

Overflow valve angle-type type UV14/15



description:

Overflow valves angle-type are used for the protection of pumps against overloading in closed circuits.

product features::

- suitable for neutral and non-neutral **liquids & gaseous media**
- spring, moving parts & environment are protected from being affected by the medium
- **depending on the version counter pressure compensated up to 20 bar**
- can be adjusted under operating conditions
- medium cannot escape into the environment

diameter:
1/2" - 2"

temperature:
-60°C up to +225°C

pressure:
0,5 bar – 70,0 bar

design:
body material:

material internal parts:

seal:

bellow:

spring:

position:

set pressure:

valve version:

connection:

overflow valve with bellows

gunmetal Rg5 CC499K

stainless steel 1.4408 (AISI 316L)

stainless steel 1.4404 (AISI 316L)

PTFE, secondary seals made of FKM

stainless steel 1.4571 (AISI 316 Ti)

stainless steel 1.4310 (AISI 302)

preferably vertical

0,5 – 70 bar (depends on spring)

adjustment over handwheel

0,5 – 25 bar with bellows (counter pressure compensated up to 4 bar)

25 – 70 bar with piston (counter pressure compensated up to 20 bar)

female thread BSP-P

male thread BSP-P

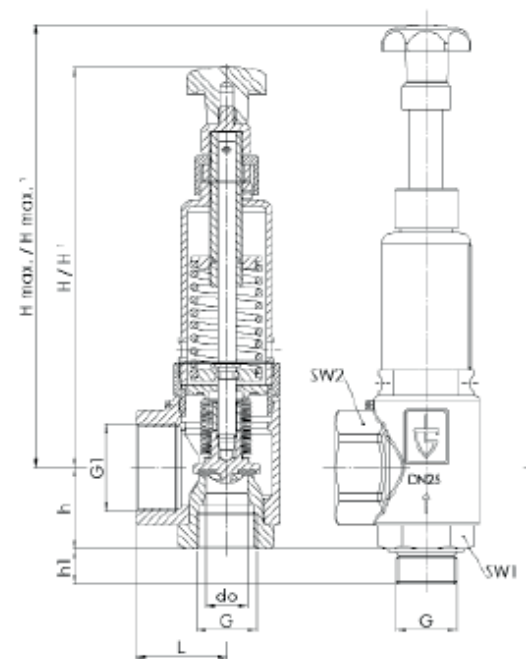
Typ UV14

Typ UV15

dimensions:

diameter DN	15	20	25	32	40	50
connection G*	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
outlet G1*	1"	1 1/4"	1 1/2"	2"	2"	2"
L	40	43	50	61	61	61
H	102	170	223	318	318	318
H max.	120	190,5	248,5	344	344	344
H1	76	152,5	193	263	263	263
H	30	39	45	55	69	74
h1	16	14	19	21	22,5	25
SW1	30	36	46	55	55	70
SW2	40	50	58	70	70	70
Do	16	18	23	30	30	30
weight kg	0,5	1,0	2,0	4,2	4,5	4,7
set pressure	in bar	in bar	in bar	in bar	in bar	in bar
spring for UV14						
spring 01	0,5-0,9	0,5-1	0,5-0,9	0,5-0,9	0,5-0,9	0,5-0,9
spring 02	1-1,3	1-1,6	0,9-1,5	1-1,3	1-1,3	1-1,3
spring 03	1,3-2,9	1,6-2,8	1,5-2	1,4-3	1,4-3	1,4-3
spring 04	2,9-3,9	2,8-5,3	2,1-4,5	3,1-5,5	3,1-5,5	3,1-5,5
spring 05	3,9-7,9	5,4-10	4,6-8	5,6-11	5,6-11	5,6-11
spring 06	8-11,5	10-12	8,1-14	11-16	11-16	11-16
spring 07	11-16	12-25	14-25	16-25	16-25	16-25
spring 08	16-25	25-40	25-50	25-40	25-40	25-40
spring 09	--	40-50	--	40-50	40-50	40-50
spring for UV15						
spring 01	0,5-0,9	0,5-1	0,5-0,9	0,5-0,9	0,5-0,9	0,5-0,9
spring 02	1-1,3	1-1,6	0,9-1,5	1-1,3	1-1,3	1-1,3
spring 03	1,3-2,9	1,6-2,8	1,5-2	1,4-3	1,4-3	1,4-3
spring 04	2,9-3,9	2,8-5,3	2,1-4,5	3,1-5,5	3,1-5,5	3,1-5,5
spring 05	3,9-7,9	5,4-10	4,6-8	5,6-11	5,6-11	5,6-11
spring 06	8-11,5	10-12	8,1-14	11-16	11-16	11-16
spring 07	11-16	12-25	14-25	16-25	16-25	16-25
spring 08	16-25	25-40	25-50	25-35	25-35	25-35
spring 09	--	40-70	50-70	35-70	35-70	35-70

* thread / connection according to DIN EN ISO 228



installation and assembly:

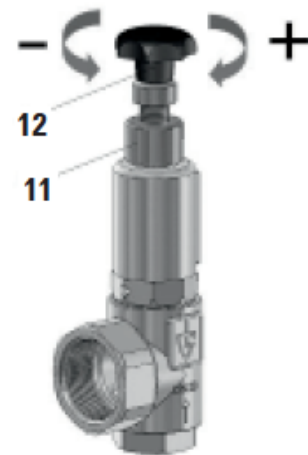
To ensure a satisfactory operation of the valves they must be assembled in such a way that the safety valve is not exposed to any impermissible static, dynamic or thermal loads. The installation has to be flushed before installing the valve. If an installation is not sufficiently cleaned or the valve is installed improperly the valve may leak even the first time it responds. Appropriate safety measures must be taken at the place of installation of the valves if the medium that discharges upon actuation of the valve can lead to direct or indirect hazards to people or the environment. Overflow valves can be installed in any position. The function of the valves is guaranteed in every position. During assembly always make sure not to apply any force when fastening the connecting thread and not to screw it in too far as this could otherwise damage the seat of the valve. Do not allow sealing material such as hemp or teflon to penetrate into the valve.

setting:

The valves can be delivered with a set pressure and sealed by the factory or without set pressure with the desired range of adjustment. Valves which have been set and sealed by the factory are marked with the set pressure. Before changing the set pressure the seal has to be removed. If valves are unsealed, the desired pressure can be set within the pressure range of the spring.

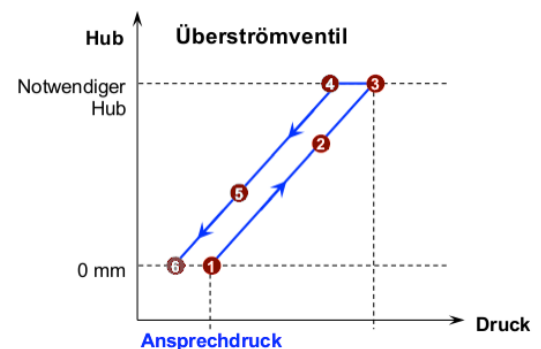
1. Release counter-nut (11)
 2. Carry out pressure adjustment at handwheel (12)
- > turning clockwise increases pressure, turning anticlockwise decreases pressure.

The setting can be secured by means of a seal.



mode of operation:

1. set pressure is reached; overflow valve is still closed
2. set pressure is exceeded; overflow valve opens proportionally to the pressure increase and discharges power
3. required overflow volume is reached; correspondingly required stroke is set
4. system pressure drops again; start of the closing process
5. system pressure drops further and stroke decreases
6. valve is closed again just below set pressure and tight; stroke equals zero



Ansprechdruck = set pressure
 Druck = pressure
 Notwendiger Hub = required stroke
 Hub = stroke
 Überströmventil = overflow valve

further options (on request):

- seals made of NBR, EPDM, FKM and FFKM
- piston version (back pressure compensated up to 20 bar) for pressures below 25 bar
- gastight version with bellows (double gastight – especially for flammable, toxic and environmentally hazardous media) with pressures of 0,5 - 25 bar and back pressure compensated up to 4 bar
- secondary seals made of FFKM

structure article number:

type	range of adjustment	connection	diameter
UV14 - gunmetal	01 – spring 01	00 – female thread	03 – 1/2"
UV15 – stainless steel	02 – spring 02	01 – male thread*	04 – 3/4"
	03 – spring 03	*only at the inlet	05 – 1"
	04 – spring 04		06 – 1 1/4"
	05 – spring 05		07 – 1 1/2"
	06 – spring 06		08 – 2"
	07 – spring 07		
	08 – spring 08		
	09 – spring 09		
	see table dimensions		

example no. UV15030005:

UV15	03	00	05
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article no. UV14030005

overflow valve made of stainless steel

pressure: 1,5 - 2,0 bar

connection: Innengewinde BSP-P

diameter: 1 "

capacity table:

For <10bar, at 1bar overpressure / >=10 bar, at 10% overpressure:

media:

air Nm³/h

DN	15	20	25	32/40/50
set pressure in bar				
0,5	120	275	503	844
1,0	105	309	592	1009
1,5	126	332	697	1190
2,0	134	375	836	1380
2,5	139	408	821	1518
3,0	120	370	964	1665
3,5	139	423	1057	1523
4,0	90	481	1108	1609
4,5	93	512	1221	1712
5,0	101	530	815	1786
5,5	104	425	912	1842
6,0	106	459	1023	1406
6,5	109	478	1120	1491
7,0	122	501	1254	1598
7,5	129	547	1388	1721
8,0	142	587	1514	1825
8,5	141	604	1246	1927
9,0	140	621	1278	2034
9,5	139	643	1386	2110
10,0	112	394	848	1472
11,0	122	430	926	1607
12,0	133	466	1004	1742
13,0	143	354	1081	1877
14,0	153	380	835	2011
15,0	163	405	891	2146
16,0	174	431	947	1551
17,0	184	456	1003	1643
18,0	194	482	1059	1735
19,0	204	507	1115	1827
20,0	215	532	1171	1918
25,0	266	660	1450	2377
26,0	-	400	586	1017
27,0	-	415	608	1054
28,0	-	429	629	1092
29,0	-	444	651	1130
30,0	-	459	673	1168
32,0	-	489	716	1243
34,0	-	519	760	1319
36,0	-	548	804	1394
38,0	-	578	847	1470
40,0	-	608	891	1545
42,0	-	637	934	1621
44,0	-	667	978	1697
45,0	-	682	999	1734
50,0	-	756	1108	1923
55,0	-	830	1217	2112
60,0	-	905	1326	2301
65,0	-	979	1435	2490
70,0	-	1053	1544	2679

only for
stainless steel
available

media:
steam kg/h

DN	15	20	25	32/40/50	
set pressure in bar					
0,5	97	212	387	649	
1,0	81	238	455	776	
1,5	87	255	536	915	
2,0	84	288	643	1062	
2,5	90	314	632	1168	
3,0	97	285	742	1281	
3,5	108	325	813	1172	
4,0	69	370	852	1238	
4,5	73	394	939	1317	
5,0	76	408	627	1374	
5,5	78	327	702	1417	
6,0	81	353	787	1082	
6,5	83	368	862	1147	
7,0	85	385	965	1229	
7,5	91	421	1068	1324	
8,0	101	452	1165	1404	
8,5	105	465	958	1482	
9,0	109	478	983	1565	
9,5	115	495	1066	1623	
10,0	84	294	633	1098	
11,0	91	320	691	1199	
12,0	99	347	749	1299	
13,0	107	264	807	1400	
14,0	114	283	623	1501	
15,0	122	302	664	1601	
16,0	130	321	706	1157	
17,0	137	340	748	1226	
18,0	145	359	790	1294	
19,0	153	378	831	1363	
20,0	160	397	873	1431	
25,0	198	492	1082	1773	
26,0	-	298	437	758	
27,0	-	309	453	787	
28,0	-	320	469	815	
29,0	-	331	486	843	
30,0	-	342	501	869	
32,0	-	364	533	925	
34,0	-	386	566	981	
36,0	-	408	598	1038	
38,0	-	430	630	1094	
40,0	-	452	663	1150	
42,0	-	474	695	1206	
44,0	-	497	728	1263	
45,0	-	508	744	1292	
50,0	-	563	826	1433	
55,0	-	619	907	1574	only for stainless steel available
60,0	-	674	988	1714	
65,0	-	729	1069	1855	
70,0	-	785	1150	1996	

media:
water m³/h

DN	15	20	25	32/40/50	
set pressure in bar					
0,5	4,4	8,6	13,6	23,3	
1,0	4,8	9,2	14,7	26,9	
1,5	4,4	8,8	15,1	27,7	
2,0	4,6	9,3	16,3	29,5	
2,5	4,8	9,7	16,1	30,8	
3,0	5,1	8,5	16,7	32,0	
3,5	5,2	8,9	17,9	27,1	
4,0	3,3	9,6	18,5	27,6	
4,5	3,4	9,8	19,8	28,7	
5,0	3,5	10,1	16,4	29,6	
5,5	3,6	8,0	17,3	31,1	
6,0	3,7	8,6	18,0	25,0	
6,5	3,7	9,3	18,8	25,7	
7,0	3,8	9,8	19,7	26,6	
7,5	3,9	10,4	20,8	27,5	
8,0	3,6	11,2	21,7	28,2	
8,5	3,4	11,8	18,2	29,3	
9,0	3,2	12,5	18,7	30,1	
9,5	2,9	13,2	19,4	31,3	
10,0	1,7	6,2	15,7	25,5	
11,0	1,7	6,5	16,4	26,6	
12,0	1,8	6,8	17,1	27,7	
13,0	1,9	5,5	17,7	24,2	
14,0	2,0	5,7	18,3	25,0	
15,0	2,0	5,9	18,9	25,9	
16,0	2,1	6,1	19,5	26,7	
17,0	2,2	6,2	20,1	27,4	
18,0	2,2	6,4	20,6	28,2	
19,0	2,3	6,6	21,2	28,9	
20,0	2,3	6,8	21,7	29,6	
25,0	2,6	7,6	24,2	33,0	
26,0	-	3,9	17,6	22,0	
27,0	-	3,9	17,9	22,4	
28,0	-	4,0	18,2	22,8	
29,0	-	4,1	18,5	23,2	
30,0	-	4,1	18,8	23,6	
32,0	-	4,3	19,4	24,3	
34,0	-	4,4	20,0	25,1	
36,0	-	4,5	20,6	25,8	
38,0	-	4,7	21,1	26,5	
40,0	-	4,8	21,7	27,1	
42,0	-	4,9	22,2	27,8	
44,0	-	5,0	22,7	28,4	
45,0	-	5,1	23,0	28,8	
50,0	-	5,4	24,2	30,3	
55,0	-	5,6	25,3	31,7	only for stainless steel available
60,0	-	5,9	26,5	33,1	
65,0	-	6,1	27,5	34,5	
70,0	-	6,3	28,5	35,7	

Image similar, subject can change without notice