



HP – PNEUMATICS

System Solutions for Industry

HP Pneumatics

Water- and Special- Fluid Hydraulics

Equipment for Road Safety Training Centres

Accessories for Tundish Systems

Fire Fighting Systems for Transformers

Live Line Washing Systems for Insulators

HL-Hydraulik GmbH

Kupferhütte 5C
D-57562 Herdorf

Tel: **+49 (0)2744-9324-0**
Fax: **+49 (0)2744-9324-56**

web: **www.hl-hydraulik.de**
e-mail: **schrupp@hl-hydraulik.de**

E1 JUN17



www.hl-hydraulik.de

HL Hydraulik GmbH

Kupferhütte 5c

57562 Herdorf

Telefon: +49 (0) 27 44-93 24-0

Fax: +49 (0) 27 44-93 24-56

E-Mail: schrupp@hl-hydraulik.de

HP Pneumatic (Drucklufttechnik)

VDEW empfohlene Druckluftsysteme und Komponenten bis 350 bar

HP Pneumatic

Electrical Industry (VDEW) recommended systems and components up to 350 bar



Wasser- und Sonderhydraulik

Edelstahl-Cartridgeventile und Vorsteuerungen bis 350 bar (800 bar), Nennweiten 2 bis 250 mm Entzunderungsventile, Druck- und Wegeventile, Sprühventile zur partiellen Walzenkühlung.



Water- and Special-Fluid Hydraulics

Stainless steel cartridges and pilot valves up to 350 bar (optional 800 bar), size 2 to 250 mm (08-10 inch).

Descaling valves, directional, check, flow and pressure control functions, spray valves for roll coolant systems.



Technik für Fahrsicherheitszentren

Innovative Technik zur Simulation kritischer Situationen im Straßenverkehr: Schleuderplatten, Fahrbahnbewässerungen, Wasserhindernissysteme

Equipment for Road Safety Training Centers

To simulate critical traffic situations.
Vehicle skidding devices, water film systems, water obstacles



Zubehör für Gießpfannenschieber

Komplette Schieber, Ersatz- und Verschleißteile

Accessories for Tundish Systems

Complete tundish valves, spares and maintenance parts



Feuerlöschsysteme für Transformatoren

Fremdenergie-unabhängige Wassersprühsysteme

Fire Fighting Systems for Transformers

Water spraying systems for operation independent from an external power supply

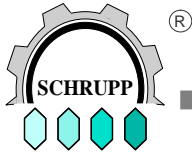


Isolatorenreinigungssysteme

Stationäre Wassersprühsysteme zur Reinigung unter Spannung

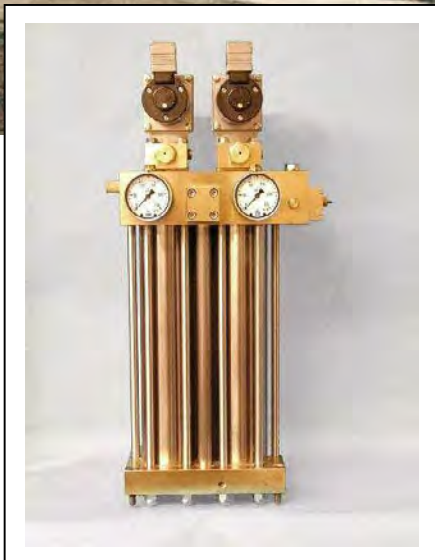
Insulator Cleaning Systems

Water spraying systems for stationary live electrical line cleaning



HP – PNEUMATICS

System Solutions for Industry



HP Pneumatics
Water- and Special- Fluid Hydraulics
Equipment for Road Safety Training Centres
Accessories for Tundish Systems
Fire Fighting Systems for Transformers
Live Line Washing Systems for Insulators

HP – PNEUMATICS

System Solutions for Industry



Traditional Valves

For high voltage breaker systems, accumulator safety functions and industrial applications up to 350bar.

Gas Dryer Stations

For laboratories and industrial productions with a need for continuous high quality in the compressed air supply.

For high pressure breathing air in diving and rescue systems.

For high voltage breaker systems to prevent corrosion and icing.

Pressures up to 350bar and dew points below -50°C can be realized.



Valves and Systems

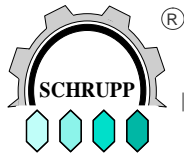
Modular designed components and manifolds in cartridge-technology for industrial applications. Pressures up to 350bar, sizes from 4 to 100mm.

High flexibility

Compact design

Reduction of maintenance and interruption time





HP-PNEUMATICS

www.hl-hydraulik.de

Traditional Valves



Manual Shut-Off and Check Valves

Type

PN 64 - DN 15, 25

HAV 15, HAV 25

PN 350 - DN 8

HAV 08



Pressure Maintaining and Pressure Maintaining Check Valves

Type

PN 60/350 - DN 16

DHV 16/12

PN 400 - DN 5

DHV 05, DRV 05



Safety Valves

Type

PN 350 - DN 6

SVE 06

PN 40 - DN 30/15

SVE 30/15



Safety Devices

Type

PN 64 – DN 20

SHE 06

PN 200 – DN 10

SHE 20



Pressure Reducing Valves

Type

PN 200 – DN 8

DMV 08

PN 40 – DN20

DMV 20

Systems and Cartridge Technology



Cartridge Program Directional, Sluice Valves

Type

PN 400 – DN 6

WEV 06

PN 250 – DN16

WEV 16



Gas Dryer

Type

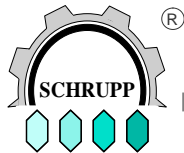
PN 350bar

Q 1000L/min /1400L/min

GTR 10, GTR 14

Q 1100-3300L/min

GTF



**HAND OPERATED VALVES
TYPE HAV**

www.hl-hydraulik.de

Hand operated valves of the Series HAV provide leakfree operation for high pressure pneumatic or water service. Their robust construction and special adjustable spindle-sealing allow operation under extreme conditions with a very long lifespan. The valves can accept flow in both directions.

Product Range:

NG 8mm PN 350bar

NG 15mm PN 64bar

NG 25mm PN 64bar

Accessories:

Reduction from NG 15 to NG 10 with outside-screw thread M18 x 1.5

Tube fitting connection to Gal. ZN 1201 DIN 50961

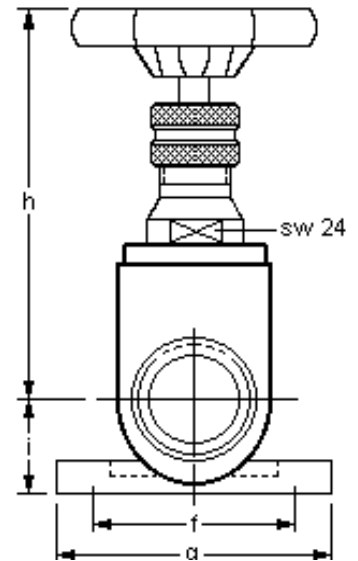
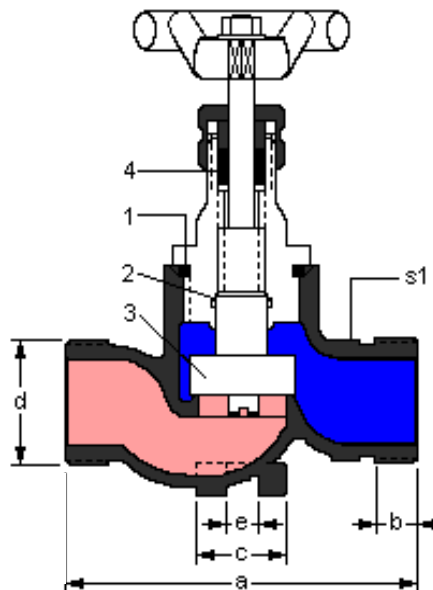


Ordering Information:

HAV 15 ND15mm PN64bar

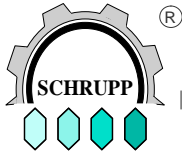
HAV 25 ND25mm PN64bar

= low pressure
 = high pressure



Type	DN	Productno.	Socket *	Vent	a	b	c	d	e	l	g	h	i	S1	D Pipe	Mass Kg
HAV	15	160523			80	9	-	M26x1,5	-	-	-	112	19	24	15/18	0,55
HAV	15	160525*	X		80	9	17	M26x1,5	8	44	60	112	19	24	15/18	0,59
HAV	15	160524		X	80	9	-	M26x1,5	-	-	-	112	19	24	15/18	0,55
HAV	15	160526*	X	X	80	9	17	M26x1,5	8	44	60	112	19	24	15/18	0,59
HAV	25	160527			105	12	-	M36x2	-	-	-	113	25	36	25/28	0,89
HAV	25	160528		X	105	12	-	M36x2	-	-	-	113	25	36	25/28	0,89

* on request



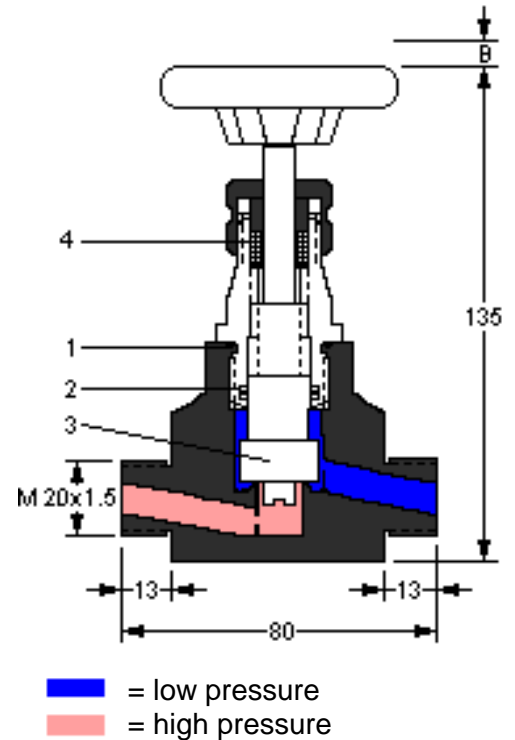
**HAND OPERATED VALVES
TYPE HAV**

www.hl-hydraulik.de

Ordering Information HAV 08 - 504242

ND 8mm PN 350bar

Productno.: 504242



Spare Parts Kit

Consisting of:

Pos	name
1	O-ring
2	U-ring
3	disk
4	Seal kit

Ordering Information

HAV 15 VTS – 160523-92

HAV 25 VTS – 504242-92

Accessories

HAV 08

Tube fitting connection per

Gal. ZN 1201 DIN 50961 for tube D = 8/10mm

Order no.: **HAV 08 EOVS**

HAV 15

Tube fitting connection per

Gal. ZN 1201 DIN 50961 for tube D = 15/18mm

Order no.: **HAV 15 EOVS**

Reduction M26x1,5 to M18x1,5 male thread

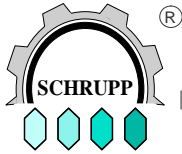
Orderno.: **HAV 15 RED10**

HAV 25

Tube fitting connection per

Gal. ZN 1201 DIN 50961 for tube D = 25/28mm

Order no.: **HAV 25 EOVS**



**NON RETURN VALVES
TYPE RSV**

www.hl-hydraulik.de

PN 64

DN 15 und DN 25

Includes EO tube fittings

Gal. ZN 1201 DIN 50961

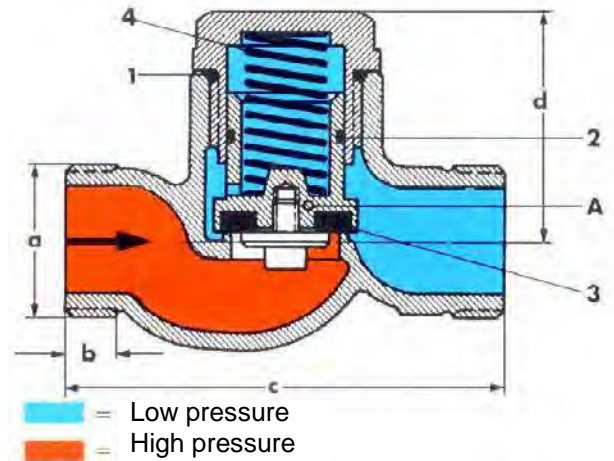


DN	Seat	a	b	c	d	Mass Kg	Partno.
15	soft	M26 x 1,5	9	80	60	0,4	160535
25	soft	M36 x 2	12	105	58	0,5	160537

Ordering Information

RSV 15 – 160535

Opening pressure 2bar



PN 100

DN 16 und DN 25

Includes EO tube fittings

Gal. ZN 1201 DIN 50961

DN	Thread connection	length
10	M 20 x 1,5/PN200	80
25	M 36 x 2/PN100	85



Ordering Information

RSV 10 – 200(max operating pressure)



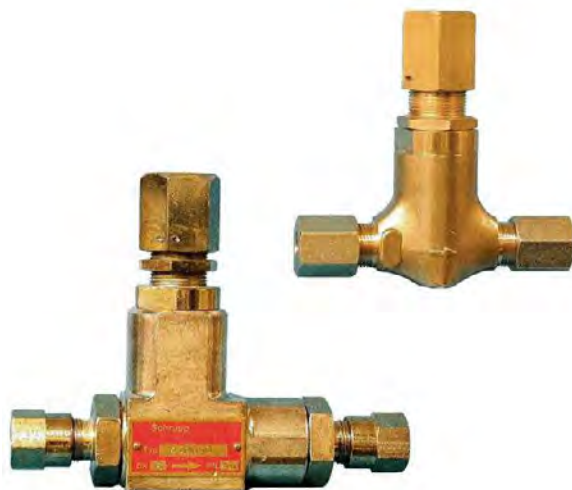
PRESSURE MAINTAINING VALVES TYPE DHV, DRV

www.hl-hydraulik.de

Pressure Maintaining and Pressure Maintaining Check Valves series DHV and DRV are mounted between the condenser and the compressed air vessel. These valves maintain a constant pressure at the condenser and help to facilitate water separation from the air.

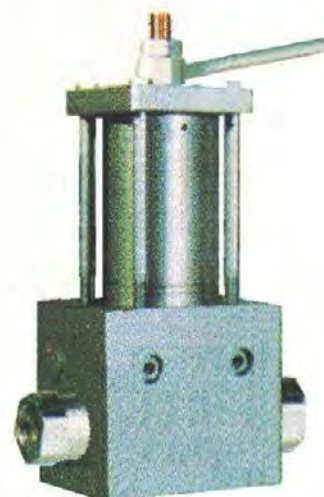
The higher the pressure at the valve, the better the water-separation.

Their robust construction allows their use under extreme conditions with a very long lifespan.

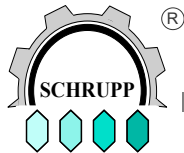


Ordering Information

- DHV 16- 451263** Pressure Maintaining Valve ND16mm PN 15-60bar
- DHV 12- 451262** Pressure Maintaining Valve ND12mm PN 30-350bar
- DHV 05- 504270** Pressure Maintaining Valve ND 5mm PN 60-350bar
- DHV 05- 504270-02** Pressure Maintaining Valve ND 5mm PN 15-70bar
- DHV 05- 504270-04** Pressure Maintaining Valve ND 5mm PN 300-400bar
- DRV 05- 450050** Pressure Maintaining Check Valve ND 5mm PN 60-350bar
- DRV 05- 450050-02** ND 5mm PN 15-70bar

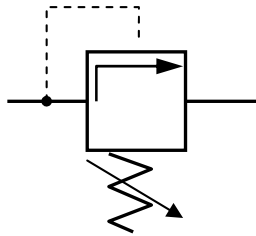


Technical Data	DHV 05	DRV 05	DHV 12	DHV 16	
Flow rate with 5bar dp	-	-	750	1500	l/min
with 10bar dp	160	160	2500	5000	l/min
with 15bar dp	-	-	4600	9200	l/min
with 220bar dp	3500	3500	-	-	l/min
Minimum pressure difference	10	10	5	5	bar
Max. operating pressure	350	350	350	60	bar
Pressure range	15-350	15-350	30-350	15-60	bar
Mass	1	1,8	12	12	Kg
Housing material	MS	MS	MS	MS	
Seals	Buna-N	Buna-N	Buna-N	Buna-N	
Tube-connection size	12	12	20	28	mm



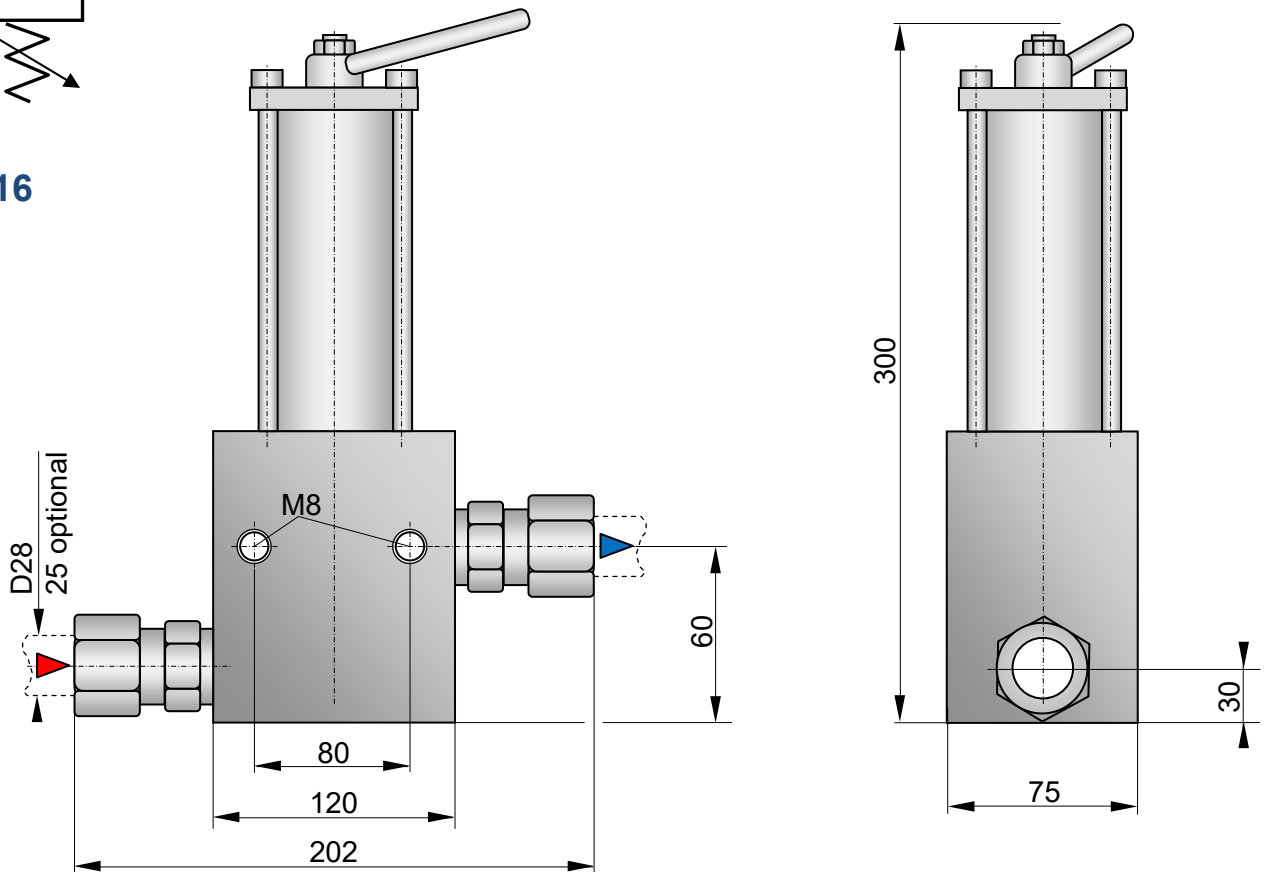
**PRESSURE MAINTAINING
VALVES TYPE DHV, DRV**

www.hl-hydraulik.de

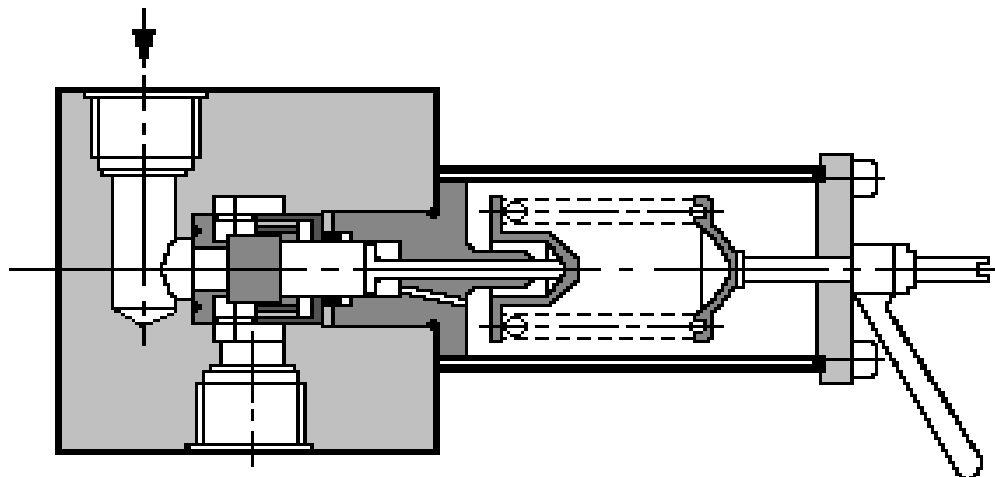


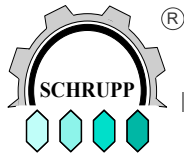
Opening Pressure Adjustment

DHV16



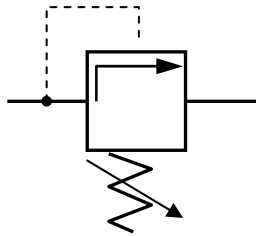
Order no. Seal Kit: DHV 16 – VTS 451263-92





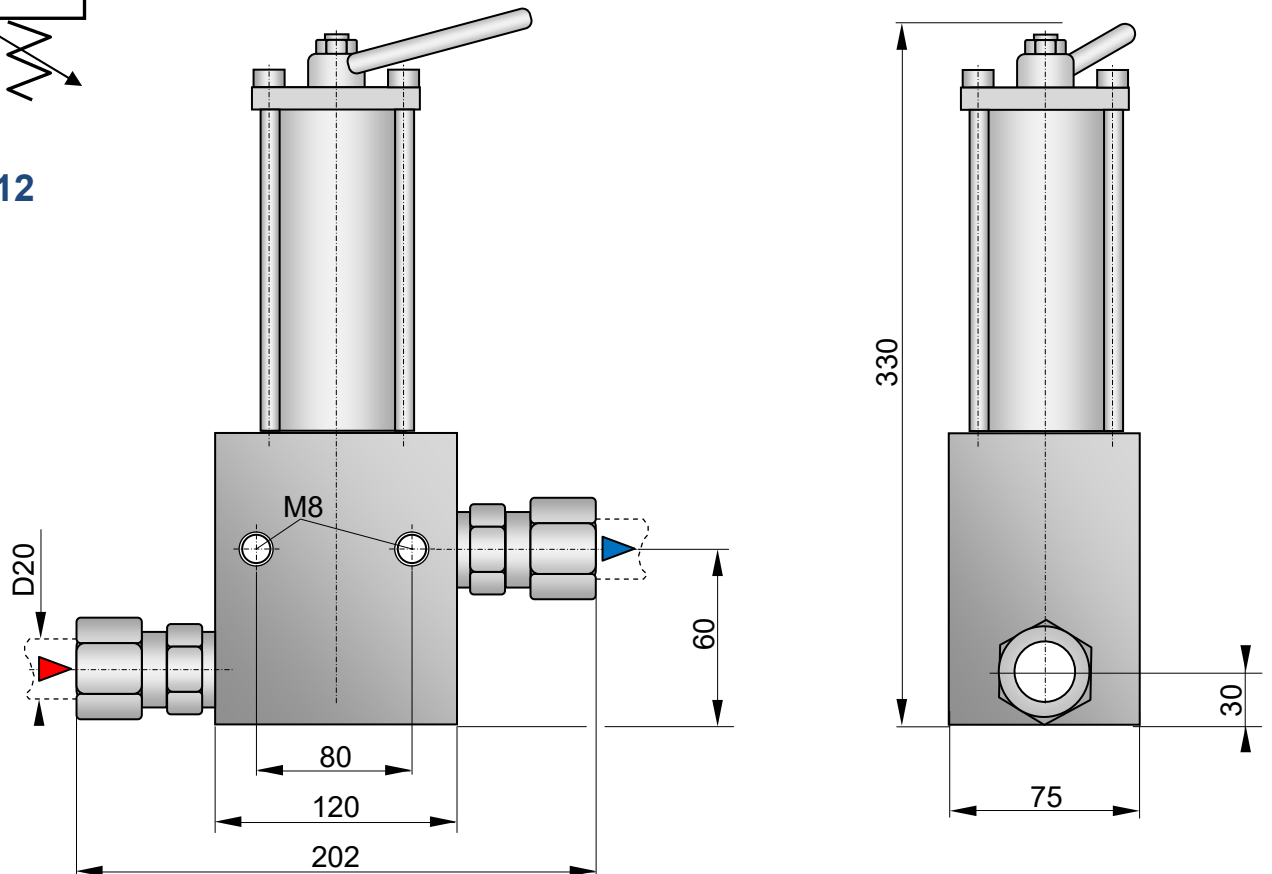
**PRESSURE MAINTAINING
VALVES TYPE DHV, DRV**

www.hl-hydraulik.de

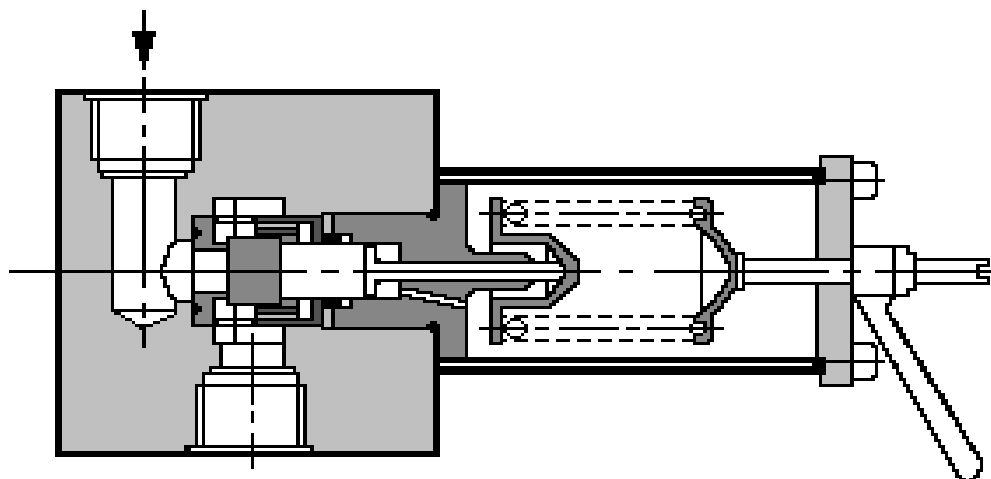


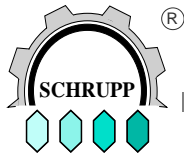
Opening Pressure Adjustment

DHV12



Order no. Seal Kit: DHV 12 – VTS 451262-92

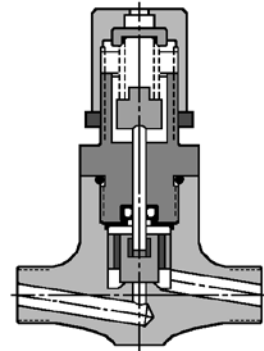
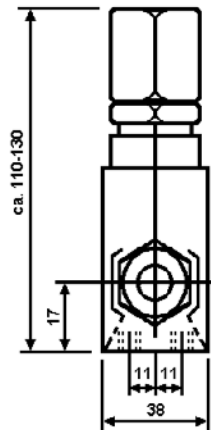
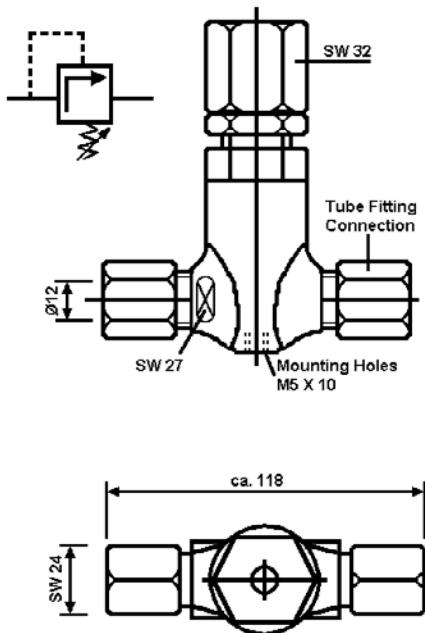




PRESSURE MAINTAINING VALVES TYPE DHV, DRV

www.hl-hydraulik.de

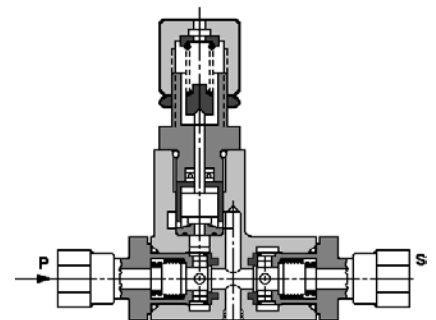
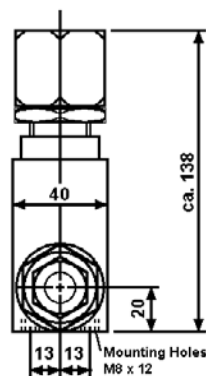
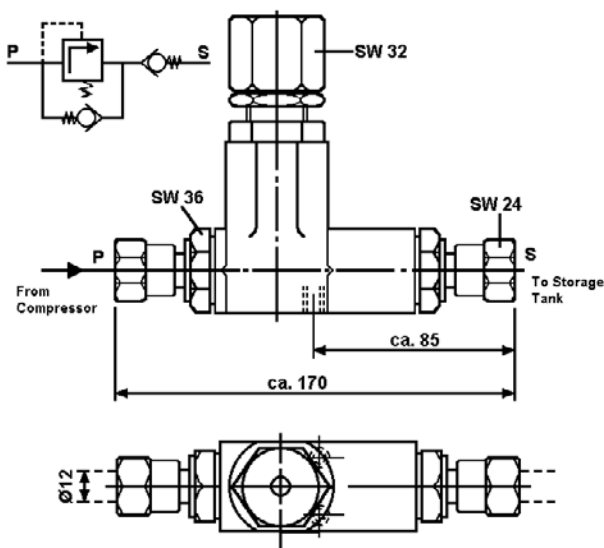
DHV 05



**Ordering Information
Spare Parts Kit:**

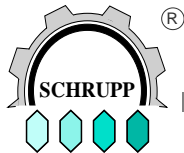
DHV 05 VTS – 504270-92

DRV 05



**Ordering Information
Spare Parts Kit:**

DRV 05 VTS – 450050-92

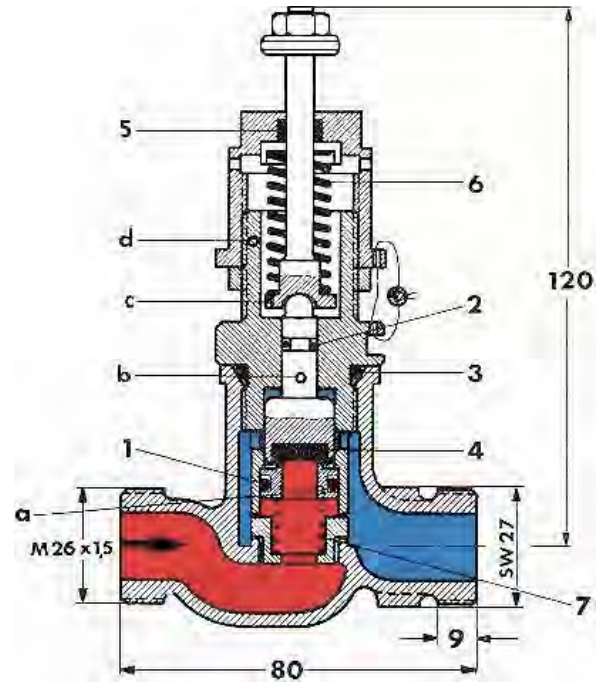


PRESSURE MAINTAINING VALVES TYPE DHV, DRV

www.hl-hydraulik.de

Pressure Maintaining Valves are mounted between the condenser and the compressed air vessel. These valves maintain a constant pressure at the condenser and help to facilitate water separation from the air.

The higher the pressure at the valve, the better the water-separation.
Pressure Maintaining Valve includes EO fittings Gal. Zn 1201 DIN 50961



Mass 5kg

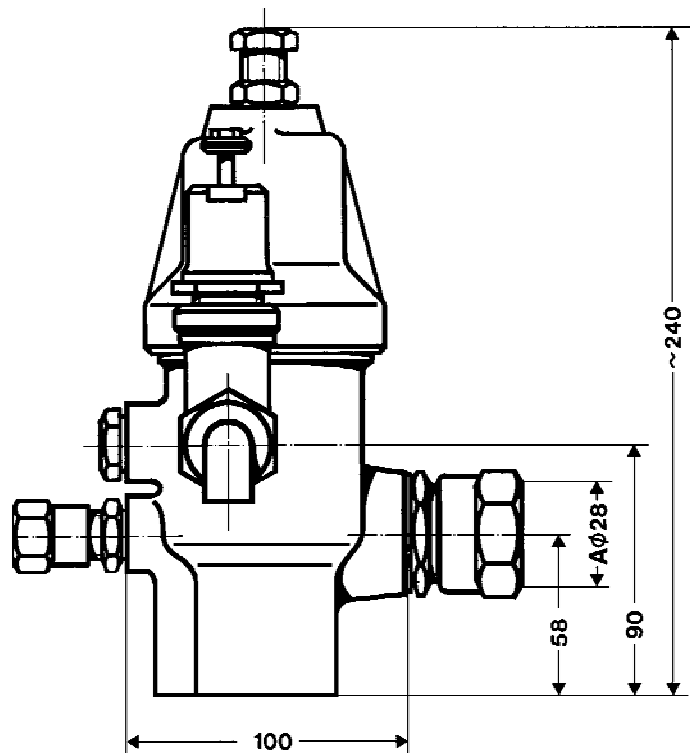
Max operating pressure 45 bar

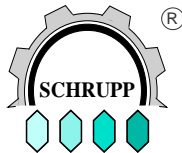
Soft seat

Ordering code: DHV 08 - 160540

Example:

Valve combination DMV 08 and DHV 06. This combination can be used to reduce a pressure in a system and to protect the secondary circuit against overpressure.





PRESSURE MAINTAINING VALVES TYPE DHV, DRV

www.hl-hydraulik.de

Pressure Maintaining Check Valves Type DHR05 include an Pressure Maintaining Valve Type DHV05 and an check valve. This combination is an economical option to individual piped valves. DHR valves are available with different ports so that they can be easily adapted to existing systems.

Pressure Maintaining Check Valves series DHR are mounted between the condenser and the compressed air vessel. These valves maintain a constant pressure at the condenser and help to facilitate water separation from the air.

As higher the pressure at the valve is, as better the water-separation.

Their robust construction allows their use under extreme conditions with a very long lifespan.



Ordering Information

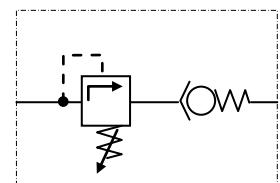
- DHR 05 - 851714** Pressure Maintaining Check Valve with connections for pipes outside dia 12mm
- DHR 05 - 851741-01** DHR, Inlet: for pipe outside dia 12mm, Outlet: G 3/8" female port
- RSV 05 - 851716** Check Valve inlet: DHV connection port, outlet: for pipe outside dia 12mm
- RSV 05 – 851716-01** Check Valve inlet: DHV connection port, outlet: G 3/8" female port

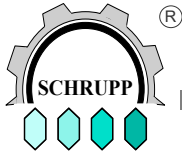
Technical Data

DHR 05

Flow rate at 10 bar dp	160	l/min
at 220bar dp	3500	l/min
Medium	compr.air	others on request
Min pressure drop	10	bar
Max. operating pressure	350	bar
Adjustment	15-350	bar
Mass	15	N
Housing material	MS	
Seals	Buna-N	

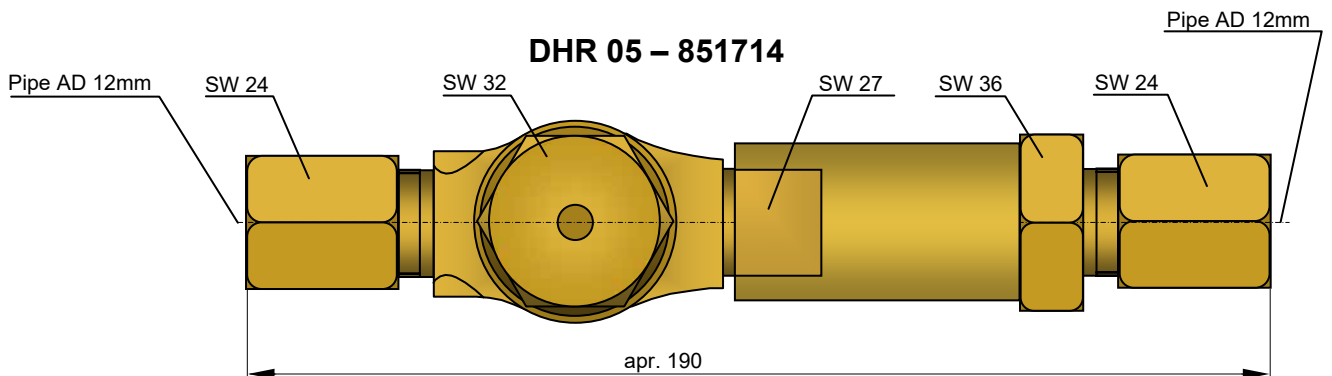
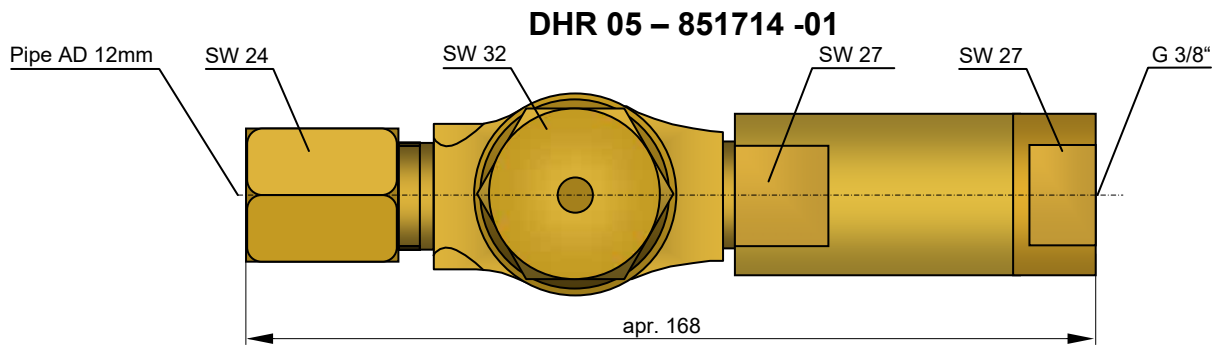
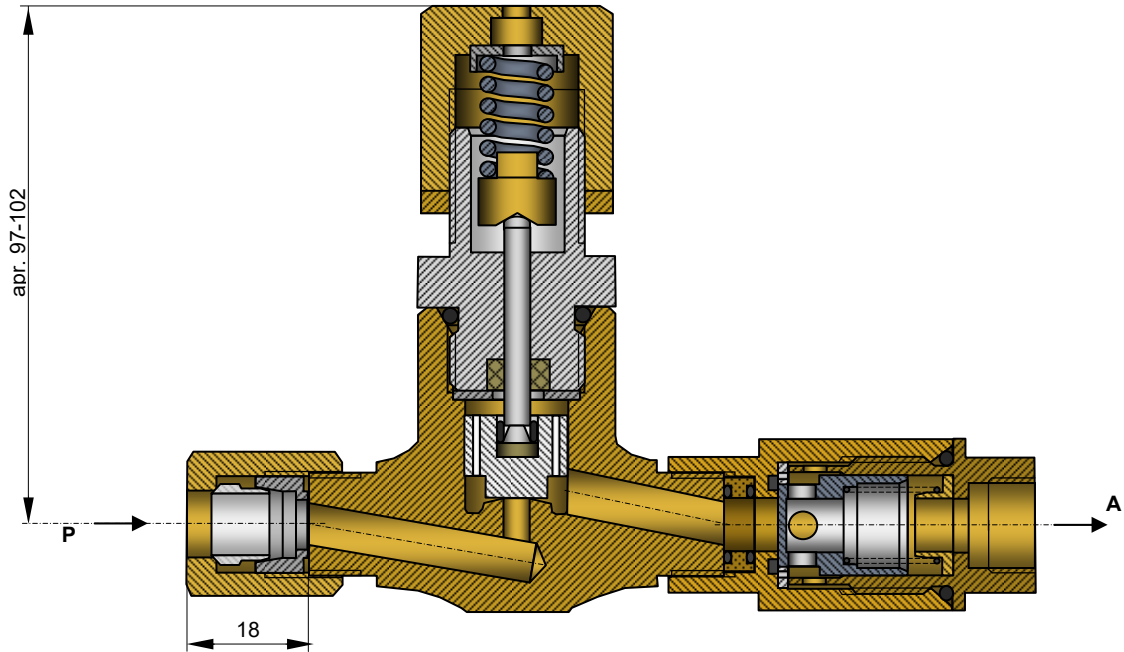
Functional Diagram

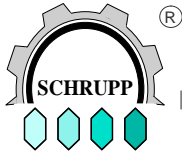




**PRESSURE MAINTAINING
 VALVES TYPE DHV, DRV**

www.hl-hydraulik.de





SAFETY VALVES TYPE SVE 06

HL Hydraulik GmbH

Kupferhütte 5C
D-57562 Herdorf
Tel +49(0)2744-9324-0
Fax +49(0)2744-9324-56
schrupp@hl-hydraulik.de

www.hl-hydraulik.de

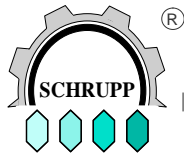


SAFETY VALVE TYPE V600 ORDERING NO SVE 06 - 087202

Application: Schrupp safety valves type SV06-1 and SV06-2 are spring loaded valves designed to protect compressors from over-pressurization.

Schrupp proportional safety valves can also be used to protect pressure vessels containing non-poisonous gases.

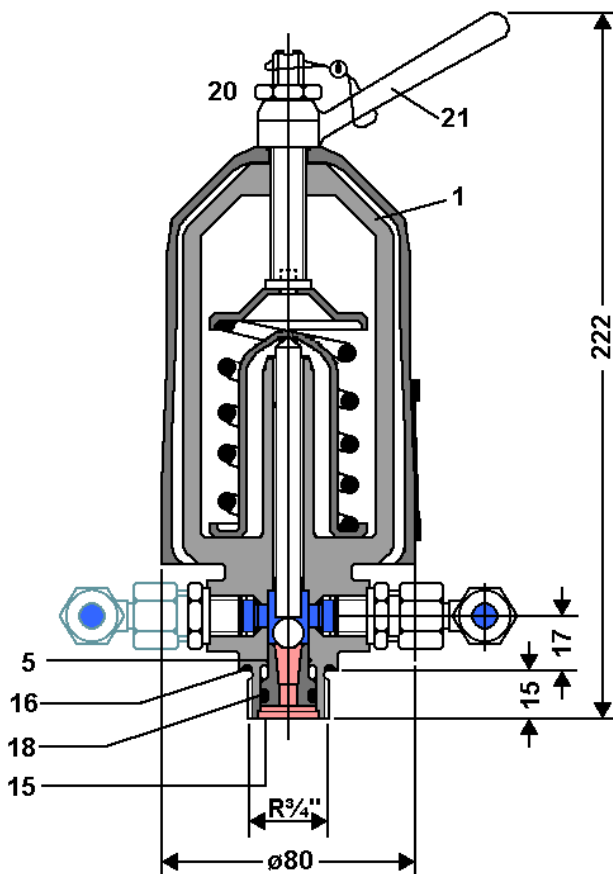
- Special characteristics:** TUV approval up to 350 bar
Acc. To 97/23/EC gases Group 2, Category IV, Certificate according to Modul B (TÜV)
Low hysteresis and good operational control even under adverse conditions.
Compact dimensions
Robust design
Easy to maintain
- Technical Data:** Size: DN6
Operating Pressure: 55 -350bar
Flow rate in L/min: 32.2 x p(bar)
Ambient Temperature: 0-70 degrees C.
Manufactured according to AD specification no. A2 for proportional safety valves.
- Notice:** Valves are shipped with plugged ports. Please remove before installation



**SAFETY VALVES
TYPE SVE 06**

www.hl-hydraulik.de

■ = Primärdruck
■ = Sekundärdruck



Functional Description:

Port R is connected to the compressor or high pressure vessel. In the event of over-pressure, the ball lifts from the seat and bleeds pressure through the side outlet port. The elbow fittings can be arranged to send the air in any direction. To check valve function, turn lever #21 counter-clockwise to valve housing, #1. This test will not affect the pressure set point.

The set pressure can be adjusted by turning lever #21 after loosening locking nut #20. (Turn clockwise to increase pressure set point.) After adjustment, re-tighten locking nut #20. The valves do not require regular servicing. Periodically, tests are required. according to 97/23EC.

The valve can be ordered for different pressure adjustment ranges

SVE06 - 087201	adjust. pressure	55 - 66bar
SVE06 - 087199	adjust. pressure	66,1- 85bar
SVE06 - 087202	adjust. pressure	85,1-110bar
SVE06 - 087200	adjust. pressure	110,1-135bar
SVE06 - 087400	adjust. pressure	135,1-150bar
SVE06 - 087204	adjust. pressure	150,1-175bar
SVE06 - 087203	adjust. pressure	175,1-220bar
SVE06 - 160253	adjust. pressure	220,1-250bar
SVE06 - 087975	adjust. pressure	250,1-350bar

Ordering Information

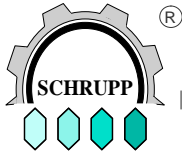
SVE 06 - 087400

Type —
Part number —

Ordering Information seal kit:

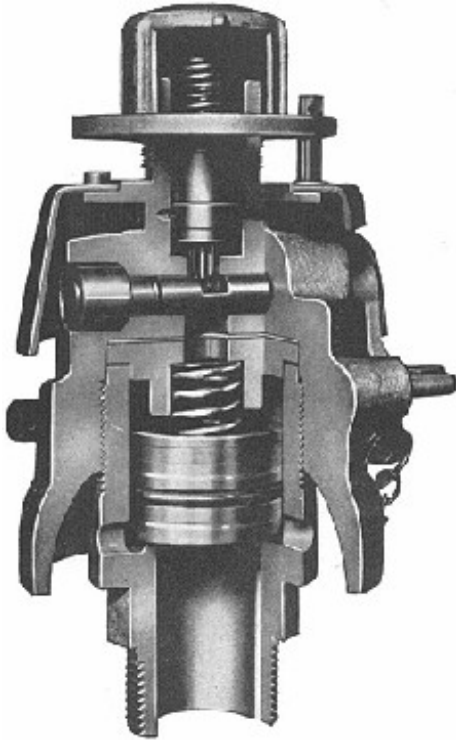
Part no.: SVE 06 - 087400 VTS

- Item 5 Seat
- Item 15 O-Ring
- Item 16 O-Ring
- Item 18 Back Ring



**SAFETY VALVES
TYPE SVE 30 (POP OFF)**

www.hl-hydraulik.de



Safety Valves Type S650:

Ordering no. SVE 30

Application: The Schrupp SV30 safety valve is a spring loaded valve used to protect vessels containing non-toxic gases from over-pressurization. Upon reaching the set pressure, the valve opens fully and immediately.

Special Features:

TUV approval up to 44 bar
Acc. To 97/23/EC gases Group 2, Category IV, Certificate according to Modul B (TÜV),

Low hysteresis and good operational control even under adverse conditions.

Compact dimensions
Robust design
Easy to maintain

Technical Data:

Nominal Size: DN 30 mm
Set pressure from 4.5 to 44 bar
Flow rate: $4750 \times p$ in liter/min
Mass: approximately 3.2 kg

Ordering Information

SVE30 – 41,1- 44 - 089062

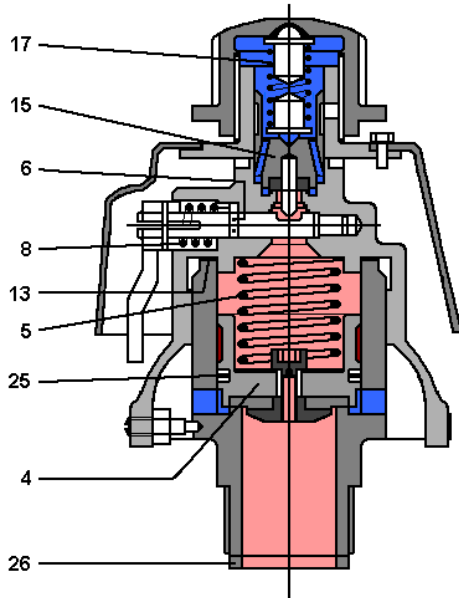
Druckbereich [bar]	
4,5	- 6
6,1	- 8
8,1	- 13
13,1	- 16
16,1	- 21
21,1	- 25
25,1	- 30
30,1	- 35
35,1	- 41
41,1	- 44

Ordering Information seal kit:

SVE30 VTS – 089062-92

**SAFETY VALVES
TYPE SVE 30 (POP OFF)**

www.hl-hydraulik.de



Red = Primary Pressure
Blue = Relieved Pressure

Part	Qty	Designation
4	1	Piston
5	1	Compression spring
6	1	O-Ring
8	1	Torsion spring
13	1	Seal 45/58 x1
15	1	Valve insert
25	1	O-Ring
26	1	Seal 30/39 X 5

Maintenance and Operation:

1. Shipping and Storage

During transportation or storage, the valve should be locked in the open position by use of the manual handle. All ports must be plugged. To open the valve, the lever should be moved against the spring force to the end position and fixed by the holding clamp.

2. Installation

On pressure vessels or pipes with minimum inside diameter of 1 inch. For installation, use only original seals; never use glue or other additional seal materials.

3. Adjustment of Set Pressure

After removing the pin the set pressure can be changed, by turning the thread cap clockwise (increases set pressure) or counter-clockwise (reduces set pressure).

4. Noise protection

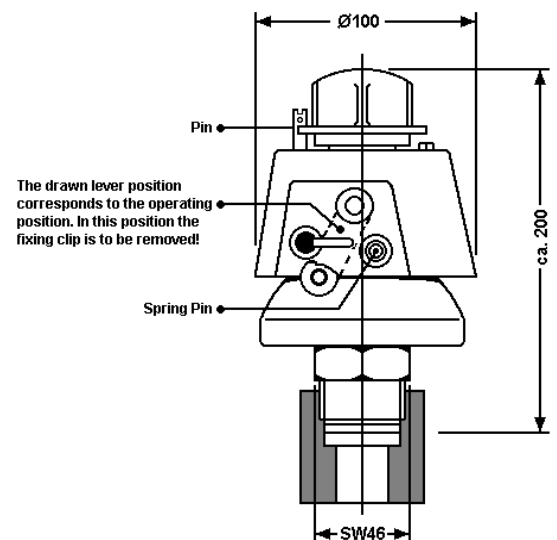
Because of the possible production of high noise levels, we recommend the use of an ear protection.

**Ordering Information Spare Part Kit
SVE 30 VTS – 089062-92**

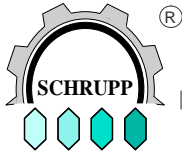
Mode of operation:

Closin With increasing pressure the valve insert (15) rises out of its seat and vents air to atmosphere. Then the piston (4) rises out of its seat and the valve opens.

Open: After blowing the pressure off over the piston (4) the valve insert (15) closes fast; the closing process of the piston (4) is delayed until the pressure build-up over the piston (4) escapes through the drilling in the piston. Thus, closing of the piston (4) takes place not via the strength of the spring (5), but with the pressure on the differential area of the piston (4) opposite the valve seat.



Technical data subject to change



**SAFETY VALVES
TYPE SVE 10**

www.hl-hydraulik.de



TÜV approved Safety Valve for compressed air.

97/23/EC, Group2, Category IV

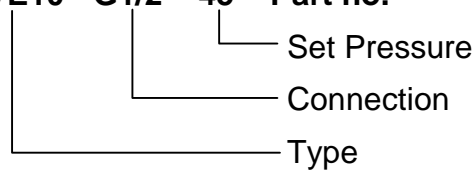
Set Pressure: 0,3 – 50 bar

Operating Temperature: max 180°C

DN 10mm

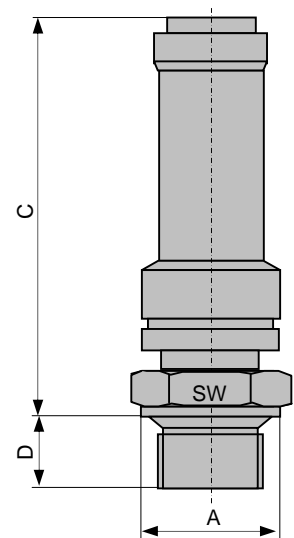
Ordering Information

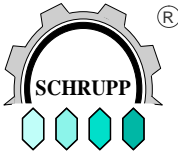
SVE10 - G1/2 - 45 - Part no.



Part no.	Connection	Pressure	SW	A	C	D
850803	G3/8"	0,3 – 8,5 bar	27	22	75	12
850803		8,6 – 40 bar	27	22	95	12
850803		40,1– 50 bar	27	22	120	12
850804	G1/2"	0,3 – 8,5 bar	27	26	75	14
850804		8,6 – 40 bar	27	26	95	14
850804		40,1– 50 bar	27	26	120	14
850805	G3/4"	0,3 – 8,5 bar	32	32	75	16
850805		8,6 – 40 bar	32	32	95	16
850805		40,1– 50 bar	32	32	120	16

Dimensions in mm





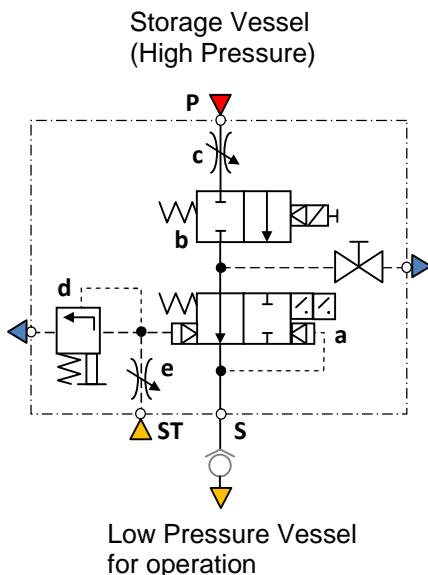
**SAFETY DEVICES
TYPE SHE**

www.hl-hydraulik.de

Safety devices of the type SHE are used to protect downstream storage vessels which are being fed by a higher operating pressure, against over pressurization. As opposed to the function of a typical safety valve, the Schrupp SHE valve protects the lower rated pressure vessel by closing the interconnection between the two vessels once the set pressure has been reached. In this way, the operational (low pressure) vessel is protected, while at the same time, maintaining the stored pressurized air necessary to ensure operation of the selected component, such as electrical switch gear.

The Schrupp SHE safety device includes the following elements:

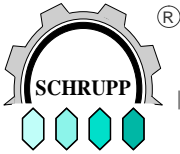
- a. Locking valve with electrical position indication switch.
- b. Solenoid actuated, pilot operated, 2/2 way sluice valve.
- c. Throttling Device.
- d. Pressure Relief Valve
- e. Pilot Throttle.
- f. Bleed Valve.



For safety reasons a check valve has to be installed at the S line.
Optional the safety device can be ordered with an integrated non return valve also.

Technical Data

TYPE	SHE MP	SHE HP	
Nominal size	20	10	mm
Primary pressure	64	64 - 200	bar
Secondary pressure	5 – 40	15 – 40	bar
Max flow rate	56,000	56,000	l/min
Mass	ca. 320	ca. 320	N
Nominal size of pressure relief valve	6	6	mm
Port P	M36 x 2	G 3/8"	
Port T	M36 x 2	M36 x 2	
Port ST connection for pipes with outside dimension:	10	10	mm
According to 97/23/EC, Group 2, Category IV			

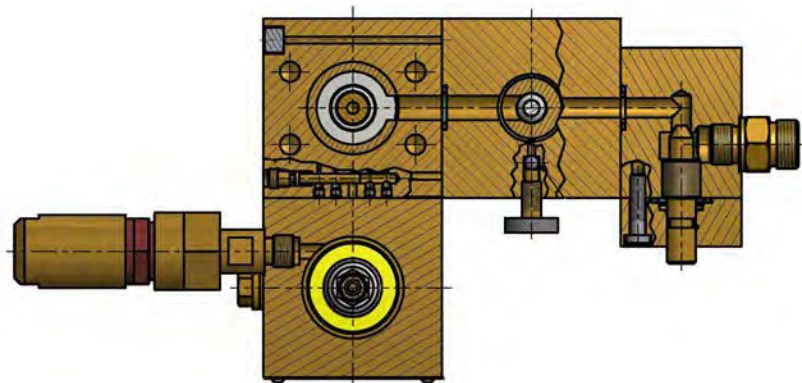
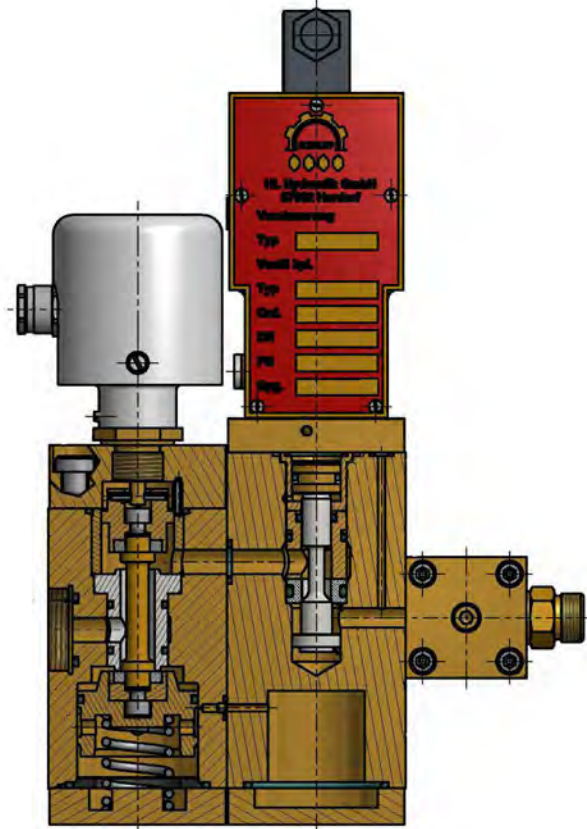
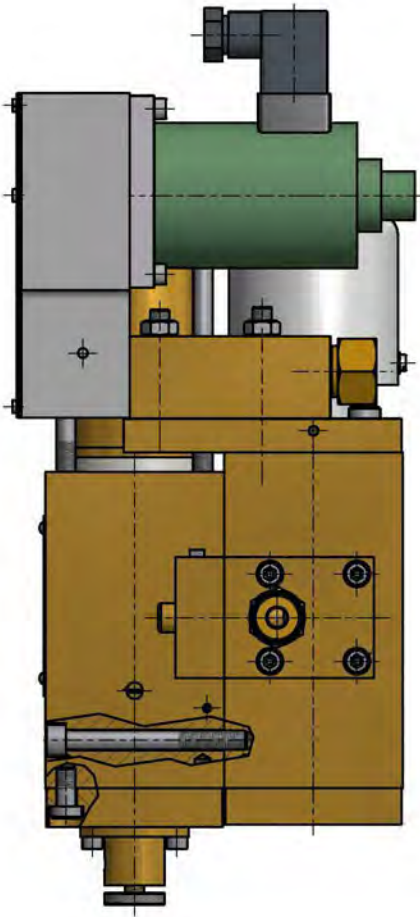


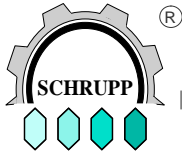
**SAFETY DEVICES
TYPE SHE**

HL Hydraulik GmbH

Kupferhütte 5C
D-57562 Herdorf
Tel +49(0)2744-9324-0
Fax +49(0)2744-9324-56
schrupp@hl-hydraulik.de

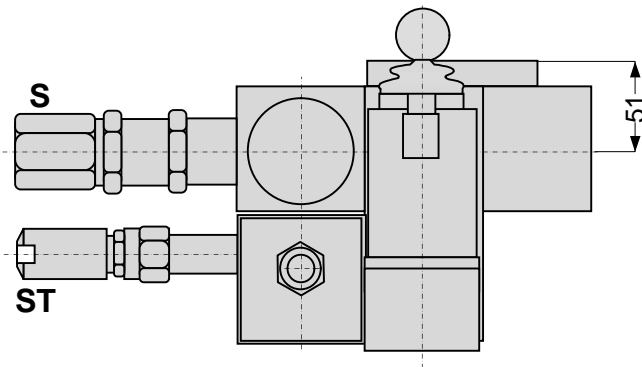
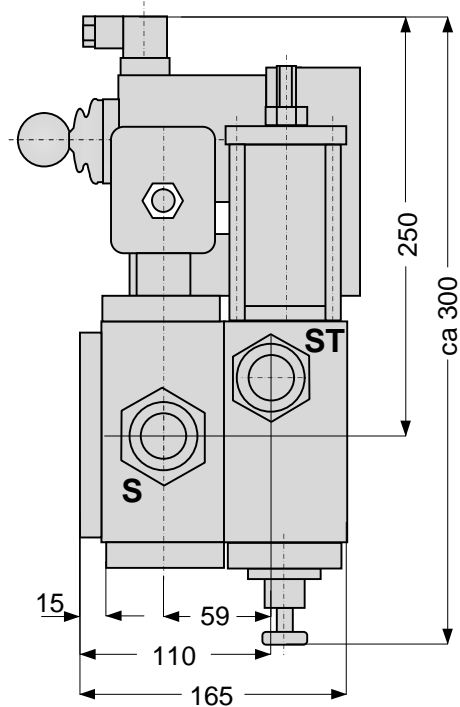
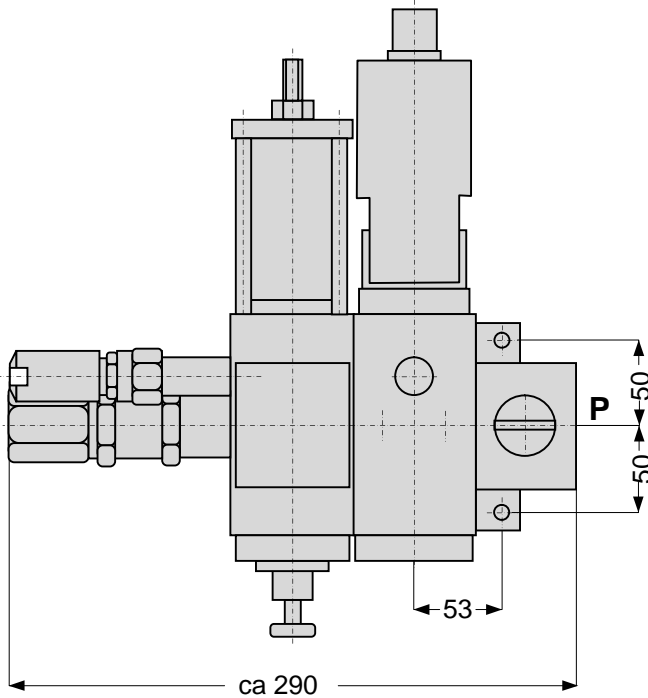
www.hl-hydraulik.de





**SAFETY DEVICES
TYPE SHE**

www.hl-hydraulik.de

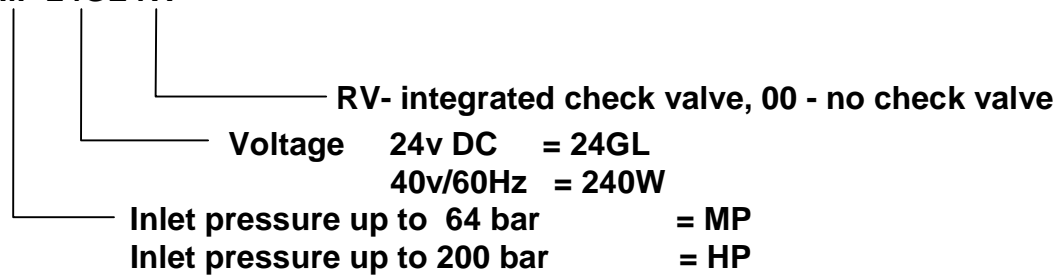


Port Connections

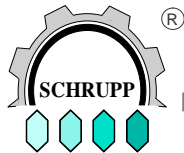
SHE MP	P, T	-	M36 x 2
	St	-	10 mm
SHE HP	P	-	G 3/8"
	T	-	M36 x 2
	St	-	10 mm

Ordering Information

SHE MP 24GL RV



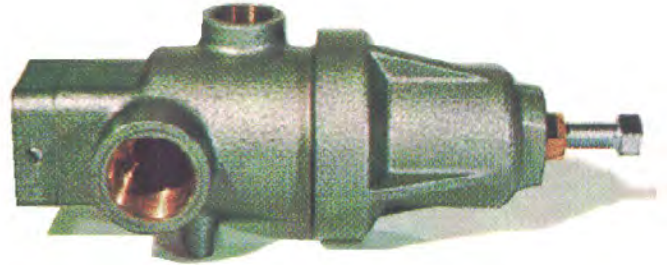
Spare parts kit: SHE MP 24GL VTS



PRESSURE REDUCING VALVES TYPE DMV 08

www.hl-hydraulik.de

Schrupp pressure reducing valves, type DMV08 (AP20380) are used to reduce pneumatic system pressure from a maximum primary pressure of 200 bar to a maximum secondary pressure of 60 bar. Upon reaching the adjusted outlet pressure, the leakfree Schrupp DMV08 closes. The robust design of the Schrupp pressure reducing valve is very compact and provides exact pressure control.



Technical Data

Nominal Size:	8mm
Inlet port:	G 3/8"
Outlet port:	G 1"
Max Primary pressure:	200bar
Max Secondary pressure:	60bar
Min Secondary pressure:	5bar
Flow rate 33,000L/min at 180bar dp	
Mass: ca. 45N	
Ambient Temperature 0-70°C	

Ordering Code

DMV 08 – 45 - 155308
(5-45bar Secondary press.)

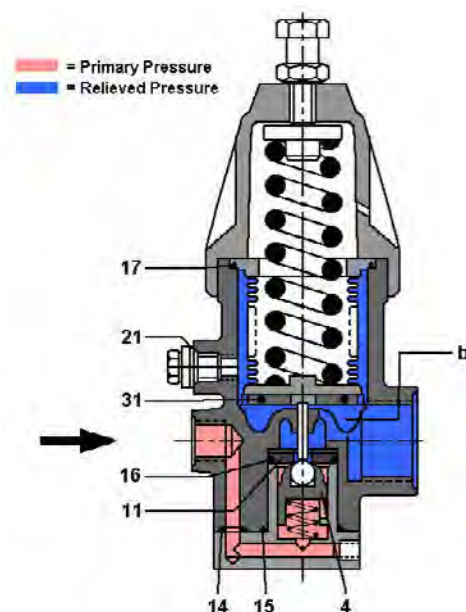
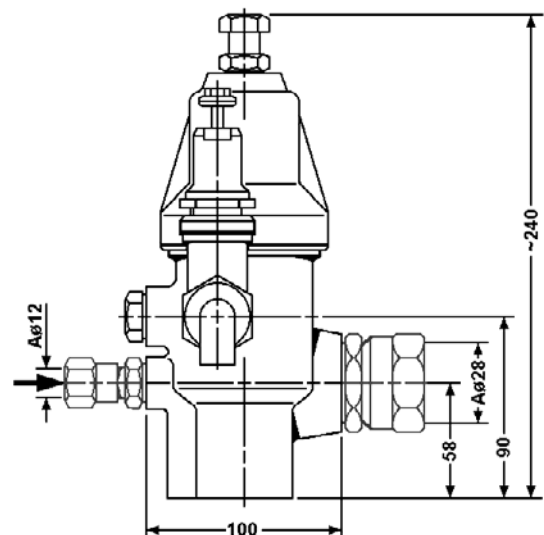
DMV 08 – 60 - 155324
(45-60bar Secondary press.)

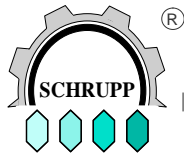
Spare Kit:

DMV 08 VTS

includes:

Pos	Stk	Description
4	1	Piston
11	1	Seat Ring
14	1	O-Ring
15	1	O-Ring
16	1	O-Ring
17	1	O-Ring
21	1	Seal
31	1	O-Ring





PRESSURE REDUCING VALVES TYPE DMV 20

www.hl-hydraulik.de

Schrupp pressure reducing valves, type DMV20 are used to reduce pneumatic system pressure from a maximum primary pressure of 40 bar to a maximum secondary pressure of 25 bar. Upon reaching the adjusted outlet pressure, the leakfree Schrupp DMV20 closes. The robust design of the Schrupp pressure reducing valve is very compact and provides exact pressure control.

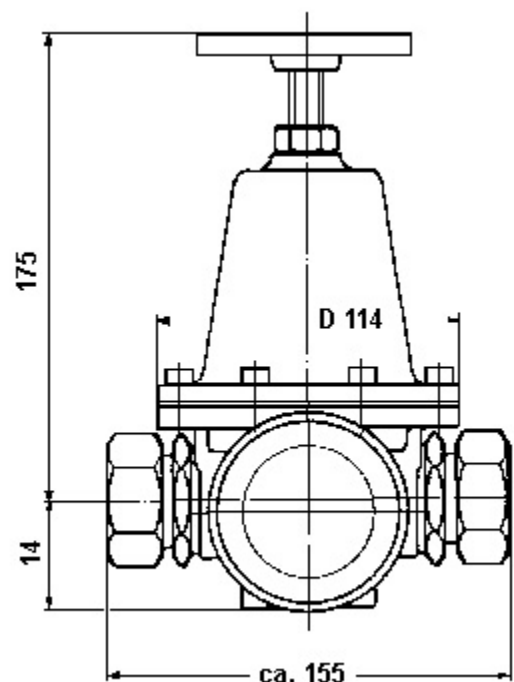


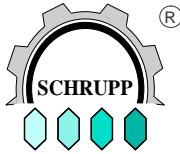
Technical Data

Size:	20mm
Inlet port:	G 1"
Outlet port:	G 1"
Max inlet-pressure:	40bar
Max outlet-pressure:	25bar
Min outlet pressure:	0,5bar
Flowrate	7.800L/min max
Mass:	apr. 4Kg
Temperature	0-60°C

Ordering code

DMV 20 - 453419





CARTRIDGE PROGRAM

www.hl-hydraulik.de



Stainless Steel Cartridge valves according to DIN24342

The valves are designed for use with water, water and oil emulsions, oil and gases. Their robust construction and compact design provide long life, ease of maintenance, and high performance.

These slip in cartridge type valves can be combined in many different ways to satisfy the requirements of a wide variety of applications. The sealed poppet design provides drop tight, leak free shut off.

Product range:

Cartridges for directional functions

Soft seated ND10 to 100 for compressed air and gases according to Group 2, 27/93/EG up to 350bar

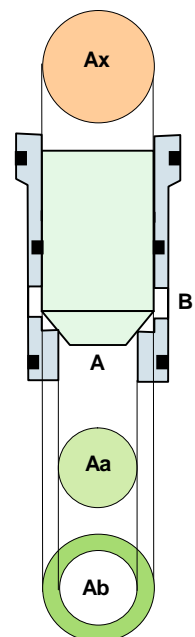
Functional description

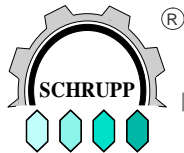
These valves are designed for use with special fluids:

- No metal to metal contact at the sliding surfaces.
 - the use of non-lubricating mediums is possible.
- All pressurized areas are separated by soft seals
 - for thin fluids and gases under high pressure.
- Special geometry and non-corroding material
 - for gases with an high humidity.

An important dimension for the function of cartridge valves is the surface ratio of the seat area A_a and the annulus area A_b to the pilot area P_x . Schrupp soft seated cartridge valves with metal support do have an ratio of 1:2 and can be used for flow in either direction.

Soft-seated valves are suitable for use in shut-off and directional functions. These valves are absolutely leak-free even for long-term operation in gas or high-pressure circuits.





CARTRIDGE PROGRAM

www.hl-hydraulik.de

Cartridge valves Type 6

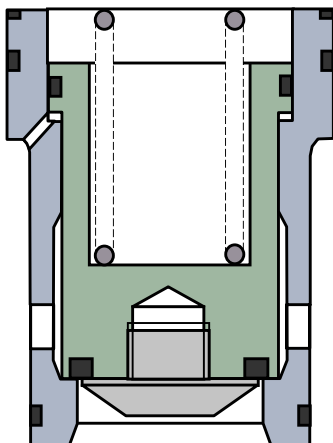
For directional and shut off applications
Dimensions according to DIN 24342
Material: stainless steel, soft seated, metal support
area ratio 1:2

Example / Order code

EO - 025 - 00 - 0.0 - 6D / S

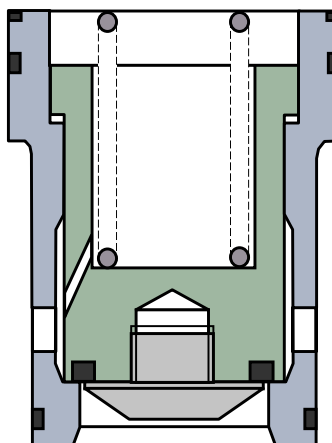
/ S = Standard design
/ R = Non return valve
/ A = Active valve

Size 010, 016, 025, 032, 040, 050, 063,
080, 100mm



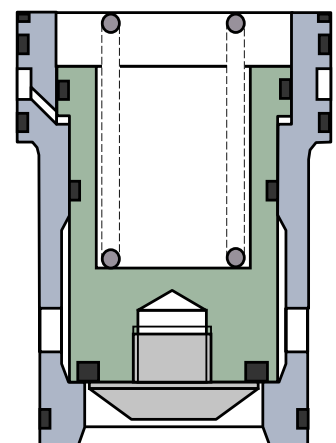
**Standard design
Type 6D / S**

350bar - ND 010 to 100
for water, oil and gas.



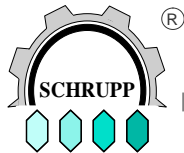
**Non return valve
Type 6D / R**

Up to 350bar - ND 010, 016,
025 for water, descaling water,
oil and gas.



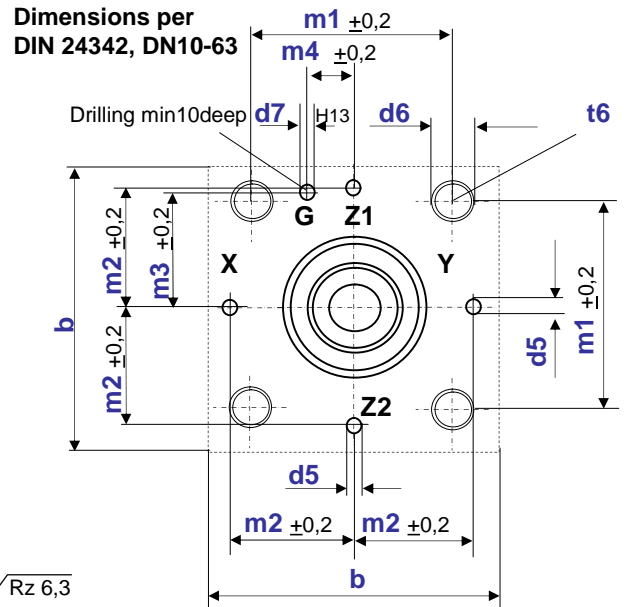
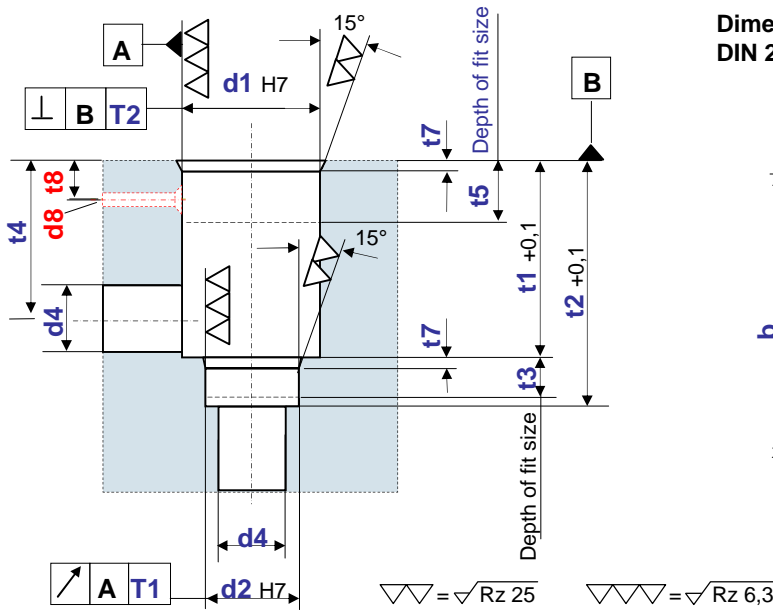
**Active valve
Type 6D / A**

Up to 350 bar - ND 16 to 100
for water, oil and gas

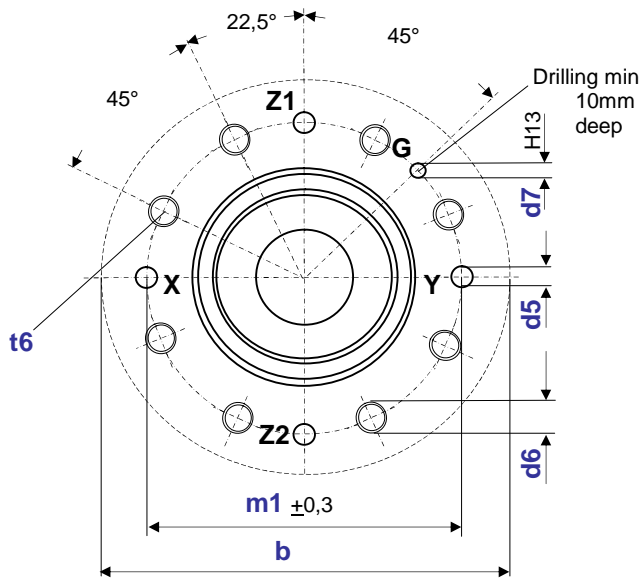


CARTRIDGE PROGRAM

www.hl-hydraulik.de

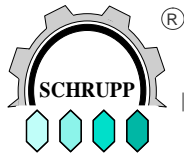


Dimensions per DIN 24342, DN80-100



DN	b	d1	d2	d4	d5	d6	d7	d8	m1	m2	m3	m4	t1	t2	t3	t4	t5	t6	t7	t8	T1	T2
10	52	20	16	10	3	M5	3	-	40	19	17	12	26	35	8	20	13	10	1,5	-	0,03	0,05
16	65	32	25	16	4	M8	4	4	46	25	23	10,5	43	56	11	34	24	20	2	13	0,03	0,05
25	85	45	34	25	6	M12	6	5	58	33	29	16	58	72	12	44	30	25	2,5	15	0,03	0,05
32	102	60	45	32	8	M16	6	5	70	41	35	17	70	85	13	52	34	35	2,5	21	0,03	0,1
40	125	75	55	40	10	M20	6	6	85	50	42,5	23	87	105	15	64	42	35	3	27	0,05	0,1
50	140	90	68	50	10	M20	8	8	100	58	50	30	100	122	17	72	46	40	4	30	0,05	0,1
63	180	120	90	63	12	M30	8	8	125	75	62,5	38	130	155	20	95	62	55	4	40	0,05	0,2
80	250	145	110	80	16	M24	10	10	200	-	-	-	175	205	25	130	88	45	5	55	0,05	0,2
100	300	180	135	100	20	M30	10	10	245	-	-	-	210	245	29	155	110	55	5	60	0,05	0,2

Details of the cavities for cartridge valve 6D/A (active) please see our separate datasheets



SLUICE OR DIRECTIONAL VALVES TYPE WEV

www.hl-hydraulik.de

2/2, 3/2 Directional Valves Type WEV 06

These robust and smooth operating valves can be used with compressed air, oil, water and emulsions. All ports can be pressurised. The valves type 500100, 500106 and 500008 are equipped with soft seats for a leak-free function. The piston is spring biased in the closed position and allows a fail safe operation so that the valve can be used for accumulator safety functions also.

Variations:

- solenoid operated
- manually operated
- hydraulically operated
- Limit switches

Type WEV 06 - 500100

NP 250bar ND6mm

compressed air,
gases Group 2 on request



Type WEV 06 - 500138

NP 250bar ND6mm

Water, oil and emulsions



Type WEV 06 - 500106

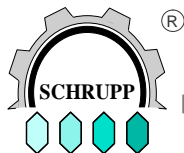
NP 350bar ND6mm

compressed air,
gases Group 2 on request

Type WEV 06 - 500008

NP 500bar ND6mm

Water, oil and emulsions

**SLUICE OR DIRECTIONAL
VALVES TYPE WEV**www.hl-hydraulik.de**2/2, 3/2 Direction Valves Type 500106**

These directional control valves are used to channel air from a high pressure reservoir to operating vessels with a lower pressure. The Schrupp sluice valves are direct solenoid operated 2/2 way valve size NG6 (3/8") or can be combined with our leak free cartridge assembly for larger sizes. In combination with other devices including pressure reducing valves, relief or safety valves, filters, throttles, etc., the Schrupp WEV series valves can be used for multiple applications in a high pressure pneumatic system.

All ports can be pressurised with full operating pressure to allow flow in any direction. This valve can be operated as a three way or two way directional control valve.

**Technical Data**

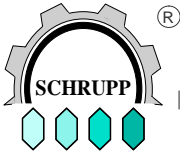
Pressure Range	0-350 bar
Design Pressure	500bar
Nominal Size	DN6
Operating Temperature	-20 bis+80 °C
Ambient Temperature	max 45 °C
Medium	Compressed air, Gas
Recommended Filtration	25 micron
Max.Power Consumption	42 W
I.D.	100%
Electr. Protection Class	IP 65
Voltage Tolerance	+5 to -10% VDE580
Opening and closing Time	100 - 200 ms
Material	Stainless Steel, PTFE, POM, Viton

Ordering Code

Valve: **WEV 06 P250 500106 01 024G** 24V DC
 120W 110V/50Hz (60Hz)
 240W 220V/50Hz (60Hz)
 max. operating pressure in bar

*Other voltages on request

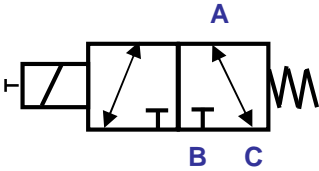
Seal Kit: **500006-92**



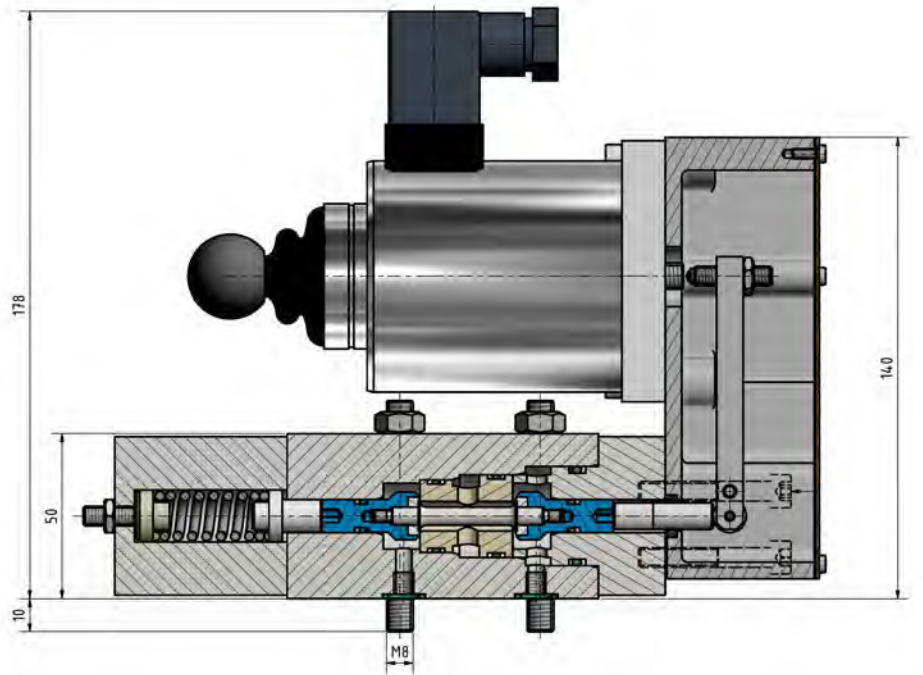
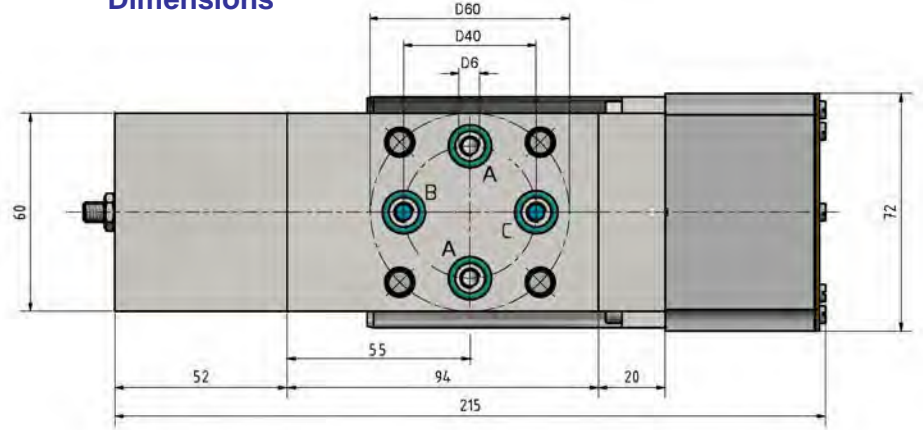
SLUICE OR DIRECTIONAL VALVES TYPE WEV

www.hl-hydraulik.de

Symbol

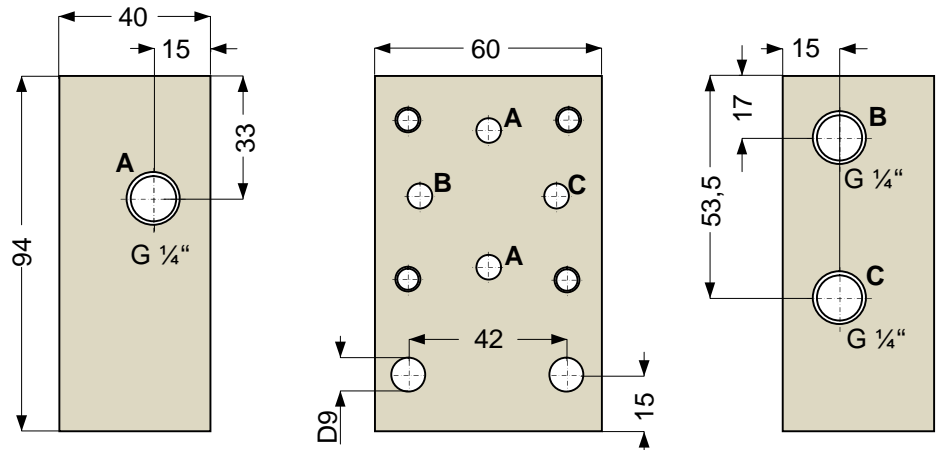


Dimensions



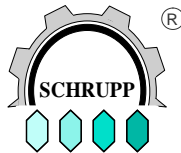
Subplate for WEV 500106

Dimensions



Ordering Code

Subplate: 850252



SLUICE OR DIRECTIONAL VALVES TYPE WEV

www.hl-hydraulik.de

2/2, 3/2 Directional Valve Type 500100

These directional control valves are used to channel air from a high pressure reservoir to operating vessels with a lower pressure. The Schrupp sluice valves are direct solenoid operated 3/2 way valve size NG6 or can be combined with our leak free cartridge assembly for larger sizes. In combination with other devices including pressure reducing valves, relief or safety valves, filters, throttles, etc., the Schrupp WEV series valves can be used for multiple applications in a high pressure pneumatic system.

All ports can be pressurised with full operating pressure to allow flow in any direction. This valve can be operated as a three way or two way directional control valve.



Technical Data

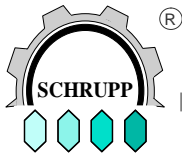
Operating Pressure	0-250 bar
Nominal Size	DN6
Operating Temperature	-20 to +80 °C
Ambient Temperature	max 45 °C
Medium	Compressed Air, Gas
Recommended Filtration	25micron
Max. Power Consumption	42 W
I.D.	100%
Electr. Protection Class	IP 65
Voltage Tolerance	+5 to -10% VDE580
Opening and closing Time	100 - 200 ms
Material	Stainless Steel, Brass, Viton

Ordering Code

Valve: **WEV 06 P250 500100-01 024G** 24V DC
120W 110V/50Hz (60Hz)
240W 220V/50Hz (60Hz)
max. operating pressure in bar

*Other voltages on request

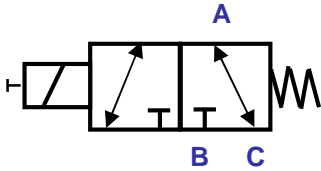
Seal Kit: **500000-92**



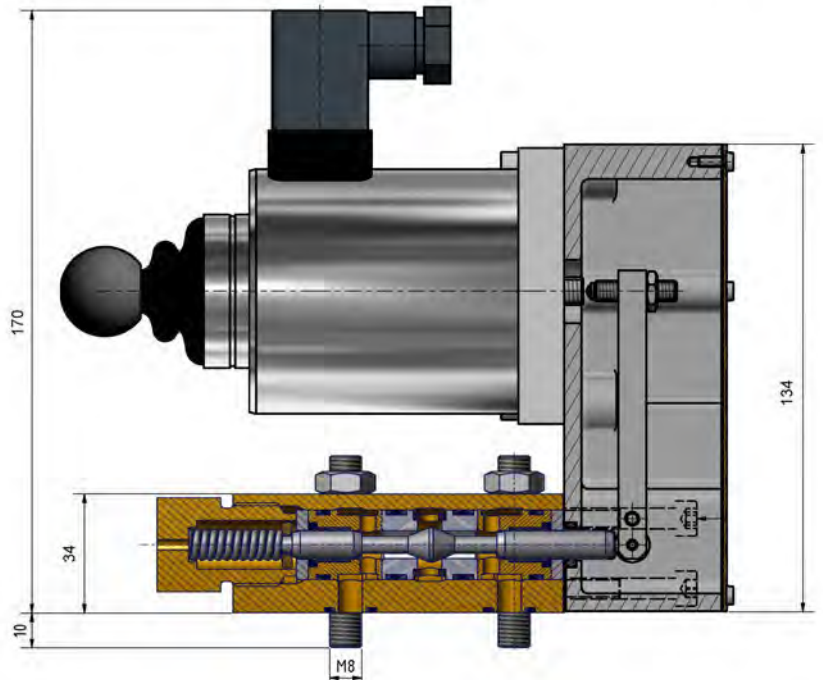
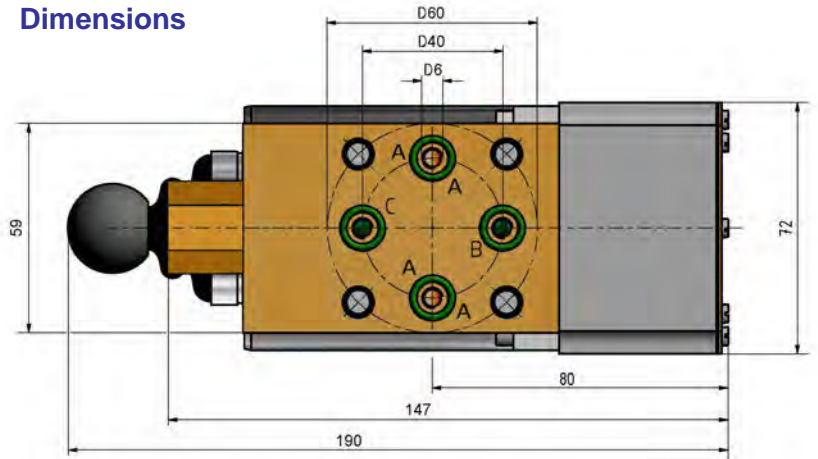
SLUICE OR DIRECTIONAL VALVES TYPE WEV

www.hl-hydraulik.de

Symbol

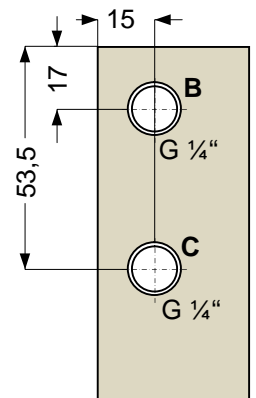
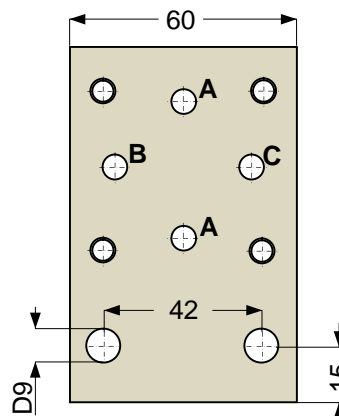
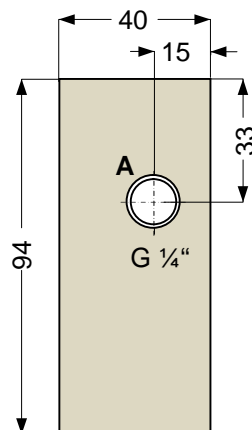


Dimensions



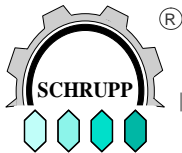
Subplate WEV 500100

Dimensions



Ordering Code

Subplate: 850252

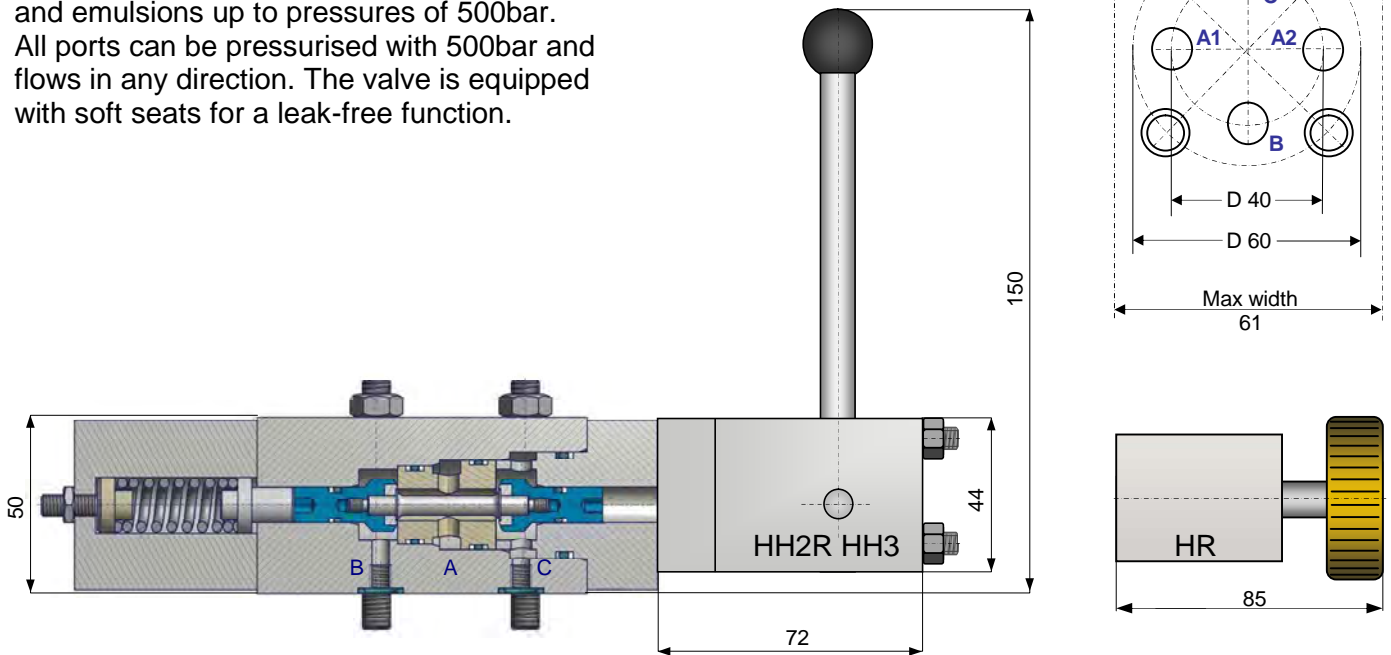


SLUICE OR DIRECTIONAL VALVES TYPE WEV

www.hl-hydraulik.de

Manual Operated Valves Type 500008 / 500106

can be used with compressed air, oil, water and emulsions up to pressures of 500bar. All ports can be pressurised with 500bar and flows in any direction. The valve is equipped with soft seats for a leak-free function.

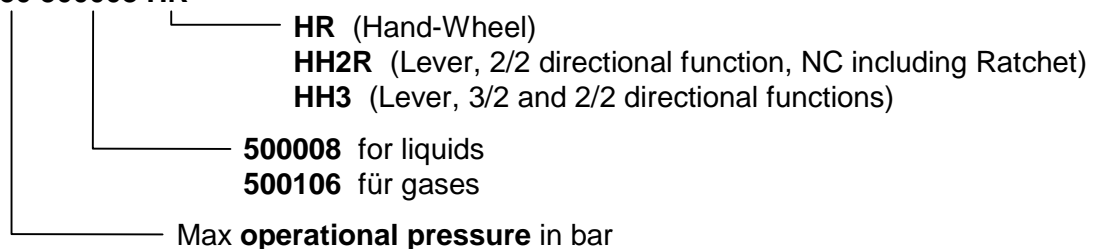


Technical Data

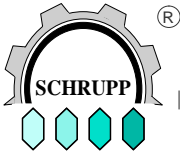
HR		Operating Pressure	0-500 bar
HH2R		Nominal Size	DN6
HH3		Operating Temperature	-20 bis +80 °C
		Ambient Temperature	max 65 °C
		Medium	Gases, Water, Oil
		Recommended Filtration	25 my
		0 to 350bar	10 my
		350bar to 500bar	Material
		Material	Stainless Steel, Brass, Delrin, Viton

Ordering Code

Valve: **WEV 06 P250 500008 HR**



Others on request



**SLUICE OR DIRECTIONAL
VALVES TYPE WEV**

www.hl-hydraulik.de

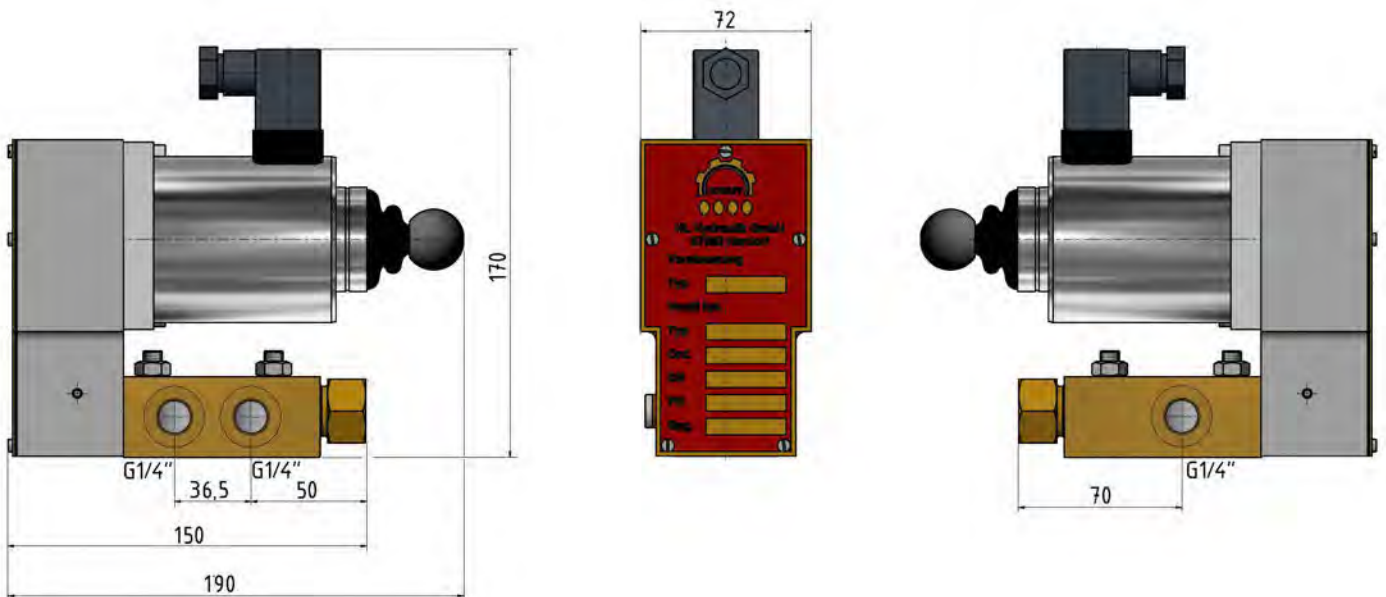
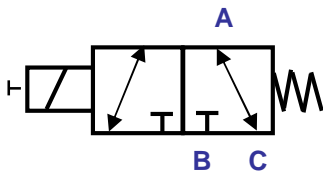
3/2, 2/2 Directional Valve DN6 PN250 with Thread Connections

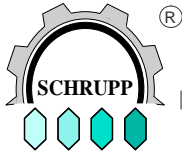
TYPE: WEV 06 RL 500104-01 024G 24V DC
110W 110V/50Hz (60Hz)
220W 220V/50Hz (60Hz)

Partnumber: 500104

These directional control valves are identical to series 500100 but have a housing with threaded connections. The valve can be used compressed for air and gas media up 250bar operating pressure.

Please find technical data at catalogue E1.7.3.





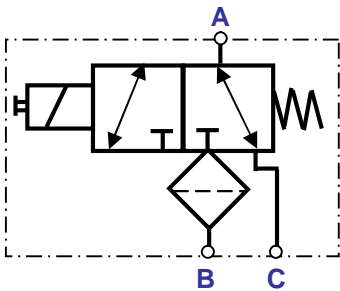
SLUICE OR DIRECTIONAL VALVES TYPE WEV

www.hl-hydraulik.de

3/2, 2/2 directional Control Valve DN6 PN250 with filter, for compressed air

TYPE: WEV 06 FL (Part no.) 024G 24V DC
110W 110V/50Hz (60Hz)
220W 220V/50Hz (60Hz)

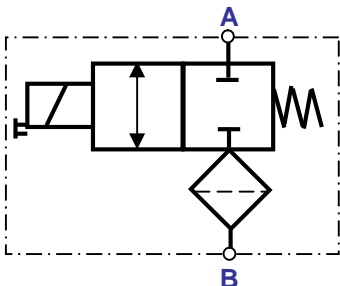
These directional control valves are used to channel air from a high pressure reservoir to operating vessels with a lower pressure. An integrated 80 micron cleanable filter at port R protects the valve against dirt particles. The Schrupp sluice valves are direct solenoid operated 2/2 way valves size NG6 (3/8") or can be combined with our leak free cartridge assembly for larger sizes, or in combination with other devices including pressure reducing valves. Max operating pressure 250bar.



Ports A, B, C - G1/4"
Part no. 451443

Spare parts for filter:

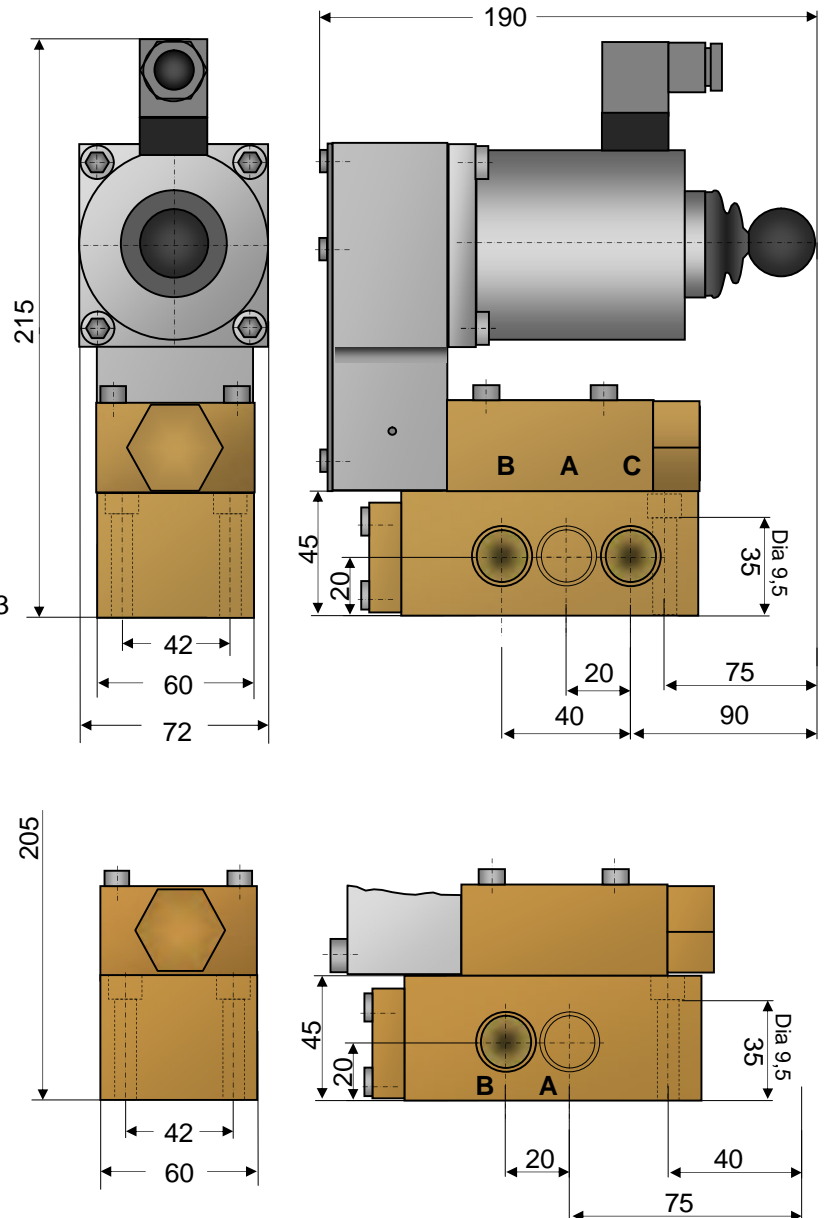
- 1Stk filter element Part no. 157346
- 1Stk O – Ring Part no. 080098
- Spare parts for directional valve see page E1.7.3

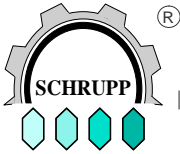


Ports A, B - G1/2"
Part no. 503690

Ports A, B - M22x1,5
Part no. 503382

Spare parts see above





SLUICE OR DIRECTIONAL VALVES TYPE WEV

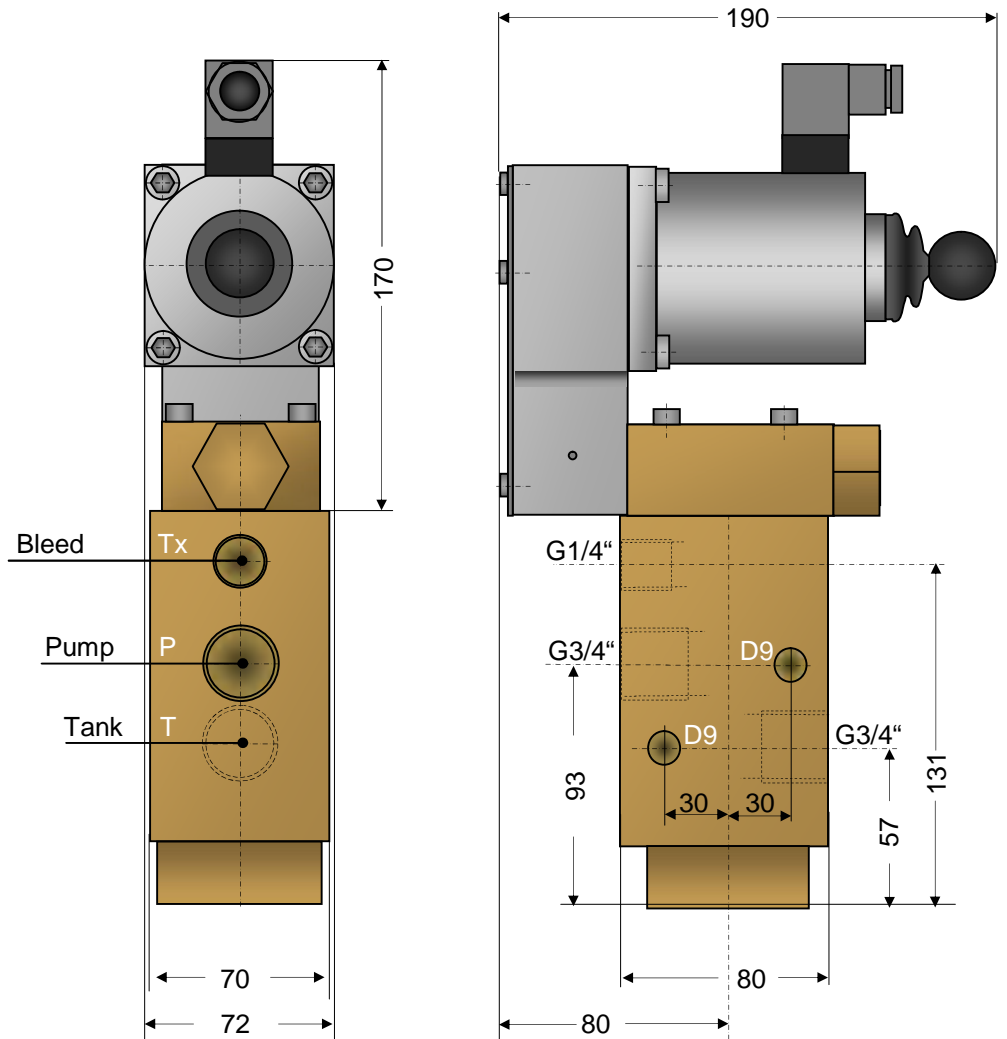
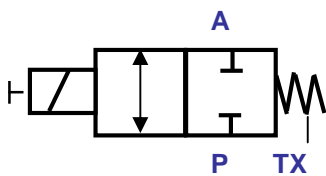
www.hl-hydraulik.de

2/2 Directional Control Valve DN16 PN250 with threaded ports for compressed air, water, oil

TYPE: WEV 16 RL (Part no.) 024G 24V DC
110W 110V/50Hz (60Hz)
220W 220V/50Hz (60Hz)

Part no. 450737

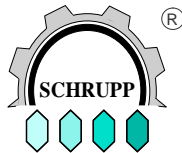
These leak free directional valves size 16mm with threaded connections can be used in compressed air systems up to 250bar. Special designs for water or oil applications on request. All ports can be operated with the maximum pressure. The valve includes a soft seated DIN cartridge size 16 type EO-16-00-6D/S, that is piloted by a type 500100 pilot valve.



Spare Parts

Pilot valve see page E1.7.3

Cartridge valve ND 16
Part no. 165991



SLUICE OR DIRECTIONAL VALVES TYPE WEV

www.hl-hydraulik.de

2/2 Directional Valve DN16 PN250 with Check Valve

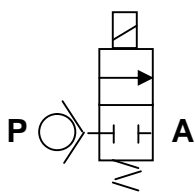
Application

These valves are used as sluice valves between high and low pressure reservoirs. They combine a 2/2 way pilot operated directional control valve and a check valve. The Schrupp WEV 16 R directional valves can also be used for diesel engine start up.

Technical Data

Housing – Brass
Internal Parts – Stainless Steel
Seals – Viton, Teflon, Delrin

Pressure Range	0-250bar
Nominal Size	DN 16
Temperature Range	-20 to+80°C
Ambient Temperature	max 45°C
Medium	compressed air,Gases
Voltages	24-240V Gs/ Ws
Max.Power Consumption	43W
I.D.	100%
Electrical Protection Class	IP 65
Voltage Tolerance	+5bis -10% VDE580

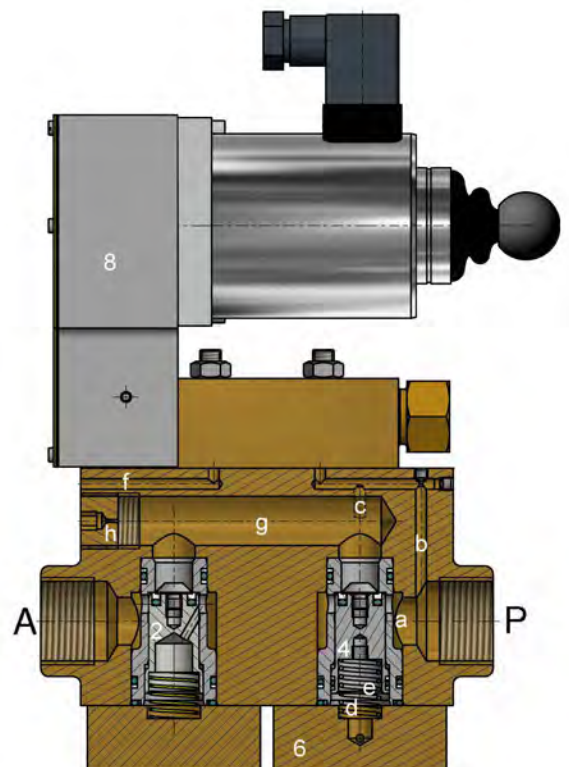


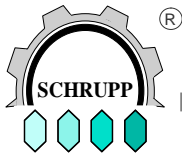
Functional Description

When the solenoid of the 3/2 way pilot valve is de-energized, piston area d is connected through drillings band c to port P. The piston of cartridge valve position 4 is closed by the spring. By energizing the solenoid of the pilot valve, drilling b will be blocked and c and f are connected. The cartridge valve will be opened by the pressure in Port P. The check valve allows flow only from P to A. During this operation a small volume of air will pass through a nozzle.

Spare Parts WEV 16 VTS

Item	Quantity	Description	Part no:
2	1	Check Valve DN16	165997
4	1	Cartridge Valve DN 16	166074
6	1	Rd-Ring	080050
8	1	Pilot Valve DN 6	500000

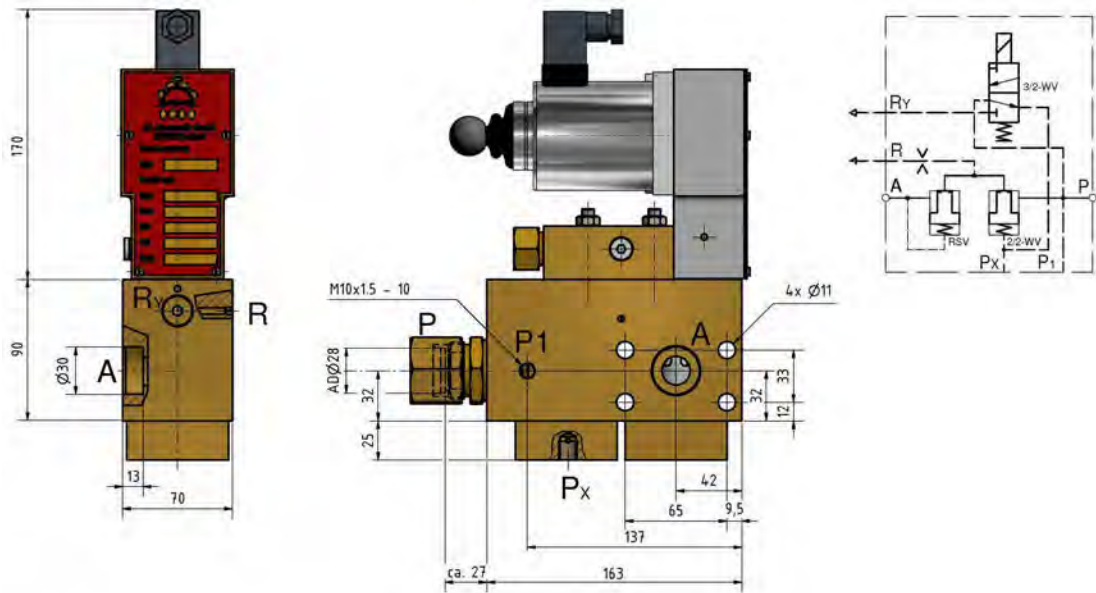




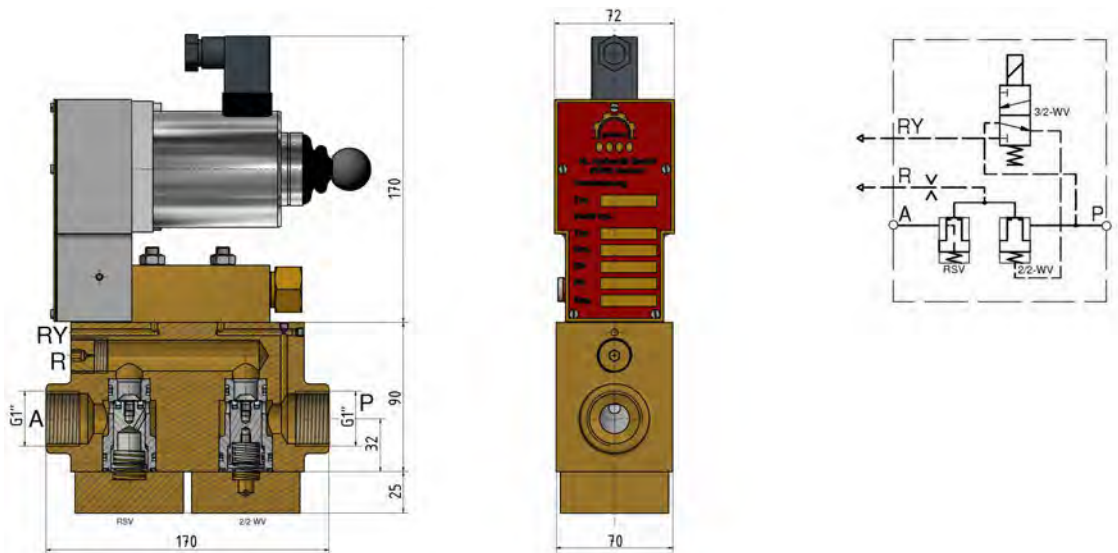
SLUICE OR DIRECTIONAL VALVES TYPE WEV

www.hl-hydraulik.de

Part No.: 168870-01



Part No.: 452617-01



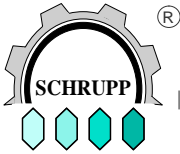
Ordering Code:

WEV 16 R **024V**

Voltage

024V, 110V/50-60Hz, 220-240V/50-60Hz
others on request

Part No.



SLUICE OR DIRECTIONAL VALVES TYPE WEV

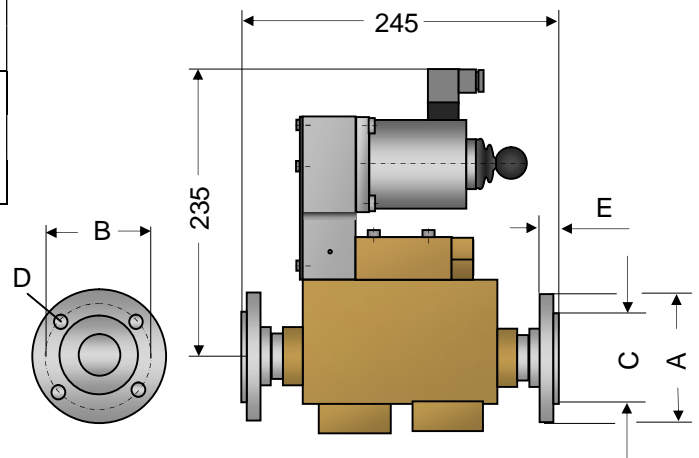
www.hl-hydraulik.de

Modification Sets and Accessories (do not use for new applications)

Valve Type 168870 with Flange connections

Part No.	Flange	A	B	C	D	E	Flange per
452631	DN 20	105	75	58	14	18	DIN 2567
452632	DN 25	115	85	68	14	18	PN 40
542633	DN 40	150	110	88	18	18	
452634	DN 20	130	90	68	18	22	DIN 2569
452635	DN 25	140	100	78	18	24	PN 100
452636	DN 40	170	125	98	23	26	

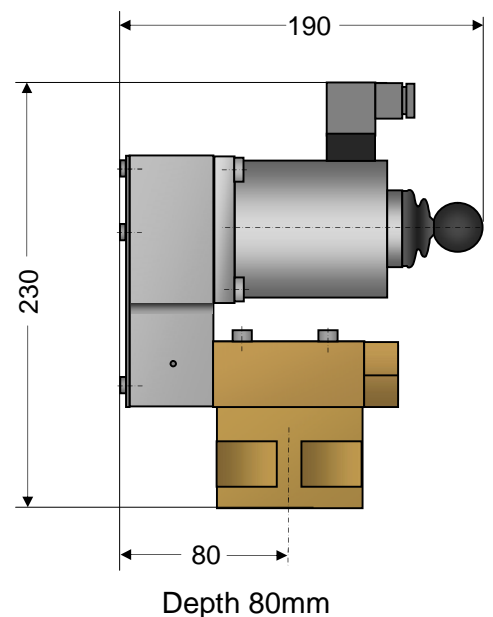
Part No for Valve type 168870 including flanges

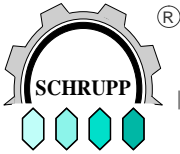


Modification set

In many systems there are still type AP 1820, AP 6225 or AP 6733 valves in operation. For technical reasons, it is not still possible to produce the original pilot valves. To upgrade these valves with new pilot valves Type 500000 it is necessary to assemble a modification set. Especially when the main stage of the valve is in good condition it is more economical to replace only the pilot valve than it is to invest in a complete new valve.

Part no. modification set 502136





GAS DRYER STATIONS

www.hl-hydraulik.de

SCHRUPP GAS DRYER STATIONS

Optional with Bypass

For compressed Air and other non- aggressive gaseous media:

- drying
- de-oiling
- filtering

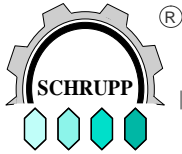
this means

- less corrosion
- less wear and
- no icing
- depressurized standby function

and therefore

- greater service life
- lower maintenance costs and
- fail safe operation





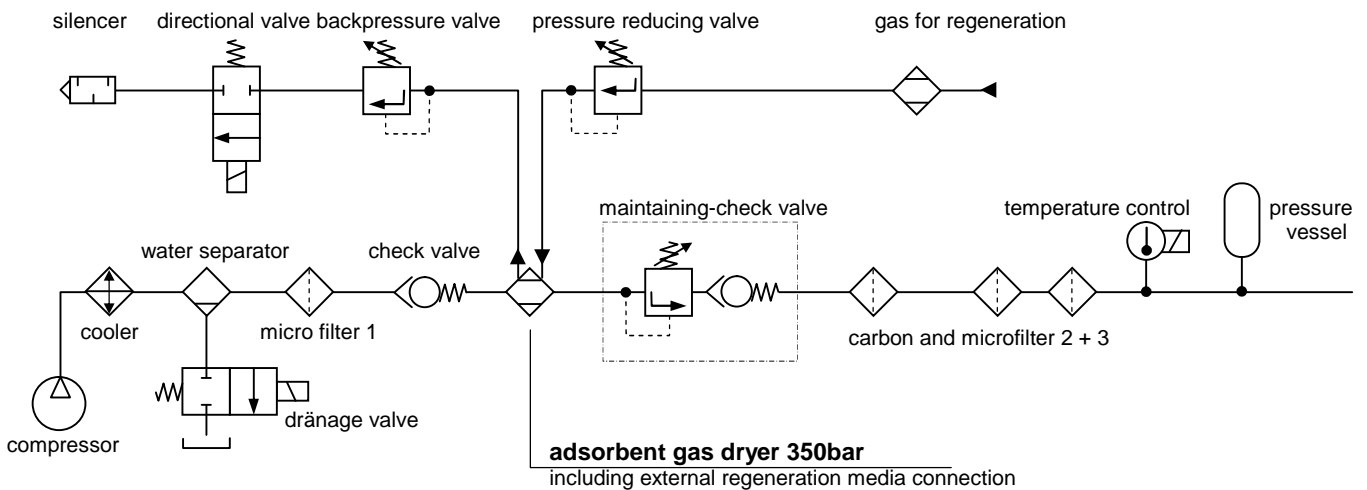
GAS DRYER STATIONS

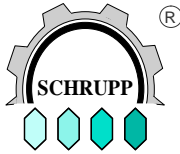
www.hl-hydraulik.de

Gas Processing Systems

Efficient Solutions for processing breathing air or industrial atmosphere.

- designed for continuous production of compressed air or class 2 gases
- excellent efficiency by use of an external regeneration media
- dew points below -50°C
- temperature compensated processing
- drying process independent from inlet temperature
- no thermal regeneration necessary
- operation pressures up to 350bar





GAS DRYER STATION

www.hl-hydraulik.de

Gas dryer stations are assembled and tested and will be supplied ready for installation according to customers' requirements. Normally all components are assembled on a common frame but it is also possible to select the items separately and integrate them into an existing system.

Variations:

Pressure ranges 30-65 bar, 65-250bar, 250-350bar

Media: industrial air, breathing air, non-flammable and non-aggressive chemical or toxic gases

Flowrates up to 1000L/min and up to 1400L/min

Special solutions for external regeneration gases, offshore atmospheres, additional filtration and absorber filters for breathing or clean air applications. TÜV or GL certificates available.

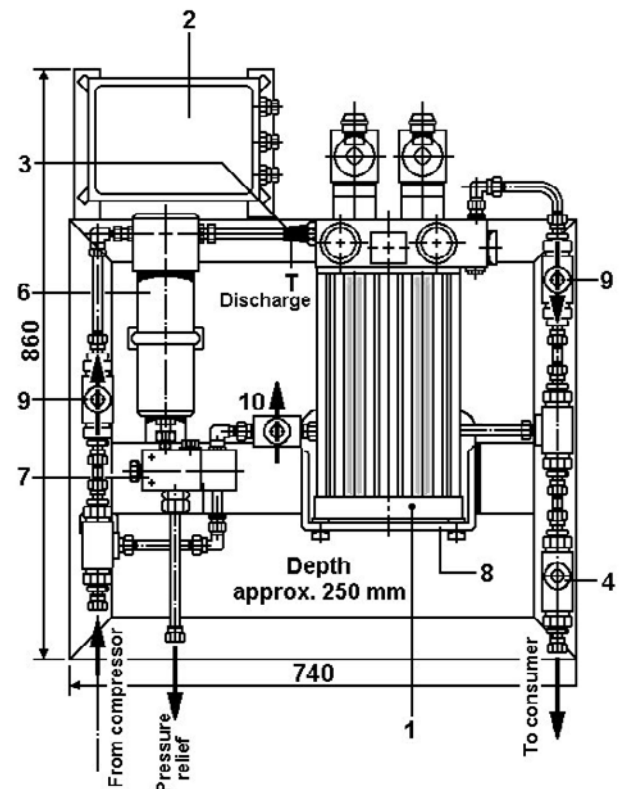
Systems and components shown in this catalogue are only examples to explain the general function of our products. Please contact us for details or any special applications.

GAS DRYER STATION GTS (Example: unit for industrial application)

- | | | |
|---|------------------------------|-----------------------|
| 1 | 1 Gas dryer | Type GTR |
| | Operating pressure | 30 - 350 bar |
| | Flow rates up to | 1400 l/min |
| | Regeneration air | 5-10% |
| | Control voltage | AC or DC |
| 2 | 1 Electrical control unit | 3 1 Silencer |
| 4 | 1 Pressure maintaining valve | 5 2 Check valves |
| 6 | 1 Fine filter | 7 1 Directional valve |
| 8 | 1 Mounting frame | |

- 9/10 1 Version with bypass (Option)
3 shut off valves + additional piping

Unit complete assembled and tested

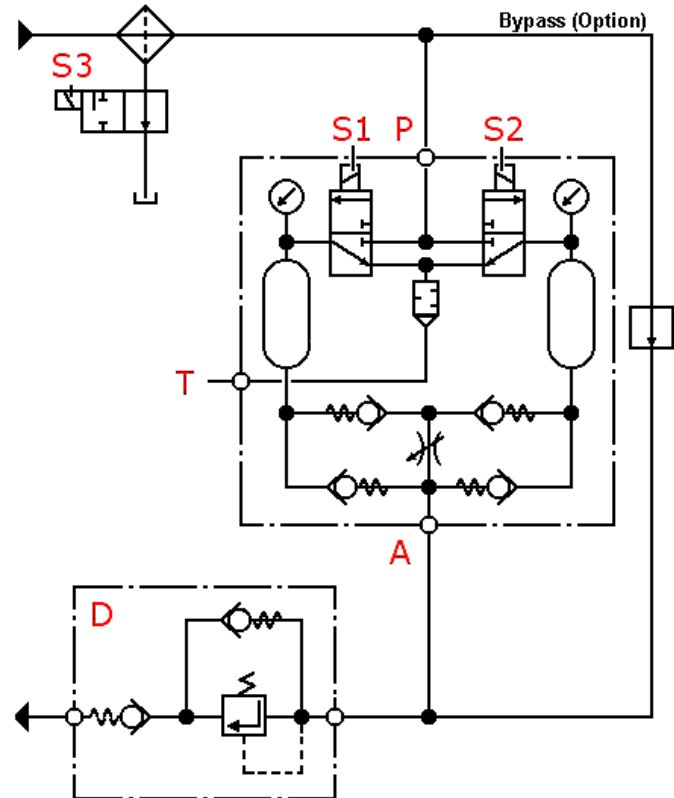


GAS DRYER STATION

www.hl-hydraulik.de

Functional Diagram

- S3 Fine filter + electrically operated drain valve
- P High pressure inlet GTR
- B Bypass (Option) (maintenance)
- T Vent connection
- A High pressure outlet GTR
- D Pressure maintaining unit



Functional description

The gas dryer station consists of a gas dryer, fine filter with drain valve, pressure maintaining check valve, shut off valves, optional bypass and an electrical control unit.

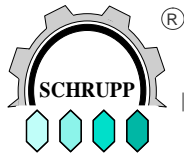
All components are assembled on a mounting frame, piped, wired and tested..

Compressed air from the copressor with high humidity passes the fine filter (S3) and enters into the Gas dryer (P). The fine filter separates free water particles from the compressed air which will be drained automatically by the directional valve if the compressor is not in operation.

The two directional valves (S1, S2) at the dryer will connect the inlet (P) to one adsorber reservoir, so that air with low humidity will exit at Port A. (For detailed information please see page E1.8.7).

The pressure maintaining check valve unit (D) creates an adjustable back pressure during the operation and keeps the system pressure lower if the compressor is not in operation so that the system can be drained.

The optional bypass allows repairs or maintenance work without an interruption of the air supply.



**GAS DRYER
TYPE GTR**

www.hl-hydraulik.de

For high pressure air and
non aggressive Medium for:

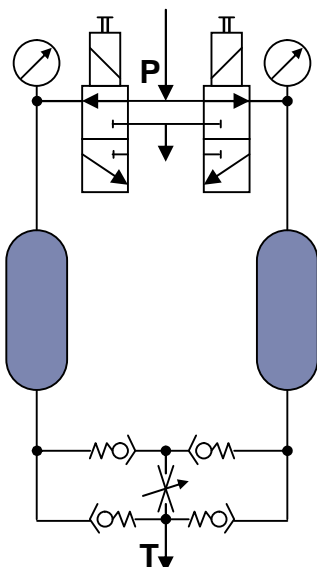
- drying
- de-oiling
- filtering

- Benefits

- less corrosion
- less wear
- no icing

and consequently

- longer service life
- lower maintenance costs
- fail-safe operation



Orderno. and example

GTR 10 **HP 335** **024**

Voltage

024 24V DC

240 220-240V/50Hz *

Oper. pressure

MP 30-250bar

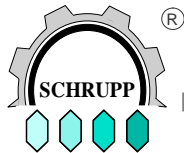
HP 250-350bar

* only for version MP

Type

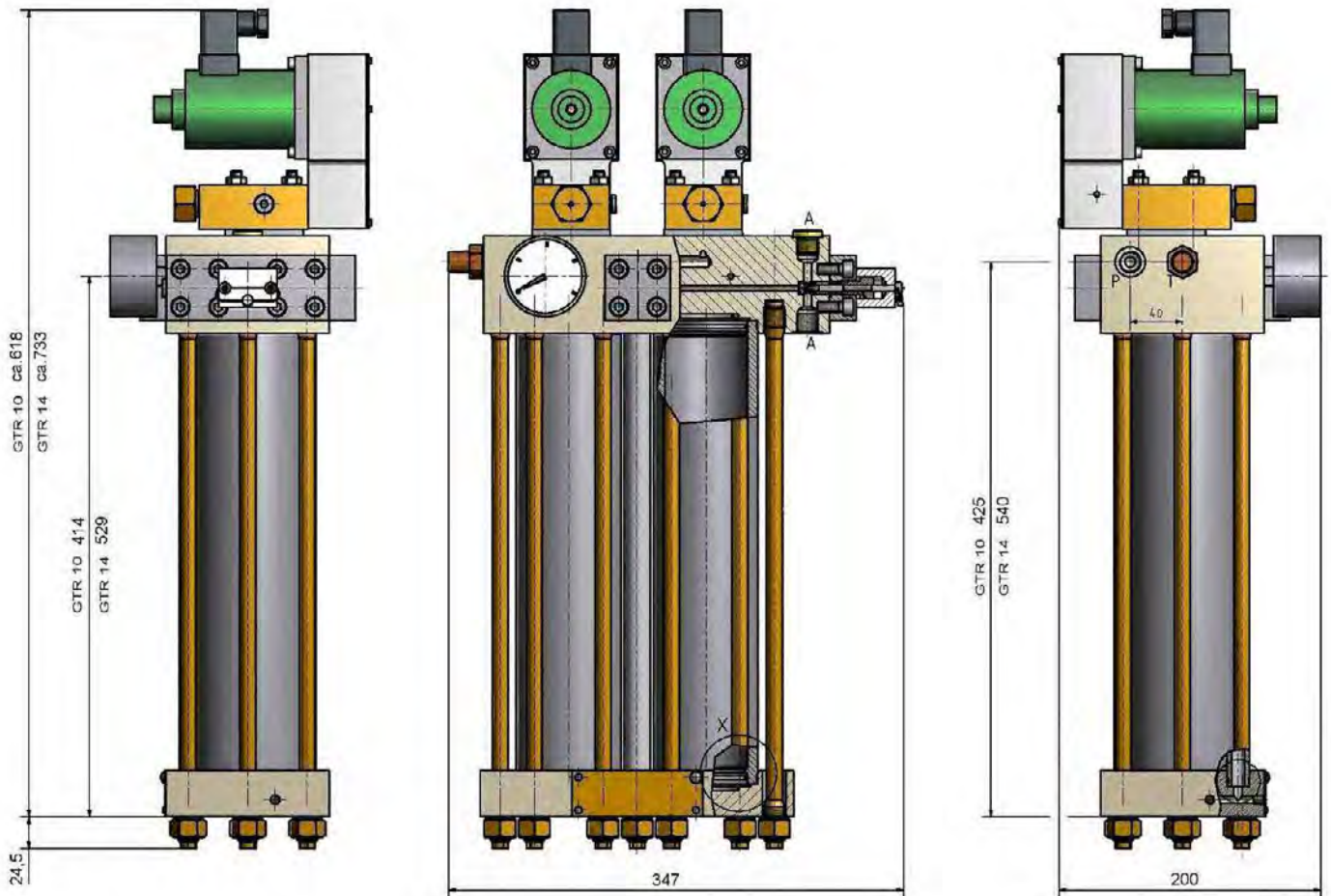
GTR 10 Q max 1000L/min

GTR14 Q max 1400L/min



**GAS DRYER
TYP GTR**

www.hl-hydraulik.de



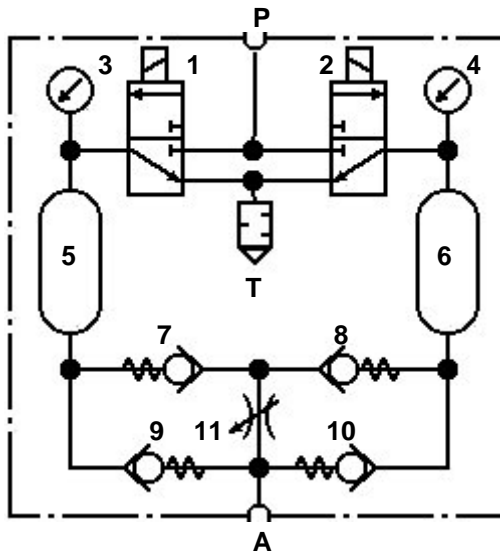
Technical Data	GTR 10 MD	GTR 10 HD	GTR 14 MD	GTR 14 HD
Operating pressure	30-250bar	250-350bar	30-250bar	250-350bar
Flow rate	1000L/min		1400L/min	
Regeneration air	5-10% of inlet flow rate			
Air volume	0,7L each reservoir		0,99L each reservoir	
Max. temperature	40°C			
Humidity	100%			
Voltage	24V DC, 240V/50Hz	24V DC	24V DC, 240V/50Hz	24V DC
Power consumption	27W	31W	27W	31W
Dew point	-40 bis -60°C			
Material Covers	SS / MS option	SS	SS / MS option	SS
Material tube	Steel nickel coated			
Main connections	G3/4"			
Mass	58Kg	61,5Kg	58Kg	61,5Kg

**GAS DRYER
GTR**

www.hl-hydraulik.de

GAS DRYER TYPE GTR

The gas drier consists of two reservoirs filled with highly porous hydrostatic materials (adsorbents), into which damp compressed air and dried depressurized air are alternately admitted for the regeneration phase.



- P High pressure inlet HP
- 1; 2 3/2-directional valve
- 3; 4 Pressure gauge
- 5; 6 Reservoir with adsorbent
- 7; 8 Check valve LP
- 9;10 Check valve HP
- 11 Throttle
- T Vent
- A High pressure outlet

The gas drier consists of two reservoirs filled with highly porous hydrostatic materials (adsorbents), into which damp compressed air and dried depressurized air are alternately admitted for the regeneration phase. The damp air coming from the compressor passes through the fine filter and the energized open 3/2-way valve DN 6 (1), which voltage is being passed, and reaches the reservoir (5).

The adsorbent in reservoir (5) removes the moisture from the damp compressed air as it passes through this reservoir. The now dry air passes via the check valve (9) to out let port /A). A small portion of this dried compressed air is depressurized in the throttle valve (11) and flows through the check valve (8) to the reservoir (6). This dried air absorbs the water from the damp adsorbents and passes via the 3/2-way valve (2) into the atmosphere, thus regenerating the adsorbents. An dryer system requires an additional fine filter at the inlet and an pressure maintaining unit at the outlet of the dryer (for more details please see page E1.8.4).

The inlet and outlet of the adsorbent reservoirs are each fitted with a sintered metal disk. These disks filter the water and oil particles out of the incoming damp air and any particles of adsorbate material from the outgoing air. Since drying and regeneration are performed in a counter-flow procedure, any residues are removed from the sintered metal disks at each reversal of the direction of flow. After the preset time interval (e.g. 10 minutes), the two 3/2-way valves (1 and 2) are automatically reversed via a timer switch.

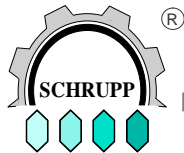
The procedure described above is now repeated but with the reservoirs “reversed”.

The drying procedure is connected to the operation of the compressor. When the compressor is switched off, both 3/2-way valves (1 and 2) are closed (off position).

In a complete dryer system the pressure relief valve opens and the condensate in the fine filter is discharged.

When the compressor is restarted, the drying procedure is continued where it was interrupted.

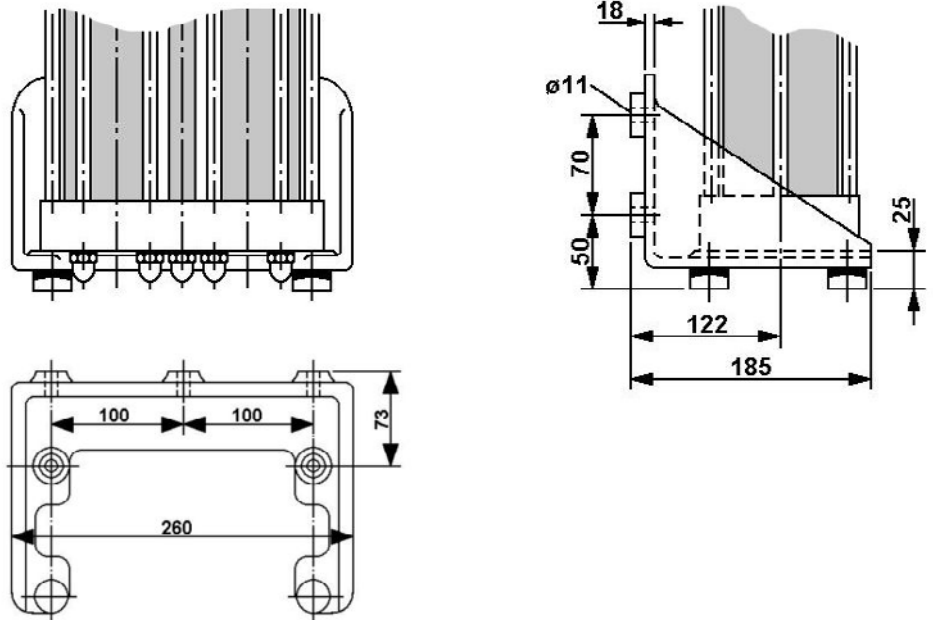
Using this method, extremely low pressure dew points can be achieved (depending on the operating pressure, down to -50°C and lower measured at the drier outlet).



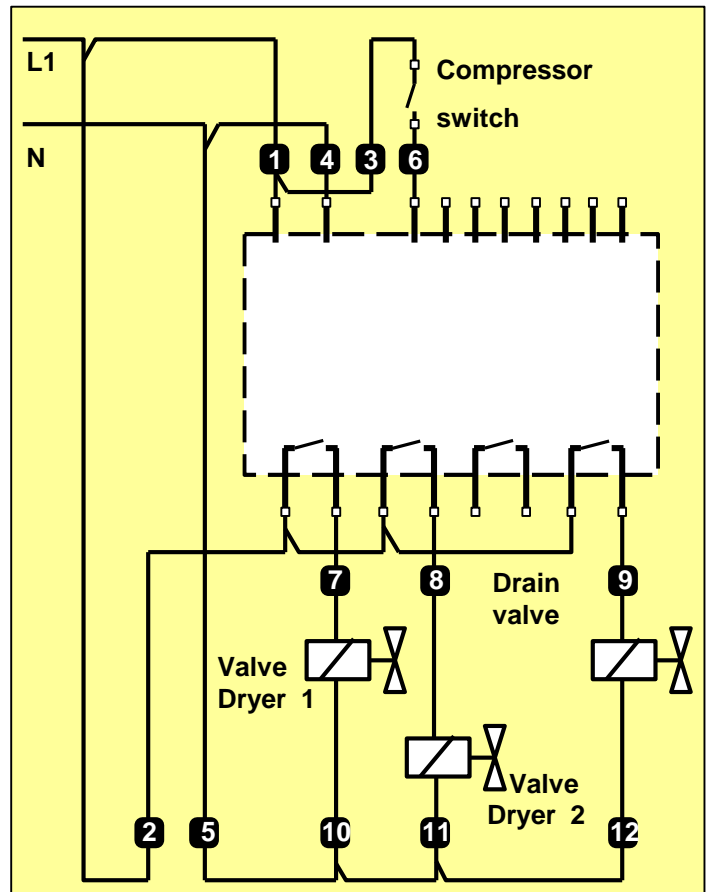
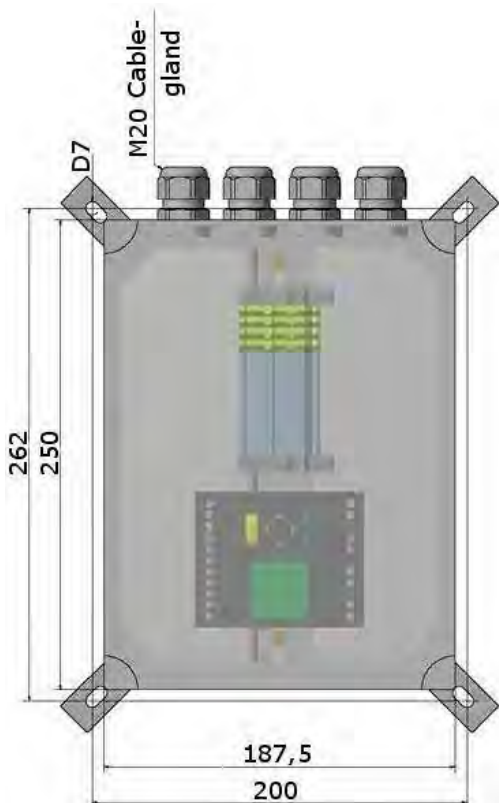
**GAS DRYER
 GTR**

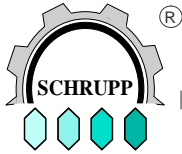
www.hl-hydraulik.de

Ordering information bracket
GTR K 507335



Ordering information control Unit
GTR PS 24GL





www.hl-hydraulik.de

Kupferhütte 5c
D 57562 Herdorf
Tel +49 (0)2744-9324-0
Fax +49 (0)2744-9324-56
schrupp@hl-hydraulik.de