

Safety valve with unit approval type MV..X.. , SV..X..



Operating pressure p_{max} = 450 bar
Flow Q_{max} = 100 lpm

Safety valve type CMVX 2.. with unit approval see D 7710 TÜV

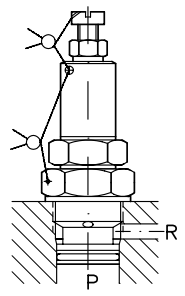
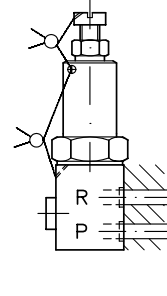
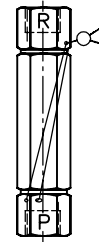
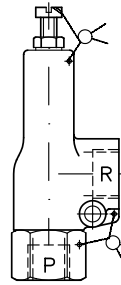
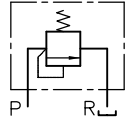
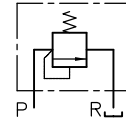
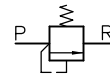
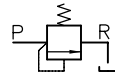
These safety valves are intended for accumulators in hydraulic circuits, covering the following regulations:

- Pressure device regulation 97/23 EC
- Operational safety regulation date 27.09.2002 / Use of Work Equipment Directive 2009/104/EC
- AD regulations 2000, sheet A2 (latest release)

1. General

These safety valves are available in three housing designs and three sizes. Selection is via the intended pressure setting (pressure range) and the intended flow (permissible flow), i.e. pump delivery flow must be lower than the flow rating of the valve (see in tables of sect. 2.1, 2.2, and 2.3).

The desired pressure setting has to be stated at the end of the order coding as the valve will be set accordingly before it is lead sealed at HAWE. This setting will be also integrated in the unit approval No. stamped on the valve body.



Elbow valve for direct pipe connection (page 1)

Inline valve for direct pipe connection (page 2)

Valve for manifold mounting (page 2)

Valve, cartridge design (page 2)

2. Available versions, main data

2.1 Elbow valve for direct pipe connection

Order coding example: **MXV 42 B - 350**

Type, order coding		Unit approval coding	Nom.- \varnothing of cone and seat (mm)	Perm. flow Q_{perm} (lpm)	Pressure range $p_{min} \dots p_{max}$ (bar)	Tapped ports conf. ISO 228/1 (BSPP)		
Spring housing made of spheroidal casting	zinc die casting							
MVSX 41 E	MXV 41 E	TÜV.SV.14 - 738.4.F.8.p	4	8	90 ... 160	MVSX 41 and MXV 41 = G 1/4		
MVSX 42 E	MXV 42 E				80 ... 160			
MVSX 41 C	MXV 41 C			TÜV.SV.14 - 738.4.F.10.p	10		316 ... 450	MVSX 42 and MXV 42 = G 3/8
MVSX 42 C	MXV 42 C							
MVSX 41 B	MXV 41 B	TÜV.SV.13 - 708.5.F.20.p	5	20	80 ... 100	MVSX 52 and MXV 52 = G 3/8		
MVSX 42 B	MXV 42 B							
MVSX 52 E	MXV 52 E	TÜV.SV.13 - 708.5.F.40.p	5	40	101 ... 140	MVSX 53 and MXV 53 = G 1/2		
MVSX 53 E	MXV 53 E							
MVSX 52 E	MXV 52 E	TÜV.SV.13 - 708.5.F.50.p	5	50	141 ... 160	MVSX 63 and MXV 63 = G 1/2		
MVSX 53 E	MXV 53 E							
MVSX 52 D	MXV 52 D	TÜV.SV.13 - 709.6.F.30.p	6	30	100 ... 140	MVSX 64 and MXV 64 = G 3/4		
MVSX 53 D	MXV 53 D							
MVSX 63 E	MXV 63 E	TÜV.SV.13 - 709.6.F.60.p	6	60	141 ... 160	MVSX 64 and MXV 64 = G 3/4		
MVSX 64 E	MXV 64 E							
MVSX 63 D	MXV 63 D	TÜV.SV.13 - 709.6.F.80.p	6	80	161 ... 210	MVSX 64 and MXV 64 = G 3/4		
MVSX 64 D	MXV 64 D							
MVSX 63 C	MXV 63 C	TÜV.SV.13 - 709.6.F.80.p	6	80	211 ... 315	MVSX 64 and MXV 64 = G 3/4		
MVSX 64 C	MXV 64 C							
MVSX 63 B	MXV 63 B	TÜV.SV.13 - 709.5.F.60.p	5	60	316 ... 450			
MVSX 64 B	MXV 64 B							

2.2 Inline valve for direct pipe connection

Coding example: **SVX 42 C - 200**

Type, order coding	Unit approval coding	Nom.-Ø of cone and seat (mm)	Perm. flow Q_{perm} (lpm)	Pressure range $P_{min} \dots P_{max}$ (bar)	Tapped ports conf. ISO 228/1 (BSPP)
SVX 42 E	TÜV.SV.10 - 1109.4.F.3.p	4	3	80 ... 120	SVX 42 = G 3/8
	TÜV.SV.10 - 1109.4.F.4.p		4	120 ... 160	
SVX 42 C	TÜV.SV.10 - 1109.4.F.3,5.p	4	3,5	160 ... 250	
	TÜV.SV.10 - 1109.4.F.6.p		6	250 ... 300	
SVX 42 B	TÜV.SV.10 - 1109.4.F.6.p	4	6	300 ... 430	

2.3 Valve for manifold mounting

Coding example: **MVPX 4 E - 100**

Type, order coding	Unit approval coding	Nom.-Ø of cone and seat (mm)	Perm. flow Q_{perm} (lpm)	Pressure range $P_{min} \dots P_{max}$ (bar)
MVPX 4 E	TÜV.SV.14 - 738.4.F.10.p	4	10	80 ... 160
MVPX 4 C			10	161 ... 315
MVPX 4 B			10	316 ... 450
MVPX 5 E	TÜV.SV.13 - 708.5.F.20.p	5	20	80 ... 100
	TÜV.SV.13 - 708.5.F.25.p		25	101 ... 160
MVPX 5 D	TÜV.SV.13 - 708.5.F.30.p		30	161 ... 210
MVPX 6 E	TÜV.SV.13 - 709.6.F.30.p	6	30	100 ... 140
	TÜV.SV.13 - 709.6.F.60.p		60	141 ... 160
MVPX 6 D	TÜV.SV.13 - 709.6.F.50.p		50	161 ... 210
MVPX 6 C	TÜV.SV.13 - 709.6.F.60.p		60	211 ... 315
MVPX 6 B	TÜV.SV.13 - 709.5.F.60.p	5	60	316 ... 450

2.4 Cartridge valve

Coding example: **MVEX 6 E - 100 - 3/4 A**

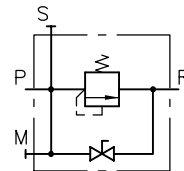
Table 1

Type, order coding	Unit approval coding	Nom.- \varnothing of cone and seat (mm)	Perm. flow Q_{perm} (lpm)	Pressure range $p_{min} \dots p_{max}$ (bar)
MVEX 4 E	TÜV.SV.14 - 738.4.F.10.p	4	10	80 ... 160
MVEX 4 C			10	161 ... 315
MVEX 4 B			10	316 ... 450
MVEX 5 E	TÜV.SV.13 - 708.5.F.10.p	5	10	100 ... 140
	TÜV.SV.13 - 708.5.F.16.p		16	141 ... 160
MVEX 5 D	TÜV.SV.13 - 708.5.F.20.p		20	161 ... 210
MVEX 6 E	TÜV.SV.13 - 709.6.F.90.p	6	90	100 ... 140
	TÜV.SV.13 - 709.6.F.100.p		100	141 ... 160
MVEX 6 D			100	161 ... 210
MVEX 6 C			100	211 ... 315
MVEX 6 B	TÜV.SV.13 - 709.5.F.30.p	5	30	316 ... 450

Table 1: Connection block for type MVEX 6

- 1/2 A	P and R = G 1/2, with drain valve
- 3/4 A	P and R = G 3/4, with drain valve

Symbol



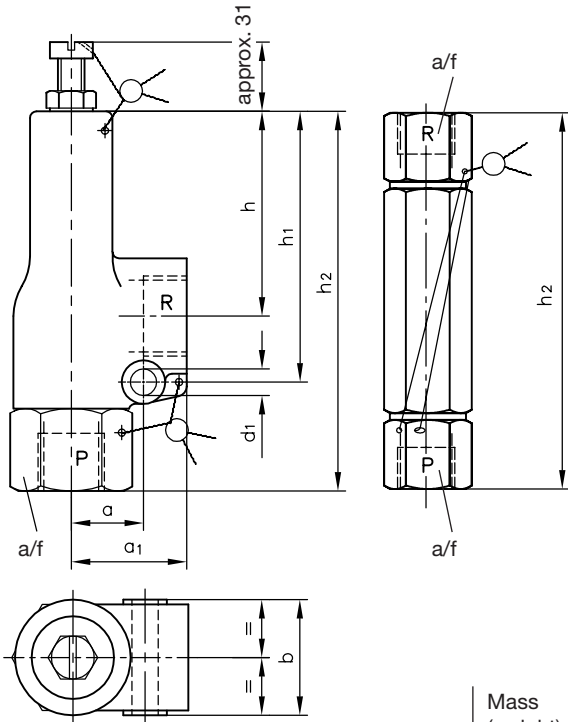
3. Additional parameter

Nomenclature and design	Directly acting safety valve, seated cone design
Installed position	Any
Flow direction	P→R, P = pump; R = return (pressure less)
Pressure fluid	Hydraulic oil acc. to DIN 51524 table 1 to 3; ISO VG 10 to 68 conf. DIN 51 519 Also suitable are biologically degradable pressure fluids of the type HEPG (Polyalkylenglycol) and HEES (synth. Ester) at operation temperature up to approx. +70°C.
Oper. viscosity	Approx. 12 ... 230 mm ² /s
Contamination rating	21/18/15 conf. ISO 4406
Temperature	Ambient: approx. -40 ... +80°C; Fluid: -20 ... +80°C, pay attention to the viscosity range! See also D 5488/1 sect. 3. Biological degradable pressure fluids: Pay attention to manufacturer's information. With regard to the compatibility with sealing materials do not exceed +70°C.
Static overload capacity	2 x p _{max}

4. Unit dimensions

All dimensions in mm, subject to change without notice!

Type MV(S)X .. and MVX ..

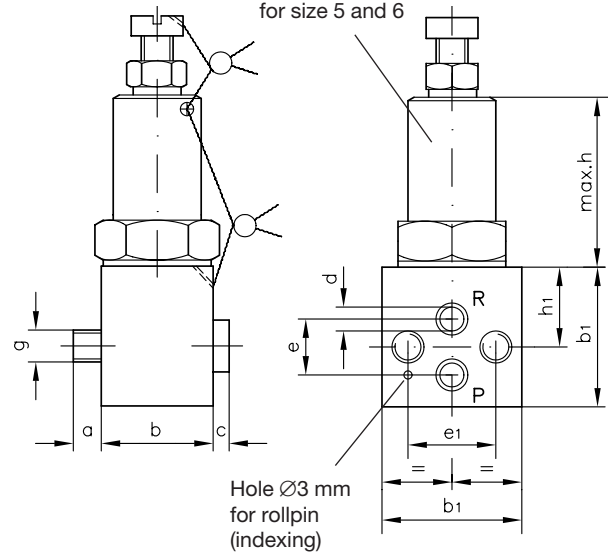


Type	a	a1	b	d1	h	h1	h2	a/f	Mass (weight) approx. (kg)
MV(S)X 41..	15	24	24	5.5	46	61	86	22	0.2
MV(S)X 42..	-	-	-	-	-	-	-	-	-
MV(S)X 52..	18	30	29	6.5	49	66	95	27	0.3
MV(S)X 53..	-	-	-	-	-	-	-	-	-
MV(S)X 63..	20	35	36	6.5	62	82	117	32	0.5
MV(S)X 64..	-	-	-	-	-	-	-	-	-
SVX 42..	-	-	-	-	-	-	110	22	0.2

Type SVX ..

Type MVPX ..

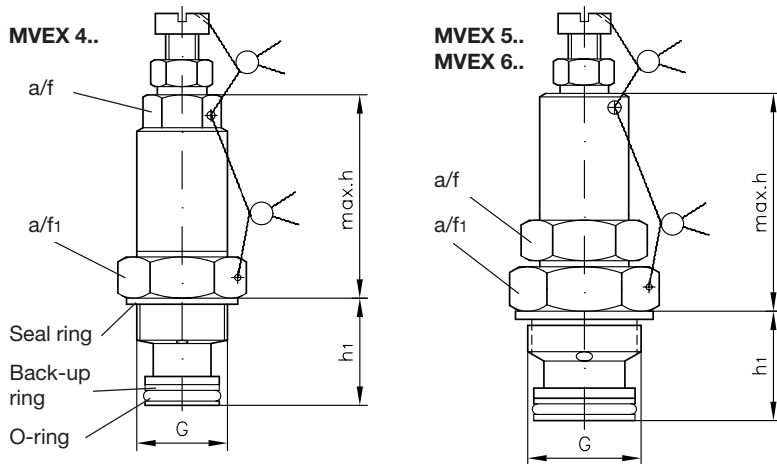
Illustration shows size 4, see type MVEX for size 5 and 6



Type	a	b	b1	c	d	e	e1	g
MVPX 4..	7	28	35	8	6	14	22	M8
MVPX 5..	8	32	40	8	9	18	27	M8
MVPX 6..	10	35	50	10	12	22	34	M10

Type	h	h1	Sealing of ports P and R via O-rings NBR 90 Sh	Mass (weight) approx. (kg)
MVPX 4..	39.5	20	8x2	0.3
MVPX 5..	44	21	10x2	0.5
MVPX 6..	53.5	26	13.95x2.62	0.8

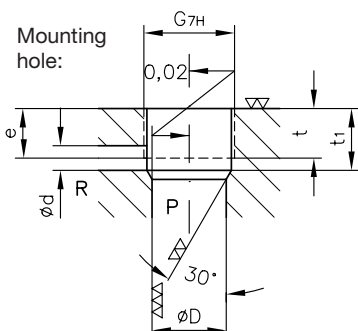
Type MVEX .. Attention: Observe the notes regarding installation in sect. 5!



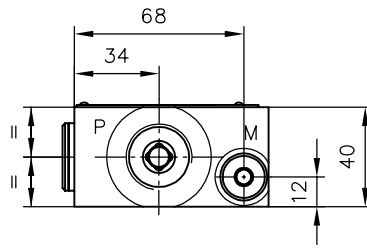
Type	h	h1	D	e	d	t	t1
MVEX 4..	49.5	26	18 ^{H8}	12	6	12	15
MVEX 5..	55	27	25 ^{H8}	11.5	9	9	16
MVEX 6..	67	32	25 ^{H8}	14	12	10	19

Type	a/f	a/f1	G
MVEX 4..	17	27	M 22x1.5
MVEX 5..	27	32	M 28x1.5
MVEX 6..	30	36	M 30x1.5

Type	Seal ring	O-ring NBR 90 Sh	Back-up ring Part No	Mass (weight) approx. (kg)
MVEX 4..	A 22x27x1.5 DIN 7603-St	12.37x2.62	5660 002	0.2
MVEX 5..	A 28x34x2 DIN 7603-Cu	20.29x2.62	3771 003	0.3
MVEX 6..	A 30x36x2 DIN 7603-Cu	20.29x2.62	3771 003	0.4

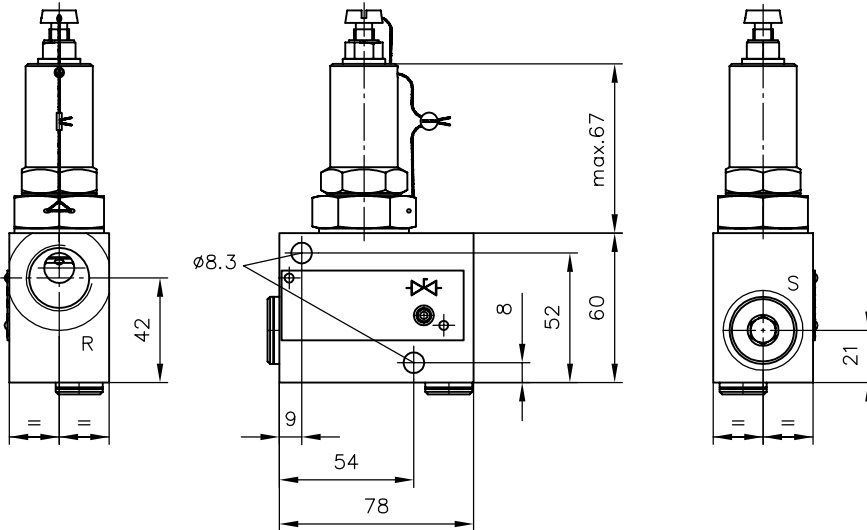


Type MVEX 6-... - 3/4 A
- 1/2 A



Tapped ports conf.
ISO 228/1 (BSPP):

	P, R	S	M
- 3/4 A	G 3/4	G 1/2	G 1/4
- 1/2 A	G 1/2	G 1/2	G 1/4



5. Notes assembly, operation and maintenance

The mounting of the safety valves has to be undertaken with special care. The regulations stated in the pressure device regulation have to be observed. The regular check routines depend on the regulations for safety valves and systems in your country. The illustrated flow direction is mandatory. The correct connection of pump line P and return line R is illustrated in the symbols at „General“ on page one.

The return line R has to be connected to the tank and must show a sufficient internal diameter. The max. torque specifications for type MVX, MVSX and type SVX must not be exceeded.

Attention: Support the valve while tightening the pipe fittings.

The mounting screws of the manifold mounting valves type MVPX, the cartridge valves type MVEX has to be torqued as specified.

Use only a/f1 to torque the valve type MVEX in the mounting hole of the manifold!

Attention: Do not damage the wire of the lead seal!

Max. torque for pipe fittings at port P and R

Type	Max. torque (Nm)		Type	Max. torque (Nm)		Type	Max. torque (Nm)	
	P	R		P	R		P	R
MVSX	41	45	MVX	41	40	SVX	42	70
	42	70		42	65		70	70
spheroidal casting	52	70	zinc die casting	52	65			
	53	140		53	90			
	63	140		63	90			
	64	230		64	90			

Max. torque for the mounting screws and for the cartridge valve body (see page 4)

Type	Max. torque		Type	Max. torque			
	g	(Nm)		a/f1	(Nm)		
MVPX	4..	M8	25	MVEX	4..	27	80
	5..	M8	25		5..	32	120
	6..	M10	50		6..	36	160

The valve should be installed at a well protected spot or an additional protective cover should be provided to prevent external damage.

Care has to be taken that no contamination enters the valve during installation and operation.

The contamination class stated in sect. 3 „Additional parameter“ must not be exceeded!

ZERTIFIKAT ◆ CERTIFICATE ◆ CERTIFICADO ◆ CERTIFIKAT ◆ 认证证书 ◆ CERTIFICATE ◆ ZERTIFIKAT



CERTIFICATE

The Certification Body of
TÜV SÜD Industrie Service GmbH,
a Notified Body of the Pressure Equipment Directive (PED),

certifies that

HAWE Hydraulik SE
Streitfeldstraße 25
81673 München, Germany

with the production plant
85356 Freising, Kulturstraße 44, Germany

implemented, operates and maintains a quality
assurance system as described in the Pressure Equipment
Directive (97/23/EC)/Annex III, Module D

for the scope of

**production of directly acting spring loaded safety valves
for hydraulic fluids**

acc. to EC Type-Examinations

The audit with the report number IS-DBB-MUC-Q-031-13 proves that the
quality assurance system fulfils the PED requirements.

The manufacturer is authorized to provide the pressure equipment
produced within the scope of the assessed quality assurance system with
the following Notified Body number:

CE 0036

Certificate No.: DGR-0036-QS-843-13

valid until August 11th, 2016

Mannheim, July 10th, 2013

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Mannheim, John

Notified Body No.: 0036

Member of
CONFEDERATION EUROPEENE



D'ORGANISMES DE CONTROLE

TÜV SÜD Industrie Services - PED-QA-Certification Body - 68167 Mannheim - Germany

TÜV®



ZERTIFIKAT CERTIFICATE

(Konformitätsbescheinigung) / (of conformity)

EG-Baumusterprüfung

EC type-examination
nach Richtlinie 97/23/EG / according to directive 97/23/EC
Zertifikat-Nr. / Certificate No.: 07 202 1042 Z 0462/1 3/D

Name und Anschrift des Herstellers
Name and address of bestm/
manufacturer: **HAWE Hydraulik SE**
Streitfeldstraße 25
D-81673 München

Hiermit wird bescheinigt, dass das unten genannte EG-Baumuster die Anforderungen der
Richtlinie 97/23/EG erfüllt. We hereby certify that the type examination mentioned below fulfills the requirements
of directive 97/23/EC.

Geprüft nach Richtlinie 97/23/EG
Tested according to 97/23/EC

Prüfbericht-Nr. / Test report No.:
1042 P 0462/13/D

Beschreibung des Baumusters
(Druckgerät):
Description of type (pressure equipment):
Sicherheitsventil
direct wirkend, federbeistellt
Typen MVX, MVPX, MVEX und MVSX in den Nenngrößen 4, 6 und 6
(Rohrleitungsanschluss-, Plattenbau- oder Einschraubventil),
Temperaturen zwischen -20°C und 80 °C
für Hydrauliksystemen gemäß Herstellerangabe
Eindringdruck zwischen 80 und 450 bar

EG-Baumusterprüfung (Modul B)
EC type-examination (module B)

1042 P 0462/13/D

Sicherheitsventil
direct wirkend, federbeistellt
Typen MVX, MVPX, MVEX und MVSX in den Nenngrößen 4, 6 und 6
(Rohrleitungsanschluss-, Plattenbau- oder Einschraubventil),
Temperaturen zwischen -20°C und 80 °C
für Hydrauliksystemen gemäß Herstellerangabe
Eindringdruck zwischen 80 und 450 bar

HAWE Hydraulik SE,
Streitfeldstraße 25, D-81673 München
01.10.2022

Fertigungsstätte/Place of manufacture:
Gültig bis / valid until:

Hannover, 13.03.2013

Zertifizierungsstelle für Druckgeräte
der TÜV NORD Systems
GmbH & Co. KG

A. Hoyer
Dipl.-Ing. A. Hoyer

Benannte Stelle/ Notified Body, 0043



Mitglied der
member of
CONFEDERATION EUROPEENE
D'ORGANISMES DE CONTROLE

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Tel. +49 (0) 511 9986 1588
Fax +49 (0) 511 9986-1532
e-mail: mannmue@tuv-nord.de



Industrie Service



ZERTIFIKAT

Certificate

EG-Baumusterprüfung (Modul B) nach Richtlinie 97/23/EG
EC Type-examination (Module B) according to Directive 97/23/EC

Zertifikat-Nr.: IS-DDB-MAN-05-05-9992-002
Certificate No.:

**Name und Anschrift
des Herstellers:**
Name and postal address of manufacturer:

HAWE Hydraulik GmbH & Co KG
Streitfeldstraße 25
D-81673 München

Hiermit wird bescheinigt, daß das unten genannte EG-Baumuster die Anforderungen der Richtlinie 97/23/EG erfüllt.

We herewith certify that the type mentioned below meets the requirements of the Directive 97/23/EC.

Prüfbericht Nr.:
Test report No.:

P-IS-DDB-MAN-05-05-9992-002

Geltungsbereich:
Scope of examination:

Sicherheitsventil für Hydraulikanlagen, Typ SVX 42...
(Einstelldruck 80 – 430 bar)

Fertigungsstätte:
Manufacturing plant:

HAWE Hydraulik GmbH & Co KG
Streitfeldstraße 25
D-81673 München

TÜV Industrie Service GmbH
TÜV SÜD Gruppe
TÜV-CERT-Zertifizierungsstelle
für Druckgeräte

Mannheim, 18. Mai 2005
(Ort, Datum)
(Place, date)

Bitte beachten Sie die Hinweise auf der zweiten Seite.
Please note the remarks on the second page..


(Manfred Schlampp)

Benannte Stelle, Kennnummer 0036
Notified Body, No. 0036

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