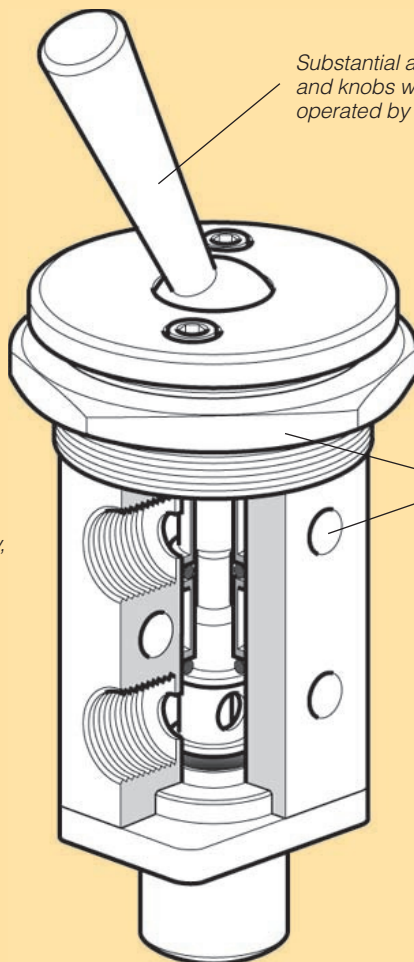


Directional control valves

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.

Pneumatically, manually, foot or mechanically actuated valves in a wide choice types.

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

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.

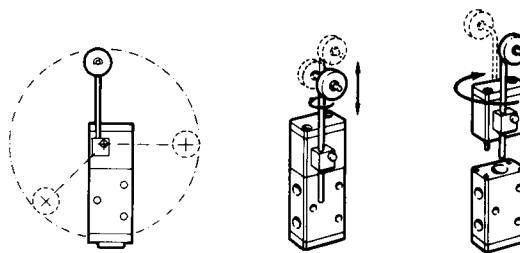
Directional control valves

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.

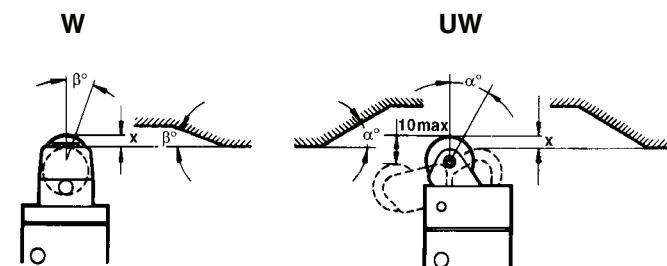


Fitting adjustable roller actuators

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

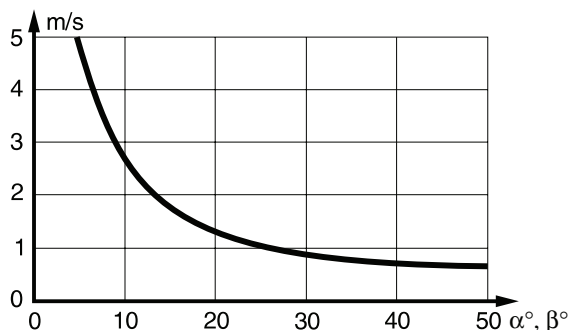
The length of the arm is adjustable, and it can also be rotated through 180°. Note, however, that the roller must always be parallel to the valve body.

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.



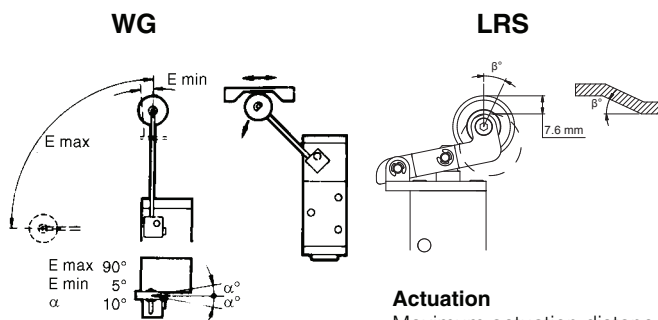
Actuation

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.



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.



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.

Material specifications

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

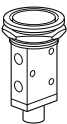
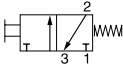
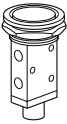
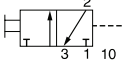
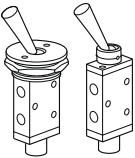
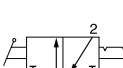
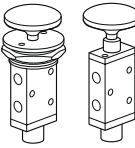
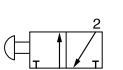
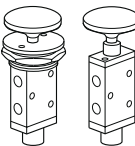

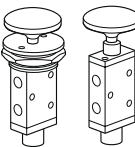
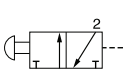


IMPORTANT

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.

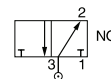
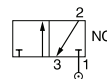
Data

Working temperature:	-20 °C to +70 °C
Working pressure:	max 10 bar
Flow (acc. to ISO 6358)	
C:	0,9 NI/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.