

## OVERFLOW/BYPASS VALVES OVF40

### DESCRIPTION

The ADCATrol OVF40 is a series of single seated, two-way overflow valves with inline connections.

These valves are mainly used in closed loop systems to ensure that a minimum flow is kept in the event that all connected consumers are in a low load condition or have simply shut down. In these scenarios, the valve will prevent problems such as pressure surges, pump cavitation and overheating.

The spring force keeps the valve closed, until the upstream pressure, which acts on the underside of the plug, exceeds the set pressure thus opening the valve and allowing flow to the downstream side.

The set pressure is manually adjusted during commissioning by compression of the spring with the adjustment screw located on the top of the valve yoke.

The set pressure corresponds to the differential between upstream and downstream pressures across the valve.

### MAIN FEATURES

Compact and versatile.

Stainless steel bellows sealing and trim.

Metal to metal valve sealing.

V-port guided valve plug.

**OPTIONS:** Soft or stellited valve sealing.  
Perforated plugs.

**USE:** Water, diathermic heat transfer oil and other fluids compatible with the construction.

### AVAILABLE

**MODELS:** OVF40S – carbon steel.  
OVF40i – stainless steel.

**SIZES:** DN 15 to DN 80.

### REGULATING

**RANGES:** DN 15 to DN 32 – 0,5 to 5 bar; 2 to 8 bar.  
DN 40 – 0,5 to 6 bar.  
DN 50 – 0,5 to 5 bar; 2 to 7 bar.  
DN 65 and DN 80 – 1 to 4 bar.

**CONNECTIONS:** Flanged EN 1092-1 PN 16 or PN 40.  
Standard PN 16 DN 65 flanges are supplied with 4 holes. 8 holes, according to EN 1092-1, on request.



### CE MARKING – GROUP 2 (PED – European Directive)

PN 16	PN 40	Category
DN 15 to 50	DN 15 to 32	SEP
DN 65 to 80	DN 40 to 80	1 (CE marked)

**BODY LIMITING CONDITIONS \***

OVF40S				OVF40i			
FLANGED PN 16		FLANGED PN 40		FLANGED PN 16		FLANGED PN 40	
ALLOWABLE PRESSURE	RELATED TEMPERATURE	ALLOWABLE PRESSURE	RELATED TEMPERATURE	ALLOWABLE PRESSURE	RELATED TEMPERATURE	ALLOWABLE PRESSURE	RELATED TEMPERATURE
16 bar	-10 / 50 °C	40 bar	-10 / 50 °C	16 bar	-10 / 50 °C	40 bar	-10 / 50 °C
13,3 bar	200 °C	33,3 bar	200 °C	13,4 bar	200 °C	33,7 bar	200 °C
12,1 bar	250 °C	27,6 bar	300 °C	12,7 bar	250 °C	29,7 bar	300 °C
11 bar	300 °C	25,7 bar	350 °C	11,8 bar	300 °C	28,5 bar	350 °C
10,2 bar	350 °C	23,8 bar	400 °C	11,4 bar	350 °C	27,4 bar	400 °C

\* Rating according to EN 1092-1:2018.

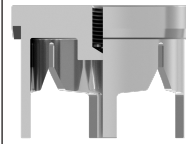
**PLUG DESIGN**

**V-PORT GUIDED**



**Sealing:** Metal to metal  
**Characteristic:** Linear (PL)  
**Flow direction:** From below  
**Rangeability:** 30:1  
**Leakage:** Class IV, acc. to IEC 60534-4

**V-PORT GUIDED (SOFT SEALING)**



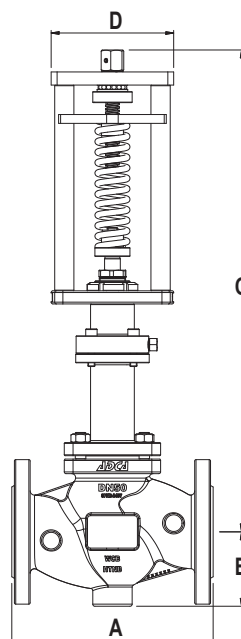
**Sealing:** PTFE/GR  
**Characteristic:** Linear (PL)  
**Flow direction:** From below  
**Rangeability:** 30:1  
**Leakage:** Class VI, acc. to IEC 60534-4

**FLOW RATE COEFFICIENTS**

SIZE	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80
<b>Kvs (m³/h)</b>	5,2	7,2	9,4	15,4	22,2	40,1	63,4	89,7
<b>SEAT Ø (mm)</b>	15	19,2	25	32	38	48	65	76
<b>STROKE (mm)</b>	20						30	

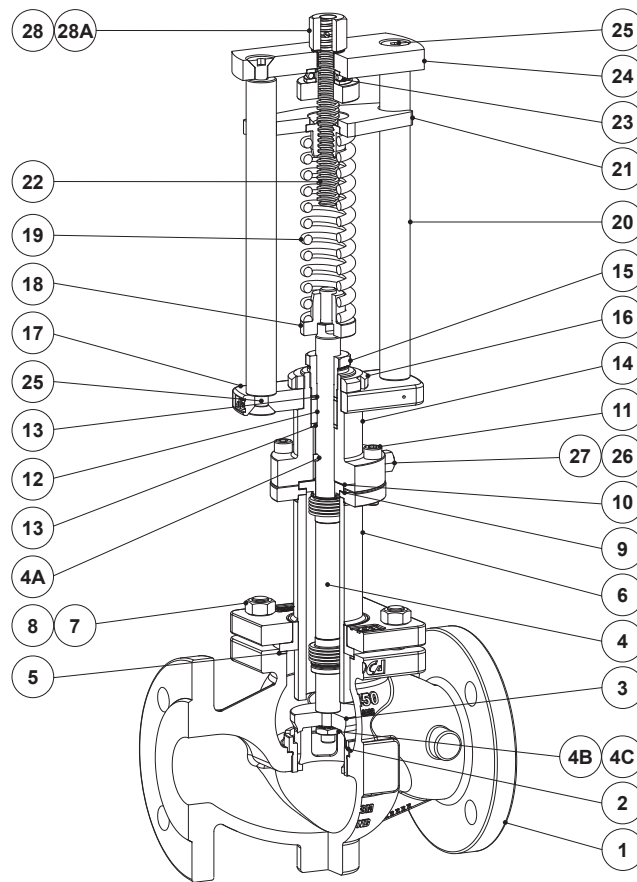
For conversion, Kvs = Cv (US) x 0,865.

**DIMENSIONS**



DIMENSIONS (mm)								
DIMENSION	SIZE							
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN80
A	130	150	160	180	200	230	290	310
B	48	53	58	70	75	83	93	100
C	480	480	485	495	505	570	843	848
D	140						155	
WEIGHT (kg)	12,2	13	13,8	16,8	19,4	22,7	41	50

### MATERIALS



MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Valve body (OVF40S)	A216 WCB / 1.0619
	Valve body (OVF40i)	A351 CF8M / 1.4408
2	* Seat	AISI 316L / 1.4404
3	* Valve plug	AISI 316L / 1.4404
4	* Stem with welded metal bellows	AISI 316L / 1.4404 AISI 316Ti / 1.4571
4A	* Locking pin	AISI 303 / 1.4305
4B	* Serrated washer	AISI 304 / 1.4301
4C	* Nut	Stainless steel A2-70
5	* Gasket	Stainless steel / Graphite
6	Bellows housing	AISI 316 / 1.4401
7	Nuts (OVF40S)	Zinc plated steel
	Nuts (OVF40i)	Stainless steel A2-70
8	Studs (OVF40S)	34CrNiMo6 / 1.6582
	Studs (OVF40i)	Stainless steel A2-70
9	* Gasket	Stainless steel / Graphite
10	* Gasket	Stainless steel / Graphite
11	Bolts	Stainless steel A2-70
12	* Packing set	Expanded graphite
13	Washer	AISI 304 / 1.4301
14	Bellows bonnet	AISI 316L / 1.4404
15	Gland nut	AISI 303 / 1.4305
16	Lock nut	A351 CF8 / 1.4308
17	Lower yoke flange	A351 CF8 / 1.4308
18	Lower spring guide	C45E / 1.1191
19	* Adjustment spring	AISI 301 / 1.4310
20	Yoke column	C45E / 1.1191
21	Upper spring guide	S235JR / 1.0038
22	Adjustment screw	S355J2G3 / 1.0570
23	Ball bearing	Zinc plated steel
24	Upper yoke flange	A351 CF8 / 1.4308
25	Bolts	Zinc plated steel
26	Gasket	Copper
27	Plug	AISI 316 / 1.4401
28	Adjustment nut	AISI 303 / 1.4305
28A	* Locking pin	AISI 303 / 1.4305

\* Available spare parts.