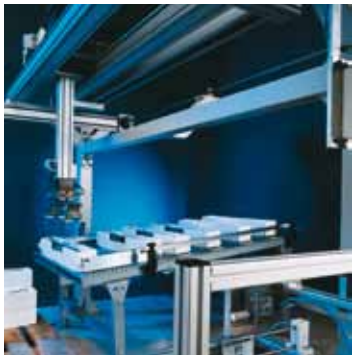
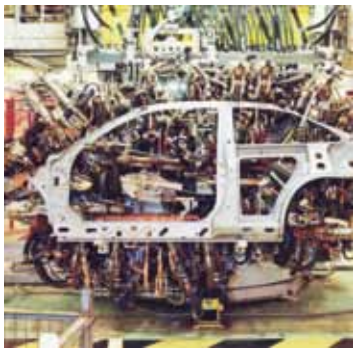


aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Directional Control Valves

Series VA13 and VA15

3- and 5-port valves. G1/8

Catalogue PDE2617TCUK Edition November 2011

Parker

ENGINEERING YOUR SUCCESS.

Working medium, air quality

Working medium: Dry, filtered compressed air to ISO 8573-1 class 3.4.3.

Recommended air quality

For best possible service life and trouble free operation, ISO 8573-1 quality class 3.4.3 should be used. This means 5µm filter (standard filter) dew point +3°C for indoor operation (a lower dew point should be selected for outdoor operation) and oil concentration 1.0 mg oil/m³, which is what a standard compressor with a standard filter gives.

Compact installation dimensions - flexible installation

The VA13/15 valve range consists of spool valves of extremely robust design, incorporating a wide range of manual, mechanical and pilot-operated actuators.

Rust and corrosion resistant designs.

The valve bodies and caps are made of brass. Stainless steel is used in the spools and the mechanical actuating devices. Versions intended for panel mounting have chromium-plated steel actuators and panel bezels.

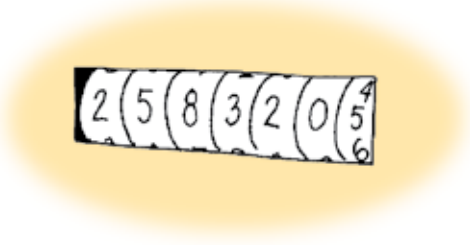
Mobile applications

The robust design, coupled with good corrosion resistance, makes the valves suitable for a wide range of applications. Manually operated valves are suitable for industrial and transport applications. The stable and ergonomically designed actuators make the valves easy to operate even with heavy working gloves.

ISO 8573-1 quality classes

Quality class	Pollution particle size (µm)	Pollution max. concentration (mg/m³)	Water max. press. dew point (°C)	Oil max. concentration (mg/m³)
1	0,1	0,1	-70	0,01
2	1	1	-40	0,1
3	5	5	-20	1,0
4	15	8	+3	5,0
5	40	10	+7	25
6	-	-	+10	-

High reliability



Valves easily comply with the requirements for component reliability in accordance with EU Machinery Directive standards EN292-2 and EN983.

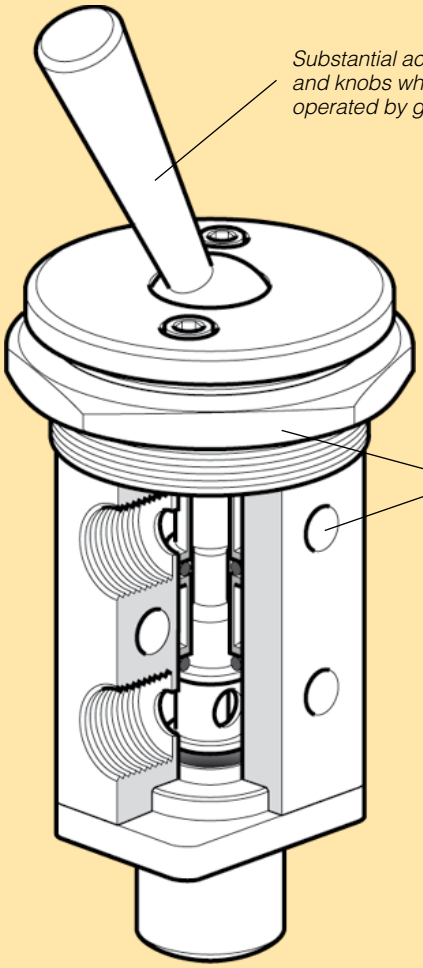
The VA valves have few moving parts combined with short spool movement, these features combine to give valves having high reliability and long service life. The valves are designed for use with or without supplementary lubrication.

Maintenance

When maintenance is required repair kits containing replacement seals are available. See page 15

Robust 3- and 5-port valves with brass bodies and stainless steel O-ring sealed spools.

Substantial actuating levers and knobs which can be operated by gloved hands.



Suitable for panel mounting or direct mounting via integral mounting holes.

Pneumatic, manual or mechanically actuated valves in a wide choice of types.

Most of the VA13 valves can be connected either as normally closed or normally open as required, by connecting the primary air supply to Port 1 or Port 3.

Ordering example

VA13-HIS4

Valve type, VA
Valve size 1 = G1/8
Number of ports, 3 or 5
Type of actuation
Type of return
Type of installation
4 = panel mounted

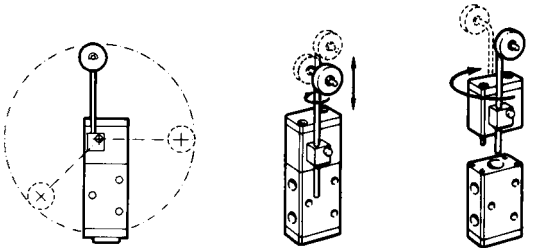
Products specially suitable for the transport industry.

Installation

Correctly mounted valves require only a minimum of maintenance. For maximum life, follow the instructions with regard to actuation directions, actuation speeds, angles and adjustments.

Panel mounting

Mount the valves in a 40,5 mm diameter hole (thread M40 x 1,5). The panel-mounting collars have a flange on the front of the panel and a retaining nut behind the panel, for simple installation and clean and attractive appearance.



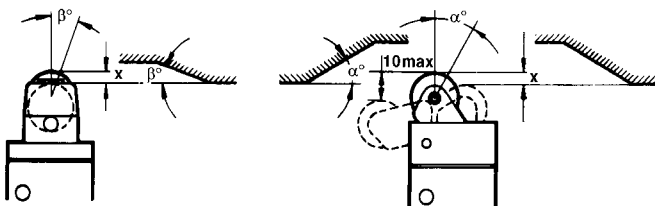
Fitting adjustable roller actuators

The rest position of the actuating arm can be arranged at any required angle on the actuator shaft (360°).

The length of the arm is adjustable, and it can also be rotated through 180°. Note, however, that the roller must always be parallel to the valve body.

The arm can also be positioned on the other side of the valve by removing the actuating mechanism, turning it through 180° and reassembling it.

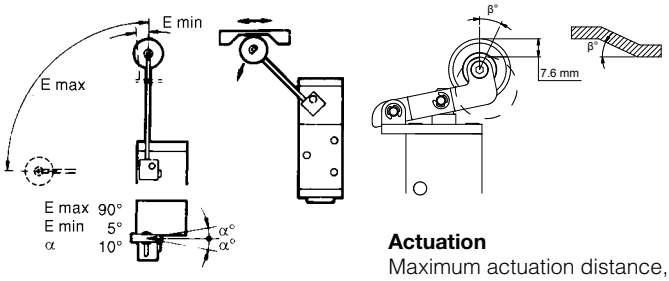
W **UW**



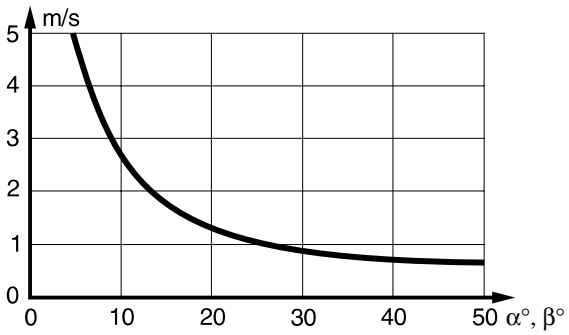
Actuation

Maximum actuation distance (X), i.e. the maximum spool stroke length, is 4 mm. Valves are fully open after 3,5 mm travel. Type UW toggle cam actuators permit a vertical motion in toggle direction of up to 10 mm.

WG **LRS**



Actuation
Maximum actuation distance, the maximum spool stroke length is 7.6 mm.



Actuation by adjustable roller

Actuation can be arranged in both directions if the arm is set as shown above. The arm needs to be moved through only 5° to make the valve change over, although a travel range of up to 90° can be accepted.

Actuation speed as a function of actuation angle

Optimum valve life will be obtained if the shape of actuation cams is matched to the method of actuation employed. The principle is that the higher the speed of the actuating motion, the smaller the incident angle. The characteristic curve shown here plots the incident angle against speed of the actuating stroke.

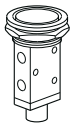
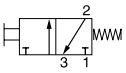
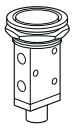
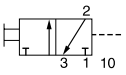
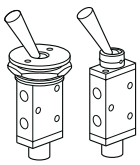
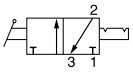
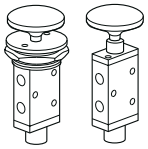
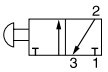
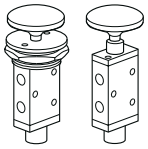
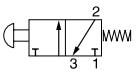
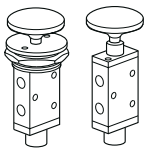
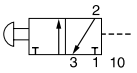
Material specifications

Valve bodys, end covers, spring guides	Brass
Spools	Polished stainless steel
Seals	Nitrile rubber
Screws, nuts, washers	Zinc plated steel
Balls	Steel
Push-buttons, knobs	Acetal plastic
Levers	Chrome-plated steel
Pedals	Phosphatized cast-iron
I-plunger	Hardened stainless steel
Rollers	Acetal plastic

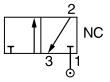
IMPORTANT
Before servicing, make sure that the valve is depressurised. Disconnect the primary air hose to ensure that the air supply is safely interrupted before removing valves.

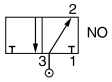
Data

Working temperature:	-20 °C to +70 °C
Working pressure:	max 10 bar
Flow (acc. to ISO 6358)	
C:	0,9 Nl/s, bar
Qn (P1=6 bar, Δp=1 bar):	3,6 l/s
Qmax:	6,3 l/s
Cv:	0,21

	Symbol	Actuator	Return	Mounting	Changeover **force** at 6 bar	Weight kg	Order code
		Push-button Red	Spring	Panel mounted	32,5 N	0,37	**VA13-HIS4**
		Push-button Black	Spring	Panel mounted	32,5 N	0,37	**VA13-HIS4A06***
		Push-button Red	Air signal	Panel mounted	6 N**	0,37	**VA13-HIA4**
		Hand lever Held in two positions	Hand lever	Panel mounted	8 N	0,52	**VA13-HB24**
				Side mounted	8 N	0,35	**VA13-HB2**
		Knob Red Two positions	Knob	Panel mounted	3 N	0,48	**VA13-KL24**
				Side mounted	3 N	0,31	**VA13-KL2**
		Knob Red	Spring	Panel mounted	31,5 N	0,49	**VA13-KS4**
				Side mounted	31,5 N	0,32	**VA13-KS**
		Knob Red Two positions	Knob/ Air signal	Panel mounted	6 N**	0,49	**VA13-KL2A4**
				Side mounted	6 N**	0,33	**VA13-KL2A**

* Panel holder in black anodized aluminium.
** Without signal pressure. Signal pressure min 3 bar at 6 bar supply pressure.

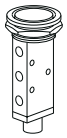
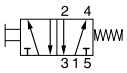
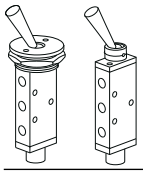
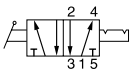
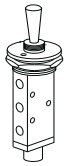
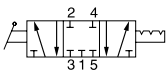
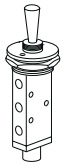
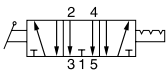
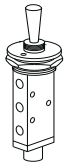
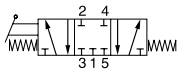
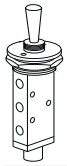
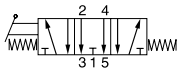
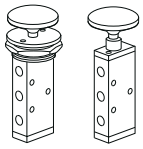
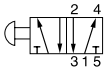
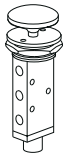
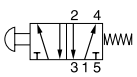
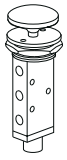
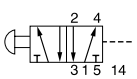




All VA13 valves (except VA13-WGR and VA13-RWG) can be connected either as normally closed 3/2 valve (NC) or normally open 3/2 valve (NO) as required, by connecting the primary air supply to Port 1 or Port 3.

Data

Working temperature:	-20 °C to +70 °C
Working pressure:	max 10 bar
Flow (acc. to ISO 6358)	
C:	0,9 Nl/s, bar
Qn (P1=6 bar, Δp=1 bar):	3,6 l/s
Qmax:	6,3 l/s
Cv:	0,21

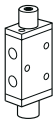
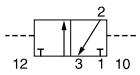
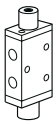
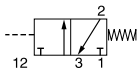
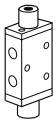
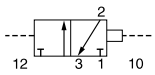
	Symbol	Actuator	Return	Mounting	Changeover **force** at 6 bar	Weight kg	Order code
		Push-button Red	Spring	Panel mounted	34,5 N	0,46	**VA15-HIS4**
		Hand lever Held in two positions	Hand lever	Panel mounted	9 N	0,63	**VA15-HB24**
				Side mounted	9 N	0,45	**VA15-HB2**
		Hand lever Held in three positions	Hand lever	Panel mounted Closed centre position	9 N	0,63	**VA15-HB34**
		Hand lever Held in three positions	Hand lever	Panel mounted Exhausted centre position	9 N	0,63	**VA15-XHB34**
		Hand lever Three positions self-centring	Hand lever	Panel mounted Closed centre position	9 N	0,63	**VA15-HC4**
		Hand lever Three positions self-centring	Hand lever	Panel mounted Exhausted centre position	9 N	0,63	**VA15-XHC4**
		Knob Red Two positions	Knob	Panel mounted	5 N	0,58	**VA15-KL24**
				Side mounted	5 N	0,42	**VA15-KL2**
		Knob Red	Spring	Panel mounted	34,5 N	0,60	**VA15-KS4**
		Knob Red Two positions	Knob/Air signal	Panel mounted	8 N*	0,61	**VA15-KL2A4**

*Without signal pressure. Signal pressure min 3 bar at 6 bar supply pressure.

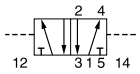
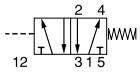
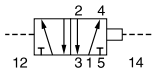
Data

Working temperature:	-20 °C to +70 °C
Working pressure:	max 10 bar
Flow (acc. to ISO 6358)	
C:	0,9 Nl/s, bar
Qn (P1=6 bar, Δp=1 bar):	3,6 l/s
Qmax:	6,3 l/s
Cv:	0,21

VA13

	Symbol	Actuator	Return	Mounting	Signal pressure min, bar at 6 bar actu./return	Weight Kg	Order code
		Air signal	Air signal	Side mounted	3/3	0,33	**VA13-AA**
		Air signal	Spring	Side mounted	4/-	0,32	**VA13-AS**
		Air signal with priority	Air signal	Side mounted	3/4	0,32	**VA13-ADA**

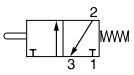
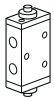
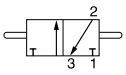
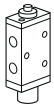
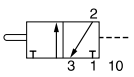
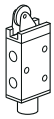
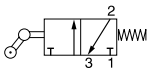
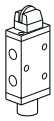
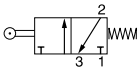
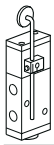
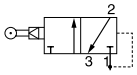
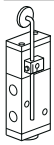
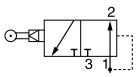
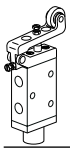
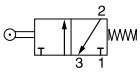
VA15

	Symbol	Actuator	Return	Mounting	Signal pressure min, bar at 6 bar actu./return	Weight Kg	Order code
		Air signal	Air signal	Side mounted	3/3	0,33	**VA15-AA**
		Air signal	Spring	Side mounted	4/-	0,32	**VA15-AS**
		Air signal with priority	Air signal	Side mounted	3/4	0,32	**VA15-ADA**

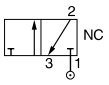
VA13 - Mechanically actuated

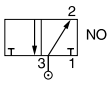
Data

Working temperature:	-20 °C to +70 °C
Working pressure:	max 10 bar max 8 bar for WGR and RWG
Flow (acc. to ISO 6358)	
C:	0,9 Nl/s, bar
Qn (P1=6 bar, Δp=1 bar):	3,6 l/s
Qmax:	6,3 l/s
Cv:	0,21

	Symbol	Actuator	Return	Mounting	**Changeover force** at 6 bar	**Weight** kg	**Order code**
		Plunger	Spring	Side mounted	32,5 N	0,30	**VA13-IS**
		Plunger Two positions	Plunger	Side mounted	3 N	0,30	**VA13-II**
		Plunger	Air signal	Side mounted	6 N*	0,30	**VA13-IA**
		Roller one way trip	Spring	Side mounted	20,5 N	0,33	**VA13-UWS**
		Roller	Spring	Side mounted	32,5 N	0,33	**VA13-WS**
		Roller on an arm	Internal air min 4 bar	Side mounted Normally closed	0,6 N min	0,41	**VA13-WGR**
		Roller on an arm	Internal air min 4 bar	Side mounted Normally open	0,6 N min	0,41	**VA13-RWG**
		Roller	Spring	Side mounted		0,41	**VA13-LRS**

* Without signal pressure. Signal pressure min 3 bar at 6 bar supply pressure.

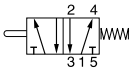
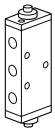
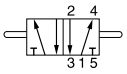
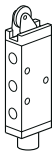
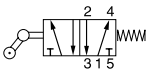
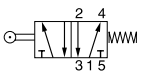
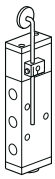
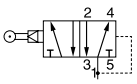
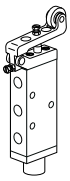
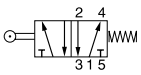




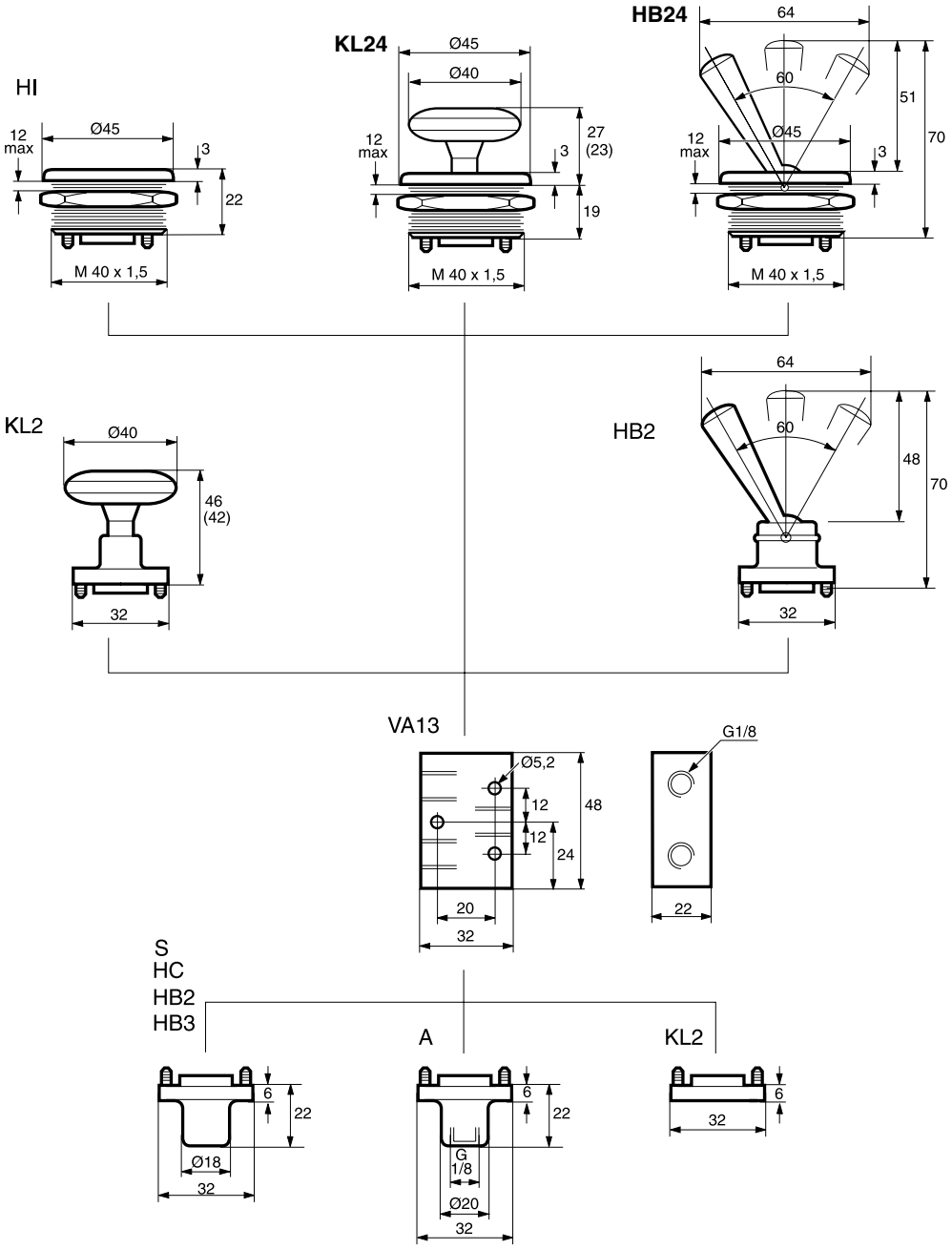
All VA13 valves (except VA13-WGR and VA13-RWG) can be connected either as normally closed 3/2 valve (NC) or normally open 3/2 valve (NO) as required, by connecting the primary air supply to Port 1 or Port 3.

Data

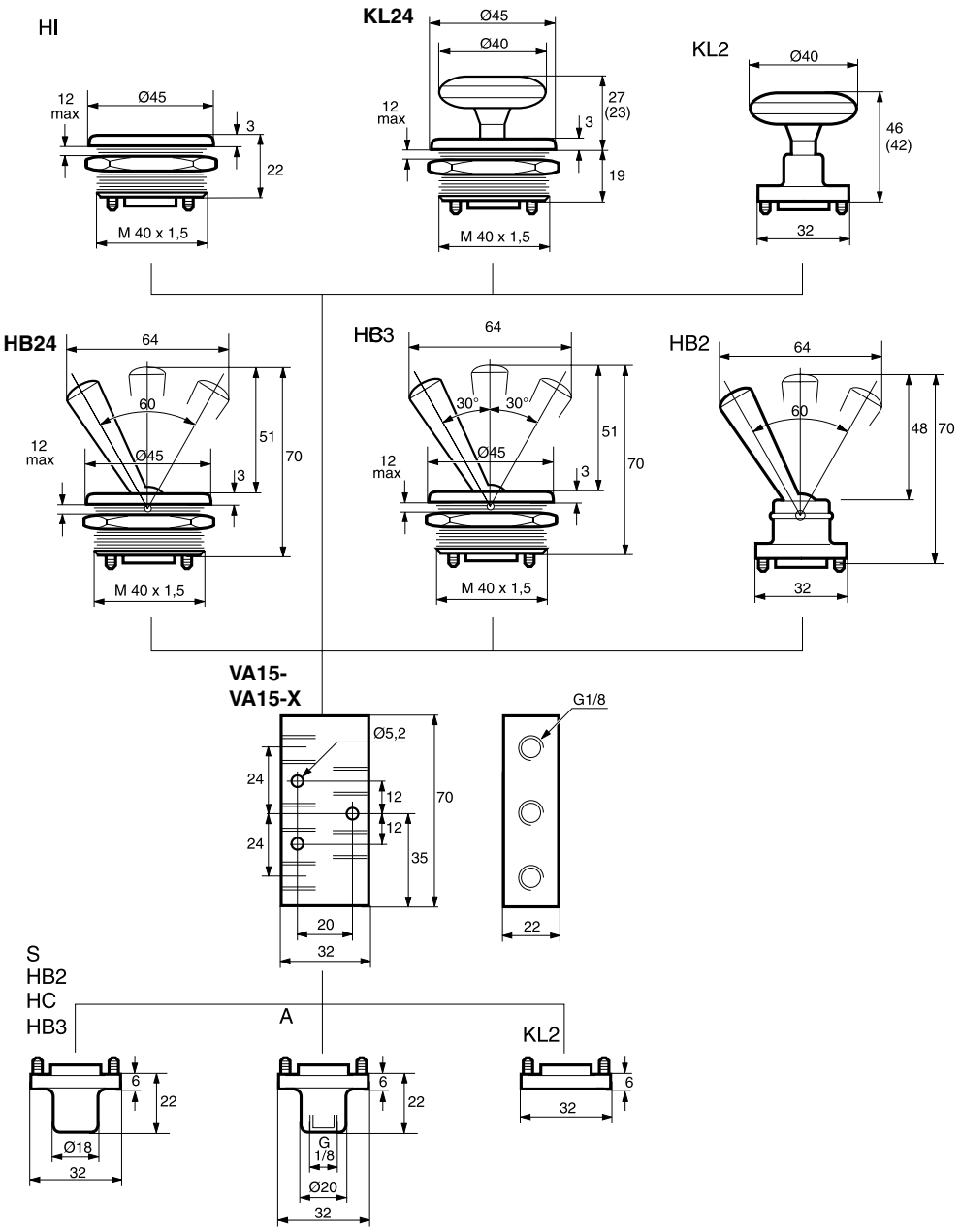
Working temperature:	-20 °C to +70 °C
Working pressure:	max 10 bar max 8 bar for WGR
Flow (acc. to ISO 6358)	
C:	0,9 Nl/s, bar
Qn (P1=6 bar, Δp=1 bar):	3,6 l/s
Qmax:	6,3 l/s
Cv:	0,21

	Symbol	Actuator	Return	Mounting	Changeover **force** at 6 bar	Weight kg	Order code
		Plunger	Spring	Side mounted	34,5 N	0,40	**VA15-IS**
		Plunger Two positions	Plunger	Side mounted	5 N	0,40	**VA15-II**
		Roller one way trip	Spring	Side mounted	21,6 N	0,43	**VA15-UWS**
		Roller	Spring	Side mounted	34,5 N	0,44	**VA15-WS**
		Roller on an arm	Internal air min 4 bar	Side mounted	0,6 N min	0,46	**VA15-WGR**
		Roller	Spring	Side mounted		0,46	**VA15-LRS**

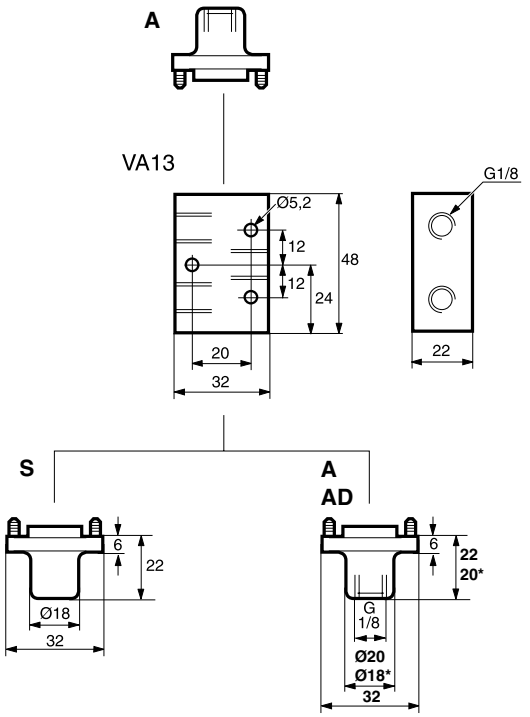
Dimensions


HI
12 max
Ø45
3
22
M 40 x 1,5
KL24
Ø45
Ø40
12 max
3
27 (23)
19
M 40 x 1,5
HB24
64
60
51
12 max
Ø45
3
70
M 40 x 1,5
KL2
Ø40
46 (42)
32
HB2
64
60
48
70
32
VA13
Ø5,2
12
12
48
24
20
32
G1/8
22
S
HC
HB2
HB3
6
22
Ø18
32
A
6
22
G 1/8
Ø20
32
KL2
6
32

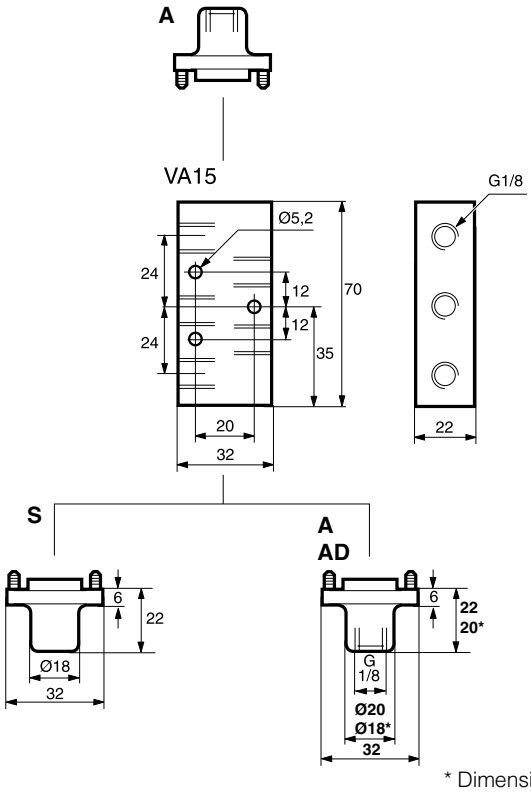
Dimensions


HI
12 max
Ø45
3
22
M 40 x 1,5
KL24
Ø45
Ø40
12 max
27 (23)
3
19
M 40 x 1,5
KL2
Ø40
46 (42)
32
HB24
64
60
12 max
Ø45
3
51
70
M 40 x 1,5
HB3
64
30°
30°
51
70
12 max
Ø45
3
M 40 x 1,5
HB2
64
60
48
70
32
VA15-
VA15-X
Ø5,2
24
24
12
12
70
35
20
32
G1/8
22
S
HB2
HC
HB3
A
KL2
6
22
Ø18
32
6
22
G 1/8
Ø20
32
6
32

Dimensions

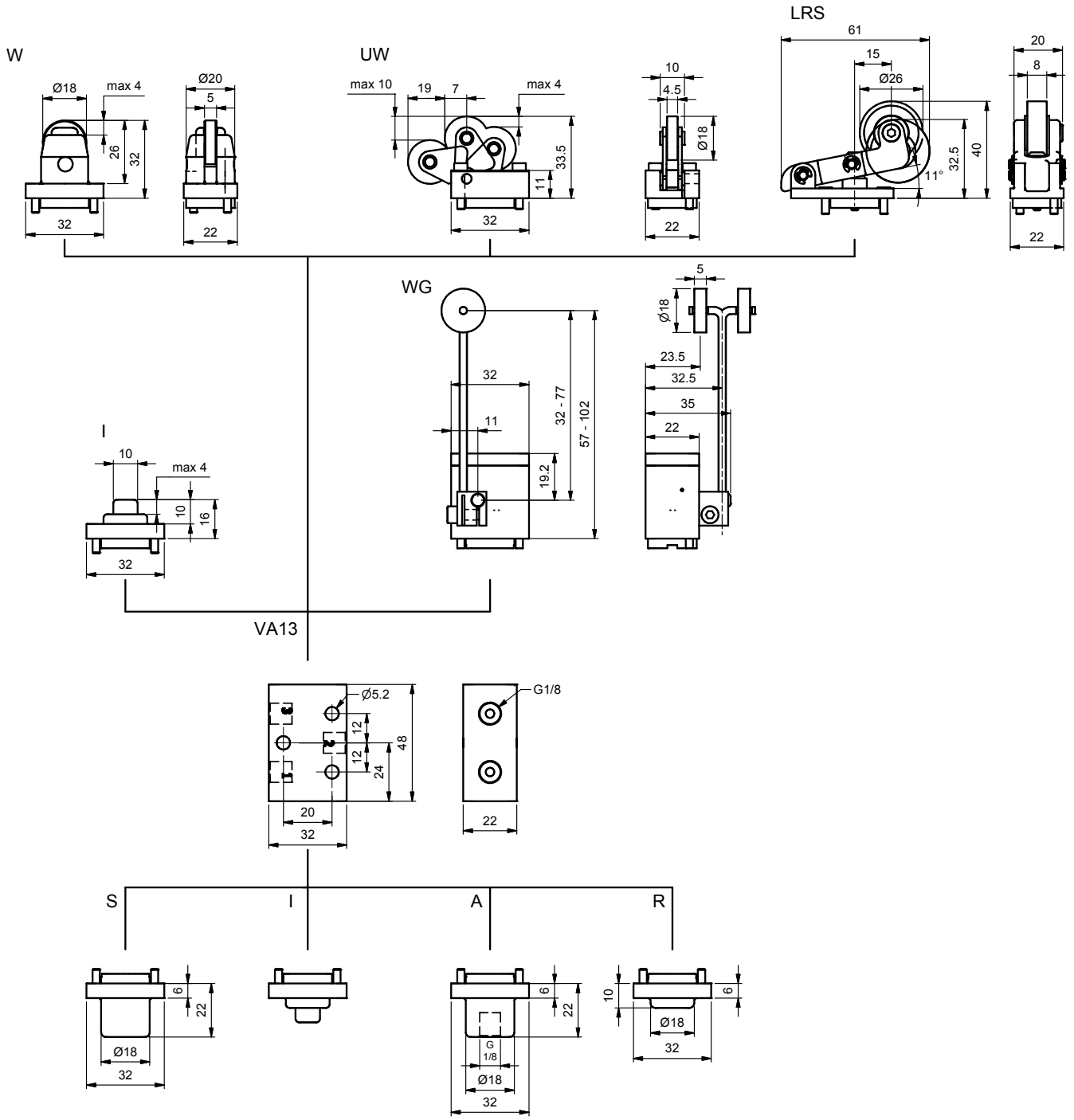


* Dimension on A-end at AD actuation

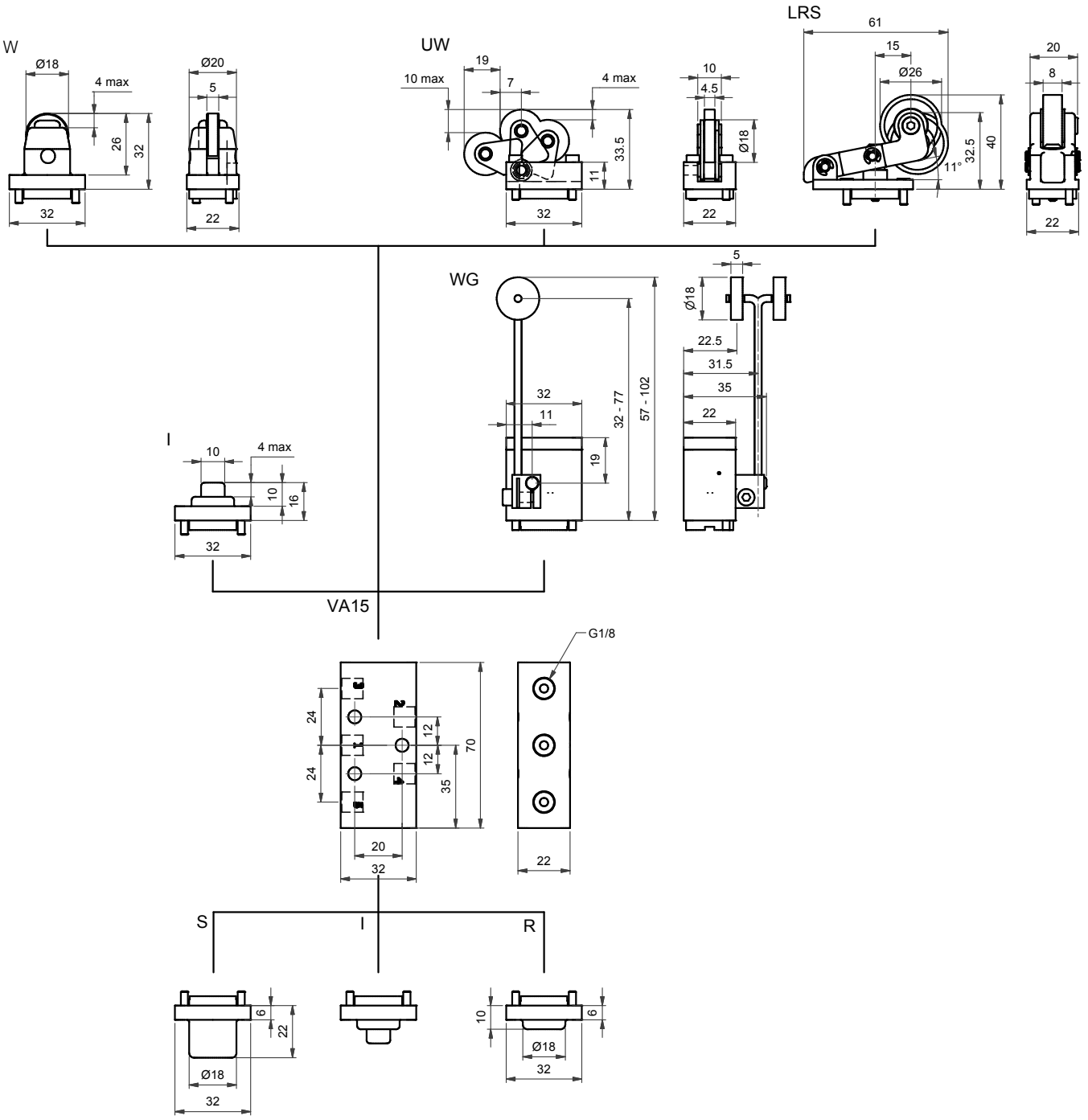


* Dimension on A-end at AD actuation

Dimensions

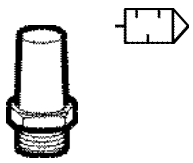

W
Ø18
max 4
26
32
32
Ø20
5
22
UW
max 10
19
7
max 4
33.5
11
32
10
4.5
Ø18
22
LRS
61
15
Ø26
11°
32.5
40
20
8
22
WG
32
11
32 - 77
57 - 102
19.2
5
Ø18
23.5
32.5
35
22
I
10
max 4
10
16
32
VA13
Ø5.2
12
12
24
48
20
32
G1/8
22
S
I
A
R
6
22
Ø18
32
6
22
G 1/8
Ø18
32
10
6
Ø18
32

Dimensions


W
Ø18
4 max
26
32
32
Ø20
5
22
UW
10 max
19
7
4 max
33.5
11
32
10
4.5
Ø18
22
LRS
61
15
Ø26
11°
32.5
40
20
8
22
WG
32
11
32 - 77
57 - 102
19
5
Ø18
22.5
31.5
35
22
I
10
4 max
10
16
32
VA15
G1/8
24
24
12
12
35
70
20
32
22
S
I
R
6
22
Ø18
32
10
6
Ø18
32

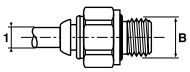
Accessories

Sintered bronze series



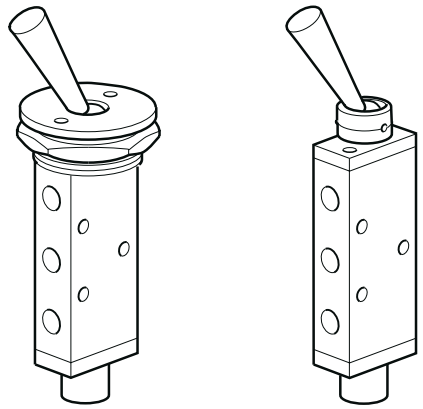
Port	Order code	Pack Qty
G1/8	**9090050700**	1

Male straight connectors - Parallel thread



Tube Ø1	Thread B	Order code	Box Qty
4	1/8	**F4PMB4-1/8**	20
6	1/8	**F4PMB6-1/8**	30
8	1/8	**F4PB8-1/8**	40

Service and Replacement Parts



VA Series Heavy Duty Valves

Order code	Repair Kit
9128674100	Body seals (6 pcs. 'O' Ring)

Important !
Before carrying out any service work, ensure that the valve and manifold have been vented. Remove the primary supply air hose to ensure total disconnection of the air supply before dismantling valves or blank connection blocks.

NB !
All technical data in this catalogue is typical only.

The air quality is decisive for the valve life: see ISO 8573.

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