

22 mm Plugs according to DIN EN 175301-803 - DIN 43650 B

	Connector	Cable length	Voltage		Features	MODEL
			a.c.	d.c.		
	Standard plug	-	12 ... 250 V	12 ... 250 V	-	0680003
	Standard plug	-	-	15 ... 30 V	LED, surge suppression	0664811
	Standard plug	-	150 ... 250 V	-	DIN 43650 B - glim lamp	0664812

22 mm coil industrial standard

Voltage	Coil code	Power inrush/hold	MODEL
24 V d.c.	13J	2 W	QM/48/13J/21
24 V 50/60 Hz	14J	4/2,5 VA	QM/48/14J/21
48 V 50/60 Hz	16J	4/2,5 VA	QM/48/16J/21
110/120 V 50/60 Hz	18J	4/2,5 VA	QM/48/18J/21
220/240 V 50/60 Hz	19J	6/5 VA	QM/48/19J/21

22 mm coil DIN EN 175 301-803 (DIN 43650 B)

Voltage	Coil code	Power inrush/hold	MODEL
24 V d.c.	13L	2 W	V10626-A13L
24 V 50/60 Hz	14L	4/2,5 VA	V10626-A14L
48 V 50/60 Hz	16L	4/2,5 VA	V10626-A16L
110/120 V 50/60 Hz	18L	4/2,5 VA	V10626-A18L
220/240 V 50/60 Hz	19L	6/5 VA	V10626-A19L

Connector plugs must be ordered separately

15 mm Plugs according to DIN EN 175301-803 - DIN 43650 C

	Connector	Cable length	Voltage		Features	MODEL
			a.c.	d.c.		
	Standard plug	-	12...250 V	12...250 V	-	0588666
	Standard plug	3 m	12...250 V	12...250 V	-	0102144

ELECTRICAL DETAILS FOR TWIN SOLENOID ACTUATED MODELS

Voltage tolerance:
±10%

Rating:
100% E.D.

Protection class:
IP 65 with sealed plugs (ISO 6952)

Double solenoid DIN EN 175 301-803 (DIN 43650 type C) 4 pin

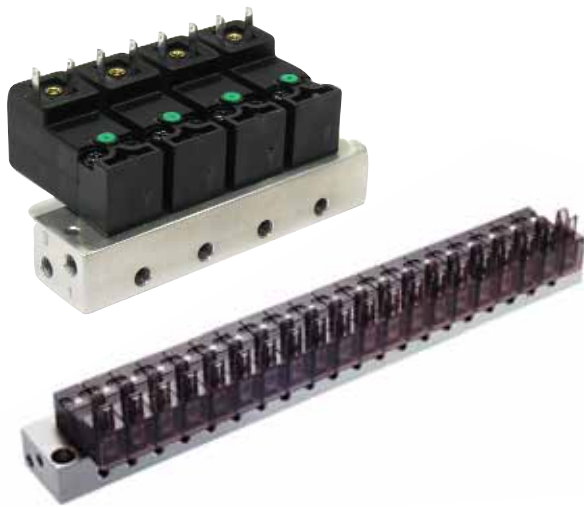
Voltage	Coil code	Power inrush/hold	Manual override	MODEL
24 V d.c.	13 A	2 W	Push only	9031703900002400
24 V d.c.	13 A	2 W	Turn & lock	9031704900002400
24 V d.c.	13 A	2 W	Without	9031705900002400

Connector plugs must be ordered separately

Symbol	Plug no.	Function	Actuation
	1	(+)	12 (Solenoid 2)
	2	(-)	12 + 14
	3	(+)	14 (Solenoid 1)

VE SERIES

2/2, 3/2



Extremely compact 10 and 15mm wide design
 High flow rate
 Low power consumption
 High cycling rates up to 2,000 cpm
 Long life in excess of 100 million cycles
 Optional manifold sub bases
 2/2 and 3/2 valves on the same sub base

TECHNICAL DATA

Medium:

Compressed air, filtered to 40 µm, lubricated or non lubricated.

Operation:

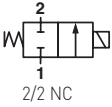




Poppet valve, direct acting and pilot

Ambient temperature:

5°C... +50°C

VE10 INDIVIDUALLY WIRED MOLEX CONNECTOR

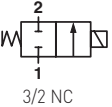





Picosol 2/2 normally closed

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Voltage	Solenoid Power (Watts)	MODEL Without Manual Override	ACCESSORIES		
							Straight fitting	Elbow fitting	2-Pin connector 1 m
 2/2 NC	M5	13	0 ... 8	24 V d.c.	1,2	 VE10**WSA13-040			
	M5	25	0 ... 4	24 V d.c.	1,2	VE10**WSA13-050	M02250405	M02470405	V11556-E10
	M5	32	0 ... 8	24 V d.c.	4,0/0,4**1)	VE10**WSA13-04B	M02250405	M02470405	V11556-E10

** = Number of stations 01, 02, 04, 06, 08 or 10

*1) Hit & hold

Picosol 3/2 normally closed

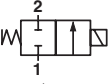



Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Voltage	Solenoid Power (Watts)	MODEL Push only Manual Override	ACCESSORIES			
							Straight fitting	Elbow fitting	Silencer	2-Pin connector 1 m
 3/2 NC	M5	12	2 ... 8	24 V d.c.	1,2	 VE10**WSA33-001				
	M5	25	2 ... 8	24 V d.c.	3,0/0,3**1)	VE10**WSA33-00A	M02250405	M02470405	T40M0500	V11556-E10
	M5	32	2 ... 6,5	24 V d.c.	3,0/0,3**1)	VE10**WSA33-01A	M02250405	M02470405	T40M0500	V11556-E10
	M5	8	2 ... 8	12 V d.c.	0,8	VE10**WSA32-000	M02250405	M02470405	T40M0500	V11556-E10
	M5	8	2 ... 8	24 V d.c.	0,8	VE10**WSA32-000	M02250405	M02470405	T40M0500	V11556-E10

** = Number of stations 01, 02, 04, 06, 08, 10, 12, 14, 18 or 20

*1) Hit & hold

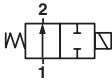




VE15 INDIVIDUALLY WIRED AMP CONNECTOR

Microsol 2/2 normally closed

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Voltage	Solenoid Power (Watts)	MODEL Without Manual Override	ACCESSORIES		
							Straight fitting	Elbow fitting	Basic Plug
 2/2 NC	M5	48	0 ... 10	24 V d.c.	2	 VE15**ASA13-043	 C02250405	 C02470405	 M/P43082

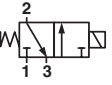





** = Number of stations 01, 02, 04, 06 or 08

Microsol 2/2 normally open

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Voltage	Solenoid Power (Watts)	MODEL Without Manual Override	ACCESSORIES		
							Straight fitting	Elbow fitting	Basic Plug
 2/2 NO	M5	48	0 ... 10	24 V d.c.	2	 VE15**ASA13-063	 C02250405	 C02470405	 M/P43082


** = Number of stations 01, 02, 04, 06 or 08

Microsol 3/2 normally closed

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Voltage	Solenoid Power (Watts)	MODEL Push only Manual Override	ACCESSORIES			
							Straight fitting	Elbow fitting	Silencer	Basic Plug
 3/2 NC	M5	27	0 ... 10	24 V d.c.	2	 VE15**ASA33-003	 C02250405	 C02470405	 T40M0500	 M/P43082
	M5	18	0 ... 10	12 V d.c.	1,5	VE15**ASA32-002	C02250405	C02470405	T40M0500	M/P43082
	M5	18	0 ... 10	24 V d.c.	1,5	VE15**ASA33-002	C02250405	C02470405	T40M0500	M/P43082
	M5	18	0 ... 10	24 V a.c.	1	VE15**ASA34-001	C02250405	C02470405	T40M0500	M/P43082
	M5	18	0 ... 10	48 V a.c.	1	VE15**ASA36-001	C02250405	C02470405	T40M0500	M/P43082
	M5	18	0 ... 10	110 V a.c.	1	VE15**ASA38-001	C02250405	C02470405	T40M0500	M/P43082
	M5	18	0 ... 10	220 V a.c.	1	VE15**ASA39-001	C02250405	C02470405	T40M0500	M/P43082

** = Number of stations 01, 02, 04, 06 or 08

Microsol 3/2 normally open




Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Voltage	Solenoid Power (Watts)	MODEL Without Manual Override	ACCESSORIES			
							Straight fitting	Elbow fitting	Silencer	Basic Plug
 3/2 NO	M5	27	0 ... 6	24 V d.c.	2	 VE15**ASA13-023	 C02250405	 C02470405	 T40M0500	 M/P43082

** = Number of stations 01, 02, 04, 06 or 08

VE SERIES

2/2, 3/2

Microsol 2/2 normally closed high flow

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Voltage	Solenoid Power (Watts)	MODEL Without Manual Override	ACCESSORIES		
							Straight fitting	Elbow fitting	Basic Plug
 2/2 NC	G1/8	194	0 ... 6	24 V d.c.	12/0,5 **1)		 C0225 06 18	 C0247 06 18	 M/P43082

** = Number of stations 01, 02, 04, 06 or 08

*1) Hit&hold

Microsol interface 3/2 normally closed high flow

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Voltage	Solenoid Power (Watts)	MODEL Push only Manual Override	ACCESSORIES			
							Straight fitting	Elbow fitting	Silencer	Basic Plug
 3/2 NC	G1/8	194	1,5 ... 10	24 V d.c.	1		 C0225 06 18	 C0247 06 18	 T40C2800	 M/P43082

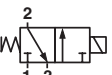





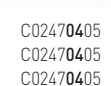



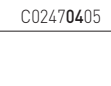






** = Number of stations 01, 02, 04, 06 or 08

Microsol interface 3/2 normally open high flow

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Voltage	Solenoid Power (Watts)	MODEL Push only Manual Override	ACCESSORIES			
							Straight fitting	Elbow fitting	Silencer	Basic Plug
 3/2 NO	G1/8	194	1,5 ... 10	24 V d.c.	1		 C0225 06 18	 C0247 06 18	 T40C2800	 M/P43082

** = Number of stations 01, 02, 04, 06 or 08

Microsol 3/2 normally closed intrinsically safe

Actuation	Port size	Flow (l/min)	Operating pressure (bar)	Voltage	Solenoid Power (Watts)	MODEL Push only Manual Override	ACCESSORIES			
							Straight fitting	Elbow fitting	Silencer	Basic Plug
 3/2 NC	M5	8	0 ... 7	12 V a.c./d.c.	0,6	VE15**ASA3C-00X	 C0225 04 05	 C0247 04 05	 T40M0500	 M/P43082
	M5	8	0 ... 7	24 V a.c./d.c.	0,7	VE15**ASA34-00Y	 C0225 04 05	 C0247 04 05	 T40M0500	 M/P43082
	M5	8	0 ... 7	12 V d.c.	0,1	VE15**ASA32-00Z	 C0225 04 05	 C0247 04 05	 T40M0500	 M/P43082
	M5	8	0 ... 7	24 V d.c.	0,1	VE15**ASA33-00Z	 C0225 04 05	 C0247 04 05	 T40M0500	 M/P43082

** = Number of stations 01, 02, 04, 06 or 08

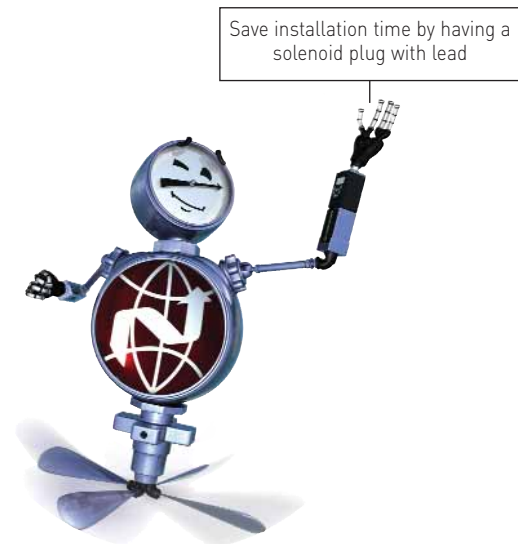
ELECTRICAL DETAILS Connectors for VE series

	Connector	Series	Cable length	Voltage	Features	MODEL
	2-Pin connector IP40	VE10	1 m			V11556-E10
	2-Pin connector IP40	VE10	0,3 m			V11556-E03
	2-Pin connector IP40	VE10	1,5 m			V11556-E15
	Single connector	VE15				M/P43082
	Single connector	VE15		24V	LED+VDR	M/P43086
	Single connector	VE15		110V	LED+VDR	M/P43148
	Single connector	VE15		220V	LED+VDR	M/P43087
	flying lead	VE15	1 m			M/P43066

Electrical details for solenoid operators

Voltage	VE10	VE15
Voltage tolerances	± 10%	-10%, +15%
Rating	100 % ED	100 % ED
Indication	LED *1)	None
Surge suppression	Transistor diode	None
Materials	PPs body, nitrile seals	PPs body, nitrile seals
Insulation class	-	F155°C
Electrical insulation	-	1500 V a.c.

*1) Hit and hold surge suppression only



EXCEL 22 (M/48, M/49)

Solenoid actuated 22 mm poppet valves

Sub-base mounted- 3/2, NC, G1/8



Sub-base mounted and manifold mounted – compact and convenient
Manual override as standard

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated and non lubricated.

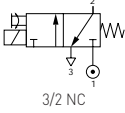




Operating pressure:

0 to 10 bar

Ambient temperature:

-20°C to +50°C.

Consult our Technical Service for use below +2°C.

Actuation	Port size	Flow (l/min)	Operating Pressure (bar)	Mounting	MODEL 1 mm orifice low power	ACCESSORIES		
						Straight fitting	Elbow fitting	Basic Plug
						Tube diameter in bold		
 3/2 NC	G 1/8	30	0..10	Single	 M/49/MAZ***			
	G 1/8	30	0..10	Manifold		M/49/MAZ***/T#	C0225 06 18	C0247 06 18

*** Insert voltage codes from table below.
Add number of valves in manifold up to 6 maximum.
Order connector plugs separately.





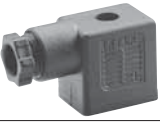
Actuation	Port size	Flow (l/min)	Operating Pressure (bar)	Mounting	MODEL 1,6 mm orifice	ACCESSORIES		
						Straight fitting	Elbow fitting	Basic Plug
						Tube diameter in bold		
 3/2 NC	G 1/8	77	0..10	Single	 M/49/MDZ***			
	G 1/8	77	0..10	Manifold		M/49/MDZ***/T#	C0225 06 18	C0247 06 18

*** Insert voltage codes from table below.
Add number of valves in manifold up to 6 maximum.
Order connector plugs separately.

Voltage codes

Voltage	1,0 mm orifice (low power)			1,6 mm orifice		
	Code	Power	Coil	Code	Power	Coil
12 V d.c.	12J	2 W	QM/48/12J/21	82J	7,5 W	QM/48/82J/21
24 V d.c.	13J	2 W	QM/48/13J/21	83J	6 W	QM/48/83J/21
24 V 50/60 Hz	14J	4/2,5 VA	QM/48/14J/21	84J	12/8 VA	QM/48/84J/21
110/120 V 50/60 Hz	18J	4/2,5 VA	QM/48/18J/21	88J	12/8 VA	QM/48/88J/21
220/240 V 50/60 Hz	19J	6/5 VA	QM/48/19J/21	89J	12/8 VA	QM/48/89J/21

22 mm Plugs according to Industrial Standard

Connector	Cable length	Voltage		Features	MODEL	
		a.c.	d.c.			
	Plug with moulded cable	1000 mm	250 V	250 V	-	M/P43313/1
	Plug with moulded cable	3000 mm	250 V	250 V	-	M/P43313/3
	Indicator plug	-	10 ... 50 V	10 ... 50 V	Lamp	M/P24121/1
	Indicator plug	-	70 ... 110 V	70 ... 250 V	Neon	M/P24121/2
	Plug with cable gland and indicator	-	150 ... 240 V	150 ... 240 V	Neon	M/P24121/3
	Indicator plug with moulded cable	1000 mm	24 V	24 V	LED,VDR	M/P43314/11
	Indicator plug with moulded cable	3000 mm	24 V	24 V	LED,VDR	M/P43314/13
	Indicator plug with moulded cable	1000 mm	110 V	110 V	LED,VDR	M/P43314/21
	Indicator plug with moulded cable	3000 mm	110 V	110 V	LED,VDR	M/P43314/23
	Indicator plug with moulded cable	1000 mm	220 V	220 V	LED,VDR	M/P43314/31
	Indicator plug with moulded cable	3000 mm	220 V	220 V	LED,VDR	M/P43314/33
	Light emitting gasket	-	12 ... 24 V	12 ... 24 V	Green LED	M/P40859
	Light emitting gasket	-	110 ... 120 V	110 ... 120 V	Green LED	M/P40886
	Light emitting gasket	-	220 ... 240 V	220 ... 240 V	Green LED	M/P40860
	Plug with cable gland	-	12 ... 250 V	12 ... 250 V	-	0657868000000

EXCEL 32 V04 & V05 SERIES

Solenoid actuated 32 mm poppet valves

In-line & sub-base mounted 2/2 & 3/2, G1/8, G1/4



Extensive range of power and orifice size options
Compact installation
Removeable coil
Standard exhaust diffuser

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated and non lubricated.

Operating pressure:

Maximum 16 bar.

See individual details.

Ambient temperature:

-20°C to +50°C.

Consult our Technical Service for use below +2°C.






Actuation	Port size	Flow (l/min)	Operating Pressure (bar)	MODEL	ACCESSORIES		
					Straight fitting	Elbow fitting	Basic Plug
					Tube diameter in bold		
 2/2 NC	Interface	150	0..16	 V05X286M-B63*A V04A286M-B62*A V04B286M-B42*A V05B286N-B42*A			
	G 1/8	190	0..10		C02250618	C02470618	M/P15737
	G 1/4	190	0..10		C02250628	C02470628	M/P15737
	G 1/4	260	0..13		C02250628	C02470628	M/P15737
 3/2 NO	Interface	95	0..10	V04X386L-B62*A V04A386L-B62*A	C02250618	C02470618	M/P15737
	G 1/8	120	0..10		C02250618	C02470618	M/P15737
 3/2 NC	Interface	95	0..10	V04X486L-B62*A V05X486M-B62*A V04A486L-B62*A V05A486M-B62*A	C02250618	C02470618	M/P15737
	Interface	150	0..10		C02250618	C02470618	M/P15737
	G 1/8	120	0..10		C02250618	C02470618	M/P15737
	G 1/8	190	0..10		C02250618	C02470618	M/P15737

* Insert voltage codes from table below. Order connector plugs separately.
For interface valves use manifold M/P35598/#. # = number of stations from 1 to 6

Voltage codes & spare coils – V04 and V05

Voltage	Code	Coil V04	V05
12 V d.c.	2	V04X286A-Q1222	-
24 V d.c.	3	V04X286A-Q1223	V05X286A-Q1233
24 V 50/60 Hz	4	V04X286A-Q1224	V05X286A-Q1234
48 V 50/60 Hz	6	V04X286A-Q1226	-
110 ... 120 V 50/60 Hz	8	V04X286A-Q1228	V05X286A-Q1238
220 ... 240 V 50/60 Hz	9	V04X286A-Q1229	V05X286A-Q1239

30 mm Plugs according to DIN 43 650 Table A, IP65

	Connector	Cable length	Voltage a.c.	d.c.	Features	MODEL
	Plug with moulded cable	1000 mm	250 V	250 V	-	M/P43315/1
	Plug with moulded cable	3000 mm	250 V	250 V	-	M/P43315/3
	Plug with cable gland	-	250 V	300 V	-	M/P15737
	Plug with cable gland	-	-	240 V	-	M/P19117
	Plug with cable gland	-	250 V	300 V	-	0570275
	Plug with cable gland	-	12 ... 250 V	12 ... 250 V	-	0663303
	Plug with cable gland	-	12 ... 240 V	12 ... 240 V	-	0570110
	Indicator plug	-	10 ... 50 V	10 ... 50 V	Lamp	M/P24120/1
	Indicator plug	-	70 ... 115 V	70 ... 115 V	Neon	M/P24120/2
	Plug with cable gland and indicator	-	150 ... 240 V	150 ... 240 V	Neon	M/P24120/3
	Indicator plug with moulded cable	1000 mm	24 V	24 V	LED,VDR	M/P43316/11
	Indicator plug with moulded cable	3000 mm	24 V	24 V	LED,VDR	M/P43316/13
	Indicator plug with moulded cable	3000 mm	110 V	110 V	LED,VDR	M/P43316/23
	Indicator plug with moulded cable	1000 mm	220 V	220 V	LED,VDR	M/P43316/31
	Indicator plug with moulded cable	3000 mm	220 V	220 V	LED,VDR	M/P43316/33
	Light emitting gaskets	-	12 ... 24 V	12 ... 24 V	Green LED	M/P40861
	Light emitting gaskets	-	110 ... 120 V	110 ... 120 V	Green LED	M/P40880
	Light emitting gaskets	-	220 ... 240 V	220 ... 240 V	Green LED	M/P40862

TWO-HAND CONTROL UNIT

G1/8



Certificate of Conformity supplied with every unit

Notified Body Approval from BSI Testing

Meets the requirements of EN574 Class IIIB*

Both hands must be engaged simultaneously

Single fault tolerant

Protection against accidental operation

No setting or adjustment required

TECHNICAL DATA

Medium:

Compressed air filtered to 40 µm, lubricated or non-lubricated.

Operating pressure:


3 to 8 bar

Ambient temperature:

+5°C to +40°C.

Consult our Technical Service for use below +2°C.

*The scope of the Machinery Directive encompasses safety components as well as machinery, and since two-hand control units are classed as safety components this requires the M/2720 to satisfy the essential health and safety requirements of the Directive. One method of ensuring this is to conform with published European Norm (EN) Standards. In the case of the M/2720 the main standard is EN574 Safety of Machinery – Two Hand Control Devices, Functional Aspects – Principles for Design. This standard classifies two-hand controls into various types, each requiring minimum performance and safety characteristics, such as simultaneous operation, fault tolerance, prevention of accidental operation etc. In addition, the M/2720 is dimensionally identical to the M/2710 which it directly replaces.

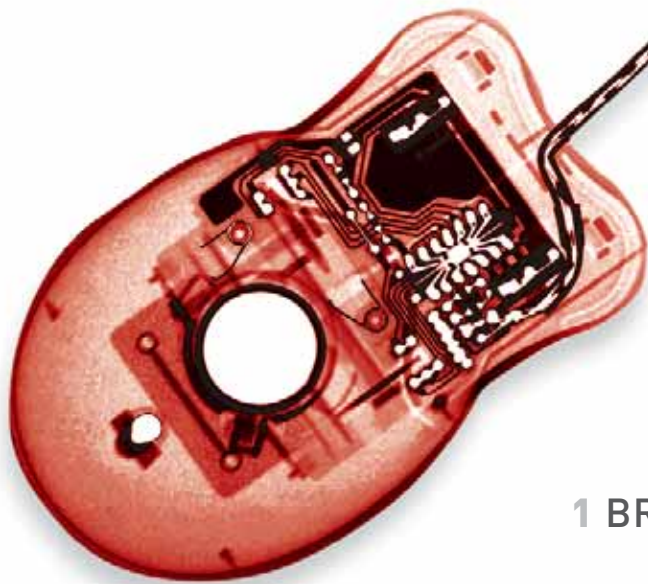
Function	Switch 'On'	Switch 'Off'	MODEL
	Both buttons must be operated within 0,5 secs	0,6 secs max.	M/2720

For further information



www.norgren.com/info/nec/en112

10 EASY STEPS TO ONLINE ORDERING



1 BROWSE

2 SEARCH

3 PRODUCTS

4 QUICKBASKET

5 PASTEBASKET

6 QUOTES

7 ORDER

8 PARCEL TRACKING

9 ORDER HISTORY

10 HELP

 **Express**



SUPER X In-line valves

Manually & mechanically actuated spool valve - 3/2, 5/2 and 5/3, G1/8, G1/4

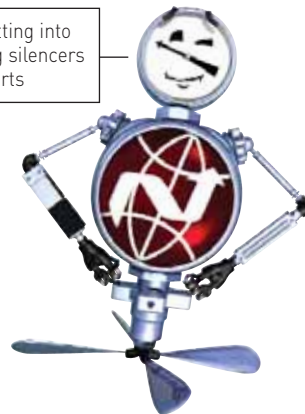


Wide range of operators
 Suitable for multi-directional flow and dual supply applications
 High flow capacity
 Lightweight corrosion resistant materials

TECHNICAL DATA


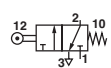




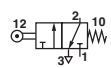

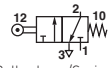

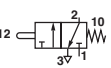

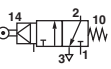

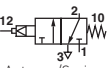
Medium:
 Compressed air, filtered, lubricated and non-lubricated
Operating pressure:
 Maximum 10 bar.
Ambient temperature:
 0°C to +70°C.
 Consult our Technical Service for use below +2°C.

Prevent dirt from getting into valves by always fitting silencers into exhaust ports


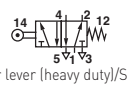




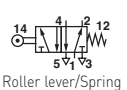

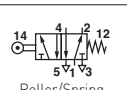

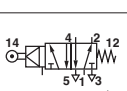


MECHANICAL VALVE MODELS

3/2 mechanical valves


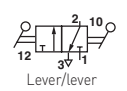




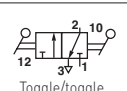

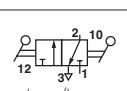

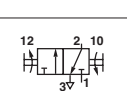

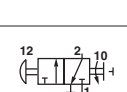

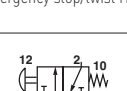
Actuation	Port size	Flow (l/min)	MODEL	ACCESSORIES		
				Straight fitting	Elbow fitting	Silencer
  <p>Roller lever (heavy duty)/Spring</p>	G1/8	335	03029302	 C02250618	 C02470618	 T40C1800
  <p>Roller/Spring</p>	G1/8 G1/4	335 965	03040202 03060202	C02250618 C02250828	C02470618 C02470828	T40C1800 T40C2800
  <p>Roller lever/Spring</p>	G1/8 G1/4	335 965	03041102 03061102	C02250618 C02250828	C02470618 C02470828	T40C1800 T40C2800
  <p>Plunger/Spring</p>	G1/8 G1/4	335 965	03040002 03060002	C02250618 C02250828	C02470618 C02470828	T40C1800 T40C2800
  <p>Sensitive roller lever/Spring</p>	G1/8	335	03042302	C02250618	C02470618	T40C1800
  <p>Antenna/Spring</p>	G1/8	335	03043202	C02250618	C02470618	T40C1800

5/2 mechanical valves

Actuation	Port size	Flow (l/min)	MODEL	ACCESSORIES		
				Straight fitting <small>Tube diameter in bold</small>	Elbow fitting	Silencer
  Roller lever (heavy duty)/Spring	G1/8	335	X3039302	 C0225 06 18	 C0247 06 18	 T40C1800
  Roller lever/Spring	G1/8 G1/4	335 965	X3045102 X3065102	C0225 06 18 C0225 08 28	C0247 06 18 C0247 08 28	T40C1800 T40C2800
  Roller/Spring	G1/8 G1/4	335 965	X3044202 X3064202	C0225 06 18 C0225 08 28	C0247 06 18 C0247 08 28	T40C1800 T40C2800
  Sensitive roller lever/Spring	G1/8	335	X3046302	C0225 06 18	C0247 06 18	T40C1800

MANUAL VALVE MODELS


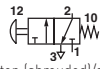




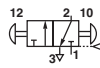

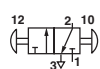

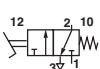

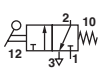
3/2 manual valves

Actuation	Port size	Flow (l/min)	MODEL	ACCESSORIES		
				Straight fitting <small>Tube diameter in bold</small>	Elbow fitting	Silencer
  Lever/lever	G1/8	335	03029602	 C0225 06 18	 C0247 06 18	 T40C1800
  Toggle/toggle	G1/8	335	03040302	C0225 06 18	C0247 06 18	T40C1800
  Lever/lever	G1/8 G1/4	335 965	03043702 03063702	C0225 06 18 C0225 08 28	C0247 06 18 C0247 08 28	T40C1800 T40C2800
  Rotary knob/rotary knob	G1/8	335	03029802	C0225 06 18	C0247 06 18	T40C1800
  Emergency stop/twist ring	G1/8	335	03029902	C0225 06 18	C0247 06 18	T40C1800
  Button/spring	G1/8 G1/8 G1/8	335 335 335	03040402 03040502 03040602	C0225 06 18 C0225 06 18 C0225 06 18	C0247 06 18 C0247 06 18 C0247 06 18	T40C1800 T40C1800 T40C1800


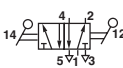




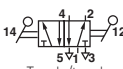

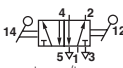

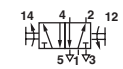

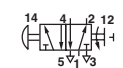
SUPER X In-line valves

Manually & mechanically actuated spool valve - 3/2, 5/2 and 5/3, G1/8, G1/4


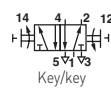




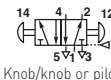

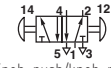

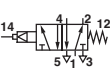

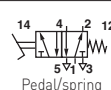

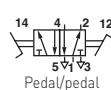

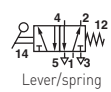
3/2 manual valves

Actuation	Port size	Flow (l/min)	MODEL	ACCESSORIES		
				Straight fitting	Elbow fitting	Silencer
  Button (shrouded)/spring	G1/8	335	03041402	 C02250618	 C02470618	 T40C1800
	G1/8	335	03041502			
	G1/8	335	03041602			
  Knob/knob or pilot	G1/8	335	03042402	C02250618 C02250828	C02470618 C02470828	T40C1800 T40C2800
	G1/4	965	03062702			
  Knob/knob	G1/8	335	03042502	C02250618 C02250828	C02470618 C02470828	T40C1800 T40C2800
	G1/4	965	03062502			
  Pedal/spring	G1/8	335	03048102	C02250618 C02250828	C02470618 C02470828	T40C1800 T40C2800
	G1/4	965	03068102			
  Lever/spring	G1/8	335	03043802	C02250618 C02250828	C02470618 C02470828	T40C1800 T40C2800
	G1/4	965	03063802			







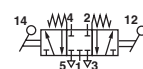

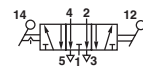

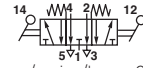
5/2 manual valves

Actuation	Port size	Flow (l/min)	MODEL	ACCESSORIES		
				Straight fitting	Elbow fitting	Silencer
  Lever/lever	G1/8	335	X3029602	 C02250618	 C02470618	 T40C1800
  Toggle/toggle	G1/8	335	X3044302	C02250618	C02470618	T40C1800
  Lever/lever	G1/8	335	X3047702	C02250618 C02250828	C02470618 C02470828	T40C1800 T40C2800
	G1/4	965	X3067702			
  Rotary knob/rotary knob	G1/8	335	X3029802	C02250618	C02470618	T40C1800
  Emergency stop/twist ring	G1/8	335	X3029902	C02250618	C02470618	T40C1800

5/2 manual valves

Actuation	Port size	Flow (l/min)	MODEL	ACCESSORIES		
				Straight fitting	Elbow fitting	Silencer
  Key/key	G1/8	335	X3045802801	 C0225 06 18	 C0247 06 18	 T40C1800
  Knob/knob or pilot	G1/8	335	X3046402	C0225 06 18	C0247 06 18	T40C1800
  Knob, push/knob, pull	G1/8 G1/4	335 965	X3046502 X3066502	C0225 06 18 C0225 08 28	C0247 06 18 C0247 08 28	T40C1800 T40C2800
  Antenna/Spring	G1/4	965	X3047202	C0225 08 28	C0247 08 28	T40C2800
  Pedal/spring	G1/8 G1/4	335 965	X3048202 X3068202	C0225 06 18 C0225 08 28	C0247 06 18 C0247 08 28	T40C1800 T40C2800
  Pedal/pedal	G1/8 G1/4	335 965	X3048402 X3068402	C0225 06 18 C0225 08 28	C0247 06 18 C0247 08 28	T40C1800 T40C2800
  Lever/spring	G1/4 G1/8	965 335	X3067802 X3047802	C0225 08 28 C0225 06 18	C0247 08 28 C0247 06 18	T40C2800 T40C1800

5/3 manual valves

Actuation	Port size	Flow (l/min)	MODEL	ACCESSORIES		
				Straight fitting	Elbow fitting	Silencer
  Lever/lever/lever - APB	G1/8 G1/4	335 965	X3343702 X3363702	 C0225 06 18 C0225 08 28	 C0247 06 18 C0247 08 28	 T40C1800 T40C2800
  Lever/spring/lever - APB	G1/8 G1/4	335 965	X3343802 X3363802	C0225 06 18 C0225 08 28	C0247 06 18 C0247 08 28	T40C1800 T40C2800
  Lever/lever/lever - COE	G1/8 G1/4	335 965	X3347702 X3367702	C0225 06 18 C0225 08 28	C0247 06 18 C0247 08 28	T40C1800 T40C2800
  Lever/spring/lever - COE	G1/8 G1/4	335 965	X3347802 X3367802	C0225 06 18 C0225 08 28	C0247 06 18 C0247 08 28	T40C1800 T40C2800

APB = All Ports Blocked, COE = Centre Open Exhaust

VP50 SERIES

Proportional pressure control valve

G1/4



Closed loop air pilot operated
proportional pressure control
valve

Adjustable for a wide range of
applications

Fast response

Low power consumption

High flow

TECHNICAL DATA

Medium:

Compressed air filtered to 50 µm,
non-lubricated

Supply pressure:

14 bar max.




Flow:

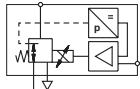
Up to 1200 l/min at 11 bar supply
pressure

Ambient temperature:

-20°C to +50°C

Consult our Technical Service for use below +2°C.

Actuation	Port size	Flow (l/min)	Output Pressure (bar)	Control signal	MODEL	ACCESSORIES			
						Straight fitting	Elbow fitting	Silencer	Connector with 5 m moulded cable
						Tube diameter in bold			
									
	G 1/4	1200	0..10	0..10 V	VP5010BJ111H00	C0225 0828	C02470828	T40C2800	0250081000000000
	G 1/4	1200	0..10	4..20 mA	VP5010BJ411H00	C0225 0828	C02470828	T40C2800	0250081000000000
	G 1/4	1200	0..8	0..10 V	VP5008BJ111H00	C0225 0828	C02470828	T40C2800	0250081000000000
	G 1/4	1200	0..8	4..20 mA	VP5008BJ411H00	C0225 0828	C02470828	T40C2800	0250081000000000
	G 1/4	1200	0..6	0..10 V	VP5006BJ111H00	C0225 0828	C02470828	T40C2800	0250081000000000
	G 1/4	1200	0..6	4..20 mA	VP5006BJ411H00	C0225 0828	C02470828	T40C2800	0250081000000000
	G 1/4	1200	0..2	0..10 V	VP5002BJ111H00	C0225 0828	C02470828	T40C2800	0250081000000000
	G 1/4	1200	0..2	4..20 mA	VP5002BJ411H00	C0225 0828	C02470828	T40C2800	0250081000000000

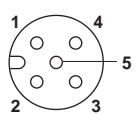


* Up to 1200 l/min at 11 bar supply pressure

Electrical information

Electromagnetic compatibility	CE marked: conforms to EC requirements EN 50081-2 (1994) and EN 50082-2 (1995)
Electrical input signal	4 to 20 mA or 0 to 10 V factory set
Electrical power input	24 V d.c. ±25% (power consumption < 1 W)
Output pressure feedback signal	0 ... 10 V full range
Connections	M12 5 pin

Instrument pin configuration



1	+24 V d.c. supply
2	0 to 10 full range
3	Control signal (+ve)
4	Common [DC supply, signal and feedback return]
5	Chassis (earth)

VP51 SERIES

Programmable proportional pressure control valve

G1/4



Closed loop air pilot digital proportional control valve
 Fully programmable with on-board diagnostics
 Multi-language menu option
 Password protection option at first level functionality
 Instant LED warning functions
 Application specific set-up
 Pressure output display; no gauge necessary
 High speed response

TECHNICAL DATA

Medium:
 Compressed air, filtered to 50 µm, non-lubricated

Output pressure:
 User adjustable up to 10 bar

Supply pressure:
 14 bar max

Ambient temperature:
 -20°C to +50°C
 Consult our Technical Service for use below +2°C.

Actuation	Port size	Flow (l/min)	Output Pressure (bar)	Control signal	MODEL	ACCESSORIES			
						Straight fitting	Elbow fitting	Silencer	Connector with 5 m moulded cable
						Tube diameter in bold			
	G 1/4	1200	0..10	0..10 V	 VP5110BJ111H00 VP5110BJ411H00	 C02250828 C02250828	 C02470828 C02470828	 T40C2800 T40C2800	 0250081000000000 0250081000000000
	G 1/4	1200	0..10	4..20 mA					

Electrical information

Electromagnetic compatibility	CE marked: conforms to EC requirements EN 50081-2 (1994) and EN 50082-2 (1995)
Electrical input signal	4 to 20 mA or 0 to 10 V factory set
Electrical power input	24 V d.c. ±25% (power consumption < 1 W)
Output pressure feedback signal	0 to 10 V full range or user-configurable switched output
Connections	M12 5 pin

Instrument pin configuration

	1	+24 V d.c. supply
	2	Monitor output
	3	Control signal (+ve)
	4	Common (d.c. supply, signal and feedback return)
	5	Chassis (earth)

For further information



www.norgren.com/info/nec/en119

HERION 26230 SERIES

Indirect solenoid actuated spool valves

6 mm orifice (ND) 5/2, 5/3, G1/4, G1/2



Standard manual override with detent
 Compact design
 High flow rate
 Simple design of soft spool seal system
 Maintenance-free
 Easily interchangeable solenoid system

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated and non-lubricated

Operating pressure:

1 to 10 bar

Flow direction:

Fixed

Mounting position:

Optional, preferably with solenoid on top

Ambient temperature:

-10°C to 50 °C

For temperatures below 0°C use conditioned dry air. If installed outdoors protect all connections against the penetration of moisture

Consult our Technical Service for use below +2°C

Electrical connection:

Connector interface to DIN 43650 form B

Actuation	Port size	Flow (l/min)	Operating Pressure (bar)	MODEL	ACCESSORIES				
					Straight fitting	Elbow fitting	Silencer	Basic Plug Form B	Basic Plug Form A
	G 1/4	1200	1..10	2623000xxx#*****#					
	G 1/2	3000	2..10	2623500xxx#*****#	C02250828 C02251248	C02470828 C02471248	T40C2800 T40C4800	0680003 0680003	0570275 0570275
	G 1/4	1200	1..10	2323100xxx#*****					
	G 1/2	3000	2..10	2323600xxx#*****	C02250828 C02251248	C02470828 C02471248	T40C2800 T40C4800	0680003 0680003	0570275 0570275
	G 1/4	900	3..10	2623300xxx#*****					
	G 1/2	2200	2,5..10	2623800xxx#*****	C02250828 C02251248	C02470828 C02471248	T40C2800 T40C4800	0680003 0680003	0570275 0570275
	G 1/4	900	3..10	2623200xxx#*****					
	G 1/2	2200	2,5..10	2623700xxx#*****	C02250828 C02251248	C02470828 C02471248	T40C2800 T40C4800	0680003 0680003	0570275 0570275
	G 1/4	900	3..10	2623400xxx#*****					
					C02250828	C02470828	T40C2800	0680003	0570275

xxxx Insert solenoid codes from table below

***** Insert voltage codes from table below

Port 3 is not throttleable

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure.

Voltage codes

24 V d.c.	02400
24 V a.c.	02450
230 V a.c.	23050
Without coil	00000

SOLENOID ACTUATORS

	Power consumption		Voltage		Protection category	Protection class	Temperatures Ambient/fluid °C	Electrical connection	kg	Solenoid Codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)						
	1,7	-	-	-	-	IP 65 (with connector)	-40 ... +50	DIN EN 175301-803 Form B 4)	0,054	3050
	1,6	3,5	30	-	-	IP 65 (with connector)	-40 ... +50	DIN EN 175301-803 Form A 6)	0,090	3036

4) Connector not supplied, see 'Accessories' table

6) Connector not supplied; required connector: part no. 0570275, see 'Accessories' table.

BUSCHJOST 82400 SERIES

Indirect solenoid actuated diaphragm valves

8 to 50 mm orifice (ND) 2/2, NC, G1/4 to G2



High flow rate
Damped operation
Clear compact design
Solenoid interchangeable without tools (Click-on®)
Particularly suitable for use as water valve in accordance with DIN EN 60730-2-8

TECHNICAL DATA

Medium:
Neutral gases and liquid fluids

Flow direction:
Fixed

Mounting position:
Optional, preferably with solenoid upright

Fluid temperature:
-10°C to +90°C max.

Ambient temperature:
+50°C max.

MATERIALS

Body: brass
Seat seal: NBR (Perbunan)
Internal parts: stainless steel, PVDF

For contaminated fluids installation of an upstream filter is recommended.

Actuation	Orifice (mm)	Port size	Kv value (m ³ /h)	Operating Pressure (bar)	MODEL
	8	G 1/4	1,90	0,1..16	8240000xxx*****
	10	G 3/8	3,00	0,1..16	8240100xxx*****
	12	G 1/2	3,80	0,1..16	8240200xxx*****
	20	G 3/4	6,10	0,1..16	8240300xxx*****
	25	G 1	9,50	0,1..16	8240400xxx*****
	32	G 1 1/4	23,00	0,1..10	8240500xxx*****
	40	G 1 1/2	25,00	0,1..10	8240600xxx*****
	50	G 2	41,00	0,1..10	8240700xxx*****

xxxx Insert solenoid codes from table below. ***** Insert voltage codes from table below

Type-tested up to 25 mm orifice size in accordance with DIN EN 60730-2-8
Solenoid valves
Test institute
TÜV Rheinland / Brandenburg



Voltage codes

24 V d.c.	02400
24 V a.c. 50 Hz	02450
230 V a.c.	23050
Without coil	00000

SOLENOID ACTUATORS

	Power consumption		Voltage		Category	Protection class	Temperatures °C		Electrical connection	Solenoid Codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)			Fluid*	Ambient**		
	8	15/12	333	52	-	IP 65	+90 max.	-25 ... +50	DIN EN 175301-803	9101

* The maximum temperature depends on the valve type
Version as per VDE 0580, duty cycle 100%.

** The maximum temperature may be higher, depending on the application.

Power consumption with coil temperature of +20°C. With the solenoid coil at operating temperature (d.c.), the power consumption is up to 30% lower for physical reasons
Cable clamping range 5 to 10 mm

For further information



www.norgren.com/info/nec/en121

BUSCHJOST 82530 SERIES

Solenoid actuated diaphragm valves with forced lifting

10 mm orifice (ND) 2/2, NC, G1/4 to G1/2



Suitable for vacuum
 Compact solenoid with integrated core tube
 Valve operates without pressure differential (Δp)
 Operating pressure 0 to 20 bar with a.c. coil and NBR seals

TECHNICAL DATA

Medium:
 Neutral gases and liquid fluids

Flow direction:
 Fixed

Mounting position:
 Optional, but preferably with solenoid facing vertically upwards

Fluid temperature:
 -10°C to +90°C max.

Ambient temperature:
 -10°C to +50°C max.

MATERIALS

Body: brass, PA 66
 Seat seal: NBR (Perbunan)
 Internal parts: stainless steel 1.4104/430F, 1.4303, PVDF

For contaminated fluids installation of an upstream filter is recommended.

Actuation	Orifice (mm)	Port size	Kv value (m ³ /h)	Operating Pressure (bar)	MODEL
	10	G 1/4	1,5	0 ...10	8253000xxx*****
	10	G 3/8	1,7	0 ...10	8253100xxx*****
	10	G 1/2	1,7	0 ...10	8253200xxx*****

xxxx Insert solenoid codes from table below.
 ***** Insert voltage codes from table below

Voltage codes	
24 V d.c.	02400
24 V a.c. 50 Hz	02450
230 V a.c. 50 Hz	23050
Without coil	00000

SOLENOID ACTUATORS

	Power consumption		Voltage		Category	Protection class	Temperatures °C		Electrical connection	Solenoid Codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)			Fluid*	Ambient**		
	12/12	20/16	500	70	-	IP 65	+90 max..	-25 ... +50	DIN EN 175301-803	8001

* The maximum temperature depends on the valve type ** The maximum temperature may be higher, depending on the application.
 Power consumption calculated with coil at +20°C, for d.c. coils at operating temperature, power consumption is up to 30% lower

BUSCHJOST 84500 / 84520 SERIES

Pressure actuated angle seat valves

15 to 50 mm orifice (ND) 2/2, G1/2 to G2



Interchangeable for NC, NO or double acting functions
 Visual position indicator is standard
 Damped closing (valve closes against flow direction)
 Suitable for contaminated flow fluids
 Suitable for vacuum up to max. 90%
 Reversed flow direction optional
 High flow rate
 Liquid pilot fluids possible

TECHNICAL DATA

Medium:
 Neutral gases and liquid fluids (84500 Series)
 Aggressive gases and liquid fluids (84520 Series)

Flow direction:
 Fixed

Mounting:
 Optional

Fluid temperature:
 -10°C to +180°C max.

Ambient temperature:
 -10°C to +60°C max.

Pilot fluid:
 Neutral gases

Pilot fluid temperature:
 +60°C max.

MATERIALS

Valve
 Body: brass CW602N (84500 Series), stainless steel (84520 Series)
 Seat seal: PTFE
 Internal parts: brass, stainless steel
 Seal packing: PTFE/FPM

Actuator
 Body: polyamide 66 with glass fibre 30%
 Seals: NBR
 Internal parts: brass, stainless steel

84500 SERIES FOR NEUTRAL GASES AND LIQUID FLUIDS

Actuation	Orifice (mm)	Port size	Kv (m ³ /h)	Operating Pressure (bar)	MODEL
	15	G 1/2	4,8	0..16	8450200 0000
	20	G 3/4	10	0..10	8450300 0000
	25	G 1	14	0..10	8450400 0000
	32	G 1 1/4	23	0..7	8450500 0000
	40	G 1 1/2	30	0..4,5	8450600 0000
	50	G 2	37	0..3	8450700 0000

84520 SERIES FOR AGRESSIVE GASES AND LIQUID FLUIDS

Actuation	Orifice (mm)	Port size	Kv (m ³ /h)	Operating Pressure (bar)	MODEL
	15	G 1/2	4,8	0..16	8452200 0000
	20	G 3/4	10	0..10	8452300 0000
	25	G 1	14	0..10	8452400 0000

For further information



www.norgren.com/info/nec/en123

HERION 97100 SERIES Indirect solenoid actuated spool valves for single and double acting actuators with NAMUR interface

6 mm orifice (ND) - 3/2, 5/2, 5/3, NC/APB, G1/4



- 3/2 or 5/2 way function via adapter plates
- Exhaust air recirculation
- Crossover-free switching, switch-over function guaranteed even with small cross section air supply
- Rest position in the event of power failure (monostable design)
- Manual override with detent
- Compact design
- Simple design of soft seal spool system
- Easily interchangeable solenoid

TECHNICAL DATA

- Medium:** Compressed air, filtered, lubricated and non-lubricated
- Operating pressure:** 2 to 8 bar
- Flow direction:** Fixed
- Mounting position:** Optional
- Ambient temperature:** Valve: -25 to +50 °C
Solenoid: See solenoid table
With minus temperatures, use conditioned dry air. If installed in the open protect all connections against the penetration of moisture. Consult our Technical Service for use below +2°C
- Electrical connection:** Acc. to DIN 175301-803 form A

3/2, 5/2 & 5/3 VALVES

Actuation	Port size			Function	Actuation	Flow l/m	kg	MODEL
	1	3 (5)	2, 4					
	G 1/4	G 1/8	Flange	NC	Solenoid/Spring	750	0,25	9710000xxx*****
	G 1/4	G 1/8	Flange	NC	Solenoid/Solenoid	750	0,35	9711000xxx*****
	G 1/4	G 1/8	Flange	APB	Solenoid/Solenoid	500	0,40	9712000xxx*****

xxxx Insert solenoid codes from table below. ***** Insert voltage codes from table on next page
 APB = All Ports Blocked
 Exterior free of non-ferrous metals

SOLENOID ACTUATORS 3/2, 5/2 & 5/3 valves

	Power consumption		Voltage		Protection category	Protection class	Temperatures Ambient/fluid °C	Electrical connection	kg	Solenoid Codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)						
	1,6	3,5	30	-	-	IP 65 (with connector)	-40 ... +50	DIN EN 175301-803 Form A 6)	0,090	3036

Standard voltages 24 V d.c., 230 V a.c. Other voltages on request. Design acc. to VDE 0580, EN 50014/50028. 100% duty cycle.
 6) Connector not supplied; required connector for d.c.: part no. 0570275 Form A, see 'Accessories' table.

3/2, 5/2 & 5/3 VALVES for minimal electrical power

Actuation	Port size			Function	Actuation	Flow l/m	kg	MODEL
	1	3 (5)	2, 4					
	G 1/4	G 1/8	Flange	NC	Solenoid/Spring	750	0,25	9710002xxxx*****
	G 1/4	G 1/8	Flange	APB	Solenoid/Solenoid	500	0,40	9712002xxxx*****

xxxx Insert solenoid codes from table below. ***** Insert voltage codes from table below
 APB = All Ports Blocked
 Exterior free of non-ferrous metals

SOLENOID ACTUATORS 3/2, 5/2 & 5/3 Valves for minimal electrical power

	Power consumption		Voltage		Protection category	Protection class	Temperatures Ambient/fluid °C	Electrical connection	kg	Solenoid Codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)						
	1,7	-	-	-	-	IP 65 (with connector)	-40 ... +50	DIN EN 175301-803 Form B ⁶⁾	0,054	3050
	0,7	0,7 2)	-	-	-	IP 65 (with connector) ²⁾	-40 ... +50	DIN EN 175301-803 Form A ⁶⁾	0,090	3034

Standard voltages 24 V d.c., 230 V a.c. Other voltages on request. Design acc. to VDE 0580, EN 50014/50028. 100% duty cycle.
 2) Valves can be operated with d.c. only. For 230 V a.c. application please use 206 V d.c. coil together with rectifier plug 0663303
 6) Connector not supplied; required connector for d.c.: part no. 0680003 Form B and 0570275 Form A, see 'Accessories' table.

Voltage codes	
24 V d.c.	02400
24 V a.c.	02450
230 V a.c.	23050

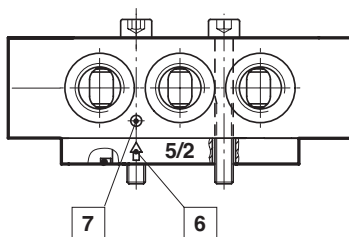
ACCESSORIES

Silencer	Connectors
0014500 (G1/8)*	0570275 Form A
	0663303 with rectifier
	0680003 Form B

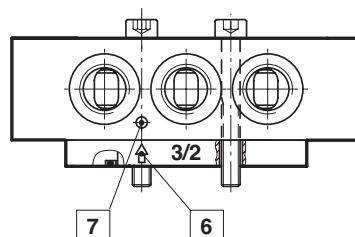
* For indoor use

CONVERSION INSTRUCTIONS OF 5/2 INTO 3/2 WAY FUNCTION

5/2 way function
(original mode of supply)



3/2 way function



3/2 resp. 5/2 way function can be achieved just by swapping enclosed adaptor plates. Make sure Marker and Arrow do match as shown on above drawing. Original mode of supply: 5/2 function.

Arrow

Marker

HERION 24011 SERIES

Direct solenoid actuated poppet valves

5 mm orifice (ND) 3/2, Universal, G1/4, 1/4 NPT, flange with NAMUR interface



Main application: single operated process actuators

TÜV-approval based on IEC 61508, DIN V 19 251. Approvals: DIN EN 161/3394 DVGW, group Rm and EN 13611

Valves for safety systems to SIL 4 or AK 7

Standard NAMUR type manifold system for easy assembly

Redundancy: 1 of 2, 2 of 3

Valve switches at power failure into starting position (mechanical return spring)

Rest position in the event of power failure provided by mechanical return spring

These solenoids are ATEX approved

Suitable for outdoor use under critical environment conditions (see solenoid list)

TECHNICAL DATA

Medium:

Neutral or aggressive gaseous or liquid fluids

Operating pressure: 0 to 10 bar

Flow: 340 l/min

Flow direction: Optional

Mounting position:

Optional, preferably vertical

Fluid temperature:

-25°C to +80°C NBR

-10°C to +120°C FPM, water up to +95°C

-40°C to +60°C VMQ

For temperatures below 0°C use conditioned dry air. If installed outdoors protect all connections against the penetration of moisture.

Consult our Technical Service for use below +2°C

VALVES WITH THREADED CONNECTION

Actuation	kg	Port size	Operating pressure (bar)#	Materials Seat seal	Manual override	Solenoid group	MODEL	Test certificate IEC 61 508**
Brass valves								
	0,65	G 1/4	0 ... 10	NBR	-	A + B	2401103xxx*****	
	0,65	G 1/4	0 ... 10	FKM	-	A + B	2401126xxx*****	•
	0,65	1/4 NPT	0 ... 10	NBR	-	A + B	2401138xxx*****	•
Stainless steel valves (1.4404/316L) for aggressive environment								
	0,65	1/4 NPT	0 ... 10	FKM	-	A	2401147xxx*****	



xxxx Insert solenoid code from tables on next page

part No. 0695241. # Viscosity for gaseous or liquid fluids up to 40 mm²/s

Approval S 137/01, SIL 4 for low demand mode, SIL 3 for high demand mode, Approval S 83/96, AK 7 (request from manufacturer)

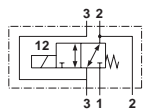
Particular for valves with TÜV approval and installation in plants, based on safety standards DIN V 19250, IEC 61511, taking into account Maintenance instruction document 7503444. The responsibility for the maintenance and repair of the solenoid valves lies with the users or the supervisory authority for these process systems.

***** Insert voltage code from table on next page

** Approval is not included in delivery,

VALVES WITH NAMUR INTERFACE - Aluminium valves anodized

Actuation	kg	Port size	Operating pressure (bar)#	Materials Seat seal	Manual override	Solenoid group	MODEL	Test certificate IEC 61 508**
	0,55	G 1/4	0 ... 10	NBR	Add-on	A + B	2401109xxx*****	•



xxxx Insert solenoid code from tables on next page.

part No. 0695241. # Viscosity for gaseous or liquid fluids up to 40 mm²/s

Approval S 137/01, SIL 4 for low demand mode, SIL 3 for high demand mode, Approval S 83/96, AK 7 (request from manufacturer)

Particular for valves with TÜV approval and installation in plants, based on safety standards DIN V 19250, IEC 61511, taking into account Maintenance instruction document 7503444. The responsibility for the maintenance and repair of the solenoid valves lies with the users or the supervisory authority for these process systems.

***** Insert voltage code from table on next page

** Approval is not included in delivery,

Voltage codes	
24 V d.c.	02400
24 V a.c.	02450
230 V a.c.	23050

ACCESSORIES

Cable glands
Protection class EEx e, EEx d
(ATEX), Ms nickel plated brass

Connectors



EEx e 0588819

0570275

(for solenoid 42xx /46xx M20 x 1,5)

GROUP A SOLENOIDS

	Power consumption		Voltage		Protection category	Protection class	Temperatures Ambient/fluid °C	Electrical connection	kg	Solenoid codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)						
	16,9	-	703	-	-	IP00 without plug ⁵⁾	-25 ... +60	DIN EN175301-803 Form A ⁶⁾	0,33	0800 ⁷⁾
	-	18	-	185	-	IP65 with plug ⁵⁾	-25 ... +60	DIN EN175301-803 Form A ⁶⁾	0,34	3803 ⁷⁾

GROUP B SOLENOIDS

	Power consumption		Voltage		Protection category	Protection class	Temperatures Ambient/fluid °C	Electrical connection	kg	Solenoid codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)						
	4	-	162	-	II2G	EEx me II T4/T6 ²⁾	-40 ... +80/+55	M20 x 1,5 ⁶⁾	0,6	4260 ⁸⁾
	-	5,3	-	23	II2D	IP66 T130°C				
	-	5,3	-	23	II2G	EEx me II T4/T6 ²⁾	-40 ... +80/+55	M20 x 1,5 ⁶⁾	0,6	4261 ⁸⁾
	-	5,3	-	23	II2D	IP66 T130°C				
	4	-	162	-	II2G	EEx md IIC T4/T6 ³⁾	-40 ... +80/+55	1/2 NPT ⁶⁾	0,8	4660 ⁸⁾
	-	5,3	-	23	II2D	EEx me IIC T4/T6 ³⁾				
	-	5,3	-	23	II2D	IP66 T130°C				

Standard voltages 24 V d.c., 230 V a.c. Other voltages on request. Design acc. to VDE 0580, EN 50014/50028. 100% duty cycle.

2) Category II 2 GD, EC-Type Examination Certificate KEMA 98 ATEX 4452 X

3) Category II 2 GD, EC-Type Examination Certificate PTB 02 ATEX 2085 X

5) Required connector for d.c. type 0570275. Connector with rectifier for a.c. or universal current: type 0663303

6) Connector/cable gland not supplied, see 'Accessories' table

7) Suitable for outdoor installation only if equipped with a special protection (e.g. cubicle installation)

8) This solenoid has a fuse with an appropriate rating.

HERION 95000 SERIES Direct solenoid actuated poppet valves

1,5 to 6 mm orifice (ND) 2/2, NC/NO, G1/4



Working from 0 bar up
Short switching times
Suited for fine vacuum 1.33-10⁻³ mbar
Assembled oil and grease-free
For a.c. solenoid systems with integrated rectifier (40 to 60 Hz)
These solenoids are ATEX and FM, CSA, XP approved

TECHNICAL DATA

Medium:

Neutral gaseous and liquid fluids

Operating pressure:

0 to 40 bar

Flow direction:

Fixed

Mounting position:

Optional, preferably with solenoid on top

Fluid temperature:

-25 to +80°C NBR (Perbunan)

Ambient temperature:

Depending on solenoid system
-25 to +80°C

Consult our Technical Service for use below +2°C

For contaminated fluids installation of an upstream filter is recommended.

Function	Port size	Orifice (mm)	Operating pressure (bar)	Flow l/min	kg	Solenoid group	MODEL
 2/2 NC	G1/4	1,5	0 ... 40	70	0,21	13B	9500100xxxx*****
	G1/4	2	0 ... 35	120	0,21	13B	9500200xxxx*****
	G1/4	3	0 ... 10	200	0,21	13C	9500300xxxx*****
	G1/4	4	0 ... 12	350	0,21	13D	9500400xxxx*****
	G1/4	4	0 ... 14	350	0,25	16D	9501400xxxx*****
	G1/4	5	0 ... 5	450	0,25	16D	9501500xxxx*****
	G1/4	6	0 ... 5	550	0,25	16D	9501600xxxx*****
 2/2 NO	G1/4	2	0 ... 20	100	0,21	13B	9502210xxxx*****
	G1/4	3	0 ... 10	160	0,21	13B	9502310xxxx*****

xxxx Insert solenoid code according to solenoid group from tables on page 130. ***** Insert voltage code from table below

Voltage codes

24 V d.c.	02400
24 V a.c.	02450
230 V a.c.	23050

ACCESSORIES

Cable glands
Protection class EEx e, EEx d
(ATEX), Ms nickel plated brass

Connectors



EEx e 0588819

(for solenoid 42xx /46xx M20 x 1,5)



0570275

HERION 96000 SERIES Direct solenoid actuated poppet valves

2 to 5 mm orifice (ND) 3/2, NC/NO, G1/4



Working from 0 bar up
 Short switching times
 Suited for fine vacuum down to 1,33·10⁻³ mbar
 Assembled oil and grease-free
 For a.c. solenoid systems with integrated rectifier (40 to 60 Hz)
 These solenoid valves are ATEX and FM, CSA, XP approved

TECHNICAL DATA

Medium:
 Neutral gaseous and liquid fluids

Operating pressure:
 0 to 18 bar

Flow direction:
 Fixed

Mounting position:
 Optional, preferably with solenoid on top

Fluid temperature:
 -25 to +80 °C NBR (Perbunan)

Ambient temperature:
 Depending on solenoid system
 -25, -40 to +55, +80, +100°C
 Consult our Technical Service for use below +2°C

For contaminated fluids installation of an upstream filter is recommended.

Function	Port size	Orifice (mm)	Operating pressure (bar)	Flow l/min	kg	Solenoid group	MODEL
<p>3/2 NC</p>	G1/4	2	0 ... 10	120	0,32	13B	9600210xxx*****
	G1/4	2	0 ... 18	120	0,52	13D	9600240xxx*****
	G1/4	3	0 ... 6	200	0,32	13C	9600320xxx*****
	G1/4	3	0 ... 14	200	0,52	13D	9600340xxx*****
	G1/4	4	0 ... 8	350	0,52	16C	9601430xxx*****
	G1/4	4	0 ... 10	350	0,52	16D	9601440xxx*****
<p>3/2 NO</p>	G1/4	5	0 ... 7	450	0,52	16D	9601540xxx*****
	G1/4	2	0 ... 9	100	0,50	13B	9602210xxx*****
	G1/4	3	0 ... 9	160	0,70	13D	9602340xxx*****
	G1/4	4	0 ... 6	300	0,70	16D	9602440xxx*****

xxxx Insert solenoid code according to solenoid group from table below. ***** Insert voltage codes from table below

Voltage codes	
24 V d.c.	02400
24 V a.c.	02450
110 V a.c.	11050
230 V a.c.	23050

ACCESSORIES

Cable glands
 Protection class EEx e, EEx d (ATEX), Ms nickel plated brass

Connectors



EEx e 0588819
 (for solenoid 42xx /46xx M20 x 1,5)

0570275


For further information





www.norgren.com/info/nec/en129

SOLENOID ACTUATORS FOR 95000 & 96000 SERIES



SOLENOID GROUP 13B

	Power consumption		Voltage		Protection category	Protection class	Temperatures Ambient/fluid °C	Electrical connection	kg	Solenoid Codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)						
	8,0	-	331	-	-	IP 65 (with connector) ⁵⁾	-25 ... +60 Fluid: max. 80	DIN EN 175301-803 Form A ⁶⁾	0,15	0246 ⁷⁾
	-	9,2	-	40	-	IP 65 (with connector) ⁵⁾	-25 ... +60 Fluid: max. 80	DIN EN 175301-803 Form A ⁶⁾	0,16	3206 ⁷⁾


SOLENOID GROUP 13C

	Power consumption		Voltage		Protection category	Protection class	Temperatures Ambient/fluid °C	Electrical connection	kg	Solenoid Codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)						
	12,1	-	504	-	-	IP 65 (with connector) ⁵⁾	-25 ... +60 Fluid: max. 80	DIN EN 175301-803 Form A ⁶⁾	0,117	0200 ⁷⁾
	-	11,3	-	49	-	IP 65 (with connector) ⁵⁾	-25 ... +60 Fluid: max. 80	DIN EN 175301-803 Form A ⁶⁾	0,160	3204 ⁷⁾
	8,9	-	369	-	II2G ²⁾ II2D	EEx me II T5/T4 IP 66 T 130°C 2)	T5: -40 ... +55 T4: -40 ... +65	M20 x 1,5 ⁶⁾	0,500	4220 ⁸⁾


SOLENOID GROUP 13D

	Power consumption		Voltage		Protection category	Protection class	Temperatures Ambient/fluid °C	Electrical connection	kg	Solenoid Codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)						
	16,9	-	703	-	-	IP 65 (with connector) ⁵⁾	-25 ... +60 Fluid: max. 80	DIN EN 175301-803 Form A ⁶⁾	0,270	0700 ⁷⁾
	-	17,3	-	75	-	IP 65 (with connector) ⁵⁾	-25 ... +60 Fluid: max. 80	DIN EN 175301-803 Form A ⁶⁾	0,320	3703 ⁷⁾
	11,4	-	475	-	II2G II2D	EEx me II T5/T4 IP66 T 130°C 2)	T5: -40 ... +40 T4: -40 ... +50	M20 x 1,5 ⁶⁾	0,500	4230 ⁸⁾

SOLENOID GROUP 16C

	Power consumption		Voltage		Protection category	Protection class	Temperatures Ambient/fluid °C	Electrical connection	kg	Solenoid Codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)						
	6,8	-	284	-	-	IP 65 (with connector) ⁵⁾	-25 ... +60 Fluid: max. 80	DIN EN 175301-803 Form A ⁶⁾	0,300	0827 ⁷⁾
	-	10,6	-	46	-	IP 65 (with connector) ⁵⁾	-25 ... +60 Fluid: max. 80	DIN EN 175301-803 Form A ⁶⁾	0,350	3805 ⁷⁾

SOLENOID GROUP 16D

	Power consumption		Voltage		Protection category	Protection class	Temperatures Ambient/fluid °C	Electrical connection	kg	Solenoid Codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)						
	16,9	-	703	-	-	IP00 without plug ⁵⁾ IP65 with plug ⁵⁾	-25 ... +60	DIN EN175301-803 Form A ⁶⁾	0,33	0800 ⁷⁾
	-	17,3	-	75	-	IP00 without plug ⁵⁾ IP65 with plug ⁵⁾	-25 ... +60	DIN EN175301-803 Form A ⁶⁾	0,34	3803 ⁷⁾

Standard voltages 24 V d.c., 230 V a.c. Other voltages on request. Design acc. to VDE 0580, EN 50014/50028, 100% duty cycle.

2) Category II Z GD, EC-Type Examination Certificate KEMA 98 ATEX 4452 X

5) Required connector type 0570275.

6) Connector/cable gland not supplied, see 'Accessories' table

7) Suitable for outdoor installation only if equipped with a special protection (e.g. cubicle installation)

8) This solenoid has a fuse with an appropriate rating.

ADDITIONAL RANGES

80200 SERIES

- High flow rate
- Optionally pilot-operated by external pilot source
- High repeatability of switching time
- Easily interchangeable solenoid system



Port size			Orifice (mm)	Type	Operating pressure (bar)	Control pressure (bar)*	Switching time (ms)	kg	MODEL
1	2	3							
G1/2	G1/2	G3/4	15	NC	2 ... 10	-	10	1,3	80265700800*****
G3/4	G3/4	G1	20	NC	2 ... 10	-	10	1,5	80266700800*****
G1	G1	G1	25	NC	2 ... 10	-	10	1,5	80267700800*****
G1/2	G1/2	G3/4	15	NC	-0,9 ... 6	4 ... 10	20	1,3	80265720800*****#

***** Insert voltage code from table below. Plugs according to DIN 43650 Form A

* Required pilot pressure \geq operating pressure, min. 2 bar; with vacuum operating pressure + 1 bar, min. 4 bar.

Valve for vacuum

Voltage codes

24 V d.c.	02400
24 V a.c.	02450

Other voltages on request.

XSz SAFETY VALVES

- Inherently fail-safe without residual pressure
- Dynamic self monitoring
- Double valve control system
- For use with pneumatic clutch and brake systems and other 3-way safety functions
- Poppet design with feedback signal ports
- Fast exhaust capability
- Conforms to EN 692, EN 954-1, BG, OSHA, SUWA and other approvals
- Improves safety and reduces downtime on mechanical power press applications
- Quick and easy adjustment of 'overlap' on mechanical presses
- No additional electrical monitoring required
- Easily fitted into existing systems



Type	Voltage	Port size				MODEL G-thread
		P	A	A1	R	
XSz 10**	a.c.	1/2"	1/2"	(1/2")	3/4"	24929000200*****
XSz 20**	d.c./a.c.	1/2"	3/4"	(1")	1"	24930000800*****
XSz 32	d.c./a.c.	1"	1"	-	1 1/2"	24931300800*****
XSz 10**	d.c.	1/2"	1/2"	(1/2")	3/4"	24929010200*****
XSz 50	d.c./a.c.	1 1/2"	2"	-	2"	24932300800*****

***** Insert voltage codes from table below.

Port sizes in brackets are plugged.

Supplied without plug. If required, select model 0570275

** Valve with integrated silencer available

Voltage codes

24 V d.c.	02400
24 V a.c.	02450
110 V a.c.	11050
230 V a.c.	23050

For further information



www.norgren.com/info/nec/en131

AIR FUSES In-line excess flow shut-off valves

1/4 to 1 1/2" BSPP



Assists in complying with safety regulations.

Tamper proof.

Compact and safe design.

Low pressure drop.

Automatically resets after failure correction.

High corrosion resistance.

High air pressure rating.

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated and non lubricated inert gases

Operating pressure:

Maximum 16 bar

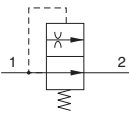
Minimum according to hose length

Ambient temperature:

-20°C to +80°C.

Consult our Technical Service for use below +2°C.

Function	Port size BSPP	Drop pressure at shut off flow (bar)	Shut off flow rate at 7 bar (dm ³ /s) ±10%	Flow at 7 bar Δ P 0,07 bar (dm ³ /s)	MODEL
	1/4	0,14	8,3	6,5	T60C2890
	1/4	0,3	14	6,5	T60C2891
	3/8	0,14	19,4	13,5	T60C3890
	3/8	0,3	32,2	13,5	T60C3891
	1/2	0,14	32,2	23,2	T60C4890
	1/2	0,3	48,3	23,2	T60C4891
	3/4	0,14	48,3	43	T60C6890
	3/4	0,3	80	43	T60C6891
	1	0,14	92	68	T60C8890
	1	0,3	128	68	T60C8891
	1 1/2	0,14	186	145	T60CB890
	1 1/2	0,3	268	145	T60CB891



BSPP: according to BS2779 and ISO 228/1.

Flow and pressure test conducted according to ISO 6358 test circuit. Mean measured flow values are provided at standard reference conditions.



T55 SERIES Non-return valves

In-line

M5, 1/8, 1/4, 3/8, 1/2" BSPP, BSPT

Permit free flow of air in one direction only

Simple, reliable design

Silicone free

Low cracking pressure

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated and non-lubricated

Operating pressure:

0,1 to 10 bar

Ambient temperature:

-20°C to +80°C

Consult our Technical Service for use below +2°C.

MATERIALS

Body: aluminium

O-ring: nitrile rubber

Valve: POM

Spring: stainless steel

Function	Port size	Flow factor C*	CV	Cracking pressure (bar)	Kg	MODEL		
						Metric	BSPP	BSPT
	M5	0,8	0,19	0,05	0,010	T55M0500		
	1/8	2,4	0,59	0,05	0,015		T55C1800	
	1/4	5,5	1,35	0,05	0,025		T55C2800	T55B2800
	3/8	9,0	2,20	0,05	0,060		T55C3800	T55B3800
	1/2	15,0	3,70	0,05	0,080		T55C4800	T55B4800

*C: measured in dm³/(s.bar)

T51, T52 AND T53 SERIES Push-in non-return valves

In-line - Ø 4, 5, 6, 8, 10, 12 mm O/D tube




- Low cracking pressure
- Releasable grab ring technology combining plastic and brass components for a compact and superior non-return design
- Non-PTFE based thread sealant on tapered threads
- Moulded mounting brackets on tube connector designs (PIF/PIF plastic valves)
- Red release sleeve indicating metric tube sizes for grab ring connection
- Grey release sleeve indicating inch tube sizes for grab ring connection
- Reliable and corrosion resistant

TECHNICAL DATA

- Medium:** Compressed air, filtered, lubricated or non-lubricated, vacuum
- Operating pressure:** 0,1 to 10 bar (T51, T52)
0,3 to 10 bar (T53)
-0,1 to -1 bar vacuum (T51, T52)
- Ambient temperature:** -20°C to +80°C
Consult our Technical Service for use below +2°C.
- Mounting:** Tube/tube PIF
Tube PIF/male thread
Male thread/tube PIF



MATERIALS

- 4, 6, 8 mm O/D**
Body: plastic PBT
Valve: plastic PBT
Release sleeve: plastic POM
Natural brass insert
Seal: silicon free nitrile
Spring: stainless steel
Grab ring: stainless steel, BS 1440 Pt 2, grade 301.S21
T52 and T53 series, nickel plated brass threads.
- 5, 10, 12 mm O/D**
Collet: nickel plated brass
Body: black anodised aluminium
Valve and insert: aluminium

Function	Tube size	Flow factor C/CV*	Cracking pressure (bar)	Minimum operating pressure (bar) **	MODEL PIF/PIF Metric
 T51 Tube/tube	4 mm	0,75/0,18	0,03+0,06	0,1	T51P0004
	5 mm	1,16/0,28	0,03+0,06	0,1	T51P0005
	6 mm	1,9/0,47	0,03+0,06	0,1	T51P0006
	8 mm	3,5/0,86	0,03+0,06	0,1	T51P0008
	10 mm	4,7/1,15	0,03+0,06	0,1	T51P0010
	12 mm	7,5/1,84	0,03+0,06	0,1	T51P0012

* Cv measured in dm³/(s.bar)

** Minimum operating pressure 0,3 bar for T53

Function	Port size x tube size BSPT x metric	Flow factor C/CV*	Cracking pressure (bar)	Minimum operating pressure (bar) **	MODEL PIF/Male thread	Male thread/PIF
 T52 Tube/thread	1/8x4 mm	0,75/0,18	0,03+0,06	0,1	T52B1804	-
	1/4x5 mm	1,4/0,34	0,03+0,06	0,1	T52B2805	-
	1/8x6 mm	1,9/0,47	0,03+0,06	0,1	T52B1806	T53B1806
 T53 Tube/thread	1/4x6 mm	1,9/0,47	0,03+0,06	0,1	T52B2806	T53B2806
	1/8x8 mm	3,5/0,86	0,03+0,06	0,1	T52B1808	-
	1/4x8 mm	3,5/0,86	0,03+0,06	0,1	T52B2808	T53B2808

* Cv measured in dm³/(s.bar)

** Minimum operating pressure 0,3 bar for T53

For further information



www.norgren.com/info/nec/en133

T15 SERIES Push-in flow regulators, uni-directional

In-line - Ø 3, 4, 5, 6, 8, 10, 12 O/D metric tube



High flow performance
 Suitable for panel/wall mounting and manifold
 Adjustment can be locked
 Captive regulator needle will not blow out when unscrewed
 Adjusting knob position
 Releasable grab ring technology combining plastic and brass components for a compact and superior fitting design
 Red release sleeve indicating metric tube sizes
 Reliable and corrosion resistant

TECHNICAL DATA

Medium:

Compressed air, filtered

Operating pressure:

0,1 to 10 bar maximum

Ambient temperature:

-20°C to +80°C

Consult our Technical Service for use below +2°C.

Mounting:

In-line. Panel mounted by hexagonal mounting nut. Wall mounted by through-holes in regulator body. Manifold by quick connection

MATERIALS

Ø 3, 4, 6, 8, 10 O/D:

Body: plastic PBT

Release sleeve, nut, knob: plastic POM

Seals: silicone free nitrile seal

External metal parts: nickel plated brass

Internal parts: brass

Spring: stainless steel

Grab ring: stainless steel, BS 1440

Pt 2, grade 301.S21

Ø 5, 12 O/D:

Collet: nickel plated brass

Function	Tube size	Max. regulated flow factor C/Cv**	Flow factor C/Cv**	Cracking pressure (bar)	Minimum operating pressure (bar)	kg	MODEL
	Metric						Metric
	3 mm	0,35/0,09	>0,35/0,09	0,1	0,1	0,013	T15P0003
	4 mm	0,45/0,11	>0,45/0,11	0,1	0,1	0,013	T15P0004
	5 mm	0,8/0,2	0,8/0,2	0,1	0,1	0,032	T15P0005*
	6 mm	1,4/0,34	>1,4/0,34	0,1	0,1	0,028	T15P0006
	8 mm	2,2/0,54	>2,2/0,54	0,1	0,1	0,047	T15P0008
	10 mm	3,9/0,96	>3,9/0,96	0,1	0,1	0,093	T15P0010
	12 mm	5,4/1,32	>5,4/1,32	0,1	0,1	0,143	T15P0012*

* Available only as collet tube connection.

** C measured in dm³/(s.bar)

For further information



www.norgren.com/info/nec/en134

T1000 SERIES Block form flow regulators

Uni-directional - M5, 1/8" to 1/2" BSPP



Compact size/low weight/ in-line units
 High flow performance
 Suitable for panel and wall mounting
 Adjustment can be locked
 Captive regulator needle will not blow out when unscrewed
 Adjusting knob position line

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated, inert gases

Operating pressure:

1 to 10 bar (0,3 to 10 bar for M5)

Ambient temperature:

-20°C to +80°C

Consult our Technical Service for use below +2°C.

MATERIALS

M5:

Body: aluminium

Seals: nitrile

Needle: brass

1/8, 1/4, 3/8, 1/2:

Body: aluminium alloy

Seals: nitrile

Needle & internal parts: brass

External parts: aluminium alloy

Function	Port size	Max. regulated flow factor		Free flow factor		Opening pressure (bar)	kg	MODEL
		C*	Cv	C*	Cv			
	M5	0,28	0,07	0,28	0,07	0,3	0,020	T1000M0500
	1/8	0,57	0,14	1,50	0,37	<0,1	0,031	T1000C1800
	1/4	1,30	0,32	2,80	0,69	<0,1	0,056	T1000C2800
	3/8	4,80	1,17	6,70	1,64	<0,1	0,150	T1000C3800
	1/2	7,50	1,84	8,30	2,00	<0,1	0,180	T1000C4800

*C: measured in dm³/(s.bar)

T1100 SERIES Block form flow regulators

Bi-directional - 1/8, 1/4" BSPP



Compact size/low weight/ in-line units.

High flow performance.

Suitable for panel and wall mounting.

Two gain flow control.

Adjustment can be locked.

Captive regulator needle will not blow out when unscrewed.

Adjusting knob position line

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated or non-lubricated, inert gases

Operating pressure:

0 to 10 bar

Ambient temperature:

-20°C to +80°C

Consult our Technical Service for use below +2°C.

MATERIALS

Body: aluminium alloy

Seals: nitrile

Needle & internal parts: brass

External parts: aluminium alloy

Function	Port size	Function	Max. regulated flow factor		Critical pressure ratio (b)	Min. operating pressure (bar)	kg	MODEL
			C*	Cv				
	1/8"	Bi-directional	0,57	0,14	0,2	0	0,031	T1100C1800
	1/4"	Bi-directional	1,3	0,32	0,2	0	0,056	T1100C2800

*C: measured in dm³/(s.bar)

For further information



www.norgren.com/info/nec/en135

BLOCKING, PRESSURE REDUCING & PNEUMATIC SENSOR FITTINGS

4 to 12 mm O/D metric tube - 1/8" to 1/2" BSPP



Very compact units
Easy tube insertion for rapid assembly of pneumatic circuits
Positive tube anchorage
Simpler pneumatic systems

TECHNICAL DATA

Medium:

Compressed air

Operating pressure:

Blocking fitting:

Supply pressure 1 to 10 bar

Pilot pressure – see table

Pressure reducing fitting:

Primary pressure 1 to 10 bar max.

Secondary pressure 1 to 8 bar max.

Pneumatic sensor fitting:

Cylinder pressure (Pc) 10 bar max.

Sensor supply pressure 3 to 10 bar

Sensor switch pressure 0,6 bar typ.

Ambient temperature:

-20°C to +80°C

Consult our Technical Service for use below +2°C.

Blocking fitting

Function	O/D Tube	Male BSPP	Pilot pressure (bar)*	MODEL
	4	1/8	2,5	102GA0418
	6	1/8	2,5	102GA0618
	6	1/4	2,5	102GA0628
	8	1/4	2,5	102GA0828
	8	3/8	3	102GA0838
	10	3/8	3	102GA1038
	12	1/2	2,5	102GA1248

*at 6 bar supply

Pressure reducing fitting

Function	O/D Tube	Male BSPP	MODEL
	4	1/8	102GB0418
	6	1/4	102GB0628
	8	1/4	102GB0828
	8	3/8	102GB0838
	10	3/8	102GB1038

Pneumatic sensor fitting

Function	O/D Tube	Male BSPP	MODEL
	4	1/8	102GD0418
	4	1/4	102GD0428

MATERIALS

Nickel plated brass or plastic body.

Nickel plated brass collet.

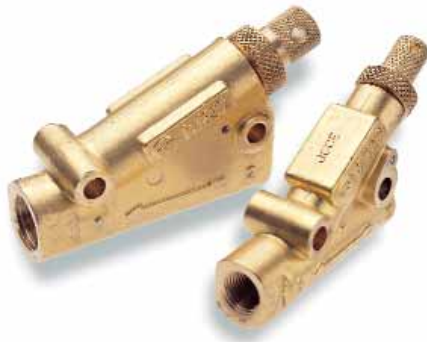
Plastic sealing washer.

Nitrile and polyurethane elastomeric parts.

Zinc plated brass banjo bolts.

M/800 SERIES Heavy duty flow regulators, uni-directional

In-line - 1/8, 1/4, 1/2, 3/4, 1"



Line mounted general purpose regulators
Captive regulating needle will not blow out when unscrewed
Calibrated adjusting knob, can be locked
Suitable for wall mounting
High operating pressure

TECHNICAL DATA

Medium:
Compressed air, filtered, lubricated and non-lubricated
Operating pressure:
0,3 to 16 bar
Ambient temperature:
-20°C to +80°C (Alternative models to 150°C)
Consult our Technical Service for use below +2°C.

MATERIALS

S/836, M/837, M/839
Body, adjusting knob and locking ring: brass
M/840, M/855
Body, adjusting knob and locking ring: aluminium
Seals: nitrile rubber.

Function	Port size	Max. regulated flow factor		Free flow factor		kg	MODEL BSPP
		C**	Cv	C**	Cv		
	1/8	0,7	0,17	2,1	0,6	0,10	S/836
	1/4	2	0,49	4,3	1	0,15	M/837
	1/2	12	2,9	17	4,1	0,60	M/839
	3/4	18	4,4	38	9,3	1,20	M/840
	1	36	8,8	45	11	3,50	M/855

** C measured in dm³/(s.bar)

T20 & 0405 SERIES Exhaust flow regulator/silencers

M5, 1/8" to 1/2" BSP



Compact, integral flow regulator and silencer units
Captive regulating needle will not blow out when unscrewed
Reduced dimensions

TECHNICAL DATA

Medium:
Compressed air, filtered, lubricated and non-lubricated, inert gases
Operating pressure:
0 to 10 bar
Ambient temperature:
-20°C to +80°C.
Consult our Technical Service for use below +2°C.

MATERIALS

T20:
Body & washer: nylon
Silencer: porous polyethylene
Adjusting screw: high tensile zinc electroplated steel
0405:
Body & nut: brass
Needle: plastic
Silencer: sintered bronze

Function	Thread	Size	Max. regulated flow factor		MODEL
			C**	Cv	
	Metric	M5	0,3	0,07	T20M0500
	BSPP	1/8	1,6	0,4	T20C1800
	BSPT	1/8	1,78	0,44	04057100
	BSPP	1/4	3,2	0,8	T20C2800
	BSPT	1/4	1,78	0,44	04057200
	BSPP (female)	1/4 Silencer only	-	-	04059200
	BSPP	3/8	6,9	1,7	T20C3800
	BSPT	3/8	8,9	2,2	04057300
	BSPP	1/2	10	2,4	T20C4800
	BSPT	1/2	8,9	2,2	04057400

* C measured in dm³/(s.bar)

For further information



www.norgren.com/info/nec/en137

T70, S/511, S/513, S/514 SERIES

Quick exhaust valves

1/8 to 1/2" BSPP



Enables air to be exhausted quickly from air reservoirs and cylinders.

Allows higher cylinder speeds to be achieved.

Simple, compact design and construction.

Very reliable in operation.

TECHNICAL DATA

Medium:

Compressed air, filtered, lubricated and non-lubricated

Operating pressure:

0,5 to 10 bar (T70)

0,7 to 10 bar (S/511)

0,7 to 7 bar (S/513, S/514)

Ambient temperature:

-20°C to +80°C.

Consult our Technical Service for use below +2°C.

MATERIALS

Body & cover: zinc alloy (T70*1800 & T70*2800, S/513), aluminium alloy (T70*3800 & T70*4800, S/511, S/514)

Seals: nitrile (T70), polyurethane (S/51*)

O-ring: nitrile

Element: porous plastic (S/513, S/514)

Function	Port size BSPP	Flow (1 ... 2)**		Flow (2 ... 3)**		kg	MODEL
		C*	Cv	C*	Cv		
	G1/8	3,8	0,9	7,3	1,8	0,15	T70C1800
	G1/4	7,7	1,9	10	2,5	0,13	T70C2800
	G3/8	15,5	3,8	22,5	5,5	0,21	T70C3800
	G1/2	21,5	5,3	24	5,9	0,19	T70C4800
	G1/2	5,7	1,9	44	10,8	0,31	S/511
	G1/4	3,9	0,8	11	2,7	0,25	S/513
	G1/2	5,7	1,9	32	7,8	0,35	S/514

* C = dm³/(s.bar) ** Flow factor measured at 6 bar inlet pressure

For further information



www.norgren.com/info/nec/en138

ADDITIONAL RANGES

T50 PIF NON-RETURN VALVES

O/D tube	MODEL
4	T50P0004
6	T50P0006
8	T50P0008
10	T50P0010
12	T50P0012

Allow free flow in one direction only.
Simple reliable design.
Low weight.
Low cracking pressure.
High operating pressure.



SLEEVE VALVES

Port size	MODEL
G1/8	M/7218
G1/4	M/7228
G3/8	M/7238
G1/2	M/7248

Sliding sleeve operation
Very compact in-line units
Easy to install
Very simple and reliable operation
3/2 function



SHUTTLE VALVES

Port size	MODEL
G1/8	T65C1800
G1/4	T65C2800

Allow two independent signal sources to be connected to a common pilot line
Can be used to perform an 'OR' logic function
Can be combined to operate from three or more sources
Valves can be ganged together



PRECISION FLOW REGULATORS

Port size	Type	MODEL
G1/8	Heavy duty, panel mount	S/636
G1/2	Heavy duty	S/839
G1/8	Precision for time delay circuits	M/650*
G1/8	Precision for time delay circuits	M/677*
G1/4	Heavy duty, panel mount	M/637
G1/2	Heavy duty, panel mount	M/639

Line mounted general purpose regulators
Captive regulating needle will not blow out when unscrewed
Calibrated adjusting knob, can be locked
Brass body



*The M/650 features an exhaust and when a time delay has been achieved, removal of the supply to the inlet releases the non-return valve enabling the pressure in a reservoir to be discharged quickly to atmosphere, thus removing the signal. The M/677 is similar except that reverse flow is allowed to pass back through the regulator instead of being discharged to atmosphere.

S/520 HEAVY DUTY NON-RETURN VALVES

Port size BSPP	MODEL
G1/8	S/520
G1/4	S/521
G3/8	S/532
G1/2	S/522

Allows free flow in one direction only
Simple reliable design
High operating pressure and temperature
Spares kit available



For further information



www.norgren.com/info/nec/en139

18 D SERIES

Pneumatic pressure switches

-1 to 30 bar



Gold-plated contacts
High cycle life
Vibration resistant to 15 g
Microswitch approved by UL and CSA
Intrinsically safe operation
Direct interface to Excelon air line units

TECHNICAL DATA

Medium:
Neutral, gaseous and liquid fluids

Operation:
Diaphragm

Mounting position:
Optional

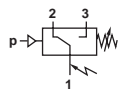
Operating pressure:
-1 to 30 bar

Over pressure:
80 bar max.

Ambient temperature:
-10°C to +80°C
Consult our Technical Service for use below +2°C.

Electrical connection DIN 43650*

Function	Port size	Type	Pressure range (bar)	Switching pressure difference (bar)**	MODEL
	G1/4	Female	0,2 ... 2	0,20 ... 0,35	0880226#
	-	Flange	0,2 ... 2	0,20 ... 0,35	0881200
	G1/4	Female	-1 ... 0	0,15 ... 0,18	0880100
	G1/4	Female	0,2 ... 2	0,20 ... 0,35	0880200
	G1/4	Female	0,5 ... 8	0,35 ... 0,85	0880300
	G1/4	Female	0,5 ... 8	0,35 ... 0,85	0880326#
	-	Flange	0,5 ... 8	0,35 ... 0,85	0881300
	G1/4	Female	1 ... 16	0,40 ... 1,20	0880400
	G1/4	Female	1 ... 16	0,40 ... 1,20	0880426#
	-	Flange	1 ... 16	0,40 ... 1,20	0881400
	G1/4	Female	1 ... 30	1,0 ... 5,00	0880600
	1/4 NPT	Female	1 ... 30	1,0 ... 5,00	0880620



* Standard plug supplied (except where marked #) ** Typical values # Free of substances that may affect paint spray applications

Electrical connection M12 x 1*

Port size	Type	Pressure range (bar)	Switching pressure difference (bar)**	MODEL
G1/4	Female	0,5 ... 8	0,35 ... 0,85	0880360#
G1/4	Female	1 ... 16	0,40 ... 1,20	0880460#

* Max. voltage 30 V, plug M12 x 1 not supplied, if required see table

** Typical values # Free of substances that may affect paint spray applications

Load level	Type of current	Type of load	Umin [V]	Maximum					Contact life
				30	48	60	125	250	
Standard * (e.g. contractors, solenoids)	a.c.	Resistive load	12	5	5	5	5	5	Switching cycles >10 ⁷
	a.c.	Inductive load, cos φ = 0,7	12	3	3	3	3	3	
	d.c.	Resistive load	12	5	1,2	0,8	0,4	-	
	d.c.	Inductive load, L/R = 10 ms	12	3	0,5	0,35	0,05	-	
Low ** (e.g. electronic circuits)	a.c.	Resistive load	5#	0,34	0,2	0,17	0,08	0,04	Switching cycles >10 ⁷
	d.c.	Inductive load, L/R = 10 ms	5#	0,1	0,01	-	-	-	

Reference number of switchings: 30/min, reference temperature: +30°C.

Spark quenching with diode with d.c. and inductive load: I_{max} = 1,5 x I_{max} of table I_{min} = 1 [mA]

Creepage and air paths correspond to insulation group B according to VDE reg. 0110 (except contact clearance of microswitch).

* Gold-plating not required as it would decay. Maximum permitted in-rush current (approximately 30 ms) a.c. make = max. 15A.

**Gold-plating required (will not decay).

Lower value of critical voltage guarantees sufficient contact safety. Lower voltages permissible under favourable conditions.

PORTING BLOCKS

Adaptor for use with Excelon 72, 73, 74 air preparation systems



Series	MODEL
Excelon 72	0523109
Excelon 73 & 74	0523110

ACCESSORIES

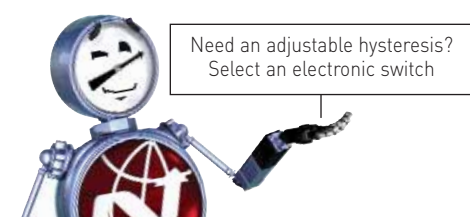
Snubber



0574773

Plugs, M12 x 1

MODEL	Description
0523057	Straight, 2 m cable, 4-core
0523052	Straight, 5 m cable, 4-core
0523058	90° 2 m cable, 4-core
0523053	90° 5 m cable, 4-core



For further information



www.norgren.com/info/nec/en140

33 D SERIES

Electronic pressure switches (pneumatic/allfluid)

-1 to 400 bar



Display of system pressure and unit (pressure unit programmable)

Compact and robust design

Easy programming of set points and additional functions

Transistor output signals 1 x PNP/2 x PNP/1 x PNP + 4 to 20 mA

Electronic lock

Switching status indicated by LED

Standard M12x1 electrical connection (IP 65)

For pneumatic, all fluid and hydraulic applications

TECHNICAL DATA

Medium:

Filtered compressed air, lubricated or unlubricated, neutral gases

Display:

LCD 4 digits illuminated, pressure unit programmable for bar, psi, mpa

Mounting position:

Optional

Operating pressure:

-1 to 16 bar (pneumatic)
0 to 400 bar (hydraulic/allfluid)

Ambient temperature:

-10°C to 60°C

Consult our Technical Service for use below +2°C.

Electrical connection M12 x 1 (standard models)*

Port size	Measuring range (bar) (Relative pressure)	Value max. (bar) (Over pressure)	Output signal	MODEL
G1/4	-1 ... 1	10	1 x PNP	0863012
Flange	-1 ... 1	10	1 x PNP	0863016
G1/4	-1 ... 1	10	2 x PNP	0863022
G1/4	-1 ... 1	10	1 x PNP / 4...20 mA	0863042
G1/4	0 ... 10	40	1 x PNP	0863112
G1/4	0 ... 16	30	1 x PNP	0863212
Flange	0 ... 16	30	1 x PNP	0863216
G1/4	0 ... 16	30	2 x PNP	0863222
Flange	0 ... 16	30	2 x PNP	0863226
G1/4	0 ... 16	30	1 x PNP / 4...20 mA	0863242
Flange	0 ... 16	30	1 x PNP / 4...20 mA	0863246
G1/4	0 ... 40	100	1 x PNP	0863312
G1/4	0 ... 100	200	1 x PNP	0863412
G1/4	0 ... 160	300	1 x PNP	0863512
G1/4	0 .. 250	500	1 x PNP	0863612
G1/4	0 .. 250	500	2 x PNP	0863622
G1/4	0 .. 400	750	1 x PNP	0863712

* M12 x 1 connector not included. Please see table below

PORTING BLOCKS

Adaptor for use with Excelcon 72, 73, 74 air preparation systems



Series	MODEL
Excelcon 72	0523109
Excelcon 73 & 74	0523110

Electrical connection M12 x 1

Pin	Signal	Cable
1	Supply voltage	Brown
2	Out 2 (PNP) / analog 4 ... 20 mA	White
3	0 V	Blue
4	Out 1 (PNP)	Black
5	PE	Grey



Electrical parameters

Electrical connection:	M12 x 1
Power supply:	10 ... 32 V d.c. (polarity safe) digital models 15 ... 32 V d.c. (polarity safe) analogue models
Permissible residual ripple:	10% (within 12 to 32 V)
Current consumption:	< 50 mA (plus load current)

Electromagnetic compatibility

Interference emission	Conforming to EN 61326. Part 1
Interference immunity	Conforming to EN 61326. Part 1

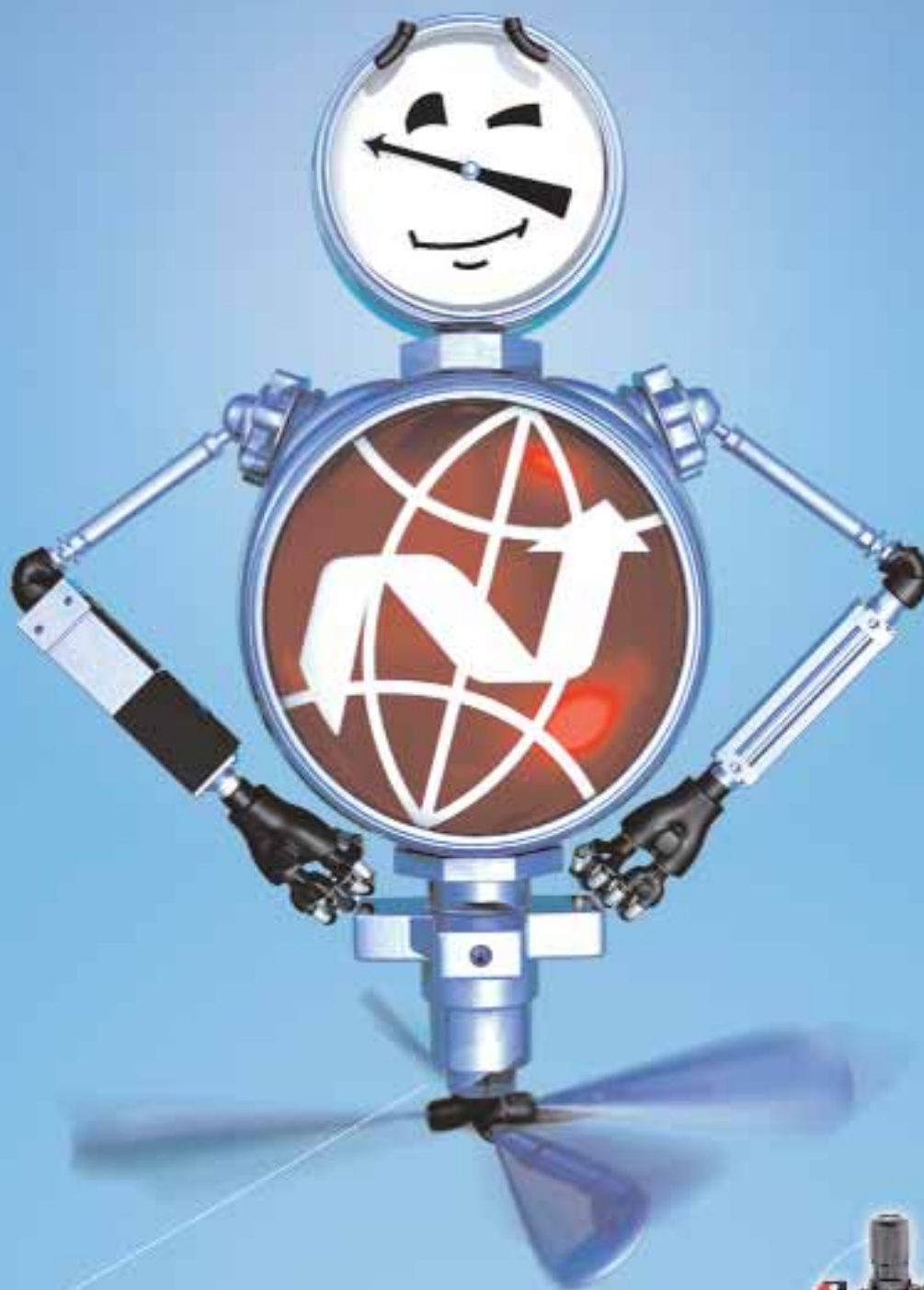
Switching output

Switching mode:	Potential-bound open collector switching to UB, suitable for inductive load
Output voltage:	Supply voltage -1,5 V
Analog output:	4 ... 20mA
Contact rating:	I _{max} = 500 mA (short-circuit proof)
Switching time:	< 10 ms
Damping:	3 ... 320 ms
Signal delay:	On/off 0 ... 20 sec
Service life:	min. 100 million switching cycles
Switching logic:	n.o. / n.c. programmable
Operating mode:	Standard, hysteresis and window mode. Separately selectable for each output

For further information



www.norgren.com/info/nec/en141



A I R L I N E

For air preparation, Norgren offers both the Olympian and Excelon series of filters, regulators, lubricators, boxed sets and combination units, miniature FRLs, valves and accessories. At www.norgren.com, you can also download additional technical information. For more information on air line equipment, simply go to the web address printed under the online icons at the bottom of the following air line product pages.

EXPRESS AIRLINE

Norgren air line equipment

Olympian Plus
plug-in system

**Filter/regulators
and lubricators**
BL64, BL68
G $\frac{1}{4}$... G1



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General purpose filters
F64G, F68G
G $\frac{1}{4}$... G $\frac{1}{2}$



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**'Puraire'® high efficiency oil
removal filters**
F64C/H, F68C/H
G $\frac{1}{4}$... G1



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**'Ultraire'® high efficiency
oil/oil vapour
removal filters**
F64B/L, FFV68
G $\frac{1}{4}$... G1



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Breathing air sets
FFB64
G $\frac{1}{4}$... G $\frac{3}{8}$



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Filter/regulators
B64G, B68G
G $\frac{1}{4}$... G $\frac{1}{2}$



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Pressure regulators
R64G, R68G
G $\frac{1}{4}$... G $\frac{1}{2}$



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Lubricators
L64, L68
G $\frac{1}{4}$... G $\frac{1}{2}$



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Pressure relief valves
V64H, V68H
G $\frac{1}{4}$... G1



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Soft start/dump valves
P64F
G $\frac{1}{4}$... G $\frac{3}{4}$



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Excelon modular system

Filter/regulators and lubricators
BL72, BL73, BL74
G $\frac{1}{4}$... G $\frac{1}{2}$



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General purpose filters
F72G, F73G, F74G
G $\frac{1}{4}$... G $\frac{3}{4}$



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'Puraire'® oil removal filters
F72C, F73C, F74C, F74H
G $\frac{1}{4}$... G $\frac{3}{4}$



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'Ultraire'® oil vapour removal filters
F72V, F74V
G $\frac{1}{4}$... G $\frac{3}{4}$



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Filter/regulators
B72G, B73G, B74G
G $\frac{1}{4}$... G $\frac{3}{4}$



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Pressure regulators
R72G, R73G, R74G
G $\frac{1}{4}$... G $\frac{3}{4}$



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Lubricators
L72, L73, L74
G $\frac{1}{4}$... G $\frac{3}{4}$



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Pressure relief valves
V72G, V74G
G $\frac{1}{4}$... G $\frac{3}{4}$



Page 172

Soft start/dump valves
P72F, P74F
G $\frac{1}{4}$... G $\frac{3}{4}$



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Membrane driers
W07M, W72M, W74M
G $\frac{1}{4}$, G $\frac{1}{2}$



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Solenoid operated control valves
P72C, P74C
G $\frac{1}{4}$... G $\frac{3}{8}$



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E X P R E S S A I R L I N E

Direct ported units

Filter/regulators and lubricators P1H
G $\frac{1}{8}$, G $\frac{1}{4}$



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Ported general purpose filters F07
G $\frac{1}{8}$... G $\frac{1}{4}$



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Ported filter/regulators B07
G $\frac{1}{8}$, G $\frac{1}{4}$



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Ported pressure regulators R07
G $\frac{1}{8}$... G $\frac{1}{4}$



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Ported lubricators L07
G $\frac{1}{8}$... G $\frac{1}{4}$



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Ported pressure relief valves - Diaphragm type V07
G $\frac{1}{8}$... G $\frac{1}{4}$ "



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General purpose stainless steel regulators R05, B05
 $\frac{1}{2}$ " NPTF



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Ported stainless steel equipment Filters, pressure regulators, lubricators F22, R22, L22
 $\frac{1}{2}$ " NPTF



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Drip leg drain 17-816
G $\frac{1}{2}$



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Precision pressure regulator 11-818
G $\frac{1}{4}$



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Special purpose pressure regulator R24
G $\frac{1}{4}$... G1 $\frac{1}{4}$



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Ported pilot operated pressure regulators R18, 11400, 11-204, 11-808-960
G $\frac{1}{4}$... G2



Page 184

- Compressed air is costly - 7% extra for every 1 bar not needed. Don't let anyone tamper with your pressure settings: fit a lockshroud or tamperproof cap.
- Compressed air is costly - 7% extra for every 1 bar not needed. Don't let anyone tamper with your pressure settings fit a lockshroud or tamperproof cap.
- Exhaust air can be noisy and dangerous to ears. Always fit a silencer.
- Air preparation units not fixed with brackets can move and cause leaks, wasting costly air. Always fit a mounting bracket.
- Lubricators extend system's life up to 4 times, saving you money.



OLYMPIAN PLUS PLUG-IN SYSTEM Boxed sets

Filter/regulators and lubricators - G1/2 & G1



Complete air processing units pre-assembled, ready to install

Boxed sets include:
filter/regulator and micro-fog lubricator complete with exhausting shut-off valve, pressure gauge and mounting brackets

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

17 bar

Ambient temperature:

-20°C to +80°C

Consult our Technical Service for use below +2°C

Pressure range:

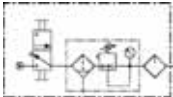





BL64: 0,3...10 bar

BL68: 0,4...8 bar

Gauge ports:

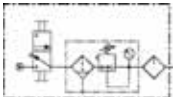





RC 1/8

BOXED SETS BL64 SERIES

Port size	MODEL		ACCESSORIES		
	Auto drain	Manual drain	Tamper resistant kit	Quick fill nipple	Silencer (Shut-off valve)
 G 1/2	 BL64-401	 BL64-421	 4355-50	 18-011-024	 T40B1800

For service kit numbers refer to individual units.

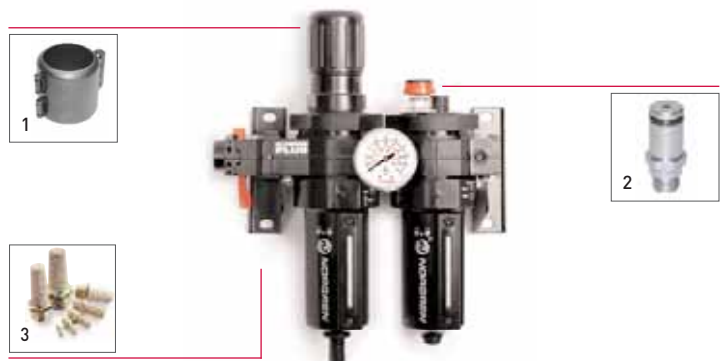
BOXED SETS BL68 SERIES

Port size	MODEL		ACCESSORIES		
	Auto drain	Manual drain	Tamper resistant kit	Quick fill nipple	Silencer (Shut-off valve)
 G1	 BL68-801	 BL68-821	 4355-50	 18-011-021	 T40B2800

For service kit numbers refer to individual units.

ACCESSORY FEATURES

- 1 TAMPER RESISTANT KIT
Simple accessory to prevent unauthorised adjustment of regulated pressure.
- 2 QUICK FILL NIPPLE
For rapid refilling of lubricators of all types.
- 3 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.



For further information



www.norgren.com/info/nec/en147

OLYMPIAN PLUS PLUG-IN SYSTEM

General purpose filters - F64G, F68G - G1/4 to G 1 1/2



F64G



F68G

Effective liquid removal and positive solid filtration
Large filter element area for minimum pressure drop

TECHNICAL DATA

Medium:
Compressed air only
Maximum inlet pressure:
17 bar
Ambient temperature:
-20°C to +80°C
Consult our Technical Service for use below +2°C

F64G SERIES

Port size	Flow* (dm³/s)	MODEL		ACCESSORIES			SERVICE KIT	
		Auto drain	Manual drain	Wall mounting bracket	3/2 Shut-off valve**	Silencer (Shut-off valve)	Auto drain	Manual drain
	G1/4	33	F64G-2GN-AD3	F64G-2GN-MD3				
	G3/8	66	F64G-3GN-AD3	F64G-3GN-MD3	74504-50	T64T-2GB-P1N	T40B1800	F64G-KITA40
	G1/2	75	F64G-4GN-AD3	F64G-4GN-MD3	74504-50	T64T-3GB-P1N	T40B1800	F64G-KITA40
	G3/4	75	F64G-6GN-AD3	F64G-6GN-MD3	74504-50	T64T-4GB-P1N	T40B1800	F64G-KITA40

* Typical flow with 6.3 bar inlet pressure and 0.5 bar pressure drop **Threaded exhaust port. For replacement filter (without yoke) substitute 'N' at the 5th and 6th digits eg: F64G-NNN-AD3 [F64].

F68G SERIES

Port size	Flow* (dm³/s)	MODEL		ACCESSORIES			SERVICE KIT	
		Auto drain	Manual drain	Wall mounting bracket	3/2 Shut-off valve**	Silencer (Shut-off valve)	Auto drain	Manual drain
	G3/4	160	F68G-6GN-AR3	F68G-6GN-MR3				
	G1	190	F68G-8GN-AR3	F68G-8GN-MR3	18-001-979	T68H-6GB-B2N	T40B2800	F68G-KITA40
	G1 1/4	200	F68G-AGN-AR3	F68G-AGN-MR3	18-001-979	T68H-8GB-B2N	T40B2800	F68G-KITA40
	G1 1/2	200	F68G-BGN-AR3	F68G-BGN-MR3	18-001-978	T68H-AGB-B2N	T40B2800	F68G-KITA40

* Typical flow with 6.3 bar inlet pressure and 0.5 bar pressure drop **Threaded exhaust port. For replacement filter (without yoke) substitute 'N' at the 5th and 6th digits eg: F68G-NNN-AR3 [F68].

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET**
To fix the device on panel or wall.
- 2 SHUT-OFF VALVE**
For safely isolating assembly from air supply.
- 3 SILENCER (SHUT-OFF VALVE)**
For noise reduction when exhausting air to atmosphere.



OLYMPIAN PLUS PLUG-IN SYSTEM

'Puraire'® high efficiency oil removal filters - F64C/H, F68C/H
G1/4 to G1



F64H



F68C

High efficiency coalescing filters
Coalescing element removes sub-micron particles and converts oil and water mist to liquid form to drain away
Service indicator standard

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

17 bar

Remaining oil content:

0.01 mg/m³ max at 21° C

Particle removal:

To 0.01 µm

Ambient temperature:

-20°C to +65°C

Consult our Technical Service for use below +2°C

F64C/H SERIES

Port size	Flow* (dm ³ /s)	MODEL	ACCESSORIES			SERVICE KIT	
		Auto drain	Wall mounting bracket	3/2 Shut-off valve**	Silencer (Shut-off valve)	Auto drain	
	G1/4	16					
	G3/8	28	F64C-3GD-AD0	74504-50	T64T-2GB-P1N	T40B1800	F64C-KITA0C
	G1/2	28	F64H-3GD-AD0	74504-50	T64T-3GB-P1N	T40B1800	F64H-KITA0C
	G3/4	28	F64H-4GD-AD0	74504-50	T64T-4GB-P1N	T40B1800	F64H-KITA0C

* To maintain stated oil content at 6.3 inlet pressure **Threaded exhaust port. For replacement filter (without yoke or pre-filter) substitute 'N' at the 5th and 6th digits eg: F64H-NND-AD0.

F68C/H SERIES

Port size	Flow* (dm ³ /s)	MODEL	ACCESSORIES			SERVICE KIT	
		Auto drain	Wall mounting bracket	3/2 Shut-off valve**	Silencer (Shut-off valve)	Auto drain	
	G1/2	35					
	G3/4	35	F68C-4GD-AR0	18-001-979	T68H-4GB-B2N	T40B2800	F68C-KITA0C
	G1	60	F68H-6GD-AU0	18-001-979	T68H-6GB-B2N	T40B2800	F68H-KITA0C
			F68H-8GD-AU0	18-001-979	T68H-8GB-B2N	T40B2800	F68H-KITA0C

* To maintain stated oil content at 6.3 inlet pressure **Threaded exhaust port. For replacement filter (without yoke) substitute 'N' at the 5th and 6th digits eg: F68H-NND-AU0.

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device on panel or wall.
- 2 SHUT-OFF VALVE
For safely isolating assembly from air supply.
- 3 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.



For further information



www.norgren.com/info/nec/en149



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in a click



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OLYMPIAN PLUS PLUG-IN SYSTEM

'Ultraire'® high efficiency oil/oil vapour removal filters - F64B/L, FFV68
G1/4 to G1



F64B/L



FFV68

F64B/F64L are 'dual function' products incorporating an oil removal element (bottom) and an oil vapour removal element (top)
FFV68 are two separate coupled filters (F68C/H and F68V/Y)
Ultra high efficiency coalescing filters with active carbon pack
Carbon pack assists in the removal of hydro-carbon gases and odours
High intensity blue colour change indication (64 Series)

TECHNICAL DATA

Medium:
Compressed air only
Maximum inlet pressure:
17 bar
Remaining oil content:
0.003 mg/m³ (at 21° C)
Particle removal:
To 0.01 µm
Ambient temperature:
-20°C to +65°C
Consult our Technical Service for use below +2°C

F64B/L SERIES

Port size	Flow* (dm ³ /s)	MODEL Auto drain	ACCESSORIES			SERVICE KIT
			Wall mounting bracket	3/2 Shut-off valve**	Silencer (Shut-off valve)	Auto drain
G1/4	7	F64B-2GN-AR0	74504-50	T64T-2GB-P1N	T40B1800	F64B-KITA0V
G3/8	11	F64L-3GN-AR0	74504-50	T64T-3GB-P1N	T40B1800	F64L-KITA0V
G1/2	11	F64L-4GN-AR0	74504-50	T64T-4GB-P1N	T40B1800	F64L-KITA0V

* To maintain stated oil at 6.3 bar inlet pressure **Threaded exhaust port. To order a basic unit without yoke substitute 'N' at the 5th and 6th digits eg: F64L-NNN-AR0.

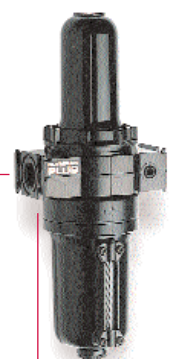
FFV68 SERIES

Port size	Flow* (dm ³ /s)	MODEL Auto drain	ACCESSORIES			SERVICE KIT
			Wall mounting bracket	3/2 Shut-off valve**	Silencer (Shut-off valve)	Auto drain
G1/2	25	FFV68-408	18-001-979	T68H-4GB-B2N	T40B2800	F68C-KITA0C, F68V-KIT00V
G3/4	35	FFV68-608	18-001-979	T68H-6GB-B2N	T40B2800	F68H-KITA0C, F68Y-KIT00Y
G1	60	FFV68-808	18-001-979	T68H-8GB-B2N	T40B2800	F68H-KITA0C, F68Y-KIT00Y

* To maintain stated oil at 6.3 bar inlet pressure **Threaded exhaust port. To order a basic unit without yoke substitute 'N' at the 5th and 6th digits eg: F68L-NNN-AR0.

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device on panel or wall
- 2 SHUT-OFF VALVE
For safely isolating assembly from air supply
- 3 SILENCER (SHUT-OFF-VALVE)
For noise reduction when exhausting air to atmosphere.



For further information



www.norgren.com/info/nec/en151

OLYMPIAN PLUS PLUG-IN SYSTEM Breathing air sets

FFB64 - G1/4 to G3/8



FFB64

Pre-assembled combinations include a general purpose pre-filter and 'Ultraire®' oil/oil vapour removal filter

Activated carbon pack assists in the removal of hydro-carbon gases and odours

Pre filter extends life of oil removal filter

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

17 bar

Remaining oil content:

0.003 mg/m³ (at 21°C)

Particle removal:

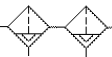




To 0.01 µm

Ambient temperature:

-20°C to +65°C

Consult our Technical Service for use below +2°C

FFB64 SERIES

Port size	Flow (dm ³ /s)	Num. of masks	Primary pre-filter (µm)	MODEL	ACCESSORIES		
				Auto drain	Wall mounting bracket	Silencer (Shut-off valve)	3/2 Shut-off valve*
 G1/4 G3/8	7	1	5	 FFB64-208 FFB64-308	 74504-50 74504-50	 T40B1800 T40B1800	 T64T-2GB-P1N T64T-3GB-P1N
	11	2	5				

For service kit numbers refer to individual units *Threaded exhaust port.

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device on panel or wall
- 2 SHUT-OFF VALVE
For safely isolating assembly from air supply
- 3 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.



For further information



www.norgren.com/info/nec/en152

OLYMPIAN PLUS PLUG-IN SYSTEM Filter/regulators

B64G, B68G - G1/4 to G1 1/2



B64G



B68G

High efficiency water removal
Good regulation characteristics
Non-rising adjusting knob has snap-action lock

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

17 bar

Gauge ports:

Rc1/8

Ambient temperature:

-20°C to +80°C

Consult our Technical Service for use below +2°C

Pressure range:

B64G: 0,3...10 bar

B68G: 0,4...8 bar

B64G SERIES

MODEL				ACCESSORIES					SERVICE KIT	
Port size	Flow* (dm ³ /s)	Auto drain	Manual drain	Wall mounting bracket	Gauge 0 ... 10 bar	3/2 Shut-off valve**	Tamper resistant kit	Silencer Shut-off valve	Auto drain	Manual drain
	30									
G1/4	30	B64G-2GK-AD3-RMN	B64G-2GK-MD3-RMN	74504-50	18-013-013	T64T-2GB-P1N	4355-50	T40B1800	B64G-KITA40R	B64G-KITM40R
G3/8	76	B64G-3GK-AD3-RMN	B64G-3GK-MD3-RMN	74504-50	18-013-013	T64T-3GB-P1N	4355-50	T40B1800	B64G-KITA40R	B64G-KITM40R
G1/2	106	B64G-4GK-AD3-RMN	B64G-4GK-MD3-RMN	74504-50	18-013-013	T64T-4GB-P1N	4355-50	T40B1800	B64G-KITA40R	B64G-KITM40R
G3/4	106	B64G-6GK-AD3-RMN	B64G-6GK-MD3-RMN	74504-50	18-013-013	T64T-6GB-P1N	4355-50	T40B1800	B64G-KITA40R	B64G-KITM40R

*Typical flow with 10 bar inlet pressure, and 1 bar set pressure and 1 bar drop from set. For replacement filter/regulator (without yoke) substitute "N" at the 5th and 6th digits eg. B64G-NNK-AD3-RMN. ** Threated exhaust port.

B68G SERIES

MODEL				ACCESSORIES					SERVICE KIT	
Port size	Flow* (dm ³ /s)	Auto drain	Manual drain	Wall mounting bracket	Gauge 0 ... 10 bar	3/2 Shut-off valve**	Tamper resistant kit	Silencer Shut-off valve	Auto drain	Manual drain
	240									
G3/4	240	B68G-6GK-AR3-RLN	B68G-6GK-MR3-RLN	18-001-979	18-013-013	T68H-6GB-B2N	4355-50	T40B2800	B68G-KITA40R	B68G-KITM40R
G1	240	B68G-8GK-AR3-RLN	B68G-8GK-MR3-RLN	18-001-979	18-013-013	T68H-8GB-B2N	4355-50	T40B2800	B68G-KITA40R	B68G-KITM40R
G1 1/4	240	B68G-AGK-AR3-RLN	B68G-AGK-MR3-RLN	18-001-978	18-013-013	T68H-AGB-B2N	4355-50	T40B2800	B68G-KITA40R	B68G-KITM40R
G1 1/2	240	B68G-BGK-AR3-RLN	B68G-BGK-MR3-RLN	18-013-013	18-013-013	T68H-BGB-B2N	4355-50	T40B2800	B68G-KITA40R	B68G-KITM40R

*Typical flow with 10 bar inlet pressure, and 1 bar set pressure and 1 bar drop from set. For replacement filter/regulator (without yoke) substitute "N" at the 5th and 6th digits eg. B68G-NNK-AR3-RLN. ** Threated exhaust port.

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device on panel or wall.
- 2 GAUGE
To monitor the working pressure.
- 3 SHUT-OFF VALVE
For safely isolating assembly from air supply
- 4 TAMPER RESISTANT KIT
Simple accessory to prevent unauthorised adjustment of regulated pressure.
- 5 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.



For further information



www.norgren.com/info/nec/en153

OLYMPIAN PLUS PLUG-IN SYSTEM Pressure regulators

R64G, R68G - G1/4 to G1 1/2



R64G

R68G

Diaphragm and balanced valve design ensure good regulation characteristics

Non-rising adjusting knob has snap-action lock

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

17 bar (R64G)

20 bar (R68G)

Gauge ports:

Rc1/8

Ambient temperature:

-20°C to +80°C







Consult our Technical Service for use below +2°C

Pressure range:

R64G: 0,3...10 bar

R68G: 0,4...8 bar









R64G SERIES

Port size	Flow* (dm ³ /s)	MODEL	ACCESSORIES					SERVICE KIT	
			Wall mounting bracket	Gauge 0 10 bar	3/2 Shut-off valve**	Silencer Shut-off valve	Tamper resistant kit		
	G1/4	35							
	G3/8	80	R64G-2GK-RMN	74504-50	18-013-013	T64T-2GB-P1N	T40B1800	4355-50	R64G-KITR
	G1/2	120	R64G-3GK-RMN	74504-50	18-013-013	T64T-3GB-P1N	T40B1800	4355-50	R64G-KITR
	G3/4	120	R64G-4GK-RMN	74504-50	18-013-013	T64T-4GB-P1N	T40B1800	4355-50	R64G-KITR
			R64G-6GK-RMN	74504-50	18-013-013	T64T-6GB-P1N	T40B1800	4355-50	R64G-KITR

*Typical flow with 10 bar inlet pressure, 6.3 bar set pressure 1 bar drop from set. For replacement regulator (without yoke) substitute 'N' at the 5th and 6th digits eg: R64G-NNK-RMN.

** Threaded exhaust port.

R68G SERIES

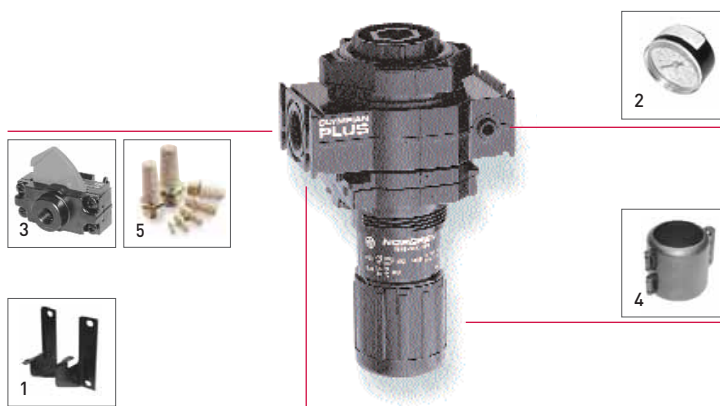
Port size	Flow (dm ³ /s)	MODEL	ACCESSORIES					SERVICE KIT	
			Wall mounting bracket	Gauge 0 10 bar	3/2 Shut-off valve**	Silencer Shut-off valve	Tamper resistant kit		
	G3/4	150							
	G1	180	R68G-6GK-RLN	18-001-979	18-013-013	T68H-6GB-B2N	T40B2800	4355-50	R68G-KITR
	G1 1/4	180	R68G-8GK-RLN	18-001-979	18-013-013	T68H-8GB-B2N	T40B2800	4355-50	R68G-KITR
	G1 1/2	180	R68G-AGK-RLN	18-001-978	18-013-013	T68H-AGB-B2N	T40B2800	4355-50	R68G-KITR
			R68G-BGK-RLN			T68H-BGB-B2N	T40B2800	4355-50	R68G-KITR

*Typical flow with 10 bar inlet pressure, 6.3 bar set pressure 1 bar drop from set. For replacement regulator (without yoke) substitute 'N' at the 5th and 6th digits eg: R68G-NNK-RLN.

** Threaded exhaust port.

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device on panel or wall.
- 2 GAUGE
To monitor the working pressure.
- 3 SHUT-OFF VALVE
For safely isolating assembly from air supply
- 4 TAMPER RESISTANT KIT
Simple accessory to prevent unauthorised adjustment of regulated pressure.
- 5 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.



For further information



www.norgren.com/info/nec/en154

OLYMPIAN PLUS PLUG-IN SYSTEM Lubricators

L64, L68 - G1/4 to G1 1/2



Micro-fog plug-in lubricators for best lubrication in general purpose pneumatic applications

TECHNICAL DATA

Medium:
Compressed air only
Maximum inlet pressure:
17 bar
Start point:
L64: 1,5 dm³/s
L68: 6 dm³/s
Bowl Capacity (litre):
L64: 0,2
L68: 0,5
Ambient temperature:
-20°C to +80°C
Consult our Technical Service for use below +2°C

L64 SERIES

Port size	Flow* (dm ³ /s)	MODELS	ACCESSORIES			SERVICE KIT
			Wall mounting bracket	3/2 Shut-off valve**	Silencer Shut-off valve	
	G1/4	25				
	G3/8	62				
	G1/2	72				
	G3/4	72				

*Typical flow with 6.3 bar inlet, 0.5 bar pressure drop. To order a basic unit without yoke substitute 'N' at the 5th and 6th letters respectively e.g. L64M-NNP-EDN. Models listed are Micro-fog. For Oil-fog models, including kits, replace 'M' at the 4th digit by 'C' e.g. L64C-4GP-EDN ** Threaded exhaust port.

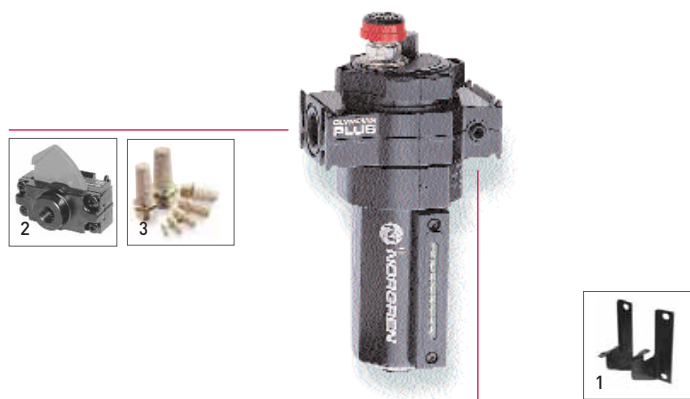
L68 SERIES

Port size	Flow* (dm ³ /s)	MODELS	ACCESSORIES			SERVICE KIT
			Wall mounting bracket	3/2 Shut-off valve**	Silencer Shut-off valve	
	G3/4	200				
	G1	200				
	G1 1/4	200				
	G1 1/2	200				

*Typical flow with 6.3 bar inlet, 0.5 bar pressure drop. To order a basic unit without yoke substitute 'N' at the 5th and 6th letters respectively e.g. L68M-NNP-EDN. Models listed are Micro-fog. For Oil-fog models, including kits, replace 'M' at the 4th digit by 'C' e.g. L68C-4GP-EDN ** Threaded exhaust port.

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device on panel or wall.
- 2 SHUT-OFF VALVE
For safely isolating assembly from air supply
- 3 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.



For further information



www.norgren.com/info/nec/en155

OLYMPIAN PLUS PLUG-IN SYSTEM Pressure relief valves

V64H, V68H - G1/4 to G1



V64H



V68H

Olympian relief valves protect compressed air systems from over-pressurisation

High relief capacity, sensitive and accurate

Threaded relief port for silencer or piped exhaust.

Norgren pressure relief valves comply with category O(S.E.P.) and category 1 of the Pressure Equipment Directive 97/23/EC.

TECHNICAL DATA

Medium:

Compressed air only

Gauge ports:

Rc1/8

Relief port:

G1/2 (V64H), G1 (V68H)

Ambient temperature:

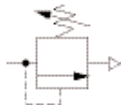








-20°C to +80°C.

Consult our Technical Service for use below +2°C

Relief pressure adjustment range:

1 ... 10 bar

V64 SERIES

Port size	MODEL	ACCESSORIES						SERVICE KIT
		Wall mounting bracket	Tamper resistant kit	Gauge 0 ... 10 bar	Silencer	3/2 Shut-off valve*	Silencer Shut-off valve	
 G1/4 G3/8 G1/2 G3/4	 V64H-2GD-RMN							
	G1/4 V64H-2GD-RMN	74504-50	1581-90	18-013-013	MB004B	T64T-2GB-P1N	T40B1800	V64H-KIT
	G3/8 V64H-3GD-RMN	74504-50	1581-90	18-013-013	MB004B	T64T-3GB-P1N	T40B1800	V64H-KIT
	G1/2 V64H-4GD-RMN	74504-50	1581-90	18-013-013	MB004B	T64T-4GB-P1N	T40B1800	V64H-KIT
G3/4 V64H-6GD-RMN	74504-50	1581-90	18-013-013	MB004B	T64T-6GB-P1N	T40B1800	V64H-KIT	

* Threaded exhaust port

V68H SERIES

Port size	MODEL	ACCESSORIES						SERVICE KIT
		Wall mounting bracket	Tamper resistant kit	Gauge 0 ... 10 bar	Silencer	3/2 Shut-off valve*	Silencer Shut-off valve	
 G3/4 G1	 V68H-6GD-RMN							
	G3/4 V68H-6GD-RMN	18-001-979	1581-90	18-013-013	MB008B	T68H-6GB-B2N	T40B2800	V68H-KIT
G1 V68H-8GD-RMN	18-001-979	1581-90	18-013-013	MB008B	T68H-8GB-B2N	T40B2800	V68H-KIT	

* Threaded exhaust port

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device on panel or wall.
- 2 GAUGE
To monitor the working pressure.
- 3 SHUT-OFF VALVE
For safely isolating assembly from air supply.
- 4 SILENCER
Reduces noise from high exhaust flow.
- 5 TAMPER RESISTANT KIT
Simple accessory to prevent unauthorised adjustment of regulated pressure.
- 6 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.



For further information



www.norgren.com/info/nec/en156

OLYMPIAN PLUS PLUG-IN SYSTEM Soft start/dump valves

P64F - G1/4 to G3/4



P64F

Assists machine designers in complying with the European Machineries Directive
 Can help existing machinery to comply with PUWER (Provision and Use of Work Equipment Regulations)
 Controlled increase of downstream pressure on start up
 Solenoid, air pilot or manual operator.
 High forward flow capacity
 High flow dump facility

TECHNICAL DATA

Medium:
Compressed air

Maximum operating pressure:
For solenoid operated versions: 10 bar
For pilot operated versions: 17 bar

Minimum operating pressure:
3 bar

Ambient temperature:
-20°C to +80°C (solenoid version up to +50°C)
Consult our Technical Service for use below +2°C

Air pilot port:
Rc1/4

Exhaust port:
G1/2

Maximum flow:
57dm³/s
Note: Maximum flow with 6,3 bar inlet pressure and pressure drop of 0,5 bar

Snap pressure:
Full flow when downstream pressure reaches 50-80% of inlet pressure.

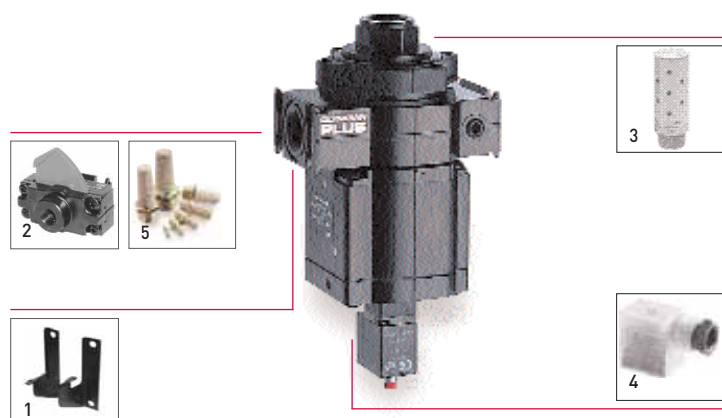
P64 F SERIES

Port Size	MODELS		ACCESSORIES				
	Solenoid pilot operated	Air pilot operated	Wall mounting bracket	3/2 Shut-off valve*	Silencer (Shut-off valve)	Silencer	Connector plug with cable gland
 Solenoid pilot operated Air pilot operated	G1/4	P64F-2GC-PFN	 74504-50	 T64T-2GB-P1N T64T-3GB-P1N T64T-4GB-P1N T64T-6GB-P1N	 T40B1800 T40B1800 T40B1800 T40B1800	 MB004B MB004B MB004B MB004B	 0657868000000000 Standard plug M/P24121/1 10 ... 50 V a.c./d.c. M/P24121/2 70 ... 110 V a.c.
	G3/8	P64F-3GC-PFN					
	G1/2	P64F-4GC-PFN					
G3/4	P64F-6GC-PFN	P64F-2GA-NNN					

*Threaded exhaust port.

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device on panel or wall.
- 2 SHUT-OFF VALVE
For safely isolating assembly from air supply.
- 3 SILENCER
Reduces noise from high exhaust flow.
- 4 CONNECTOR PLUG
For connection to mains with solenoid versions.
- 5 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.



For further information



www.norgren.com/info/nec/en157

EXCELON MODULAR SYSTEM Boxed sets

Filter/regulators and lubricators - G1/4 to G1/2



Boxed sets include:
 filter/regulator and micro-fog lubricator complete with exhausting shut-off valve, pressure gauge and mounting brackets
 High efficiency water and particle removal
 Quick release bayonet bowls
 Push to lock adjusting knob with tamper resistant option
 All round (360°) visibility of lubricator sight feed dome for ease of drip rate setting
 Micro-fog lubricator for most general purpose pneumatic applications

TECHNICAL DATA

Medium:
Compressed air
Maximum inlet pressure:
10 bar
Gauge ports:
RC 1/8
Ambient temperature:
-20°C to +50°C
Consult our Technical Service for use below +2°C
Pressure range:
0,3 ... 10 bar

BOXED SETS BL72 SERIES

Port Size	Bowl	MODELS		ACCESSORIES	
		Auto drain	Manual drain	Silencer Shut-off valve	Tamper resistant kit
 G1/4	T	BL72-201GA	BL72-221G	 T40M0500	 4255-51

T=Transparent bowl

For service kit numbers refer to individual units

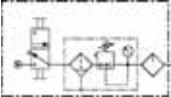




BOXED SETS BL73 SERIES

Port Size	Bowl	MODELS		ACCESSORIES	
		Auto drain	Manual drain	Silencer Shut-off valve	Tamper resistant kit
 G3/8	T	BL73-301G	BL73-321G	 T40M0500	 4455-51

T=Transparent bowl

For service kit numbers refer to individual units

BOXED SETS BL74 SERIES

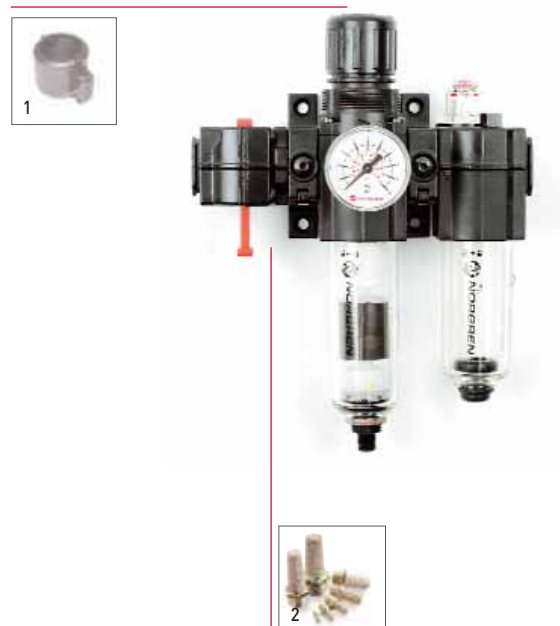
Port Size	Bowl	MODELS		ACCESSORIES	
		Auto drain	Manual drain	Silencer Shut-off valve	Tamper resistant kit
 G 1/2	GT	 BL74-401G	 BL74-421G	 T4081800	 4355-51

GT= Guarded transparent bowl

For service kit numbers refer to individual units

ACCESSORY FEATURES

- 1 TAMPER RESISTANT KIT
Simple accessory to prevent unauthorised adjustment of regulated pressure.
- 2 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.



Compressed air is costly - 7% extra for every 1 bar not needed. Don't let anyone tamper with your pressure settings: fit a lockshroud or tamperproof cap



EXCELON MODULAR SYSTEM General purpose filters

F72G, F73G, F74G- G1/4 to G3/4









Excelon design allows in-line installation or modular installation with other Excelon products
Quick release bayonet bowl

TECHNICAL DATA







Medium:
Compressed air only
Maximum inlet pressure:
10 bar
Ambient temperature:
-34°C to +50°C
Consult our Technical Service for use below +2°C

F72G SERIES

Port Size	Flow* (dm ³ /s)	Bowl	MODELS		ACCESSORIES Wall mounting bracket	SERVICE KIT	
			Auto drain	Manual drain		Auto drain	Manual drain
 G 1/4 G 3/8	30	T	 F72G-2GN-AL3	 F72G-2GN-QT3	 4224-50 4224-50	 F72G-KITA40 F72G-KITA40	 F72G-KITM40 F72G-KITM40
	30	T	F72G-3GN-AL3	F72G-3GN-QT3			







T=Transparent bowl *Typical flow with 6.3 bar inlet pressure and 0.5 bar pressure drop.

F73G SERIES

Port Size	Flow* (dm ³ /s)	Bowl	MODELS		ACCESSORIES Wall mounting bracket	SERVICE KIT	
			Auto drain	Manual drain		Auto drain	Manual drain
 G 1/4 G 3/8 G 1/2	29	T	 F73G-2GN-AT3	 F73G-2GN-QT3	 4424-50 4424-50 4424-50	 F73G-KITA40 F73G-KITA40 F73G-KITA40	 F73G-KITM40 F73G-KITM40 F73G-KITM40
	35	T	F73G-3GN-AT3	F73G-3GN-QT3			
	38	T	F73G-4GN-AT3	F73G-4GN-QT3			

T=Transparent bowl *Typical flow with 6.3 bar inlet pressure and 0.5 bar pressure drop.

F74G SERIES

Port Size	Flow (dm ³ /s)	Bowl	MODELS		ACCESSORIES Wall mounting bracket	SERVICE KIT	
			Auto drain	Manual drain		Auto drain	Manual drain
 G 3/8 G 1/2 G 3/4	66	GT	 F74G-3GN-AP3	 F74G-3GN-QP3	 4324-50 4324-50 4324-50	 F74G-KITA40 F74G-KITA40 F74G-KITA40	 F74G-KITM40 F74G-KITM40 F74G-KITM40
	83	GT	F74G-4GN-AP3	F74G-4GN-QP3			
	83	GT	F74G-6GN-AP3	F74G-6GN-QP3			

GT= Guarded transparent bowl *Typical flow with 6.3 bar inlet pressure and 0.5 bar pressure drop.



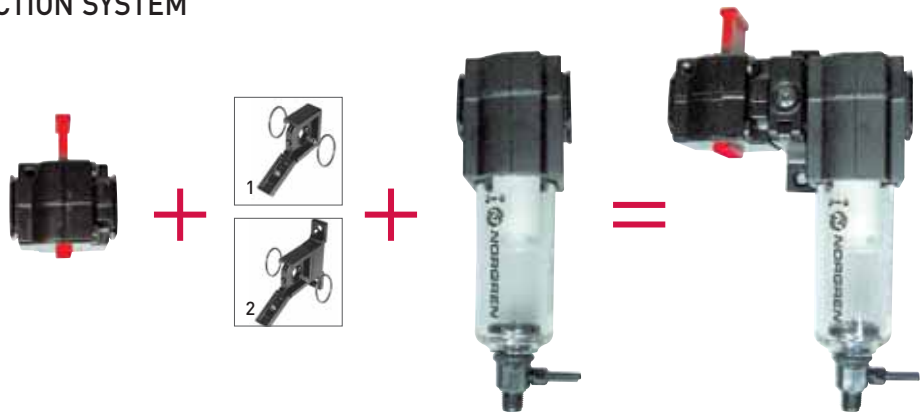
For further information



www.norgren.com/info/nec/en160

PATENTED QUIKCLAMP CONNECTION SYSTEM

Allows easy connection of one Excelon unit to another
 One piece - no loose parts
 Uniquely, connected products can be rotated in 90° increments
 Secure mounting to a wall, panel or machine surface



	Port size	3/2 Shut-off valve*	Quikclamp	Quikclamp and Quikclamp Wall bracket	Silencer (shut-off valve)
F72G SERIES					
	G1/4	T72T-2GA-P1N	4214-51	4214-52	T40M0500
	G3/8	T72T-3GA-P1N	4214-51	4214-52	T40M0500
F73G SERIES					
	G1/4	T73T-2GA-P1N	4314-51	4314-52	T40M0500
	G3/8	T73T-3GA-P1N	4314-51	4314-52	T40M0500
	G1/2	T73T-4GA-P1N	4314-51	4314-52	T40M0500
F74G SERIES					
	G3/8	T74T-3GA-P1N	4314-51	4214-52	T40B1800
	G1/2	T74T-4GA-P1N	4314-51	4214-52	T40B1800
	G3/4	T74T-6GA-P1N	4314-51	4214-52	T40B1800

*Threaded exhaust port

ACCESSORY FEATURES

- 1** WALL MOUNTING BRACKET
To fix the device to the wall.
- 2** SHUT-OFF VALVE
For safely isolating assembly from air supply
- 3** SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.
- 4** QUIKCLAMP



EXCELON MODULAR SYSTEM 'Puraire'® oil removal filters

F72C, F73C, F74C, F74H - G1/4 to G3/4



F72C

F74H

Excelon design allows in-line installation or modular installation with other Excelon products

High efficiency oil and particle removal

Quick release bayonet bowl

Service indicator standard

TECHNICAL DATA

Medium:

Compressed air

Maximum inlet pressure:

10 bar transparent bowl or guarded 8 bar transparent bowl F72C with auto drain

Remaining oil content:

0,01 mg/m³ at +21°C

Particle removal:






To 0,01 µm

Ambient temperature:

-34°C to +50°C






Consult our Technical Service for use below +2°C

F72C SERIES

Port Size	Flow* (dm ³ /s)	Bowl	MODELS		ACCESSORIES Wall mounting bracket	SERVICE KIT
			Auto drain	Manual drain		
 G 1/4 G 3/8	4,5	T			 4224-50 4224-50	 F72C-KITA0C F72C-KITA0C
	4,5	T	F72C-3GD-AL0	F72C-3GD-QT0		






T=Transparent bowl *To maintain stated oil content at 6.3 bar inlet pressure

F73C SERIES

Port Size	Flow* (dm ³ /s)	Bowl	MODELS		ACCESSORIES Wall mounting bracket	SERVICE KIT
			Auto drain	Manual drain		
 G 1/4 G 3/8 G 1/2	10	T			 4424-50 4424-50 4424-50	 F73C-KITA0C F73C-KITA0C F73C-KITA0C
	10	T	F73C-3GD-AT0	F73C-3GD-QT0		
	10	T	F73C-4GD-AT0	F73C-4GD-QT0		

T=Transparent bowl *To maintain stated oil content at 6.3 bar inlet pressure

F74C SERIES

Port Size	Flow* (dm ³ /s)	Bowl	MODELS		ACCESSORIES Wall mounting bracket	SERVICE KIT
			Auto drain	Manual drain		
 G 3/8 G 1/2	16	GT			 4324-50 4324-50	 F74C-KITA0C F74C-KITA0C
	16	GT	F74C-4GD-AP0	F74C-4GD-QP0		

GT= Guarded transparent bowl *To maintain stated oil content at 6.3 bar inlet pressure




For further information



www.norgren.com/info/nec/en162

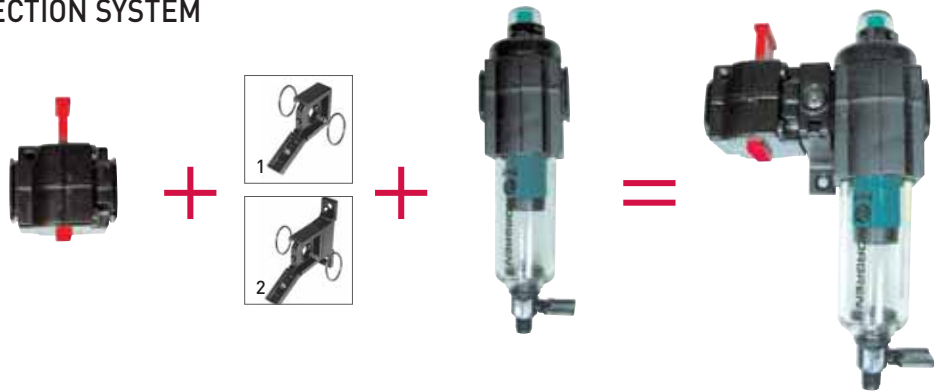
F74H SERIES





Port Size	Flow * (dm ³ /s)	Bowl	MODELS		ACCESSORIES Wall mounting bracket	SERVICE KIT
			Auto drain	Manual drain		
G 1/2	28	GT				
G 3/4	28	GT	F74H-4GD-AP0	F74H-4GD-QP0	4324-50	F74H-KITA0C
			F74H-6GD-AP0	F74H-6GD-QP0	4324-50	F74H-KITA0C

GT= Guarded transparent bowl

PATENTED QUIKCLAMP CONNECTION SYSTEM

Allows easy connection of one Excelon unit to another
 One piece - no loose parts
 Uniquely, connected products can be rotated in 90° increments
 Secure mounting to a wall, panel or machine surface



Port size	3/2 Shut-off valve*	Quikclamp	Quikclamp and Quikclamp Wall bracket	Silencer (shut-off valve)
   				
F72C SERIES				
G1/4	T72T-2GA-P1N	4214-51	4214-52	T40M0500
G3/8	T72T-3GA-P1N	4214-51	4214-52	T40M0500
F73C SERIES				
G1/4	T73T-2GA-P1N	4314-51	4314-52	T40M0500
G3/8	T73T-3GA-P1N	4314-51	4314-52	T40M0500
G1/2	T73T-4GA-P1N	4314-51	4314-52	T40M0500
F74C SERIES				
G3/8	T74T-3GA-P1N	4314-51	4214-52	T40B1800
G1/2	T74T-4GA-P1N	4314-51	4214-52	T40B1800
G3/4	T74T-6GA-P1N	4314-51	4214-52	T40B1800

*Threaded exhaust port

Compressed air is costly - 7% extra for every 1 bar not needed. Don't let anyone tamper with your pressure settings fit a lockshroud or tamperproof cap.



ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device to the wall.
- 2 SHUT-OFF VALVE
For safely isolating assembly from air supply
- 3 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.
- 4 QUIKCLAMP



EXCELON MODULAR SYSTEM

'Ultraire®' oil vapour removal filters F72V, F74V - G1/4 to G3/4



F72V



F74V

Excelon design allows in-line or modular installation with other Excelon products

Adsorbing type activated carbon element removes oil vapours and most hydrocarbon odours

Quick release bayonet bowl

High intensity blue colour change indication (F72V)

TECHNICAL DATA

Medium:

Compressed air

Maximum inlet pressure:

10 bar (F72V)

17 bar (F74V)

Remaining oil content:

0,003 mg/m³ max. at +21°C.

Ambient temperature:

Transparent bowl: -34°C to +50°C (F72V)

Metal bowl: -34°C to +65°C (F74V)




Consult our Technical Service for use below +2°C

F72V SERIES

Port Size	Flow* (dm ³ /s)	Bowl	MODELS	ACCESSORIES Wall mounting bracket	SERVICE KIT
G 1/4	1,6	T	 F72V-2GN-ETC	 4224-50	 F72V-KITA0V
G 3/8	1,6	T	F72V-3GN-ETC	4224-50	F72V-KITA0V

T=Transparent bowl * To maintain stated oil content at 6.3 bar inlet pressure



F74V SERIES

Port Size	Flow* (dm ³ /s)	Bowl	MODELS	ACCESSORIES Wall mounting bracket	SERVICE KIT
G 3/8	13	M	 F74V-3GN-EMA	 4324-50	 F74V-KITA0V
G 1/2	13	M	F74V-4GN-EMA	4324-50	F74V-KITA0V
G 3/4	13	M	F74V-6GN-EMA	4324-50	F74V-KITA0V

M= Metal bowl * To maintain stated oil content at 6.3 bar inlet pressure

PATENTED QUIKCLAMP CONNECTION SYSTEM

Allows easy connection of one Excelon unit to another
 One piece - no loose parts
 Uniquely, connected products can be rotated in 90° increments
 Secure mounting to a wall, panel or machine surface

	Port size	Quikclamp	Quikclamp and Quikclamp Wall bracket
			
F72V SERIES	G1/4	4214-51	4214-52
	G3/8	4214-51	4214-52
F74V SERIES	G3/8	4314-51	4314-52
	G1/2	4314-51	4314-52
	G3/4	4314-51	4314-52

ACCESSORY FEATURES

1 WALL MOUNTING BRACKET
 To fix the device to the wall.

2 QUIKCLAMP



EXCELON MODULAR SYSTEM Filter/regulators

B72G, B73G, B74G - G1/4 to G3/4



B72G

B74G

Excelon design allows in-line installation or modular installation with other Excelon products

High efficiency water and particle removal

Quick release bayonet bowl

Push to lock adjusting knob with tamper resistant accessory

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

10 bar

Pressure range:

0.3 ... 10 bar

Gauge ports:







Rc1/8

Ambient temperature:

-34°C to +50°C

Consult our Technical Service for use below +2°C.

B72G SERIES

MODELS					ACCESSORIES				SERVICE KIT	
Port size	Flow* (dm ³ /s)	Bowl	Auto drain	Manual drain	Wall mounting bracket	Neck mounting bracket	Gauge 0...10 bar	Tamper resistant cover and seal wire	Auto drain	Manual drain
										
G1/4	38	T	B72G-2GK-AL3-RMN	B72G-2GK-QT3-RMN	4224-50	74316-50	18-013-989	4255-51	B72G-KITA40R	B72G-KITM40R
G3/8	38	T	B72G-3GK-AL3-RMN	B72G-3GK-QT3-RMN	4224-50	74316-50	18-013-989	4255-51	B72G-KITA40R	B72G-KITM40R

T=Transparent bowl *Typical flow with 10 bar inlet pressure, 6.3 set pressure and 1 bar drop from set

B73G SERIES

MODELS					ACCESSORIES				SERVICE KIT	
Port size	Flow* (dm ³ /s)	Bowl	Auto drain	Manual drain	Wall mounting bracket	Neck mounting bracket	Gauge 0...10 bar	Tamper resistant cover and seal wire	Auto drain	Manual drain
										
G1/4	49	T	B73G-2GK-AT3-RMN	B73G-2GK-QT3-RMN	4424-50	4461-50	18-013-013	4455-51	B73G-KITA40R	B73G-KITM40R
G3/8	50	T	B73G-3GK-AT3-RMN	B73G-3GK-QT3-RMN	4424-50	4461-50	18-013-013	4455-51	B73G-KITA40R	B73G-KITM40R
G1/2	50	T	B73G-4GK-AT3-RMN	B73G-4GK-QT3-RMN	4424-50	4461-50	18-013-013	4455-51	B73G-KITA40R	B73G-KITM40R

T=Transparent bowl *Typical flow with 10 bar inlet pressure, 6.3 set pressure and 1 bar drop from set

B74G SERIES

MODELS					ACCESSORIES				SERVICE KIT	
Port size	Flow* (dm ³ /s)	Bowl	Auto drain	Manual drain	Wall mounting bracket	Neck mounting bracket	Gauge 0...10 bar	Tamper resistant cover and seal wire	Auto drain	Manual drain
										
G3/8	77	GT	B74G-3GK-AP3-RMN	B74G-3GK-QP3-RMN	4324-50	4368-51	18-013-013	4355-51	B74G-KITA40R	B74G-KITM40R
G1/2	100	GT	B74G-4GK-AP3-RMN	B74G-4GK-QP3-RMN	4324-50	4368-51	18-013-013	4355-51	B74G-KITA40R	B74G-KITM40R
G3/4	100	GT	B74G-6GK-AP3-RMN	B74G-6GK-QP3-RMN	4324-50	4368-51	18-013-013	4355-51	B74G-KITA40R	B74G-KITM40R

GT= Guarded transparent bowl *Typical flow with 10 bar inlet pressure, 6.3 set pressure and 1 bar drop from set

For further information



www.norgren.com/info/nec/en166

PATENTED QUIKCLAMP CONNECTION SYSTEM

Allows easy connection of one Excelon unit to another
 One piece - no loose parts
 Uniquely, connected products can be rotated in 90° increments
 Secure mounting to a wall, panel or machine surface



	Port size	3/2 Shut-off valve*	Quikclamp	Quikclamp and Quikclamp Wall bracket	Silencer (shut-off valve)
B72G SERIES	G1/4	T72T-2GA-P1N	4214-51	4214-52	T40M0500
	G3/8	T72T-3GA-P1N	4214-51	4214-52	T40M0500
B73G SERIES	G1/4	T73T-2GA-P1N	4314-51	4314-52	T40M0500
	G3/8	T73T-3GA-P1N	4314-51	4314-52	T40M0500
	G1/2	T73T-4GA-P1N	4314-51	4314-52	T40M0500
B74G SERIES	G3/8	T74T-3GA-P1N	4314-51	4214-52	T40B1800
	G1/2	T74T-4GA-P1N	4314-51	4214-52	T40B1800
	G3/4	T74T-6GA-P1N	4314-51	4214-52	T40B1800

Compressed air is costly - 7% extra for every 1 bar not needed. Don't let anyone tamper with your pressure settings: fit a lockshroud or tamperproof cap



*Threaded exhaust port

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device to the wall.
- 2 NECK MOUNTING BRACKET
To fix the device on panel or wall.
- 3 GAUGE
To monitor the working pressure.
- 4 3/2 SHUT-OFF VALVE
Slide valve with lockable blade. Threaded exhaust port.
- 5 TAMPER RESISTANT KIT
Simple accessory to prevent unauthorised adjustment of regulated pressure.
- 6 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere
- 7 QUIKCLAMP



EXCELON MODULAR SYSTEM Pressure regulators

R72G, R73G, R74G - G1/4 to G3/4



R72G

R74G

Excelon design allows in-line or modular installation

Balanced valve design for optimum pressure control

Standard relieving models allow reduction of downstream pressure when the system is dead-ended

Push to lock adjusting knob with tamper resistant accessory

TECHNICAL DATA

Medium:

Compressed air

Maximum inlet pressure:

20 bar

Gauge ports:

Rc1/8

Ambient temperature:

-34°C to +65°C (R72G)








-34°C to +80°C (R73G & R74G)

Consult our Technical Service for use below +2°C

Pressure range:

0,3 ... 10 bar

R72G SERIES

Port size	Flow* (dm ³ /s)	MODELS	ACCESSORIES				SERVICE KIT
			Wall mounting bracket	Neck mounting bracket	Gauge 0 ... 10 bar	Tamper resistant kit	
 G 1/4 G 3/8	33	 R72G-2GK-RMN R72G-3GK-RMN	 4224-50	 74316-50 74316-50	 18-013-989 18-013-989	 4255-51 4255-51	 R72G-KITR R72G-KITR
	33						

* Typical flow with 10 bar inlet pressure, 6.3 bar set pressure and 1 bar drop from set

R73G SERIES

Port size	Flow* (dm ³ /s)	MODELS	ACCESSORIES				SERVICE KIT
			Wall mounting bracket	Neck mounting bracket	Gauge 0 ... 10 bar	Tamper resistant kit	
 G 1/4 G 3/8 G 1/2	50	 R73G-2GK-RMN R73G-3GK-RMN R73G-4GK-RMN	 4424-50	 4461-50 4461-50	 18-013-013 18-013-013	 4455-51 4455-51	 R73G-KITR R73G-KITR R73G-KITR
	60						
	60						

* Typical flow with 10 bar inlet pressure, 6.3 bar set pressure and 1 bar drop from set

R74G SERIES

Port size	Flow* (dm ³ /s)	MODELS	ACCESSORIES				SERVICE KIT
			Wall mounting bracket	Neck mounting bracket	Gauge 0 ... 10 bar	Tamper resistant kit	
 G 3/8 G 1/2 G 3/4	98	 R74G-3GK-RMN R74G-4GK-RMN R74G-6GK-RMN	 4324-50	 4368-51 4368-51	 18-013-013 18-013-013	 4355-51 4355-51	 R74G-KITR R74G-KITR R74G-KITR
	105						
	105						

* Typical flow with 10 bar inlet pressure, 6.3 bar set pressure and 1 bar drop from set

PATENTED QUIKCLAMP CONNECTION SYSTEM

Allows easy connection of one Excelon unit to another

One piece - no loose parts

Uniquely, connected products can be rotated in 90° increments

Secure mounting to a wall, panel or machine surface



	Port size	3/2 Shut-off valve*	Quikclamp	Quikclamp and Quikclamp Wall bracket	Silencer (shut-off valve)
R72G SERIES	G1/4	T72T-2GA-P1N	4214-51	4214-52	T40M0500
	G3/8	T72T-3GA-P1N	4214-51	4214-52	T40M0500
R73G SERIES	G1/4	T73T-2GA-P1N	4314-51	4314-52	T40M0500
	G3/8	T73T-3GA-P1N	4314-51	4314-52	T40M0500
	G1/2	T73T-4GA-P1N	4314-51	4314-52	T40M0500
R74G SERIES	G3/8	T74T-3GA-P1N	4314-51	4214-52	T40B1800
	G1/2	T74T-4GA-P1N	4314-51	4214-52	T40B1800
	G3/4	T74T-6GA-P1N	4314-51	4214-52	T40B1800

*Threaded exhaust port

ACCESSORY FEATURES

- 1** WALL MOUNTING BRACKET
To fix the device to the wall.
- 2** NECK MOUNTING BRACKET
To fix the device on panel or wall.
- 3** GAUGE
To monitor the working pressure.
- 4** 3/2 SHUT-OFF VALVE
Slide valve with lockable blade. Threaded exhaust port.
- 5** TAMPER RESISTANT COVER
Simple accessory to prevent unauthorised adjustment of regulated pressure.
- 6** SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.
- 7** QUIKCLAMP



EXCELON MODULAR SYSTEM Lubricators

L72, L73, L74 - G1/4 to G3/4



Excelon design allows in-line or modular installation
 Flow sensor provides a nearly constant oil/air ratio over a wide range of flows
 All round (360°) visibility of sight-feed dome for ease of drip rate setting
 Micro-fog lubricators for best lubrication in general purpose pneumatic applications

TECHNICAL DATA

Medium:
Compressed air

Maximum inlet pressure:
10 bar

Start point:
 L72M 0,94 dm³/s
 L73M 0,71 dm³/s
 L74M 0,94 dm³/s

Minimum flow required for lubricator operation at 6,3 bar inlet pressure

Bowl capacity:
 L72 0.05 l
 L73 0.10 l
 L74 0.20 l

Ambient temperature:
-20°C to +50°C
Consult our Technical Service for use below +2°C

BOXED SETS L72 SERIES

Port size	Flow* (dm ³ /s)	Bowl	MODELS	ACCESSORIES Wall mounting bracket	SERVICE KIT	
	G 1/4	24	T	 L72M-26P-ETN	 4224-50	 L72M-KIT
	G 3/8	24	T			

T=Transparent bowl * Typical flow with 6.3 bar inlet and 0.5 bar pressure drop.

BOXED SETS L73 SERIES

Port size	Flow* (dm ³ /s)	Bowl	MODELS	ACCESSORIES Wall mounting bracket	SERVICE KIT	
	G 1/4	50	T	 4424-50	 L73M-KIT	
	G 3/8	64	T			L73M-36P-ETN
	G 1/2	64	T			L73M-46P-ETN

T=Transparent bowl * Typical flow with 6.3 bar inlet and 0.5 bar pressure drop.

BOXED SETS L74 SERIES

Port size	Flow* (dm ³ /s)	Bowl	MODELS	ACCESSORIES Wall mounting bracket	SERVICE KIT	
	G 3/8	50	GT	 4324-50	 L74M-KIT	
	G 1/2	70	GT			L74M-46P-QPN
	G 3/4	70	GT			L74M-66P-QPN

GT= Guarded transparent bowl * Typical flow with 6.3 bar inlet and 0.5 bar pressure drop.



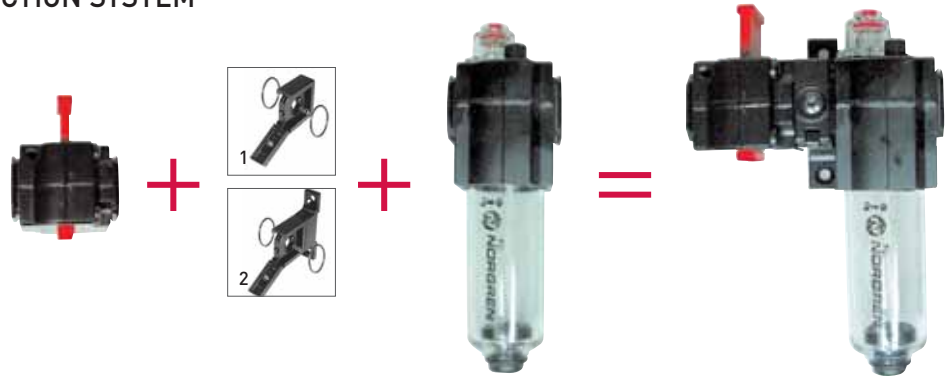
For further information



www.norgren.com/info/nec/en170

PATENTED QUIKCLAMP CONNECTION SYSTEM

Allows easy connection of one Excelon unit to another
 One piece - no loose parts
 Uniquely, connected products can be rotated in 90° increments
 Secure mounting to a wall, panel or machine surface



	Port size	3/2 Shut-off valve*	Quikclamp	Quikclamp and Quikclamp Wall bracket	Silencer (shut-off valve)
R72G SERIES	G1/4	T72T-2GA-P1N	4214-51	4214-52	T40M0500
	G3/8	T72T-3GA-P1N	4214-51	4214-52	T40M0500
R73G SERIES	G1/4	T73T-2GA-P1N	4314-51	4314-52	T40M0500
	G3/8	T73T-3GA-P1N	4314-51	4314-52	T40M0500
	G1/2	T73T-4GA-P1N	4314-51	4314-52	T40M0500
R74G SERIES	G3/8	T74T-3GA-P1N	4314-51	4214-52	T40B1800
	G1/2	T74T-4GA-P1N	4314-51	4214-52	T40B1800
	G3/4	T74T-6GA-P1N	4314-51	4214-52	T40B1800

*Threaded exhaust port

Lubricators extend system's life up to 4 times, saving you money



ACCESSORY FEATURES

- 1** WALL MOUNTING BRACKET
To fix the device to the wall.
- 2** 3/2 SHUT-OFF VALVE
Slide valve with lockable blade. Threaded exhaust port.
- 3** SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.
- 4** QUIKCLAMP



EXCELON MODULAR SYSTEM Pressure relief valves

V72G, V74G - G 1/4to G 3/4



V72G



V74G

Excelon design allows in-line installation or modular installation with other Excelon products

Push to lock adjusting knob with tamper resistant accessory

Helps protect air operated equipment from over pressurisation

Norgren pressure relief valves comply with category O(S.E.P.) and category 1 of the Pressure Equipment Directive 97/23/EC.

TECHNICAL DATA

Medium:
Compressed air

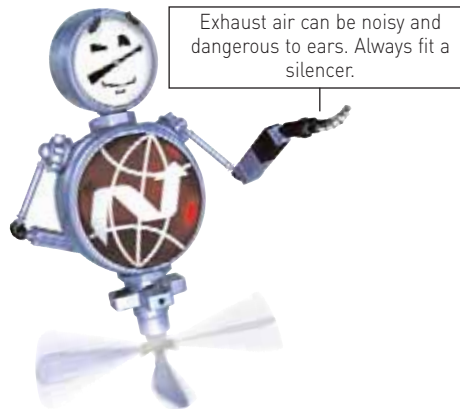
Gauge ports:
Rc1/8

Relief port:
G1/4 (V72G), G1/2 (V74G)

Ambient temperature:
-34°C to +65°C (V72G)
-34°C to +80°C (V74G)

Consult our Technical Service for use below +2°C








Relief pressure adjustment range:
0,3 ... 10 bar



V72G SERIES

Port size	MODELS	ACCESSORIES					SERVICE KIT
		Wall mounting bracket	Neck mounting bracket	Gauge 0 ... 10 bar	Tamper resistant kit	Silencer	
 G 1/4 G 3/8	 V72G-2GK-NMN V72G-3GK-NMN	 4224-50 4224-50	 74316-50 74316-50	 18-013-989 18-013-989	 4255-51 4255-51	 MB002B MB002B	 V72G-KIT V72G-KIT

V74G SERIES

Port size	MODELS	ACCESSORIES					SERVICE KIT
		Wall mounting bracket	Neck mounting bracket	Gauge 0 ... 10 bar	Tamper resistant kit	Silencer	
 G 3/8 G 1/2 G 3/4	 V74G-3GK-NMN V74G-4GK-NMN V74G-6GK-NMN	 4324-50 4324-50 4324-50	 4368-51 4368-51 4368-51	 18-013-013 18-013-013 18-013-013	 4355-51 4355-51 4355-51	 MB004B MB004B MB004B	 V74G-KIT V74G-KIT V74G-KIT

PATENTED QUIKCLAMP CONNECTION SYSTEM

Allows easy connection of one Excelon unit to another
 One piece - no loose parts
 Uniquely, connected products can be rotated in 90° increments
 Secure mounting to a wall, panel or machine surface



Port size	3/2 Shut-off valve*	Quikclamp	Quikclamp and Quikclamp Wall bracket	Silencer (shut-off valve)
V72G SERIES				
G1/4	T72T-2GA-P1N	4214-51	4214-52	T40M0500
G3/8	T72T-3GA-P1N	4314-51	4214-52	T40M0500
V74G SERIES				
G3/8	T74T-3GA-P1N	4314-51	4214-52	T40B1800
G1/2	T74T-4GA-P1N	4314-51	4214-52	T40B1800
G3/4	T74T-6GA-P1N	4314-51	4214-52	T40B1800

*Threaded exhaust port

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device to the wall.
- 2 NECK MOUNTING BRACKET
To fix the device on panel or wall.
- 3 GAUGE
To monitor the working pressure.
- 4 3/2 SHUT-OFF VALVE
Slide valve with lockable blade. Threaded exhaust port.
- 5 TAMPER RESISTANT COVER
Simple accessory to prevent unauthorised adjustment of regulated pressure.
- 6 SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.
- 7 QUIKCLAMP
- 8 SILENCER
Reduces noise from high exhaust flow.



EXCELON MODULAR SYSTEM Soft start/dump valves

P72F, P74F - G1/4 to G3/4



P72F



P74F

Assists machine designers in complying with the European Machineries Directive

Can help existing machinery to comply with PUWER (Provision and Use of Work Equipment Regulations)

Controlled increase of downstream pressure on start up

High forward flow capacity

High flow dump facility

TECHNICAL DATA

Medium:

Compressed air

Maximum operating pressure:

10 bar (solenoid pilot operated)

17 bar (air pilot operated)

Minimum operating pressure:

3 bar

Ambient temperature:

-20°C to +65°C P72F.

-20°C to +80°C P74F

Consult our Technical Service for use below +2°C

Air pilot port:

P72F M5

P74F Rc1/4

Exhaust port:

P72F Rc1/4

P74F G1/2

Maximum flow:

P72F 21 dm³/s


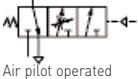
P74F 57 dm³/s

Note: Maximum flow with 6,3 bar inlet pressure and pressure drop of 0,5 bar






Snap pressure:

Full flow when downstream pressure reaches 50 to 80% of inlet pressure.

P72F SERIES

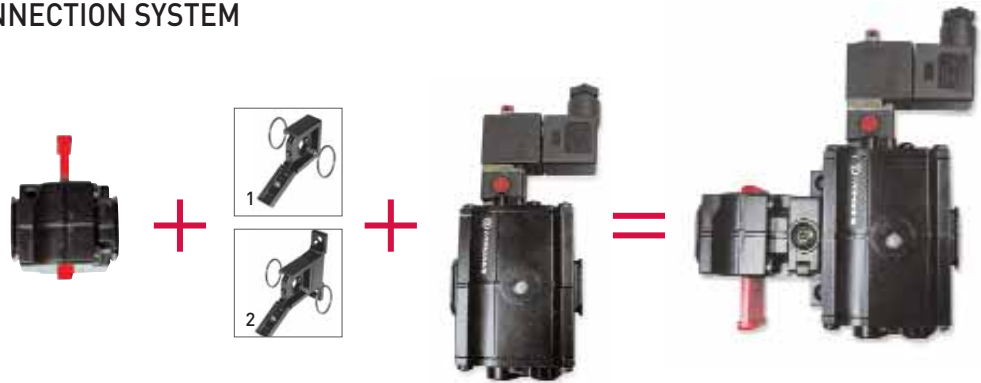
Port size	MODELS		ACCESSORIES	
	Solenoid pilot operated	Air pilot operated	Silencer	Connector plug with cable gland
 Solenoid pilot operated				
G1/4	P72F-2GC-PFN	P72F-2GA-NNN	MB002B	M/P24121/1
 Air pilot operated	G3/8	P72F-3GC-PFN	MB002B	M/P24121/2
		-		0657868000000000
				10 ... 50 V a.c./d.c. 70 ... 110 V a.c. Standard plug

P74F SERIES

Port size	MODELS		ACCESSORIES	
	Solenoid pilot operated	Air pilot operated	Silencer	Connector plug with cable gland
 Solenoid pilot operated				
G1/2	P74F-4GC-PFN	P74F-4GA-NNN	MB004B	M/P24121/1
 Air pilot operated	G3/4	P74F-6GC-PFN	MB004B	M/P24121/2
		-		0657868000000000
				10 ... 50 V a.c./d.c. 70 ... 110 V a.c. Standard plug

PATENTED QUIKCLAMP CONNECTION SYSTEM

Allows easy connection of one Excelon unit to another
 One piece - no loose parts
 Uniquely, connected products can be rotated in 90° increments
 Secure mounting to a wall, panel or machine surface

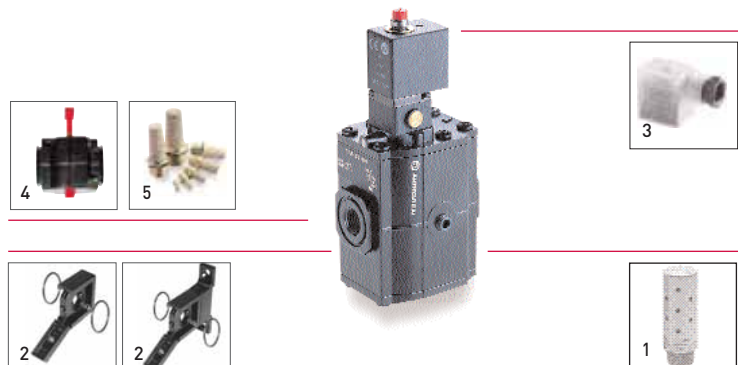


	Port size	3/2 Shut-off valve*	Quikclamp	Quikclamp and Quikclamp Wall bracket	Silencer (shut-off valve)
P72F SERIES	G1/4 G3/8	T72T-2GA-P1N T72T-3GA-P1N			
			4214-51	4214-52	T40M0500
P74F SERIES	G3/8 G1/2 G3/4	T74T-3GA-P1N T74T-4GA-P1N T74T-6GA-P1N			
			4314-51	4214-52	T40B1800
			4314-51	4214-52	T40B1800
			4314-51	4214-52	T40B1800

*Threaded exhaust port

ACCESSORY FEATURES

- 1** SILENCER
Reduces noise from high exhaust flow.
- 2** QUIKCLAMP
- 3** CONNECTOR PLUG
For connection to mains with solenoid versions.
- 4** 3/2 SHUT-OFF VALVE
Slide valve with lockable blade. Threaded exhaust port.
- 5** SILENCER (SHUT-OFF VALVE)
For noise reduction when exhausting air to atmosphere.



MEMBRANE DRIERS W07M, W72M, W74M

G1/4, G1/2



Removes water vapour from compressed air

Provides dewpoint suppression up to 44°C below the ambient temperature, depending on air flow through the membrane

Dewpoint suppression of 11°C below the ambient temperature is suitable for most industrial applications

W72 and W74 utilize the Excelon® Quikclamp™ design to provide in-line or modular installation with 72, 73 and 74 Series products

W07 available for in-line installation only

Easy installation, no power required

Maintenance free with proper pre-filtration

Minimal pressure drop

TECHNICAL DATA

Medium:

Compressed air, pre-filtered to 0,01 µm and oil free


Maximum operating pressure:
10 bar

Ambient temperature:

-20 to 80°C*

*Air supply must be dry enough to avoid ice formation at temperatures below +2°C.

STANDARD MODELS

Port size	Nominal Flow (dm ³ /s)*		Differential pressure (bar)	kg	MODEL	
	Outlet	Inlet				
	G1/4	1,00	1,06	0,028	0,39	W07M-2GN-NNA
	G1/4	2,40	2,65	0,023	0,82	W72M-2GN-NNB
	G1/4	4,75	5,27	0,062	0,84	W72M-2GN-NNC
	G1/2	14,20	15,76	0,093	1,79	W74M-4GN-NNE

*7 bar inlet pressure, 38° ambient temperature and dew point suppression of 11°C

For further information



www.norgren.com/info/nec/en176

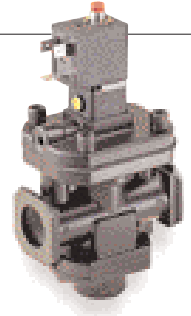
EXCELON MODULAR SYSTEM ACCESSORIES

SOLENOID OPERATED CONTROL VALVES

Series	Port size	Function	Type	MODELL
72	G1/4	3/2 NC	Solenoid	P72C-2GC-PFN
72	G1/4	3/2 NC	Pilot	P72C-2GA-NNN
72	G3/8	3/2 NC	Solenoid	P72C-3GC-PFN
74	*	3/2 NC	Solenoid	P74C-NGC-PFN

*Ports are unthreaded. Use Quikclamps.

High flow, spring return.
Solenoid or air pilot operated.



For further information



www.norgren.com/info/nec/en177

PORTED COMBINATION UNITS Filter/regulators and lubricators

P1H - G1/8, G1/4



Combinations of filter-regulators and lubricators can be ordered as pre-assembled units

Complete control of filtration, regulation and lubrication at a single point

Micro-fog versions for most general purpose pneumatic applications

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

10 bar

Ambient temperature:

-20°C to +50°C.

Consult our Technical Service for use below +2°C


Pressure range:

0,3 ... 7 bar

Air preparation units not fixed with brackets can move and cause leaks, wasting costly air. Always fit a mounting bracket.



P1H SERIES

Port size	MODELS		ACCESSORIES	
	Auto drain	Manual drain	Neck mounting bracket	Gauge 0 ... 10 bar
 G 1/8 G 1/4	 P1H-100-A3QG P1H-200-A3QG	 P1H-100-M3QG P1H-200-M3QG	 18-025-003 18-025-003	 18-013-989 18-013-989

ACCESSORY FEATURES

- 1 NECK MOUNTING BRACKET
To fix the device on panel or wall.
- 2 GAUGE
To monitor the working pressure.



For further information



www.norgren.com/info/nec/en178

PORTED GENERAL PURPOSE FILTERS

F07
G1/8, G1/4



Direct ported filters with high water removal efficiency
Automatic drains supplied as standard
High flow miniature unit
Transparent bowl for 360° visibility

TECHNICAL DATA

Medium:
Compressed air only
Maximum inlet pressure:
10 bar
Ambient temperature:
-34°C to +50°C
Consult our Technical Service for use below +2°C

F07 SERIES

Port size	Flow* (dm³/s)	MODELS		ACCESSORIES SERVICE KIT		
		Auto drain	Manual drain	Wall mounting bracket	Auto drain	Manual drain
 G 1/8 G 1/4	9	 F07-100-A3TG	 F07-100-M3TG	 5939-06	 F07-KITA40	 F07-KITM40
	11,5	F07-200-A3TG	F07-200-M3TG	5939-06	F07-KITA40	F07-KITM40

*Typical flow with 6.3 bar inlet pressure and 0.5 bar pressure drop

ACCESSORY FEATURES

- 1 WALL MOUNTING BRACKET
To fix the device to the wall.



For further information



www.norgren.com/info/nec/en179

PORTED FILTER/REGULATORS

B07
G1/8, G1/4



Filter-regulators for all general purpose pneumatic applications
High performance design provides high flow with minimum pressure drop
Non-rising adjusting knob has snap-action lock
Transparent bowl for 360° visibility

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

10 bar

Gauge ports:

Rc1/8

Pressure range:

0.3...7 bar

Ambient temperature:

-34°C to +50°C

Consult our Technical Service for use below +2°C

B07 SERIES

Port size	Flow* (dm ³ /s)	MODELS		ACCESSORIES			SERVICE KIT	
		Auto drain	Manual drain	Mounting bracket and nut	Gauge 0 ... 10 bar	Panel mounting nut	Auto drain	Manual drain
 G 1/8 G 1/4	6,2	 B07-101-A3KG	 B07-101-M3KG	 18-025-003	 18-013-989	 2962-89 (Plastic nut only) 2962-04 (Metal nut only)	 B07-KITA40R	 B07-KITM40R
	6,5	B07-201-A3KG	B07-201-M3KG	18-025-003	18-013-989		B07-KITA40R	B07-KITM40R

*Typical flow with 10 bar inlet pressure, 6.3 bar set pressure and 1 bar drop.

ACCESSORY FEATURES

- 1 NECK MOUNTING BRACKET
To fix the device on panel or wall.
- 2 GAUGE
To monitor the working pressure.



For further information



www.norgren.com/info/nec/en180

PORTED PRESSURE REGULATORS

R07
G1/8, G1/4








Ported regulators for general purpose pneumatic applications
Relieving operation as standard
Non-rising adjusting knob with snap-action lock

TECHNICAL DATA

Medium:
Compressed air only
Maximum inlet pressure:
20 bar
Gauge ports:
Rc1/8
Ambient temperature:
-34°C to +65°C
Consult our Technical Service for use below +2°C
Pressure range:
0,3 ... 7 bar

R07 SERIES

Port size	Flow* (dm³/s)	MODELS		ACCESSORIES			SERVICE KIT
		Pressure 0,3 ... 7 bar	Pressure 0,5 ... 10 bar	Neck mounting bracket	Gauge 0 ... 10 bar	Panel mounting nut	
G 1/8	6,5						
G 1/4	7	R07-200-RNKG	R07-205-RNMG	18-025-003	18-013-989	2962-89 [Plastic nut only] 2962-04 [Metal nut only]	R07-KITR R07-KITR

*Typical flow with 10 bar inlet pressure, 6.3 bar set pressure and 1 bar drop from set.

ACCESSORY FEATURES

- 1 NECK MOUNTING BRACKET
To fix the device on panel or wall.
- 2 GAUGE
To monitor the working pressure.



For further information



www.norgren.com/info/nec/en181

PORTED LUBRICATORS

L07
G1/8, G1/4



Micro-fog lubricators provide a fine mist for most general purpose pneumatic applications
Transparent bowl for 360° visibility

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

10 bar

Start point:

0,24 dm³/s

Minimum flow required for lubricator operation at 6,3 bar inlet pressure

Ambient temperature:

-20°C to +50°C

Consult our Technical Service for use below +2°C

L07 SERIES

	Port size	Flow* (dm ³ /s)	MODELS	ACCESSORIES Neck Mounting bracket	SERVICE KIT
	G 1/8 G 1/4	5 6,7	 L07-100-MPQG L07-200-MPQG	 18-025-003 18-025-003	 L07-KIT L07-KIT

*Typical flow with 6.3 bar inlet pressure and 0.5 bar pressure drop

ACCESSORY FEATURES

- 1 NECK MOUNTING BRACKET
To fix the device on panel or wall.



Lubricators extend system's life up to 4 times, saving you money



For further information



www.norgren.com/info/nec/en182

PORTED PRESSURE RELIEF VALVES Diaphragm type V07

G1/8, G1/4



Protect compressed air systems from over-pressurisation

Norgren pressure relief valves comply with category O(S.E.P.) and category 1 of the Pressure Equipment Directive 97/23/EC.

TECHNICAL DATA

Medium:

Compressed air only

Gauge ports:

Rc1/8

Relief port:

As inlet port

Pressure range:

0.3...9bar

Ambient temperature:

-34°C to +65°C

Consult our Technical Service for use below +2°C

Relief pressure adjustment range:

0,3 ... 9 bar

V07 SERIES

Port size	MODELS	ACCESSORIES		SERVICE KIT
		Neck mounting bracket	Gauge 0 ... 10 bar	
 G 1/8 G 1/4	 V07-100-NNLG V07-200-NNLG	 18-025-003 18-025-003	 18-013-989 18-013-989	 V07-KIT V07-KIT

ACCESSORY FEATURES

- 1 NECK MOUNTING BRACKET
To fix the device on panel or wall.
- 2 GAUGE
To monitor the working pressure.



For further information



www.norgren.com/info/nec/en183

PORTED PILOT OPERATED PRESSURE REGULATORS

11400/11-204/20AL, 11-808, R18
G3/4 to G2



11400/11-204



11-808



R18

Can be installed at any point in the compressed air system without regard to accessibility – pilot regulator can be installed in the most convenient location

Accurate pressure regulation over a wide range of flows

Can be used with conventional or feedback pilot regulator

Feedback pilot regulator senses downstream pressure and automatically adjusts pilot operated regulator outlet pressure

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

20 bar (11-808, 11-204)
25 bar (11400)
31 bar (R18)

Gauge ports:

Rc1/8 (11-808)
G1/8 (11400)
G1/4 (R18)

Pilot port:

Rc1/4 (11-808)
G1/4 (R18)

Exhaust ports:




G3/4" (R18)

Ambient temperature:

-20°C to +80°C

Consult our Technical Service for use below +2°C

11-400, 20AL SERIES - Conventional pilot regulators

Port size	Range (bar)	MODELS	ACCESSORIES Gauge *	SERVICE KIT	
	G 1/4	0,06...2	 18-013-013 18-013-013 18-013-013 18-013-014	 11400-100 11400-100 11400-100 11400-100	
	G 1/4	0,06...4			11400-2G/PC100
	G 1/4	0,16...7			11400-2G/PE100
	G 1/4	7...20			11400-2G/PG100 20AL-X2G/PK100

* For setting of remotely positioned regulator

11-204 SERIES - Feedback pilot regulators

Port size	MODELS	ACCESSORIES Wall mounting bracket	Gauge *	SERVICE KIT
	G 1/4	 18-001-005 18-001-005	 18-013-013 18-013-014	 11-204-100 11-204-100
	G 1/4			

* For setting of remotely positioned regulator

11-808 SERIES

Port size	Flow (dm ³ /s)	MODELS	ACCESSORIES Wall mounting bracket	Gauge 0 ... 25 bar	SERVICE KIT
	G3/4	 11-808-960 11-808-980	 18-001-027 18-001-027	 18-013-014 18-013-014	 11-908-100 11-908-100
	G1				

* Typical flow (feedback pilot) with 8 bar inlet pressure, 6,3 bar outlet pressure and minimal pressure drop.

R18 SERIES

Port size	Flow (dm ³ /s)	MODELS	ACCESSORIES			SERVICE KIT
			Gauge 0 ... 25 bar	Silencer	Concentric reducing adaptor for gauge ports**	
 G1 1/2 G2	950# 950#	 R18-B00-RNXD R18-C00-RNXD	 18-013-014 18-013-014	 MB0006B MB0006B	 150232818 150232818	 R18-100R R18-100R

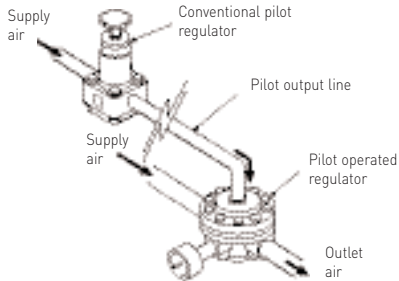
#Typical flow (feedback pilot) with 8 bar inlet pressure, 6,3 bar outlet pressure and minimal pressure droop.
 **Reducer to fit gauge into R18 gauge port.

ACCESSORY FEATURES

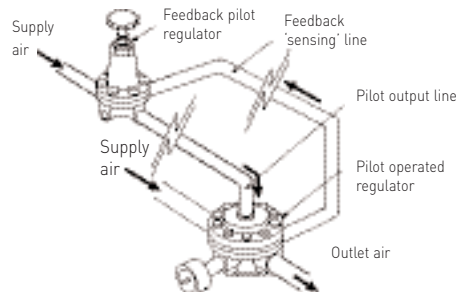
- 1** WALL MOUNTING BRACKET (11-808 only)
To monitor the working pressure.
- 2** GAUGE
To monitor the working pressure.
- 3** SILENCER
Reduces noise from high exhaust flow. (R18 only)
- 4** CONCENTRIC REDUCING ADAPTOR FOR GAUGE PORTS
Ports not used as outlets need reducer for 1/8 gauge



Conventional pilot



Feedback pilot



Feedback pilot regulators give more sensitive control and quicker reaction to downstream pressure changes.
 Feedback 'sensing' line to be kept to minimum length (<200mm).

'MICRO TROL' SPECIAL PURPOSE PRESSURE REGULATORS

R24 - G1/4 to G1 1/4



Exceptionally high flow and relief flow characteristics
 Easy to adjust even at high output pressures
 Balanced valve minimises effect of variations in inlet pressure on outlet pressure
 Relieving feature allows outlet pressure reduction even when the system is dead ended
 Full flow gauge ports
 Panel mounting facility

TECHNICAL DATA

Medium:
Compressed air



Maximum inlet pressure:
20 bar *

Gauge ports:
G1/4 with 1/4 main
G3/8 with 3/8 main
G1/2 with all others

Pressure range :
0,7...8 bar

Ambient temperature:
0°C to +80°C.
Consult our Technical Service for use below +2°C

R24 SERIES

Port size	MODELS	ACCESSORIES			SERVICE KIT
		Neck mounting bracket	Gauge 0 ... 10 bar	Concentric reducing adaptor for gauge ports**	
					
G1/4	R24-200-RNLG	18-999-412	18-013-013	150232818	5292-52
G3/8	R24-300-RNLG	18-999-412	18-013-013	150233818	5292-52
G1/2	R24-400-RNLG	18-999-412	18-013-013	150234818	5292-52
G3/4	R24-600-RNLG	18-999-412	18-013-013	150234818	5292-53
G1	R24-800-RNLG	18-999-412	18-013-013	150234818	5292-53
G1 1/4	R24-A00-RNLG	18-999-412	18-013-013	150234818	5292-53

**Reducer to fit gauge into R1/8 gauge port.

ACCESSORY FEATURES

- 1** NECK MOUNTING BRACKET
To fix the device on panel or wall.
- 2** GAUGE
To monitor the working pressure.
- 3** CONCENTRIC REDUCING ADAPTOR FOR GAUGE PORTS
Ports not used as outlets need reducer for 1/8 gauge



GENERAL PURPOSE STAINLESS STEEL REGULATORS

Pressure regulators, filter-regulators

B05, R05 - 1/4" PTF



Metallic parts meet NACE* recommendations

Miniature high corrosion resistant design

Adjusting knob has snap-action lock

Particularly suitable for marine, petro-chemical, food processing, medical, dental and similar applications

Panel mounting facility

* National Association of Corrosion Engineers - recognised oil-field recommendation for resistance to sulphide stress cracking common in well-head and other corrosive environments.

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

17 bar

Gauge ports:

1/8" PTF

Pressure range:






0.3...8,6 bar

Ambient temperature:

-34°C to +66°C

Consult our Technical Service for use below +2°C

B05 SERIES

Port size	Flow * (dm ³ /s)	MODELS	ACCESSORIES Gauge** 0 ... 10 bar	Mounting nut	SERVICE KIT
 1/4 PTF	5	 B05-233-M1LA	 18-013-844	 2962-89	 B05-KITM05R

* Typical flow with 10 bar inlet pressure, 6.3 pressure and 1 bar drop from set. ** Not NACE standard

R05 SERIES

Port size	Flow (dm ³ /s)	MODELS	ACCESSORIES Gauge* 0 ... 10 bar	Mounting nut	SERVICE KIT
 1/4 PTF	3	 R05-200-RNLA	 18-013-844	 2962-89	 R05-KITR

* Not NACE standard

ACCESSORY FEATURES

- 1 GAUGE
To monitor the working pressure.
- 2 MOUNTING NUT
For panel mounting.



For further information



www.norgren.com/info/nec/en187

PORTED STAINLESS STEEL EQUIPMENT

Filters, pressure regulators, lubricators

F22, R22, L22 - 1/2" PTF



F22

R22

L22

Lloyds Register Type Approved
Materials meet NACE*
recommendations (MR-0175,
2002 revision)

25 µm filter element and auto
drain as standard

Orientable metal bowls with
sightglasses

* National Association of Corrosion Engineers –
recognised oil-field recommendation for
resistance to sulphide stress cracking common
in well-head and other corrosive environments

TECHNICAL DATA

Medium:

Compressed air only

Maximum inlet pressure:

17 bar (F22)

20 bar (R22)

Gauge ports:

1/4 PTF (R22)

Pressure range:

R22: 0,4...10 bar

Operation:

R22: Relieving

L22: Oil-fog

Start Point:

L22: 1,7 dm³/sat 6,3 bar

Ambient temperature:

-20°C to +80°C







Consult our Technical Service for use below +2°C

F22 SERIES

Port size	Flow* (dm ³ /s)	MODELS		ACCESSORIES	SERVICE KIT	
		Auto drain	Manual drain	Wall mounting bracket	Auto drain	Manual drain
 1/2 PTF	57					

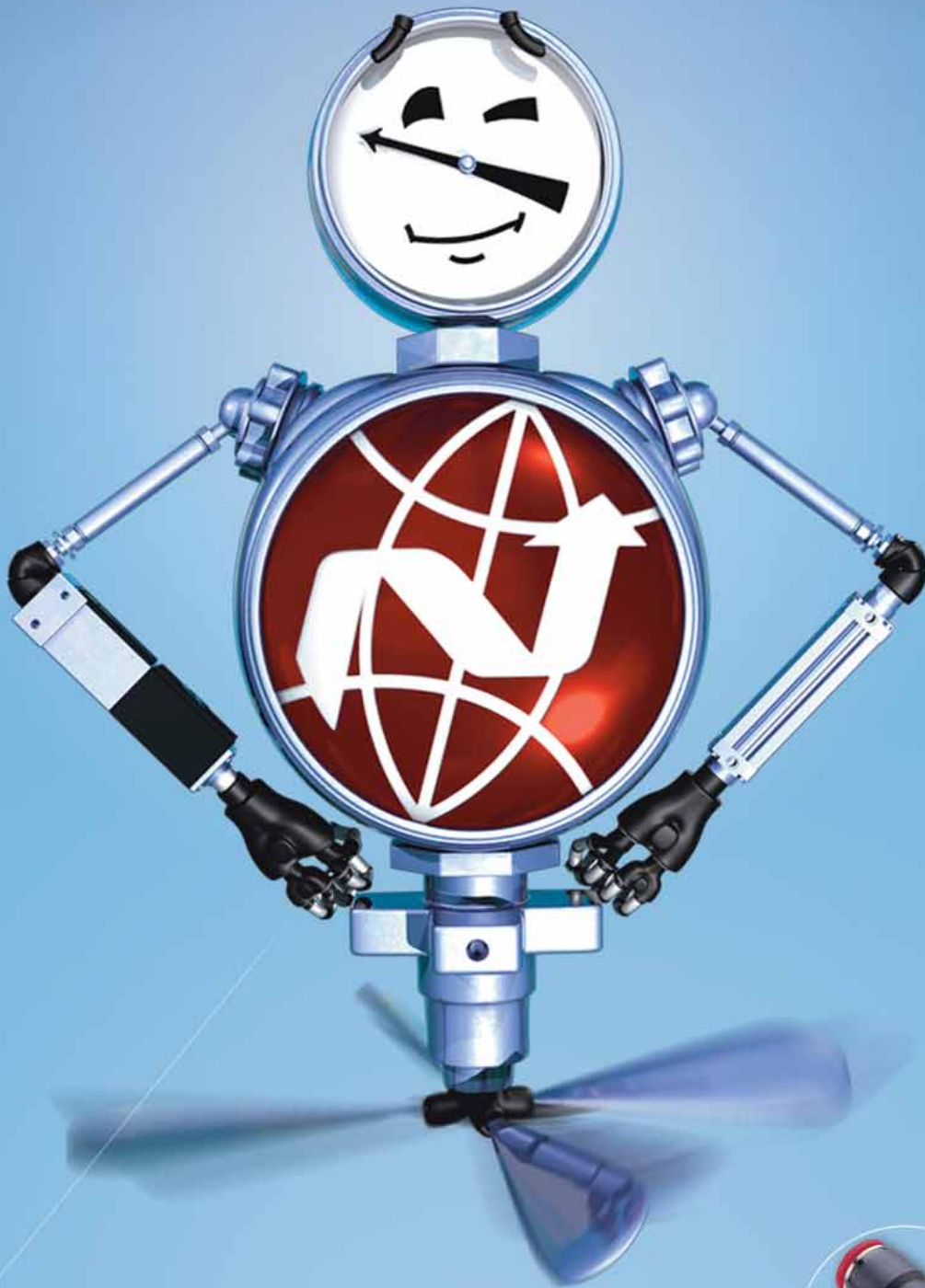
* Typical flow with 10 bar inlet pressure, 6.3 bar pressure and 0.5 bar pressure drop

R22 SERIES

Port size	Flow* (dm ³ /s)	MODELS	ACCESSORIES		SERVICE KIT	
		Auto drain	Neck mounting bracket	Gauge** 0 ... 10 bar	Wall mounting bracket	Auto drain
 1/2 PTF	50					

* Typical flow with 10 bar inlet pressure, 6.3 bar set pressure and 1 bar drop from set **Not to NACE standard





F I T T I N G S

Norgren offers fittings to work seamlessly with virtually every motion and fluid control product. At www.norgren.com, you can download additional technical information. For more information on a specific fitting, tubing, hose, or other accessory, simply go to the web address printed under the online icons at the bottom of the following fittings product pages.

E X P R E S S F I T T I N G S

Norgren fittings and accessories

Fittings

Pneufit C and M
Push-in composite
Ø 3 ... 16 mm

Page 194

Pneufit push-in
Ø 4 ... 14 mm

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24 Series
Push-on tube fittings
Ø 4/2,5 mm ... 15/12,5 mm

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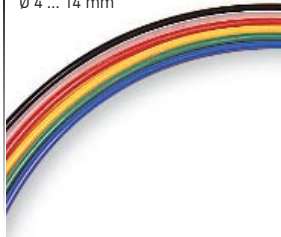
43 Series
Compressin fittings -
External nut
Ø 4 ... 22 mm

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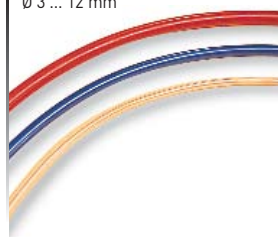
BSP and hose
M5, 1/8" ... 1"

Page 221

Tubing

Nylon tubing
Ø 4 ... 14 mm

Page 226

Polyurethane tubing
Ø 3 ... 12 mm

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E X P R E S S F I T T I N G S

Accessories

60, 61 Series
Ball valves
G1/8 ... G1/4



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MA, MB Series
Silencers
G1/8 ... G2



Page 230

T40 Series
Sintered bronze silencers
G1/8 ... G1



Page 231

M/S, T45 Series
Porous plastic silencers
Ø 4 ... 12 mm
G1/8 ... G1



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M/1500 Series
Exhaust filters
G1/8 ... G1



Page 231

Rotating joints
G1/8 ... G 3/8



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PNEUFIT C AND M COMPOSITE FITTINGS

Metric Ø 3 to 16 mm O/D tube



Norgren Pneufit® C and M fittings are ready to use, offering fast assembly with no need for tools and providing optimum flow.

Pneufit® C offers a broad range of over 1,000 composite push-in pneumatic fittings to complement our established all brass Pneufit® series.

Releasable stainless-steel grab-ring to grip nylon or polyurethane tube (85 or 95 durometer).

Nickel plated brass components provide corrosion and contamination resistance and an extended life.

Pre applied thread sealant on all taper threads and recessed captive O-ring on parallel threads provides optimum rapid sealing.

Internal and external hexagons on straight fittings.

Immediate quality sealing using silicone free U-packing.

Mounting holes on all union fittings.

Also introducing Miniature Pneufit® M an ultra compact alternative where space is at a premium.

TECHNICAL DATA

Medium:

Compressed air

Operating pressure:

750 mm Hg vacuum, up to 10 bar

Ambient temperature:

0 to 60°C

Consult our Technical Service for use below +2°C

Tube sizes:

Standard sizes: 4, 6, 8, 10, 12, 16 mm

Miniature sizes: 3, 4, and 6 mm

Thread sizes:

Standard sizes: M5, M6, 1/8", 1/4", 3/8" and 1/2" ISO G and ISO Rc

Miniature sizes: M3, M5 and 1/8" ISORc

Tubing:

Nylon 11 or 12

Polyurethane 85, 95 or 98 durometer

MATERIALS

Body: PBT

Seals: NBR (silicone free) u-packing and O-rings

Threaded bodies: nickel plated brass

Release sleeve and backing ring: POM

Grab-ring: stainless steel

Collar: nickel plated brass

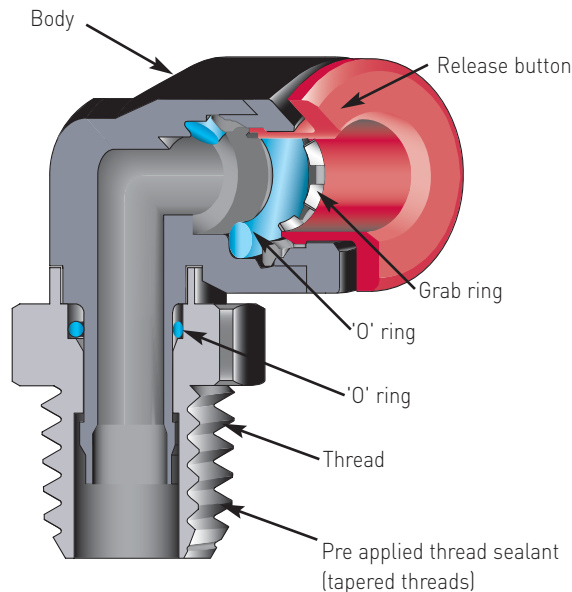
Thread sealant: threebond 2350B



Always ensure tubing is cut at 90 degrees, pushed home in the fitting

Typical part number: C01470628

90° swivel elbow adaptor





Straight union

O/D Tube	
4	C00200400
6	C00200600
8	C00200800
10	C00201000
12	C00201200
16	C00201600



Straight adaptor (external + internal hex)

O/D Tube	Metric & BSPP thread	
4	M5	C02250405
4	M6	C02250406
4	G1/8	C02250418
4	G1/4	C02250428
4	G3/8	C02250438
6	M5	C02250605
6	M6	C02250606
6	G1/8	C02250618
6	G1/4	C02250628
6	G3/8	C02250638
8	G1/8	C02250818
8	G1/4	C02250828
8	G3/8	C02250838
8	G1/2	C02250848
10	G1/8	C02251018
10	G1/4	C02251028
10	G3/8	C02251038
10	G1/2	C02251048
12	G1/4	C02251228
12	G3/8	C02251238
12	G1/2	C02251248
16	G3/8	C02251638
16	G1/2	C02251648



Straight union (unequal)

O/D Tube	O/D Tube	
6	4	C00200604
8	6	C00200806
10	8	C00201008
12	10	C00201210
16	12	C00201612



Straight adaptor (external + internal hex)

O/D Tube	BSPT Thread	
4	R1/8	C01250418
4	R1/4	C01250428
4	R3/8	C01250438
6	R1/8	C01250618
6	R1/4	C01250628
6	R3/8	C01250638
6	R1/2	C01250648
8	R1/8	C01250818
8	R1/4	C01250828
8	R3/8	C01250838
8	R1/2	C01250848
10	R1/8	C01251018
10	R1/4	C01251028
10	R3/8	C01251038
10	R1/2	C01251048
12	R1/8	C01251218
12	R1/4	C01251228
12	R3/8	C01251238
12	R1/2	C01251248
16	R3/8	C01251638
16	R1/2	C01251648



Straight adaptor (internal hex only)

O/D Tube	Metric & BSPT thread	
4	M5	C022A0405
4	M6	C022A0406
4	R1/8	C012A0418
4	R1/4	C012A0428
4	R3/8	C012A0438
6	M5	C022A0605
6	M6	C022A0606
6	R1/8	C012A0618
6	R1/4	C012A0628
6	R3/8	C012A0638
8	R1/8	C012A0818
8	R1/4	C012A0828
8	R3/8	C012A0838
8	R1/2	C012A0848
10	R1/8	C012A1018
10	R1/4	C012A1028
10	R3/8	C012A1038
10	R1/2	C012A1048
12	R1/8	C012A1218
12	R1/4	C012A1228
12	R3/8	C012A1238
12	R1/2	C012A1248

PNEUFIT C AND M COMPOSITE FITTINGS

Metric Ø 3 to 16 mm O/D tube



Female adaptor

O/D Tube	Female BSPP	
4	M5	C02260405
4	G1/8	C02260418
4	G1/4	C02260428
4	G3/8	C02260438
6	G1/8	C02260618
6	G1/4	C02260628
6	G3/8	C02260638
8	G1/8	C02260818
8	G1/4	C02260828
8	G3/8	C02260838
8	G1/2	C02260848
10	G1/8	C02261018
10	G1/4	C02261028
10	G3/8	C02261038
10	G1/2	C02261048
12	G1/4	C02261228
12	G3/8	C02261238
12	G1/2	C02261248



Bulkhead union

O/D Tube	
4	C00290400
6	C00290600
8	C00290800
10	C00291000
12	C00291200



Stem reducer

O/D Stem	O/D Tube	
6	4	C00230604
8	4	C00230804
8	6	C00230806
10	6	C00231006
10	8	C00231008
12	6	C00231206
12	8	C00231208
12	10	C00231210
16	12	C00231612



Straight adaptor (female bulkhead)

O/D Tube	BSPP Thread	
4	G1/8	C02320418
4	G1/4	C02320428
4	G3/8	C02320438
6	G1/8	C02320618
6	G1/4	C02320628
6	G3/8	C02320638
8	G1/8	C02320818
8	G1/4	C02320828
8	G3/8	C02320838
10	G1/4	C02321028
10	G3/8	C02321038
10	G1/2	C02321048
12	G1/4	C02321228
12	G3/8	C02321238
12	G1/2	C02321248



Stem expander (stem/tube)

O/D Tube	O/D Stem	
6	4	C00230406
8	6	C00230608



Stem union

O/D Tube	
4	C00220400
6	C00220600
8	C00220800
10	C00221000
12	C00221200
16	C00221600



**Stem union
(unequal)**

O/D Tube	O/D Stem	
4	6	C00220604
6	8	C00220806
8	10	C00221008
10	12	C00221210
12	16	C00221612



90° Swivel elbow adaptor

O/D Tube	BSPT Thread	
4	R1/8	C01470418
4	R1/4	C01470428
4	R3/8	C01470438
6	R1/8	C01470618
6	R1/4	C01470628
6	R3/8	C01470638
6	R1/2	C01470648
8	R1/8	C01470818
8	R1/4	C01470828
8	R3/8	C01470838
8	R1/2	C01470848
10	R1/8	C01471018
10	R1/4	C01471028
10	R3/8	C01471038
10	R1/2	C01471048
12	R1/8	C01471218
12	R1/4	C01471228
12	R3/8	C01471238
12	R1/2	C01471248
16	R3/8	C01471638
16	R1/2	C01471648



Plug

O/D Tube	
4	C00040400
6	C00040600
8	C00040800
10	C00041000
12	C00041200
16	C00041600



Cap (female plug)

O/D Tube	
4	C00120400
6	C00120600
8	C00120800
10	C00121000
12	C00121200
16	C00121600



90° Swivel elbow adaptor

O/D Tube	Metric & BSPP Thread	
4	M5	C02470405
4	M6	C02470406
4	G1/8	C02470418
4	G1/4	C02470428
4	G3/8	C02470438
6	M5	C02470605
6	M6	C02470606
6	G1/8	C02470618
6	G1/4	C02470628
6	G3/8	C02470638
8	G1/8	C02470818
8	G1/4	C02470828
8	G3/8	C02470838
8	G1/2	C02470848
10	G1/8	C02471018
10	G1/4	C02471028
10	G3/8	C02471038
10	G1/2	C02471048
12	G1/4	C02471228
12	G3/8	C02471238
12	G1/2	C02471248
16	G3/8	C02471638
16	G1/2	C02471648



Union elbow

O/D Tube	
4	C00400400
6	C00400600
8	C00400800
10	C00401000
12	C00401200
16	C00401600

PNEUFIT C AND M COMPOSITE FITTINGS

Metric Ø 3 to 16 mm O/D tube



Stem elbow

O/D Tube	O/D Stem	
4	4	C00430400
6	6	C00430600
8	8	C00430800
10	10	C00431000
12	12	C00431200
16	16	C00431600



90° Swivel elbow adaptor (female)

O/D Tube	Metric & BSPT Thread	
4	M5	C02480405
4	M6	C02480406
4	R1/8	C01480418
4	R1/4	C01480428
6	M5	C02480605
6	M6	C02480606
6	R1/8	C01480618
6	R1/4	C01480628
6	R3/8	C01480638
8	R1/8	C01480818
8	R1/4	C01480828
8	R3/8	C01480838
10	R1/4	C01481028
10	R3/8	C01481038
10	R1/2	C01481048
12	R1/4	C01481228
12	R3/8	C01481238
12	R1/2	C01481248



90° Swivel elbow adaptor (Extended)

O/D Tube	Metric & BSPT Thread	
4	M5	C02540405
4	M6	C02540406
4	R1/8	C01540418
4	R1/4	C01540428
4	R3/8	C01540438
6	M5	C02540605
6	M6	C02540606
6	R1/8	C01540618
6	R1/4	C01540628
6	R3/8	C01540638
6	R1/2	C01540648
8	R1/8	C01540818
8	R1/4	C01540828
8	R3/8	C01540838
8	R1/2	C01540848
10	R1/8	C01541018
10	R1/4	C01541028
10	R3/8	C01541038
10	R1/2	C01541048
12	R1/8	C01541218
12	R1/4	C01541228
12	R3/8	C01541238
12	R1/2	C01541248
16	R3/8	C01541638
16	R1/2	C01541648



Banjo

O/D Tube	Metric & BSPP thread	
4	M5	C0A510405
4	G1/8	C0A510418
4	G1/4	C0A510428
6	M5	C0A510605
6	G1/8	C0A510618
6	G1/4	C0A510628
6	G3/8	C0A510638
8	G1/8	C0A510818
8	G1/4	C0A510828
8	G3/8	C0A510838
8	G1/2	C0A510848
10	G1/4	C0A511028
10	G3/8	C0A511038
10	G1/2	C0A511048
12	G3/8	C0A511238
12	G1/2	C0A511248



Banjo with top port

O/D Tube	Metric & BSPP thread	
4	M5	C0D510405
4	R1/8	C0E510418
4	R1/4	C0F510428
6	M5	C0D510605
6	R1/8	C0E510618
6	R1/4	C0F510628
6	R3/8	C0G510638
8	R1/8	C0E510818
8	R1/4	C0F510828
8	R3/8	C0G510838
10	R1/4	C0F511028
10	R3/8	C0G511038
12	R3/8	C0G511238



Banjo flow control (out)

O/D Tube	BSPT Thread	
4	R1/8	C0TA00418
4	R1/4	C0TA00428
6	R1/8	C0TA00618
6	R1/4	C0TA00628
6	R3/8	C0TA00638
8	R1/8	C0TA00818
8	R1/4	C0TA00828
8	R3/8	C0TA00838
8	R1/2	C0TA00848
10	R1/4	C0TA01028
10	R3/8	C0TA01038
10	R1/2	C0TA01048
12	R1/4	C0TA01228
12	R3/8	C0TA01238
12	R1/2	C0TA01248



Banjo flow control (in)

O/D Tube	Metric & BSPP Thread	
3	M5	COL510305
4	M5	COL510405
4	G1/8	COL510418
4	G1/4	COL510428
6	M5	COL510605
6	G1/8	COL510618
6	G1/4	COL510628
6	G3/8	COL510638
8	G1/8	COL510818
8	G1/4	COL510828
8	G3/8	COL510838
8	G1/2	COL510848
10	G1/4	COL511028
10	G3/8	COL511038
10	G1/2	COL511048
12	G1/4	COL511228
12	G3/8	COL511238
12	G1/2	COL511248



Banjo flow control (out)

O/D Tube	Metric & BSPP Thread	
3	M5	COK510305
4	M5	COK510405
4	G1/8	COK510418
4	G1/4	COK510428
6	M5	COK510605
6	G1/8	COK510618
6	G1/4	COK510628
6	G3/8	COK510638
8	G1/8	COK510818
8	G1/4	COK510828
8	G3/8	COK510838
8	G1/2	COK510848
10	G1/4	COK511028
10	G3/8	COK511038
10	G1/2	COK511048
12	G1/4	COK511228
12	G3/8	COK511238
12	G1/2	COK511248



Shrouded banjo

O/D Tube	BSPT Thread	
4	R 1/8	COTB00418
4	R 1/4	COTB00428
6	R 1/8	COTB00618
6	R 1/4	COTB00628
6	R 3/8	COTB00638
8	R 1/8	COTB00818
8	R 1/4	COTB00828
8	R 3/8	COTB00838
8	R 1/2	COTB00848
10	R 1/4	COTB01028
10	R 3/8	COTB01038
10	R 1/2	COTB01048
12	R 1/4	COTB01228
12	R 3/8	COTB01238
12	R 1/2	COTB01248



Banjo flow control (in)

O/D Tube	BSPT Thread	
4	R1/8	COSA00418
4	R1/4	COSA00428
6	R1/8	COSA00618
6	R1/4	COSA00628
6	R3/8	COSA00638
8	R1/8	COSA00818
8	R1/4	COSA00828
8	R3/8	COSA00838
8	R1/2	COSA00848
10	R1/4	COSA01028
10	R3/8	COSA01038
10	R1/2	COSA01048
12	R1/4	COSA01228
12	R3/8	COSA01238
12	R1/2	COSA01248



Shrouded banjo

O/D Tube	Metric & BSPP thread	
4	M5	COKB00405
4	G 1/8	COKB00418
4	G 1/4	COKB00428
6	M5	COKB00605
6	G 1/8	COKB00618
6	G 1/4	COKB00628
6	G 3/8	COKB00638
8	G 1/8	COKB00818
8	G 1/4	COKB00828
8	G 3/8	COKB00838
8	G 1/2	COKB00848
10	G 1/4	COKB01028
10	G 3/8	COKB01038
10	G 1/2	COKB01048
12	G 1/4	COKB01228
12	G 3/8	COKB01238
12	G 1/2	COKB01248

PNEUFIT C AND M COMPOSITE FITTINGS

Metric Ø 3 to 16 mm O/D tube



In-line flow control

O/D Tube	
4	C00GE0400
6	C00GE0600
8	C00GE0800
10	C00GE1000
12	C00GE1200



Swivel tee adaptor

O/D Tube	Metric & BSPP Thread	
4	M5	C02670405
4	M6	C02670406
4	G1/8	C02670418
4	G1/4	C02670428
4	G3/8	C02670438
6	M5	C02670605
6	M6	C02670606
6	G1/8	C02670618
6	G1/4	C02670628
6	G3/8	C02670638
6	G1/2	C02670648
8	G1/8	C02670818
8	G1/4	C02670828
8	G3/8	C02670838
8	G1/2	C02670848
10	G1/8	C02671018
10	G1/4	C02671028
10	G3/8	C02671038
10	G1/2	C02671048
12	G1/4	C02671228
12	G3/8	C02671238
12	G1/2	C02671248
16	G3/8	C02671638
16	G1/2	C02671648



Union teem

O/D Tube	
4	C00600400
6	C00600600
8	C00600800
10	C00601000
12	C00601200
16	C00601600



Union tee (unequal)

O/D Tube	Union tee (unequal)	
6	4	C006A0604
8	6	C006A0806
10	6	C006A1006
10	8	C006A1008
12	8	C006A1208
12	10	C006A1210
16	10	C006A1610
16	12	C006A1612



Swivel tee adaptor

O/D Tube	BSPT Thread	
4	R1/8	C01670418
4	R1/4	C01670428
4	R3/8	C01670438
6	R1/8	C01670618
6	R1/4	C01670628
6	R3/8	C01670638
6	R1/2	C01670648
8	R1/8	C01670818
8	R1/4	C01670828
8	R3/8	C01670838
8	R1/2	C01670848
10	R1/8	C01671018
10	R1/4	C01671028
10	R3/8	C01671038
10	R1/2	C01671048
12	R1/8	C01671218
12	R1/4	C01671228
12	R3/8	C01671238
12	R1/2	C01671248
16	R3/8	C01671638
16	R1/2	C01671648



Swivel side tee adaptor

O/D Tube	BSPT Thread	
4	R1/8	C01680418
4	R1/4	C01680428
4	R3/8	C01680438
6	R1/8	C01680618
6	R1/4	C01680628
6	R3/8	C01680638
6	R1/2	C01680648
8	R1/8	C01680818
8	R1/4	C01680828
8	R3/8	C01680838
8	R1/2	C01680848
10	R1/8	C01681018
10	R1/4	C01681028
10	R3/8	C01681038
10	R1/2	C01681048
12	R1/8	C01681218
12	R1/4	C01681228
12	R3/8	C01681238
12	R1/2	C01681248



Swivel side tee adaptor

O/D Tube	Metric & BSPP Thread	
4	M5	C02680405
4	M6	C02680406
4	G1/8	C02680418
4	G1/4	C02680428
4	G3/8	C02680438
6	M5	C02680605
6	M6	C02680606
6	G1/8	C02680618
6	G1/4	C02680628
6	G3/8	C02680638
8	G1/8	C02680818
8	G1/4	C02680828
8	G3/8	C02680838
8	G1/2	C02680848
10	G1/8	C02681018
10	G1/4	C02681028
10	G3/8	C02681038
10	G1/2	C02681048
12	G1/4	C02681228
12	G3/8	C02681238
12	G1/2	C02681248



Swivel tee adaptor (female)

O/D Tube	Metric & BSPT Thread	
4	M5	C026C0405
4	M6	C026C0406
4	R1/8	C016C0418
4	R1/4	C016C0428
6	M5	C026C0605
6	M6	C026C0606
6	R1/8	C016C0618
6	R1/4	C016C0628
6	R3/8	C016C0638
8	R1/8	C016C0818
8	R1/4	C016C0828
8	R3/8	C016C0838
8	R1/2	C016C0848
10	R1/8	C016C1018
10	R1/4	C016C1028
10	R3/8	C016C1038
10	R1/2	C016C1048
12	R1/4	C016C1228
12	R3/8	C016C1238
12	R1/2	C016C1248



Stem tee (equal)

O/D Tube	O/D Stem	
4	4	C00630400
6	6	C00630600
8	8	C00630800
10	10	C00631000
12	12	C00631200



Union Y (equal)

O/D Tube	
4	C00820400
6	C00820600
8	C00820800
10	C00821000
12	C00821200

(unequal)

O/D Tube	O/D Stem	
4	6	C00630604
6	8	C00630806
8	10	C00631008
10	12	C00631210

Union Y (unequal)

O/D Tube	O/D Tube	
4	6	C00820604
6	8	C00820806
8	10	C00821008
10	12	C00821210



Stem side tee (equal)

O/D Tube	O/D Stem	
4	4	C00640400
6	6	C00640600
8	8	C00640800
10	10	C00641000
12	12	C00641200



Swivel Y adaptor

O/D Tube	BSPT Thread	
4	R1/8	C01880418
4	R1/4	C01880428
4	R3/8	C01880438
6	R1/8	C01880618
6	R1/4	C01880628
6	R3/8	C01880638
6	R1/2	C01880648
8	R1/8	C01880818
8	R1/4	C01880828
8	R3/8	C01880838
8	R1/2	C01880848
10	R1/8	C01881018
10	R1/4	C01881028
10	R3/8	C01881038
10	R1/2	C01881048
12	R1/8	C01881218
12	R1/4	C01881228
12	R3/8	C01881238
12	R1/2	C01881248

(unequal)

O/D Tube	O/D Stem	
4	6	C00640604
6	8	C00640806
8	10	C00641008
10	12	C00641210

PNEUFIT C AND M COMPOSITE FITTINGS

Metric Ø 3 to 16 mm O/D tube



Swivel Y adaptor

O/D Tube	BSPP Thread	
4	M5	C02880405
4	M6	C02880406
4	G1/8	C02880418
4	G1/4	C02880428
4	G3/8	C02880438
6	M5	C02880605
6	M6	C02880606
6	G1/8	C02880618
6	G1/4	C02880628
6	G3/8	C02880638
6	G1/2	C02880648
8	G1/8	C02880818
8	G1/4	C02880828
8	G3/8	C02880838
8	G1/2	C02880848
10	G1/8	C02881018
10	G1/4	C02881028
10	G3/8	C02881038
10	G1/2	C02881048
12	G1/4	C02881228
12	G3/8	C02881238
12	G1/2	C02881248



Manifold union

O/D Tube Outlet	O/D Tube inlet	
4	6	C00D30604
4	8	C00D30804
6	8	C00D30806
6	10	C00D31006
8	10	C00D31008



Male manifold

O/D Tube	O/D Stem	BSPT Thread	
4	6	R1/8	C01D30418
4	8	R1/8	C01D30428
6	8	R1/4	C01D30628
8	10	R3/8	C01D30838



Stem Y (equal)

O/D Tube	O/D Stem	
4	4	C00840400
6	6	C00840600
8	8	C00840800
10	10	C00841000
12	12	C00841200



Stem manifold

O/D Tube	O/D Stem	
4	6	C00J30604
4	8	C00J30804
6	8	C00J30806
8	10	C00J31008

Stem Y (unequal)

O/D Tube	O/D Stem	
4	6	C00840604
6	8	C00840806
8	10	C00841008
10	12	C00841210



Union cross

O/D Tube	
4	C00900400
6	C00900600
8	C00900800
10	C00901000
12	C00901200



Hand valve tube to tube

O/D Tube	
6	C00GF0600
8	C00GF0800
10	C00GF1000
12	C00GF1200



Hand valve thread to thread

BSPT Thread	
R1/8	C01GG1818
R1/4	C01GG2828
R3/8	C01GG3838
R1/2	C01GG4848



Straight union

O/D Tube	
3	M00200300
4	M00200400
6	M00200600



Hand valve tube to thread

O/D Tube	BSPT Thread	
6	R 1/8	C01GH0618
6	R 1/4	C01GH0628
6	R 3/8	C01GH0638
8	R 1/8	C01GH0818
8	R 1/4	C01GH0828
8	R 3/8	C01GH0838
10	R 1/4	C01GH1028
10	R 3/8	C01GH1038
10	R 1/2	C01GH1048
12	R 1/4	C01GH1228
12	R 3/8	C01GH1238
12	R 1/2	C01GH1248



Straight adaptor (external hex + internal hex)

O/D Tube	Metric & BSPT Thread	
3	M3	M02250303
3	M5	M02250305
3	M6	M02250306
4	M3	M02250403
4	M5	M02250405
4	M6	M02250406
4	R1/8	M01250418
6	M5	M02250605
6	M6	M02250606
6	R1/8	M01250618



Hand valve thread to tube

O/D Tube	BSPT Thread	
6	R 1/8	C01GJ0618
6	R 1/4	C01GJ0628
6	R 3/8	C01GJ0638
8	R 1/8	C01GJ0818
8	R 1/4	C01GJ0828
8	R 3/8	C01GJ0838
10	R 1/4	C01GJ1028
10	R 3/8	C01GJ1038
10	R 1/2	C01GJ1048
12	R 1/4	C01GJ1228
12	R 3/8	C01GJ1238
12	R 1/2	C01GJ1248



Straight adaptor (internal hex only)

O/D Tube	Metric & BSPT Thread	
3	M3	M022A0303
3	M5	M022A0305
3	M6	M022A0306
4	M3	M022A0403
4	M5	M022A0405
4	M6	M022A0406
4	R1/8	M012A0418
6	M5	M022A0605
6	M6	M022A0606
6	R1/8	M012A0618



Straight union (unequal)

O/D Tube	O/D Tube	
4	3	M00200403
6	3	M00200603
6	4	M00200604



Straight adaptor (female thread)

O/D Tube	Metric & BSPT Thread	
3	M3	M02260303
3	M5	M02260305
3	M6	M02260306
4	M3	M02260403
4	M5	M02260405
4	M6	M02260406
4	R1/8	M01260418
6	M5	M02260605
6	M6	M02260606
6	R1/8	M01260618

PNEUFIT C AND M COMPOSITE FITTINGS

Metric Ø 3 to 16 mm O/D tube



Union elbow

O/D Tube	
3	M00400300
4	M00400400
6	M00400600



Swivel side tee adaptor

O/D Tube	Metric & BSPT Thread	
3	M3	M02680303
3	M5	M02680305
3	M6	M02680306
4	M3	M02680403
4	M5	M02680405
4	M6	M02680406
4	R1/8	M01680418
6	M5	M02680605
6	M6	M02680606
6	R1/8	M01680618



Union tee

O/D Tube	
3	M00600300
4	M00600400
6	M00600600



Swivel tee adaptor

O/D Tube	Metric & BSPT thread	
3	M3	M02670303
3	M5	M02670305
3	M6	M02670306
4	M3	M02670403
4	M5	M02670405
4	M6	M02670406
4	R1/8	M01670418
6	M5	M02670605
6	M6	M02670606
6	R1/8	M01670618



90° Swivel elbow adaptor

O/D Tube	Metric & BSPT thread	
3	M3	M02470303
3	M5	M02470305
3	M6	M02470306
4	M3	M02470403
4	M5	M02470405
4	M6	M02470406
4	R1/8	M01470418
6	M5	M02470605
6	M6	M02470606
6	R1/8	M01470618

PNEUFIT PUSH-IN FITTINGS

Metric Ø 4 to 14 mm O/D tube



Compact units featuring retained collets and positive tube anchorage.

Silicone free O-ring seals.

Non-PTFE based thread sealant on all BSP taper threads.

Easy tube insertion for rapid assembly.

Internal hexagon on straight adaptors allows assembly in confined spaces.

For simple and quick assembly of pneumatic circuits.

Wide range of types available.

Reliable and corrosion resistant.

TECHNICAL DATA

Medium:

Compressed air

Operating pressure:

Vacuum - 18 bar unless otherwise stated (dependant on tubing specification)

Ambient temperature:

-20°C to +80°C

Consult our Technical Service for use below +2°C

Tube sizes:

4, 5, 6, 8, 10, 12, 14 mm O/D

Warning: The push-in tube fittings in this section must not be used in vehicle air braking and ancillary systems.

For push-in fittings suitable for these applications please consult our Technical Service for details.

Tubing:

Nylon 11 or 12, polyurethane* and other plasticised or

unplasticised tubing which conforms to the tolerances specified in

BS5409/1:1976, light and normal duty, DIN 73378, DIN 74324, NFE 49-100.

*It is light, stable and has a hardness of 92 to 98 shore A.

MATERIALS

Body: nickel plated brass or glass filled nylon

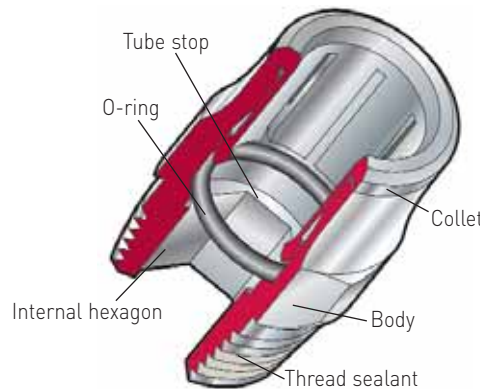
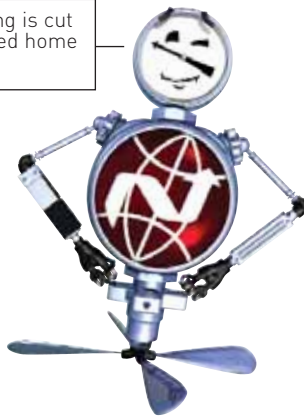
Collet: nickel plated brass

'O'-ring: Silicone free nitrile rubber

Sealing washer (parallel threads): nitrile 'O'-ring

Thread sealant: non-PTFE

Always ensure tubing is cut at 90 degrees, pushed home in the fitting



For further information



www.norgren.com/info/nec/en205

PNEUFIT PUSH-IN FITTINGS

Metric Ø 4 to 14 mm O/D tube



Straight adaptor

O/D Tube	Metric & BSPP thread	
4	M3	102250403
4	M5	102250405
4	G1/8	102250418
4	G1/4	102250428
5	M5	102250505
5	G1/8	102250518
5	G1/4	102250528
6	M5	102250605
6	G1/8	102250618
6	G1/4	102250628
8	G1/8	102250818
8	G1/4	102250828
8	G3/8	102250838
8	G1/2	102250848
10	G1/8	102251018
10	G1/4	102251028
10	G3/8	102251038
10	G1/2	102251048
12	G1/4	102251228
12	G3/8	102251238
12	G1/2	102251248
14	G3/8	102251438
14	G1/2	102251448



Straight adaptor

O/D Tube	BSPT Thread	
4	R1/8	101250418
4	R1/4	101250428
5	R1/8	101250518
5	R1/4	101250528
6	R1/8	101250618
6	R1/4	101250628
8	R1/8	101250818
8	R1/4	101250828
8	R3/8	101250838
8	R1/2	101250848
10	R1/8	101251018
10	R1/4	101251028
10	R3/8	101251038
10	R1/2	101251048
12	R1/4	101251228
12	R3/8	101251238
12	R1/2	101251248
14	R3/8	101251438
14	R1/2	101251448



Straight adaptor

O/D Tube	Metric & BSPP female	
4	M5	102260405
4	G1/8	102260418
4	G1/4	102260428
5	G1/8	102260518
5	G1/4	102260528
6	G1/8	102260618
6	G1/4	102260628
8	G1/8	102260818
8	G1/4	102260828
10	G1/4	102261028
10	G3/8	102261038
12	G3/8	102261238
12	G1/2	102261248



Straight stem adaptor

O/D Stem	BSPP Thread	
4	R1/8	101150418
4	R1/4	101150428
5	R1/8	101150518
5	R1/4	101150528
6	R1/8	101150618
6	R1/4	101150628
8	R1/8	101150818
8	R1/4	101150828
8	R3/8	101150838
10	R1/4	101151028
10	R3/8	101151038
10	R1/2	101151048
12	R3/8	101151238
12	R1/2	101151248



Straight stem adaptor

O/D Stem	BSPP Thread	
4	G1/8	102150418
4	G1/4	102150428
5	G1/8	102150518
6	G1/8	102150618
6	G1/4	102150628
8	G1/8	102150818
8	G1/4	102150828
8	G3/8	102150838
10	G1/4	102151028
10	G3/8	102151038
12	G3/8	102151238
12	G1/2	102151248
14	G3/8	102151438



Straight connector

O/D Tube	
4	100200400
5	100200500
6	100200600
8	100200800
10	100201000
12	100201200
14	100201400



Bulkhead connector

O/D Tube	
4	100290400
5	100290500
6	100290600
8	100290800
10	100291000
12	100291200
14	100291400



**Mixed bulkhead connector
PIF to compression fitting**

O/D Tube	O/D tube comp	
4	4	100310404
6	6	100310606
8	8	100310808
10	10	100311010
12	12	100311212

Supplied complete with tubing nut and sleeve.



Stem tailpiece adaptor

O/D Stem	Hose bore	
5	5	100190505
6	5	100190605
6	6,3	100190606
8	6,3	100190806
8	8	100190808
10	10	100191010
12	10	100191210
12	12,5	100191212



Unequal stem

Reducing O/D stem	O/D Tube	
5	4	100230504
6	4	100230604
6	5	100230605
8	4	100230804
8	5	100230805
8	6	100230806
10	4	100231004
10	6	100231006
10	8	100231008
12	4	100231204
12	5	100231205
12	6	100231206
12	8	100231208
12	10	100231210
14	6	100231406
14	8	100231408
14	10	100231410
14	12	100231412

Expanding

4	6	100230406
6	8	100230608



Silencer

O/D Stem	
4	100110400
6	100110600
8	100110800
10	100111000
12	100111200



**Straight stem
connector - brass**

O/D Stem	
4	100220400
5	100220500
6	100220600
8	100220800
10	100221000
12	100221200
14	100221400

PNEUFIT PUSH-IN FITTINGS

Metric Ø 4 to 14 mm O/D tube



Fixed elbow adaptor

O/D Tube	BSPT Thread	
4	R1/8	101450418
4	R1/4	101450428
5	R1/8	101450518
5	R1/4	101450528
6	R1/8	101450618
6	R1/4	101450628
8	R1/8	101450818
8	R1/4	101450828
8	R3/8	101450838
8	R1/2	101450848
10	R1/8	101451018
10	R1/4	101451028
10	R3/8	101451038
10	R1/2	101451048
12	R1/4	101451228
12	R3/8	101451238
12	R1/2	101451248



90° swivel elbow adaptor

O/D Tube	Metric & BSPP thread	
4	M3	102470403
4	M5	102470405
4	G1/8	102470418
4	G1/4	102470428
5	M5	102470505
5	G1/8	102470518
5	G1/4	102470528
6	M5	102470605
6	G1/8	102470618
6	G1/4	102470628
8	G1/8	102470818
8	G1/4	102470828
8	G3/8	102470838
8	G1/2	102470848
10	G1/8	102471018
10	G1/4	102471028
10	G3/8	102471038
10	G1/2	102471048
12	G1/4	102471228
12	G3/8	102471238
12	G1/2	102471248
14	G3/8	102471438
14	G1/2	102471448



90° swivel elbow adaptor

O/D Tube	BSPT Thread	
4	R1/8	101470418
4	R1/4	101470428
5	R1/8	101470518
5	R1/4	101470528
6	R1/8	101470618
6	R1/4	101470628
6	R3/8	101470638
8	R1/8	101470818
8	R1/4	101470828
8	R3/8	101470838
8	R1/2	101470848
10	R1/8	101471018
10	R1/4	101471028
10	R3/8	101471038
10	R1/2	101471048
12	R1/4	101471228
12	R3/8	101471238
12	R1/2	101471248
14	R3/8	101471438
14	R1/2	101471448



Extended swivel elbow adaptor

O/D Tube	BSPT Thread	
4	R1/8	101540418
4	R1/4	101540428
6	R1/8	101540618
6	R1/4	101540628
8	R1/8	101540818
8	R1/4	101540828
8	R3/8	101540838
10	R3/8	101541038



45° swivel adaptor

O/D Tube	BSPP Thread	
6	G1/8	102570618
6	G1/4	102570628
8	G1/8	102570818
8	G1/4	102570828



Equal elbow connector

O/D Tube	
4	100400400
5	100400500
6	100400600
8	100400800
10	100401000
12	100401200
14	100401400



Swivel tee adaptor

O/D Tube	Metric & BSPP thread	
4	M5	102670405
4	G1/8	102670418
5	M5	102670505
5	G1/8	102670518
5	G1/4	102670528
6	M5	102670605
6	G1/8	102670618
6	G1/4	102670628
8	G1/8	102670818
8	G1/4	102670828
8	G3/8	102670838
10	G1/4	102671028
10	G3/8	102671038
12	G1/4	102671228
12	G3/8	102671238
14	G3/8	102671438
14	G1/2	102671448



Stem elbow connector

Equal O/D tube	O/D Stem	
4	4	100430400
6	6	100430600
8	8	100430800

Extended O/D tube	O/D Stem	
6	6	100440600



Swivel tee adaptor

O/D Tube	BSPT Thread	
4	R1/8	101670418
4	R1/4	101670428
5	R1/8	101670518
6	R1/8	101670618
6	R1/4	101670628
8	R1/8	101670818
8	R1/4	101670828
8	R3/8	101670838
10	R1/4	101671028
10	R3/8	101671038
10	R1/2	101671048
12	R1/4	101671228
12	R3/8	101671238
12	R1/2	101671248
14	R3/8	101671438
14	R1/2	101671448



Bulkhead swivel elbow connector

O/D Tube	
4	100490400
6	100490600
8	100490800
10	100491000
12	100491200
14	100491400



Fixed tee adaptor

O/D Tube	BSPT Thread	
4	R1/8	101650418
5	R1/8	101650518
6	R1/8	101650618
6	R1/4	101650628
8	R1/8	101650818
8	R1/4	101650828
10	R1/4	101651028
12	R1/4	101651228



Equal tee connector

O/D Tube	
4	100600400
5	100600500
6	100600600
8	100600800
10	100601000
12	100601200
14	100601400

PNEUFIT PUSH-IN FITTINGS

Metric Ø 4 to 14 mm O/D tube



Fixed side tee adaptor

O/D Tube	BSPT Thread	
6	R1/8	101750618
8	R1/8	101750818
8	R1/4	101750828



4 way cross connector

O/D Tube	
4	100900400
6	100900600
8	100900800
10	100901000



Swivel side tee adaptor

O/D Tube	Metric & BSPP thread	
4	M5	102680405
4	G1/8	102680418
6	G1/8	102680618
6	G1/4	102680628
8	G1/8	102680818
8	G1/4	102680828
8	G3/8	102680838
10	G1/4	102681028
10	G3/8	102681038
12	G1/4	102681228
12	G3/8	102681238
14	G3/8	102681438
14	G1/2	102681448



Parallel Y connector

Equal O/D tube	O/D Tube	
4	4	100820400
6	6	100820600
8	8	100820800
10	10	100821000
Unequal O/D tube	O/D Tube	
6	4	100820604
8	6	100820806
10	8	100821008



Swivel side tee adaptor

O/D Tube	BSPT Thread	
4	R1/8	101680418
4	R1/4	101680428
5	R1/8	101680518
6	R1/8	101680618
6	R1/4	101680628
8	R1/8	101680818
8	R1/4	101680828
8	R3/8	101680838
10	R1/4	101681028
10	R3/8	101681038
12	R1/4	101681228
12	R3/8	101681238
12	R1/2	101681248
14	R3/8	101681438
14	R1/2	101681448



Parallel Y adaptor

O/D Tube	BSPT Thread	
4	R1/8	101880418
6	R1/8	101880618
6	R1/4	101880628
8	R1/8	101880818
8	R1/4	101880828
10	R3/8	101881038
10	R1/2	101881048



Manifold

O/D Tube inlet	O/D Tube Outlet	
8	4	100D60804
8	6	100D60806
10	6	100D61006
10	8	100D61008

2 inlets; 6 outlets.



Tee banjo assembly non regulating bolt

O/D Tube	Metric & BSPP thread	
4	M5	10A710405
4	G1/8	10A710418
6	G1/8	10A710618
6	G1/4	10A710628
8	G1/8	10A710818
8	G1/4	10A710828



Manifold

O/D Tube inlet	O/D Tube Outlet (x6)	BSPT Thread	
8	6	R1/4	101D60628
8	6	R3/8	101D60638
10	8	R1/2	101D60848



Elbow banjo assembly regulating out

O/D Tube	BSPT Thread	
4	R1/8	10TA00418
6	R1/8	10TA00618
6	R1/4	10TA00628
8	R1/4	10TA00828
8	R3/8	10TA00838
10	R1/4	10TA01028
10	R3/8	10TA01038
12	R1/2	10TA01248

Pressure rating on this item 10 bar.



Elbow banjo assembly non regulating bolt

O/D Tube	Metric & BSPP thread	
4	M5	10A510405
4	G1/8A	10A510418
5	M5	10A510505
6	M5	10A510605
6	G1/8A	10A510618
6	G1/4A	10A510628
8	G1/8A	10A510818
8	G1/4A	10A510828
8	G3/8A	10A510838
10	G1/4A	10A511028
10	G3/8A	10A511038



Elbow banjo assembly regulating out

O/D Tube	BSPT Thread	
6	R1/8	10T000618

Pressure rating on this item 10 bar.



Elbow banjo assembly regulating out

O/D Tube	Metric & BSPP thread	
4	M5	10K510405
4	G1/8	10K510418
5	M5	10K510505
5	G1/8	10K510518
6	M5	10K510605
6	G1/8	10K510618
6	G1/4	10K510628
8	G1/8	10K510818
8	G1/4	10K510828
8	G3/8	10K510838
10	G1/4	10K511028
10	G3/8	10K511038
12	G3/8	10K511238
12	G1/2	10K511248

Pressure rating on this item 10 bar.



Elbow banjo body

O/D Tube	Bolt Thread	
4	M5	100510405
4	R1/8	100510418
5	M5	100510505
6	M5	100510605
6	R1/8	100510618
6	R1/4	100510628
8	R1/8	100510818
8	R1/4	100510828
8	R3/8	100510838
10	R1/4	100511028
10	R3/8	100511038
12	R3/8	100511238
12	R1/2	100511248

PNEUFIT PUSH-IN FITTINGS

Metric Ø 4 to 14 mm O/D tube



Tee banjo body

O/D Tube	Bolt Thread	
4	M5	100710405
4	R1/8	100710418
6	M5	100710605
6	R1/8	100710618
6	R1/4	100710628
8	R1/8	100710818
8	R1/4	100710828



**Banjo bolt
Non regulating double stacking**

Metric & BSPP thread	
M5	20B000005
G1/8	20B000018
G1/4	20B000028
G3/8	20B000038
G1/2	20B000048



**Banjo bolt
Non regulating single stacking**

Metric & BSPP thread	
M5	20A000005
G1/8	20A000018
G1/4	20A000028
G3/8	20A000038
G1/2	20A000048



**Banjo bolt
Non regulating triple stacking**

BSPP Thread	
G1/8A	20C000018
G1/4A	20C000028
G3/8A	20C000038



**Regulating out banjo bolts
Single stacking
(screwdriver adjustable)**

Flow	Metric & BSPP Thread	
Reg out	G1/8A	20K000018
	G1/4A	20K000028
Reg in	M5	20L000005
	G1/8A	20L000018
	G1/4A	20L000028
	G3/8A	20L000038
	G1/8A	20M000018
Bi direc	G1/8A	20M000018
	G1/4A	20M000028



PIF Non-return valve

O/D Tube	Flow Factor Cv*/C**	
4	0,09/0,38	T50P0004
6	0,38/1,57	T50P0006
8	0,78/3,2	T50P0008
10	1,103/4,5	T50P0010
12	1,64/6,7	T50P0012

*Cv: US gal/min. **C: dm³/s.bar].

Pressure rating on this item 10 bar.



**Banjo bolt
Non-regulating single stacking
with top port (BSP parallel)**

Port thread	Bolt Thread	
G1/8	G1/8A	20E001818
G1/4	G1/4A	20F002828
G3/8	G3/8A	20G003838

COMPRESSION FITTINGS EXTERNAL NUT 43 Series

Metric Ø 4 to 22 mm O/D tube



Rugged and durable
Ideal for most industrial applications
Wide range of types and sizes
Thread sizes from 1/8" to 1" BSP
Supplied assembled with tubing sleeves, nuts and appropriate seals

TECHNICAL DATA

Medium:

These fittings are designed for use with compressed air, oils, water and other fluids used in pneumatic and low pressure hydraulic applications. Consult our Technical Service for details.

Operating pressure:

The maximum working pressure is limited by the type of tubing being used.

Ambient temperature:

The maximum working temperature is limited by the type of tubing being used.

Tube sizes:

4, 6, 8, 10, 12, 14, 15, 16, 18, 22 mm O/D

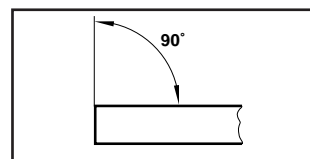
Threads used on products conform to:

- ISO 7.1 Taper BSP
- ISO 228 Parallel BSP
- ISO R/226 metric

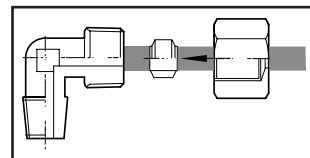
Tube types:

Nylon 11 or 12 and other plasticised or unplasticised tubing and other soft plastic tubing.
 Copper, annealed and half-hard.
 Double wall brazed steel tube (Bundy)

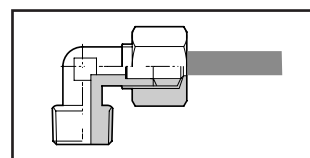
METHOD OF ASSEMBLY



1. Ensure that the tube is cut square and is free from fraze.



2. For larger sizes of metal tubes it is beneficial to lightly oil the tubing nut and sleeve before tightening the joint. Place the tubing nut and sleeve on the tube and push the tube into the fitting until it bottoms on the tube stop.



3. Holding the tube firmly in contact with the tube stop screw the tubing nut down finger tight and then tighten a further 11/4-11/2 full turns. Slacken off the assembly and ensure that the groove made by sleeve even. Release nut and re-tighten nut an extra quarter turn.

Note

When fitting to curved tubes ensure that section entering the fitting is straight for a minimum of twice the nut height.

The method of preparation and assembly described will ensure leak-proof joints over a wide pressure range, depending upon the size and type of tubing being used. Failure to follow this guide, or over-tightening at any joint, may lead to damage of the fittings or an unsatisfactory seal.

MATERIALS

Brass to OT 58 UNI 5705 for all items, except plastic washers.

Plastic washers: nylon

All brass items have a nickel plated finish unless otherwise stated.

For further information



www.norgren.com/info/nec/en213

COMPRESSION FITTINGS EXTERNAL NUT 43 Series

Metric Ø 4 to 22 mm O/D tube



Tubing plug

O/D Tube	
4	43 004 0400
6	43 004 0600
8	43 004 0800
10	43 004 1000
12	43 004 1200
14	43 004 1400
15	43 004 1500
16	43 004 1600
18	43 004 1800
22	43 004 2200

Natural brass finish.



Reducing connector

O/D Tube	O/D Tube	
6	4	43 028 0604
8	6	43 028 0806
10	8	43 028 1008
12	10	43 028 1210
14	12	43 028 1412

Natural brass finish for sleeve and reducer.



Stem tailpiece connector

O/D Tube	Hose Bore	
6	7	43 019 0607
8	7	43 019 0807
8	10	43 019 0810
10	7	43 019 1007
10	10	43 019 1010
12	10	43 019 1210
12	13	43 019 1213
14	13	43 019 1413

Natural brass finish.



Bulkhead connector

O/D Tube	
4	43 029 0400
6	43 029 0600
8	43 029 0800
10	43 029 1000
12	43 029 1200
14	43 029 1400

Minimum bulkhead thickness 3,0 mm



Tube support

O/D I/D tube	
4/2,7	43 033 0403
6/4,0	43 033 0604
8/6,0	43 033 0806
10/8,0	43 033 1008
12/9,0	43 033 1209
12/10,0	43 033 1210
14/12,0	43 033 1412
15/12,5	43 033 1512
16/13,0	43 033 1613
18/15,0	43 033 1815
18/16,0	43 033 1816
22/18,0	43 033 2218

Natural brass finish.
For use on plastic tubing.



Straight connector

O/D Tube	
4	43 020 0400
6	43 020 0600
8	43 020 0800
10	43 020 1000
12	43 020 1200
14	43 020 1400
15	43 020 1500
16	43 020 1600
18	43 020 1800
22	43 020 2200



Straight stem adaptor

O/D Stem	BSPP Thread	
6	G1/8A	43 215 0618
6	G1/4A	43 215 0628
8	G1/8A	43 215 0818
8	G1/4A	43 215 0828
8	G3/8A	43 215 0838
10	G1/4A	43 215 1028
10	G3/8A	43 215 1038
14	G3/8A	43 215 1438
14	G1/2A	43 215 1448



Straight male adaptor

O/D Stem	BSPP Thread	
4	1/8	43 225 0418
6	1/8	43 225 0618
6	1/4	43 225 0628
8	1/8	43 225 0818
8	1/4	43 225 0828
8	3/8	43 225 0838
10	1/4	43 225 1028
10	3/8	43 225 1038
14	3/8	43 225 1438
14	1/2	43 225 1448
22	3/4	43 225 2268
22	1	43 225 2288



Straight male adaptor

O/D Tube	BSPT Thread	
4	R1/8	43 125 0418
4	R1/4	43 125 0428
6	R1/8	43 125 0618
6	R1/4	43 125 0628
6	R3/8	43 125 0638
8	R1/8	43 125 0818
8	R1/4	43 125 0828
8	R3/8	43 125 0838
10	R1/4	43 125 1028
10	R3/8	43 125 1038
10	R1/2	43 125 1048
12	R1/4	43 125 1228
12	R3/8	43 125 1238
12	R1/2	43 125 1248
14	R3/8	43 125 1438
14	R1/2	43 125 1448
15	R1/2	43 125 1548
16	R1/2	43 125 1648
16	R3/4	43 125 1668
18	R1/2	43 125 1848
18	R3/4	43 125 1868
22	R1/2	43 125 2248
22	R3/4	43 125 2268



Male elbow adaptor

O/D Tube	BSPT Thread	
4	R1/8	43 145 0418
6	R1/8	43 145 0618
6	R1/4	43 145 0628
8	R1/8	43 145 0818
8	R1/4	43 145 0828
8	R3/8	43 145 0838
10	R1/4	43 145 1028
10	R3/8	43 145 1038
10	R1/2	43 145 1048
12	R1/4	43 145 1228
12	R3/8	43 145 1238
12	R1/2	43 145 1248
14	R3/8	43 145 1438
14	R1/2	43 145 1448
15	R1/2	43 145 1548
16	R1/2	43 145 1648
18	R1/2	43 145 1848
18	R3/4	43 145 1868
22	R3/4	43 145 2268



Tee connector

O/D Tube	
4	43 060 0400
6	43 060 0600
8	43 060 0800
10	43 060 1000
12	43 060 1200
14	43 060 1400
15	43 060 1500
16	43 060 1600
18	43 060 1800
22	43 060 2200



Straight female adaptor

O/D Tube	BSPP Thread	
4	R1/8	43 226 0418
6	R1/8	43 226 0618
6	R1/4	43 226 0628
8	R1/8	43 226 0818
8	R1/4	43 226 0828
8	R3/8	43 226 0838
10	R1/4	43 226 1028
10	R3/8	43 226 1038
10	R1/2	43 226 1048
12	R1/4	43 226 1228
12	R3/8	43 226 1238
12	R1/2	43 226 1248
14	R3/8	43 226 1438
14	R1/2	43 226 1448
15	R1/2	43 226 1548
16	R1/2	43 226 1648
16	R3/4	43 226 1668
18	R1/2	43 226 1848
18	R3/4	43 226 1868
22	R3/4	43 226 2268



Male tee adaptor

O/D Tube	BSPT Thread	
4	R1/8	43 165 0418
6	R1/8	43 165 0618
6	R1/4	43 165 0628
8	R1/8	43 165 0818
8	R1/4	43 165 0828
8	R3/8	43 165 0838
10	R1/4	43 165 1028
10	R3/8	43 165 1038
10	R1/2	43 165 1048
12	R1/4	43 165 1228
12	R3/8	43 165 1238
12	R1/2	43 165 1248
14	R3/8	43 165 1438
14	R1/2	43 165 1448
15	R1/2	43 165 1548
16	R1/2	43 165 1648
18	R1/2	43 165 1848
18	R3/4	43 165 1868
22	R3/4	43 165 2268



Elbow connector

O/D Tube	
4	43 040 0400
6	43 040 0600
8	43 040 0800
10	43 040 1000
12	43 040 1200
14	43 040 1400
15	43 040 1500
16	43 040 1600
18	43 040 1800
22	43 040 2200



Male side tee adaptor

O/D Tube	BSPT Thread	
4	R1/8	431750418
6	R1/8	431750618
6	R1/4	431750628
8	R1/8	431750818
8	R1/4	431750828
8	R3/8	431750838

COMPRESSION FITTINGS EXTERNAL NUT 43 Series

Metric Ø 4 to 22 mm O/D tube



Four way connector

O/D Tube	
4	43 090 0400
6	43 090 0600
8	43 090 0800
10	43 090 1000
12	43 090 1200
14	43 090 1400



Universal tubing sleeve

O/D Tube	
4	43 002 0400
6	43 002 0600
8	43 002 0800
10	43 002 1000
12	43 002 1200
14	43 002 1400
15	43 002 1500
16	43 002 1600
18	43 002 1800
22	43 002 2200

Natural brass finish.



Elbow banjo assembly

O/D Tube	BSPP Thread	
4	G1/8A	43 A51 0418
6	G1/8A	43 A51 0618
6	G1/4A	43 A51 0628
8	G1/8A	43 A51 0818
8	G1/4A	43 A51 0828
8	G3/8A	43 A51 0838
10	G1/4A	43 A51 1028
10	G3/8A	43 A51 1038
14	G1/4A	43 A51 1428
14	G3/8A	43 A51 1438
14	G1/2A	43 A51 1448
22	G3/4A	43 A51 2268



Conical tubing sleeve

O/D Tube	
4	43 003 0400
6	43 003 0600
8	43 003 0800
10	43 003 1000
12	43 003 1200
14	43 003 1400
15	43 003 1500
16	43 003 1600
18	43 003 1800
22	43 003 2200

Natural brass finish.



Single banjo body

O/D Tube	BSPP Thread	
4	G1/8	43 051 0418
6	G1/8	43 051 0618
6	G1/4	43 051 0628
8	G1/8	43 051 0818
8	G1/4	43 051 0828
8	G3/8	43 051 0838
10	G1/4	43 051 1028
10	G3/8	43 051 1038
14	G1/4	43 051 1428#
14	G3/8	43 051 1438#
14	G1/2	43 051 1448#
22	G3/4	43 051 2268#

To be used with bolts marked *



Tubing nut

O/D Tube	Internal Thread	
4	M8 x 1,0	43 001 0400
6	M10 x 1,0	43 001 0600
8	M12 x 1,0	43 001 0800
10	M16 x 1,5	43 001 1000
12	M18 x 1,5	43 001 1200
14	M20 x 1,5	43 001 1400
15	M20 x 1,5	43 001 1500
16	M22 x 1,5	43 001 1600
18	M24 x 1,5	43 001 1800
22	M30 x 1,5	43 001 2200



Banjo bolt

BSPP Thread	
G1/8A	43 A00 0018
G1/4A	43 A00 0028
G3/8A	43 A00 0038
G1/4A	43 A00 0L28*
G3/8A	43 A00 0L38*
G1/2A	43 A00 0L48*
G3/4A	43 A00 0L68*

* To be used with bodies marked #



Conical tubing nut

O/D Tube	Internal Thread	
4	M8 x 1,0	43 034 0400
6	M10 x 1,0	43 034 0600
8	M12 x 1,0	43 034 0800
10	M16 x 1,5	43 034 1000
12	M18 x 1,5	43 034 1200
14	M20 x 1,5	43 034 1400
15	M20 x 1,5	43 034 1500
16	M22 x 1,5	43 034 1600
18	M24 x 1,5	43 034 1800
22	M30 x 1,5	43 034 2200

Note: This nut has an identification diameter on the outboard end.

PUSH-ON TUBE FITTINGS 24 Series

Metric Ø 4/2,5 mm to 15/12,5 mm OD/ID tube



Ideal for use on vacuum systems.
 For simple and quick connection of pneumatic circuits.
 Neat, compact design.
 Precision machined for complete reliability.
 Corrosion resistant.
 Unique barb shape ensures good grip on tube even if fitting is tightened by hand.
 Ideal for use in confined spaces where tight bend radii are required.
 Tubing nuts included.

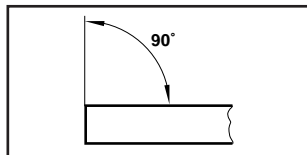
TECHNICAL DATA

Medium:
 Compressed air.
Operating pressure:
 Vacuum: -15 bar
 (dependant on tube operating specification)
Ambient temperature:
 -18°C to +70°C.
Tube sizes:
 4/2,5 mm, 5/3 mm, 6/4 mm, 8/6 mm, 10/8 mm, 12/10 mm, 15/12,5 mm OD/ID
Tube types:
 Nylon 11 & 12, polyurethane.

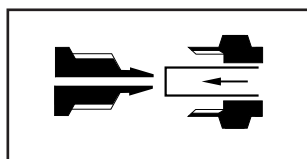
MATERIALS

Nut and body: Nickel plated brass to OT58 UNI 5705
 'O' ring: NBR 70
 Sealing washer: Polyamide 66

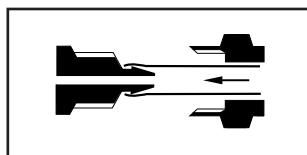
METHOD OF ASSEMBLY



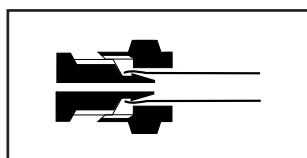
1. Ensure that the end of the tube is cut square and is free from burrs.



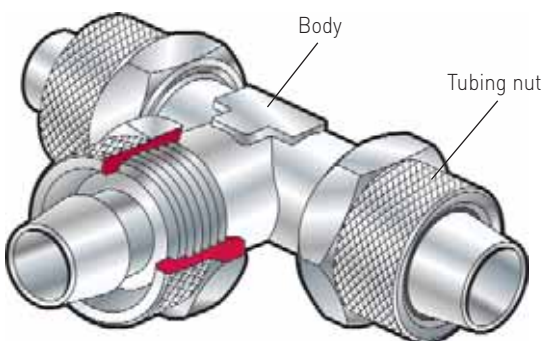
2. Place the knurled nut over the tube.



3. Push the tube over the barbed end of the fitting up to the tube stop.



4. Screw the knurled nut onto the fitting until finger tight. The hexagon on the nut is to aid release.



For further information



www.norgren.com/info/nec/en217

PUSH-ON TUBE FITTINGS 24 Series

Metric Ø 4/2,5 mm to 15/12,5 mm OD/ID tube



Straight male adaptor

O/D I/D tube	Male BSPT	
4/2,5	R1/8	241250418
5/3	R1/8	241250518
6/4	R1/8	241250618
6/4	R1/4	241250628
6/4	R3/8	241250638
8/6	R1/8	241250818
8/6	R1/4	241250828
8/6	R3/8	241250838
8/6	R1/2	241250848
10/8	R1/8	241251018
10/8	R1/4	241251028
10/8	R3/8	241251038
10/8	R1/2	241251048
12/10	R3/8	241251238
12/10	R1/2	241251248
15/12,5	R1/2	241251548



Straight connector

O/D I/D tube	O/D I/D tube	
4/2,5	-	240200400
5/3	-	240200500
6/4	-	240200600
6/4	5/3	240200605
8/6	-	240200800
8/6	6/4	240200806
10/8	-	240201000
12/10	-	240201200
15/12,5	-	240201500



Straight male adaptor

O/D I/D tube	Male BSPP	
4/2,5	G1/8A	242250418
5/3	G1/8A	242250518
6/4	G1/8A	242250618
6/4	G1/4A	242250628
6/4	G3/8A	242250638
6/4	G1/2A	242250648
8/6	G1/8A	242250818
8/6	G1/4A	242250828
8/6	G3/8A	242250838
8/6	G1/2A	242250848
10/8	G1/8A	242251018
10/8	G1/4A	242251028
10/8	G3/8A	242251038
10/8	G1/2A	242251048
12/10	G3/8A	242251238
12/10	G1/2A	242251248
15/12,5	G1/2A	242251548



Bulkhead connector

O/D I/D tube	
4/2,5	240290400
5/3	240290500
6/4	240290600
8/6	240290800
8/6 x 6/4	240290806
10/8	240291000
12/10	240291200
15/12,5	240291500



Elbow male adaptor

O/D I/D tube	Male BSPT	
4/2,5	1/8	241450418
5/3	1/8	241450518
6/4	1/8	241450618
6/4	1/4	241450628
6/4	3/8	241450638
8/6	1/8	241450818
8/6	1/4	241450828
8/6	3/8	241450838
8/6	1/2	241450848
10/8	1/8	241451018
10/8	1/4	241451028
10/8	3/8	241451038
10/8	1/2	241451048
12/10	3/8	241451238
12/10	1/2	241451248
15/12,5	1/2	241451548



Straight male adaptor

O/D I/D tube	Male BSPP	
4/2,5	M5	242250405
5/3	M5	242250505
6/4	M5	242250605

Supplied complete with sealing washer.



Straight female adaptor

O/D I/D tube	Female BSPP	
6/4	G1/8	242260618
6/4	G1/4	242260628
6/4	G3/8	242260638
8/6	G1/8	242260818
8/6	G1/4	242260828
8/6	G3/8	242260838
8/6	G1/2	242260848
10/8	G1/4	242261028
10/8	G3/8	242261038
10/8	G1/2	242261048



Swivel elbow adaptor

O/D I/D tube	Male BSPP	
6/4	1/8	242470618
6/4	1/4	242470628
8/6	1/8	242470818
8/6	1/4	242470828
10/8	1/4	242471028

Supplied complete with sealing washer.



Elbow female adaptor

O/D I/D tube	Female BSPP	
5/3	G1/8	242460518
6/4	G1/8	242460618
6/4	G1/4	242460628
8/6	G1/8	242460818
8/6	G1/4	242460828
10/8	G1/4	242461028
10/8	G3/8	242461038



Tee connector

O/D I/D tube	
4/2,5	240600400
5/3	240600500
6/4	240600600
8/6	240600800
8/6 - 6/4	240600806
10/8	240601000
10/8 - 6/4	240601006
10/8 - 8/6	240601008
12/10	240601200
15/12,5	240601500



Elbow connector

O/D I/D tube	
4/2,5	240400400
5/3	240400500
6/4	240400600
8/6	240400800
8/6-6/4	240400806
10/8	240401000
12/10	240401200
15/12,5	240401500



Equal cross connector

O/D I/D tube	
6/4	240900600
8/6	240900800
10/8	240901000
12/10	240901200



Tee male adaptor

O/D I/D tube	Male BSPT	
4/2,5	1/8	241650418
5/3	1/8	241650518
6/4	1/8	241650618
6/4	1/4	241650628
8/6	1/8	241650818
8/6	1/4	241650828
10/8	1/8	241651018
10/8	1/4	241651028
10/8	3/8	241651038
12/10	3/8	241651238
15/12,5	1/2	241651548



Tubing nut

O/D I/D tube	
4/2,5	240010400
5/3	240010500
6/4	240010600
8/6	240010800
10/8	240011000
12/10	240011200



Side tee male adaptor

O/D I/D tube	Male BSPT	
5/3	R1/8	241750518
6/4	R1/8	241750618
6/4	R1/4	241750628
8/6	R1/8	241750818
8/6	R1/4	241750828
10/8	R1/8	241751018
10/8	R1/4	241751028
10/8	R3/8	241751038
12/10	R3/8	241751238



Plug

O/D I/D tube	
4/2,5	240050400
6/4	240050600
8/6	240050800

PUSH-ON TUBE FITTINGS 24 Series

Metric Ø 4/2,5 mm to 15/12,5 mm OD/ID tube



**Elbow banjo assembly
Non regulating bolt**

O/D I/D tube	Bolt Thread	
4/2,5	M5	24A510405
5/3	M5	24A510505
6/4	M5	24A510605
4/2,5	G1/8A	24A510418
5/3	G1/8A	24A510518
6/4	G1/8A	24A510618
8/6	G1/8A	24A510818
6/4	G1/4A	24A510628
8/6	G1/4A	24A510828
10/8	G1/4A	24A511028
6/4	G3/8A	24A510638
8/6	G3/8A	24A510838
12/10	G3/8A	24A511238
12/10	G1/2A	24A511248

Supplied complete with sealing washer.



**Banjo flow regulator
Regulating out**

O/D I/D tube	Bolt Thread	
4/2,5	M5	24K510405
4/2,5	1/8	24K510418
6/4	M5	24K510605
6/4	1/8	24K510618
6/4	1/4	24K510628
8/6	1/8	24K510818
8/6	1/4	24K510828
10/8	1/4	24K511028



**Tee banjo assembly
Non regulating bolt**

O/D I/D tube	Bolt Thread	
4/2,5	M5	24A710405
4/2,5	G1/8A	24A710418
5/3	M5	24A710505
5/3	G1/8A	24A710518
6/4	M5	24A710605
6/4	G1/8A	24A710618
6/4	G1/4	24A710628
6/4	G3/8A	24A710638
8/6	G1/8A	24A710818
8/6	G1/4A	24A710828
8/6	G3/8A	24A710838
8/6	G1/2A	24A710848
12/10	G3/8A	24A711238
12/10	G1/2A	24A711248

Supplied complete with sealing washer.



**Triple tee banjo assembly
Non regulating bolt**

O/D I/D tube	Bolt Thread	
4/2,5	1/8	24C510418
6/4	1/4	24C510628
8/6	1/4	24C510828
10/8	1/4	24C511028



**Triple tee banjo
Regulating out**

O/D I/D tube	Bolt Thread	
4/2,5	1/8	24C710418
6/4	1/4	24C710628
8/6	1/4	24C710828
10/8	1/4	24C711028



**Double elbow banjo assembly
Non regulating bolt**

O/D I/D tube	Bolt Thread	
4/2,5	G1/8A	24B510418
6/4	G1/8A	24B510618
6/4	G1/4A	24B510628
8/6	G1/4A	24B510828
10/8	G1/4A	24B511028
10/8	G1/2A	24B511048
12/10	G3/8A	24B511238



**Banjo flow regulator
Regulating in**

O/D I/D tube	Bolt Thread	
4/2,5	M5	24L510405
4/2,5	1/8	24L510418
5/3	1/8	24L510518
6/4	1/8	24L510618
8/6	1/8	24L510818
6/4	1/4	24L510628
8/6	1/4	24L510828



**Double tee banjo assembly
Non regulating bolt**

O/D I/D tube	Bolt Thread	
4/2,5	G1/8A	24B710418
6/4	G1/4A	24B710628
8/6	G1/4A	24B710828
10/8	G1/4A	24B711028



**Banjo flow regulator
Bi-directional**

O/D I/D tube	Bolt Thread	
4/2,5	M5	24M510405
5/3	1/8	24M510518
6/4	1/8	24M510618
6/4	1/4	24M510628
8/6	1/4	24M510828

BSP & HOSE FITTINGS

M5, 1/8" to 1" BSP



Bright nickel plated.
Corrosion resistant.
Compact design.
Washers included where necessary.

TECHNICAL DATA

Medium:

Compressed air or any fluids compatible with the materials listed opposite.

Operating pressure:

Generally limited by tubing specification except where plastic sealing washers are used (banjo bolts and M5 units). In these cases pressure is limited to 18 bar. Suitable for vacuum applications. flow regulating banjos are limited to 1 to 10 bar operating range.

Ambient temperature:

Generally limited by tubing specification except where plastic sealing washers are used (banjo bolts, & M5 units). In these cases temperature is limited to +70°C.

MATERIALS

Bar parts: brass to BS 2874: 1986 (CZ 121), bright nickel plated

Stamped parts: brass to BS 2872: 1969 (CZ 122), bright nickel plated

Sealing washers: copper (Delrin for M5 items)

For further information



www.norgren.com/info/nec/en221

BSP & HOSE FITTINGS

M5, 1/8" to 1" BSP



BSP connector

Reducing Male BSPP	Female Metric and BSPP thread	
G1/8	M5	160231805
G1/4	M5	160232805
G1/4	G1/8	160232818
G3/8	G1/8	160233818
G3/8	G1/4	160233828
G1/2	G1/8	160234818
G1/2	G1/4	160234828
G1/2	G3/8	160234838
G3/4	G1/4	160236828
G3/4	G3/8	160236838
G3/4	G1/2	160236848

Metric & BSPP thread	Female BSPP	
M5	G1/8	160230518
G1/8	G1/4	160231828
G1/8	G3/8	160231838
G1/4	G3/8	160232838
G1/4	G1/2	160232848
G1/4	G3/4	160232868
G3/8	G1/2	160233848
G3/8	G3/4	160233868
G1/2	G3/4	160234868

Supplied with sealing washer.



Bulkhead connector

Metric & BSPP thread	Male metric thread	
M5	M10 x 1,0	160290005
G1/8	M16 x 1,5	160290018
G1/4	M20 x 1,5	160290028
G3/8	M26 x 1,5	160290038
G1/2	M28 x 1,5	160290048
G3/4	M33 x 1,5	160290068
G1	M42 x 1,5	160290088

Supplied with locknut.



Sleeve adaptor

Metric & BSPP thread	Metric & BSPP thread	
M5	M5	160220505
G1/8	M5	160221805
G1/8	G1/8	160221818
G1/4	G1/8	160222818
G1/4	G1/4	160222828
G3/8	G1/8	160223818
G3/8	G1/4	160223828
G3/8	G3/8	160223838
G1/2	G1/8	160224818
G1/2	G1/4	160224828
G1/2	G3/8	160224838
G1/2	G1/2	160224848
G3/4	G1/2	160226848
G3/4	G3/4	160226868
G1	G3/4	160228868
G1	G1	160228888



BSP connector

Reducing Male BSPT	Female BSPP	
R1/8	G1/8	150231818
R1/4	G1/8	150232818
R1/4	G1/4	150232828
R3/8	G1/8	150233818
R3/8	G1/4	150233828
R3/8	G3/8	150233838
R1/2	G1/8	150234818
R1/2	G1/4	150234828
R1/2	G3/8	150234838
R1/2	G1/2	150234848
R3/4	G1/4	150236828
R3/4	G3/8	150236838
R3/4	G1/2	150236848
R1	G3/8	150238838
R1	G1/2	150238848
R1	G3/4	150238868

Expanding Male BSPT	Female BSPP	
R1/8	G1/4	150231828
R1/8	G3/8	150231838
R1/8	G1/2	150231848
R1/4	G3/8	150232838
R1/4	G1/2	150232848
R1/4	G3/4	150232868
R3/8	G1/2	150233848
R3/8	G3/4	150233868
R1/2	G3/4	150234868
R3/4	G1	150236888



Adaptor

Female NPTF	Male BSPT	
R1/8	R1/8	154231818
R1/4	R1/4	154232828
R3/8	R3/8	154233838
R1/2	R1/2	154234848
R3/4	R3/4	154236868

Female BSPP	Male BSPT	
G1/4	R1/4	172232828
G3/8	R3/8	172233838
G1/2	R1/2	172234848



Nipple adaptor

Metric & BSPP thread	Metric & BSPP thread	
M5	M5	160200505
G1/8	M5	160201805
G1/8	1/8	160201818
G1/4	1/8	160202818
G1/4	1/4	160202828
G3/8	1/4	160203828
G3/8	3/8	160203838
G1/2	1/4	160204828
G1/2	3/8	160204838
G1/2	1/2	160204848
G3/4	1/2	160206848
G3/4	3/4	160206868
G1	1/2	160208848
G1	3/4	160208868
G1	1	160208888

Supplied with sealing washers.



Nipple adaptor

BSPT Thread	BSPT Thread	
R1/8	R1/8	150201818
R1/4	R1/8	150202818
R1/4	R1/4	150202828
R3/8	R1/8	150203818
R3/8	R1/4	150203828
R3/8	R3/8	150203838
R1/2	R1/8	150204818
R1/2	R1/4	150204828
R1/2	R3/8	150204838
R1/2	R1/2	150204848
R3/4	R1/4	150206828
R3/4	R3/8	150206838
R3/4	R1/2	150206848
R3/4	R3/4	150206868
R1	R3/8	150208838
R1	R1/2	150208848
R1	R3/4	150208868
R1	R1	150208888



Hose adaptor

Hose bore	BSPT Thread	
4	R1/8	291170418
6	R1/8	291170618
6	R1/4	291170628
6	R3/8	291170638
7	R1/8	291170718
7	R1/4	291170728
7	R3/8	291170738
8	R1/4	291170828
8	R3/8	291170838
9	R1/8	291170918
9	R1/4	291170928
9	R3/8	291170938
9	R1/2	291170948
10	R1/8	291171018
10	R1/4	291171028
10	R3/8	291171038
12	R3/8	291171238
13	R1/4	291171328
13	R3/8	291171338
13	R1/2	291171348
13	R3/4	291171368
16	R3/8	291171638
16	R1/2	291171648
16	R3/4	291171668
19	R3/8	291171938
19	R1/2	291171948
19	R3/4	291171968
25	R3/4	291172568
25	R1	291172588
32	R1	291173288



Hexagon nipple

Male BSPT	Male NPTF	
R1/8	1/8	154201818
R1/4	1/4	154202828
R3/8	3/8	154203838
R1/2	1/2	154204848
R3/4	3/4	154206868

Adaptor fittings – allow connection between components and system using BSP or NPT threads.



Plug

BSPT Thread	
R1/8	150050018
R1/4	150050028
R3/8	150050038
R1/2	150050048
R3/4	150050068
R1	150050088



Swivel hose adaptor

Hose bore	Female BSPP	
1/4	G1/4	302180428
1/4	G3/8	302180438
3/8	G1/4	302180628
3/8	G3/8	302180638
1/2	G1/2	302180748



Plug

Metric & BSPP Threads	
M5	160050005
G1/8A	160050018
G1/4A	160050028
G3/8A	160050038
G1/2A	160050048
G3/4A	160050068
G1A	160050088

Supplied with sealing washer.



Hose connector

Hose bore	
1/4	300140404
5/16	300140505
3/8	300140606
1/2	300140707

BSP & HOSE FITTINGS

M5, 1/8" to 1" BSP



Hose adaptor

Hose bore Inch/mm	BSPT Thread	
3/16	R1/8	301170318
3/16	R1/4	301170328
1/4	R1/8	301170418
1/4	R1/4	301170428
1/4	R3/8	301170438
1/4	R1/2	301170448
5/16	R1/8	301170518
8	R1/4	291170828
3/8	R1/8	301170618
3/8	R1/4	301170628
3/8	R3/8	301170638
3/8	R1/2	301170648
1/2	R1/4	301170728
1/2	R3/8	301170738
1/2	R1/2	301170748
1/2	R3/4	301170768
16	R1/2	291171648
16	R3/4	291171668
19	R1/2	291171948
19	R3/4	291171968
3/4	R1	301170988
1	R1	301171088



Tee connector

Female BSPP	
G1/8	160620018
G1/4	160620028
G3/8	160620038
G1/2	160620048
G3/4	160620068



Tee

Male BSPT	Female BSPP	
R1/8	G1/8	150690018
R1/4	G1/4	150690028
R3/8	G3/8	150690038
R1/2	G1/2	150690048
R3/4	G3/4	150690068



Hose adaptor

Hose bore Inch/mm	BSPP Thread	
3	M5 x 0,8	292170305
3	G1/8A	292170318
4	G1/8A	292170418
4	G1/4A	292170428
5	G1/8A	292170518
6	G1/8A	292170618
6	G1/4A	292170628
6	G3/8A	292170638
9	G1/8A	292170918
9	G1/4A	292170928
9	G3/8A	292170938
9	G1/2A	292170948
13	G1/4A	292171328
13	G3/8A	292171338
13	G1/2A	292171348
13	G3/4A	292171368
19	G3/4A	292171968

Supplied with sealing washer.



Tee

BSPT Thread	
R1/4	150600028



Cross

Female BSPP	
G1/8	160920018
G1/4	160920028
G3/8	160920038
G1/2	160920048



Flat union

Male BSPT	
R1/8	150331818
R1/4	150332828
R3/8	150333838
R1/2	150334848
R3/4	150336868
R1	150338888



Elbow

Female BSPP	
G1/8	160420018
G1/4	160420028
G3/8	160420038
G1/2	160420048
G3/4	160420068



Elbow

Male BSPT	Female BSP	
R1/8	G1/8	150430018
R1/4	G1/4	150430028
R3/8	G3/8	150430038
R1/2	G1/2	150430048
R3/4	G3/4	150430068



**Elbow banjo assembly
Non-regulating**

Male BSP	Female BSP	
G1/8	G1/8	16A511818
G1/4	G1/4	16A512828
G3/8	G3/8	16A513838
G1/2	G1/2	16A514848

Female parallel BSP thread to male parallel BSP thread.



Elbow

BSPT Thread	
R1/8	150400018
R1/4	150400028
R3/8	150400038
R1/2	150400048



**Elbow banjo assembly
Regulating out**

Male BSP	Female BSP	
G1/8	G1/8	16K511818
G1/4	G1/4	16K512828
G3/8	G3/8	16K513838
G1/2	G1/2	16K514848

Arrow on bolt hexagon indicates free flow direction.

Pressure range 1 to 10 bar.



Locknut

BSP Thread	
G1/8	360546 01
G1/4	360546 02
G3/8	360546 03
G1/2	360546 04
G3/4	360546 06

Natural brass finish



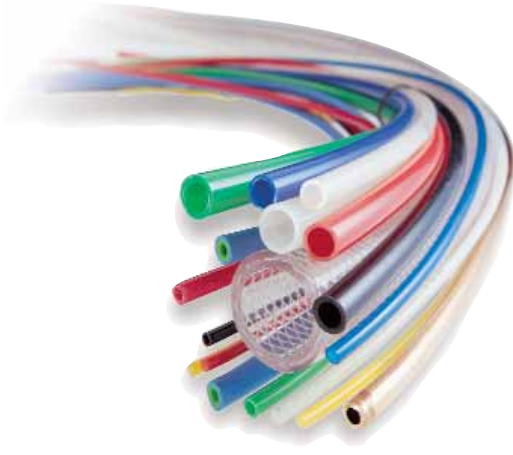
Elbow banjo body

Female BSP	Bolt Thread	
G1/8	1/8	160511818
G1/4	1/4	160512828
G3/8	3/8	160513838
G1/2	1/2	160514848

Female parallel BSP thread.

TUBING & HOSES

Ø 3 to 22 mm O/D



Available in a variety of different types to suit a wide range of applications.

All tubing can be used with specific ranges of tube fittings shown in this catalogue.

Nylon and polyurethane tube available in a range of colours for ease of identification.

TECHNICAL DATA

Medium:

Compressed air. Consult our Technical Service for use with other fluids.

Operating pressure:

Refer to specific tubing type on the following pages.

Ambient temperature:

Refer to specific tubing type on the following pages.

MATERIALS

Nylon tube: nylon (polyamide) type 12, fully plasticised and light stabilised. metric tube meets the requirements of DIN 73378 and BS 5409.

Polyurethane tube: is light stabilised and has a hardness of 92-98 shore A.

Maximum working pressures

O/D mm		3	4	5	6	8	10	12	14
Max. pressure (bar)* at -40°C to +20°C	Nylon	-	28	31	25	19	24	18	15
	Polyurethane	15	10	11	9	9	9	9	-
Min. bend radius mm	Nylon	-	25	25	30	50	60	75	80
	Polyurethane	7	7	9	16	17	25	-	-

Maximum continuous working temperature: nylon +80°C, polyurethane +60°C.

*Multiply by factors in table alongside for use at higher temperatures.

Pressure/ temperature conversion factors

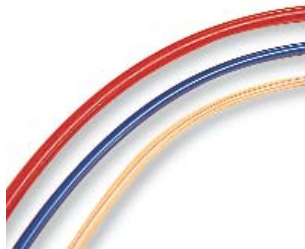
Working temperature	Factor
+30°C	0,83
+40°C	0,72
+50°C	0,64
+60°C	0,57
+80°C	0,47

Nylon to DIN 73378, DIN 74324 and BS5409-1 : 1976 table 2



Colour	Length (m)	O/D I/D tube							
		4/2,5	5/3	6/4	8/6	10/7,5	12/9	14/11	
Natural	30	PA0004030C	PA0005030C	PA0006030C	PA0008030C	PA0010030C	PA0012030C	PA0014030C	
Natural	100	PA0004100	PA0005100	PA0006100	PA0008100	PA0010100	PA0012100	PA0014100	
Black	30	PA0704030C	PA0705030C	PA0706030C	PA0708030C	PA0710030C	PA0712030C	PA0714030C	
Black	100	PA0704100	PA0705100	PA0706100	PA0708100	PA0710100	PA0712100	PA0714100	
Blue	30	PA0504030C	PA0505030C	PA0506030C	PA0508030C	PA0510030C	PA0512030C	-	
Blue	100	PA0504100	PA0505100	PA0506100	PA0508100	PA0510100	PA0512100	-	
Red	30	PA0104030C	-	PA0106030C	PA0108030C	PA0110030C	PA0112030C	PA0114030C	
Red	100	PA0104100	-	PA0106100	PA0108100	PA0110100	PA0112100	PA0114100	
Yellow	30	-	-	PA030C6030C	PA030C8030C	PA0310030C	-	-	
Yellow	100	-	-	PA030C6100	PA030C8100	PA0310100	-	-	
Green	30	PA0204030C	-	PA0206030C	PA0208030C	PA0210030C	PA0212030C	-	
Green	100	PA0204100	-	PA0206100	PA0208100	PA0210100	PA0212100	-	

Polyurethane



Colour	Length (m)	O/D I/D tube							
		3/2	4/2,5	5/3	6/4	8/5,5	10/7	12/8	
Natural	30	PU0003030C	-	PU0005030C	PU0006030C	PU0008030D	PU0010030D	PU0012030D	
Natural	100	-	-	PU0005100C	PU0006100C	PU0008100D	PU0010100D	PU0012100D	
Black	30	-	PU0704030C	PU0705030C	PU0706030C	PU0708030D	PU0710030D	PU0712030D	
Black	100	-	PU0704100C	PU0705100C	PU0706100C	PU0708100D	PU0710100D	PU0712100D	
Blue	30	-	PU0504030C	-	PU0506030C	PU0508030D	PU0510030D	PU0512030D	
Blue	100	-	PU0504100C	-	PU0506100C	PU0508100D	PU0510100D	PU0512100D	
Red	30	-	PU0104030C	-	PU0106030C	PU0108030D	PU0110030D	-	
Red	100	-	PU0104100C	-	PU0106100C	PU0108100D	PU0110100D	-	

Key: (D) = Drum (C) = coil. Above also in 30 m



Tube cutter

Type	
Cutter	M/3314
Replacement blade	39 0120 10*
Replacement blade	39 0120 61**

*Pack of 10

** 1-off

For use on nylon and polyurethane tubing 4 to 16 mm and 1/8" to 1/2" O/D tube.



Tubing channels

O/D Tube	No. of channels	
5	10	100HA0500
6	10	100HA0600
8	10	100HA0800
12	6	100H61200

BALL VALVES 60, 61 Series

Brass 1/8" to 4" BSP



Precision engineered shut-off valves.

Minimum resistance to fluid flow.

Positive quick open/shut action.

Flow in either direction (except exhaust type).

TECHNICAL DATA

Medium:

Compressed air, inert gases, water, oils and many hydrocarbon derivatives depending upon valve seat material

Operating pressure:

Refer to tables

Ambient temperature:

Refer to tables opposite

MATERIALS

60 Series:

Nickel plated brass to UNI-5705-65, chromium plated brass, zinc plated steel, PTFE seats and nitrile or FKM rubber seals

61 Series:

Stainless steel body, stem, ball nut and handle PTFE seats



**Mini
Reduced bore**

Female	Maximum pressure (bar)	
G1/8	10	601112118
G1/4	10	601112128
G3/8	10	601112138
G1/2	10	601112148

PTFE seats, nitrile seals
Operating temperature: -10°C to +90°C

Female/ Male	Maximum pressure (bar)	
G1/8	10	601112218
G1/4	10	601112228
G3/8	10	601112238
G1/2	10	601112248

PTFE seats, nitrile seals
Operating temperature: -10°C to +90°C



**Exhausting
Full bore**

Female	Maximum pressure (bar)	
G1/4	12	602113128EX
G3/8	12	602113138EX
G1/2	12	602113148EX
G3/4	12	602113168EX
G1	12	602113188EX
G1 1/4	12	6021131A8EX

PTFE seats and seals
Operating temperature: 0°C to +60°C



**Three way
Full bore**

Female	Maximum pressure (bar)	
G1/4	25	602114428
G3/8	25	602114438
G1/2	25	602114448
G3/4	16	602114468

PTFE seats, FKM seals
Operating temperature: -15°C to +150°C



Standard Full bore

Female	Maximum pressure (bar)	
G1/4	45	602112128
G3/8	40	602112138
G1/2	35	602112148
G3/4	30	602112168
G1	25	602112188
G1 1/4	20	6021121A8
G1 1/2	20	6021121B8
G2	16	6021121C8

PTFE seats, FKM seals
Operating temperature: -20°C to +150°C



**Lockable exhausting
Full bore**

Female	Maximum pressure (bar)	
G1/4	13,6	601812128
G3/8	13,6	601812138
G1/2	13,6	601812148
G3/4	13,6	601812168
G1	13,6	601812188

Note: lever lockable only in closed position.
Standard handle accepts Ø 7 mm shackle.



Stainless steel ball valves

Female	Maximum pressure (bar)	
G1/4	100	615112128
G3/8	100	615112138
G1/2	100	615112148
G3/4	64	615112168
G1	64	615112188

Operating temperature: -20°C to +150°C

*To order 'Tee' handled version change 4th character to 2

QUIETAIRE HEAVY DUTY SILENCERS MA and MB Series

1/8" to 2" BSPT, BSPP



Reduce the noise levels of pneumatic equipment.
 Prevent open line exhaust dangers.
 Corrosion resistant.
 High flow capacity with low back pressure.
 Brass mesh screen and aluminium construction provide improved flow, longer life and cleanable element.
 Prevent metal chips, abrasive grits, dust and other contaminants from entering open exhaust ports.

TECHNICAL DATA

Medium
 Compressed air, filtered, lubricated and non-lubricated, inert gases
Operating pressure
 -1 to 20 bar
Ambient temperature
 -20°C to +80°C
Operation
 Exhaust silencer
Mounting
 Directly in the exhaust port

MATERIALS

Aluminium body and shell, brass mesh element

Male thread

Model NPT	BSPT	Port size	Flow Factor Cv*/C**
MB001A		1/8	1,3 / 5,3
MB002A		1/4	2,3 / 9,4
MB003A	MB003B	3/8	4,9 / 20,0
MB004A		1/2	6,8 / 27,7
MB006A	MB006B	3/4	14,8 / 60,4
MB008A		1	18,0 / 73,4
	MBP10B	1 1/4"	23,6 / 96,3

*Cv measured in US/gall/min **C measured in dm³/(s.bar)

Female thread

Model BSPT	BSPP	Port size	Flow Factor Cv*/C**
MA001B		1/8"	0,8 / 3,26
MA002B		1/4"	2,4 / 9,79
MA003B		3/8"	5,7 / 23,3
MA004B		1/2"	6,9 / 28,1
MA006B		3/4"	18,0 / 73,4
MA008B		1"	20 / 81,6
	MA012C	1 1/2"	39 / 159,1
	MA016C	2"	59 / 241,0

*Cv measured in US/gall/min **C measured in dm³/(s.bar)

SINTERED BRONZE SILENCERS, T40 SERIES

BSPT	Model	BSPP	Model
		M5	T40M0500
1/8	T40B1800	1/8	T40C1800
1/4	T40B2800	1/4	T40C2800
3/8	T40B3800	3/8	T40C3800
1/2	T40B4800	1/2	T40C4800
3/4	T40B6800	3/4	T40C6800
1	T40B8800	1	T40C8800

Reduce the noise levels of pneumatic equipment.
 Compact and efficient.
 Screw directly into the exhaust port.
 Prevent the ingress of dirt.



M/S & T45 POROUS PLASTIC SILENCERS

BSPT	Model
M5	M/S0
1/8	M/S1
1/4	M/S2
3/8	M/S3
1/2	M/S4
3/4	M/S6
1	M/S8

Reduce the noise levels of pneumatic equipment
 Compact, efficient and lightweight
 Screw directly into the exhaust port
 Prevent the ingress of dirt



Threaded silencers

O/D Tube	Model
4	T45P0004
6	T45P0006
8	T45P0008
10	T45P0010

Reduce the noise levels of pneumatic equipment
 Compact, efficient and lightweight
 Insert directly into Push-In Fitting exhaust port
 Prevent the ingress of dirt



Stem or PIF silencers

EXHAUST FILTERS

BSPP	Model
G1/8	M/1511
G1/4	M/1512
G1/2	M/1514
G3/4	M/1516
G1	M/1518

Prevent the ingress of dirt with minimal flow restriction
 Robust and compact
 Screw directly into the exhaust port



SLOW ROTATING JOINTS

BSPT Taper	Model
1/8	04 0174 00
1/4	04 0175 00
3/8	04 0176 00

For use with a variety of fluids
 7 bar maximum
 50 r.p.m. maximum



FAST ROTATING JOINTS

Medium	BSPT Taper	Model
Pressure	1/4	04 0161 00
Vacuum	1/4	04 0162 00

Pressure and vacuum models
 For use with a variety of fluids
 7 bar maximum
 2000 r.p.m. maximum



For further information



www.norgren.com/info/nec/en231



CLASSIC RANGES

Norgren continues to supply customers with the long established and application driven products they have always trusted. In the following pages you will find a selection of those products. Visit www.norgren.com or contact your Norgren Express team for additional information, including delivery time confirmation, on these and other Classic Ranges.

CLASSIC RANGES

ACTUATORS

KA/8000

Stainless steel tie-rod cylinders (ISO/VDMA)

Double acting Ø 32 to 200mm



High corrosion and acid resistance

Conforms to ISO 6431, VDMA 24562 and NFE 49-003-1

Ideal for applications in the food industry

STANDARD MODELS

Ø	Piston rod Ø	Port size	MODEL		Service kit
			Magnetic	Non magnetic	
32	12	G1/8	KA/8032/M/*	KA/8032/*	KQA/8032/00
40	16	G1/4	KA/8040/M/*	KA/8040/*	KQA/8040/00
50	20	G1/4	KA/8050/M/*	KA/8050/*	KQA/8050/00
63	20	G3/8	KA/8063/M/*	KA/8063/*	KQA/8063/00
80	25	G3/8	KA/8080/M/*	KA/8080/*	KQA/8080/00
100	25	G1/2	KA/8100/M/*	KA/8100/*	KQA/8100/00
125	32	G1/2	KA/8125/M/*	KA/8125/*	KQA/8125/00
160	40	G3/4	KA/8160/M/*	KA/8160/*	KQA/8160/00
200	40	G3/4	KA/8200/M/*	KA/8200/*	KQA/8200/00

* Insert stroke length in mm

RM/900

Magnetic and

Non-Magnetic Ø 1.25 to 14"



Large range of bore sizes – ideal for a wide variety of industrial applications

Long established design – proven ruggedness and reliability

Extensive choice of mountings

Adjustable cushioning

Magnetic and non-magnetic piston

STANDARD MODELS

Ø	Piston rod Ø	Port size	MODEL		Service kit
			Magnetic	Non magnetic	
1,25	12 mm	G 1/8	RM/9125/M/*	RM/9125/*	QM/9125/00
1,75	16 mm	G 1/4	RM/9175/M/*	RM/9175/*	QM/9175/00
2	20 mm	G 1/4	RM/920/M/*	RM/920/*	QM/920/00
2,5	25 mm	G 3/8	RM/925/M/*	RM/925/*	QM/925/00
3	25 mm	G 3/8	RM/930/M/*	RM/930/*	QM/930/00
4	32 mm	G 3/8	RM/940/M/*	RM/940/*	QM/940/00
5	1 1/2"	G 1/2	-	RM/950/*	QM/950/00
6	1 1/2"	G 1/2	-	RM/960/*	QM/960/00
8	1 3/4"	G 3/4	-	RM/980/*	QM/980/00
10	2 1/4"	G 1	-	RM/9100/*	QM/9100/00
12	2 1/4"	G 1	-	RM/9120/*	QM/9120/00
14	2 1/4"	G 1	-	RM/9140/*	QM/9140/00

* Insert stroke length in mm

For further information



www.norgren.com/info/nec/en233

CLASSIC RANGES

PRA/282000 Smart cylinder

Double Acting Ø 32 to 100 mm



Conforms to ISO 6431 and VDMA 24562

Complete functional unit with LED display

Integrated AS-i Bus or multipole connector

Integrated 5/2 or 5/3 valve with different functions

Flow regulator for speed control as standard

Integrated reed or solid state switch

Profile with concealed tie rods

Comprehensive range of standard VDMA mountings

STANDARD MODELS

Ø	Piston rod Ø	Port size	MODEL		Service kit
			AS-i Bus**	Multipole**	
32	12	G1/8	PRA/282032/MIR/A1/*	PRA/282032/MIR/M1/*	QA/282032/00
40	16	G1/4	PRA/282040/MIR/A1/*	PRA/282040/MIR/M1/*	QA/282040/00
50	20	G1/4	PRA/282050/MIR/A1/*	PRA/282050/MIR/M1/*	QA/282050/00
63	20	G3/8	PRA/282063/MIR/A1/*	PRA/282063/MIR/M1/*	QA/282063/00
80	25	G3/8	PRA/282080/MIR/A1/*	PRA/282080/MIR/M1/*	QA/282080/00
100	25	G1/2	PRA/282100/MIR/A1/*	PRA/282100/MIR/M1/*	QA/282100/00

* Insert stroke length in mm

** 5/2 Sol/spring valve integrated

VALVES

Buschjost 82540

'Click-on'® Solenoid actuated

diaphragm valves with forced lifting 8 to 50 mm orifice (ND)
2/2, NC, G1/4 ... G2



High flow rate

For robust industry solutions

Damped operation

Suitable for vacuum

For systems with low or discontinuous pressure

Solenoid interchangeable without tools (Click-on®)

Valve operates without differential pressure (Δp)

STANDARD MODELS

Orifice (mm)	Port size	Operating pressure (bar)	kv value m ³ /h	MODEL	Voltage codes	
					24 V d.c.	230 V a.c.
8	G 1/4	0 ... 10	1,9	8254000xxxx*****	24 V d.c.	02400
10	G 3/8	0 ... 10	3,0	8254100xxxx*****	24 V a.c. 40 to 60 Hz	02449
12	G 1/2	0 ... 10	3,4	8254200xxxx*****	42 V a.c. 40 to 60 Hz	04249
20	G 3/4	0 ... 10	5,8	8254300xxxx*****	110 V a.c. 40 to 60 Hz	11049
25	G 1	0 ... 10	8,0	8254400xxxx*****	230 V a.c. 40 to 60 Hz	23049
32	G 1 1/4	0 ... 10	23,0	8254500xxxx*****	a.c. version with built-in rectifier	
40	G 1 1/2	0 ... 10	25,0	8254600xxxx*****		
50	G 2	0 ... 10	41,0	8254700xxxx*****		

xxxx Insert solenoid codes ***** Insert voltage codes

ELECTRICAL DETAILS FOR SOLENOID OPERATORS

	Power consumption		Voltage		Protection class	Temperatures °C		Solenoid codes
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)		Fluid*	Ambient**	
	18	45/35	750	152	IP 65	+110 max	-25 ... +50	9151
	-	20 VA/18 W	-	88	IP 65	+110 max	-25 ... +50	9154
	38	-	1583	-	IP 65	+110 max.	-25 ... +50	9401
	-	42 VA/38 W	-	185	IP 65	+110 max.	-25 ... +50	9404
	40	-	1667	-	IP 65	+110 max.	-25 ... +50	8401
	-	45 VA/40 W	-	195	IP 65	+110 max.	-25 ... +50	8404

* The maximum temperature depends on the valve type ** The maximum temperature may be higher, depending on the application
According to VDE 0580, 100% rated
Power consumption calculated with coil at +20°C, for d.c. coils at operating temperature, power consumption is up to 30% lower

For further information



www.norgren.com/info/nec/en234

CLASSIC RANGES

Herion 26360, 80207 In line valve

Indirect solenoid actuated spool valves
3/2, 5/2, 5/3, G1/4", G1/2"



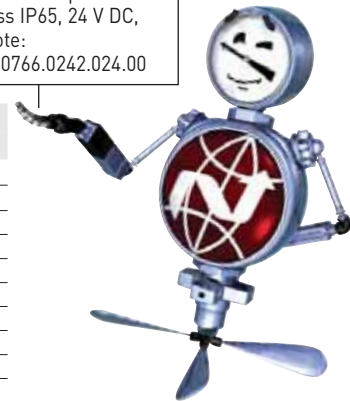
For single and double operated actuators
Manual override with and without detent
Simple design of soft seal spool system
Maintenance-free

Easily interchangeable solenoid
Valves and solenoids are ATEX approved

3/2 way function

Symbol	MODEL	Port size	Operating pressure (bar)		Flow l/min	Switching time (ms)	Manual override with/without detent
			min.	max			
	8020766	G 1/4	1	10	1200	35	-
	8020767	G 1/4	1	10	1200	35	without
	8020867	G 1/2	1,5	10	3000	35	without
	8020765	G 1/4	1	10	1200	35	with
	8020865	G 1/2	1,5	10	3000	35	with

Ordering example
3/2 directional control valve, Port size G 1/4, solenoid in protection class IP65, 24 V DC, Quote: 8020766.0242.024.00



5/2 way function

Symbol	MODEL	Port size	Operating pressure (bar)		Flow l/min	Switching time (ms)	Manual override with/without detent
			min.	max			
	2636066	G 1/4	1	10	1200	35	-
	2636067	G 1/4	1	10	1200	35	without
	2636065	G 1/4	1	10	1200	35	with
	2637065	G 1/2	2	10	3000	40	with
	2636265	G 1/4	1	10	1200	30	with
	2637265	G 1/2	2	10	3000	35	with

SOLENOID OPERATORS GROUP 13B

MODEL	Power consumption		Current		Protection class	Temperatures Ambient/ Fluid °C	Electrical connection Form
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)			
0242	2,7	-	113	-	IP 65 (with plug)*3)	-25 ... +60 Fluid: max. 80	DIN EN 175301-803 Form A *4)
0245	-	4,2	-	-	IP 65 (with plug)*3)	-25 ... +60 Fluid: max. 80	DIN EN 175301-803 Form A *4)
3215	2,7	-	113	-	EEx nA II T4 IP 65 T 110°C	-20 ... +60	DIN EN 175301-803 Form A with special screw
0298	3,2	-	135	-	EEx m II T4 *1) IP 66 T110°C	-20 ... +70	Cable 3 m lang
0299	-	3,5	-	15	EEx m II T4 *1) IP 66 T 110°C	-20 ... +70	Cable 3 m lang
4210 *5)	3,9	-	162	-	EEx me II T4 *2) IP 66 T110°C	-40 ... +55 (T6) -40 ... +80 (T4)	M20 x 1,5 *4)
4211 *5)	-	5,3	-	23	EEx me II T6/T4 *2) IP 66 T130°C	-40 ... +55 (T6) -40 ... +80 (T4)	M20 x 1,5 *4)
4610 *5)	3,9	-	162	-	EEx md IIC T6/T4 *3) EEx me II T6/T4 *3) IP 66 T130°C	-40 ... +55 (T6) -40 ... +80 (T4)	1/2-14 NPT *4)
3722	-	5,3	-	23	NEMA 4,4X *4) 6,6P, 7,9-T3C (160°C)	-20 ... +60	Flying leads 450 mm long
3723	-	5,3	-	23	NEMA 4,4X *4) 6,6P, 7,9-T3C (160°C)	-20 ... +60	Flying leads 450 mm long

ACCESSORIES

Cable gland protection class EEx e, EEx d (ATEX), Ms nickel plated brass Connector



EEx e 0588819 (for solenoid 42xx / 46xx M20 x 1,5)
EEx d 0588851 (for solenoid 46xx M20 x 1,5)
EEx d, EEx e 0588925 (for solenoid 46xx 1/2-14 NPT)

0570275
0663303 (with rectifier)

Standard voltages 24 V DC, 230 V AC. Other voltages on request. Design acc. to VDE 0580, EN 50014/50028. 100% duty cycle.

*1) Category II 2 GD, EC-Type-Examination-Certificate KEMA 02 *2) Category II 2 GD, EC-Type-Examination-Certificate KEMA 98
*3) Category II 2 GD, EC-Type-Examination-Certificate PTB 02 ATEX *4) CSA-LR 57643-6, FM approved, for hazardous locations: Div
*5) Required connector for DC: type 0570275 *6) Cable gland is not indicated in delivery
*7) IP65 according to DIN 40050/IEC 529 and DIN EN 600068-2- *8) This solenoid has a fuse with an appropriate rating

For further information



www.norgren.com/info/nec/en235

CLASSIC RANGES

18S Pressure sensor

-1 to 25 bar



Temperature compensated
Vacuum and overpressure
Robust design for pneumatic and industrial applications
Electronic pressure sensors are components which are usually positioned next to the point of measurement. The

fluidic signal is converted into a standard pressure proportional analogue output signal of 4 to 20 mA by means of a piezo-resistant sensor and an electronic circuit, which amplifies, linearises and temperature compensates the signal

STANDARD MODELS

Port size	Measuring range (bar) (Relative pressure)	Value max. (bar) (Over pressure)	MODEL DIN 43650	
G 1/4	-1 ... 1	10	0862081	M12x1* 0862082
Flange	-1 ... 1	10	0862085	0862086
G 1/4	0...10	30	0862181	0862182
Flange	0...10	30	0862185	0862186
G 1/4	0...25	40	0862381	0862382
Flange	0...25	40	0862385	0862386

* M12x1 connector not included, please see table on the right

M12 CONNECTORS

MODEL	Description
0523055	Straight, without cable
0523057	Straight, 2 m cable, 4-core
0523052	Straight, 5 m cable, 4-core
0523056	90° 1,5 m cable, 4-core
0523058	90° 2 m cable, 4-core
0523053	90° 5 m cable, 4-core

AIRLINE

B38 Stainless steel Filter-Regulators

1/4 PTF



Lloyds Register Type Approved
Materials meet NACE* recommendations (MR-0175, 2002 revision)

Suitable for marine, offshore, food processing and dental applications

* National Association of Corrosion Engineers – recognised oil-field recommendation for resistance to sulphide stress cracking common in well-head and other corrosive environments

STANDARD MODELS

Port size	Flow (dm³/s)	Element (µm)	Drain	Range (bar)	Operation	kg	MODEL	Service kit
1/4 PTF	8*	25	Manual	0,25 ... 7	Relieving	1,40	B38-244-B2KA	R38-101R & B38-100S (25)
1/4 PTF	8*	25	Manual	0,07 ... 4	Relieving	1,40	B38-244-B2FA	R38-101R & B38-100S (25)
1/4 PTF	8*	25	Auto	0,07 ... 4	Relieving	1,60	B38-244-A2FA	R38-101R & B38-100S (25)
1/2 PTF	50**	25	Manual	0,3 ... 9	Relieving	1,40	B38-444-M2LA #	2787-41 & 2787-44
1/2 PTF	50**	25	Auto	0,3 ... 9	Relieving	2,10	B38-444-A2LA ‡	2787-41 & 2787-44

Can be adjusted to zero outlet pressure, and, generally, to pressures in excess of those specified.

* Typical flow with 7 bar inlet pressure, 1 bar set pressure and a droop of 0,05 bar.

** Typical flow with 12 bar inlet pressure, 8 bar set pressure and a droop of 1 bar.

Drain kits: # Manual drain 2787-43

‡ Auto drain 3000-87

FITTINGS

34 and 36 Compression fittings Metric and inch

Ø 4 to 28 mm O/D tube
Ø 3/16" to 3/4" O/D tube



Wide range of types and sizes
Rugged and durable
Suitable for use under extreme conditions of temperature and pressure
Ideal for most general industrial applications

For additional information on 34 and 36 Series please go to the url shown in this page.

For further information



www.norgren.com/info/nec/en236

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M/P29254	11	QM/8050/25	15, 17, 37	UM/22456/*	94
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P74F-*	174	RT/571*	10	VZC7L2C1-C313A	90
PA*	226	RT/572*	14	W07M-*	176
PM/3*	61	S/5*	138	W72M-*	176
PQA/182*	31, 33	S/636	139	W74M-*	176
PRA/181*	30	S/836	137	X3*	115-117
PRA/182*	32, 34	S/839	139		

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