INTEGRAL COMPONENTS

The PMC02 **cartridge hand pump** SAE08 (3/4-16UNF), 2 cc/stroke is an affordable and easy way to add an emergency actuation to your power pack.

Two way **poppet seat solenoid valves** SAE08 (3/4-16UNF) are available in Normally Closed, Normally Open, single and double locking types. Manual override also available.

Pressure and flow **proportional control valves** are available as standard, also with integrated **PWM driver**

All cartridges are **single piece** screw-in valves, easily fitted with no loose parts.

The **main relief valve** is fitted in a SAE08 (3/4-16UNF) cavity for PPC/SPU (M14) for PPM. It is designed to improve pressure setting, stability whilst avoiding the noisy operation typical of lower cost alternatives.

The **main check valve** fits in a SAE08 (3/4-16UNF) standard cavity for PPC and (5/8-18UNF) for PPM and can be **easily removed** from the outside for easy cleaning and servicing

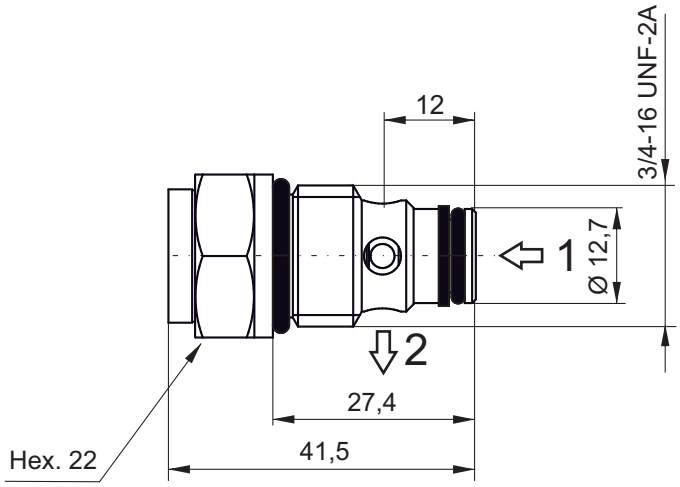
Q & A

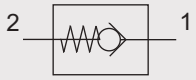
How does the coding of the power pack works?
The power packs are coded with a «speaking» code, which is basically the list of sub-assemblies which make up the power pack (motor, pump, valves, tank,...). Integral components are those mounted inside central manifold cavities. Each component has an assembly code, normally a single letter, which builds up the speaking code. It also has a spare part code in case it is to be ordered as a loose component. The numbered cavities are indicated in the hydraulic scheme and on the casting too, so that it is easy to draw the schematic diagram starting from the speaking code itself and easy to assemble the components on the manifold.

There are several different coils and connectors for the cartridge solenoid valves. How do I choose the proper ones?
Thanks to Hydronit range consistency, most integral solenoid valves (and some external valves too - see section G in this catalog) fit the same M63* series coils. M630 are for DC supply voltage, while M631 are rectified coils with integral rectifying circuit to be supplied with AC current, not requiring external rectifying bridge connectors. The M63* coils are availble with DIN 43650 / ISO 4400 standard connectors (KA13200000) and Deutsch connectors too. On table D180 you will find the coil table for all valves.

Which are the mostly used plugs?
G or H plugs are normally fitted in cavity 2 and 4, of types UA and UB central manifolds when these cavities are not used. H type has a 1/4"BSP connection port to allow mounting of a pressure gauge or switch or minimess. L type plug fits cavity 3 of U4 and UB manifolds when this cavity is not used.

SAE08 MAIN CHECK VALVE





Main features

Max pressure	350 bar
Weight	0.052 Kg
Max flow	25 l/min
Tightening torque	25 Nm
Fluid temperature	-30°C ÷ +80°C
Cracking pressure	0,5 bar
Filtration	ISO 4406

Spare part code

VUC — **Check valve**

20C — **Nominal size:** 20

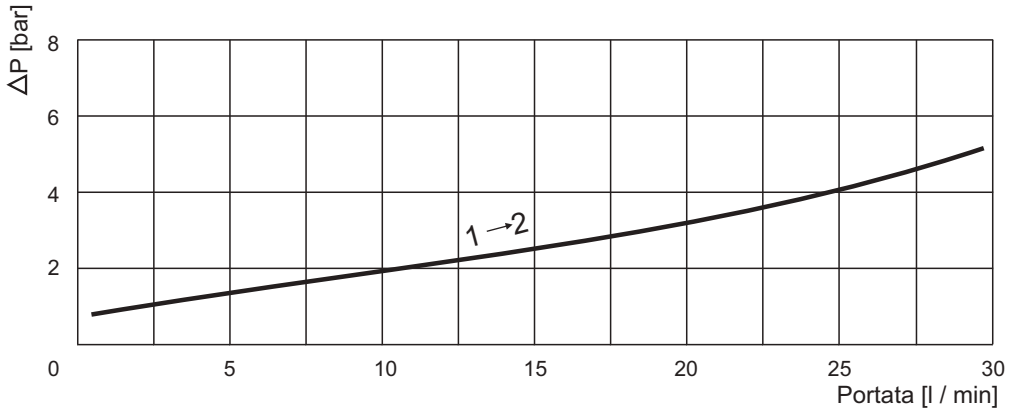
***** — **Options:**
- = no options
FP = pressure port closed with a 1/4 BSP plug

Assembly code

JC*

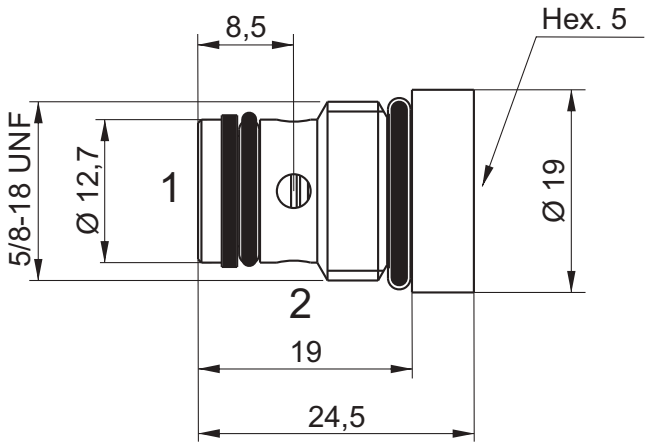
where * is the option

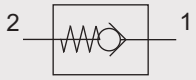
Pressure drop diagram



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

5/8-18 UNF MAIN CHECK VALVE





Main features

Max pressure	350 bar
Weight	0.045 Kg
Max flow	15 l/min
Tightening torque	25 Nm
Fluid temperature	-30°C ÷ +80°C
Cracking pressure	1 bar
Filtration	ISO 4406
Max current	10A - 400A

Spare part code

VUC — **Check valve**

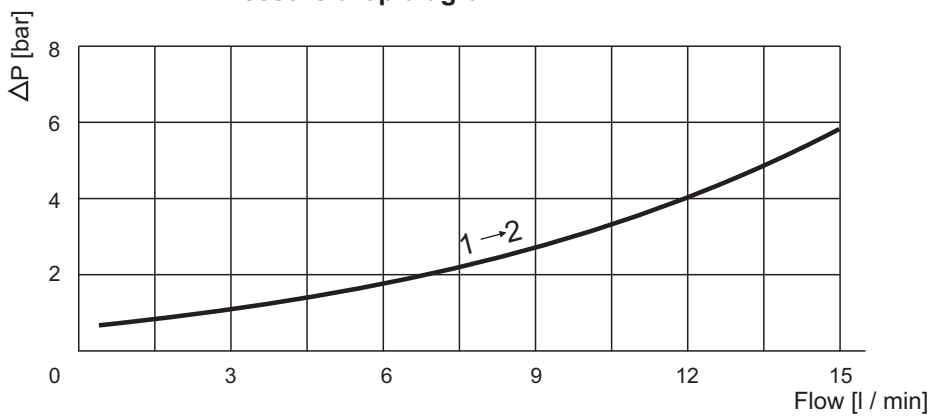
10 — **Nominal size:** 10

- — **Options:**
- = ball type
C = poppet type

Assembly code

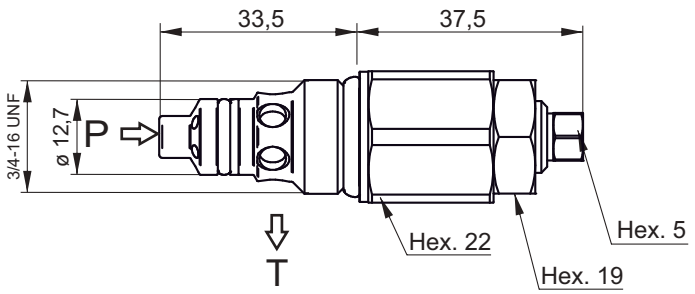
JM (VUC10)
JP (VUC10C)

Pressure drop diagram

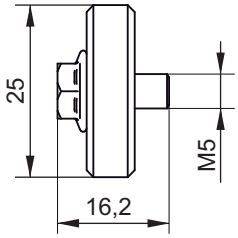


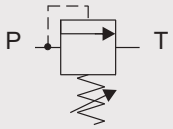
Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08 DIRECT ACTING MAIN RELIEF VALVE



Option 2





Main features

Max pressure	400 bar
Weight	0.14 Kg
Max flow	30 l/min
Tightening torque	30 Nm
Fluid temperature	-30°C ÷ +80°C
Filtration	ISO 4406
Cavity	SAE08-2

Spare part code

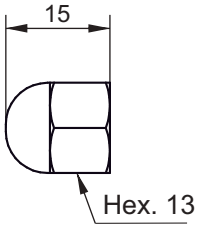
VMDC — **Relief valve**

20 — **Nominal size:**
20 = 20 l/min

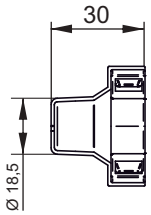
B — **Optimal Working range:**
A = 5 ÷ 50 bar
B = 50 ÷ 150 bar
C = 150 ÷ 250 bar
D = 250 ÷ 400 bar

1 — **Option:**
1 = M6 screw (std)
2 = handwheel
3 = with cap
4 = plastic seal

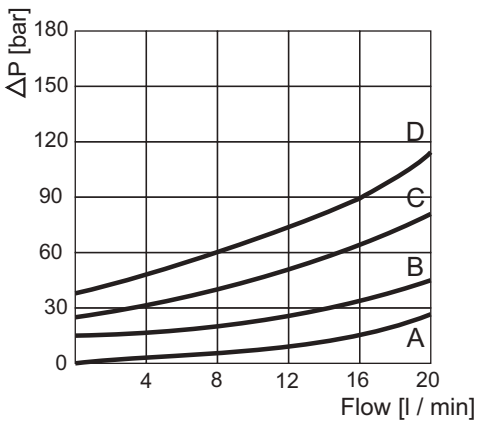
Option 3



Option 4



Minimum setting pressure



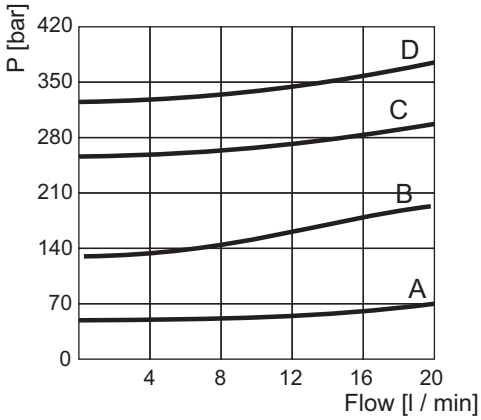
Assembly code

V* ♦**

where *** stands for max setting pressure [bar]. Ex. V250

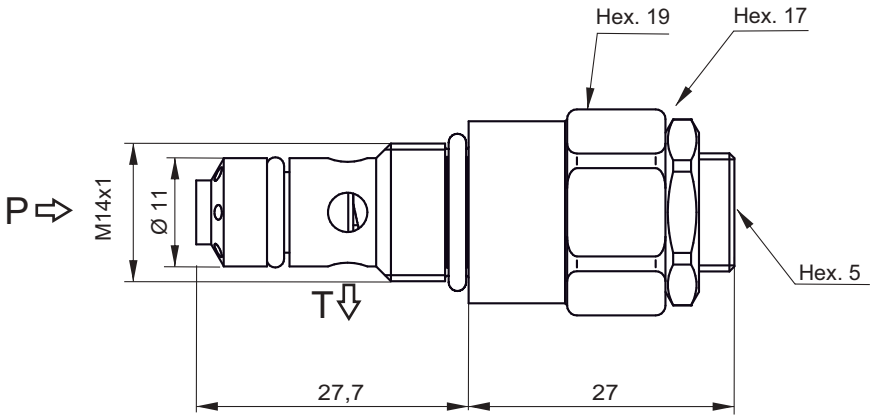
where ♦ is the option

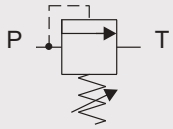
Pressure vs Flow



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

M14 DIRECT ACTING MAIN RELIEF VALVE FOR M MANIFOLDS





Main features

Max pressure	280 bar
Weight	0.06 Kg
Max flow	15 l/min
Tightening torque	25 Nm
Fluid temperature	-30°C ÷ +80°C
Filtration	ISO 4406

Spare part code

VMDC — **Direct acting main relief valve**

15 — **Nominal size:** 15 = 15 l/min

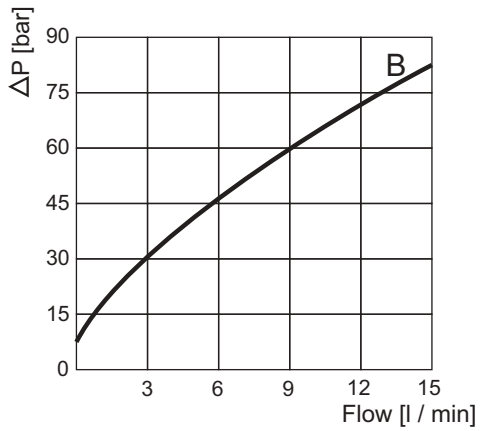
C — **Working range:** B = 5 ÷ 280 bar

1 — **Options:** 1 = screw (std)

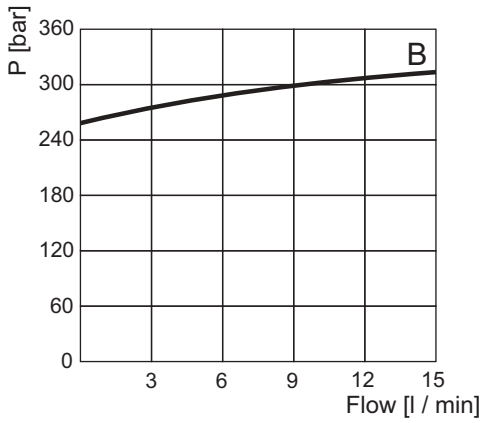
Assembly code

DM_280

Minimum setting pressure

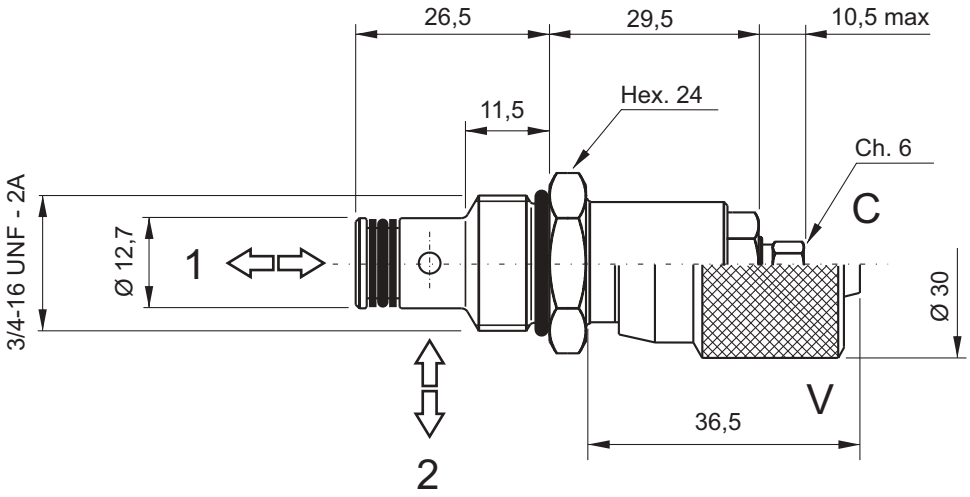


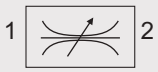
Pressure vs flow



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08 BIDIRECTIONAL ADJUSTABLE FLOW CONTROL VALVE





Main features

Max pressure	300 bar
Weight	0.08 Kg
Max flow	15 l/min
Tightening torque	25 Nm
Fluid temperature	-30°C ÷ +80°C
Filtration	ISO 4406
Cavity	SAE08-2

Spare part code

CSB — **Flow control valve**

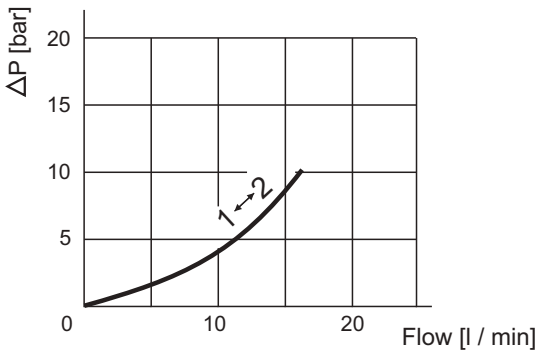
04 — **Nominal size:**
04 = SAE08

C — **Adjustment:**
C = screw (std)
V = handwheel

Assembly code

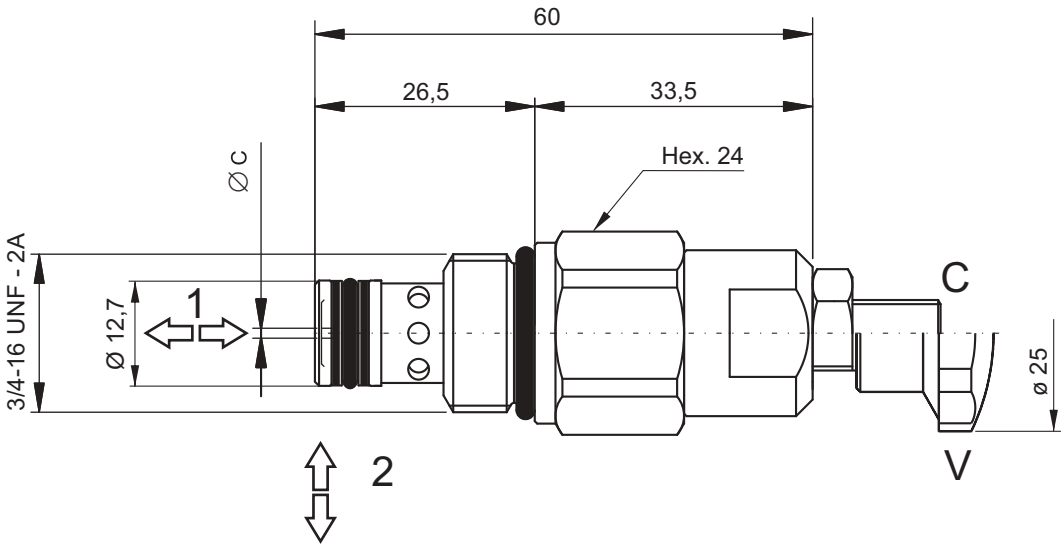
S

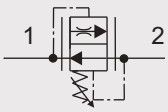
Pressure drop diagram



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08 PRESSURE COMPENSATED ADJUSTABLE FLOW CONTROL VALVE





Main features

Max pressure	350 bar
Weight	0.11 Kg
Max flow	18 l/min
Tightening torque	25 Nm
Fluid temperature	-20°C ÷ +80°C
Filtration	ISO 4406
Cavity	SAE08-2

Spare part code

VCF6 — **Adjustable pressure compensated flow control valve**

***** — **Nominal dimension:** see below table

C — **Adjustment:**
C = screw (std)
V = handwheel

Assembly code

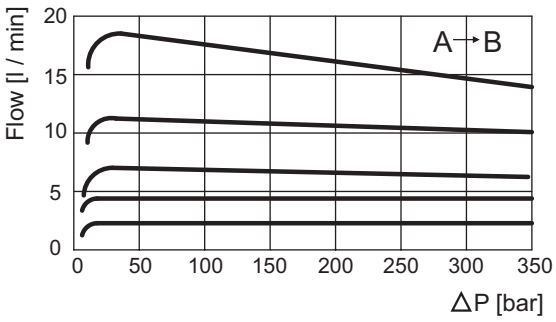
R *

Where * stands for nominal dimension

Range available

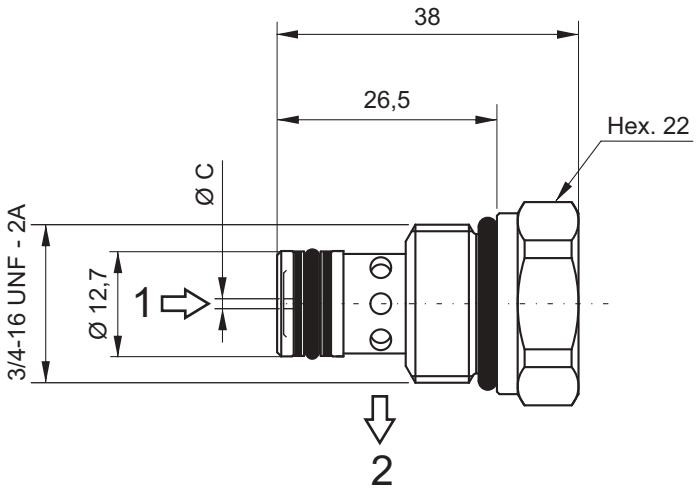
Nominal dimension	∅ C	Controlled flow at 100 bar ± 10% l/min
2	1	0,8 ÷ 3,0
3	1,3	1,3 ÷ 5,1
4	1,5	1,9 ÷ 6,8
5	1,7	2,6 ÷ 9,1
6	2,2	4,0 ÷ 14,4
7	2,8	7,2 ÷ 18,0

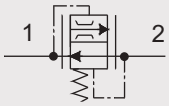
Pressure drop diagram



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08 PRESSURE COMPENSATED FIXED FLOW CONTROL VALVE





Main features

Max pressure	350 bar
Weight	0.06 Kg
Max flow	22 l/min
Tightening torque	25 Nm
Fluid temperature	-30°C ÷ +80°C
Filtration	ISO 4406
Cavity	SAE08-2

Spare part code

VSC — **Pressure compensated flow control valve**

6 — **Nominal size:** 6 = SAE08

***** — **Controlled flow:** see below table

Assembly code

F*

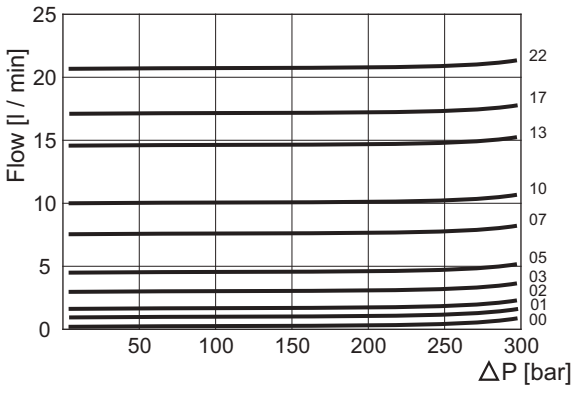
Where * stands for controlled flow [l/min]

Controlled flow

Spare part code	Ø C [mm]	Portata [l/min]
VSC600	0,8	1
VSC601	1	1,5
VSC602	1,25	2
VSC603	1,5	3
VSC605	1,75	5
VSC607	2	7
VSC610	2,5	10
VSC613	2,75	13
VSC617	3	17
VSC622	3,5	22

Note: nominal controlled flows, measured at 100 bar with an oil viscosity of 46 cSt at 50 °C, are to be taken as general reference values and must be tested in the field.

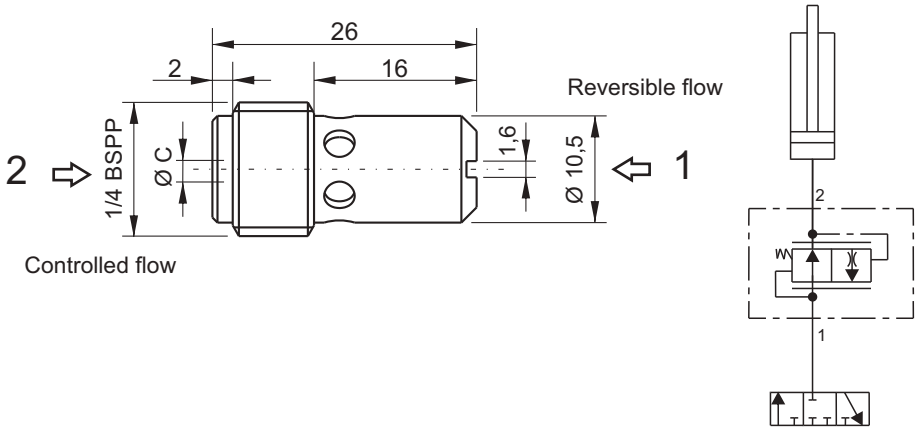
Pressure drop diagram

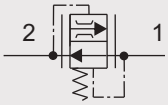


Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

1/4 BSPP PRESSURE COMPENSATED FIXED FLOW CONTROL VALVE

Typical application





Main features

Max pressure	300 bar
Weight	0.012 Kg
Max flow	22 l/min
Tightening torque	15 Nm
Fluid temperature	-30°C ÷ +80°C
Filtration	ISO 4406

Spare part code

VSC — **Flow control valve pressure compensated**

01 — **Nominal size:** 01

***** — **Controlled flow:** see below table

Assembly code

***(01)**

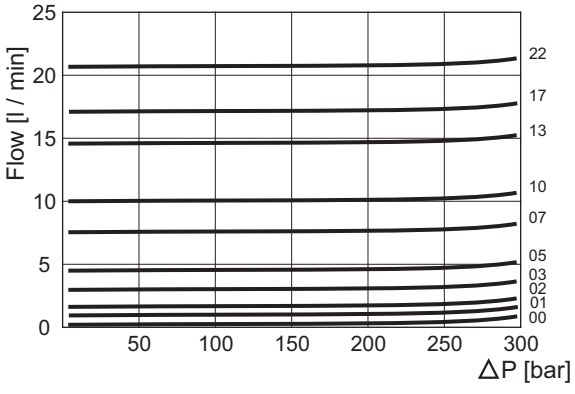
Where * stands for controlled flow [l/min]

Controlled flow

Spare part code	Ø C [mm]	Portata [l/min]
VSC0100	0,8	1
VSC0101	1	1,5
VSC0102	1,25	2
VSC0103	1,5	3
VSC0105	1,75	5
VSC0107	2	7
VSC0110	2,5	10
VSC0113	2,75	13
VSC0117	3	17
VSC0122	3,5	22

Note: nominal controlled flows, measured at 100 bar with an oil viscosity of 46 cSt at 50 °C, are to be taken as general reference values and must be tested in the field.

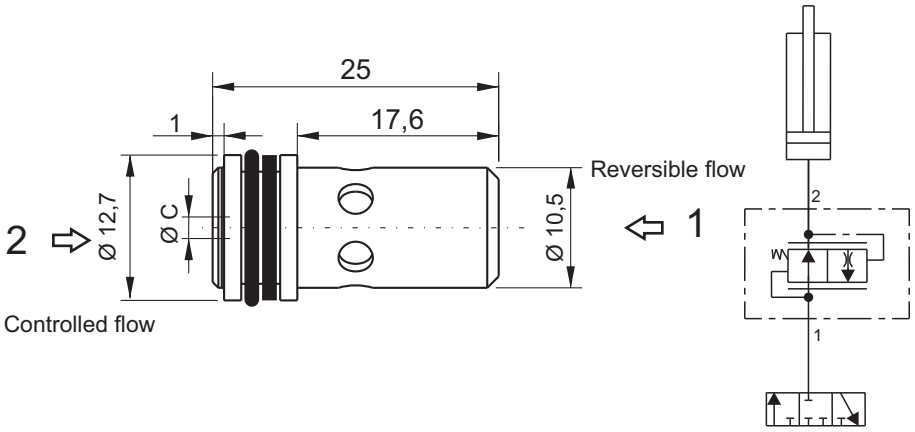
Pressure drop diagram

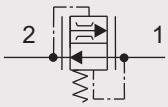


Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SLIP-IN PRESSURE COMPENSATED FIXED FLOW CONTROL VALVE

Typical application





Main features

Max pressure	300 bar
Weight	0.012 Kg
Max flow	22 l/min
Fluid temperature	-30°C ÷ +80°C
Filtration	ISO 4406

Spare part code

VSC — **Flow control valve pressure compensated**

04 — **Nominal size:** 04

***** — **Controlled flow:** see below table

Assembly code

***(04)**

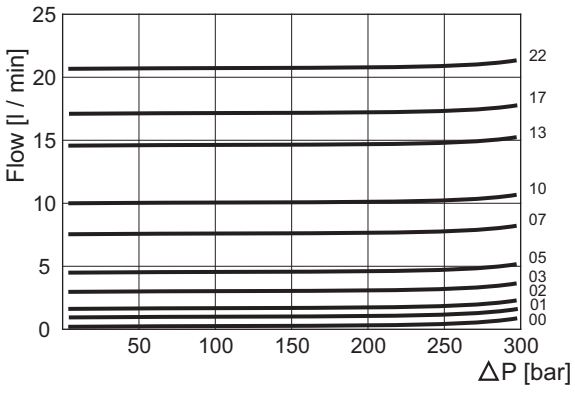
Where * stands for controlled flow [l/min]

Controlled flow

Spare part code	Ø C [mm]	Portata [l/min]
VSC0400	0,8	1
VSC0401	1	1,5
VSC0402	1,25	2
VSC0403	1,5	3
VSC0405	1,75	5
VSC0407	2	7
VSC0410	2,5	10
VSC0413	2,75	13
VSC0417	3	17
VSC0422	3,5	22

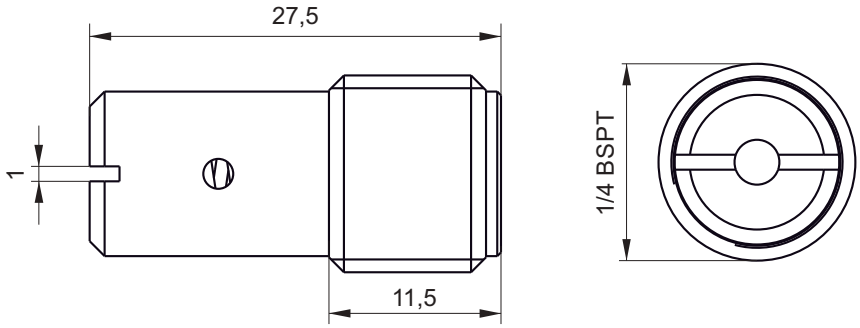
Note: nominal controlled flows, measured at 100 bar with an oil viscosity of 46 cSt at 50 °C, are to be taken as general reference values and must be tested in the field.

Pressure drop diagram

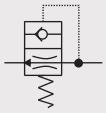


Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

1/4 BSPP START-UP VALVE FOR SINGLE PHASE ELECTRIC MOTORS



SUV01 valve is to be mounted in cavity 9 of U type and cavity 13 of S type central maindfold, after its proper machining (drilling and threading). The function of this valve is to discharge the pressure inside the central manifold line between the pump and the check valve in , when the power pack is off. It is typically used with single-phase motor starting under load, overcoming the inherent low torque at start-up of single phase AC induction motors.



Main features

Max pressure	300 bar
Weight	0.0025 Kg
Max flow	22 l/min
Min flow	2 l/min
Tightening torque	15 Nm
Fluid temperature	-10°C ÷ +80°C
Filtration	ISO 4406

Spare part code

SUV — **Start-up valve for single phase electric motors**

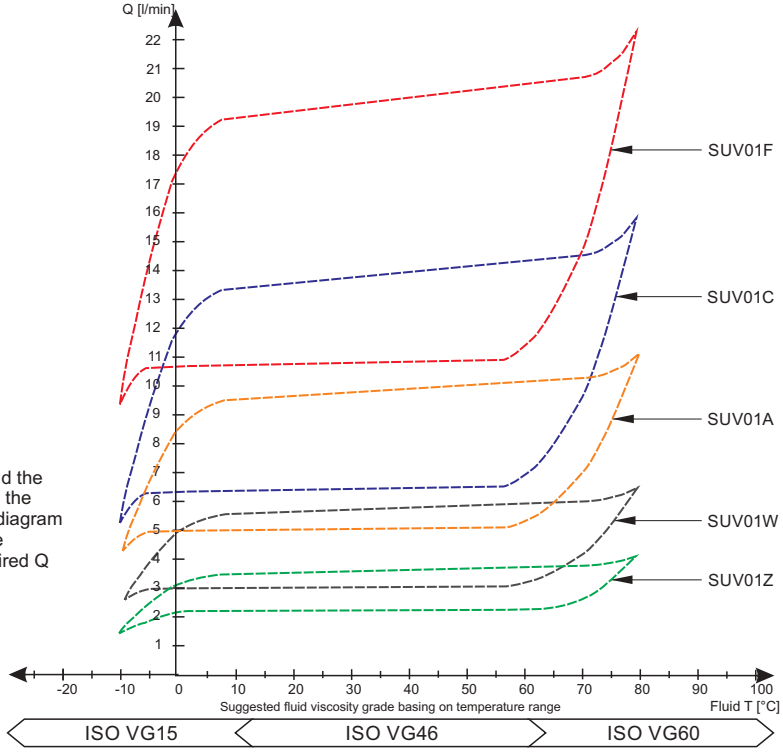
01 — **Nominal size:** 01 = 1/4 BSPT

A — **Flow reference:** see below table for the proper choice depending on pump flow and fluid temperature

Assembly code

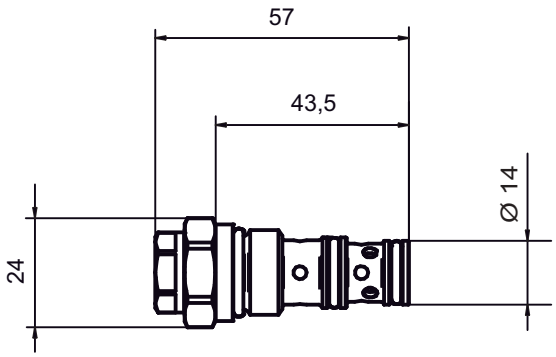
S01*

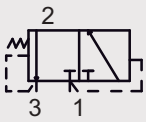
Where * stands for the setting



Working limits diagram
Once the required power pack flow and the fluid working temperature are defined, the proper valve can be chosen from the diagram aside. Try to choose the valve with the working area most centered with required Q and T.

SAE08 3/2 HYDRAULICALLY PILOTED DIRECTIONAL VALVE FOR SB3 MANIFOLD





Main features

Max pressure	200 bar
Max flow	20 l/min
Weight	0,09 kg
Cavity	SAE08-3

Recommended tightening torque: 40-45 Nm
Oil temperature: -30 ÷ + 110 °C
Max leakage: 200 cm³/min - 200 bar

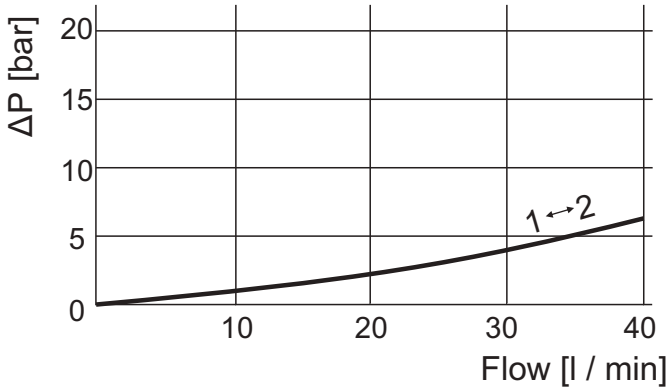
Spare part code

SVDCH00004	**3/2 directional valve piloted 3/4-16 UNF**

Assembly code

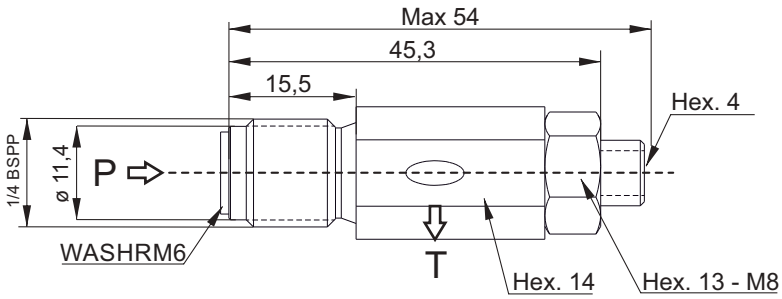
O

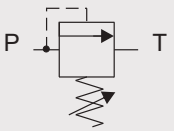
Performance diagram



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

1/4 BSPP ANTI-SHOCK THERMAL ADJUSTABLE RELIEF VALVE





Main features

Max pressure	350 bar
Weight	0,14 kg

Recommended tightening torque: 15 ÷20 Nm
Recommended filtration: 25 ÷ 50 µ
Oil temperature: -30 ÷ + 80 °C

Spare part code

SVRFH0000* — **Anti-shock / Thermal Relief valve**

* — 1 = 50 ÷ 175 bar
2 = 100 ÷ 300 bar

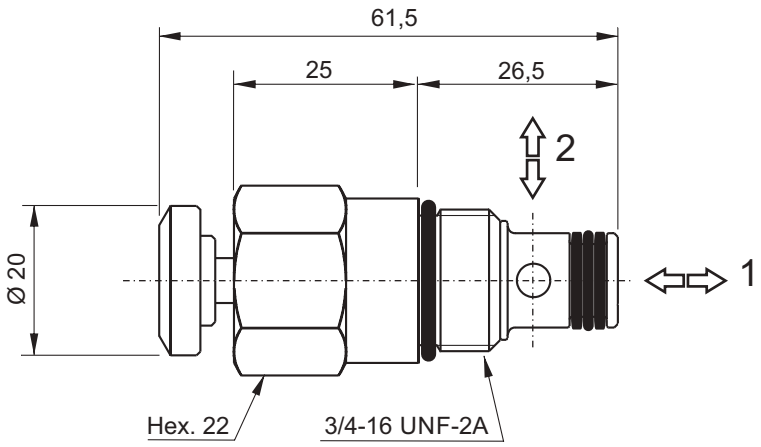
Assembly code

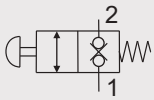
ATR*

* — - = 100 ÷ 300 bar
L = 50 ÷ 175 bar

Note: the thermal relief valve protects the circuit from hydraulic fluid thermal expansion high pressures, by automatically relieving a few drops of fluid and resetting itself as soon as the trapped pressure decreases.
It must be mounted on the actuator circuit side when the same is exposed at consistent variations of temperatures over timechange depending on fluid viscosity and temperature.

SAE08 MANUAL 2/2 DOUBLE LOCKING NC EMERGENCY VALVE





Main features

Max pressure	300 bar
Weight	0.12 Kg
Max flow	25 l/min
Tightening torque	25 Nm
Fluid temperature	-30°C ÷ +80°C
Filtration	ISO 4406
Cavity	SAE08-2

Spare part code

CPE — **Two-way manual emergency valve**

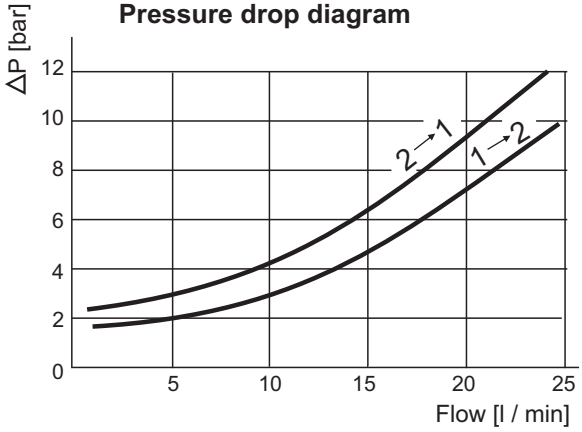
04 — **Nominal size:** 04 = 3/4-16 UNF

P — **Operating device:** P = press button

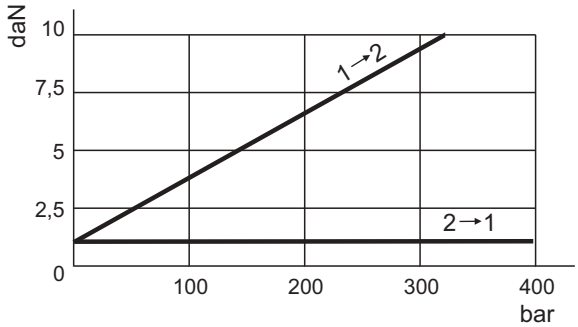
Assembly code

Z

Pressure drop diagram

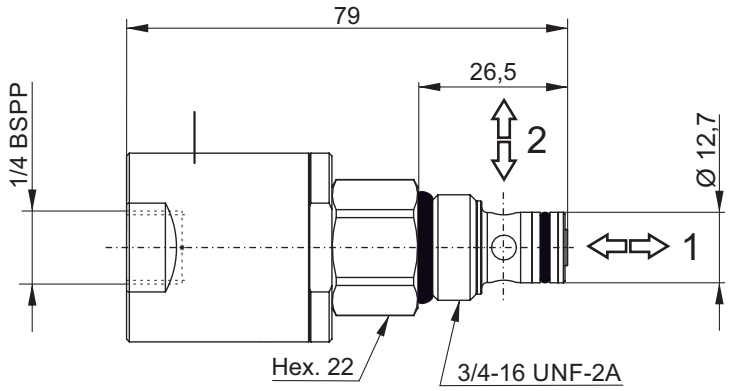


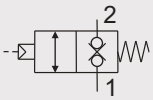
Operating force (daN) on the button



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08 PNEUMATIC 2/2 DOUBLE LOCKING NC VALVE





Main features

Max pressure	350 bar
Weight	0.16 Kg
Max flow	40 l/min
Tightening torque	25 Nm
Fluid temperature	-20°C ÷ +80°C
Pilot pressure	4/15 bar 58218PSI
Filtration	ISO 4406
Max leakage	0,25cm³/min
Cavity	SAE08-2

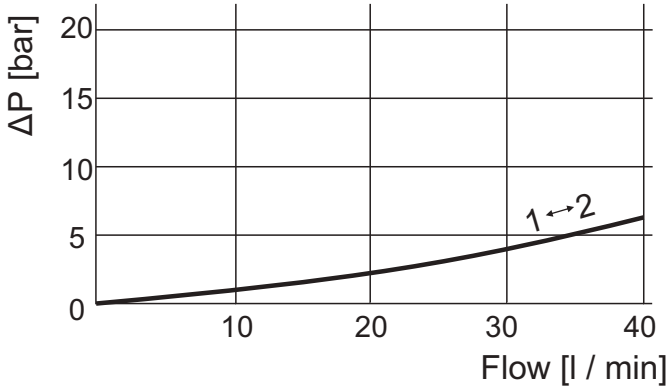
Spare part code

SVDCH00001	**Two-way pneumatic valve 3/4-16 UNF**

Assembly code

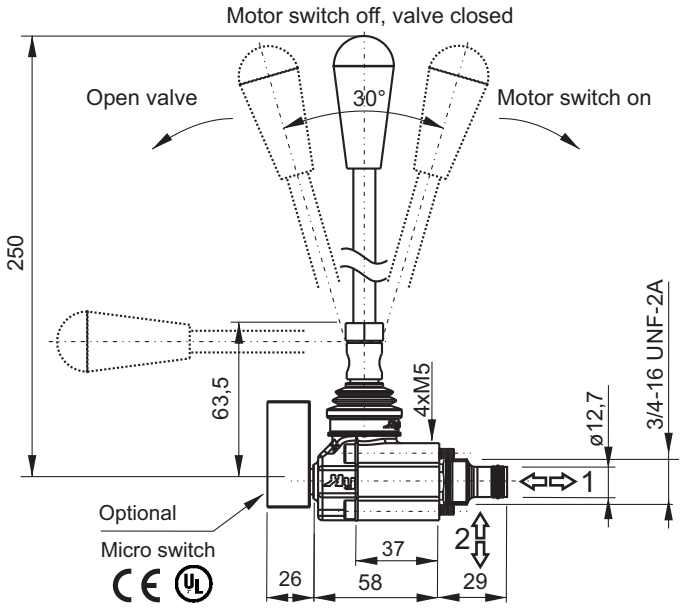
W

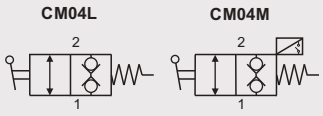
Performance diagram



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08 2/2 DOUBLE LOCKING NC MANUAL LEVER VALVE





Main features

Max pressure	300 bar
Weight	0.34 Kg
Max flow	25 l/min
Tightening torque	25 Nm
Fluid temperature	-30°C ÷ +80°C
Fixing bolts	4xM5x45
Filtration	ISO 4406
Max current	10A - 400A
Cavity	SAE08-2

Spare part code

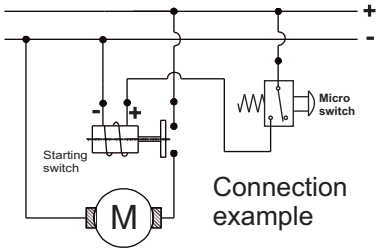
CM — **Two-way manual lever valve**

04 — **Nominal size:** 04 = 3/4-16 UNF

L — **Type:** L = lever (std), M = lever+micro switch

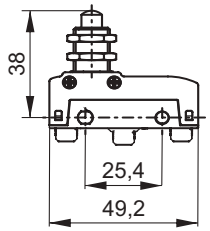
Assembly code

E (CM04L)
EM (CM04M)



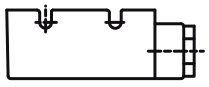
Connection example

Micro switch option



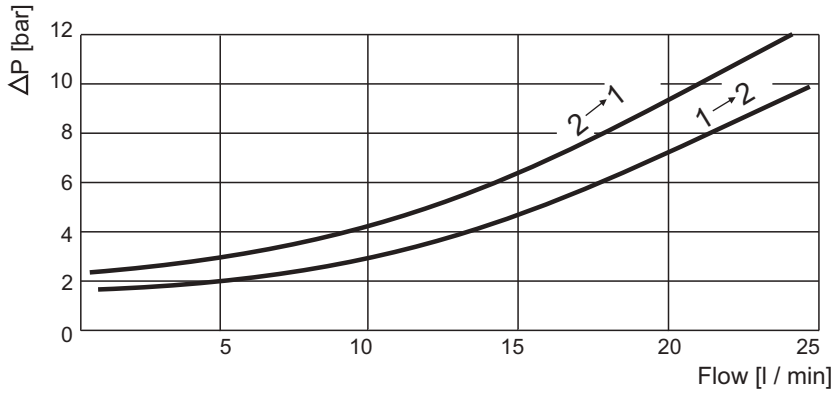
Spare part code
MCR1222

Plastic terminal cover protection



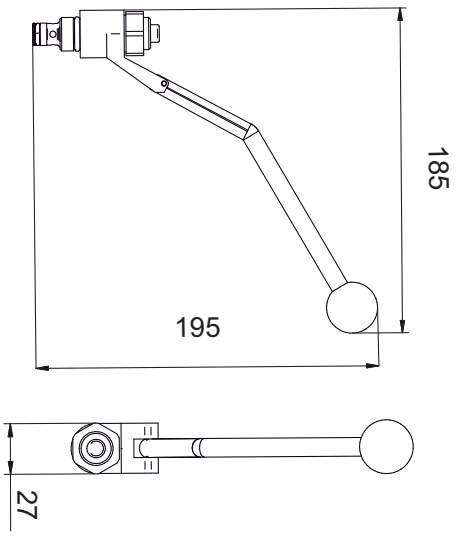
Spare part code
VFC02

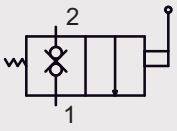
Pressure drop diagram



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08 2/2 DOUBLE LOCKING NC MANUAL LEVER VALVE (PUSH OPERATION)





Main features

Max pressure	315 bar
Max flow	30 l/min
Weight	0,05 kg
Pilot pressure	4/15 bar 58/218 PSI
Cavity	SAE08-2

Recommended tightening torque: 25-27.2 Nm
Recommended filtration: 25 µ
Oil temperature: -30 ÷ + 100 °C

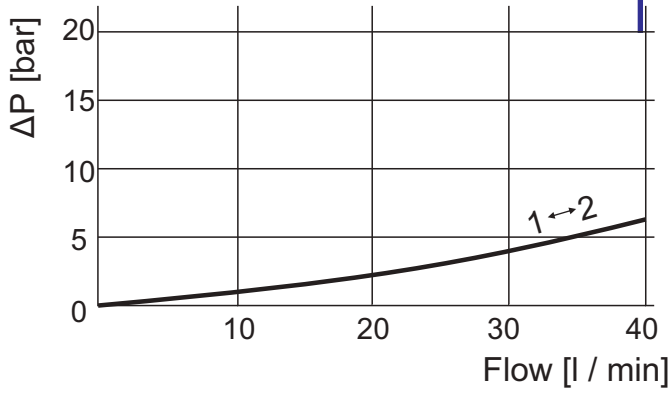
Spare part code

SVDCH00005 — **Two-seal pneumatic valve 2/2NF 3/4-16 UNF**

Assembly code

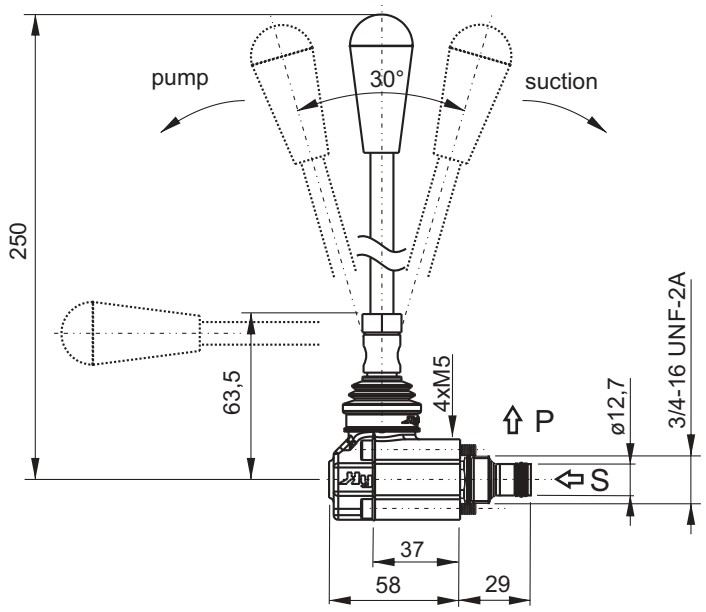
EN

Performance diagram



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08 2CC HAND PUMP



Main features

Max pressure	180 bar
Weight	0.34 Kg
Fixing bolts	M5x45
Tightening torque	25 Nm
Fluid temperature	-25°C ÷ +85°C
Filtration	ISO 4406
Cavity	SAE08-2

Spare part code

PMC — **Hand pump**

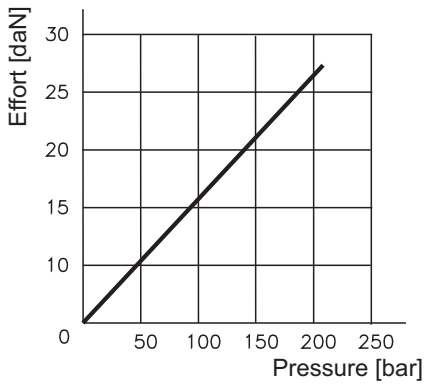
02 — **Nominal size:**
02 = 2 cc/stroke

L — **Type:**
L = lever (std)

Assembly code

U

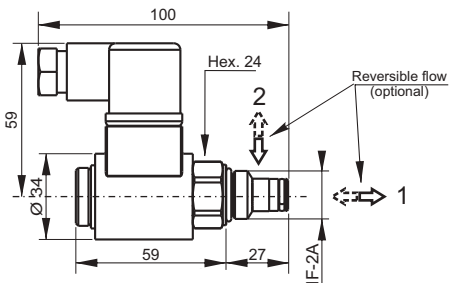
Effort (daN)
operating on the lever end



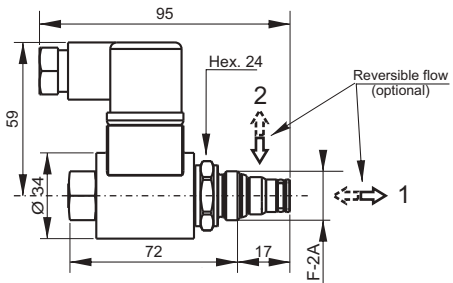
Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08 PILOT OPERATED 2/2 SINGLE LOCKING POPPET SOLENOID VALVES

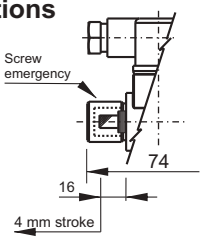
Normally closed

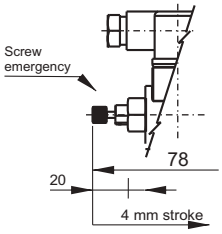


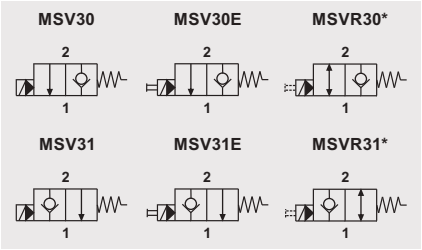
Normally open



Options







Main features

Max press.	up to 350 bar
Max flow	up to 30 l/min
Weight	0,11 Kg (without coil)
Internal leakage	5 drops/min at 350 bar
Response time	30 ms (energizing) 50ms (de-energizing)
Duty cycle	ED 100%
Voltage	+/- 10% nominal voltage
Environment temperature	-15 ÷ +50°C
Fluid temperature	-30 - +80°C
Filtration	ISO 4406
Tightening torque	25Nm
Cavity	SAE08-2

Spare part code

MSV — **Pilot Operated 2-way Single Locking Valve**

- — **Options:**
R = with reversible flow

30 — **Operation:**
30 = normally closed
31 = normally open

0 — **Emergency override:**
0 = no emergency (std)
E = emergency

0000 — **Supply voltage:**
0000 = no coil (std)
see coils table

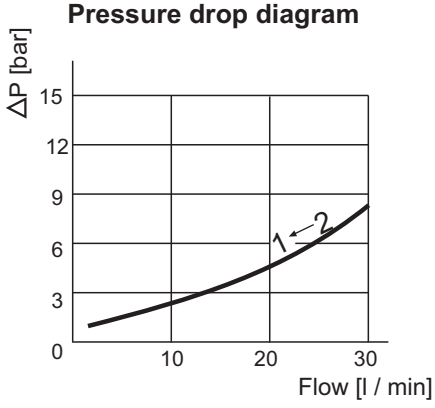
Assembly code

A (MSV30) **Voltage**
B (MSV30E) **Voltage**
Q (MSV31) **Voltage**
C (MSV31E) **Voltage**

Ex: A12DC

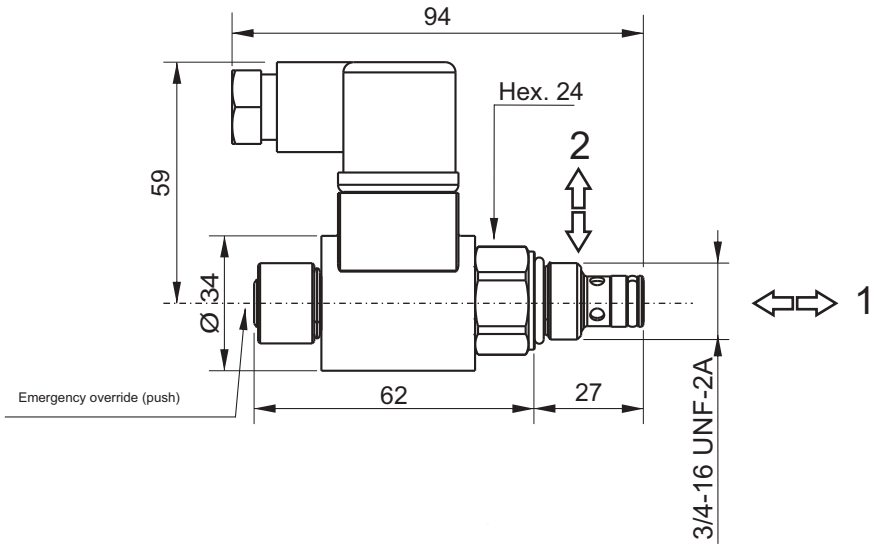
Supply Voltage	Coils Coil code	Connector code
12DC	M6306012	KA132000B1
24DC	M6306024	KA132000B1
48DC	M6306048	KA132000B1
24AC	M6316024	KA132000B1
115AC	M63160115	KA132000B1
230AC	M63160230	KA132000B1

Pressure drop diagram

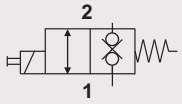


Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

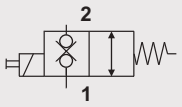
SAE08 DIRECT OPERATED 2/2 DOUBLE LOCKING POPPET SOLENOID VALVES



MDV30E



MDV31E



Main features

Max press.	up to 250 bar
Max flow	up to 40 l/min
Weight	0,11 Kg
Internal leakage	5 drops/min at 350 bar
Response time	30 ms (energizing) 50ms (de-energizing)
Duty cycle	ED 100%
Voltage	+/- 10% nominal voltage
Environment temperature	-15 ÷ +50°C
Fluid temperature	-30 - +80°C
Filtration	ISO 4406
Tightening torque	25Nm
Cavity	SAE08-2

Spare part code

MDV — **Two-way double locking solenoid valve**

30 — **Operation:**
30 = normally closed
31 = normally open

E — **Option:**
E = emergency (std)

0000 — **Supply voltage:**
0000 = no coil (std)
see coils table

Assembly code

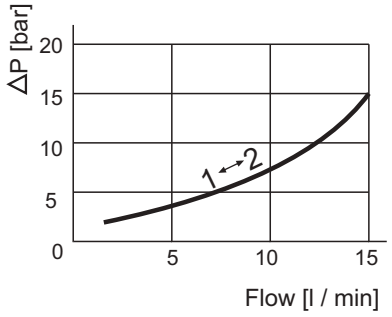
D (MDV30E) **Voltage**
M (MDV31E) **Voltage**

Ex: D12DC

Coils

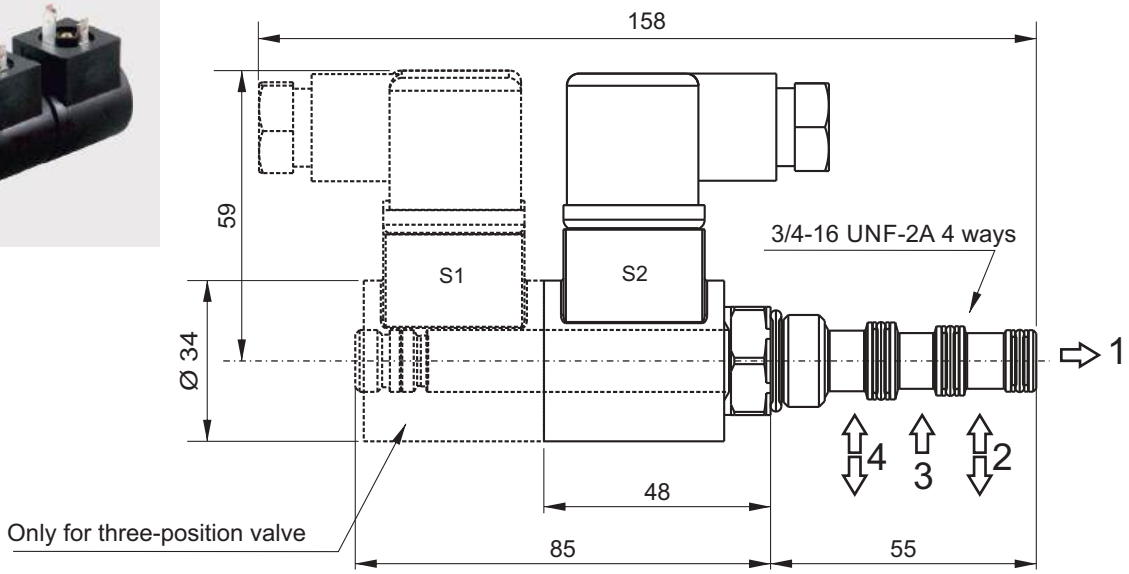
Supply Voltage	Coil code	Connector code
12DC	M14040001	KA132000B1
24DC	M1404002	KA132000B1
24AC	M1404002	KA132000B1
115AC	M1404004	KA132000B1
230AC	M1404005	KA132000B1

Pressure drop diagram



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08-4 DIRECT OPERATED 4/3 OR 4/2 DIRECTIONAL SPOOL SOLENOID VALVES



Main features

Max press.	210 bar
Max flow	11,5 l/min
Weight	0,37 Kg (1 solenoid) 0,64 Kg (2 solenoids)
Internal leakage	278 cc/min at 210 bar
Minimum pull-in voltage	85% of nominal
Duty cycle	ED 100%
Voltage	+/- 10% nominal voltage
Environment temperature	-15 ÷ +50°C
Fluid temperature	-30 - +80°C
Filtration	ISO 4406
Tightening torque	25Nm
Cavity	SAE08-4

Spare part code

MSV4V — **4/3 or 4/2 directional spool solenoid valve**

A2 — **Spool configuration:** see below table

00 — **Option:** 00 = std

0000 — **Supply voltage:** 0000 = no coil (std) see coils table

Assembly code

4VA2 Voltage

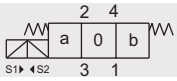
Ex: 4VA2 24DC

Coils

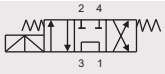
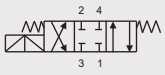
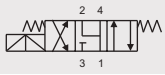
Supply Voltage	Coil code	Connector code
12DC	M6306012	KA132000B1
24DC	M6306024	KA132000B1
24AC	M6316024	KA132000B1
115AC	M63160115	KA132000B1
230AC	M63160230	KA132000B1

Spools

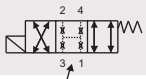
Code



Double solenoid

A2	
B2	
C2	
E2	

Single solenoid

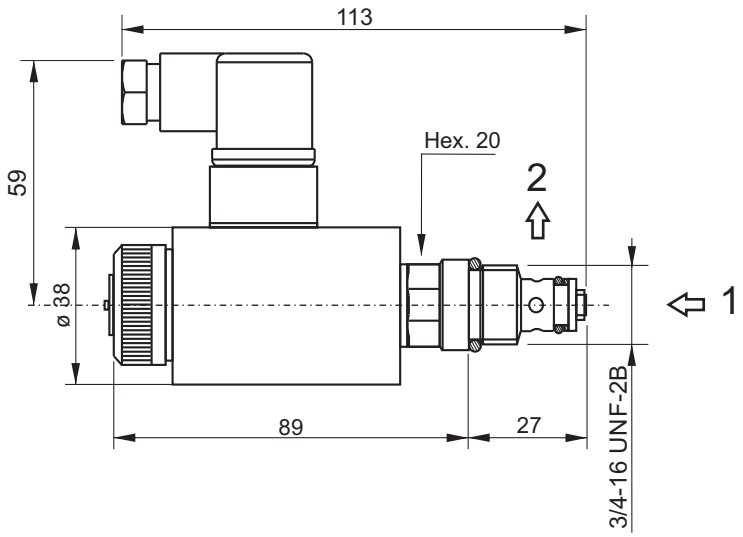
A11C	

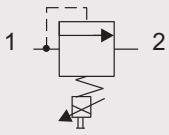
transition

Valve code	Code marked on solenoid head
A2	**A**
B2	**C**
C2	**B**
E2	**D**

SAE08 PROPORTIONAL PRESSURE RELIEF VALVE

CE





Main features

Max press.	350 bar
Max flow	2 l/min
Weight	0,46 Kg
PWM	120Hz
Hysteresis	5%
Duty cycle	ED 100%
Voltage	+/- 10% nominal voltage
Environment temperature	-15 ÷ +50°C
Fluid temperature	-30 - +80°C
Filtration	ISO 4406
Tightening torque	25Nm
Cavity	SAE08-2

Note: Supplying current to the coil from 0 to I max (see diagram), a proportional pressure variation is obtained on port P.

Spare part code

VMPC — **Direct acting proportional relief valve**

2 — **Nominal size:**
2 = 2 l/min

C — **Working range:**
A = 10 ÷ 80 bar
C = 40 ÷ 250 bar

E — **Options:**
E = emergency (std)

0000 — **Supply voltage:**
- 0000 = no coil
- 12DC
- 24DC

see coils table

Assembly code

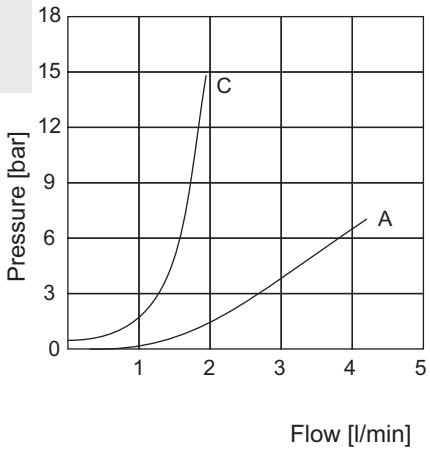
P* Voltage**

where *** stands for max setting pressure [bar]. eg. P25012DC

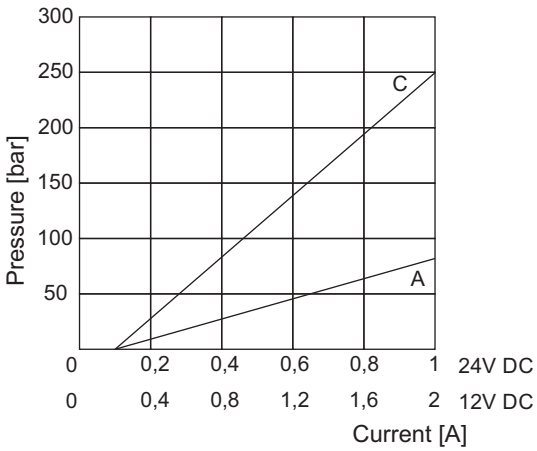
Coils

Supply Voltage	Coil code	Connector code
12DC	98001190	KA132000B1
24DC	98002190	KA132000B1

Pressure drop diagram

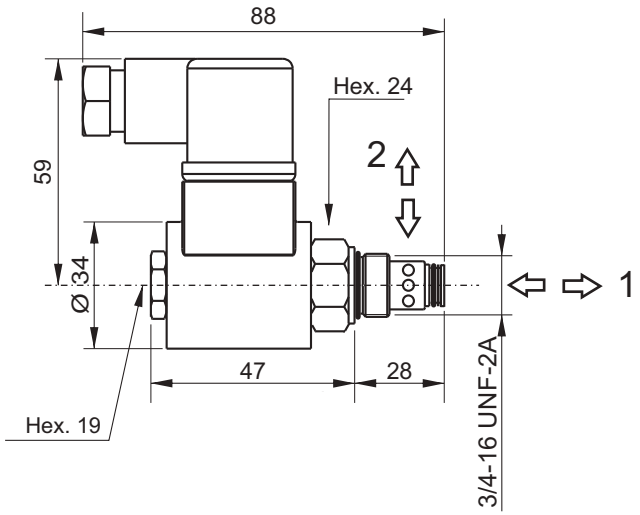


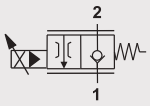
Pressure vs current



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature.

SAE08 2/2 SINGLE LOCKING POPPET PROPORTIONAL FLOW CONTROL VALVE





Main features

Max press.	210 bar
Max flow	22 l/min
Weight	0,1 Kg (without coil)
PWM	120Hz
Hysteresis	5% (10% above 85% Imax)
Duty cycle	ED 100%
Voltage	+/- 10% nominal voltage
Environment temperature	-15 ÷ +50°C
Fluid temperature	-40 - +120°C
Filtration	ISO 4406
Tightening torque	30Nm
Cavity	SAE08-2

Spare part code

CSPC — **Proportional flow control valve**

15 — **Nominal size:**
15 = 15 l/min

0 — **Option:**
0 = no option

0000 — **Supply voltage:**
- 0000 = no coil (std)
- 12DC
- 24DC

see coils table

Assembly code

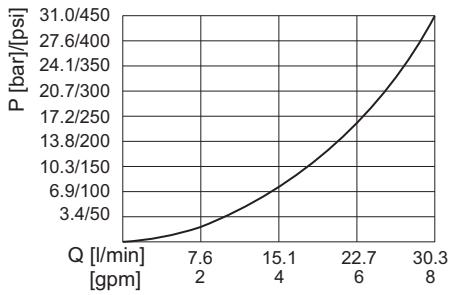
T* Voltage**

eg: T12DC

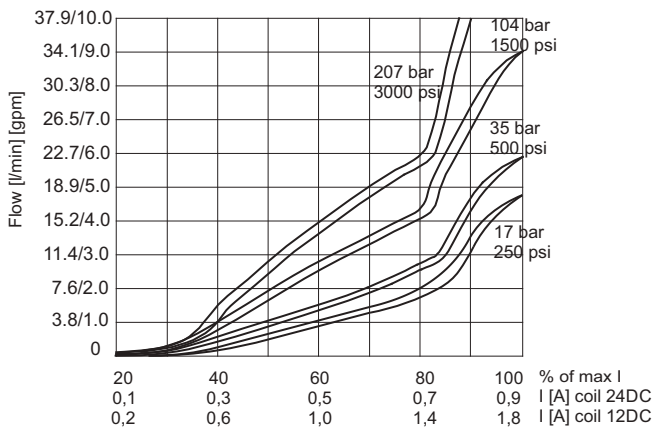
Coils

Supply voltage	Coil code	Connector code
12DC	M6306012	KA132000B1
24DC	M6306024	KA132000B1

Pressure Drop 2 > 1 with fully open valve

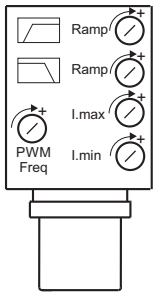


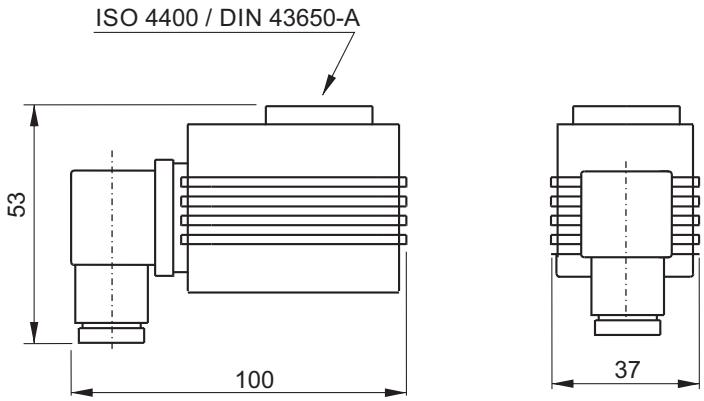
Flow vs current at different pressure drops



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C.
Pressure drop may change depending on fluid viscosity and temperature.

VPC - PLUG IN ELECTRONIC AMPLIFIER FOR PROPORTIONAL SOLENOID VALVES





Main features

Supply voltage	12 / 24V DC
Voltage input signal range	10 V
Max current range	2,5A
PWM (optionally adjustable)	120 Hz (50 ÷ 400 Hz)
Ramp adjustment (independent)	5%
Input impedance	100 kohm
Voltage	+/- 10% nominal voltage
Weight	0,11 kg
Normatives	EN50081-1/EN50082-2 (89/336 CEE electromagnetic comp.) 73/23/CEE / 96/68/CEE (low voltage)
Notes	Closed current loop included (does not change with temperature)

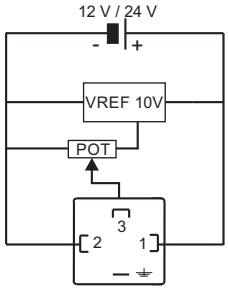
Spare part code

VPC — **Electronic amplifier for solenoid valves**

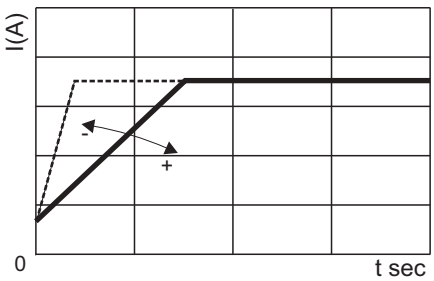
00 — **Options**

Suitable for:
- CSPC15**** proportional flow control valve
- VMPC2**** proportional pressure relief valve
- other proportional valves

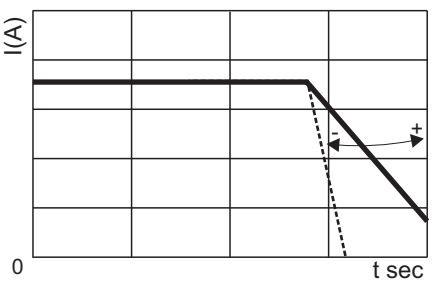
Electric circuit



Ramp adjustment (up)



Ramp adjustment (down)



Instruction for use:

1) turn the “I MIN” trimmer fully counterclockwise;
2) adjust the external voltage input signal to the desired initial regulating (flow or pressure) value;
3) turn “I MIN” trimmer in a clockwise direction until valve just starts regulating;
4) adjust the external voltage input signal to the max value and adjust “I MAX” trimmer until the valve regulates the maximum flow or pressure on the hydraulic system.
Independent current to temperature variations.

COILS FOR SOLENOID VALVES

M630* / M631*

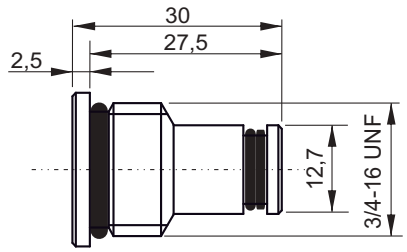
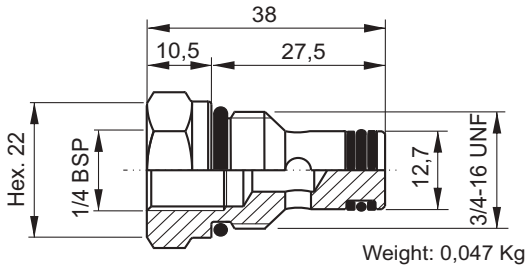
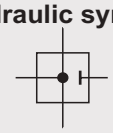
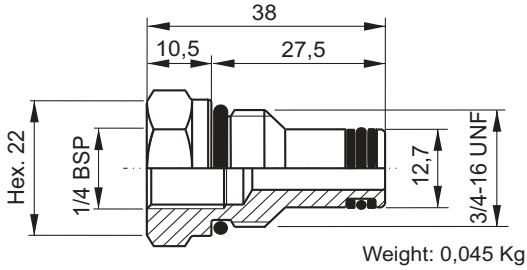
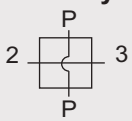
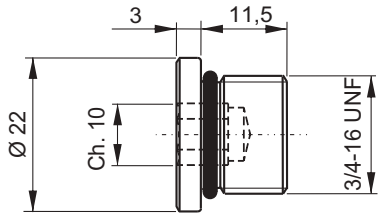
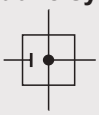
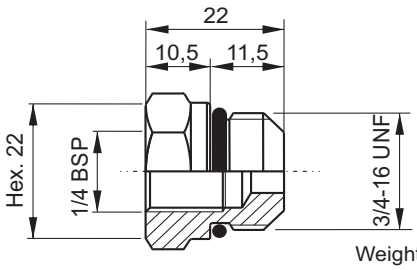
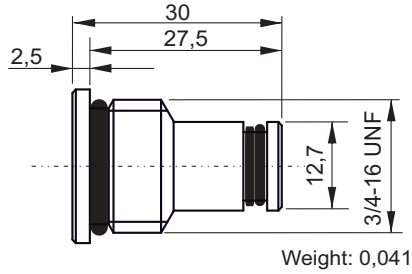
M630DT*

M140

9800*

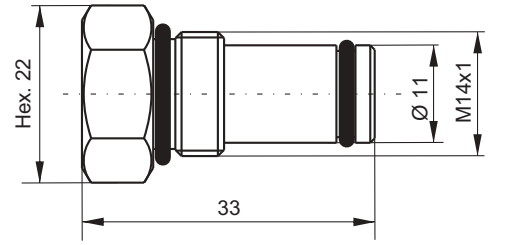
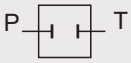
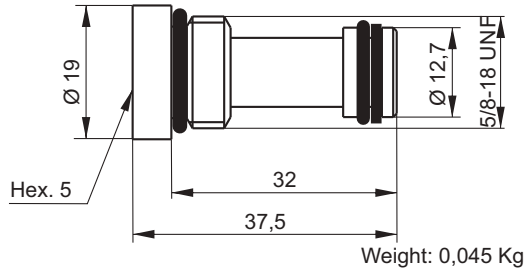
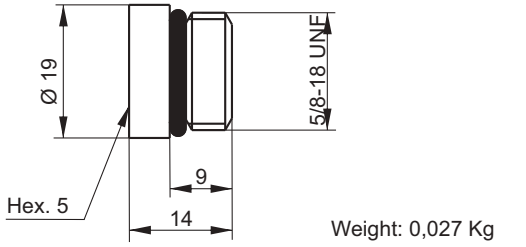
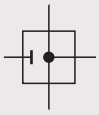
Supply voltage [V]	Assembly code	Coil type	Spare part code	Spare connector code	Holding Power [W]	Duty charge ED [%]	Prot. class	Wt [g]	Suitable for valves
12DC	12DC_M630	DC	**M6306012**	KA132000B1 DIN43650/ISO4400	18W	100	H	130	MSV30 MSV4V CSPC15
24DC	24DC_M630	DC	**M6306024**	KA132000B1 DIN43650/ISO4400	18W	100	H	130	MSV30 MSV4V CSPC15
48DC	48DC_M630	DC	**M6306048**	KA132000B1 DIN43650/ISO4400	18W	100	H	130	MSV3V MSV30 SD02
24AC	24AC_M631	RC with integrated rectifying bridge	**M6316024**	KA132000B1 DIN43650/ISO4400	18W	100	H	130	MSV30 MSV4V
115AC	115AC_M631	RC with integrated rectifying bridge	**M6316115**	KA132000B1 DIN43650/ISO4400	18W	100	H	130	MSV30 MSV4V
230AC	230AC_M631	RC with integrated rectifying bridge	**M6316230**	KA132000B1 DIN43650/ISO4400	18W	100	H	130	MSV30 MSV4V
12DC	12DC_M630DT	DC, Deutsch	**M6306012DT**	DT06-4S Deutsch	17W	100	H	117	MSV30 SD00
24DC	24DC_M630DT	DC, Deutsch	**M6306024DT**	DT06-4S Deutsch	17W	100	H	117	MSV30 Sd00
12DC	12DC_M630HP	DC	**M6306012HP**	KA132000B1 DIN43650/ISO4400	21W	100	H	130	MSV30 MSV4V CSPC15
24DC	24DC_M630HP	DC	**M6306024HP**	KA132000B1 DIN43650/ISO4400	21W	100	H	130	MSV30 MSV4V CSPC15
48DC	48DC_M630HP	DC	**M6306048HP**	KA132000B1 DIN43650/ISO4400	21W	100	H	130	MSV3V MSV30 SD02
12DC	Embedded in the VMPC2 proportional valve code	DC	**98001190**	KA132000B1 DIN43650/ISO4400	36W	100	H	257	VMPC2
24DC	Embedded in the VMPC2 proportional valve code	DC	**98002190**	KA132000B1 DIN43650/ISO4400	36W	100	H	247	VMPC2
12DC	12DC_M140	DC	**M14040001**	KA132000B1 DIN43650/ISO4400	22W	100	H	202	MDV30 MDV31 MSV31
24DC	24DC_M140	DC	**M14040002**	KA132000B1 DIN43650/ISO4400	22W	100	H	202	MDV30 MDV31 MSV31
48DC	48DC_M140	DC	**M14040003**	KA132000B1 DIN43650/ISO4400	22W	100	H	202	MDV30 MDV31 MSV31
24AC	24RAC_M140	RC - needs external rectifying connector	**M14040002**	KA132R11B1 DIN43650/ISO4400	22W	100	H	202	MDV30 MDV31 MSV31
115AC	110RAC_M140	RC - needs external rectifying connector	**M14040004**	KA132R12B1 DIN43650/ISO4400	22W	100	H	202	MDV30 MDV31 MSV31
230AC	220RAC_M140	RC - needs external rectifying connector	**M14040005**	KA132R13B1 DIN43650/ISO4400	22W	100	H	202	MDV30 MDV31 MSV31

PLUGS

 Weight: 0,041 Kg	**Hydraulic symbol** **Spare part code** **E70100005**	**Assembly code** **G**
 Weight: 0,047 Kg	**Hydraulic symbol**  **Spare part code** **E70100003**	**Assembly code** **H**
 Weight: 0,045 Kg	**Hydraulic symbol**  **Spare part code** **E70100006**	**Assembly code** **P**
 Weight: 0,027 Kg	**Hydraulic symbol**  **Spare part code** **E70100004**	**Assembly code** **L**
 Weight: 0,042 Kg	**Hydraulic symbol** **Spare part code** **E70100002**	**Assembly code** **N**
 Weight: 0,041 Kg	**Hydraulic symbol** **Spare part code** **E70200010**	**Assembly code** **XP**

Note: cavities 3, 4 and 6 are present on central manifold type UB only.

PLUGS

 Weight: 0,110 Kg	**Hydraulic symbol**  **Spare part code** **N70200010**	**Assembly code** **XM**
 Weight: 0,045 Kg	**Hydraulic symbol** **Spare part code** **N70200007**	**Assembly code** **MG**
 Weight: 0,027 Kg	**Hydraulic symbol**  **Spare part code** **N70200008**	**Assembly code** **ML**

Note: cavities 2 and 3 are machined SAE08 (3/4-16UNF) in central manifold MB and 5/8-18UNF in central manifold MR.
Cavity 2 is machined SAE08-4way in central manifold M4.
Cavity 4 is machined only in reversible central manifold MR.

NOTES