PRESSURE REDUCING VALVE
DIRECT ACTING
PRV 25/2 S – Carbon steel

DESCRIPTION

The ADCA PRV25/2S series direct acting pressure reducing valves are designed for use on steam, compressed air and other gases.
They are suitable for reducing steam pressure at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.
Connections are female screwed or flanged.

MAIN FEATURES

Compact design.
Bellows specially designed for high durability.
Non rising stem regulating knob.
Built-in strainer.

OPTIONS:	Regulating screw with top cap.
USE:	Saturated steam, compressed air and other gases compatible with the construction.
AVAILABLE MODELS:	PRV25/2S – metal to metal seating PRV25/2SG – soft valve PRW25/2S – soft valve balanced
RECOMMENDED APPLICATIONS :	PRV25/2S – steam and compressed air PRV25/2SG – steam and compressed air where tight off is required PRW25/2S – water, compressed air
SIZES:	½", ¾", 1"; DN15, DN20 and DN25.
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) . Flanged EN 1092-1 PN40 or ANSI.
INSTALLATION:	Horizontal installation. An "Y" strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.

CE MARKING (PED - European Directive 97/23/EC)	
PN 25	**Category**
DN 15 to 25	SEP - art. 3, paragraph3

PRESSURE REDUCING VALVE
DIRECT ACTING
PRV25I – Stainless steel (CF8M)

DESCRIPTION

The ADCA PRV25I series direct acting pressure reducing valves are designed for use on steam, compressed air and other gases.
They are suitable for reducing steam pressure at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.
Connections are female screwed or flanged.

MAIN FEATURES

Compact design.
Bellows specially designed for high durability.
Non rising stem regulating knob.
Built-in strainer.

OPTIONS:	Regulating screw with top cap.
USE:	Saturated steam, compressed air and other gases compatible with the construction.
AVAILABLE MODELS:	PRV25 I – metal to metal seating PRV25IG – soft valve PRW25I – soft valve balanced
RECOMMENDED APPLICATIONS :	PRV25I – steam and compressed air PRV25IG – steam and compressed air where tight off is required PRW25I – water, compressed air
SIZES:	½", ¾", 1"; DN15, DN 20 and DN 25.
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) . Flanged EN 1092-1 PN40 or ANSI.
INSTALLATION:	Horizontal installation. An "Y" strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.

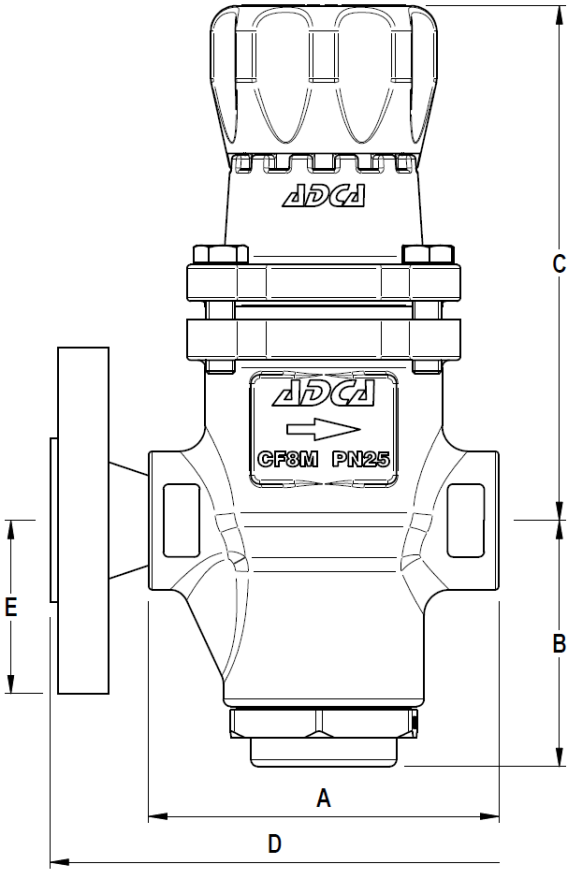
CE MARKING (PED - European Directive 97/23/EC)	
PN 25	**Category**
DN 15 to 25	SEP - art. 3, paragraph3

LIMITING CONDITIONS			
	PRV25I	PRV25IG	PRW25I
Body design conditions	PN25	PN25	PN25
Max.upstream pressure	17 bar	17 bar	14 bar
Max.downstream pressure	8,6 bar	8,6 bar	8,6 bar
Min.downstream pressure	0,14 bar	0,14 bar	0,35 bar
Max.design temperature	210ºC	180ºC	75ºC
Max.cold hydraulic test	38 bar	38 bar	38 bar
Max.reducing ratio	10:1	10:1	10:1

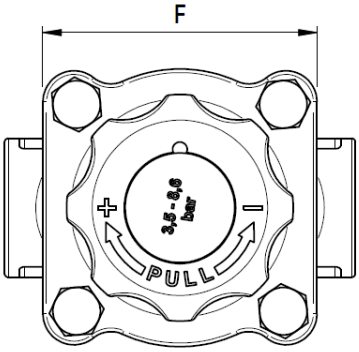
CAPACITIES (See selection table)			
Valve Size	*15*	*20*	*25*
KVs	1,7	2,6	3,1

PRESSURE RANGES				
Spring colour	*Blue **	*Yellow ***	*Green*	*Red*
Red.Press. bar	0,35 - 1,7	0,14 - 1,7	1,4 - 4,0	3,5 - 8,6

*Applicable only on the PRW ; ** Appl.only on the PRV
Where control spring ranges overlap,always use the lower range to give better control and precision.

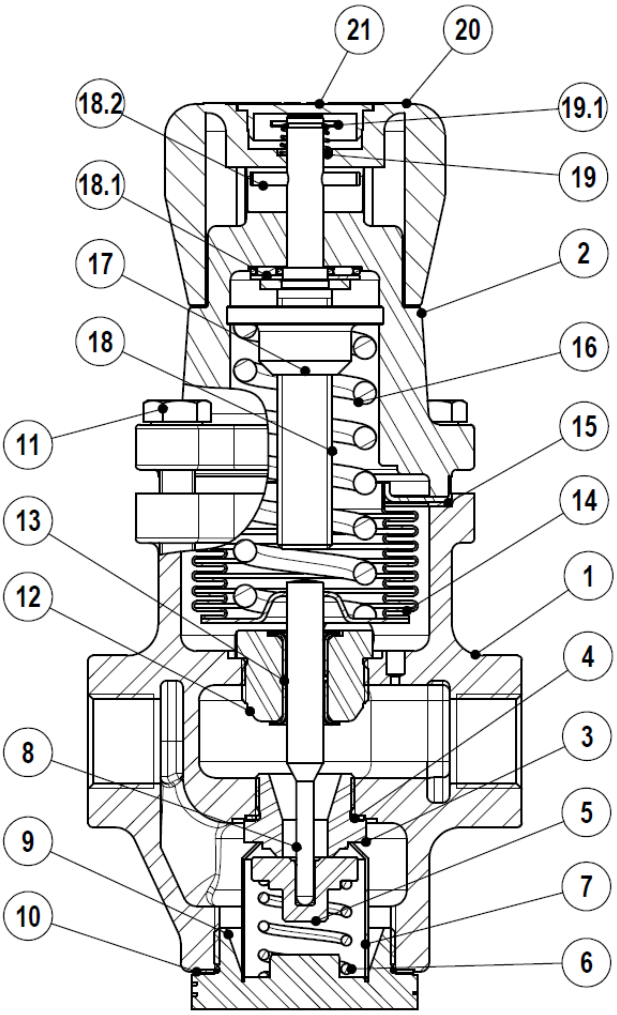


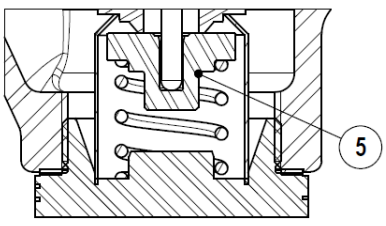
DIMENSIONS (mm)-Screwed						EN1092-1 Flanges		
SIZE DN	*A*	*B*	*C*	*F*	*WGT. Kgs*	*D*	*E*	*WGT. Kgs*
1/2"	96	68,5	141	74	3	150	47,5	4,4
3/4"	96	68,5	141	74	3	150	52,5	5
1"	96	68,5	141	74	2,9	160	57,5	5,5



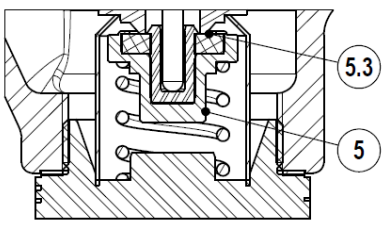
MATERIALS		
POS.	**DESIGNATION**	**MATERIAL**
1	VALVE BODY	CF8M / 1.4408
2	COVER	CF8M / 1.4408
3	*SEAT	AISI 316 / 1.4401
4	*GASKET	COPPER
5	*VALVE	HARDENED ST.STEEL
5.1	*O-RING	NBR
5.2	*VALVE HEAD	NBR
5.3	*VALVE HEAD	PTFE/GRAPHITE
6	*VALVE RETURN SPRING	AISI 302 / 1.4300
7	*STRAINER SCREEN	AISI 304 / 1.4301
8	PUSHROD	AISI 316 / 1.4401
9	BOTTOM CAP	CF8M / 1.4408
10	*CAP GASKET	ST.ST./ GRAPHITE
11	COVER BOLTS	STAINLESS STEEL
12	*GUIDE BUSH	AISI 316 / 1.4401
13	* PLAIN BEARING	BRONZE FILLED PTFE
14	*BELLOWS	AISI 316 TI / 1.4571
15	*BELLOWS GASKET	ST.ST./ GRAPHITE
16	*ADJUSTMENT SPRING	STEEL
17	TOP SPRING PLATE	BRASS
18	ADJUSTMENT SCREW	AISI 304 / 1.4301
18.1	BEARING	STEEL
18.2	PIN	AISI 304 / 1.4301
19	SPRING	AISI 302 / 1.4300
19.1	STARLOCK WASHER	AISI 302 / 1.4300
20	HANDWHEEL	PLASTIC
21	SPRING IDENT.PLATE	PLASTIC

* Available spare parts.

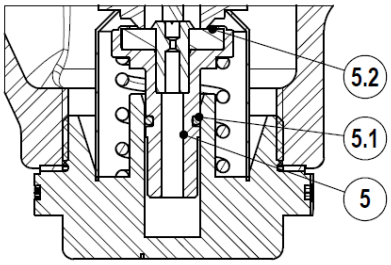




PRV25I



PRV25IG



PRW25I

STEAM CAPACITY TABLE (Kg/h)

INLET bar	OUTLET bar	SAT. STEAM		
		DN15	DN20	DN25
2	0,2	33	53	64
	1,2	57	87	104
	1,6	38	59	71
3	0,3	45	70	83
	1,2	76	116	138
	2,2	61	93	111
	2,6	46	70	83
4	0,4	56	87	104
	1	66	102	121
	2,5	95	145	173
	3,5	57	87	104
5	0,5	68	105	125
	2	91	139	166
	3	114	174	208
	4	85	130	155
6	0,6	79	122	145
	2	106	162	194
	3	133	203	243
	4	120	184	219
7	0,7	91	139	167
	2	121	185	222
	3,5	152	232	277
	5	132	201	240
8	0,8	102	157	187
	2	137	210	250
	3,5	171	262	312
	5	161	247	294
	6	142	217	259
9	0,9	114	174	208
	2,5	133	203	242
	4	152	233	277
	5	190	291	347
	7	152	232	277
10	1	125	192	228
	3	146	224	266
	4	167	256	305
	6	209	320	381
	8	161	247	294
11	1,1	136	210	249
	3	182	280	333
	6	228	350	416
	8	198	302	360
	8,6	182	279	331
12	1,2	148	227	270
	3	197	302	360
	6	247	378	451
	8	228	349	416
	8,6	217	332	396
13	1,3	159	244	291
	4	186	284	340
	6	212	325	388
	7	266	407	486
	8,6	246	378	451
15	1,5	182	259	321
	4	212	302	374
	6	243	345	427
	8	304	433	536
	8,6	298	426	512
17	1,7	205	279	333
	4	238	325	386
	6	273	372	441
	8	342	465	555
	8,6	339	449	541

COMPRESSED AIR CAPACITY TABLE (Nm3/h-0ºC-1,013bar)

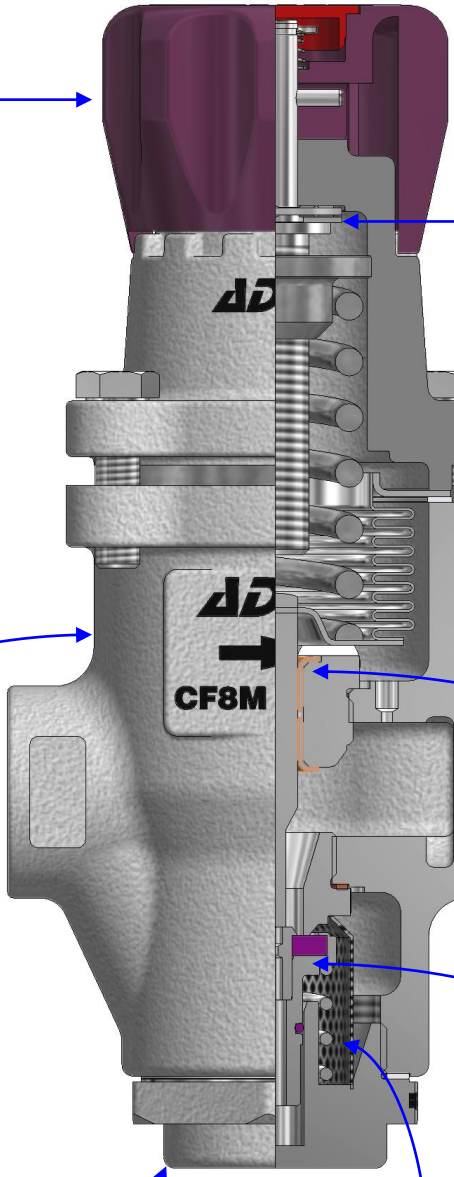
INLET bar	OUTLET bar	COMPRESSED AIR		
		DN15	DN20	DN25
2	0,2	45	72	86
	1,2	77	117	140
	1,6	51	80	96
3	0,3	61	95	112
	1,2	103	157	186
	2,2	82	126	150
	2,6	62	95	112
4	0,4	76	117	140
	1	89	138	163
	2,5	128	196	234
	3,5	77	117	140
5	0,5	92	142	169
	2	123	188	224
	3	154	235	281
	4	115	176	209
6	0,6	107	165	196
	2	143	219	262
	3	180	274	328
	4	162	248	296
7	0,7	123	188	225
	2	163	250	300
	3,5	205	313	374
	5	178	271	324
8	0,8	138	212	252
	2	185	284	338
	3,5	231	354	421
	5	217	333	397
	6	192	293	350
9	0,9	154	235	281
	2,5	180	274	327
	4	205	315	374
	5	257	393	468
	7	205	313	374
10	1	169	259	308
	3	197	302	359
	4	225	346	412
	6	282	432	514
	8	217	333	397
11	1,1	184	284	336
	3	246	378	450
	6	308	473	562
	8	267	408	486
	8,6	246	377	447
12	1,2	200	306	365
	3	266	408	486
	6	333	510	609
	8	308	471	562
	8,6	293	448	535
13	1,3	215	329	393
	4	251	383	459
	6	286	439	524
	7	359	549	656
	8,6	332	510	609
15	1,5	246	350	433
	4	286	408	505
	6	328	466	576
	8	410	585	724
	8,6	402	575	691
17	1,7	277	377	450
	4	321	439	521
	6	369	502	595
	8	462	628	749
	8,6	458	606	730

WATER CAPACITY TABLE (m3/h)

D.P. bar	WATER		
	DN15	DN20	DN25
1,5	2,1	3,18	3,8
2	2,4	3,67	4,38
3	2,95	4,5	5,37
4	3,4	5,2	6,2
5	3,8	5,8	6,93
6	4,16	6,36	7,6
8	4,8	7,35	8,75
12	5,8	9	10,7

Non rising stem regulating knob

Antifriction bearing for easy pressure setting



Electro polished CF8M stainless steel

Stem plain bearing for smooth valve operation

Three different types of plugs:
Metal
Soft
Soft balanced

Bottom seat cover for easy and quick seat inspection and maintenance

Seat protection, easy to clean strainer screen

PILOT OPERATED PRESSURE REDUCING VALVES
PRV47 (Steel) PRV47I (St. Steel)

DESCRIPTION

The ADCA PRV47 pilot operated pressure reducing valves are designed for use on steam, compressed air, nitrogen and other gases compatible with the construction and they can be installed on pressure reducing stations throughout all industries.
Connections are flanged or threaded.

MAIN FEATURES

Robust complete steel or stainless steel construction.
Suitable for dead end conditions.
Guided piston and valve stem.
Hardened plug.

OPTIONS: Soft faced valve plug for gases and steam
Special pressure top for low pressures
Drain connection in bottom cover
Stellited plug and seat

USE: Saturated steam, compressed air and other gases (Group 2) compatible with the construction (except oxygen).

AVAILABLE MODELS: PRV47 - standard model for steam
PRV47G -compressed air and gases

VALVE SIZES: DN15 to DN50
CONNECTIONS: Flanged EN 1092-1 or ANSI
Threaded BSP, NPT, SW.

INSTALLATION: Horizontal installation.
An "Y" strainer, steam separator and steam trap should be provided upstream the valve.
See IMI, installation and maintenance instructions.

ORDER REQUIREMENTS: Type of fluid
Maximum operating temperature
Inlet and outlet pressure
Flow rate (maximum and minimum)

HOW TO SELECT: Never size the valve according to the pipe diameter in which has to be fitted but according to the required actual flow of fluid.
Refer to valve calculation table or consult the factory.

CE MARKING (PED - European Directive 97/23/EC)	
PN 40	**Category**
DN15 to DN32	SEP - art. 3, paragraph3
DN40 to DN50	1 (CE Marked)

BODY LIMITING CONDITIONS		
FLANGED PN40 / ANSI 300 * ALLOW. PRES.	**FLANGED ANSI 150 ** ALLOW. PRES.**	**RELATED TEMP.**
40 bar	19,3 bar	50 ºC
37 bar	17,7 bar	100 ºC
31 bar	12,5 bar	239 ºC
28 bar	10,2 bar	300 ºC

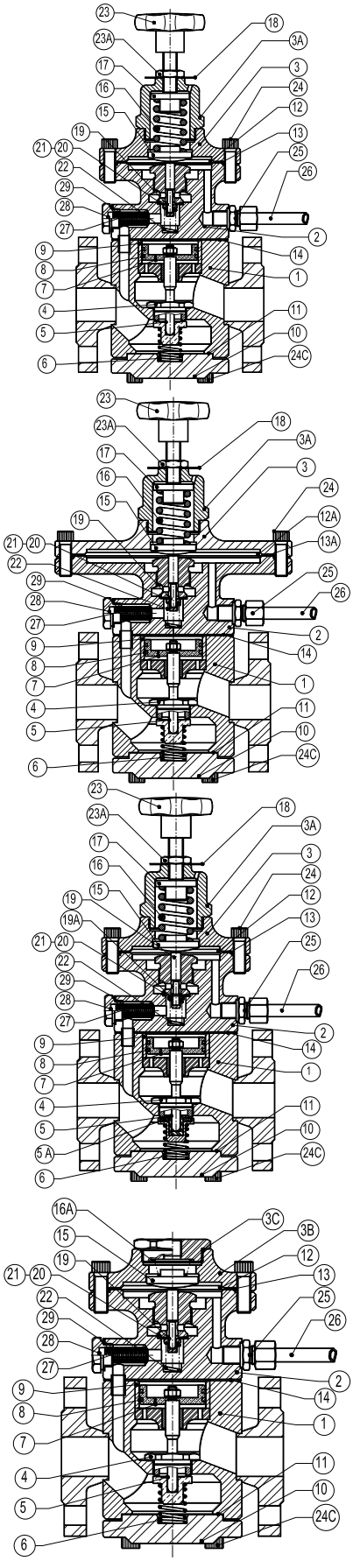
Minimum working temperature : - 10ºC
* Rating according to EN1092-1:2007
** Rating according to EN1759-1:2004

Maximum upstream pressure (steam) : 28 bar
Maximum upstream pressure (air) : 31 bar
Maximum downstream pressure: 17 bar
Minimum downstream pressure : 0,35 bar*
* 0,07 bar with low pressure top (limited at 7 bar inlet).
Pressure and temperature may change if soft seating or piston rings are used.

USEFUL NOTES ON VALVE AND PIPE SIZING
A special low pressure top assembly should be fitted for outlet pressures from 0,07 up to 0,5 bar (Fig.2).
Two regulators in parallel should be used on larger systems where minimum flow is less than 10% of maximum. If the flow is unknown it is possible to estimate it based on pipe sizing or equipment heat requirement - please consult.
The balance pipe connection is recommended to enter the downstream pipe at a minimum of 1 meter from the valve.A spool piece can be supplied to house the balancing pipe.

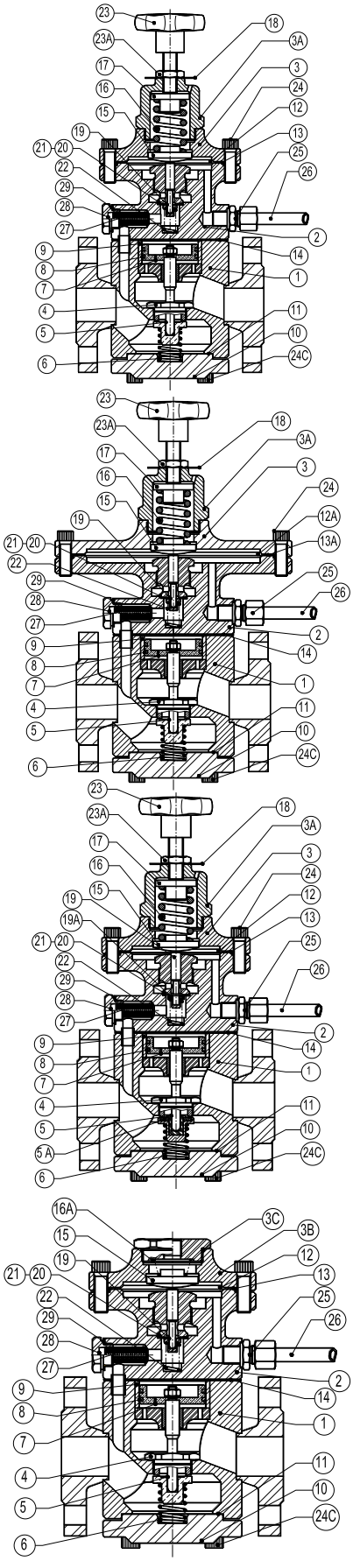
MATERIALS - PRV47 Steel construction		
POS.	**DESIGNATION**	**MATERIAL**
1	VALVE BODY	S355J2G3 / 1.0570 ; P250GH / 1.0460
2	PILOT VALVE BODY	CF8 / 1.4308
3	TOP COVER	CF8 / 1.4308
3A	COVER SPRING	CF8 / 1.4308
3B	TOP COVER	C45E / 1.1191
3C	COVER NUT	C45E / 1.1191
4	*MAIN VALVE SEAT	AISI316 / 1.4401
5	*MAIN VALVE	HARDENED ST.STEEL
5A	*MAIN VALVE (SOFT)	SS316 W/ PTFE/GR; RULON,...
6	*MAIN VALVE SPRING	AISI 302 / 1.4300
7	*PISTON	BRONZE B62 / ASTMB148.97
8	*PISTON RINGS	BRONZE / FKM / EPDM / NBR
9	PISTON LINER	AISI304L / 1.4306
10	BOTTOM COVER	S355J2G3 / 1.0570
11	*BOTTOM COVER GASKET	ST.ST/GRAPHITE
12	*DIAPHRAGM	AISI301 / 1.4310
12A	*LOW PRESSURE DIAPHRAGM	AISI301 / 1.4310
13	*DIAPHRAGM GASKET	ST.STEEL/GRAPHITE
13A	*DIAPHRAGM GASKET	ST.STEEL/GRAPHITE
14	*PILOT VALVE GASKET	ST.STEEL/GRAPHITE
15	LOWER SPRING CARRIER	BRASS
16	*ADJUSTMENT SPRING	STEEL
16A	DIAPHRAGM SPRING	STAINLESS STEEL
17	TOP SPRING CARRIER	BRASS
18	SPRING IDENT. PLATE	ALUMINIUM
19	*PILOT VALVE	AISI316 / 1.4401
19A	*PILOT VALVE (SOFT)	PTFE/GR; RULON, ETC
20	*PILOT VALVE SEAT	AISI316 / 1.4401
21	*PILOT VALVE GASKET	COPPER
22	*PILOT VALVE SPRING	AISI302 / 1.4300
23	HANDWHEEL	PLASTIC/ST.STEEL
23A	LOCKNUT	AISI304 / 1.4301
24	BOLTS	STEEL 10.9
24C	BOLTS	STEEL 10.9
25	COMPRESSION FITTING	PLATED CARBON STEEL
26	BALANCE PIPE	COPPER
27	*PILOT VALVE STRAINER	AISI304 / 1.4301
28	STRAINER NUT	AISI304 / 1.4301
29	GASKET	COPPER
100	* PRESSURE REGULATOR (Relievin	ADCA P-10
102	** STEAM TRAP	ADCA TH-21
103	** GLOBE VALVE	ADCA GV32B
104	** DRAIN CONNECTION NIPPLE	STEEL DN1/2" x 3/8"
105	SOLENOID VALVE	BRASS
106	SUSTAINING VALVE	ADCA PS15
107	STRAINER	ADCA IS100I-ST.STEEL

* Available spare parts



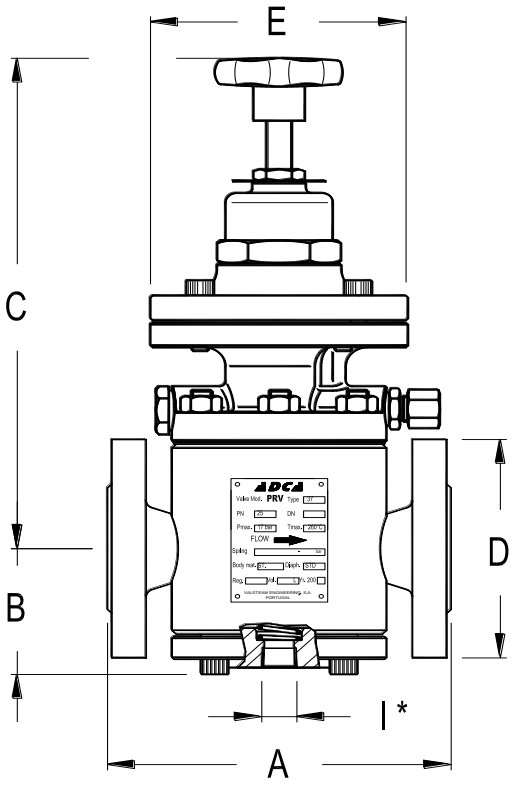
MATERIALS - PRV47I Stainless steel construction		
POS.	**DESIGNATION**	**MATERIAL**
1	VALVE BODY	AISI316 / 1.4401
2	PILOT VALVE BODY	CF8 / 1.4308
3	TOP COVER	CF8 / 1.4308
3A	COVER SPRING	CF8 / 1.4308
3B	TOP COVER	AISI316 / 1.4401
3C	COVER NUT	AISI316 / 1.4401
4	*MAIN VALVE SEAT	AISI316 / 1.4401
5	*MAIN VALVE	HARDENED ST.STEEL
5A	*MAIN VALVE (SOFT)	SS317 W/ PTFE/GR / RULON,...
6	*MAIN VALVE SPRING	AISI302 / 1.4300
7	*PISTON	STAINLESS STEEL
8	*PISTON RINGS	BRONZE / FKM/ EPDM / NBR
9	PISTON LINER	AISI304L / 1.4306
10	*BOTTOM COVER	AISI316 / 1.4401
11	*BOTTOM COVER GASKET	ST.ST/GRAPHITE / PTFE
12	*DIAPHRAGM	AISI301 / 1.4310
12A	*LOW PRESSURE DIAPHRAGM	AISI301 / 1.4310
13	*DIAPHRAGM GASKET	ST.STEEL/GRAPHITE
13A	*DIAPHRAGM GASKET	ST.STEEL/GRAPHITE
14	*PILOT VALVE GASKET	ST.STEEL/GRAPHITE
15	LOWER SPRING CARRIER	BRASS / ST.STEEL
16	*ADJUSTMENT SPRING	STEEL / ST.STEEL
16A	DIAPHRAGM SPRING	STAINLESS STEEL
17	TOP SPRING CARRIER	BRASS
18	SPRING IDENT. PLATE	ALUMINIUM / ST.STEEL
19	*PILOT VALVE	AISI316 / 1.4401
19A	*PILOT VALVE (SOFT)	PTFE/GR; RULON, ETC
20	*PILOT VALVE SEAT	AISI316 / 1.4401
21	*PILOT VALVE GASKET	COPPER / PTFE
22	*PILOT VALVE SPRING	AISI302 / 1.4300
23	HANDWHEEL	PLASTIC/ST.STEEL
23A	LOCKNUT	AISI304 / 1.4301
24	BOLTS	ST.STEEL A-4
24C	BOLTS	ST.STEEL A-4
25	COMPRESSION FITTING	STAINLESS STEEL
26	BALANCE PIPE	STAINLESS STEEL
27	*PILOT VALVE STRAINER	AISI304 / 1.4301
28	STRAINER NUT	AISI304 / 1.4301
29	GASKET	COPPER / PTFE
100	** PRESSURE REGULATOR (Relieving)	ADCA P-10
102	** STEAM TRAP	ADCA TH-21
103	** GLOBE VALVE	ADCA GV32B
104	** DRAIN CONNECTION NIPPLE	STAINLESS STEEL DN1/2" x 3/8"
105	SOLENOID VALVE	STAINLESS STEEL
106	SUSTAINING VALVE	ADCA PS15 - ST.STEEL
107	STRAINER	ADCA IS100I -ST.STEEL

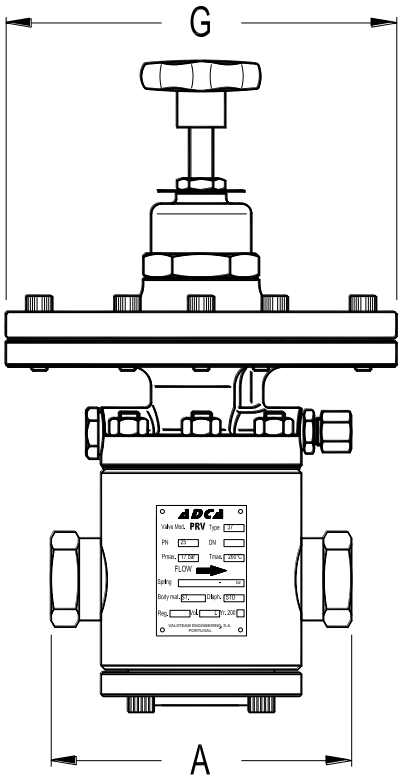
*Available spare parts



PRESSURE RANGES IN bar				
SPRING COLOUR	GREEN W/1 Diaphragm	BLUE W/1 Diaphragm	RED W/2 Diaphragms	BLACK W/2 Diaphragms
Red. Pressure	0,07 to 0,5 bar *	1,5 to 5,5 bar **	3,5 to 8,5 bar **	7 to 17 bar **
Red. Pressure	0,35 to 2 bar **	/	/	/

* With low pressure top; **Standard diaphragm.





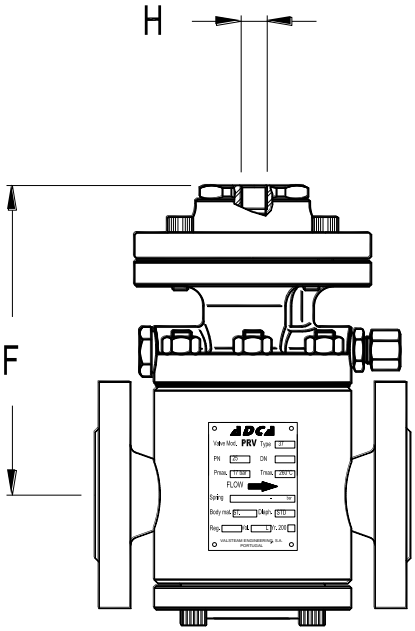


Fig.1 **Fig.2** **Fig.3**

Fig.1 - Valve with standard diaphragm; Fig.2 - Valve with low pressure top; Fig.3 - Valve with compressed air top.

*** Drain connection (option) for steam trapping. This drain connection does not replace the separator but can be useful if for example the valve stops operation for large periods.**

DIMENSIONS - VALVE BODY (mm)													
DN	A EN1092-1 Flanges	A ANSI 150 Flanges	A ANSI 300 Flanges	A Threaded	B	C	D	E	F	G	H	I	WEIGHT Kgs *
15	150	184	190	140	56	275	95	120	162	195	1/4"	3/8"	13
20	150	184	194	140	56	287	105	120	174	195	1/4"	3/8"	13,5
25	160	184	197	150	56	287	115	120	174	195	1/4"	3/8"	14
32	180	-	-	170	68	299	140	120	186	195	1/4"	3/8"	18
40	200	222	235	190	75	307	150	130	194	195	1/4"	3/8"	22
50	230	254	267	230	84	323	165	160	210	195	1/4"	3/8"	31

*** Proximate values, please contact for certified figures.**

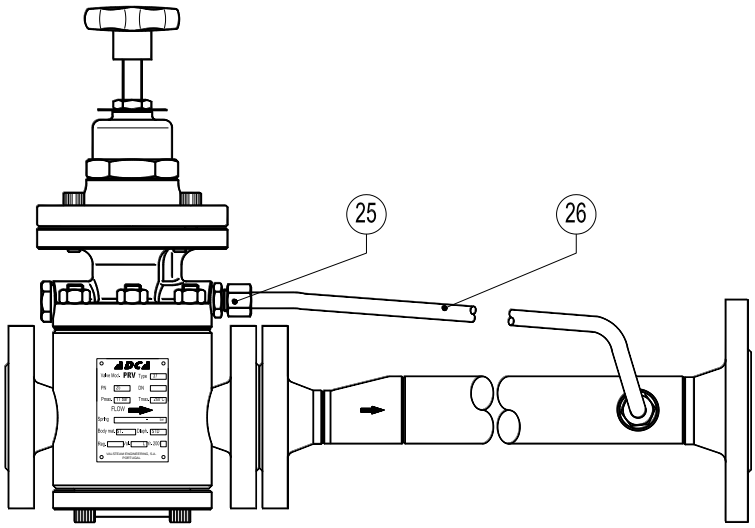


Fig.4

PRV 47 Standard for steam, compressed air or gases (Fig.4)

Description of operation: the high pressure upstream fluid is admitted to the valve and pilot valve. By compressing the regulating spring over the diaphragm, the pilot valve opens admitting regulated pressure on the top of the piston, which opens the main valve allowing the flow. The downstream pressure is then transmitted through the balance pipe, acting on the underside of the diaphragm.

Any downstream pressure increase deflects the diaphragm and the pilot valve closes, thus shutting off regulated gas to the piston which in turn closes the main valve assisted by the upstream pressure and loading spring. When the correct downstream pressure is achieved, the valve opens again, repeating the already described operation.

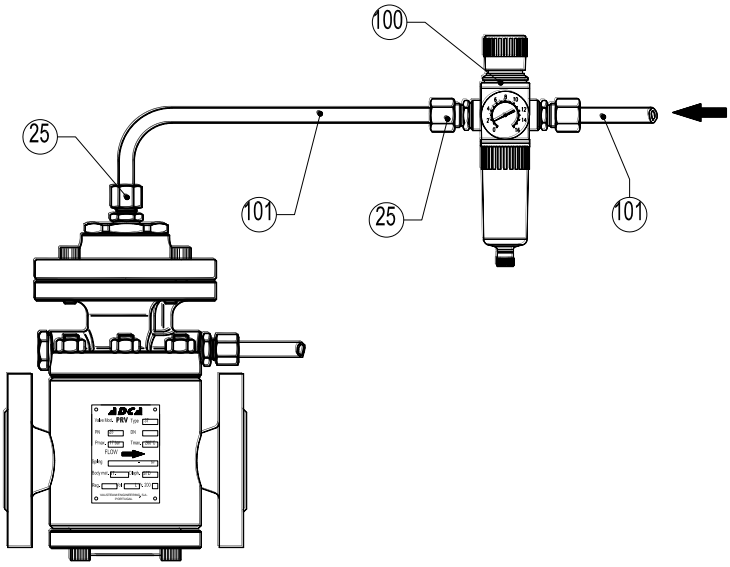


Fig.5

PRV47 valve with compressed air top for remote control (Fig.5)

The regulating spring force is placed by a compressed air signal.

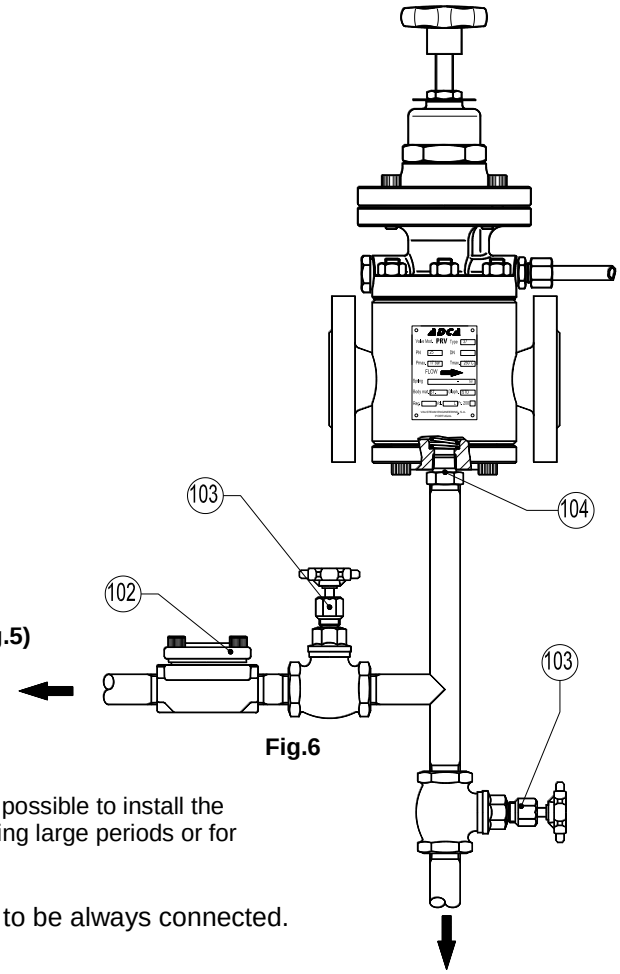


Fig.6

PRV47 with drain connection (Fig.6)

The optional drain connection is specially recommended when it is not possible to install the humidity separator close to the valve, when the valve is on no-flow during large periods or for system cleaning during start up .

Important: the balance pipe nr.26 (supplied with the valve) has to be always connected.

PRV47E with solenoid valve for electric remote control (Fig.7)
This valve version operates like the standard valve but it allows a remote control closure by means of a switching or timer control. When closing the solenoid valve, the pressure signal to the pilot valve is interrupted and thus also the main valve remains closed.

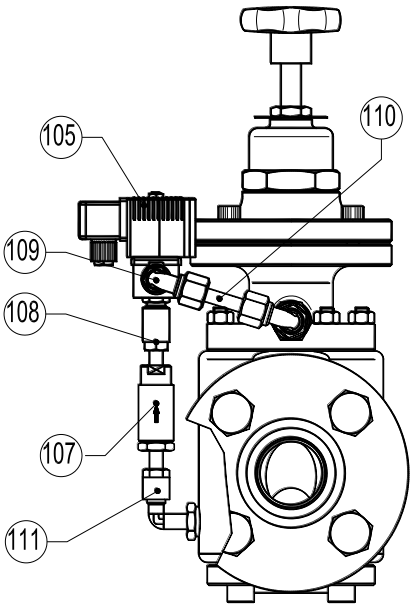


Fig.7

PRS47 pressure reducing and sustaining valve (Fig.8)
This version is a combination of pressure reducing valve and pressure sustaining valve. Compressing the spring of the PS15 (nr.106) pressure sustaining valve the same is closed till a desired set pressure, interrupting the signal to the PRV47 pilot valve and consequently it will remain closed.
Since the pressure supply to the PS15 valve reaches the desired set pressure it will allow the flow and fluid signal to the PRV47 pilot valve, it will than work as already described.

PS47 pressure sustaining valve (available on request)
The pressure sustaining valves are particularly recommended in those systems where a limited flow rate is available and it is necessary to guaranty the supply to some critical process applications. Installing this valve in the supply of non-critical application limited to the minimum required pressure, they will close in case of excess of consumption and consequent pressure drop in the system, keeping the remaining flow available for the critical application.
In general this valve maintains the upstream pressure under control.

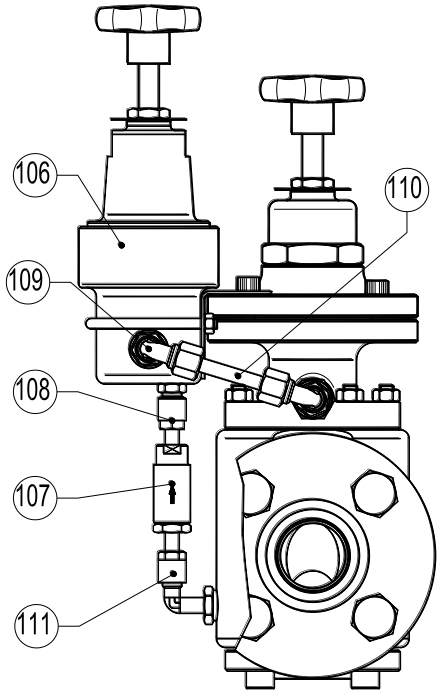


Fig.8

PRV 47 - STEAM CAPACITY TABLE (Kg/h)

INLET barg	OUTLET barg	SATURATED STEAM					
		DN15	DN20	DN25	DN32	DN40	DN50
0,7	0,35	40	75	125	190	280	480
1	0,4	45	95	160	240	355	620
	0,6	40	83	140	210	308	535
2	0,4 ÷ 1	75	150	250	380	545	960
	1,2	65	138	230	345	515	900
	1,6	50	105	175	265	393	685
3	0,4 ÷ 1,5	100	200	335	510	750	1310
	2	85	170	290	450	660	1155
	2,2	80	165	277	416	613	1050
	2,6	60	127	203	315	467	818
4	0,4 ÷ 2	125	250	420	630	920	1580
	2,5	114	225	385	580	850	1465
	3,2	92	183	309	482	708	1205
	3,6	68	137	237	353	536	932
5	0,4 ÷ 2	150	310	512	755	1114	1895
	3	144	295	488	743	1095	1835
	4	115	225	373	578	846	1430
	4,2	105	213	343	525	770	1342
6	0,4 ÷ 3	175	355	602	919	1358	2298
	4	159	314	538	827	1217	2142
	5	119	250	411	637	941	1644
	5,2	109	217	360	568	839	1465
7	0,4 ÷ 3,5	197	410	670	1005	1540	2644
	5	178	358	587	908	1345	2306
	6	132	271	452	688	1027	1773
	6,2	122	251	416	635	934	1618
8	0,4 ÷ 4	225	471	778	1169	1759	3043
	5	221	339	730	1118	1659	2884
	6	192	385	639	976	1451	2513
	7	146	293	481	732	1085	1887
	7,2	137	274	453	692	1011	1782
9	0,4 ÷ 5	251	518	856	1325	1923	3358
	6	241	500	788	1222	1766	3095
	7	206	398	679	1068	1559	2676
	8	156	314	514	794	1142	2053
	8,2	145	292	483	741	1090	1888
10	0,4 ÷ 5	275	561	944	1468	2127	3718
	6	272	551	917	1419	2074	3619
	7	252	508	838	1268	1871	3249
	8	213	431	722	1118	1659	2831
	9	163	333	548	843	1244	2152
	9,2	150	298	493	756	1143	1929
12	1 ÷ 6	330	680	1124	1732	2541	4407
	8	311	629	1023	1575	2332	4034
	10	265	533	812	1271	1867	3202
	11	175	364	568	924	1350	2359
15	1 ÷ 8	408	839	1373	2138	3118	5403
	12	339	656	1068	1629	2441	4250
	14	199	401	662	1017	1503	2619
17	1 ÷ 9	425	863	1460	2178	3165	5343
	15	347	709	1190	1816	2694	4712
	16	207	416	717	1217	1608	2824
20	1 ÷ 12	541	1062	1774	2746	4001	6971
	15	459	931	1552	2335	3476	6184
	17	391	648	988	1748	2840	4698
25	2,5 ÷ 12	685	1337	2191	3360	4971	8392
	15	680	1320	2183	3356	4877	8284
	17	641	1256	2084	3156	4670	7866
28	5 ÷ 15	781	1521	3355	3864	5611	9862
	17	763	1471	3259	3768	5506	9652

PRV 47 - COMP. AIR CAPACITY TABLE (Nm3/h-0°C-1,013bar)

INLET barg	OUTLET barg	COMPRESSED AIR					
		DN15	DN20	DN25	DN32	DN40	DN50
0,7	0,35	15	31	50	70	111	191
1	0,4	16	33	51	79	113	194
	0,6	27	55	90	138	199	343
2	0,4 ÷ 1	60	122	201	307	444	763
	1,2	54	109	180	276	399	686
	1,6	45	91	150	230	333	572
3	0,4 ÷ 1,5	120	240	300	460	666	1150
	2	105	210	251	384	555	1050
	2,2	48	93	152	232	334	570
	2,6	45	61	101	154	223	384
4	0,4 ÷ 2	150	238	499	739	1089	1825
	2,5	135	208	449	568	978	1635
	3,2	119	177	398	492	867	1444
	3,6	60	124	202	154	444	763
5	0,4 ÷ 2	180	360	505	768	1110	1908
	3	165	330	556	691	997	1716
	4	151	298	404	613	885	1526
	4,2	136	285	383	582	840	1449
6	0,4 ÷ 3	210	468	696	1046	1523	2580
	4	195	437	646	969	1412	2389
	5	150	345	494	738	1079	1817
	5,2	135	315	443	664	968	1627
7	0,4 ÷ 3,5	240	480	804	1200	1740	2989
	5	210	421	701	1046	1524	2640
	6	150	301	499	756	1104	1829
	6,2	105	211	349	529	773	1280
8	0,4 ÷ 4	270	546	798	1353	1746	3411
	5	265	516	747	1276	1635	3220
	6	225	449	710	1125	1635	2762
	7	180	361	600	892	1296	2184
	7,2	156	312	540	768	1128	1978
9	0,4 ÷ 5	301	612	1011	1507	2244	3789
	6	270	553	910	1359	1980	3474
	7	240	492	816	1230	1798	2970
	8	180	360	598	903	1288	2247
	8,2	165	329	547	826	1176	2056
10	0,4 ÷ 5	330	659	1116	1692	2412	4173
	6	314	628	1065	1615	2301	3983
	7	288	599	1004	1503	2202	3810
	8	240	492	806	1212	1770	3022
	9	192	360	658	898	1350	2280
	9,2	181	342	628	852	1283	2165
12	1 ÷ 6	390	792	1300	1978	2844	4917
	8	360	732	1219	1827	2622	4497
	10	270	553	910	1359	1980	3474
	11	210	468	696	1046	1523	2580
15	1 ÷ 8	480	972	1602	2427	3564	6072
	12	375	762	1272	1923	2784	4692
	14	255	528	889	1332	1896	3398
17	1 ÷ 9	540	912	1819	2737	3984	6818
	15	315	708	1179	1764	2520	4418
	16	255	528	889	1332	1896	3398
20	1 ÷ 12	615	1254	2379	3153	4578	7911
	15	534	900	1799	2707	3940	6738
	17	450	901	1497	2246	3336	5796
25	2,5 ÷ 12	780	1590	2689	3982	5790	9902
	15	756	1530	2548	3828	5616	9600
	17	720	1464	2412	3707	5310	9123
28	5 ÷ 15	870	1770	2910	4430	6390	10950
	17	840	1724	2820	4320	6180	10680

ORDERING CODES PRV47

Valve Model	VR.47			S.	1			1.	A	15	
PRV47-standard steam use	VR.47										
PRV47G-compressed air and gases	VR.47G										
Construction Material											
Standard steel construction		(1)									
Stainless steel construction		I									
Remote Control and Pilots											
Standard valve			(1)								
Solenoid valve 220V for remote closure up to 10 bar-180ºC			E								
Pressure sustaining / reducing **a)**			S								
Pressure sustaining / reducing / solenoid			ES								
Diaphragm Type											
Standard diaphragm				S.							
Low pressure diaphragm				L.							
Outlet Pressure											
Green spring 0,35 to 2 bar - single diaphragm					1						
Blue spring 1,5 to 5,5 bar - single diaphragm					2						
Red spring 3,5 to 8,5 bar - double diaphragm					3						
Black spring 7 to 17 bar - double diaphragm					4						
Pneumatic control top 0,35 to 4 bar - single diaphragm					6						
Pneumatic control top 2 to 17 bar - double diaphragm					7						
Piston Rings											
Bronze **c)**						(1)					
FKM **c)**						V					
EPDM **c)**						E					
NBR **c)**						N					
Drain Connection											
Standard valve							(1)				
Drain connection DN 3/8"							D				
Valve Plug											
Standard metal to metal with hardened plug								1.			
Stellited valve and plug								2.			
Soft plug - Virgin PTFE								3.			
Soft plug - PTFE/GR								4.			
Soft plug - Rulon								5.			
Soft plug - Viton								6.			
Connections											
Threaded BSP ISO 7/1 Rp									A		
Threaded NPT ANSI B1.20.1									C		
Flanged EN 1092-1 PN40									N		
Flanged ANSI B16.5 150#									U		
Flanged ANSI B16.5 300#									V		
SIZE											
DN 1/2" or DN15										15	
DN 3/4" or DN20										20	
DN …..											
Special valves / Extras b)											E

Remarks:

(1) Omitted if a standard valve is requested

a)PS15 Sustaining valve standard spring : 0,2 to 10 bar

b)Full description or aditional codes has to be hadded in case of a a non-standard combination .

c)Valve limited to maximum operating temperature materials

PILOT OPERATED PRESSURE REDUCING VALVES
PRV47/2 DN65 – DN100

DESCRIPTION

The ADCA PRV47/2 pilot operated pressure reducing valves are designed for use on steam, compressed air, nitrogen and other gases compatible with the construction and they can be installed on pressure reducing stations throughout all industries.
Connections are flanged.

MAIN FEATURES

Robust complete carbon steel construction.
Suitable for dead end conditions.
Guided piston and valve stem.
Hardened plug.

OPTIONS:	Soft faced valve plug for gases and steam Special pressure top for low pressures Stellited plug and seat Balance pipe connected to the valve body
USE:	Saturated steam, compressed air and other gases (Group 2) compatible with the construction (except oxygen).
AVAILABLE MODELS:	PRV47/2 - standard model for steam PRV47/2G -compressed air and gases
VALVE SIZES:	DN65 to DN100
CONNECTIONS:	Flanged EN1092-1
INSTALLATION:	Horizontal installation. An "Y" strainer, steam separator and steam trap should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS:	Type of fluid Maximum operating temperature Inlet and outlet pressure Flow rate (maximum and minimum)

USEFUL NOTES ON VALVE AND PIPE SIZING

A special low pressure top assembly should be fitted for outlet pressures from 0,07 up to 0,5 bar (Fig.2).
Two regulators in parallel should be used on larger systems where minimum flow is less than 10% of maximum. If the flow is unknown it is possible to estimate it based on pipe sizing or equipment heat requirement - please consult.
The balance pipe connection is recommend to enter downstream pipe at a minimum of 1 meter from valve. A spool piece can be supplied to house the balancing pipe.
HOW TO SELECT: Never size the valve according to the pipe diameter in which it has to be fitted but according to the required actual flow of fluid.
Refer to valve calculation table or consult the factory.

INSTALLATION

Installation instructions are available (IMI-PRV47) and typical assembling drawing. Special assembling design may be produced on request.

VALVE BODY LIMITING CONDITIONS

PN16 *		PN40 *	
ALLOW. PRESS.	RELATED TEMP.	ALLOW. PRESS.	RELATED TEMP.
16 bar	-10/50 ºC	40 bar	-10 /50º C
13,3 bar	200 ºC	33,3 bar	200 ºC
12,1 bar	250 ºC	30,4 bar	250 ºC
11 bar	300 ºC	27,6 bar	300 ºC

* Rating according to EN1092-1:2007.

CE MARKING (PED - European Directive 97/23/EC)		
PN 16	PN 40	Category
DN65 to DN100	DN40 to DN100	1 (CE Marked)

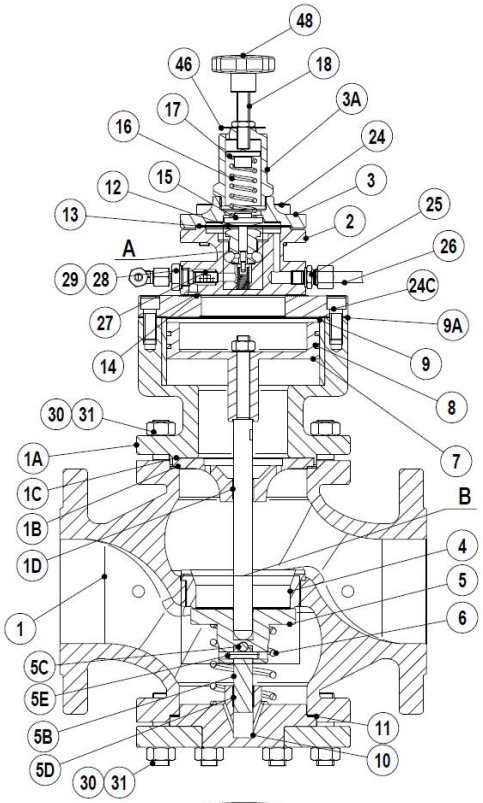
LIMITING CONDITIONS (Steam)

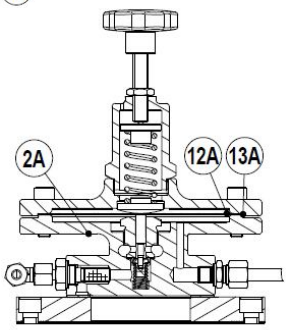
	PN 16	PN40
Max.upstream pressure	13 bar	28 bar
Max.downstream pressure	13 bar	17 bar
Min.downstream pressure *	0,35 bar	0,35 bar
Max.operating temperature	250ºC	250ºC
Max.reducing ratio	See capacity table	
Rangeability	10:1	10:1
Max.cold hydraulic test	17 bar	17 bar
Max.hyd. factory valve body test	24 bar	60 bar

* 0,07 bar with low pressure top (limited at 7 bar inlet).
Pressure and temperature may change if soft seating or soft piston rings are used.

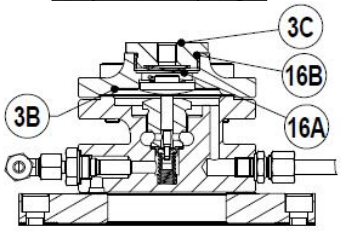
MATERIALS - PRV47/2 Carbon steel construction		
POS.	**DESIGNATION**	**MATERIAL**
1	VALVE BODY	ASTM A216WCB / 1.0619
1A	PISTON HOUSING	ASTM A216WCB / 1.0619
1B	STEM GUIDE	Bronze B62/ASTM B148.97
1C	*GASKET	ST.ST/GRAPHITE
1D	*PLAIN BEARING	BRONZE
2	PILOT VALVE BODY	CF8 / 1.4308
2A	PILOT VALVE BODY	CF8 / 1.4308
3	TOP COVER	CF8 / 1.4308
3A	COVER SPRING	CF8 / 1.4308
3B	TOP COVER	CF8 / 1.4308
3C	COVER NUT	C45E / 1.1191
4	*MAIN VALVE SEAT	AISI316 / 1.4401
5	*MAIN VALVE	HARDENED ST.STEEL
5A	*MAIN VALVE (SOFT)	SS316 W/ PTFE/GR; RULON,...
5B	*VALVE STEM	AISI316 / 1.4401
5C	*BALL	AISI440C / 1.4125
5D	* PLAIN BEARING	BRONZE
5E	*SPRING PIN	AISI304 / 1.4301
6	*MAIN VALVE SPRING	AISI302 / 1.4300
7	*PISTON	Bronze B62/ASTM B148.97
8	*PISTON RINGS	BRONZE / FKM / EPDM / NBR
9	PISTON LINER	AISI304L / 1.4306
9A	*GASKET	ST.ST/GRAPHITE
10	BOTTOM COVER	C45E / 1.1191
11	*BOTTOM COVER GASKET	ST.ST/GRAPHITE
12	*DIAPHRAGM	AISI301 / 1.4310
12A	*LOW PRESSURE DIAPHRAGM	AISI301 / 1.4310
13	*DIAPHRAGM GASKET	ST.STEEL/GRAPHITE
13A	*DIAPHRAGM GASKET	ST.STEEL/GRAPHITE
14	*PILOT VALVE GASKET	ST.STEEL/GRAPHITE
15	LOWER SPRING CARRIER	BRASS
16	*ADJUSTMENT SPRING	STEEL
16A	DIAPHRAGM SPRING	STAINLESS STEEL
16B	*O-RING	EPDM
17	TOP SPRING CARRIER	BRASS
18	LOCKNUT	AISI304 / 1.4301
19	*PUSH ROD	AISI316 / 1.4401
19A	*PILOT VALVE (SOFT)	PTFE/GR; RULON, ETC
20	*PILOT VALVE PLUG	HARDENED ST.STEEL
20A	*PILOT VALVE SEAT	AISI316 / 1.4401
21	*PILOT VALVE GASKET	COPPER
22	*PILOT VALVE SPRING	AISI302 / 1.4300
24	BOLTS	STEEL 10.9
24C	BOLTS	STEEL 10.9
25	COMPRESSION FITTING	PLATED CARBON STEEL
26	BALANCE PIPE	COPPER
27	PILOT VALVE STRAINER SCREEN	AISI304 / 1.4301
28	*STRAINER NUT	AISI304 / 1.4301
29	GASKET	COPPER
30	STUDS	34CrNiMo6 / 1.6582
31	NUTS	STEEL Cl.8
46	SPRING IDENT. PLATE	ALUMINIUM
48	HANDWHEEL	PLASTIC/ST.STEEL
100	** PRESSURE REGULATOR (Relieving)	ADCA P-10
105	SOLENOID VALVE	BRASS
107	*STRAINER	ADCA IS100I-ST.STEEL

* Available spare parts

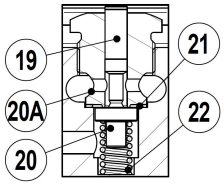




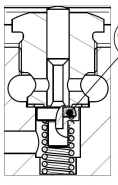
Low pressure diaphragm



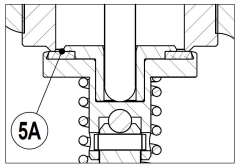
Compressed air top.



Detail A
Pilot main valve



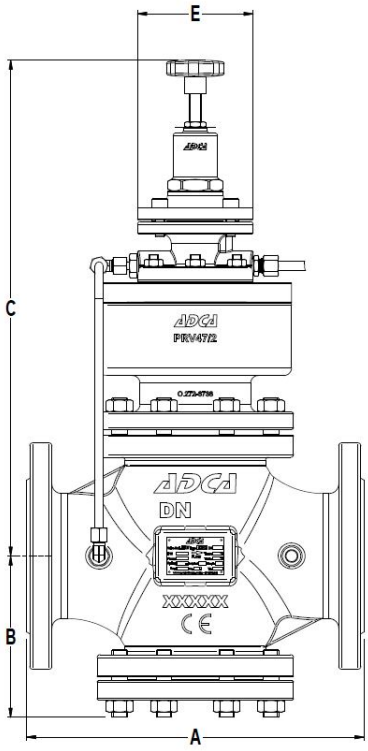
Detail A
Pilot soft main valve

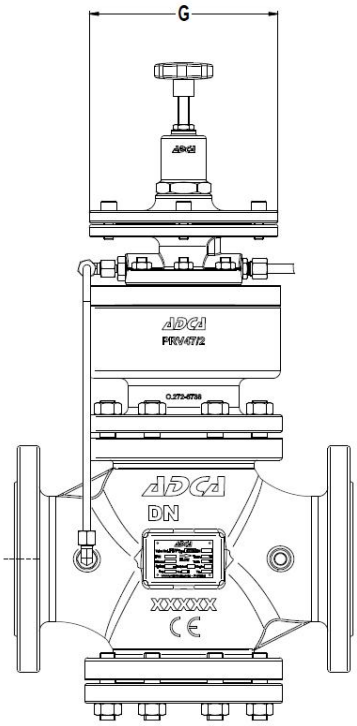


Detail B
Main soft valve

PRESSURE RANGES IN bar				
SPRING COLOUR	***GREEN W/1 Diaphragm***	***BLUE W/1 Diaphragm***	***RED W/2 Diaphragms***	***BLACK W/2 Diaphragms***
Red. Pressure	0,07 to 0,5 bar *	1,5 to 5,5 bar **	3,5 to 8,5 bar **	7 to 17 bar **
Red. Pressure	0,35 to 2 bar **	/	/	/

* With low pressure top; **Standard diaphragm.





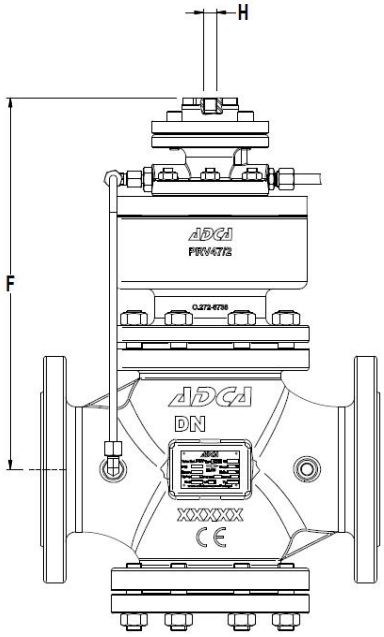


Fig.1 **Fig.2** **Fig.3**

Fig.1 - Valve with standard diaphragm; Fig.2 - Valve with low pressure top; Fig.3 - Valve with compressed air top.

DIMENSIONS - VALVE BODY (mm)								
DN	***A EN1092-1 Flanges***	***B***	***C***	***E***	***F***	***G***	***H***	***WEIGHT Kgs***
65	290	150	470	120	340	195	1/4"	46,7
80	310	150	480	120	350	195	1/4"	56,7
100	350	168	515	120	386	195	1/4"	76,9

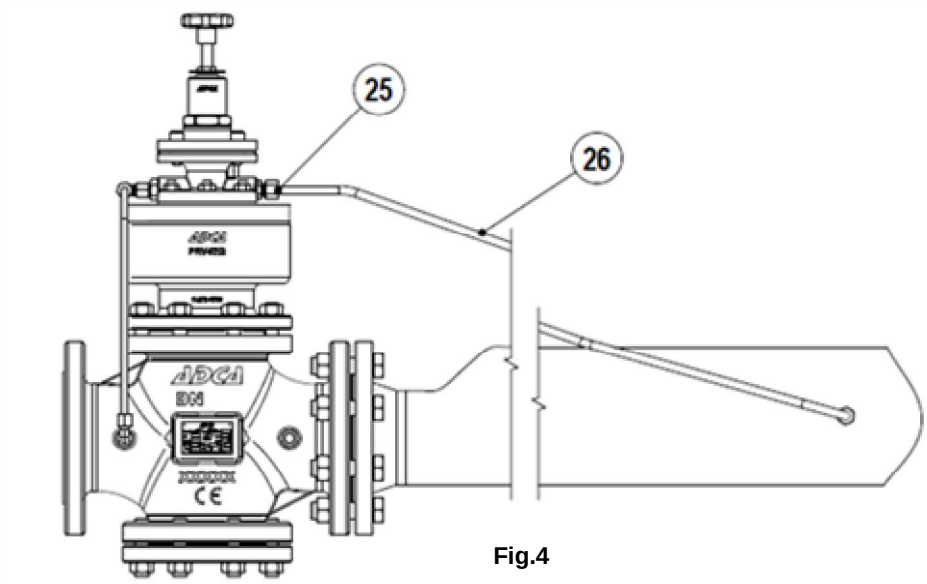


Fig.4

PRV 47/2 Standard for steam, compressed air or gases (Fig.4)
Description of operation: the high pressure upstream fluid is admitted to the valve and pilot valve. By compressing the regulating spring over the diaphragm, the pilot valve opens admitting regulated pressure on the top of the piston, which opens the main valve allowing the flow. The downstream pressure is then transmitted through the balance pipe, acting on the underside of the diaphragm.
Any downstream pressure increase deflects the diaphragm and the pilot valve closes, thus shutting off regulated gas to the piston which in turn closes the main valve assisted by the upstream pressure and loading spring. When the correct downstream pressure is achieved, the valve opens again, repeating the already described operation.
Important: the balance pipe nr.26 (supplied with the valve) must always be connected unless the valve was supplied with the balance pipe connected to the valve body. However, the fitting of the balance pipe is highly recommended when:
-The reduced pressure is below 55% of the inlet pressure (mandatory for pressure reductions greater than 10:1)
-Instability of reduced pressure occurs
-When a low pressure top assembly is fitted

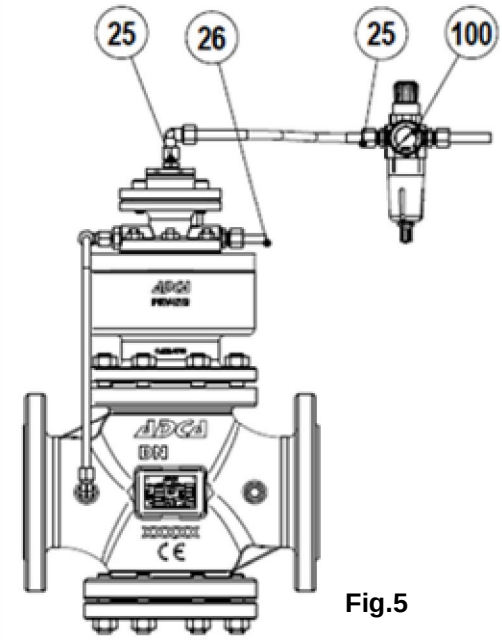


Fig.5

PRV47/2 valve with compressed air top for remote control (Fig.5)
The regulating spring force is placed by a compressed air signal.

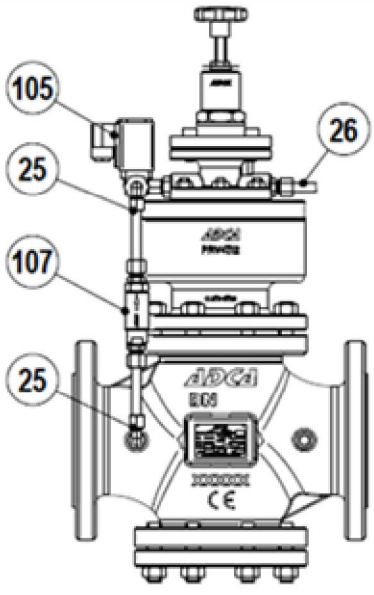


Fig.7

PRV47/2E with solenoid valve for electric remote control (Fig.7)
This valve version operates like the standard valve but it allows a remote control closure by means of a switching or timer control.
When closing the solenoid valve, the pressure signal to the pilot valve is interrupted and thus also the main valve remains closed.

PRV 47/2 - STEAM CAPACITY TABLE (Kg/h)										
INLET barg	OUTLET barg	SATURATED STEAM								
		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	100
0,7	0,35	40	75	125	190	280	480	-	-	-
1	0,4	45	95	160	240	355	620	-	-	-
	0,6	40	83	140	210	308	535	-	-	-
2	0,4 ÷ 1	75	150	250	380	545	960	1490	1880	3390
	1,2	65	138	230	345	515	900	1335	1685	3022
	1,6	50	105	175	265	393	685	-	-	-
3	0,4 ÷ 1,5	100	200	335	510	750	1310	1980	2475	4358
	2	85	170	290	450	660	1155	1732	2175	3962
	2,2	80	165	277	416	613	1050	1585	1981	3616
	2,6	60	127	203	315	467	818	-	-	-
4	0,4 ÷ 2	125	250	420	630	920	1580	2530	3170	5696
	2,5	114	225	385	580	850	1465	2328	2923	5249
	3,2	92	183	309	482	708	1205	1735	2179	3913
	3,6	68	137	237	353	536	932	-	-	-
5	0,4 ÷ 2	150	310	512	755	1114	1895	3022	3765	6733
	3	144	295	488	743	1095	1835	2869	3615	6486
	4	115	225	373	578	846	1430	2130	2675	4852
	4,2	105	213	343	525	770	1342	-	-	-
6	0,4 ÷ 3	175	355	602	919	1358	2298	3566	4453	8021
	4	159	314	538	827	1217	2142	3219	4012	7229
	5	119	250	411	637	941	1644	2276	2870	5150
	5,2	109	217	360	568	839	1465	-	-	-
7	0,4 ÷ 3,5	197	410	670	1005	1540	2644	3959	4952	8911
	5	178	358	587	908	1345	2306	3513	4405	7921
	6	132	271	452	688	1027	1773	2764	3022	5416
	6,2	122	251	416	635	934	1618	-	-	-
8	0,4 ÷ 4	225	471	778	1169	1759	3043	4605	5745	10398
	5	221	339	730	1118	1659	2884	4305	5395	9704
	6	192	385	639	976	1451	2513	3761	4704	8467
	7	146	293	481	732	1085	1887	2727	3168	5695
	7,2	137	274	453	692	1011	1782	-	-	-
9	0,4 ÷ 5	251	518	856	1325	1923	3358	5051	6334	11387
	6	241	500	788	1222	1766	3095	4653	5794	10396
	7	206	398	679	1068	1559	2676	4060	5051	8961
	8	156	314	514	794	1142	2053	2671	3319	5991
	8,2	145	292	483	741	1090	1888	-	-	
10	0,4 ÷ 5	275	561	944	1468	2127	3718	5592	7031	12377
	6	272	551	917	1419	2074	3619	5443	6830	12270
	7	252	508	838	1268	1871	3249	4951	6187	10891
	8	213	431	722	1118	1659	2831	4108	5149	9209
	9	163	333	548	843	1244	2152	2721	3466	6190
	9,2	150	298	493	756	1143	1929	-	-	-
12	1 ÷ 6	330	680	1124	1732	2541	4407	6631	8216	14850
	8	311	629	1023	1575	2332	4034	6090	7573	13862
	10	265	533	812	1271	1867	3202	4503	5592	9903
	11	175	364	568	924	1350	2359	2920	3612	6536
15	1 ÷ 8	408	839	1373	2138	3118	5403	8164	10393	18317
	12	339	656	1068	1629	2441	4250	6385	7968	14356
	14	199	401	662	1017	1503	2619	2968	3661	6438
17	1 ÷ 9	425	863	1460	2178	3165	5343	9204	11360	20290
	15	347	709	1190	1816	2694	4712	5870	7363	14855
	16	207	416	717	1217	1608	2824	3598	4312	6330
20	1 ÷ 12 (2 ÷ 12)*	541	1062	1774	2746	4001	6971	10390	13363	23765
	15	459	931	1552	2335	3476	6184	9156	11382	20298
	17	391	648	988	1748	2840	4698	6098	7628	9476
25	2,5 ÷ 12 (6 ÷ 12)*	685	1337	2191	3360	4971	8392	12870	15845	29200
	15	680	1320	2183	3356	4877	8284	12690	15710	29010
	17	641	1256	2084	3156	4670	7866	12370	14860	27720
28	5 ÷ 15 (6 ÷ 15) *	781	1521	3355	3864	5611	9862	14870	18380	33164
	17	763	1471	3259	3768	5506	9652	14340	17770	32665

Detailed information concerning the sizes DN15 to DN50 available in the catalogue IS PRV47.10

* Minimum outlet pressures for the sizes DN65 to DN100.

ORDERING CODES PRV47/2

Valve Model	V47			S.	1			1.	A	65	
PRV47-standard steam use	V47										
PRV47G-compressed air and gases	V47G										
Material Construction											
Standard steel construction		(1)									
Stainless steel construction (special design)		I									
Remote Control and Pilots											
Standard valve			(1)								
Solenoid valve 220V for remote closure up to 10 bar-180ºC			E								
Pressure sustaining / reducing **a)**			S								
Pressure sustaining / reducing / solenoid			ES								
Diaphragm Type											
Standard diaphragm				S.							
Low pressure diaphragm				L.							
Outlet Pressure											
Green spring 0,35 to 2 bar - single diaphragm					1						
Blue spring 1,5 to 5,5 bar - single diaphragm					2						
Red spring 3,5 to 8,5 bar - double diaphragm					3						
Black spring 7 to 17 bar - double diaphragm					4						
Pneumatic control top 0,35 to 4 bar - single diaphragm					6						
Pneumatic control top 2 to 17 bar - double diaphragm					7						
Piston Rings											
Bronze **c)**						(1)					
FKM **c)**						V					
EPDM **c)**						E					
NBR **c)**						N					
Drain Connection											
Standard valve							(1)				
Drain connection DN 3/8"							D				
Valve Plug											
Standard metal to metal with hardened plug								1.			
Stellited valve and plug								2.			
Soft plug - Virgin PTFE								3.			
Soft plug - PTFE/GR								4.			
Soft plug - Rulon								5.			
Soft plug - Viton								6.			
Connections											
Flanged EN 1092-1 PN16									L		
Flanged EN 1092-1 PN40									N		
SIZE											
DN 65										65	
DN 80										80	
DN 100										100	
Special valves / Extras b)											E

Remarks:

(1) Omitted if a standard valve is requested

a)PS15 Sustaining valve standard spring : 0,2 to 10 bar

b)Full description or aditional codes has to be hadded in case of a a non-standard combination .

c)Valve limited to maximum operating temperature materials

PRESSURE REDUCING VALVE
RP45 (Threaded)
(DN ½" – DN 1")

DESCRIPTION

The ADCA RP45 series pressure reducing valves are single seat bellows sealed controllers, operating without auxiliary energy, designed for use on steam, compressed air, industrial inert gases and liquids compatible with the construction.
They are particularly suitable for reducing steam pressure in all energy and process systems where pressures should be kept constant.

OPERATION

Pressure reduction is achieved by means of variable throttling of the inlet flow at the valve seat by variation of the flow area between seat and disc. The outlet pressure which is transmitted through the feed-back line to the diaphragm chamber counteracts the spring force acting on the valve spindle and controls the valve aperture corresponding to the spring setting and thus to the required outlet pressure.

MAIN FEATURES

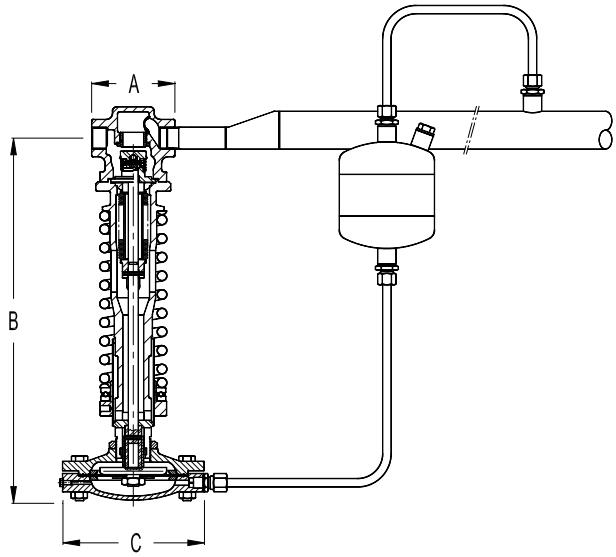
Specially designed high durability bellows, providing pressure balancing and friction less plug stem.
Robust construction (fit-and-forget).
Suitable for use with high pressure turndowns.
Interchangeable actuators

OPTIONS:	Soft sealing for steam Nitrile rubber soft seated version for air and gas applications where tight shut-off is required. Low-noise flow divider
USE:	Steam, compressed air and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	RP45S and RP45ST or N – PN40 cast steel RP45I and RP45IT or N – Stainless Steel (All wetted parts free of ferrous metal or in St.Steel.). Suffix T : Soft seated with PTFE/GR Suffix N : soft seated with nitrile rubber
SIZES:	DN ½" to DN 1"
CONNECTIONS	Female screwed BSP or NPT Horizontal installation.
INSTALLATION:	An "Y" strainer, steam separator and steam trap should be provided upstream the valve. See IMI, installation and maintenance instructions.

CE MARKING (PED - European Directive)		
PN 16	**PN 40**	**Category**
DN1/2" to DN 1"	DN1/2" to DN 1"	SEP - art. 3, paragraph3

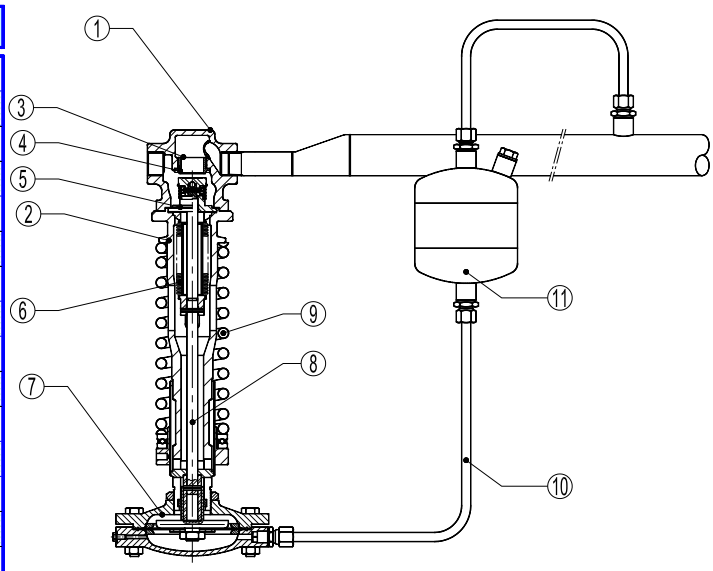
LIMITING CONDITIONS						
	RP45S	RP45I	RP45ST	RP45IT	RP45SN *	RP45IN *
Body design conditions	PN40	PN40	PN40	PN40	PN40	PN40
Max.upstream pressure	25 bar	25 bar	25 bar	25 bar	25 bar	25 bar
Max.downstream pressure **	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar
Min.downstream pressure	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar
Max.operating temperature	250°C	250°C	200 °C	200 °C	80 °C	80 °C
Max.reducing ratio	25:1	25:1	25:1	25:1	10:1	10:1
Rangeability	10:1	10:1	10:1	10:1	10:1	10:1
Max.cold hydraulic test	25 bar	25 bar	25 bar	25 bar	25 bar	25 bar
Max.hyd. factory valve body test	60 bar	60 bar	60 bar	60 bar	60 bar	60 bar

*Suffix N : - a maximum turndown ratio 10:1 should be observed. Other soft materials on request.
** Others on request with bellows or piston actuator



DIMENSIONS (mm)						
VALVE				ACTUATOR		
SIZE DN	A	B	WGT. Kgs	TYPE	C	WGT. Kgs
1/2"	100	440	11,2	**A1**	172	4,3
3/4"	100	440	11,5	**A11**	172	4,3
1"	100	440	12,1	**A2**	220	7,3
-	-	-	-	**A21**	220	7,3
-	-	-	-	**A3**	282	11,3
-	-	-	-	**A4**	340	16,3

MATERIALS		
POS.	DESIGNATION	MATERIAL
1	Valve body RP45S	A 216 WCB / 1.0619
1	Valve body RP45I	CF8M / 1.4408
2	Piston body RP45S	GJS-400-15 / 0.7040
2	Piston body RP45I	GJS-400-15 / 0.7040 Nickel plated
3	Valve seat	HARDENED ST.STEEL
4	* Valve disc	HARDENED ST.STEEL
4	* Soft valve disc	AISI304/1.4301 ;NBR (PTFE/GR,etc)
5	Guide	AISI 304 / 1.4301
6	* Bellows	AISI 316 Ti / 1.4571
7	* Diaph.chamber RP45S	GJL-250 / 0.6025
7	* Diaph. Chamber RP45I	CF8M / 1.4408
8	Spindle	AISI 304 / 1.4301
9	Regulating spring	SPRING STEEL
10	* Impulse line RP45S	COPPER
10	* Impulse line RP45I	AISI 316 / 1.4401
11	* Cond. vessel a) RP45S	S235JRG2 / 1.0038
11	* Cond. vessel a) RP45I	AISI 316 / 1.4401



* Available spare parts.
a) Not necessary when in operation with low temperature compressed air or water.

SATURATED STEAM CAPACITY TABLE (Kg/h)
(P2 < 0,58 P1)

INLET barg	VALVE SIZE		
	DN 1/2"	DN 3/4"	DN 1"
0,5	51	68	90
0,75	63	84	112
1	75	100	133
1,5	100	133	175
2	126	170	230
2,5	150	200	260
3	175	240	310
4	220	290	390
5	260	350	480
6	330	440	580
7	400	520	700
8	450	600	800
9	500	670	880
10	560	750	980
12	680	900	1180
14	800	1050	1400
16	920	1230	1630
18	1040	1400	1860
20	1170	1540	2100
22	1330	1780	2350
24	1500	2000	2600
25	1600	2150	2800

ACTUATOR AND SPRING SELECTION TABLE

VALVE SIZE DN	Kvs m3/h	ACTUATOR	A - 4	A - 4	A - 3	A - 2	A - 21	A - 1	A - 11
1/2"	4,8	Out.(bar)	0,15-0,49	0,5-0,99	1,0-1,6	1,7-3,8	3,9-5,5	5,6-8,2	8,3-13
		Spring Nº.	66	60	60	60	60	60	60
3/4"	6,9	Out.(bar)	0,15-0,49	0,5-0,99	1,0-1,6	1,7-3,8	3,9-5,5	5,6-8,2	8,3-13
		Spring Nº.	66	60	60	60	60	60	60
1"	9,1	Out.(bar)	0,15-0,49	0,5-0,99	1,0-1,6	1,7-3,8	3,9-5,5	5,6-8,2	8,3-13
		Spring Nº.	66	60	60	60	60	60	60

Correction factors:
The given capacities apply to the pressure reducing valves at **critical pressure drop** (downstream pressure in barg about 58% of the upstream pressure barg or lower). In case of **non-critical pressure drop** a correction factor must be used as follows:

PRESSURE RATIO * P2 / P1	CORRECTION FACTOR *f*
≥ 0,7	1,25
≥ 0,8	1,6
≥ 0,9	2,25

*** Pressure ratio in bar abs (barg + 1)**

No correction factor should be used for smaller pressure ratios than 0.7.

Superheated steam:
If superheated steam is to be reduced instead of saturated steam a correction factor has to be applied as well, the required mass flow must be multiplied by the following factor :
Vh / Vs, where Vh = specific volume of superheated steam and Vs = specific volume of saturated steam.

HOW TO SIZE (using table for steam)
Example (valve selection) : Saturated steam capacity: 300Kg/h; Upstream pressure: 7 bar; Downstream pressure required: 5 bar.

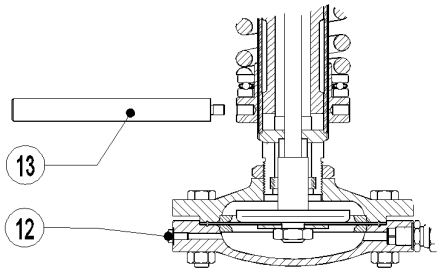
Solution: First determine correction factor for pressure ratio: $\frac{5+1}{7+1} = 0.75 \rightarrow f = 1.25$,

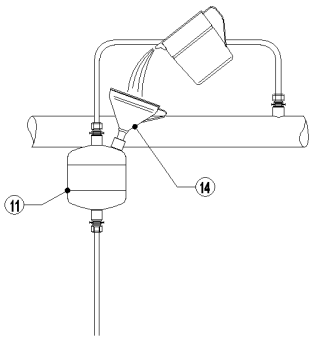
Then multiply the given capacity: $300 \times 1.25 = 375\,Kg/h$

Go to 7 bar in the column "bar" of the capacity table. By following the horizontal line you can find out the values for selection of pressure reducing valve. Looking for an equal or higher value than 375 Kg/h. In this case it will be 400 Kg/h. Now, go to the top of the table and read off the nominal size: DN ½"
On the actuator and spring selection table, for downstream pressure of 5 bar we may see that the recommended actuator is type A-21, considering the valve supplied with spring Nr.60.
How to order: RP45S DN ½" valve complete with spring Nr.60, type A-21 actuator, condensate vessel and copper tube impulse line.
HOW TO SIZE (using Kvs): please consult formulas on IS PV10.00 E or consult factory.

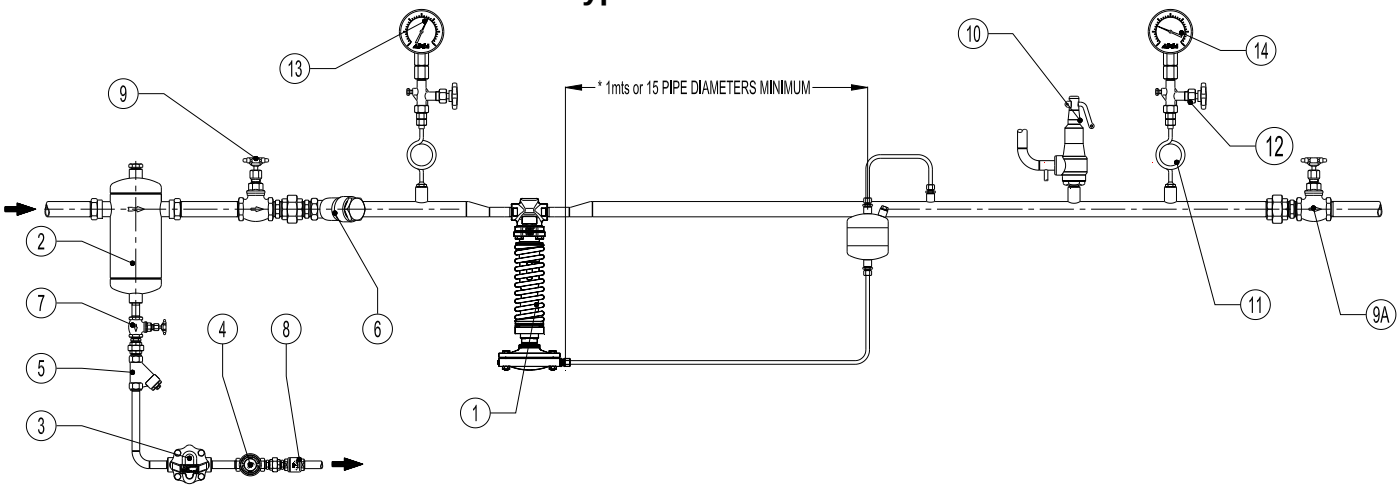
INSTALLATION RECOMMENDATIONS
RP45 is designed primarily for steam, compressed air and non inflammable gases. It has limited use for neutral liquids since the plug close in the same direction of the fluid flow, which can produce vibrations and water hammer when used at less than 20% of capacity. To avoid this, valve can be installed with the fluid direction against the plug under certain conditions. Please consult the factory.
At service conditions where the temperature is more than 100ºC it is necessary to protect the diaphragm against overheating by using a seal pot.
Never size the valve according to the pipe diameter in which it has to be fitted but according to the required actual flow .Pipe sizing must also respect the maximum recommended flow velocities according to the medium.
INSTALLATION
Service conditions less than 100ºC: with gases the valve is ready to work. In case of liquids the actuator must be filled completely with liquid, so, the vent screw (12) should be open till the water flow without bubbles.
The valve can be installed with the diaphragm pointing upwards or downwards.

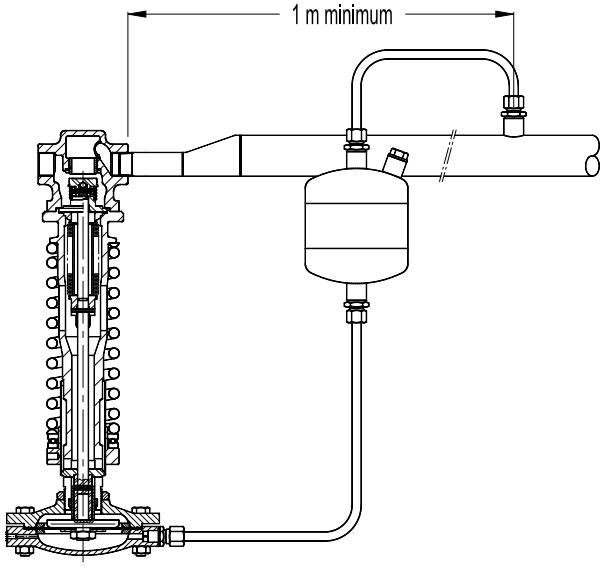
Service conditions more than 100ºC: Fill the seal pot (11) using a funnel (14) until the water emerges from the actuator vent (12) without bubbles .Close the actuator vent screw (12) and proceed filling the pot until the water reaches the top and close it with the plug. The valve is now ready to work.
The valve must be installed with the diaphragm pointing downwards.
Downstream pressure should be adjusted with the key (13). Compressing the spring, spring force increase and downstream pressure increase. Relaxing the spring, spring force decrease and downstream pressure decrease.
The valve closes when the downstream pressure rises.





Typical Installation





MATERIALS		
POS.	***DESIGNATION***	***MODEL***
1	Pressure reducing valve	ADCA RP45
1A	Water seal pot	POT
2	Humidity separator	ADCA S 16
3	Steam trap	ADCA FLT series
4	Sight glass	ADCA SW 12
5	Y Strainer	ADCA IS 16
6	Y Strainer	ADCA IS16 or IS116
7	Stop valve	ADCA GV32B
8	Check valve	ADCA RT
9	Stop valve	ADCA GV32B
9A	Stop valve	ADCA GV32B
10	Safety valve	-
11	Coil	ADCA GSC-40
12	Gauge cock	ADCA GC-400
13	Upsteam pressure gauge	ADCA MAN-100
14	Downstream pressure gauge	ADCA MAN-100

By-pass: if overpressure can not be accepted the use of by-pass is not recommended. In alternative, for critical process, two pressure reducing stations should be installed in parallel. PN ratings and materials according to the operating pressures. * The balance pipe connection is recommended to enter downstream pipe at a minimum of 1 meter from valve. Installation instructions are available (IMI-RP45) and typical assembling drawing. Special assembling designs may be produced on request.

PRESSURE REDUCING VALVE
RP45 (EN)

RP45
DN 15 – DN100

DESCRIPTION
The ADCA RP45 series pressure reducing valves are single seat bellows sealed controllers, operating without auxiliary energy, designed for use on steam, compressed air, industrial inert gases and liquids compatible with the construction.
They are particularly suitable for reducing steam pressure in all energy and process systems where pressures should be kept constant.

OPERATION
Pressure reduction is achieved by means of variable throttling of the inlet flow at the valve seat by variation of the flow area between seat and disc. The outlet pressure which is transmitted through the feed-back line to the diaphragm or piston chamber counteracts the spring force acting on the valve spindle and controls the valve aperture corresponding to the spring setting and thus to the required outlet pressure.

MAIN FEATURES
Specially designed high durability bellows, providing pressure balancing and friction less plug stem.
Robust construction (fit-and-forget).
Suitable for use with high pressure turndowns.
Interchangeable actuators

OPTIONS:	Soft sealing for steam Nitrile rubber soft seated version for air and gas applications where tight shut-off is required. Low-noise flow divider
USE:	Steam, compressed air and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	RP45G and RP45GT or N – PN16 SG iron RP45S and RP45ST or N – PN16 Cast steel RP45S and RP45ST or N – PN40 Cast steel RP45I and RP45IT or N – Stainless Steel (All wetted parts free of ferrous metal or in St.Steel.). Suffix T : Soft seated with PTFE/GR Suffix N : soft seated with nitrile rubber
SIZES:	DN 15 to DN 150
CONNECTIONS	RP45G Flanged EN 1092-2 PN16 RP45S or I Flanged EN 1092-1 PN16 - PN40
INSTALLATION:	Horizontal installation. An “Y” strainer, steam separator and steam trap should be provided upstream the valve. See IMI, installation and maintenance instructions.

RP45
DN 125 – DN150

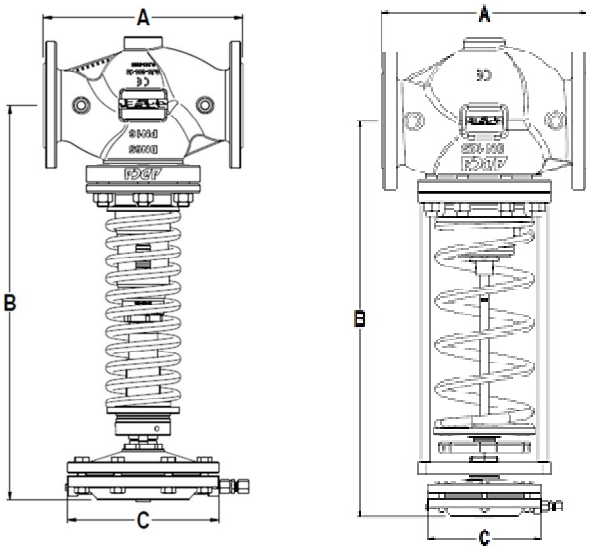
RP45 I
DN 15 – DN100

CE MARKING (PED - European Directive)		
PN 16	**PN 40**	**Category**
DN15 to DN50	DN15 to DN32	SEP - art. 3, paragraph3
DN65 to DN150	DN40 to DN100	1 (CE Marked)
/	DN125 to DN150	2 (CE Marked)

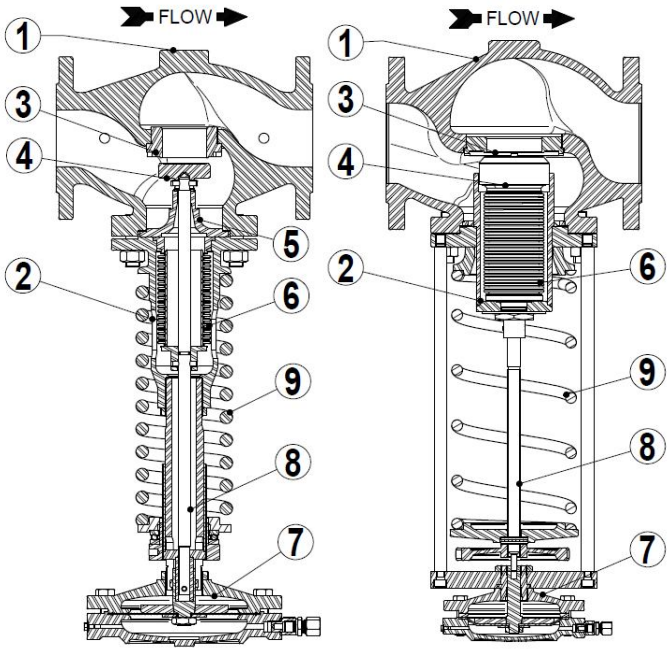
LIMITING CONDITIONS									
	RP45G RP45S	RP45S	RP45I	RP45GT RP45ST	RP45ST	RP45IT	RP45GN* RP45SN*	RP45SN *	RP45IN *
Body design conditions	PN16	PN40	PN40	PN16	PN40	PN40	PN16	PN40	PN40
Max.upstream pressure	13 bar	25 bar	25 bar	13 bar	25 bar	25 bar	13 bar	25 bar	25 bar
Max.downstream DN15/100	13 bar	18 bar	18 bar	13 bar	18 bar	13 bar	13 bar	18 bar	18 bar
Max.downstream DN125/150	12 bar	16,5 bar	16,5 bar	12 bar	16,5 bar	16,5 bar	12 bar	16,5 bar	16,5 bar
Min.downstream pressure	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar
Max.operating temperature	200ºC	250ºC	250ºC	200 ºC	200 ºC	200 ºC	80 ºC	80 ºC	80 ºC
Max.reducing ratio	25:1	25:1	25:1	25:1	25:1	25:1	10:1	10:1	10:1
Rangeability	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1
Max.cold hydraulic test	24 bar	25 bar	25 bar	24 bar	25 bar	25 bar	24 bar	25 bar	25 bar
Max.hyd. factory valve body test	24 bar	60 bar	60 bar	24 bar	60 bar	60 bar	24 bar	60 bar	60 bar

*Suffix N : - a maximum turndown ratio 10:1 should be observed. Other soft materials on request.

DIMENSIONS (mm)						
VALVE				ACTUATOR		
SIZE DN	A	B	WGT. Kgs	TYPE	C	WGT. Kgs
15	130	440	12,7	A1	172	4,3
20	150	440	12,7	A1S	172	4,3
25	160	440	13,7	A10S	172	4,3
32	180	445	15,7	A11	172	4,3
40	200	445	17,7	A12S	172	4,3
50	230	540	25,7	A2	220	7,3
65	290	540	29,7	A21	220	7,3
80	310	610	36,7	A3	282	11,3
100	350	650	53,7	A4	340	16,3
125	400	780	101,4	B1	172	4,4
150	480	790	134,5	B2	220	7,4
				B21	220	7,4
				B3	283	11,6
				B4	340	18,6
				C11S	145	2,3



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	Valve body RP45G	GJS-400-15 / 0.7040
1	Valve body RP45S	A216WCB / 1.0619
1	Valve body RP45I	CF8M / 1.4408
2	Piston body RP45G and S	GJS-400-15 / 0.7040
2	Piston body RP45I	GJS-400-15 / 0.7040 Nickel plated
3	Valve seat	HARDENED ST.STEEL
4	* Valve disc	HARDENED ST.STEEL
4	* Soft valve disc	AISI304/1.4301 ;NBR (PTFE/GR,etc)
5	Guide	Bronze B62 / ASTM B148-97
6	* Bellows	AISI 316 Ti / 1.4571
7	* Diaph.chamber RP45G	GJL-250 / 0.6025
7	* Diaph.chamber RP45S	A216WCB / 1.0619
7	* Diaph. Chamber RP45I	CF8M / 1.4408
8	* Spindle	AISI 304 / 1.4301
9	* Regulating spring	SPRING STEEL



* Available spare parts.

SATURATED STEAM CAPACITY TABLE (Kg/h)
(P2 < 0,58 P1)

INLET barg	VALVE SIZE										
	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150
0,5	51	68	90	118	186	300	460	800	1250	1500	1800
0,75	63	84	112	146	230	360	580	1000	1550	1750	2350
1	75	100	133	175	280	430	700	1200	1850	2250	3200
1,5	100	133	175	240	360	590	910	1600	2500	3000	4000
2	126	170	230	290	450	730	1160	2000	3050	3500	4700
2,5	150	200	260	350	550	880	1390	2400	3600	4500	6500
3	175	240	310	400	640	1010	1600	2700	4300	5500	8500
4	220	290	390	510	800	1300	2000	3400	5400	7000	10000
5	260	350	480	620	1000	1600	2500	4200	6500	8000	12000
6	330	440	580	760	1220	1930	3000	5100	8000	9500	14000
7	400	520	700	910	1430	2300	3600	6100	9500	11500	16000
8	450	600	800	1040	1670	2700	4100	7100	11000	13000	18000
9	500	670	880	1180	1800	2900	4600	7800	12000	15000	20000
10	560	750	980	1300	2000	3200	5100	8500	13500	17000	22000
12	680	900	1180	1540	2500	4000	6100	10500	16300	20000	25000
14	800	1050	1400	1850	2900	4700	7200	12600	19000	23000	29000
16	920	1230	1630	2150	3400	5500	8300	14600	22000	26000	33000
18	1040	1400	1860	2450	3800	6200	9500	16600	25000	30000	38000
20	1170	1540	2100	2700	4200	7000	10800	18600	28000	33000	42000
22	1330	1780	2350	3050	4900	7800	12200	21000	32000	36000	45000
24	1500	2000	2600	3400	5400	8700	13700	23500	36000	40000	48000
25	1600	2150	2800	3600	5700	9200	14500	25500	38000	42000	50000

ACTUATOR AND SPRING SELECTION TABLE

DN	Kvs m3/h		ACTUATOR														
			A - 4	A - 4	A - 3	A - 2	A - 21	A - 1	A1S	A - 11	A12S	A-10S	B - 4	B - 3	B - 2	B - 21	B -1	C-11S
15	4,8	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,6	1,7 - 3,8	3,9 - 5,5	5,6 - 8,2	/	8,3-13	10 - 18	/	/	/	/	/	/	/
		Spring Nº.	66	60	60	60	60	60	/	60	60.1	/	/	/	/	/	/	/
20	6,9	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,6	1,7 - 3,8	3,9 - 5,5	5,6 - 8,2	/	8,3-13	10 - 18	/	/	/	/	/	/	/
		Spring Nº.	66	60	60	60	60	60	/	60	60.1	/	/	/	/	/	/	/
25	9,1	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,6	1,7 - 3,8	3,9 - 5,5	5,6 - 8,2	/	8,3-13	10 - 18	/	/	/	/	/	/	/
		Spring Nº.	66	60	60	60	60	60	/	60	60.1	/	/	/	/	/	/	/
32	11,8	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,6	1,7 - 3,8	3,9 - 5,5	5,6 - 8,2	/	8,3-13	10 - 18	/	/	/	/	/	/	/
		Spring Nº.	66	60	60	60	60	60	/	60	60.1	/	/	/	/	/	/	/
40	14,4	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,6	1,7 - 3,8	3,9 - 5,5	5,6 - 8,2	/	8,3-13	10 - 18	/	/	/	/	/	/	/
		Spring Nº.	66	60	60	60	60	60	/	60	60.1	/	/	/	/	/	/	/
50	26,5	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,9	2 - 4,2	4,3 - 6,9	7 - 8,5	/	8,6-13	/	10 - 18	/	/	/	/	/	/
		Spring Nº.	67	61	61	61	61	64	/	64	/	61	/	/	/	/	/	/
65	51,5	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,9	2 - 4,2	4,3 - 6,9	7 - 8,5	/	8,6-13	/	10 - 18	/	/	/	/	/	/
		Spring Nº.	67	61	61	61	61	64	/	64	/	61	/	/	/	/	/	/
80	79,5	Outlet (bar)	0,15 - 0,45	0,46 - 0,99	1,0 - 1,9	2 - 5	5,1 - 8,9	9 - 13	11 - 18	/	/	/	/	/	/	/	/	/
		Spring Nº.	68	62	62	62	62	65	62	/	/	/	/	/	/	/	/	/
100	129,5	Outlet (bar)	0,15 - 0,45	0,46 - 0,99	1,0 - 1,9	2 - 6,0	6,1 - 13	/	11 - 18	/	/	/	/	/	/	/	/	/
		Spring Nº.	69	63	63	63	63	/	63	/	/	/	/	/	/	/	/	/
125	150	Outlet (bar)	/	/	/	/	/	/	/	/	/	/	0,5-1,5	1,1-2,5	1,5-5,5	4 - 8,5	6 - 12	8 - 16,5
		Spring Nº.	/	/	/	/	/	/	/	/	/	/	70	70	70	70	70	70
150	204	Outlet (bar)	/	/	/	/	/	/	/	/	/	/	0,5-1,5	1,1-2,5	1,5-5,5	4 - 8,5	6 - 12	8 - 16,5
		Spring Nº.	/	/	/	/	/	/	/	/	/	/	70	70	70	70	70	70

Actuator reference without suffix in cast iron, suffix S in cast steel, suffix SS in stain.steel.

Correction factors:

The given capacities apply to the pressure reducing valves at **critical pressure drop** (downstream pressure in barg about 58% of the upstream pressure barg or lower). In case of **non-critical pressure drop** a correction factor must be used as follows:

No correction factor should be used for smaller pressure ratios than 0.7.

PRESSURE RATIO * P2 / P1	CORRECTION FACTOR *f*
≥ 0,7	1,25
≥ 0,8	1,6
≥ 0,9	2,25

*** Pressure ratio in bar abs (barg + 1)**

Superheated steam:
If superheated steam is to be reduced instead of saturated steam a correction factor has to be applied as well, the required mass flow must be multiplied by the following factor:
$\frac{Vh}{Vs}$, where Vh = specific volume of superheated steam and Vs = specific volume of saturated steam .

HOW TO SIZE (using table for steam)
Example (valve selection) : Saturated steam capacity: 300Kg/h; Upstream pressure: 3 bar; Downstream pressure required: 2bar.

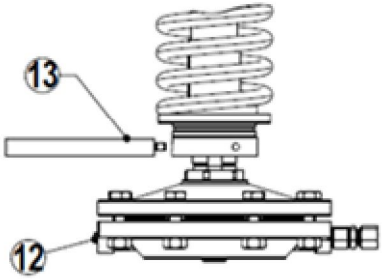
Solution: First determine correction factor for pressure ratio: $\frac{2+1}{3+1} = 0.75 \rightarrow f = 1.25$,

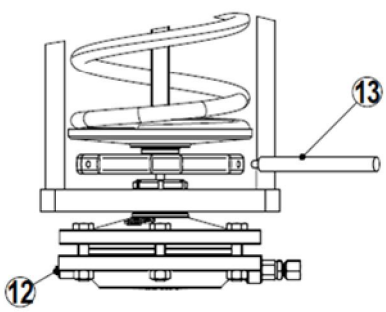
Then multiply the given capacity: $300 \times 1.25 = 375\,Kg/h$

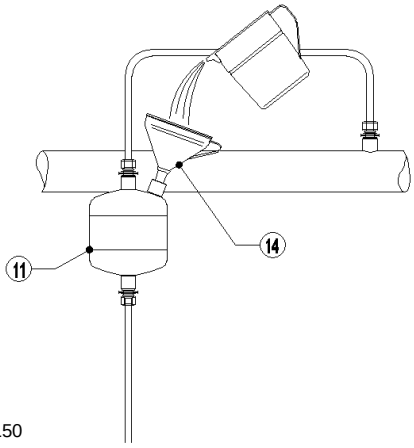
Go to 3 bar in the column "bar" of the capacity table. By following the horizontal line you can find out the values for selection of pressure reducing valve. Looking for an equal or higher value than 375 Kg/h. In this case it will be 400 Kg/h. Now, go to the top of the table and read off the nominal size: DN32
On the actuator and spring selection table, for downstream pressure of 2 bar we may see that the recommended actuator is type A-2, considering the valve supplied with spring Nr.60.
How to order: RP45G DN32 PN16 valve complete with spring Nr.60, type A-2 actuator, condensate vessel and copper tube impulse line.
HOW TO SIZE (using Kvs): please consult formulas on IS PV10.00 E or consult factory.

INSTALLATION RECOMMENDATIONS
RP45 is designed primarily for steam, compressed air and non inflammable gases. It has limited use for neutral liquids since the plug close in the same direction of the fluid flow, which can produce vibrations and water hammer when used at less than 20% of capacity. To avoid this, valve can be installed with the fluid direction against the plug under certain conditions. Please consult the factory.
At service conditions where the temperature is more than 100ºC it is necessary to protect the diaphragm against overheating by using a seal pot.
Never size the valve according to the pipe diameter in which it has to be fitted but according to the required actual flow .Pipe sizing must also respect the maximum recommended flow velocities according to the medium.

INSTALLATION
Service conditions less than 100ºC: with gases the valve is ready to work. In case of liquids the actuator must be filled completely with liquid, so, the vent screw (12) should be open till the water flow without bubbles.
The valve can be installed with the diaphragm pointing upwards or downwards.
Service conditions more than 100ºC: Fill the seal pot (11) using a funnel (14) until the water emerges from the actuator vent (12) without bubbles .Close the actuator vent screw (12) and proceed filling the pot until the water reaches the top and close it with the plug. The valve is now ready to work.
The valve must be installed with the diaphragm pointing downwards.
Downstream pressure should be adjusted with the key (13). Compressing the spring, spring force increase and downstream pressure increase. Relaxing the spring, spring force decrease and downstream pressure decrease.
The valve closes when the downstream pressure rises.



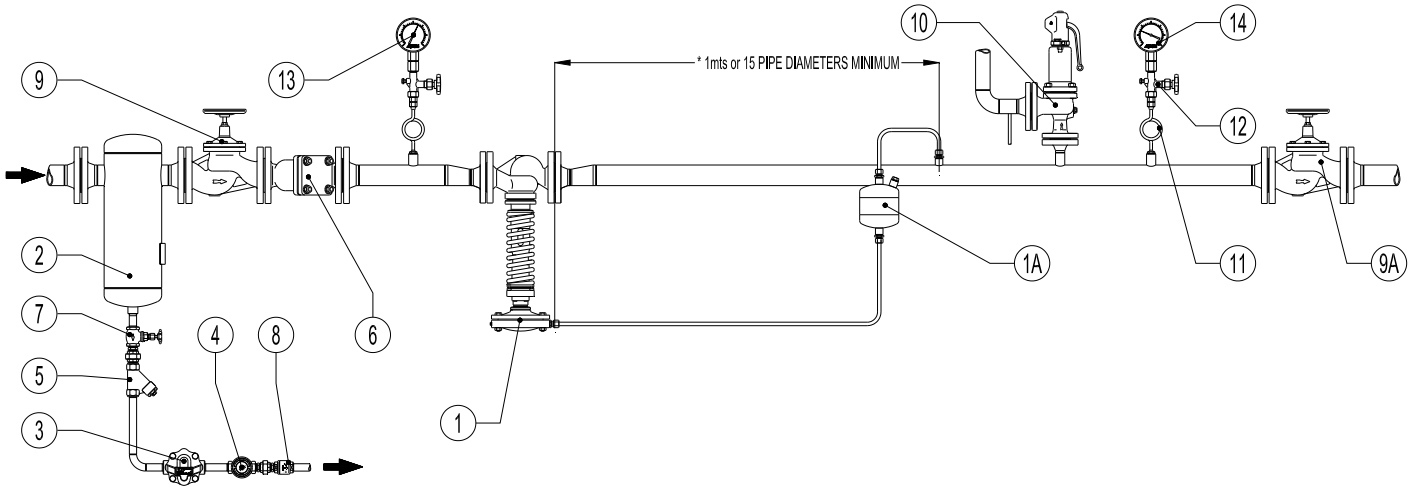


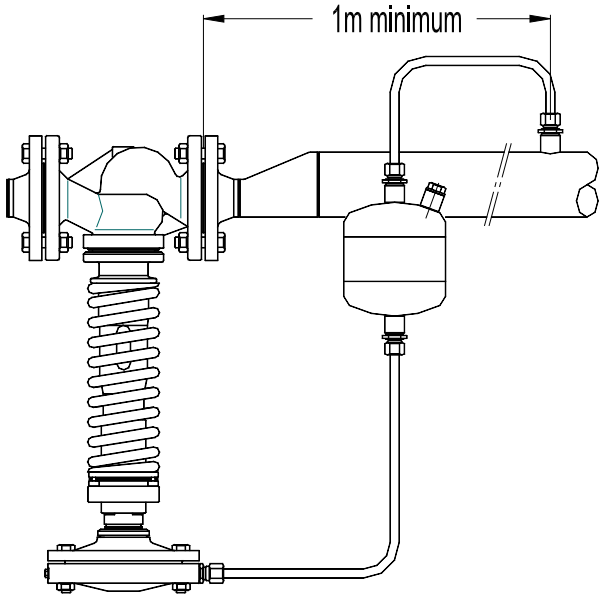


DN 125 – DN150

DN 15 – DN100

Typical Installation





MATERIALS		
POS.	***DESIGNATION***	***MODEL***
1	Pressure reducing valve	ADCA RP45
* 1A	Water seal pot	POT
2	Humidity separator	ADCA S 25
3	Steam trap	ADCA FLT series
4	Sight glass	ADCA SW 12
5	Y Strainer	ADCA IS 140
6	Y Strainer	ADCA IS16F
7	Stop valve	ADCA GV32B
8	Check valve	ADCA RT
9	Stop valve	ADCA VF20
9A	Stop valve	ADCA VF20
10	Safety valve	-
11	Coil	ADCA GSC-40
12	Gauge cock	ADCA GC-400
13	Upsteam pressure gauge	ADCA MAN-100
14	Downstream pressure gauge	ADCA MAN-100

* Not necessary when in operation with low temperature compressed air or water.

POT detailed information: see IS POT.10 E 07.13

Remarks:

By-pass: if overpressure can not be accepted the use of by-pass is not recommended. In alternative, for critical process, two pressure reducing stations should be installed in parallel.

PN ratings and materials according to the operating pressures.

* The balance pipe connection is recommended to enter downstream pipe at a minimum of 1 meter from valve. Installation instructions are available (IMI-RP45) and typical assembling drawing.

Special assembling designs may be produced on request.

PRESSURE REDUCING VALVE
RP45 – (ANSI)

DESCRIPTION

The ADCA RP45 series pressure reducing valves are single seat bellows sealed controllers, operating without auxiliary energy, designed for use on steam, compressed air, industrial inert gases and liquids compatible with the construction.
They are particularly suitable for reducing steam pressure in all energy and process systems where pressures should be kept constant.

OPERATION

Pressure reduction is achieved by means of variable throttling of the inlet flow at the valve seat by variation of the flow area between seat and disc. The outlet pressure which is transmitted through the feed-back line to the diaphragm or piston chamber counteracts the spring force acting on the valve spindle and controls the valve aperture corresponding to the spring setting and thus to the required outlet pressure.

MAIN FEATURES

Specially designed high durability bellows, providing pressure balancing and friction less plug stem.
Robust construction (fit-and-forget).
Suitable for use with high pressure turndowns.
Interchangeable actuators

OPTIONS:	Soft sealing for steam Nitrile rubber soft seated version for air and gas applications where tight shut-off is required. Low-noise flow divider
USE:	Steam, compressed air and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	RP45S and RP45ST or N – Cast steel RP45I and RP45IT or N – Stainless Steel (All wetted parts free of ferrous metal or in St.Steel.). Suffix T : Soft seated with PTFE/GR Suffix N : soft seated with nitrile rubber
SIZES:	½" to 4"
CONNECTIONS	Flanged ANSI B16.5 150# and 300#
INSTALLATION:	Horizontal installation. An "Y" or "T" strainer, steam separator and steam trap should be provided upstream the valve. See IMI, installation and maintenance instructions.

CE MARKING (PED - European Directive)		
ANSI 150	**ANSI 300**	**Category**
1/2" - 2" (DN15-50)	1" (DN25)	SEP - art. 3, paragraph3
3"-4" (DN80-100)	11/2"-4" (DN40-100)	1 (CE Marked)

Note: classification for gases - Group 2, for others see IMI

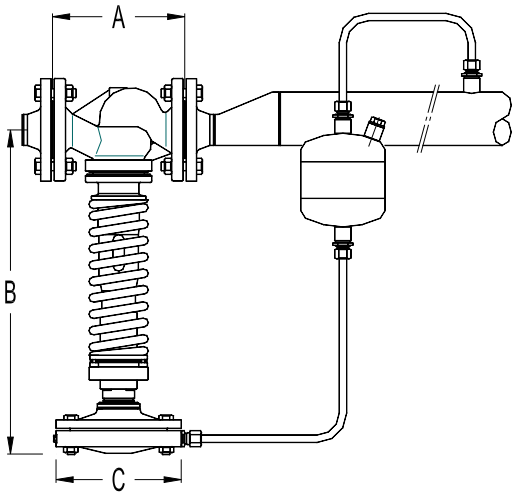
LIMITING CONDITIONS									
	RP45S	RP45S	RP45I	RP45ST	RP45ST	RP45IT	RP45SN*	RP45SN *	RP45IN *
Body design conditions	150 #	300 #	300 #	150 #	300 #	300 #	150 #	300 #	300 #
Max.upstream pressure	13 bar	25 bar	25 bar	13 bar	25 bar	25 bar	13 bar	25 bar	25 bar
Max.downstream pressure **	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar
Min.downstream pressure	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar
Max.operating temperature	200ºC	250ºC	250ºC	200 ºC	200 ºC	200 ºC	80 ºC	80 ºC	80 ºC
Max.reducing ratio	25:1	25:1	25:1	25:1	25:1	25:1	10:1	10:1	10:1
Rangeability	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1
Max.cold hydraulic test	24 bar	25 bar	25 bar	24 bar	25 bar	25 bar	24 bar	25 bar	25 bar
Max.hyd. factory valve body test	24 bar	60 bar	60 bar	24 bar	60 bar	60 bar	24 bar	60 bar	60 bar

*Suffix N : - a maximum turndown ratio 10:1 should be observed. Other soft materials on request.

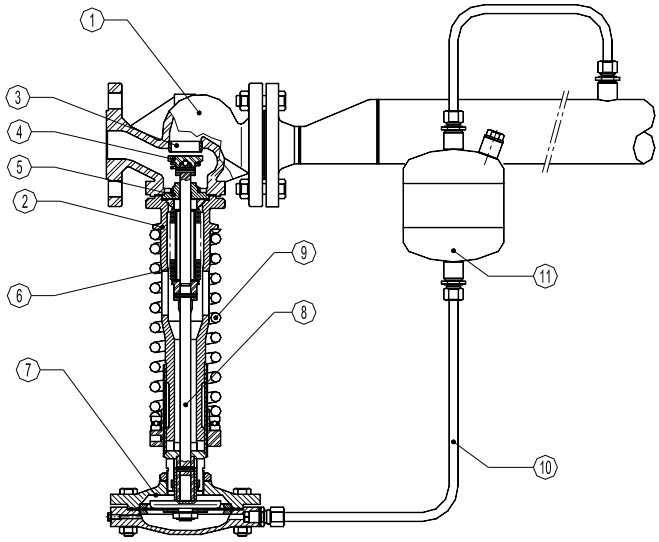
** Others on request with bellows or piston actuator

DIMENSIONS (mm)						
VALVE				ACTUATOR		
SIZE	*A* ANSI 300*	*B*	*WGT. Kgs*	*TYPE*	*C*	*WGT. Kgs*
1/2"	190	440	12,7	**A1**	172	4,3
3/4"	194	440	12,7	**A11**	172	4,3
1"	197	440	13,7	**A2**	220	7,3
11/2"	235	445	17,7	**A21**	220	7,3
2"	267	540	25,7	**A3**	282	11,3
3"	317	610	36,7	**A4**	340	16,3
4"	368	650	53,7			

* ANSI 150 is drilled with the same lenght.



MATERIALS		
POS.	*DESIGNATION*	*MATERIAL*
1	Valve body RP45S	A 216 WCB / 1.0619
1	Valve body RP45I	CF8M / 1.4408
2	Piston body RP45S	GJS-400-15 / 0.7040
2	Piston body RP45I	GJS-400-15 / 0.7040 Nickel plated
3	Valve seat	HARDENED ST.STEEL
4	* Valve disc	HARDENED ST.STEEL
4	* Soft valve disc	AISI304/1.4301 ;NBR (PTFE/GR,etc)
5	Guide	AISI 304 / 1.4301
6	* Bellows	AISI 316 Ti / 1.4571
7	* Diaph.chamber RP45S	GJL-250 / 0.6025
7	* Diaph. Chamber RP45I	CF8M / 1.4408
8	Spindle	AISI 304 / 1.4301
9	Regulating spring	SPRING STEEL
10	* Impulse line RP45S	COPPER
10	* Impulse line RP45I	AISI 316 / 1.4401
11	* Cond. vessel a) RP45S	S235JRG2 / 1.0038
11	* Cond. vessel a) RP45I	AISI 316 / 1.4401



* Available spare parts.

a) Not necessary when in operation with low temperature compressed air or water.

SATURATED STEAM CAPACITY TABLE (Kg/h) (P2 < 0,58 P1)							
INLET barg	VALVE SIZE						
	1/2"	3/4"	1"	11/2"	2"	3"	4"
0,5	51	68	90	186	300	800	1250
0,75	63	84	112	230	360	1000	1550
1	75	100	133	280	430	1200	1850
1,5	100	133	175	360	590	1600	2500
2	126	170	230	450	730	2000	3050
2,5	150	200	260	550	880	2400	3600
3	175	240	310	640	1010	2700	4300
4	220	290	390	800	1300	3400	5400
5	260	350	480	1000	1600	4200	6500
6	330	440	580	1220	1930	5100	8000
7	400	520	700	1430	2300	6100	9500
8	450	600	800	1670	2700	7100	11000
9	500	670	880	1800	2900	7800	12000
10	560	750	980	2000	3200	8500	13500
12	680	900	1180	2500	4000	10500	16300
14	800	1050	1400	2900	4700	12600	19000
16	920	1230	1630	3400	5500	14600	22000
18	1040	1400	1860	3800	6200	16600	25000
20	1170	1540	2100	4200	7000	18600	28000
22	1330	1780	2350	4900	7800	21000	32000
24	1500	2000	2600	5400	8700	23500	36000
25	1600	2150	2800	5700	9200	25500	38000

ACTUATOR AND SPRING SELECTION TABLE									
VALVE SIZE	Kvs m3/h	Cv (US)	ACTUATOR						
				A - 4	A - 4	A - 3	A - 2	A - 21	A - 1	A - 11
1/2"	4,8	5,6	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,6	1,7 - 3,8	3,9 - 5,5	5,6 - 8,2	8,3 - 13
			Spring Nº.	66	60	60	60	60	60	60
3/4"	6,9	8	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,6	1,7 - 3,8	3,9 - 5,5	5,6 - 8,2	8,3 - 13
			Spring Nº.	66	60	60	60	60	60	60
1"	9,1	10,6	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,6	1,7 - 3,8	3,9 - 5,5	5,6 - 8,2	8,3 - 13
			Spring Nº.	66	60	60	60	60	60	60
11/2"	14,4	16,8	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,6	1,7 - 3,8	3,9 - 5,5	5,6 - 8,2	8,3 - 13
			Spring Nº.	66	60	60	60	60	60	60
2"	26,5	31	Outlet (bar)	0,15 - 0,49	0,5 - 0,99	1,0 - 1,9	2 - 4,2	4,3 - 6,9	7 - 8,5	8,6 - 13
			Spring Nº.	67	61	61	61	61	64	64
3"	79,5	93	Outlet (bar)	0,15 - 0,45	0,46 - 0,99	1,0 - 1,9	2 - 5	5,1 - 8,9	9 - 13	/
			Spring Nº.	68	62	62	62	62	65	/
4"	129,5	151,5	Outlet (bar)	0,15 - 0,45	0,46 - 0,99	1,0 - 1,9	2 - 6,0	6,1 - 13	/	/
			Spring Nº.	69	63	63	63	63	/	/

Correction factors:
The given capacities apply to the pressure reducing valves at **critical pressure drop** (downstream pressure in barg about 58% of the upstream pressure barg or lower). In case of **non-critical pressure drop** a correction factor must be used as follows:

No correction factor should be used for smaller pressure ratios than 0.7.

PRESSURE RATIO * P2 / P1	CORRECTION FACTOR *f*
≥ 0,7	1,25
≥ 0,8	1,6
≥ 0,9	2,25

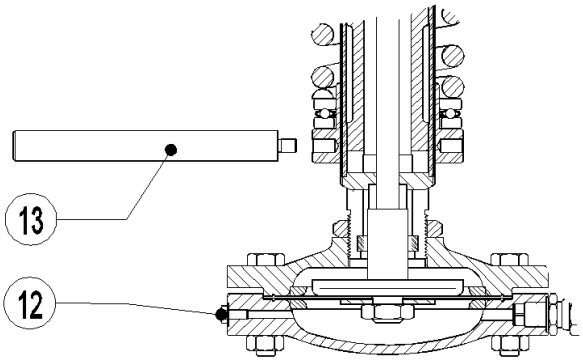
*** Pressure ratio in bar abs (barg + 1)**

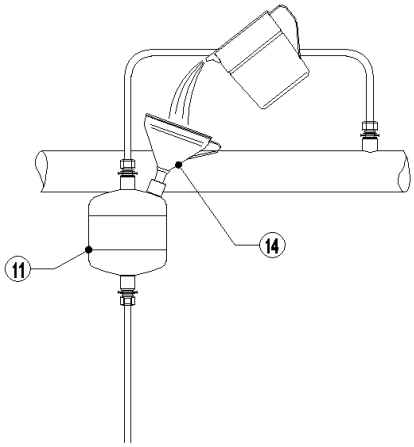
Superheated steam:
If superheated steam is to be reduced instead of saturated steam a correction factor has to be applied as well, the required mass flow must be multiplied by the following factor:
$\frac{Vh}{Vs}$, where Vh = specific volume of superheated steam and Vs = specific volume of saturated steam .

HOW TO SIZE (using table for steam)
Example (valve selection) : Saturated steam capacity: 500Kg/h; Upstream pressure: 3 bar; Downstream pressure required: 2bar.
Solution: First determine correction factor for pressure ratio: $\frac{2+1}{3+1} = 0.75 \rightarrow f = 1.25$,
Then multiply the given capacity: $500 \times 1.25 = 625 Kg/h$
Go to 3 bar in the column "bar" of the capacity table. By following the horizontal line you can find out the values for selection of pressure reducing valve. Looking for an equal or higher value than 625 Kg/h. In this case it will be 640 Kg/h. Now, go to the top of the table and read off the nominal size: DN11/2"
On the actuator and spring selection table, for downstream pressure of 2 bar we may see that the recommended actuator is type A-2, considering the valve supplied with spring Nr.60.
How to order: RP45G DN11/2" PN16 valve complete with spring Nr.60, type A-2 actuator, condensate vessel and copper tube impulse line.
HOW TO SIZE (using Kvs): please consult formulas on IS PV10.00 E or consult factory.

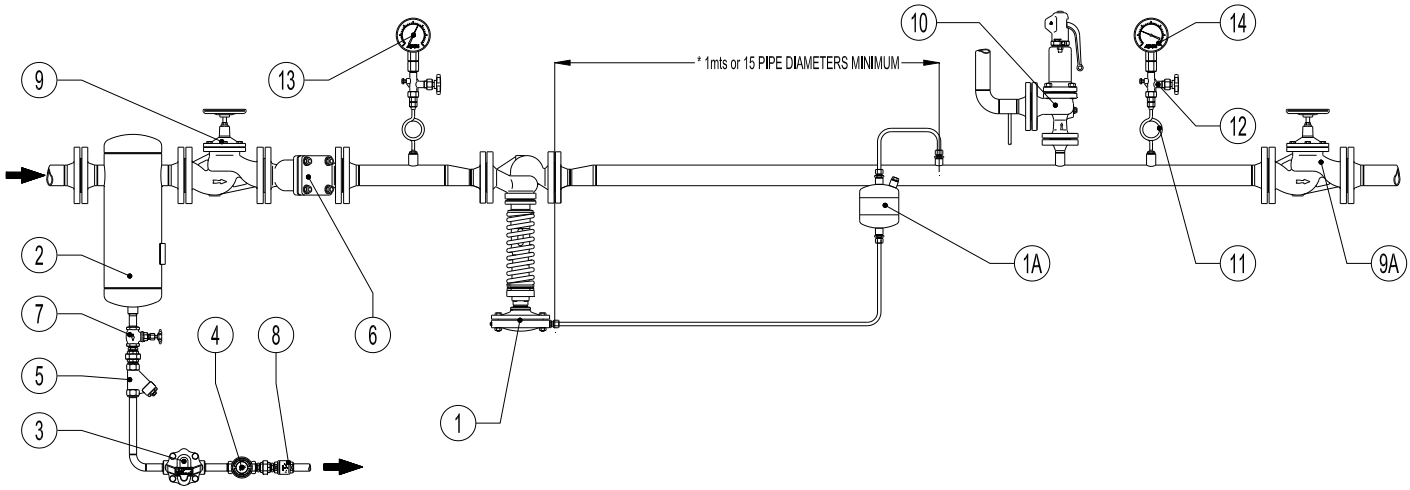
INSTALLATION RECOMMENDATIONS
RP45 is designed primarily for steam, compressed air and non inflammable gases. It has limited use for neutral liquids since the plug close in the same direction of the fluid flow, which can produce vibrations and water hammer when used at less than 20% of capacity. To avoid this, valve can be installed with the fluid direction against the plug under certain conditions. Please consult the factory.
At service conditions where the temperature is more than 100ºC it is necessary to protect the diaphragm against overheating by using a seal pot.
Never size the valve according to the pipe diameter in which it has to be fitted but according to the required actual flow .Pipe sizing must also respect the maximum recommended flow velocities according to the medium.

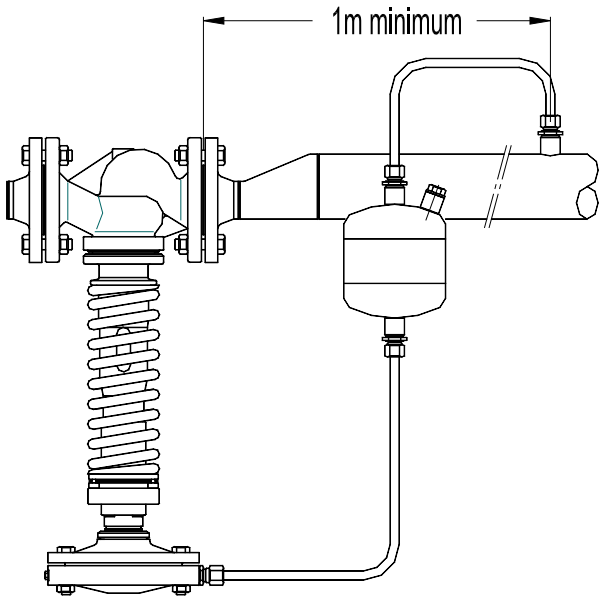
INSTALLATION
Service conditions less than 100ºC: with gases the valve is ready to work. In case of liquids the actuator must be filled completely with liquid, so, the vent screw (12) should be open till the water flow without bubbles.
The valve can be installed with the diaphragm pointing upwards or downwards.
Service conditions more than 100ºC: Fill the seal pot (11) using a funnel (14) until the water emerges from the actuator vent (12) without bubbles .Close the actuator vent screw (12) and proceed filling the pot until the water reaches the top and close it with the plug. The valve is now ready to work.
The valve must be installed with the diaphragm pointing downwards.
Downstream pressure should be adjusted with the key (13). Compressing the spring, spring force increase and downstream pressure increase. Relaxing the spring, spring force decrease and downstream pressure decrease.
The valve closes when the downstream pressure rises.





Typical Installation





MATERIALS		
POS.	***DESIGNATION***	***MODEL***
1	Pressure reducing valve	ADCA RP45
1A	Water seal pot	POT
2	Humidity separator	ADCA S 25
3	Steam trap	ADCA FLT series
4	Sight glass	ADCA SW 12
5	Y Strainer	ADCA IS 16
6	Y Strainer	ADCA IS16F
7	Stop valve	ADCA GV32B
8	Check valve	ADCA RT
9	Stop valve	ADCA VF16
9A	Stop valve	ADCA VF16
10	Safety valve	-
11	Coil	ADCA GSC-40
12	Gauge cock	ADCA GC-400
13	Upsteam pressure gauge	ADCA MAN-100
14	Downstream pressure gauge	ADCA MAN-100

Remarks:
By-pass: if overpressure can not be accepted the use of by-pass is not recommended. In alternative, for critical process, two pressure reducing stations should be installed in parallel.
PN ratings and materials according to the operating pressures.
* The balance pipe connection is recommended to enter downstream pipe at a minimum of 1 meter from valve. Installation instructions are available (IMI-RP45) and typical assembling drawing.
Special assembling designs may be produced on request.

WATER SEAL POT
POT

DESCRIPTION

ADCA POT´s are specially designed to protect the actuator diaphragms of RP45 pressure regulators when the media temperature exceeds the maximum operating allowed temperature of the actuator and diaphragm.

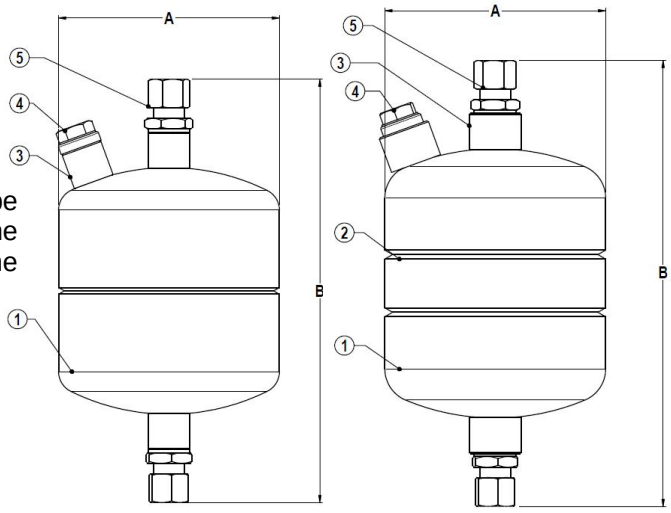
OPTIONS: Bigger sizes for special applications or when there is quick pressure or flow rate fluctuation.
Different connection sizes and materials under request against extra price.

USE: In conjunction with RP45 series pressure reducing valves

AVAILABLE MODELS: POT-4S - PN16 steel construction
POT-4SS – PN16 stainless steel
POT-41S – PN40 carbon steel

SIZES AND CONNECTIONS 3/8" Female screwed ISO7/1 Rp (BS21)
(Compression fittings – 3/8" x 10)

INSTALLATION: Connection to the steam pipe must be always depressurized when filling the vessel with water, in order to avoid the risk of scalding. See RP45 IMI.



POT-4S POT-41S

CE MARKING - GROUP 2 GASES CAT.		
RATING	**SIZE**	**CAT.**
PN16-PN40	DN 3/8"	SEP

LIMITING CONDITIONS **

Model	Press. bar	Temp. ºC	Model	Press. bar	Temp. ºC	Rating	Press. bar	Temp. ºC
POT-4S PN16	16	50	POT-4SS PN16	16	50	POT-41S PN40	40	50
	14	100		16	100		37	100
	13 *	195		13 *	195		31 *	239
	12	250		12	250		27	300

*PMO-Max.operating pressure for saturated steam. Minimum operating temp.: -10ºC.
Design code: AD-Merkblatt; ** Rating according to EN1092:2007.

DIMENSIONS (mm)

MODEL	*A*	*B*	*VOL. Lts.*	*WGT Kg*
POT-4S	114	224	1,3	1,9
POT-4SS	114	226	1,3	1,9
POT-41S	114	232	1,3	2,8

MATERIALS

POS.	*DESIGNATION*	*POT-4S*	*POT-4SS*	*POT-41S*
1	Heads	S235JRG2 / 1.0038	ASTM A403 WP316L	EN10028-2 / P265GH / 1.0425
2	Pipe	/	ASTM A312TP316L	EN10216-2 / P235GH / 1.0325
3	Sockets	ASTM A105 / 1.0432	AISI316 / 1.4401	S355J2G3 / 1.0570
4	Plug	ASTM A105 / 1.0432	AISI316 / 1.4401	ASTM A105 / 1.0432
5	Compression fitting	Fe/Zn - ISO 2081 - Cl.L	316Ti / 1.4571 - Cl.S	Fe/Zn - ISO 2081 - Cl.L

PRESSURE REDUCING VALVE STATION
RP45TW

DESCRIPTION

The ADCA RP45TW series pressure reducing station consists of two standard RP45 valves installed in parallel. This system is particularly recommended for installations where a single valve cannot reach the maximum required flow rate or when the consumption variation is significant, being prudent to install two smaller valves instead of a single one in order to avoid oversizing.
The system is also used where it is vital that the steam supply is not interrupted.

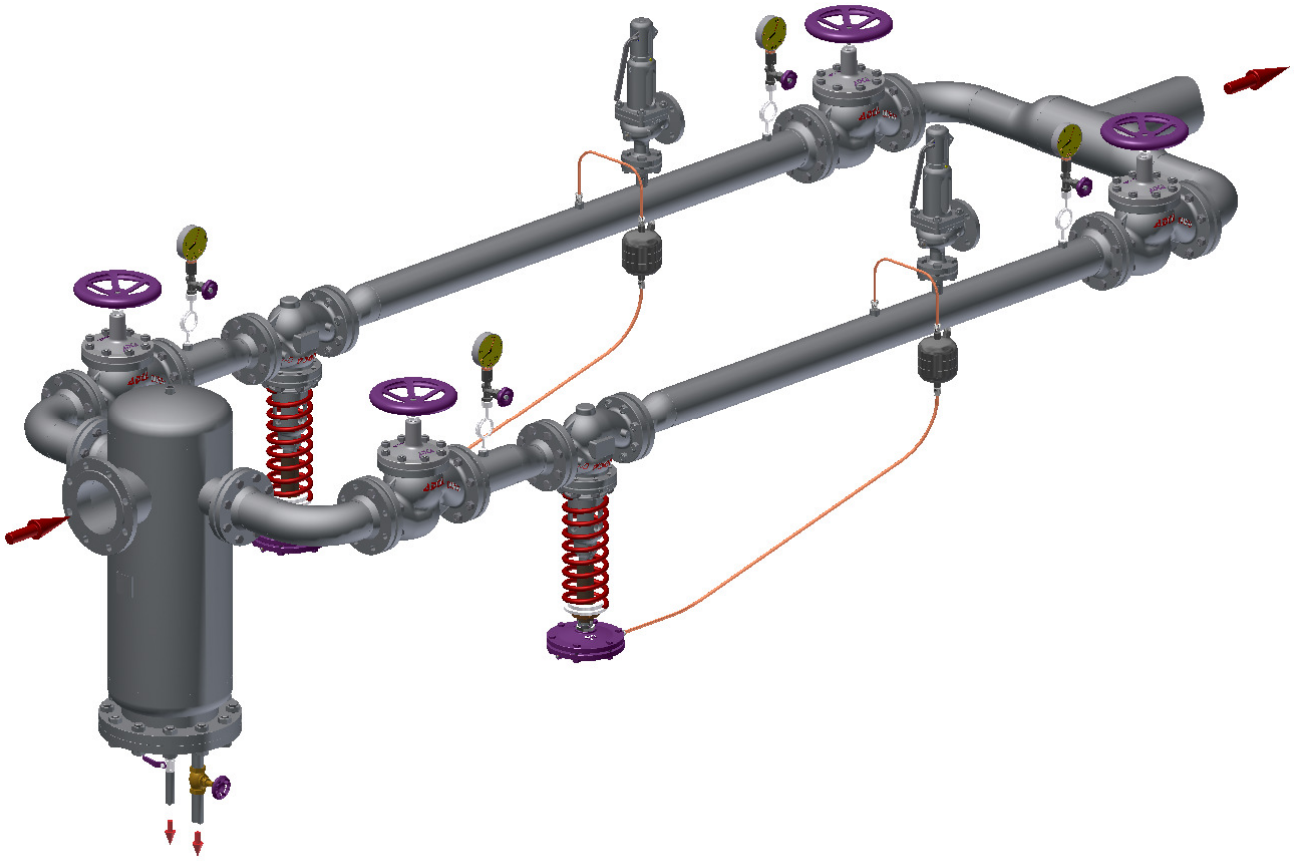
OPERATION

Each valve operates individually according to the description on the concerning RP45 datasheet. The assembly also allows that one of the valves is regulated to a slightly different pressure than the other, with this avoiding the oversizing problems when the consumption variation is significant. In this case, one of the valves might remain closed, opening only when the consumption increase justifies it.

MAIN FEATURES

The main characteristic of this assembly is the use of a humidity separator type S252/F (see IS 9.315 E 03.11), which beyond the separator function also includes a strainer and the particularity of having one inlet and two outlets.
Compact design.

OPTIONS:	Different valve combinations, fittings and designs.
USE:	Steam, compressed air and other gases and liquids compatible with the construction.
SIZES:	S252/F separator – DN15 to DN300
	Pressure regulator – DN15 to DN100
CONNECTIONS:	EN flanges PN16 to PN40
	ANSI 150 and 300 lbs
INSTALLATION:	Horizontal installation (see ADCR.05.4805)
	Special designs on request



PRESSURE REGULATING VALVE
RP4D and RP4P

DESCRIPTION

The ADCA RP4 series pressure regulating valves are single seated, operated without auxiliary energy, designed for use on water and other liquids compatible with the construction.
They are particularly suitable for reducing or sustaining water pressure in all industrial process systems where pressures should be kept constant.

RP4D

OPERATION

Pressure reduction is achieved by means of variable throttling of the inlet flow at the valve seat by variation of the flow area between seat and disc. The basic control element is composed by a pilot valve type P-20 (see IS P20D.01E), externally piped. It can vary according with the foreseen options, but always with basic function of controlling pressure in the chamber above valve's diaphragm (RP4D) or piston (RP4P)

MAIN FEATURES

Robust construction
Wide range of tailor made versions

OPTIONS: Anti-cavitation plugs (flow over the seat)
Pressure sustaining design (SP4…)

USE: Water , gases and other fluids compatible with the construction.

AVAILABLE MODELS:
RP4DS– PN16 or PN40 diaphragm sensing
RP4DI– PN16 or PN40 diaphragm sensing
RP4PS – PN16 or PN40 piston sensing
RP4PI – PN16 or PN40 piston sensing
Suffix S : Cast steel construction
Suffix I : Stainless steel construction

SIZES: DN 32 to DN 100
CONNECTIONS: Flanged EN 1092-1 PN16 and PN40
ANSI on request

MAX. PRESSURE
PRESS. DROP: With standard plug – 10 bar
With perforated plug – 10 to 20 bar
(Water at ambient temperature)

INSTALLATION: Horizontal installation.
An "Y" strainer should be provided upstream the valve.
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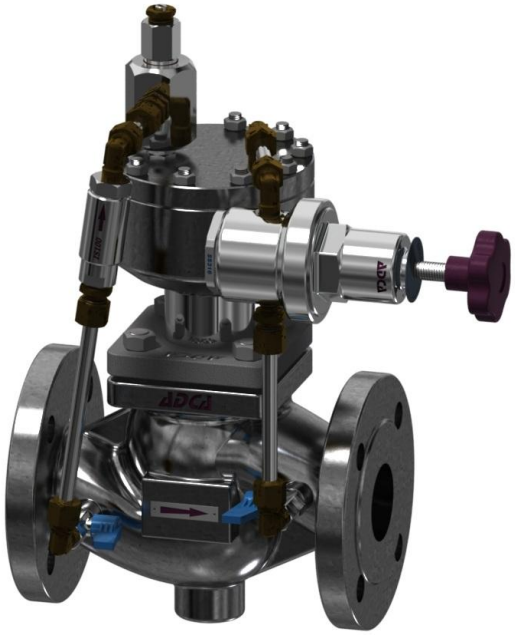


RP4P

CE MARKING (PED - European Directive 97/23/EC)		
PN 16	**PN 40**	**Category**
DN32 to DN50	DN32	SEP - art. 3, paragraph3
DN65 to DN100	DN40 to DN100	1 (CE Marked)

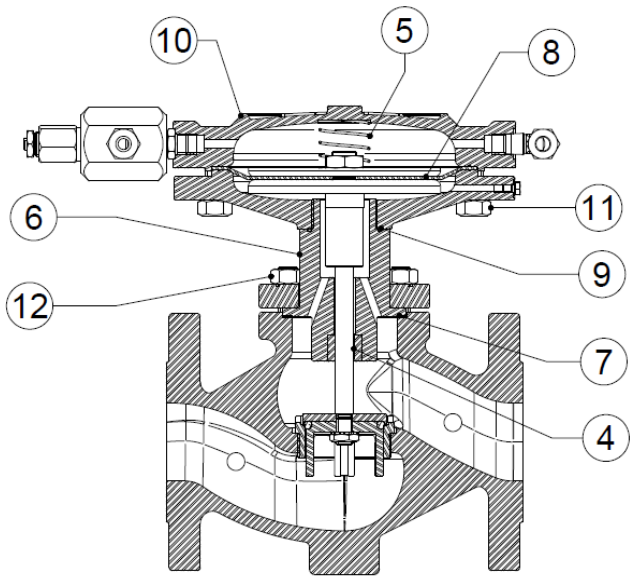
VALVE BODY LIMITING CONDITIONS							
RP4...S - PN16 *		RP4...I - PN16 *		RP4...S - PN40 *		RP4...I - PN40 *	
ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.
16 bar	-10 /120º C	16 bar	-10 /50º C	40 bar	-10 /50º C	40 bar	-10 /50º C
13,3 bar	200 ºC	13,4 bar	200 ºC	33,3 bar	200 ºC	33,7 bar	200 ºC
12,1 bar	250 ºC	12,7 bar	250 ºC	27,6 bar	300 ºC	29,7 bar	300 ºC
11 bar	300 ºC	11,8 bar	300 ºC	25,7 bar	350 ºC	28,5 bar	350 ºC
10,2 bar	350 ºC	11,4 bar	350 ºC	23,8 bar	400 ºC	27,4 bar	400 ºC

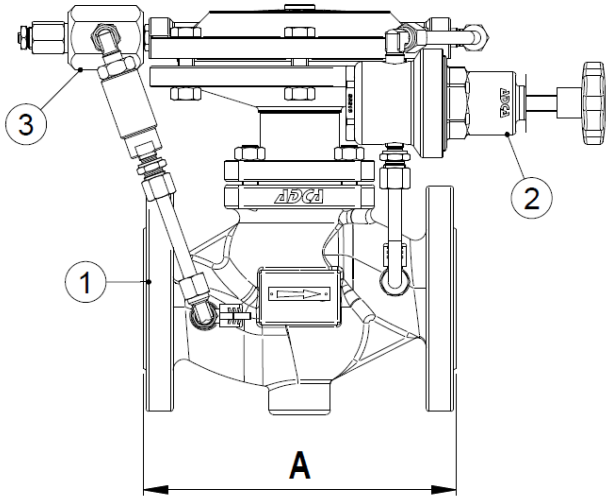
* Rating according to EN1092-1:2007
Maximum temperature limited by the materials used such as o-rings, diaphragms, etc

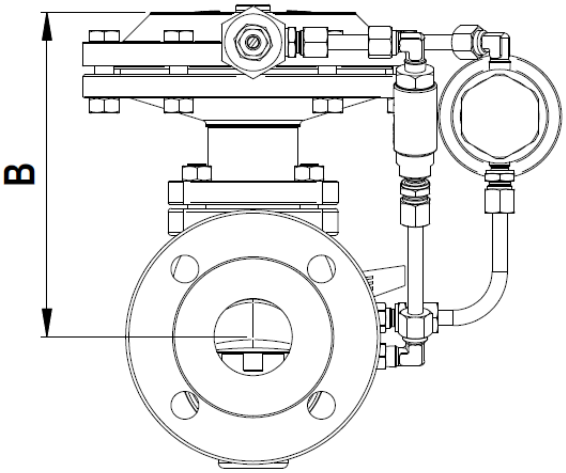
MATERIALS			
POS.	*DESIGNATION*	*MATERIAL RP4DS*	*MATERIAL RP4DI*
1	Valve Body	ASTM A216WCB / 1.0619 ; GP240GH / 1.0619	CF8M / 1.4408
2	Pilot valve	AISI316 / 1.4401	AISI316 / 1.4401
3	Needle valve	AISI316 / 1.4401	AISI316 / 1.4401
4	Trim	Stainless steel	Stainless steel
5	Spring	AISI302 / 1.4300	AISI302 / 1.4300
6	Bonnet	CF8M / 1.4408	CF8M / 1.4408
7	Gasket	Non asbestos	Non asbestos
8	Diaphragm	Rubber	Rubber
9	Gasket	NBR	NBR
10	Actuator	Steel	St.Steel
11,12	Bolts	Steel 8.8	A2-70

DIMENSIONS RP4D (mm)			
SIZE DN	*A*	*B*	*WGT. Kgs*
32	180	195	17
40	200	200	18,8
50	230	210	26,5
65	290	245	32
80	310	248	38
100	350	255	54

*Approximate dimensions and weight, consult factory for certified figures.







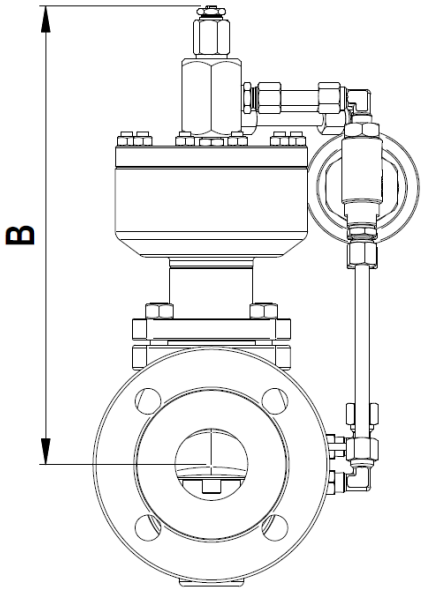
FLOW RATE COEFICIENTS					
DN	RP4D		RP4P		
	Kvs (m3/h)		Kvs (m3/h)		
	Full bore Std. Plug	Red. Flow Std.Plug	Full bore Std. Plug	Red. Flow Std.Plug	Perforated Plug
32	15,4	--	15,4	11,7	11,8
40	22,2	--	22,2	19,2	18
50	40,1	--	40,1	27,7	28
65	--	49	63,4	49	48
80	--	79,2	89,7	79,2	74
100	--	112,1	136,7	112,1	115

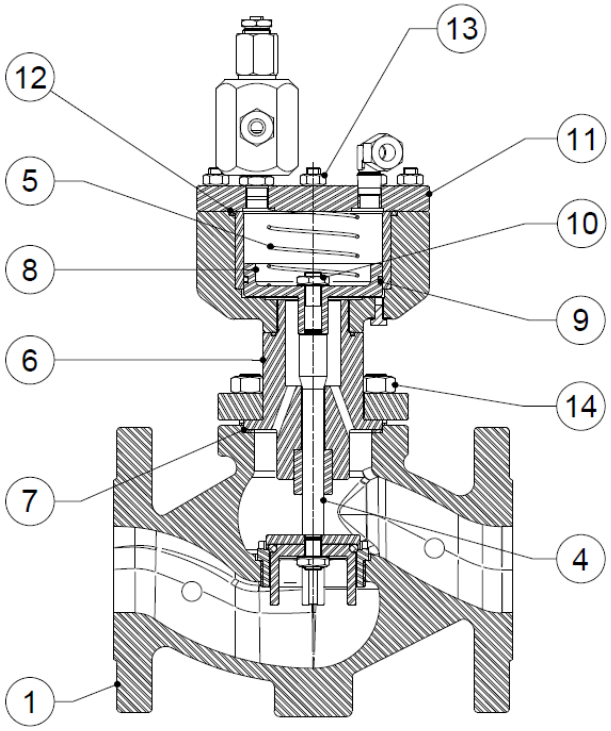
Kvs in m3/h , Sizing: see data sheet IS PV10.00 E ; For conversion Kvs = Cv(US) x 0,855

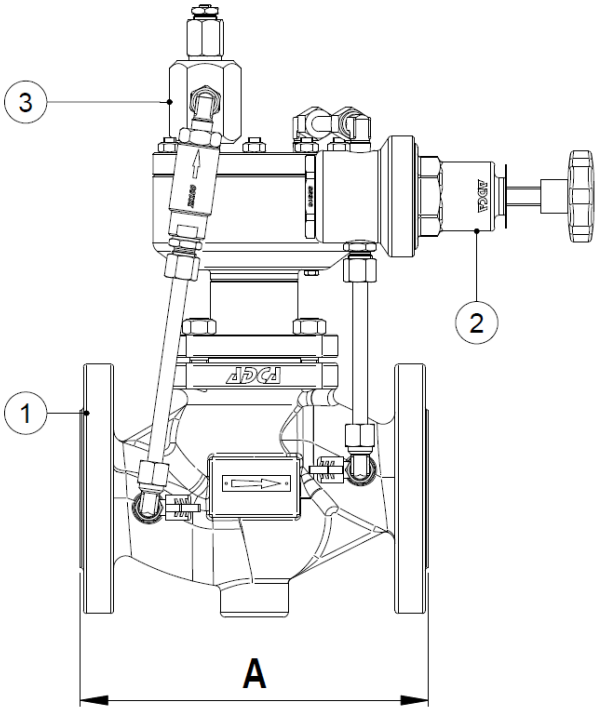
DIMENSIONS RP4P (mm)			
SIZE DN	A	B	WGT. Kgs
32	180	275	19,2
40	200	280	22
50	230	290	29
65	290	325	34
80	310	328	40,5
100	350	335	56

*Approximate dimensions and weight, consult factory for certified figures.

MATERIALS			
POS.	DESIGNATION	MATERIAL RP4PS	MATERIAL RP4PI
1	Valve Body	ASTM A216WCB / 1.0619 ; GP240GH / 1.0619	CF8M / 1.4408
2	Pilot valve	AISI316 / 1.4401	AISI316 / 1.4401
3	Needle valve	AISI316 / 1.4401	AISI316 / 1.4401
4	Trim	Stainless steel	Stainless steel
5	Spring	AISI302 / 1.4300	AISI302 / 1.4300
6	Bonnet	CF8M / 1.4408	CF8M / 1.4408
7	Gasket	Non asbestos	Non asbestos
8	Piston	AISI316 / 1.4401	AISI316 / 1.4401
9	O-ring	NBR	NBR
10	Nut	A2-70	A2-70
11	Cover	S355J2G3 / 1.0570	AISI316 / 1.4401
12	O-ring	NBR	NBR
13	Bolts	Steel 8.8	A2-70







PRESSURE REGULATING VALVE
RP6D and RP6P

DESCRIPTION

The ADCA RP6 series pressure regulating valves are single seated balanced plug, operated without auxiliary energy, designed for use on gases and liquids compatible with the construction.
They are particularly suitable for reducing or sustaining pressure in all industrial process systems where pressures should be kept constant.

RP6D

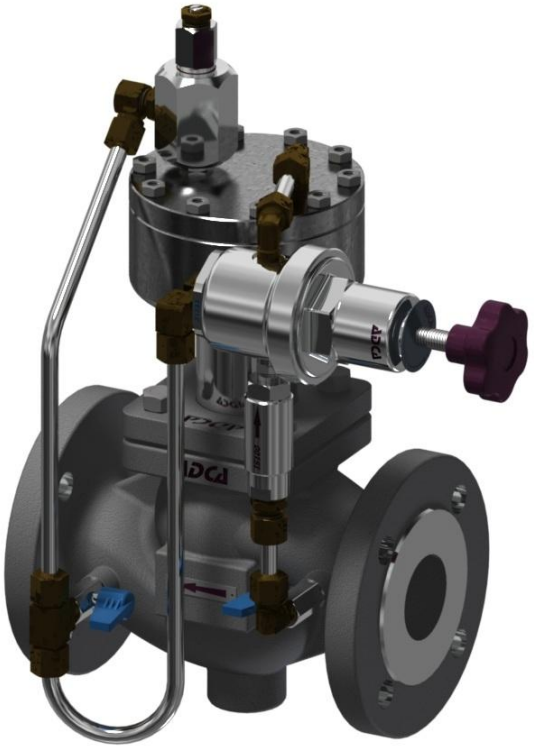
OPERATION

Pressure reduction is achieved by means of variable throttling of the inlet flow at the valve seat by variation of the flow area between seat and disc. The basic control element is composed by a pilot valve type P-20 (see IS P20D.01E), externally piped. It can vary according with the foreseen options, but always with basic function of controlling pressure in the chamber above valve's diaphragm (RP6D) or piston (RP6P)

MAIN FEATURES

Robust construction
Wide range of tailor made versions

OPTIONS:	Pressure sustaining design (SP6…)
USE:	Gases and other fluids compatible with the construction.
AVAILABLE MODELS:	RP6DS– PN16 or PN40 diaphragm sensing RP6DI – PN16 or PN40 diaphragm sensing RP6PS – PN16 or PN40 piston sensing RP6PI– PN16 or PN40 piston sensing Suffix S : Cast steel construction Suffix I : Stainless steel construction
SIZES:	DN 32 to DN 100
CONNECTIONS:	Flanged EN 1092-1 PN16 and PN40 ANSI on request
INSTALLATION:	Horizontal installation. An "Y" strainer should be provided upstream the valve. .



RP6P

CE MARKING (PED - European Directive 97/23/EC)		
PN 16	**PN 40**	**Category**
DN32 to DN50	DN32	SEP - art. 3, paragraph3
DN65 to DN100	DN40 to DN100	1 (CE Marked)

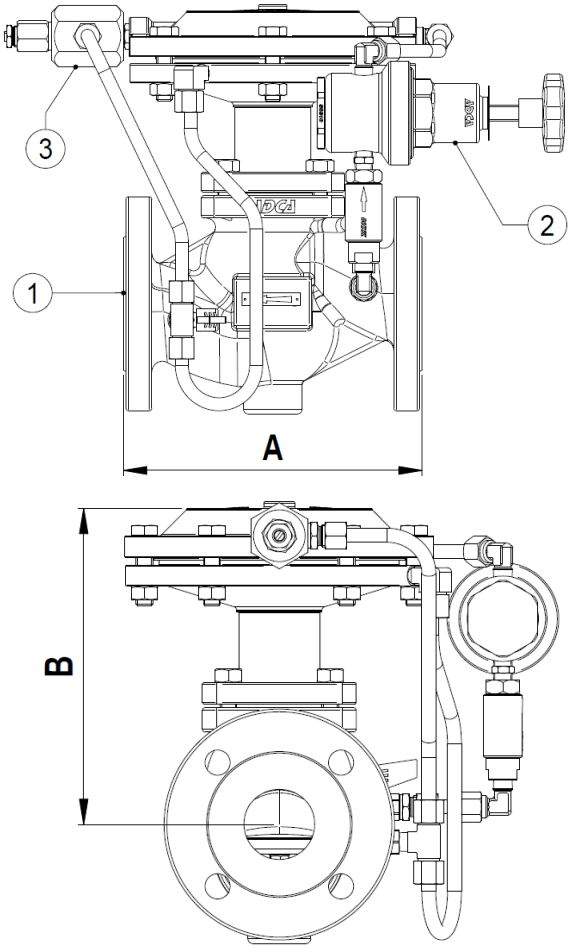
VALVE BODY LIMITING CONDITIONS							
RP6...S - PN16 *		RP6...I - PN16 *		RP6...S - PN40 *		RP6...I - PN40 *	
ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.
16 bar	-10 /120º C	16 bar	-10 /50º C	40 bar	-10 /50º C	40 bar	-10 /50º C
13,3 bar	200 ºC	13,4 bar	200 ºC	33,3 bar	200 ºC	33,7 bar	200 ºC
12,1 bar	250 ºC	12,7 bar	250 ºC	27,6 bar	300 ºC	29,7 bar	300 ºC
11 bar	300 ºC	11,8 bar	300 ºC	25,7 bar	350 ºC	28,5 bar	350 ºC
10,2 bar	350 ºC	11,4 bar	350 ºC	23,8 bar	400 ºC	27,4 bar	400 ºC

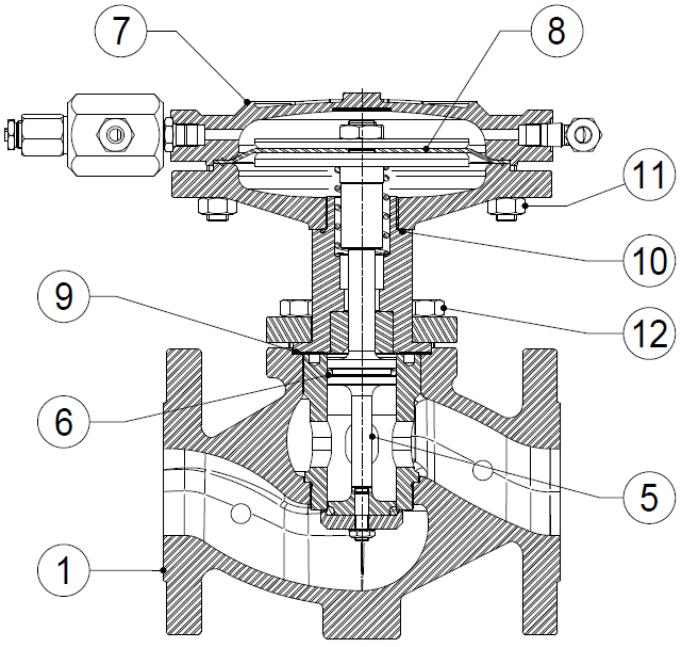
* Rating according to EN1092-1:2007
Maximum temperature limited by the materials used such as o-rings, diaphragms, etc

MATERIALS			
POS.	*DESIGNATION*	*MATERIAL RP6DS*	*MATERIAL RP6DI*
1	Valve Body	ASTM A216WCB / 1.0619 ; GP240GH / 1.0619	CF8M / 1.4408
2	Pilot valve	AISI316 / 1.4401	AISI316 / 1.4401
3	Needle valve	AISI316 / 1.4401	AISI316 / 1.4401
5	Trim	Stainless steel	Stainless steel
6	O-Ring	NBR	NBR
7	Actuator	Steel	St.Steel
8	Diaphragm	Rubber	Rubber
9	Gasket	Non asbestos	Non asbestos
10	O-ring	NBR	NBR
11,12	Bolts	Steel 8.8	A2-70

DIMENSIONS (mm)			
SIZE DN	*A*	*B*	*WGT. Kgs*
32	180	210	17
40	200	215	18,8
50	230	225	26,5
65	290	260	32
80	310	263	38
100	350	270	54

*Approximate dimensions and weight, consult factory for certified figures.

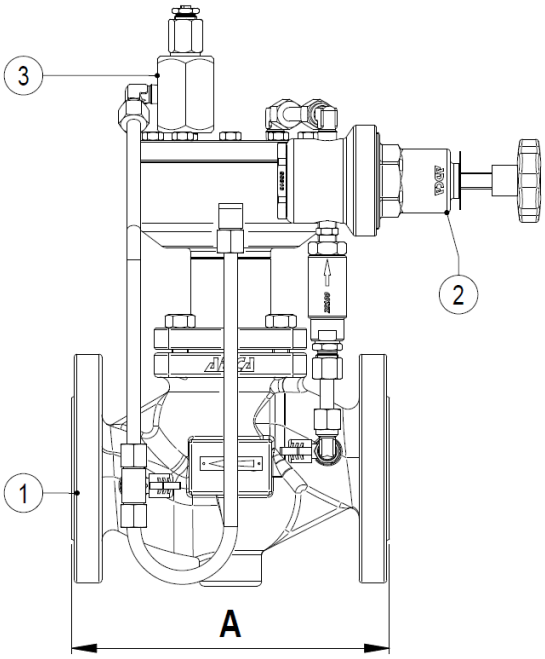


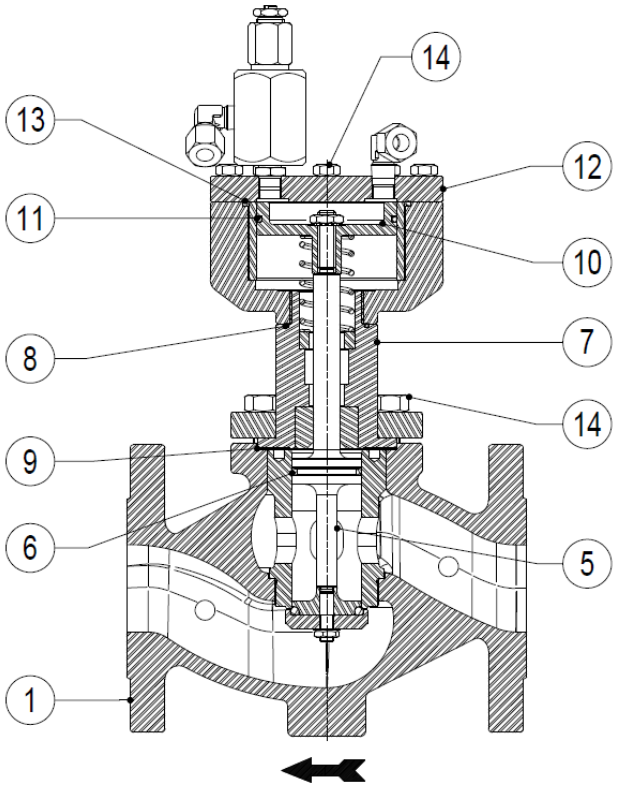


MATERIALS			
POS.	DESIGNATION	MATERIAL RP6PS	MATERIAL RP6PI
1	Valve Body	ASTM A216WCB / 1.0619 ; GP240GH / 1.0619	CF8M / 1.4408
2	Pilot valve	AISI316 / 1.4401	AISI316 / 1.4401
3	Needle valve	AISI316 / 1.4401	AISI316 / 1.4401
5	Trim	Stainless steel	Stainless steel
6	O-Ring	NBR	NBR
7	Bonnet	CF8M / 1.4408	CF8M / 1.4408
8	O-Ring	NBR	NBR
9	Gasket	Non asbestos	Non asbestos
10	Piston	AISI316 / 1.4401	AISI316 / 1.4401
11	O-Ring	NBR	NBR
12	Cover	S355J2G3 / 1.0570	AISI316 / 1.4401
13	O-Ring	NBR	NBR
14	Bolts	Steel 8.8	A2-70

FLOW RATE COEFICIENTS		
DN	RP6D	RP6P
	Kvs (m3/h)	Kvs (m3/h)
	Full bore Std. Plug	Full bore Std. Plug
32	15,4	15,4
40	22,2	22,2
50	40,1	40,1
65	--	63,4
80	--	89,7
100	--	136,7

Kvs in m3/h , Sizing: see data sheet IS PV10.00 E .
For conversion Kvs = Cv(US) x 0,855



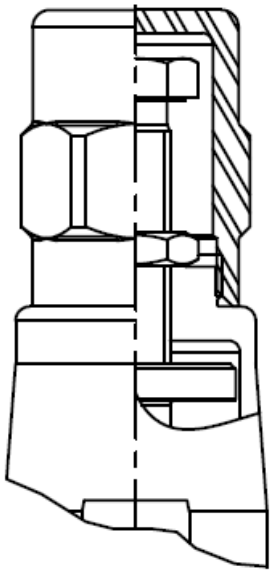


DIMENSIONS (mm)			
SIZE DN	A	B	WGT. Kgs
32	180	305	19
40	200	310	21
50	230	320	28,5
65	290	355	34
80	310	353	40
100	350	360	56

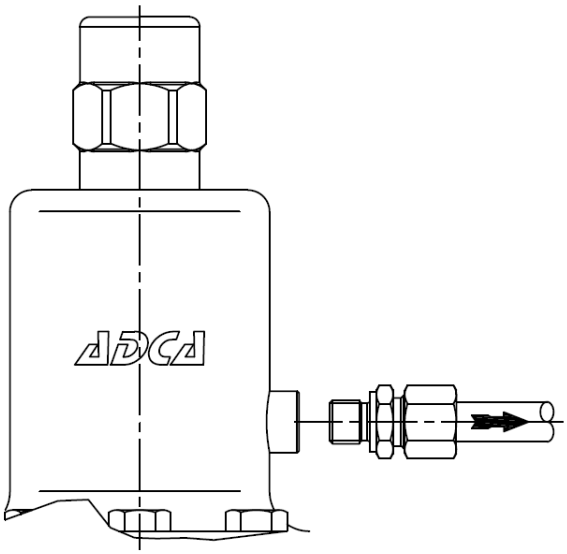
*Approximate dimensions and weight, consult factory for certified figures.

PRESSURE REDUCING AND PRESSURE SUSTAINING VALVE OPTIONS

Top cap (Tc)
(Adjusting screw sealing)

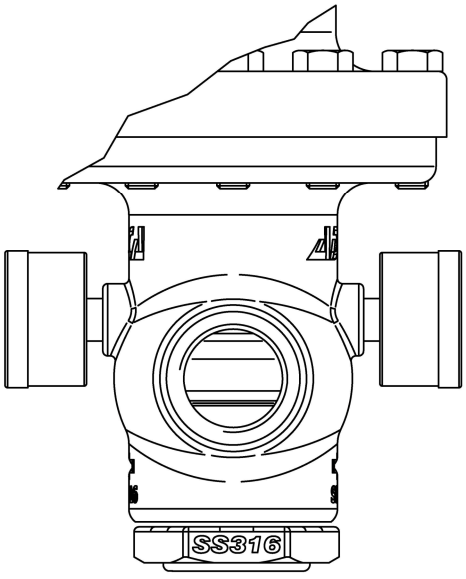


Leakage line connection (Llc)
(To be piped to a safe place)



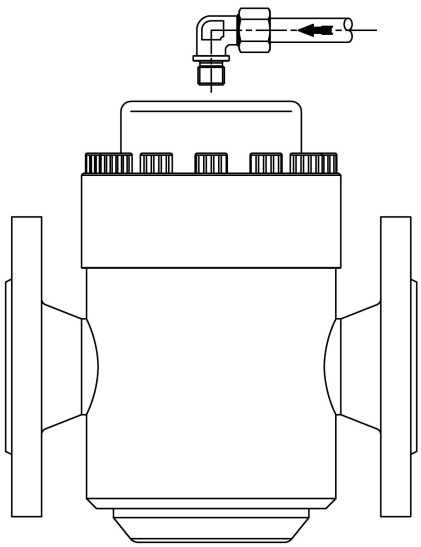
For maximum safety, when handling toxic or hazardous media, to avoid room contamination.
Recommended in a self-relieving regulator

Pressure gauge connection (Pgc)



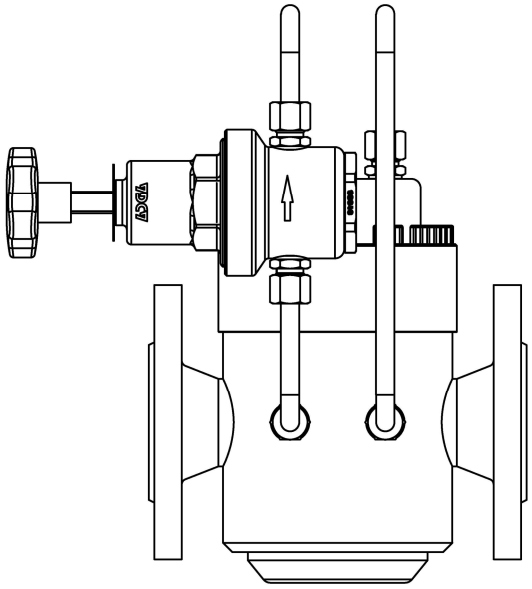
Can be applied in one or both sides

Dome loaded (Dl)



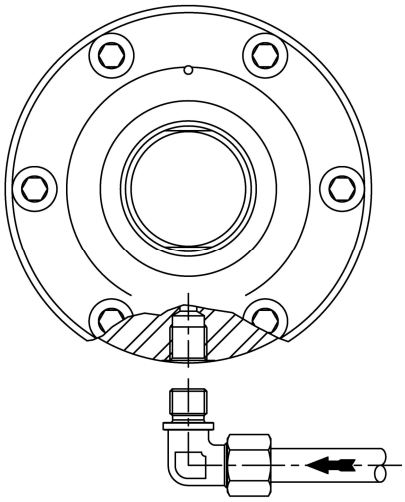
Operated by a smaller self-relieving pressure regulator
Reduced droop

Pilot operated (Po)



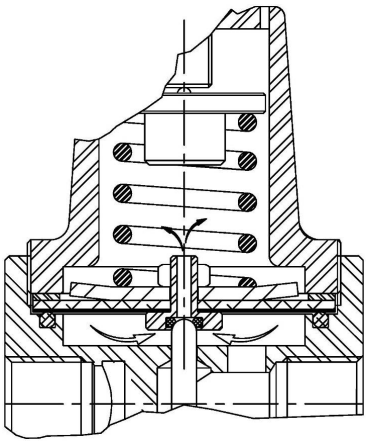
Maximum accuracy, reduced droop

External feedback (Ef)

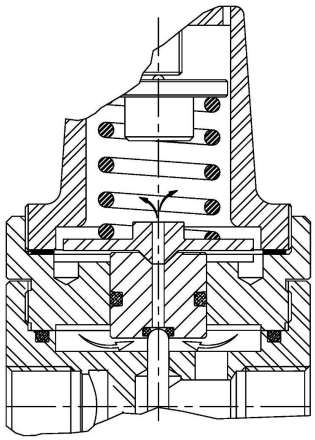


Better performance in case of high differential pressures
Reduced droop

Self relieving - diaphragm design (Rlv)



Self relieving - piston design (Rlv)



	PRV25 PRW25	*P15 PS15*	*P20*	*PS4*	*P7 PS7*	*PRV300 PS300*	*PRV30 PS30*	*PRV31 PS31*	*PRV41*
Tc	NA	A	A	A	A	A	A	A	A
Llc	NA	A	A	A	A	A	A	A	A
Pgc	A 1)	A 2)	A 2)	A 2)	A 2)	A 1)	A 1)	A 1)	A 2)
Dl	NA	A	A	A	A	A	A	A	A
Po	NA	A	A	A	NA	A	A	A	A
Ef	A	A	A	S	S	A 3)	A 3)	A 3)	A
Rlv *	NA	NA	NA	NA	NA	A	A	A	A

* Applicable only to pressure regulators
Key: A - Available against extra price ; NA - Not available; S - Standard (no extra price)
1) Pressure gauge (if directly connected): Max. D63
2) Pressure gauge (if directly connected): Max. D40
3) Except for PRV30,31 and 300 DN 1"-25 made from casted material

PISTON SENSING PRESSURE REDUCING VALVE
P 20P (Low flow)
DN ¼”

DESCRIPTION

The ADCA P20P series ***direct acting, spring-loaded piston sensing,*** pressure reducing valves, are designed for use on compressed air and other gases or liquids compatible with the materials of construction .
They are suitable for low flow pressure reducing in instrumentation systems among others.
Connections are female screwed.

MAIN FEATURES

Compact design.
Machined from barstock materials
No rising handwheel
Ultrasonically cleaned and degreased

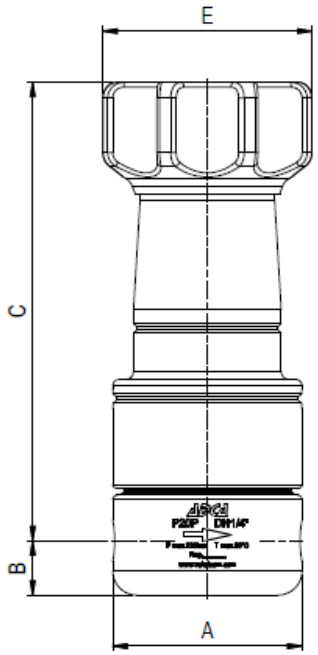
OPTIONS:	Different soft valves for liquids and gases. Relieving – internal relief valve to allow reduce outlet pressure in a no-flow condition. Relieving – captured vent below panel Panel mounting ring Bottom mounting Outlet 1/4” gauge connection on body.
USE:	Compressed air, water and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	P20P – Stainless steel piston sensing
SIZES:	DN 1/4”
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) or NPT. Special connections on request
INSTALLATION:	In any position An upstream strainer should be provided in case of dirty fluids usage. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Inlet pressure and required outlet pressure Capacity (maximum and minimum).

CAPACITIES			
Valve Size	***1/4"***	***1/4"***	***1/4"***
KVs (m3/h)	0,043	0,22	0,62

LIMITING CONDITIONS	
Valve model	**P20P**
Body design conditions	PN 320
Max.upstream pressure	220 bar
Max.downstream pressure	200 bar
Min.downstream pressure	0,2 bar
Max.design temperature *	80 ºC
Max.recommended reducing ratio	40:1

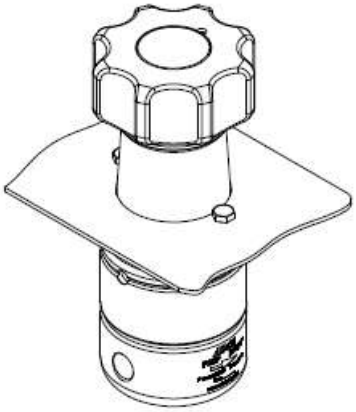
*Other on request.

CE MARKING (PED - European Directive 97/23/EC)	
PN 320	**Category**
DN 1/4"	SEP - art. 3, paragraph3

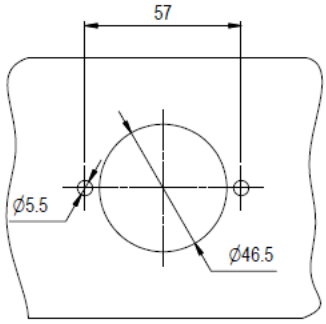


DIMENSIONS (mm)							
Screwed							
SIZE DN	A	B	C	ØE	d*	d1*	WGT. Kgs
1/4"	59	17	143,5	69	1/8"-1/4"	1/8"-1/4"	2,5

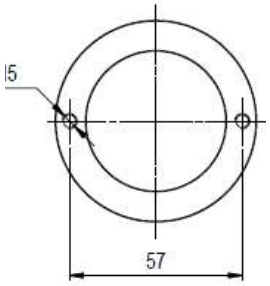
* Optional: pressure gauge or captured vent connection.



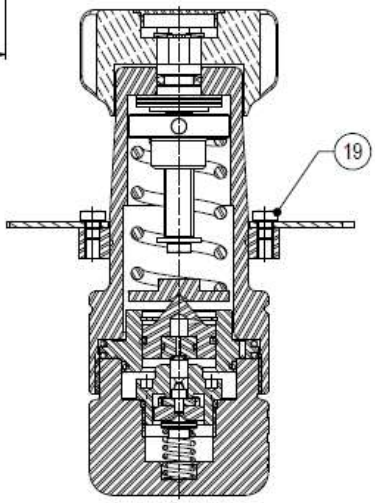
Panel mounting

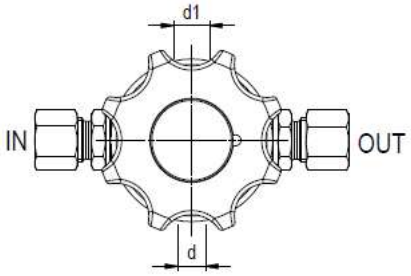


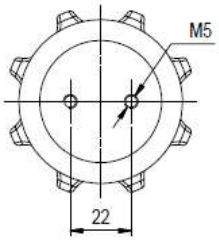
Panel cut-out



Ring

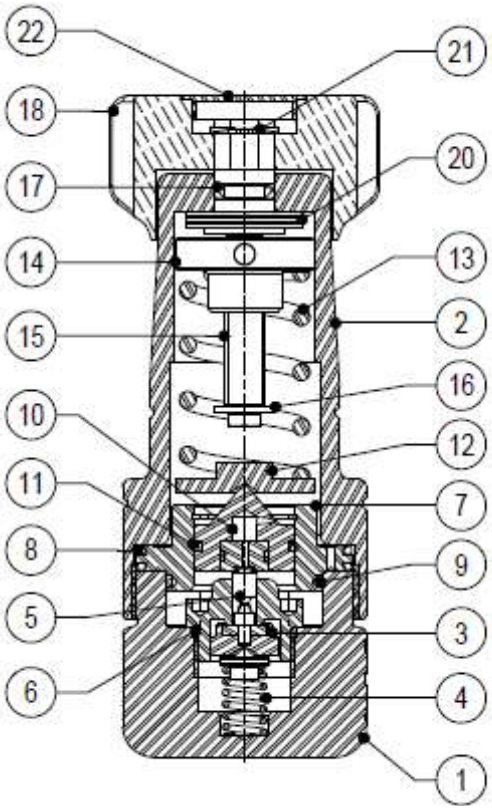






Bottom mounting

MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316L / 1.4404
2	TOP COVER	AISI316L / 1.4404
3	* VALVE HEAD	NBR-EPDM-PTFE,etc
4	* VALVE SPRING	AISI302 / 1.4300
5	PUSHROD	AISI316L / 1.4404
6	* O-RING	NBR-EPDM-PTFE,etc
7	PISTON SLEEVE	AISI316L / 1.4404
8	* O-RING	NBR-EPDM-PTFE,etc
9	* O-RING	NBR-EPDM-PTFE,etc
10	PISTON	AISI316L / 1.4404
11	* O-RING	NBR-EPDM-PTFE,etc
12	SPRING PLATE	AISI316L / 1.4404
13	* ADJUSTMENT SPRING	SPRING STEEL
14	TOP SPRING PLATE	AISI316L / 1.4404
15	ADJUSTMENT SCREW	AISI316L / 1.4404
16	RETAINING WASHER	ST.STEEL A2
17	* O-RING	NBR-EPDM-PTFE,etc
18	HANDWHEEL	ALUMINIUM PAINTED
19	** PANEL MOUNTING RING	AISI316L / 1.4404
20	BEARING	CORROSION RES. STEEL
21	EXT.BOWED SHAFT RING	STAINLESS STEEL
22	COVER NUT	PLASTIC



* Available spare parts. ** Optional

Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

ORDERING CODES P20P

Valve Model	P20P	.	1	W	N	E				.A	108	
P20P - Diaphragm sensing	P20P											
Outlet spring range												
Nº1 - 0,2 to 1,5 bar			1									
Nº2 - 0,3 to 3 bar			2									
Nº3 - 0,8 to 8 bar			3									
Nº4 - 1,5 to 15 bar			4									
Nº5 - 3 to 30 bar			5									
Nº6 - 5 to 50 bar			6									
Nº7 - 20 to 200 bar			7									
Aplication												
Water				W								
Gases				G								
Oxygen (Degreased)				O								
Seal material												
NBR					N							
EPDM					E							
PTFE					T							
FPM/VITON					V							
Maximum inlet pressure												
80 bar						E						
220 bar						F						
Gauge port 1/4" *												
Without gauge ports							(1)					
Gauge port on the left side (Related to the flow direction)							4					
Gauge port on the right side (Related to the flow direction)							3					
Gauge ports on both sides							2					
Relieving												
Non-relieving								(1)				
Relieving (Only for non dangerous gases)								R				
Panel mounting												
Without panel mounting ring									(1)			
With panel mounting ring									P			
Pipe connection												
Threaded BSP ISO 7/1 Rp										A		
Threaded NPT ANSI B1.20.1										C		
Size												
DN 1/4" - Kvs 0,043											108	
DN 1/4" - Kvs 0,22											208	
DN 1/4" - Kvs 0,62											308	
Special valves / Extras b)												E

* Gauge port can also be used as external sensing line.

(1) Omitted if a standard valve is requested

b)Full description or addicional codes have to be added in case of non-standard combination.

DIAPHRAGM SENSING PRESSURE REDUCING VALVE
P 20D
DN ¼" – 1/2"

DESCRIPTION

The ADCA P20D series ***direct acting, spring-loaded diaphragm sensing, balanced valve*** pressure reducing valves, are designed for use on compressed air, water and other gases or liquids compatible with the materials of construction .
They are suitable for pressure reducing stations where small loads are involved. They are also specifically recommended to operate as pilot valves in combination with other pressure regulators.

MAIN FEATURES

Compact design.
Balanced valve.
Machined from barstock materials or investment casting.
Ultrasonically cleaned and degreased

OPTIONS:	Different soft valves for water and gases. Outlet 1/4" gauge connection on body. Regulating screw with top cap. Connection for external sensing line
USE:	Compressed air, water and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	P20D – Diaphragm sensing
SIZES:	DN 1/4" to DN 1/2"
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) or NPT.
INSTALLATION:	Horizontal or vertical installation. A strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Inlet pressure and required outlet pressure Capacity (maximum and minimum).

CAPACITIES			
Valve Size	1/4"	3/8"	1/2"
KVs (m3/h)	1,2	1,8	1,8

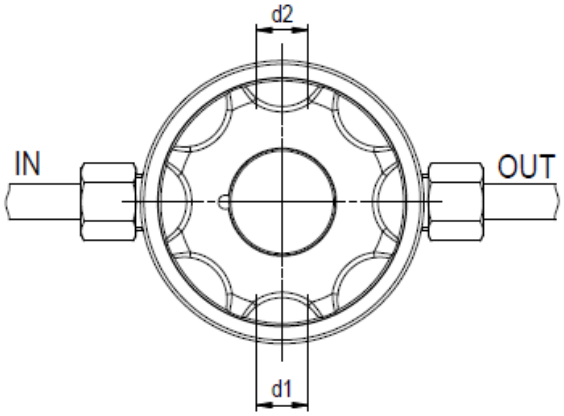
LIMITING CONDITIONS	
Valve model	P20D
Body design conditions	PN 63
Max.upstream pressure	50 bar
Max.downstream pressure	15 bar
Min.downstream pressure	0,2 bar
Max.design temperature *	80 ºC
Max.recommended reducing ratio	40:1

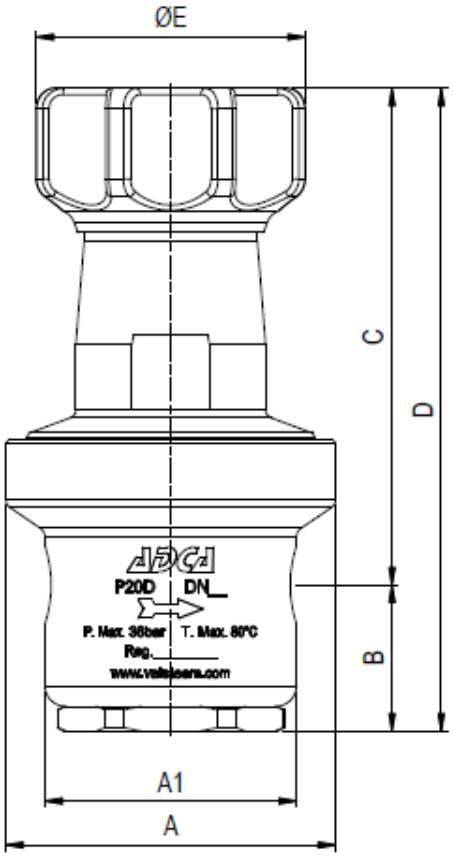
*Other on request.

CE MARKING (PED - European Directive 97/23/EC)	
PN 16-PN63	Category
DN 08 to 15	SEP - art. 3, paragraph3

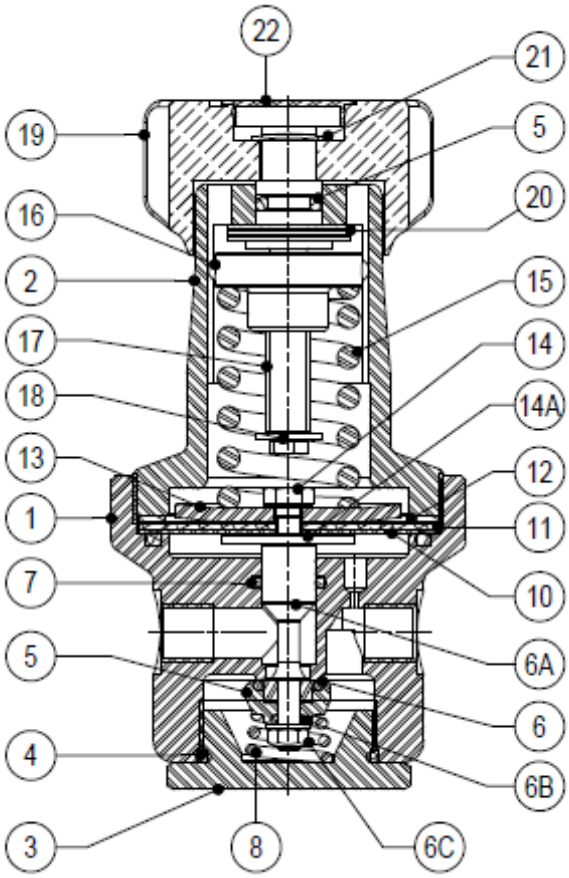
DIMENSIONS (mm)									
Screwed									
SIZE DN	A	A1	B	C	D	ØE	d1*	d2*	WGT. Kgs
1/4"	80	61	35,5	120,5	156	69	1/4"	1/4"	1,8
3/8"	80	61	35,5	120,5	156	69	1/4"	1/4"	1,8
1/2"	80	80	35,5	120,5	156	69	1/4"	1/4"	2,5

* Optional





MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316 / 1.4401 ; CF8M / 1.4408
2	TOP COVER	AISI316 / 1.4401 ; CF8M / 1.4408
3	SEAT COVER	AISI316 / 1.4401 ; CF8M / 1.4408
4	* O-RING	NBR
5	* PISTON VALVE	AISI316 / 1.4401
6	* VALVE HEAD	NBR-EPDM-PTFE,etc
6A	PUSHROD	AISI316 / 1.4401
6B	*O-RING	NBR
6C	NUT	ST.STEEL A2
7	* O-RING	NBR-EPDM-PTFE,etc
8	VALVE SPRING	AISI302 / 1.4300
10	* DIAPHRAGM	PTFE
11	* DIAPHRAGM	NBR
12	GASKET	ALUMINIUM
13	SPRING PLATE	AISI304 / 1.4301
14	BOLT	ST.STEEL A2
14A	PUSHER DISC	AISI304 / 1.4301
15	* ADJUSTMENT SPRING	SPRING STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	RETAINING WASHER	ST.STEEL A2
19	HANDWHEEL	ALUMINIUM PAINTED
20	BEARING	CORROSION RES. STEEL
21	EXT.BOWED SHAFT RING	STAINLESS STEEL
22	COVER NUT	PLASTIC



* Available spare parts.

Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

ORDERING CODES P20D

Valve Model	P20	.	1	W	N	C	R		.A	08	
P20D - Diaphragm sensing	P20										
Outlet spring range											
Nº1 - 0,2 to 1,5 bar			1								
Nº2 - 0,3 to 3 bar			2								
Nº3 - 0,8 to 8 bar			3								
Nº4 - 1,5 to 15 bar			4								
Aplication											
Water				W							
Gases				G							
Oxygen (Degreased)				O							
Seal material											
NBR					N						
EPDM					E						
PTFE					T						
FPM/VITON					V						
Maximum inlet pressure											
30 bar						C					
50 bar a)						D					
Diaphragm material											
Rubber/PTFE							R				
Gauge port 1/4" *											
Without gauge ports								(1)			
Gauge port on the left side (Related to the flow direction)								4			
Gauge port on the right side (Related to the flow direction)								3			
Gauge ports on both sides								2			
Pipe connection											
Threaded BSP ISO 7/1 Rp									A		
Threaded NPT ANSI B1.20.1									C		
Size											
DN 1/4"										08	
DN 3/8"										10	
DN 1/2"										15	
Special valves / Extras b)											E

* Gauge port can also be used as external sensing line.

(1) Omitted if a standard valve is requested

a) The 50 bar inlet available only with spring Nº4

b)Full description or addicional codes have to be added in case of non-standard combination.

DIAPHRAGM SENSING PRESSURE REDUCING VALVE
P 20DS
DN ¼" – 1/2"

DESCRIPTION

The ADCA P20DS series *direct acting, spring-loaded diaphragm sensing* pressure reducing valves, are designed for use on steam, compressed air and other gases or liquids compatible with the materials of construction .
They are suitable for pressure reducing stations where small loads are involved. They are also specifically recommended to operate as pilot valves in combination with other pressure regulators.

MAIN FEATURES

Compact design.
Machined from barstock materials or investment casting.
Ultrasonically cleaned and degreased

OPTIONS:	Different soft valves for water and gases. Outlet 1/4" gauge connection on body. Regulating screw with top cap. Connection for external sensing line
USE:	Steam. compressed air and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	P20DS – Stainless steel diaphragm sensing
SIZES:	DN 1/4" to DN 1/2"
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) or NPT.
INSTALLATION:	Horizontal or vertical installation. A strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Inlet pressure and required outlet pressure Capacity (maximum and minimum).

CAPACITIES			
Valve Size	*1/4"*	*3/8"*	*1/2"*
KVs (m3/h)	1,2	1,8	1,8

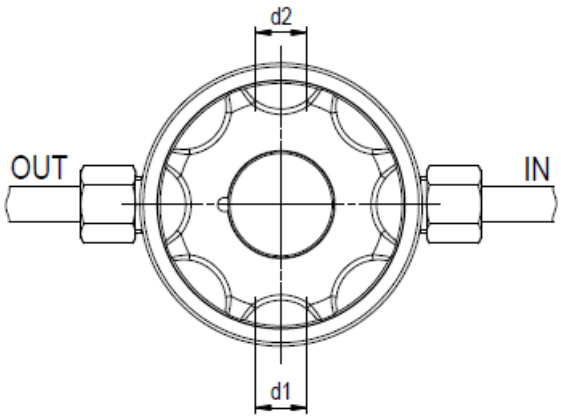
LIMITING CONDITIONS	
Valve model	P20 DS
Body design conditions	PN 25
Max.upstream pressure	14 bar
Max.downstream pressure	8 bar
Min.downstream pressure	0,2 bar
Max.design temperature *	200 °C
Max.recommended reducing ratio	10:1

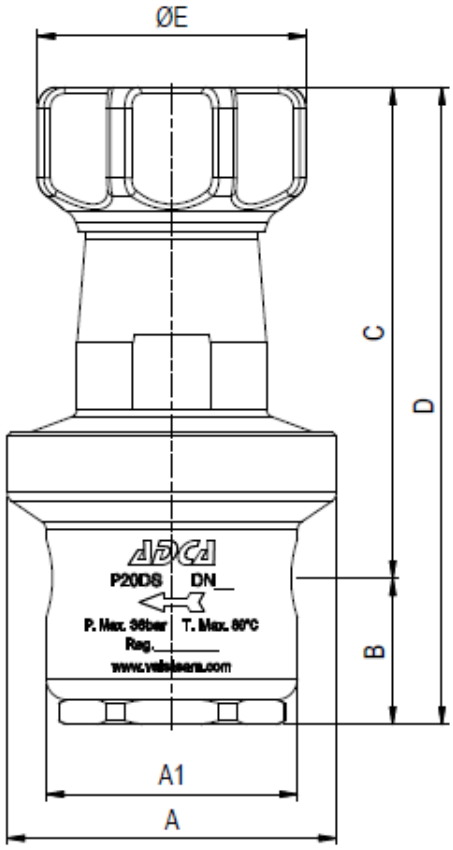
*Other on request.

CE MARKING (PED - European Directive 97/23/EC)	
PN 25	Category
DN 08 to 15	SEP - art. 3, paragraph3

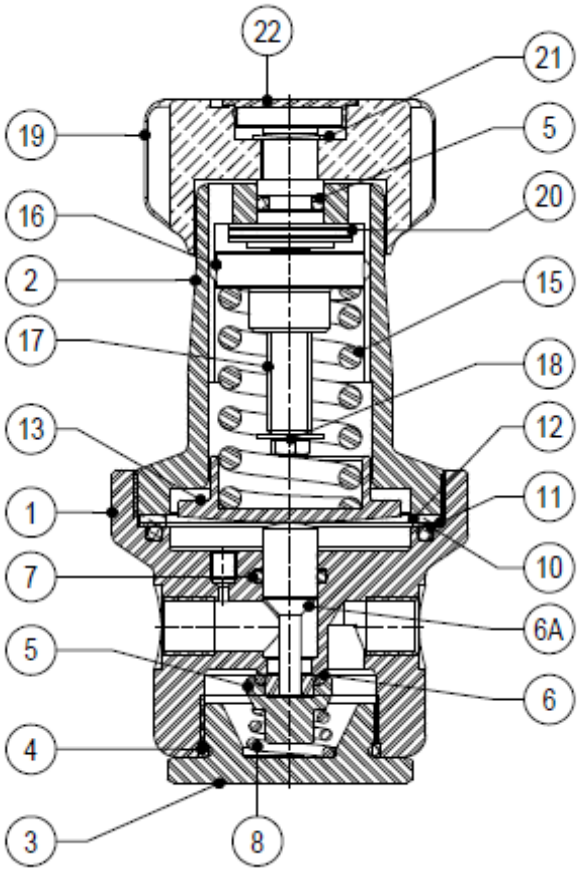
DIMENSIONS (mm)									
Screwed									
SIZE DN	A	A1	B	C	D	ØE	d1*	d2*	WGT. Kgs
1/4"	80	61	35,5	120,5	156	69	1/4"	1/4"	1,8
3/8"	80	61	35,5	120,5	156	69	1/4"	1/4"	1,8
1/2"	80	80	35,5	120,5	156	69	1/4"	1/4"	2,5

* Optional





MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316 / 1.4401 ; CF8M / 1.4408
2	TOP COVER	AISI316 / 1.4401 ; CF8M / 1.4408
3	SEAT COVER	AISI316 / 1.4401 ; CF8M / 1.4408
4	* O-RING	VITON
5	* PISTON VALVE	AISI316 / 1.4401
6	* VALVE HEAD	VITON
6A	PUSHROD	AISI316 / 1.4401
7	* O-RING	VITON
8	VALVE SPRING	AISI302 / 1.4300
10	* GASKET	COMPRESSED ARAMID FIBER
11	* DIAPHRAGM	AISI301 / 1.4410
12	GASKET	ALUMINIUM
13	SPRING PLATE	AISI304 / 1.4301
15	* ADJUSTMENT SPRING	SPRING STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	RETAINING WASHER	ST.STEEL A2
19	HANDWHEEL	ALUMINIUM PAINTED
20	BEARING	CORROSION RES. STEEL
21	EXT.BOWED SHAFT RING	STAINLESS STEEL
22	COVER NUT	PLASTIC



* Available spare parts.

Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

ORDERING CODES P20DS

Valve Model	P20DS	.	1	S	T	S		.A	08	
P20DS - Diaphragm sensing	P20DS									
Outlet spring range										
Nº1 - 0,2 to 1,5 bar			1							
Nº2 - 0,3 to 3 bar			2							
Nº3 - 0,8 to 8 bar			3							
Aplication										
Steam				S						
Gases				G						
Oxygen (Degreased)				O						
Seal material										
NBR					N					
EPDM					E					
PTFE					T					
FPM/VITON					V					
Diaphragm material										
Stainless steel						S				
Gauge port 1/4" *										
Without gauge ports							(1)			
Gauge port on the left side (Related to the flow direction)							4			
Gauge port on the right side (Related to the flow direction)							3			
Gauge ports on both sides							2			
Pipe connection										
Threaded BSP ISO 7/1 Rp								A		
Threaded NPT ANSI B1.20.1								C		
Size										
DN 1/4"									08	
DN 3/8"									10	
DN 1/2"									15	
Special valves / Extras b)										E

* Gauge port can also be used as external sensing line.

(1) Omitted if a standard valve is requested

b)Full description or addicional codes have to be added in case of non-standard combination.

DIAPHRAGM SENSING PRESSURE REDUCING VALVE
P 7
DN ¼" – 3/8"

DESCRIPTION

The ADCA P7 series ***direct acting, spring-loaded diaphragm sensing,*** pressure reducing valves, are designed for use on steam and compressed air and other gases compatible with the materials of construction .
They are suitable for pressure reducing stations where very small loads are involved. They are also specifically recommended to operate as pilot valves in combination with other pressure regulators.

MAIN FEATURES

Compact design.
Stainless steel diaphragm

OPTIONS:	Outlet 1/4" gauge connection on body. Regulating screw with top cap. Internal sensing orifice Compressed air top for remote control Barstock stainless steel construction
USE:	Steam, compressed air and other gases compatible with the construction.
AVAILABLE MODELS:	P7SS – Stainless steel construction
SIZES:	DN 1/4" and DN 3/8"
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) or NPT.
INSTALLATION:	Horizontal installation. A strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Inlet pressure and required outlet pressure Capacity (maximum and minimum).

CAPACITIES		
Valve Size	***1/4"***	***3/8"***
KVs (m3/h)	1	1,1

LIMITING CONDITIONS	
Valve model	**P7**
Body design conditions	PN 40
Max.upstream pressure (steam)	25 bar
Max.upstream pressure (gases)	31 bar
Max.downstream pressure	17 bar
Min.downstream pressure	0,35 bar *
Max.design temperature	300 ºC

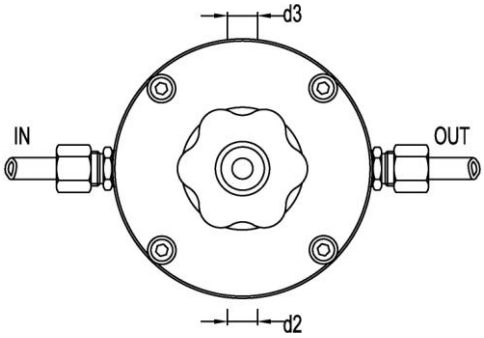
* 0,07 bar with low pressure top (limited at 7 bar inlet). The low pressure diaphragm should be fitted for outlet pressures from 0,07 up to 0,5 bar.
Pressure and temperature may change if soft seating is used.
The balance pipe connection is recommended to enter downstream pipe at a minimum 1meter from valve for higher accuracy. The valve can also be supplied with an internal sensing orifice instead of external.

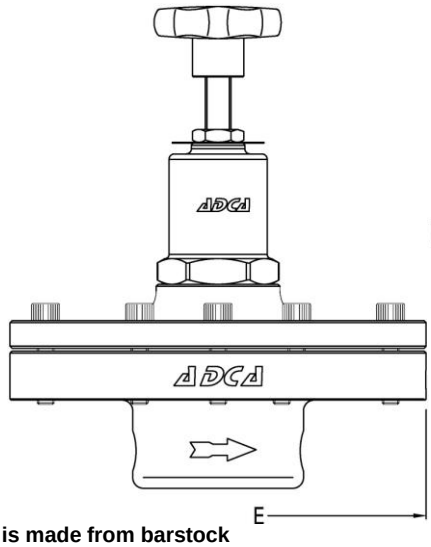
CE MARKING (PED - European Directive 97/23/EC)	
PN 16 - PN 40	**Category**
DN 08 to 10	SEP - art. 3, paragraph3

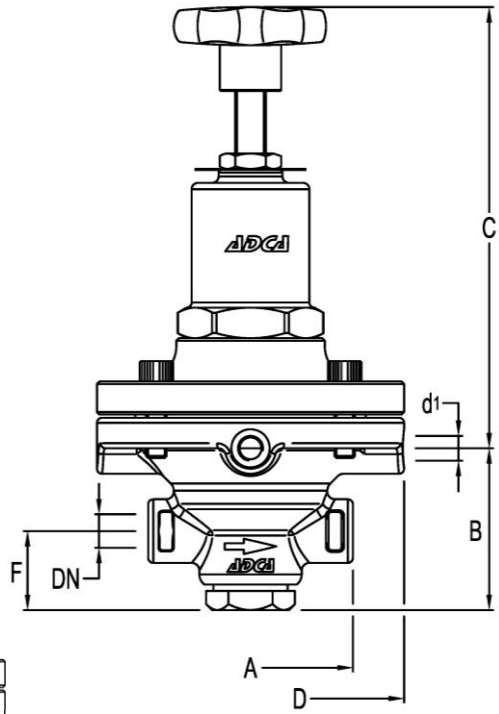
DIMENSIONS (mm)										
Screwed										
SIZE DN	A	B	C	D	E*	F	d1**	d2***	d3***	WGT. Kgs
1/4"	80	63,5	185	120	195	31	1/8"	1/8"	1/8"	4,8
3/8"	80	63,5	185	120	195	31	1/8"	1/8"	1/8"	4,8

*Low pressure diaphragm ; ** Sensing line connection

*** Optional (pressure gauge connections),can be used also as sensing line connections.

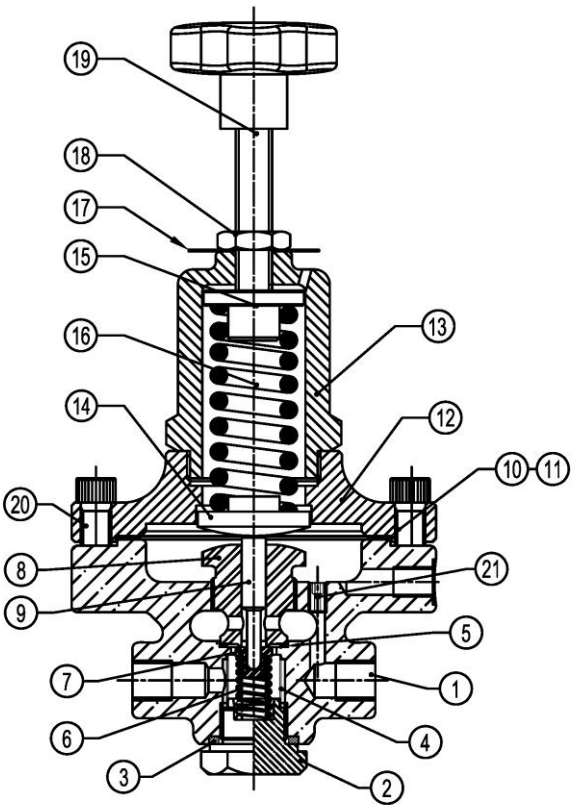






Version with low pressure diaphragm is made from barstock

MATERIALS P7SS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316 / 1.4401 ; CF8M / 1.4408
2	PLUG	AISI316 / 1.4401
3	* GASKET	STAINLESS STEEL / GRAPHITE
4	* STRAINER SCREEN	AISI304 / 1.4301
5	GASKET	COPPER
6	* SPRING	AISI302 / 1.4300
7	* VALVE HEAD	AISI420-EPDM-PTFE,etc
8	* PILOT VALVE BODY	AISI316 / 1.4401
9	*PUSHROD	AISI316 / 1.4401
10	* DIAPHRAGM	AISI301 / 1.4310
11	* GASKET	ST.ST. / GRAPHITE
12	TOP COVER	CF8 / 1.4308
13	COVER SPRING	CF8 / 1.4308
14	LOWER SPRING CARRIER	BRASS
15	TOP SPRING CARRIER	BRASS
16	* ADJUSTMENT SPRING	SPRING STEEL
17	SPRING IDENT. PLATE	ALUMINIUM
18	LOCKNUT	ST.STEEL A2-70
19	HANDWHEEL	PLASTIC
20	BOLTS	ST.STEEL A2-70
21	RESTRICTOR	ST.STEEL A2-70



* Available spare parts.

Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

ORDERING CODES P7

Valve Model	P7SS	.	1	S		S		.A	08	
P7SS Stainless steel pilot regulator	P7SS									
Outlet spring range (see table)										
Green			1							
Blue			2							
Red (fitted with two diaphragms)			3							
Black (fitted with two diaphragms)			4							
Aplication										
Steam				S						
Gases				G						
Seal material										
Metal to metal lapped					(1)					
EPDM					E					
PTFE					T					
FPM/VITON					V					
Stainless steel diaphragm										
Standard diaphragm (a)						S				
Low pressure diapragm						L				
Gauge port 1/8" *										
Without gauge ports							(1)			
Gauge port on the left side (Related to the flow direction)							4			
Gauge port on the right side (Related to the flow direction)							3			
Gauge ports on both sides							2			
Pipe connection										
Threaded BSP ISO 7/1 Rp								A		
Threaded NPT ANSI B1.20.1								C		
Size										
DN 1/4"									08	
DN 3/8"									10	
Special valves / Extras b)										E

* Gauge port can also be used as external sensing line.

(1) Omitted if a standard valve is requested

a) Two diaphragms will be fitted with black spring

b)Full description or addicional codes have to be added in case of non-standard combination.

PRESSURE RANGES IN bar

SPRING COLOUR	*GREEN W/1 Diaphragm*	*BLUE W/1 Diaphragm*	*RED W/2 Diaphragms*	*BLACK W/2 Diaphragms*
Red. Pressure	0,07 to 0,5 bar *	1,5 to 5,5 bar **	3,5 to 8,5 bar **	7 to 17 bar **
Red. Pressure	0,35 to 2 bar **	/	/	/

* With low pressure top; **Standard diaphragm.

HIGH ACCURACY PRESSURE REDUCING VALVE
PRV 300
DN ½" – ¾"; DN15 – DN20

DESCRIPTION

The ADCA PRV300 series ***direct acting, spring-loaded diaphragm sensing , balanced plug*** pressure reducing valves, are designed for use on compressed air, water and other gases or liquids compatible with the materials of construction .
They are suitable for high accuracy pressure reducing stations at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.
Connections are female screwed or flanged.

MAIN FEATURES

Compact design.
Large high accuracy diaphragm.
Balanced valve plug
Machined from barstock materials and investment casting

OPTIONS:	Different soft valves for water and gases. Relieving-Internal relief valve to allow reduce outlet pressure in a no-flow condition. Built-in strainer. Outlet 1/4" gauge connection on body. Regulating screw with top cap.
USE:	Compressed air, water and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	PRV300/SS – Stainless steel
SIZES:	DN 1/2" and 3/4" DN 15 and DN20
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) . Flanged EN 1092-1 PN40 or ANSI.
INSTALLATION:	Horizontal installation. An "Y" strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Inlet pressure and required outlet pressure Capacity (maximum and minimum).

CAPACITIES		
Valve Size	***15***	***20***
KVs (m3/h)	2,1	2,4

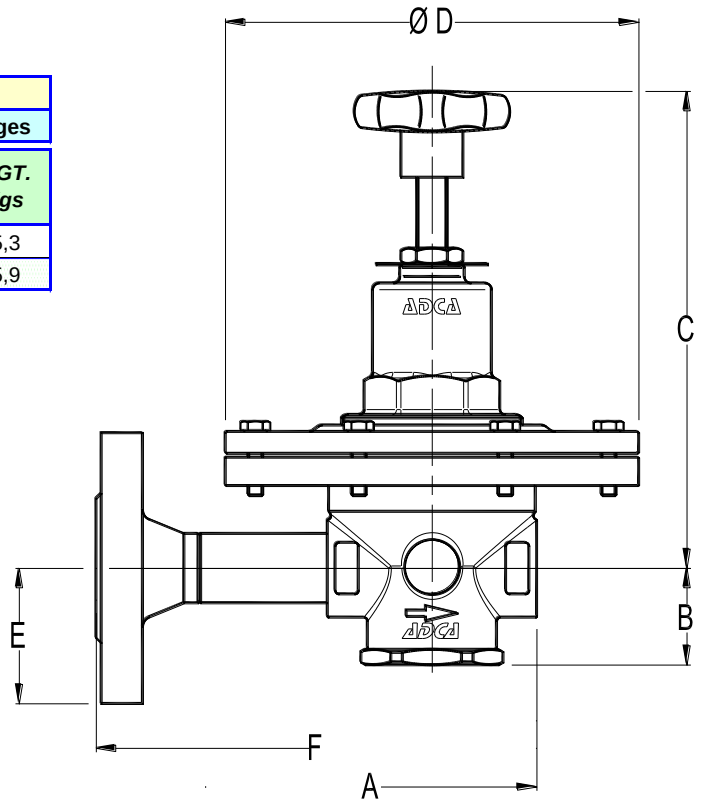
LIMITING CONDITIONS	
Valve model	**PRV300SS**
Body design conditions	PN 16
Max.upstream pressure	16 bar
Max.downstream pressure	0,7 bar
Min.downstream pressure	0,05 bar
Max.design temperature *	80 ºC
Max.recommended reducing ratio	40:1

*Other on request.

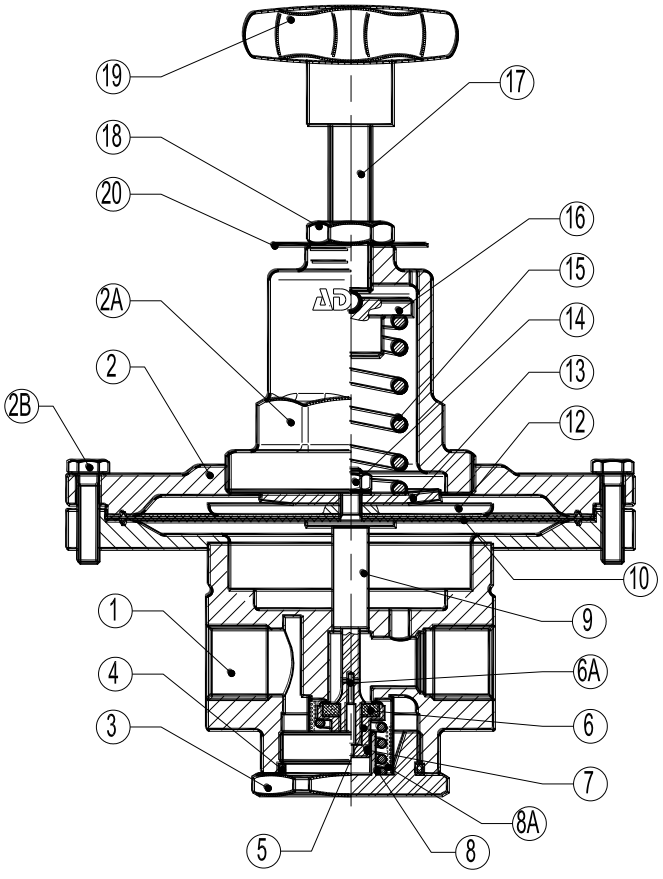
CE MARKING (PED - European Directive 97/23/EC)	
PN 16	**Category**
DN 15 to 20	SEP - art. 3, paragraph3

DIMENSIONS (mm)								
Screwed						EN 1092-1 Flanges		
SIZE DN	A	B	C	D	WGT. Kgs	E	F *	WGT. Kgs
1/2"-15	80	38	185	160	3,9	47,5	260	5,3
3/4"-20	80	38	185	160	3,9	52,5	260	5,9

* Different lenghts on request.



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316 / 1.4401 ; CF8M / 1.4408
2	COVER	AISI316 / 1.4401
2A	SPRING COVER	AISI316 / 1.4401 ; CF8M / 1.4408
2B	BOLTS	ST.STEEL A2-70
3	SEAT COVER	AISI316 / 1.4401
4	*0-RING	NBR
5	*PISTON VALVE	AISI316 / 1.4401
6	*VALVE HEAD	NBR
6A	*PUSHROD	AISI316 / 1.4401
7	*O-RING	NBR
8	*VALVE SPRING	AISI302 / 1.4300
8A	*STRAINER SCREEN	AISI304 / 1.4301
9	PUSHER DISC	AISI304 / 1.4301
10	*DIAPHRAGM	RUBBER
13	SPRING PLATE	AISI304 / 1.4301
14	NUT	ST.STEEL A2-70
15	*ADJUSTMENT SPRING	STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
19	HANDWHEEL	PLASTIC
20	SPRING IDENT. PLATE	ALUMINIUM



* Available spare parts.

Remarks: All valves has a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

ORDERING CODES PRV300SS

Valve Model	R300	.	1	W	N	B	R		.		15	
PRV300SS - Diaphragm sensing	R300											
Outlet spring range												
Nº1 - 0,05 to 0,7 bar			1									
Aplication												
Water				W								
Gases				G								
Oxygen (Degreased)				O								
Seal material												
NBR					N							
EPDM					E							
PTFE					T							
FPM/VITON					V							
Maximum inlet pressure												
16 bar						B						
Diaphragm material												
Rubber/PTFE (Relieving or non-relieving)							R					
Gauge port 1/4"												
Without gauge ports								(1)				
Gauge port on the left side (Related to the flow direction)								4				
Gauge port on the right side (Related to the flow direction)								3				
Gauge ports on both sides								2				
Relieving												
Non-relieving									(1)			
Relieving (Only for non-dangerous gases)									R			
Pipe connection												
Threaded BSP ISO 7/1 Rp										A		
Threaded NPT ANSI B1.20.1										C		
Socket weld SW ANSI B16.11										H		
Butt weld BW ANSI B16.25										I		
Flanged EN1092-1 PN40										N		
Flanged EN1092-1 PN63										O		
Flanged ANSI B16.5 150#										U		
Flanged ANSI B16.5 300#										V		
Flanged ANSI B16.5 600#										W		
Size												
DN 1/2" or DN 15											15	
DN 3/4" or DN 20											20	
….											25	
											32	
											40	
											50	
Special valves / Extras b)												E

(1) Omitted if a standard valve is requested

b)Full description or addicional codes has to be added in case of non-standard combination.

HIGH ACCURACY PRESSURE REDUCING VALVE
PRV 300
DN 1” – 1.1/4”; DN25 – DN32

DESCRIPTION

The ADCA PRV300 series ***direct acting, spring-loaded diaphragm sensing , balanced plug*** pressure reducing valves, are designed for use on compressed air, water and other gases or liquids compatible with the materials of construction .
They are suitable for high accuracy pressure reducing stations at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.
Connections are female screwed or flanged.

MAIN FEATURES

Compact design.
Large high accuracy diaphragm.
Balanced valve plug
Machined from barstock materials and investment casting

OPTIONS: Different soft valves for water and gases.
Relieving-Internal relief valve to allow reduce outlet pressure in a no-flow condition.
Built-in strainer.
Outlet 1/4” gauge connection on body.
Regulating screw with top cap.

USE: Compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: PRV300/SS – Stainless steel

SIZES: DN 1” and 11/4”
DN 25 and DN32

CONNECTIONS: Female screwed ISO7/1Rp(BS 21) .
Flanged EN 1092-1 PN40 or ANSI.

INSTALLATION: Horizontal installation.
An “Y” strainer should be provided upstream the valve.
See IMI, installation and maintenance instructions.

ORDER REQUIREMENTS : Type of fluid
Maximum operating temperature
Inlet pressure and required outlet pressure
Capacity (maximum and minimum).

CAPACITIES		
Valve Size	***25***	***32***
KVs (m3/h)	6,5	7,2

LIMITING CONDITIONS	
Valve model	**PRV300SS**
Body design conditions	PN 16
Max.upstream pressure	16 bar
Max.downstream pressure	1,7 bar
Min.downstream pressure	0,05 bar
Max.design temperature *	80 ºC
Max.recommended reducing ratio	40:1

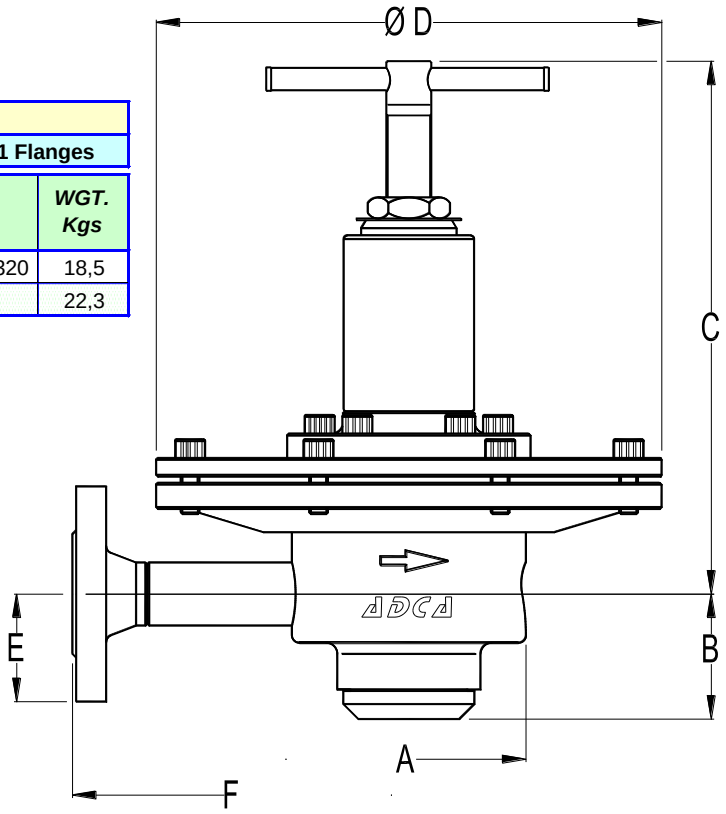
*Other on request.

CE MARKING (PED - European Directive 97/23/EC)	
PN 16	**Category**
DN 25 to 32	SEP - art. 3, paragraph3

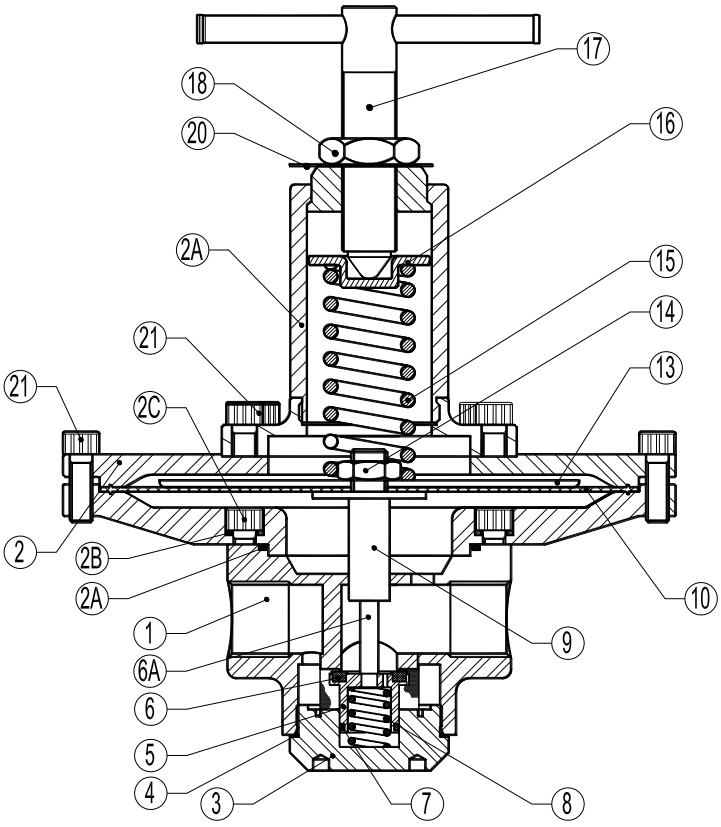
DIMENSIONS (mm)								
Screwed						EN 1092-1 Flanges		
SIZE DN	A	B	C	D	WGT. Kgs	E	F *	WGT. Kgs
1"-25	**105/125	66	**295/285	270	15,9	57,5	**160/320	18,5
11/4"-32	**105/125	66	**295/285	270	15,9	70	320	22,3

* Different lenghts on request.

** Standard face to face dimension in case of CF8M valve body



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316 / 1.4401 ; CF8M 1.4408
2	COVER	ST.STEEL (1.4401)
2A	SPRING COVER	AISI316 / 1.4401 ; CF8M 1.4408
2B	BOLTS	ST.STEEL A2-70
3	SEAT COVER	AISI316 / 1.4401
4	*0-RING	NBR
5	*PISTON VALVE	AISI316 / 1.4401
6	*VALVE HEAD	NBR
6A	*PUSHROD	AISI316 / 1.4401
7	*O-RING	NBR
8	*VALVE SPRING	AISI302 / 1.4300
8A	**STRAINER SCREEN	AISI304 / 1.4301
9	PUSHER DISC	AISI304 / 1.4301
10	*DIAPHRAGM	RUBBER
13	SPRING PLATE	AISI304 / 1.4301
14	NUT	ST.STEEL A2-70
15	*ADJUSTMENT SPRING	STEEL
16	TOP SPRING PLATE	AISI304 / 1.4301
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
20	SPRING IDENT. PLATE	ALUMINIUM



* Available spare parts.** Optional

Remarks: All valves has a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

ORDERING CODES PRV300SS

Valve Model	R300	.	1	W	N	C	R		.		15	
PRV300SS - Diaphragm sensing	R300											
Outlet spring range												
Nº1 - 0,05 to 0,3 bar			1									
Nº2 - 0,2 to 1,7 bar			2									
Aplication												
Water				W								
Gases				G								
Oxygen (Degreased)				O								
Seal material												
NBR					N							
EPDM					E							
PTFE					T							
FPM/VITON					V							
Maximum inlet pressure												
16 bar						B						
Diaphragm material												
Rubber/PTFE (Relieving or non-relieving)							R					
Gauge port 1/4"												
Without gauge ports								(1)				
Gauge port on the left side (Related to the flow direction)								4				
Gauge port on the right side (Related to the flow direction)								3				
Gauge ports on both sides								2				
Relieving												
Non-relieving									(1)			
Relieving (Only for non-dangerous gases)									R			
Pipe connection												
Threaded BSP ISO 7/1 Rp										A		
Threaded NPT ANSI B1.20.1										C		
Socket weld SW ANSI B16.11										H		
Butt weld BW ANSI B16.25										I		
Flanged EN1092-1 PN40										N		
Flanged EN1092-1 PN63										O		
Flanged ANSI B16.5 150#										U		
Flanged ANSI B16.5 300#										V		
Flanged ANSI B16.5 600#										W		
Size												
DN 1/2" or DN 15											15	
DN 3/4" or DN 20											20	
….											25	
											32	
											40	
											50	
Special valves / Extras b)												E

(1) Omitted if a standard valve is requested

b)Full description or addicional codes has to be added in case of non-standard combination.

HIGH ACCURACY PRESSURE REDUCING VALVE
PRV 300
DN 11/2” – 2”; DN40 – DN50

DESCRIPTION

The ADCA PRV300 series ***direct acting, spring-loaded diaphragm sensing, balanced plug*** pressure reducing valves, are designed for use on compressed air, water and other gases or liquids compatible with the materials of construction .
They are suitable for high accuracy pressure reducing stations at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.
Connections are female screwed or flanged.

MAIN FEATURES

Compact design.
Large high accuracy diaphragm.
Balanced valve plug
Machined from barstock materials and investment casting

OPTIONS:	Different soft valves for water and gases. Relieving-Internal relief valve to allow reduce outlet pressure in a no-flow condition. Built-in strainer. Outlet 1/4” gauge connection on body. Regulating screw with top cap.
USE:	Compressed air, water and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	PRV300/SS – Stainless steel
SIZES:	DN 11/2” and 2” DN 40 and DN50
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) . Flanged EN 1092-1 PN40 or ANSI.
INSTALLATION:	Horizontal installation. An “Y” strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Inlet pressure and required outlet pressure Capacity (maximum and minimum).

CAPACITIES		
Valve Size	***40***	***50***
KVs (m3/h)	12,7	13,7

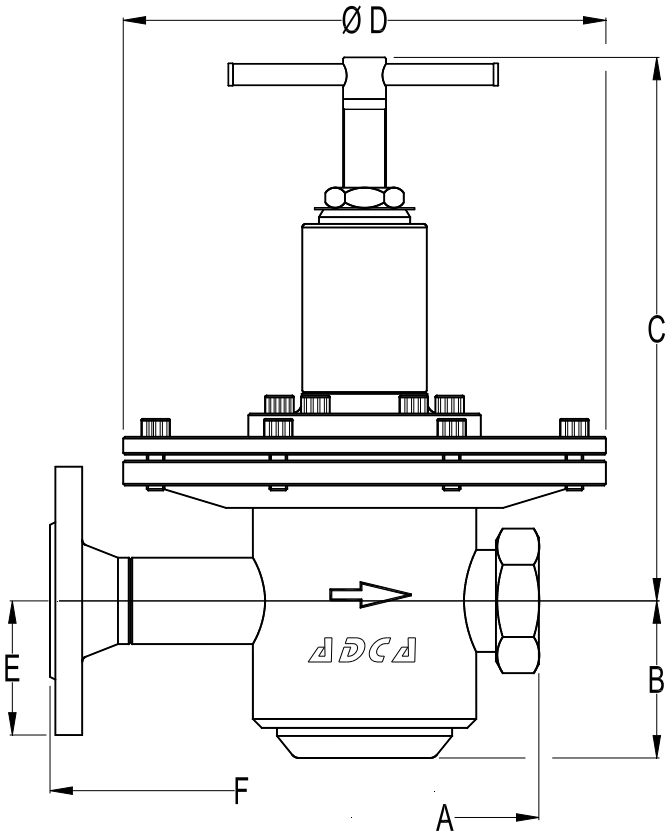
LIMITING CONDITIONS	
Valve model	**PRV300SS**
Body design conditions	PN 16
Max.upstream pressure	16 bar
Max.downstream pressure	1,7 bar
Min.downstream pressure	0,05 bar
Max.design temperature *	80 ºC
Max.recommended reducing ratio	40:1

*Other on request.

CE MARKING (PED - European Directive 97/23/EC)	
PN 16	**Category**
DN 40 to 50	SEP - art. 3, paragraph3

DIMENSIONS (mm)								
Screwed						EN 1092-1 Flanges		
SIZE DN	A	B	C	D	WGT. Kgs	E	F *	WGT. Kgs
11/2"-40	195	90	305	270	23,2	75	320	28
2"-50	205	90	305	270	23,6	82,5	320	28,7

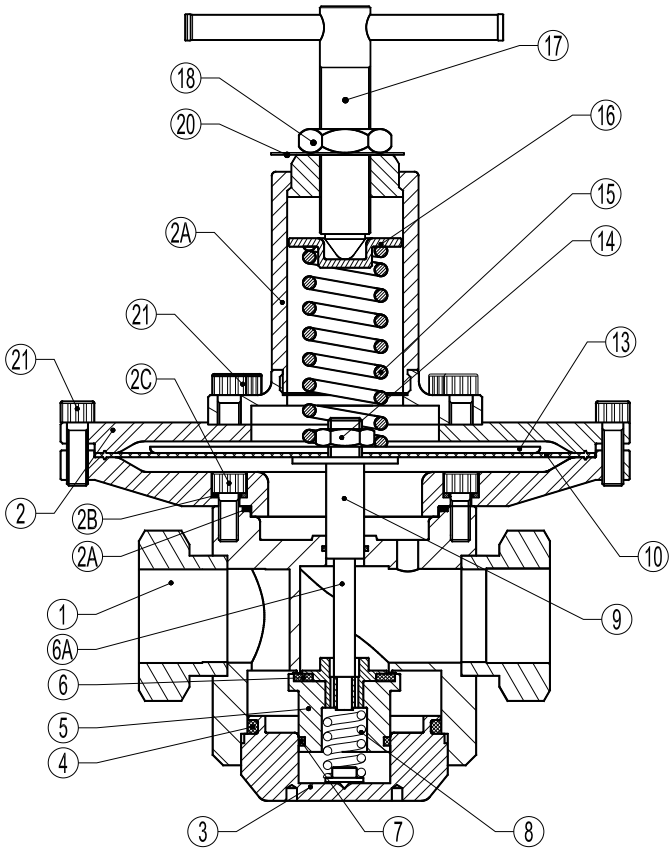
* Different lenghts on request.



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316 / 1.4401 ; CF8M / 1.4408
2	COVER	AISI316 / 1.4401
2A	SPRING COVER	AISI316 / 1.4401 ; CF8M / 1.4408
2B	BOLTS	ST.STEEL A2-70
3	SEAT COVER	AISI316 / 1.4401
4	*0-RING	NBR
5	*PISTON VALVE	AISI316 / 1.4401
6	*VALVE HEAD	NBR
6A	*PUSHROD	AISI316 / 1.4401
7	*O-RING	NBR
8	*VALVE SPRING	SPRING STEEL
9	PUSHER DISC	AISI304 / 1.4301
10	*DIAPHRAGM	RUBBER
13	SPRING PLATE	AISI304 / 1.4301
14	NUT	ST.STEEL A2-70
15	*ADJUSTMENT SPRING	STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
20	SPRING IDENT. PLATE	ALUMINIUM

* Available spare parts.

Remarks: All valves has a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.



ORDERING CODES PRV300SS

Valve Model	R300	.	1	W	N	B	R		.		15	
PRV300SS - Diaphragm sensing	R300											
Outlet spring range												
Nº1 - 0,05 to 0,3 bar			1									
Nº2 - 0,2 to 1,7 bar			2									
Aplication												
Water				W								
Gases				G								
Oxygen (Degreased)				O								
Seal material												
NBR					N							
EPDM					E							
PTFE					T							
FPM/VITON					V							
Maximum inlet pressure												
16 bar						B						
Diaphragm material												
Rubber/PTFE (Relieving or non-relieving)							R					
Gauge port 1/4"												
Without gauge ports								(1)				
Gauge port on the left side (Related to the flow direction)								4				
Gauge port on the right side (Related to the flow direction)								3				
Gauge ports on both sides								2				
Relieving												
Non-relieving									(1)			
Relieving (Only for non-dangerous gases)									R			
Pipe connection												
Threaded BSP ISO 7/1 Rp										A		
Threaded NPT ANSI B1.20.1										C		
Socket weld SW ANSI B16.11										H		
Butt weld BW ANSI B16.25										I		
Flanged EN1092-1 PN40										N		
Flanged EN1092-1 PN63										O		
Flanged ANSI B16.5 150#										U		
Flanged ANSI B16.5 300#										V		
Flanged ANSI B16.5 600#										W		
Size												
DN 1/2" or DN 15											15	
DN 3/4" or DN 20											20	
....											25	
											32	
											40	
											50	
Special valves / Extras b)												E

(1) Omitted if a standard valve is requested

b)Full description or addicional codes has to be added in case of non-standard combination.

DIAPHRAGM SENSING PRESSURE REDUCING VALVE
PRV 30SS
DN ½" – ¾"; DN15 – DN20

DESCRIPTION

The ADCA PRV30 series ***direct acting, spring-loaded diaphragm sensing, balanced valve*** pressure reducing valves, are designed for use on compressed air, water and other gases or liquids compatible with the materials of construction .
They are suitable for pressure reducing stations at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.

MAIN FEATURES

Compact design.
Balanced valve.
Machined from barstock materials or investment casting.

OPTIONS: Different soft valves for water and gases.
Relieving-Internal relief valve to allow reduce outlet pressure in a no-flow condition.
Built-in strainer.
Outlet 1/4" gauge connection on body.
Regulating screw with top cap.

USE: Compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: PRV30/SS – Stainless steel.

SIZES: DN 1/2" and DN 3/4"
DN 15 and DN 20

CONNECTIONS: Female screwed ISO7/1Rp(BS 21) or NPT.
Flanged EN 1092-1 PN40-PN63.
Special flanges upon request.

INSTALLATION: Horizontal installation.
An "Y" strainer should be provided upstream the valve.
See IMI, installation and maintenance instructions.

ORDER REQUIREMENTS : Type of fluid
Maximum operating temperature
Inlet pressure and required outlet pressure
Capacity (maximum and minimum).

CAPACITIES		
Valve Size	***15***	***20***
KVs (m3/h)	2,1	2,4

LIMITING CONDITIONS	
Valve model	**PRV30SS**
Body design conditions	PN 63
Max.upstream pressure	50 bar
Max.downstream pressure	15 bar
Min.downstream pressure	0,2 bar
Max.design temperature *	80 ºC
Max.recommended reducing ratio	40:1

*Other on request.

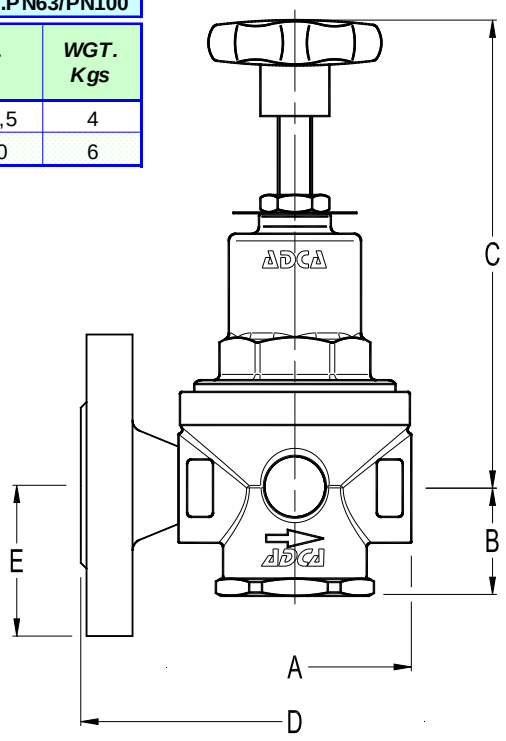
CE MARKING (PED - European Directive 97/23/EC)	
PN 16-PN63	**Category**
DN 15 to 20	SEP - art. 3, paragraph3

DIMENSIONS (mm)										
Screwed					EN 1092-1 Flg.PN16/PN40			EN 1092-1 Flg.PN63/PN100		
SIZE DN	A	B	C	WGT. Kgs	D*	E	WGT. Kgs	D*	E	WGT. Kgs
1/2"-15	80	38	175	1,8	150	47,5	3,2	210	52,5	4
3/4"-20	80	38	175	1,8	150	52,5	3,8	230	70	6

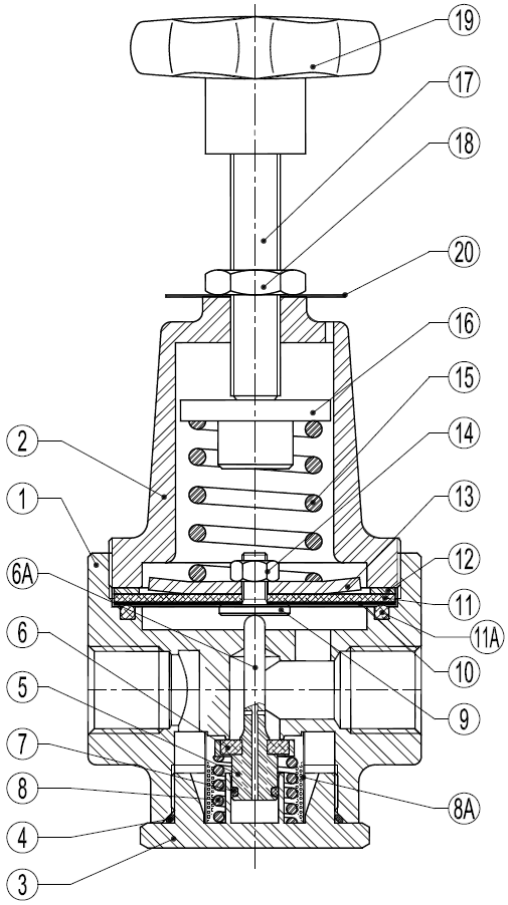
* Different lenghts and connections on request.

Note: DN15 PN16/40 face to face dim. was adopted as per DN20

DN 1" or DN 25 available on special execution and same performace



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY (a)	CF8M / 1.4408 (AISI316 / 1.4401)
2	TOP COVER (a)	CF8M / 1.4408 (AISI316 / 1.4401)
3	SEAT COVER (a)	CF8M / 1.4408 (AISI316 / 1.4401)
4	* O-RING	NBR
5	* PISTON VALVE	AISI316 / 1.4401
6	* VALVE HEAD	NBR-EPDM-PTFE,etc
6A	PUSHROD	AISI316 / 1.4401
7	* O-RING	NBR-EPDM-PTFE,etc
8	* VALVE SPRING	AISI302 / 1.4300
8A	* STRAINER SCREEN	AISI304 / 1.4301
9	PUSHER DISC	AISI304 / 1.4301
10	* DIAPHRAGM	PTFE
11	* DIAPHRAGM	**NBR
11A	*O-RING	NBR-EPDM-PTFE,etc
12	GASKET	**ALUMINIUM
13	SPRING PLATE	AISI304 / 1.4301
14	NUT	ST.STEEL A2-70
15	* ADJUSTMENT SPRING	SPRING STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
19	HANDWHEEL	PLASTIC
20	SPRING IDENT. PLATE	ALUMINIUM



* Available spare parts. ** Stainless steel on request .

Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

a) Barstock execution on request

ORDERING CODES PRV30SS

Valve Model	R30	.	1	W	N	C	R		.		15	
PRV30SS - Diaphragm sensing	R30											
Outlet spring range												
Nº1 - 0,2 to 1,5 bar			1									
Nº2 - 0,3 to 3 bar			2									
Nº3 - 0,8 to 8 bar			3									
Nº4 - 1,5 to 15 bar			4									
Aplication												
Water				W								
Gases				G								
Oxygen (Degreased)				O								
Seal material												
NBR					N							
EPDM					E							
PTFE					T							
FPM/VITON					V							
Maximum inlet pressure												
30 bar						C						
50 bar a)						D						
Diaphragm material												
Stainless steel (Non-relieving)							S					
Rubber/PTFE (Relieving or non-relieving)							R					
Gauge port 1/4"												
Without gauge ports								(1)				
Gauge port on the left side (Related to the flow direction)								4				
Gauge port on the right side (Related to the flow direction)								3				
Gauge ports on both sides								2				
Relieving												
Non-relieving									(1)			
Relieving (Only for non-dangerous gases)									R			
Pipe connection												
Threaded BSP ISO 7/1 Rp										A		
Threaded NPT ANSI B1.20.1										C		
Socket weld SW ANSI B16.11										H		
Butt weld BW ANSI B16.25										I		
Flanged EN1092-1 PN40										N		
Flanged EN1092-1 PN63										O		
Flanged ANSI B16.5 150#										U		
Flanged ANSI B16.5 300#										V		
Flanged ANSI B16.5 600#										W		
Size												
DN 1/2" or DN 15											15	
DN 3/4" or DN 20											20	
DN 1" or DN 25 (same performance but larger connection - special execution)											25E	
Special valves / Extras b)												E

(1) Omitted if a standard valve is requested

a) The 50 bar inlet available only with spring Nº4

b)Full description or addicional codes have to be added in case of non-standard combination.

STEAM EQUIPMENT

DIAPHRAGM SENSING PRESSURE REDUCING VALVE
PRV 30SS
DN 1” – 1 1/4”; DN25 – DN32

DESCRIPTION

The ADCA PRV30 series ***direct acting, spring-loaded diaphragm sensing, balanced valve*** pressure reducing valves, are designed for use on compressed air, water and other gases or liquids compatible with the materials of construction .
They are suitable for pressure reducing stations at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.

MAIN FEATURES

Compact design.
Balanced valve.

OPTIONS:	Different soft valves for water and gases. Relieving-Internal relief valve to allow reduce outlet pressure in a no-flow condition. Outlet 1/4” gauge connection on body. Regulating screw with top cap.
USE:	Compressed air, water and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	PRV30/SS – Stainless steel.
SIZES:	DN 1” and DN 11/4” DN 25 and DN 32
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) or NPT. Flanged EN1092-1 PN40-PN63. Special flanges upon request.
INSTALLATION:	Horizontal installation. An “Y” strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Inlet pressure and required outlet pressure Capacity (maximum and minimum).

PN40 **PN63**

CAPACITIES		
Valve Size	***25***	***32***
KVs (m3/h)	6,5	7,2

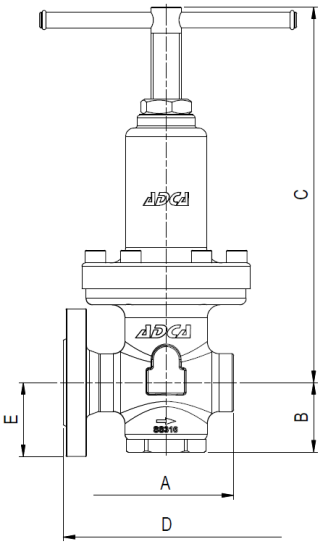
LIMITING CONDITIONS	
Valve model	**PRV30SS**
Body design conditions	PN 63
Max.upstream pressure	50 bar
Max.downstream pressure	15 bar
Min.downstream pressure	0,2 bar
Max.design temperature *	80 ºC
Max.recommended reducing ratio	40:1

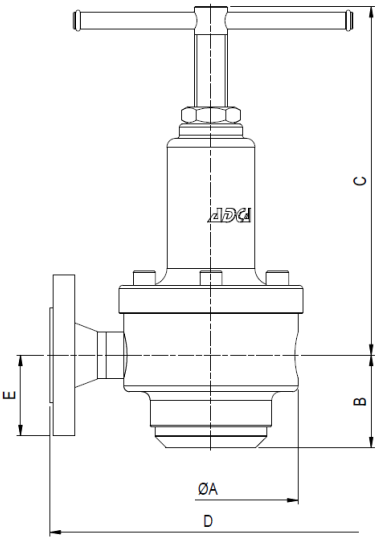
*Other on request.

CE MARKING (PED - European Directive 97/23/EC)	
PN 16 - PN 63	**Category**
DN 25 to 32	SEP - art. 3, paragraph3

DIMENSIONS (mm) - CASTED VERSION							
Screwed					Flg. PN16/40		
SIZE DN	A	B	C	WGT. Kgs	D*	E	WGT. Kgs
1"-25	105	60	295	6,3	160	57,5	8,5

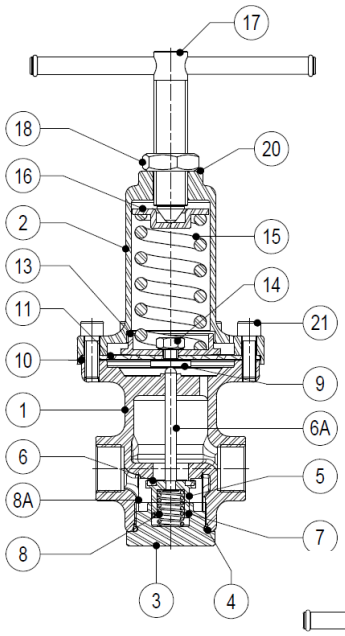
* Different lenghts on request.





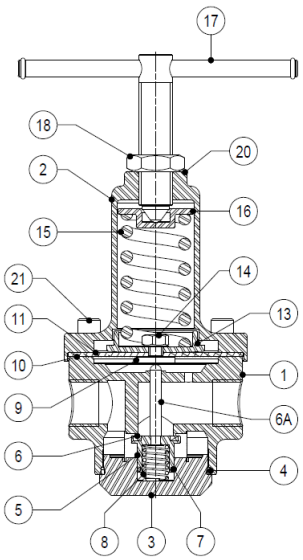
DIMENSION (mm) - BARSTOCK VERSION																
Screwed					Flg. PN16/40			Flg. PN63/100			ANSI 150 lbs			ANSI 300 lbs		
SIZE DN	A	B	C	Kg	D*	E	Kg	D*	E	Kg	D*	E	Kg	D*	E	Kg
1"-25	125	66	250	7,5	230	58	11	230	70	13	230	54	10,5	230	62	11,5
11/4"-32	125	66	250	7,5	260	70	11	260	78	14	260	59	11	260	67	12

* Different lenghts on request.



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316 / 1.4401 ; CF8M / 1.4408
2	TOP COVER	CF8M / 1.4408
3	SEAT COVER	AISI316 / 1.4401
4	* O-RING	NBR
5	* PISTON VALVE	AISI316 / 1.4401
6	* VALVE HEAD	NBR-EPDM-PTFE,etc
6A	PUSHROD	AISI316 / 1.4401
7	* O-RING	NBR-EPDM-PTFE,etc
8	* VALVE SPRING	AISI302 / 1.4300
8A	* STRAINER SCREEN	AISI304 / 1.4301
9	PUSHER DISC	AISI304 / 1.4301
10	* DIAPHRAGM	PTFE
11	* DIAPHRAGM	**NBR
13	SPRING PLATE	AISI304 / 1.4301
14	NUT	ST.STEEL A2-70
15	* ADJUSTMENT SPRING	SPRING STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
20	SPRING IDENT. PLATE	ALUMINIUM
21	BOLTS	ST.STEEL A2-70

* Available spare parts. ** Stainless steel on request .
Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.



ORDERING CODES PRV30SS

Valve Model	R30	.	1	W	N	C	R		.		15	
PRV30SS - Diaphragm sensing	R30											
Outlet spring range												
Nº1 - 0,2 to 1,5 bar			1									
Nº2 - 0,3 to 3 bar			2									
Nº3 - 0,8 to 8 bar			3									
Nº4 - 1,5 to 15 bar			4									
Aplication												
Water				W								
Gases				G								
Oxygen (Degreased)				O								
Seal material												
NBR					N							
EPDM					E							
PTFE					T							
FPM/VITON					V							
Maximum inlet pressure												
30 bar						C						
50 bar a)						D						
Diaphragm material												
Stainless steel (Non-relieving)							S					
Rubber/PTFE (Relieving or non-relieving)							R					
Gauge port 1/4"												
Without gauge ports								(1)				
Gauge port on the left side (Related to the flow direction)								4				
Gauge port on the right side (Related to the flow direction)								3				
Gauge ports on both sides								2				
Relieving												
Non-relieving									(1)			
Relieving (Only for non-dangerous gases)									R			
Pipe connection												
Threaded BSP ISO 7/1 Rp										A		
Threaded NPT ANSI B1.20.1										C		
Socket weld SW ANSI B16.11										H		
Butt weld BW ANSI B16.25										I		
Flanged EN1092-1 PN40										N		
Flanged EN1092-1 PN63										O		
Flanged ANSI B16.5 150#										U		
Flanged ANSI B16.5 300#										V		
Flanged ANSI B16.5 600#										W		
Size												
DN 1" or DN 25											25	
DN 11/4" or DN 32											32	
….												
Special valves / Extras b)												E

(1) Omitted if a standard valve is requested

a) The 50 bar inlet available only with spring Nº4

b)Full description or addicional codes have to be added in case of non-standard combination.

DIAPHRAGM SENSING PRESSURE REDUCING VALVE
PRV 30SS
DN 11/2" – 2"; DN40 – DN50

Type 11 B
Flanges

Type 01 A
Flanges

DESCRIPTION

The ADCA PRV30 series ***direct acting, spring-loaded diaphragm sensing, balanced valve*** pressure reducing valves, are designed for use on compressed air, water and other gases or liquids compatible with the materials of construction .
They are suitable for pressure reducing stations at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.

MAIN FEATURES

Compact design.
Balanced valve.
Machined from barstock materials.

OPTIONS: Different soft valves for water and gases.
Relieving-Internal relief valve to allow reduce outlet pressure in a no-flow condition.
Built-in strainer.
Outlet 1/4" gauge connection on body.
Regulating screw with top cap.

USE: Compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: PRV30/SS – Stainless steel.

SIZES: DN 11/2" and DN 2"
DN 40 and DN 50

CONNECTIONS: Female screwed ISO7/1Rp(BS 21) or NPT.
DN40-Flanged EN1092-1 Type11 B PN 40-63
DN50-Flanged EN1092-1 Type01 A PN 40 *
DN50-Flanged EN1092-1 Type11 B PN 63
*Type 11 B PN40 welding neck available, with different face to face dimension.

INSTALLATION: Horizontal installation.
An "Y" strainer should be provided upstream the valve.
See IMI, installation and maintenance instructions.

ORDER REQUIREMENTS : Type of fluid
Maximum operating temperature
Inlet pressure and required outlet pressure
Capacity (maximum and minimum).

CAPACITIES		
Valve Size	*40*	*50*
KVs (m3/h)	12,7	13,7

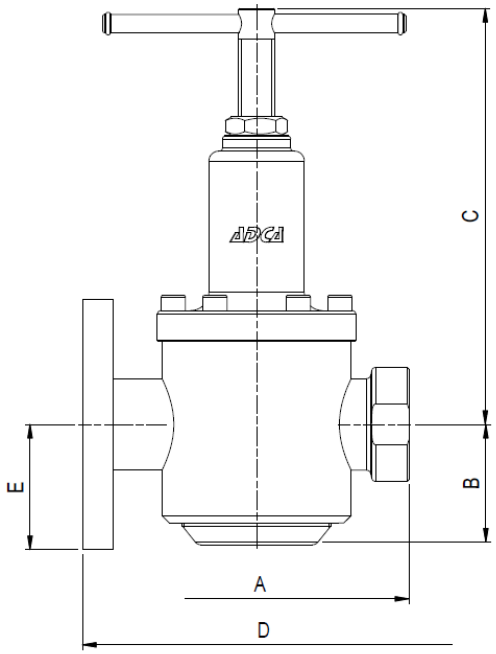
LIMITING CONDITIONS	
Valve model	**PRV30SS**
Body design conditions	PN 63
Max.upstream pressure	50 bar
Max.downstream pressure	15 bar
Min.downstream pressure	0,2 bar
Max.design temperature *	80 °C
Max.recommended reducing ratio	40:1

*Other on request.

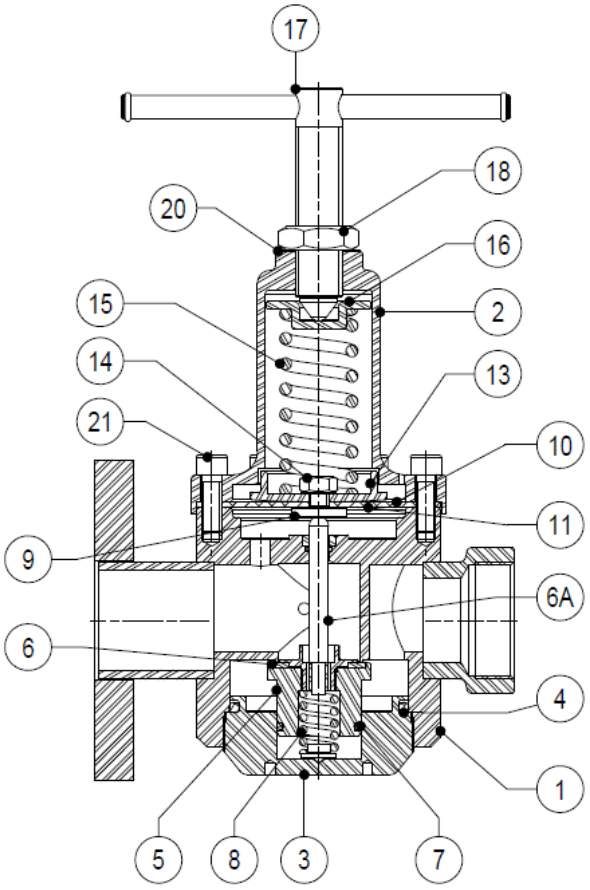
CE MARKING (PED - European Directive 97/23/EC)	
PN 63	**Category**
DN 40-50	1 (CE Marked)

DIMENSIONS (mm)																
Screwed					Flg.PN16/40			Flg.PN63/100				ANSI 150 lbs			ANSI 150 lbs		
SIZE DN	A	B	C	WGT. Kgs	D*	E	WGT. Kgs	D*	E PN63	E PN100	WGT. Kgs	D*	E	WGT. Kgs	D*	E	WGT. Kgs
11/2"-40	205	86	268	13	201	75	16,3	260	85	85	20,3	235	63,5	15,5	248	78	18
2"-50	201	80	274	13,3	** 230	82,5	18,5	300	90	97,5	22,8	254	76	18	267	82,5	20

* Different lenghts and ANSI flanges available on request.
** Only available with flat flanges EN 1092-1 Type01 A. Welding neck Type11 B flanges as option with 300mm minimum face to face dimensions.



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316 / 1.4401
2	TOP COVER	CF8M / 1.4408
3	SEAT COVER	AISI316 / 1.4401
4	* O-RING	NBR
5	* PISTON VALVE	AISI316 / 1.4401
6	* VALVE HEAD	NBR-EPDM-PTFE,etc
6A	PUSHROD	AISI316 / 1.4401
7	* O-RING	NBR-EPDM-PTFE,etc
8	* VALVE SPRING	AISI302 / 1.4300
9	PUSHER DISC	AISI304 / 1.4301
10	* DIAPHRAGM	PTFE
11	* DIAPHRAGM	**NBR
13	SPRING PLATE	AISI304 / 1.4301
14	NUT	ST.STEEL A2-70
15	* ADJUSTMENT SPRING	SPRING STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
20	SPRING IDENT. PLATE	ALUMINIUM
21	BOLTS	ST.STEEL A2-70



* Available spare parts. ** Stainless steel on request .
Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

ORDERING CODES PRV30SS

Valve Model	R30	.	1	W	N	C	R		.		15	
PRV30SS - Diaphragm sensing	R30											
Outlet spring range												
Nº1 - 0,2 to 1,5 bar			1									
Nº2 - 0,3 to 3 bar			2									
Nº3 - 0,8 to 8 bar			3									
Nº4 - 1,5 to 15 bar			4									
Aplication												
Water				W								
Gases				G								
Oxygen (Degreased)				O								
Seal material												
NBR					N							
EPDM					E							
PTFE					T							
FPM/VITON					V							
Maximum inlet pressure												
30 bar						C						
50 bar a)						D						
Diaphragm material												
Stainless steel (Non-relieving)							S					
Rubber/PTFE (Relieving or non-relieving)							R					
Gauge port 1/4"												
Without gauge ports								(1)				
Gauge port on the left side (Related to the flow direction)								4				
Gauge port on the right side (Related to the flow direction)								3				
Gauge ports on both sides								2				
Relieving												
Non-relieving									(1)			
Relieving (Only for non-dangerous gases)									R			
Pipe connection												
Threaded BSP ISO 7/1 Rp										A		
Threaded NPT ANSI B1.20.1										C		
Socket weld SW ANSI B16.11										H		
Butt weld BW ANSI B16.25										I		
Flanged EN1092-1 PN40										N		
Flanged EN1092-1 PN63										O		
Flanged ANSI B16.5 150#										U		
Flanged ANSI B16.5 300#										V		
Flanged ANSI B16.5 600#										W		
Size												
DN 1/2" or DN 15											15	
DN 3/4" or DN 20											20	
….											25	
											32	
											40	
											50	
Special valves / Extras b)												E

(1) Omitted if a standard valve is requested

a) The 50 bar inlet available only with spring Nº4

b)Full description or addicional codes have to be added in case of non-standard combination.

PISTON SENSING PRESSURE REDUCING VALVE
PRV 31SS
DN ½" – ¾"; DN15 – DN20

DESCRIPTION

The ADCA PRV31 series ***direct acting, spring-loaded piston sensing, balanced valve*** pressure reducing valves, are designed for use on compressed air , water and other gases or liquids compatible with the materials of construction .
They are suitable for pressure reducing stations at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.
Connections are female screwed or flanged.

MAIN FEATURES

Compact design.
Balanced valve.
Machined from barstock materials or investment casting.

OPTIONS: Different soft valves for water and gases.
Relieving-Internal relief valve to allow reduce outlet pressure in a no-flow condition.
Built-in strainer.
Outlet 1/4" gauge connection on body.
Regulating screw with top cap.

USE: Compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: PRV31/SS – Stainless steel.

SIZES: DN 1/2" and DN 3/4"
DN 15 and DN 20

CONNECTIONS: Female screwed ISO7/1Rp(BS 21) or NPT.
Flanged EN 1092-1 PN40 – PN63.
Special flanges upon request.

INSTALLATION: Horizontal installation.
An "Y" strainer should be provided upstream the valve.
See IMI, installation and maintenance instructions.

ORDER REQUIREMENTS : Type of fluid
Maximum operating temperature
Inlet pressure and required outlet pressure
Capacity (maximum and minimum).

CAPACITIES		
Valve Size	***15***	***20***
KVs (m3/h)	3	3,5

LIMITING CONDITIONS	
Valve model	**PRV31SS**
Body design conditions	PN 63
Max.upstream pressure	50 bar
Max.downstream pressure	50 bar
Min.downstream pressure	3 bar
Max.design temperature *	80 ºC
Max.recommended reducing ratio	40:1

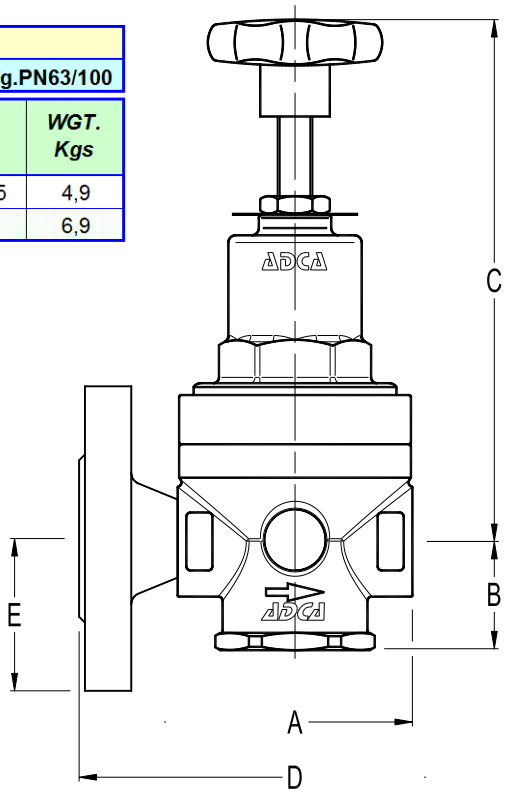
*Other on request.

CE MARKING (PED - European Directive 97/23/EC)	
PN 16 - PN 63	**Category**
DN 15 to 20	SEP - art. 3, paragraph3

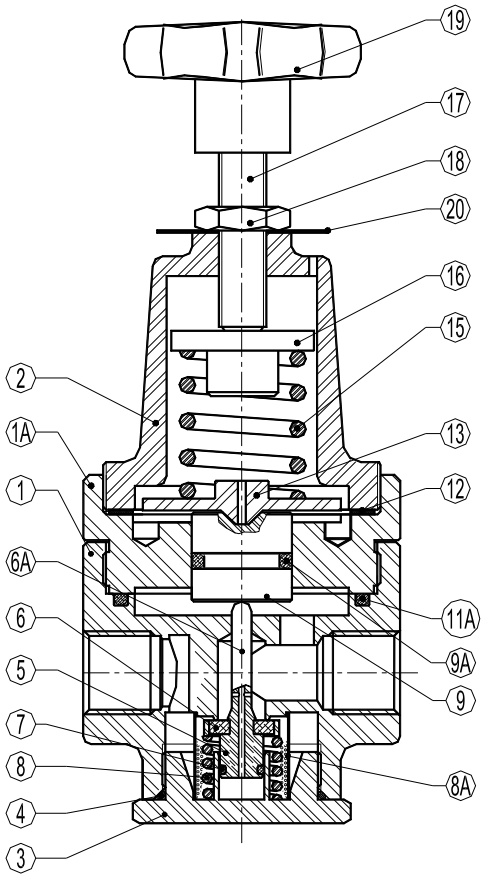
DIMENSIONS (mm)										
Screwed					EN 1092-1 Flg.PN16/40			EN 1092-1 Flg.PN63/100		
SIZE DN	A	B	C	WGT. Kgs	D*	E	WGT. Kgs	D*	E	WGT. Kgs
1/2"-15	80	38	175	2,6	150	47,5	4	210	52,5	4,9
3/4"-20	80	38	175	2,6	150	52,5	4,7	230	70	6,9

* Different lenghts on request.

Note: DN15 PN16/40 face to face dim. was adopted as per DN20



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY (a)	CF8M / 1.4408 (AISI316 / 1.4401)
1A	PISTON SLEEVE	AISI316 / 1.4401
2	TOP COVER (a)	CF8M / 1.4408 (AISI316 / 1.4401)
3	SEAT COVER (a)	CF8M / 1.4408 (AISI316 / 1.4401)
4	* O-RING	NBR
5	* PISTON VALVE	AISI316 / 1.4401
6	* VALVE HEAD	NBR-EPDM-PTFE,etc
6A	PUSHROD	AISI316 / 1.4401
7	* O-RING	NBR-EPDM-PTFE,etc
8	* VALVE SPRING	AISI302 / 1.4300
8A	* STRAINER SCREEN	AISI304 / 1.4301
9	PISTON	AISI316 / 1.4401
9A	* O-RING	NBR-EPDM-PTFE,etc
11A	O-RING	NBR-EPDM-PTFE,etc
12	GASKET	ALUMINIUM
13	SPRING PLATE	AISI304 / 1.4301
15	* ADJUSTMENT SPRING	SPRING STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
19	HANDWHEEL	PLASTIC
20	SPRING IDENT. PLATE	ALUMINIUM



* Available spare parts.

Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

a) Barstock execution on request

ORDERING CODES PRV31SS

Valve Model	R31	.	1	W	N	C		.		15	
PRV31SS - Piston sensing	R31										
Outlet spring range											
Nº5 - 3 to 30 bar			5								
Nº6 - 5 to 50 bar			6								
Aplication											
Water				W							
Gases				G							
Oxygen (Degreased)				O							
Seal material											
NBR					N						
EPDM					E						
PTFE					T						
FPM/VITON					V						
Maximum inlet pressure											
30 bar						C					
50 bar						D					
Gauge port 1/4"											
Without gauge ports							(1)				
Gauge port on the left side (Related to the flow direction)							4				
Gauge port on the right side (Related to the flow direction)							3				
Gauge ports on both sides							2				
Relieving											
Non-relieving								(1)			
Relieving (Only for non-dangerous gases)								R			
Pipe connection											
Threaded BSP ISO 7/1 Rp									A		
Threaded NPT ANSI B1.20.1									C		
Socket weld SW ANSI B16.11									H		
Butt weld BW ANSI B16.25									I		
Flanged EN1092-1 PN40									N		
Flanged EN1092-1 PN63									O		
Flanged ANSI B16.5 150#									U		
Flanged ANSI B16.5 300#									V		
Flanged ANSI B16.5 600#									W		
Size											
DN 1/2" or DN 15										15	
DN 3/4" or DN 20										20	
….										25	
										32	
										40	
										50	
Special valves / Extras b)											E

(1) Omitted if a standard valve is requested

b)Full description or addicional codes have to be added in case of non-standard combination.

PISTON SENSING PRESSURE REDUCING VALVE
PRV 31SS
DN 1” – 11/4”; DN25 – DN32

DESCRIPTION

The ADCA PRV31 series ***direct acting, spring-loaded piston sensing, balanced valve*** pressure reducing valves, are designed for use on compressed air , water and other gases or liquids compatible with the materials of the construction .
They are suitable for pressure reducing stations at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.
Connections are female screwed or flanged.

MAIN FEATURES

Compact design.
Balanced valve.

PN40

PN63

OPTIONS: Different soft valves for water and gases.
Relieving-Internal relief valve to allow reduce outlet pressure in a no-flow condition.
Outlet 1/4” gauge connection on body.
Regulating screw with top cap.

USE: Compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: PRV31/SS – Stainless steel.

SIZES: DN 1” and DN 11/4”
DN 25 and DN 32

CONNECTIONS: Female screwed ISO7/1Rp(BS 21) or NPT.
Flanged EN 1092-1 PN40 -PN63.
Special flanges upon request.

INSTALLATION: Horizontal installation.
An “Y” strainer should be provided upstream the valve.
See IMI, installation and maintenance instructions.

ORDER REQUIREMENTS : Type of fluid
Maximum operating temperature
Inlet pressure and required outlet pressure
Capacity (maximum and minimum).

CAPACITIES		
Valve Size	***25***	***32***
KVs (m3/h)	7,5	8,2

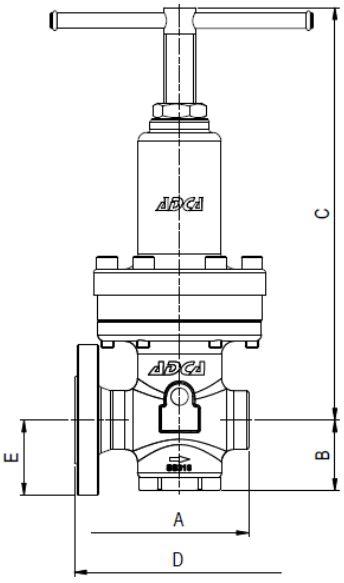
LIMITING CONDITIONS	
Valve model	**PRV31SS**
Body design conditions	PN 63
Max.upstream pressure	50 bar
Max.downstream pressure	50 bar
Min.downstream pressure	3 bar
Max.design temperature *	80 ºC
Max.recommended reducing ratio	40:1

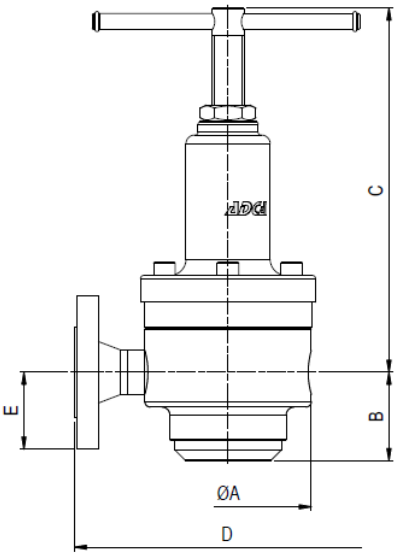
*Other on request.

CE MARKING (PED - European Directive 97/23/EC)	
PN 16 - PN 63	**Category**
DN 25 to 32	SEP - art. 3, paragraph3

DIMENSIONS (mm) - CASTED VERSION							
Screwed					Flg.PN16/40		
SIZE DN	A	B	C	WGT. Kgs	D*	E	WGT. Kgs
1"-25	105	60	320	8,6	160	57,5	10,7

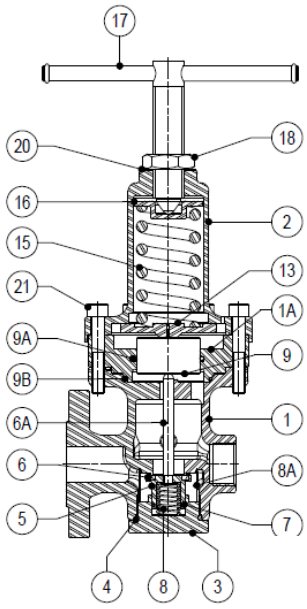
* Different lenghts on request.





DIMENSIONS (mm) - BARSTOCK VERSION																
Screwed					Flg.PN16/40			Flg.PN63/100			ANSI 150 lbs			ANSI 300 lbs		
SIZE DN	A	B	C	Kg	D*	E	Kg	D*	E	Kg	D*	E	Kg	D*	E	Kg
1"-25	125	66	275	9,7	230	58	12	230	70	15	230	54	14	230	62	17
11/4"-32	125	66	275	9,7	260	70	14	260	78	17	260	59	15	260	67	18

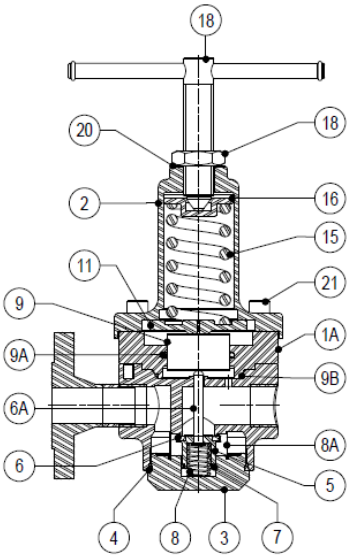
* Different lenghts on request.



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316 / 1.4401 ; CF8M / 1.4408
1A	PISTON SLEEVE	AISI316 / 1.4401
2	TOP COVER	CF8M / 1.4408
3	SEAT COVER	AISI316 / 1.4401
4	* O-RING	NBR
5	* PISTON VALVE	AISI316 / 1.4401
6	* VALVE HEAD	NBR-EPDM-PTFE,etc
6A	PUSHROD	AISI316 / 1.4401
7	* O-RING	NBR-EPDM-PTFE,etc
8	* VALVE SPRING	AISI302 / 1.4300
8A	* STRAINER SCREEN	AISI304 / 1.4301
9	PISTON	AISI316 / 1.4401
9A	* O-RING	NBR-EPDM-PTFE,etc
9B	*O-RING	NBR-EPDM-PTFE,etc
13	SPRING PLATE	AISI304 / 1.4301
15	* ADJUSTMENT SPRING	SPRING STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
20	SPRING IDENT. PLATE	ALUMINIUM
21	BOLTS	STAINLESS ST. A2-70

* Available spare parts.

Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.



ORDERING CODES PRV31SS

Valve Model	R31	.	1	W	N	C		.		15	
PRV31SS - Piston sensing	R31										
Outlet spring range											
Nº5 - 3 to 30 bar			5								
Nº6 - 5 to 50 bar			6								
Aplication											
Water				W							
Gases				G							
Oxygen (Degreased)				O							
Seal material											
NBR					N						
EPDM					E						
PTFE					T						
FPM/VITON					V						
Maximum inlet pressure											
30 bar						C					
50 bar						D					
Gauge port 1/4"											
Without gauge ports							(1)				
Gauge port on the left side (Related to the flow direction)							4				
Gauge port on the right side (Related to the flow direction)							3				
Gauge ports on both sides							2				
Relieving											
Non-relieving								(1)			
Relieving (Only for non-dangerous gases)								R			
Pipe connection											
Threaded BSP ISO 7/1 Rp									A		
Threaded NPT ANSI B1.20.1									C		
Socket weld SW ANSI B16.11									H		
Butt weld BW ANSI B16.25									I		
Flanged EN1092-1 PN40									N		
Flanged EN1092-1 PN63									O		
Flanged ANSI B16.5 150#									U		
Flanged ANSI B16.5 300#									V		
Flanged ANSI B16.5 600#									W		
Size											
DN 1/2" or DN 15										15	
DN 3/4" or DN 20										20	
….										25	
										32	
										40	
										50	
Special valves / Extras b)											E

(1) Omitted if a standard valve is requested

b)Full description or addicional codes have to be added in case of non-standard combination.

PISTON SENSING PRESSURE REDUCING VALVE
PRV 31SS
DN 11/2" – 2"; DN40 – DN50

Type 11 B Flanges

Type 01 A Flanges

DESCRIPTION

The ADCA PRV31 series ***direct acting, spring-loaded piston sensing, balanced valve*** pressure reducing valves, are designed for use on compressed air , water and other gases or liquids compatible with the materials of the construction .
They are suitable for pressure reducing stations at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.
Connections are female screwed or flanged.

MAIN FEATURES

Compact design.
Balanced valve.
Machined from barstock materials.

OPTIONS:	Different soft valves for water and gases. Relieving-Internal relief valve to allow reduce outlet pressure in a no-flow condition. Built-in strainer. Outlet 1/4" gauge connection on body. Regulating screw with top cap.
USE:	Compressed air, water and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	PRV31/SS – Stainless steel.
SIZES:	DN 11/2" and DN 2" DN 40 and DN 50
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) or NPT. DN40-Flanged EN1092-1 Type11 B PN 40-63 DN50-Flanged EN1092-1 Type01 A PN 40 * DN50-Flanged EN1092-1 Type11 B PN 63 *Type 11 B PN40 welding neck available, with different face to face dimension.
INSTALLATION:	Horizontal installation. An "Y" strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Inlet pressure and required outlet pressure Capacity (maximum and minimum).

CAPACITIES		
Valve Size	*40*	*50*
KVs (m3/h)	14,4	15,4

LIMITING CONDITIONS	
Valve model	**PRV31SS**
Body design conditions	PN 63
Max.upstream pressure	50 bar
Max.downstream pressure	50 bar
Min.downstream pressure	3 bar
Max.design temperature *	80 °C
Max.recommended reducing ratio	40:1

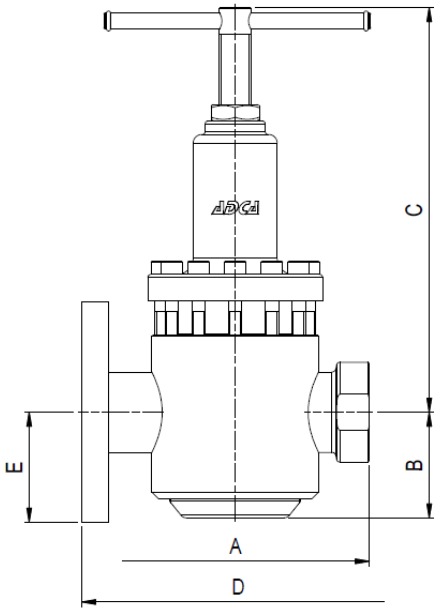
*Other on request.

CE MARKING (PED - European Directive 97/23/EC)	
PN 63	**Category**
DN 40-50	1 (CE Marked)

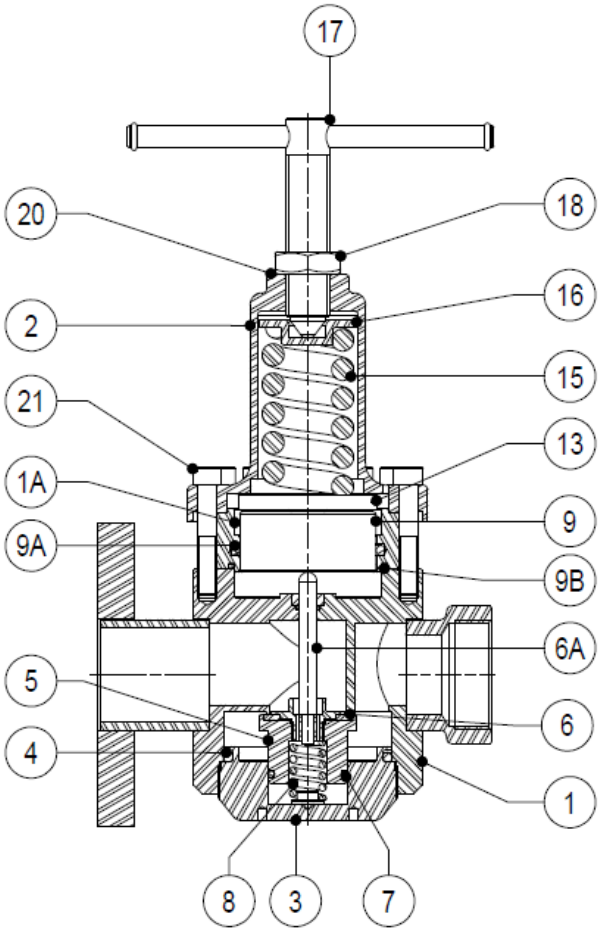
DIMENSIONS (mm)																
Screwed					Flg.PN16/40			Flg.PN63/100				ANSI 150 lbs			ANSI 300 lbs		
SIZE DN	A	B	C	WGT. Kgs	D*	E	WGT. Kgs	D*	E PN63	E PN100	WGT. Kgs	D*	E	WGT. Kgs	D*	E	WGT. Kgs
11/2"-40	205	86	305	14,8	201	75	18,1	260	85	85	22,1	235	63,5	17,5	248	78	20
2"-50	201	80	305	15,1	** 230	82,5	20,3	300	90	97,5	24,6	254	76	20	267	82,5	21,7

* Different lenghts and ANSI flanges available on request.

** Only available with flat flanges EN 1092-1 Type01 A. Welding neck Type11 B flanges as option with 300mm minimum face to face dimensions.



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316 / 1.4401
1A	PISTON SLEEVE	AISI316 / 1.4401
2	TOP COVER	CF8M / 1.4408
3	SEAT COVER	AISI316 / 1.4401
4	* O-RING	NBR
5	* PISTON VALVE	AISI316 / 1.4401
6	* VALVE HEAD	NBR-EPDM-PTFE,etc
6A	PUSHROD	AISI316 / 1.4401
7	* O-RING	NBR-EPDM-PTFE,etc
8	* VALVE SPRING	AISI302 / 1.4300
9	PISTON	AISI316 / 1.4401
9A	* O-RING	NBR-EPDM-PTFE,etc
9B	*O-RING	NBR-EPDM-PTFE,etc
13	SPRING PLATE	AISI304 / 1.4301
15	* ADJUSTMENT SPRING	SPRING STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
20	SPRING IDENT. PLATE	ALUMINIUM
21	BOLTS	STAINLESS ST. A2-70



* Available spare parts.

Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

ORDERING CODES PRV31SS

Valve Model	R31	.	1	W	N	C		.		15	
PRV31SS - Piston sensing	R31										
Outlet spring range											
Nº5 - 3 to 30 bar			5								
Nº6 - 5 to 50 bar			6								
Aplication											
Water				W							
Gases				G							
Oxygen (Degreased)				O							
Seal material											
NBR					N						
EPDM					E						
PTFE					T						
FPM/VITON					V						
Maximum inlet pressure											
30 bar						C					
50 bar						D					
Gauge port 1/4"											
Without gauge ports							(1)				
Gauge port on the left side (Related to the flow direction)							4				
Gauge port on the right side (Related to the flow direction)							3				
Gauge ports on both sides							2				
Relieving											
Non-relieving								(1)			
Relieving (Only for non-dangerous gases)								R			
Pipe connection											
Threaded BSP ISO 7/1 Rp									A		
Threaded NPT ANSI B1.20.1									C		
Socket weld SW ANSI B16.11									H		
Butt weld BW ANSI B16.25									I		
Flanged EN1092-1 PN40									N		
Flanged EN1092-1 PN63									O		
Flanged ANSI B16.5 150#									U		
Flanged ANSI B16.5 300#									V		
Flanged ANSI B16.5 600#									W		
Size											
DN 1/2" or DN 15										15	
DN 3/4" or DN 20										20	
….										25	
										32	
										40	
										50	
Special valves / Extras b)											E

(1) Omitted if a standard valve is requested

b)Full description or addicional codes have to be added in case of non-standard combination.

PISTON SENSING PRESSURE REDUCING VALVE
PRV 41SS
DN 1/4" – 1/2"; DN15

DESCRIPTION

The ADCA PRV41 series ***direct acting, spring-loaded piston sensing, balanced valve*** pressure reducing valves, are designed for use on compressed air , water and other gases or liquids compatible with the materials of the construction .
They are suitable for pressure reducing stations at the point of use on different industrial applications.
Connections are female screwed or flanged.

MAIN FEATURES

Compact design.
Balanced valve.
Machined from barstock materials .

OPTIONS:	Different soft valves for water and gases. Relieving-Internal relief valve to allow reduce outlet pressure in a no-flow condition. Outlet 1/4" gauge connection on body. Regulating screw with top cap.
USE:	Compressed air, water and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	PRV41/SS – Stainless steel.
SIZES:	DN 1/4", 3/8" and ½" DN 15
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) or NPT. Flanged EN 1092-1 PN40 - PN320. Special flanges upon request.
INSTALLATION:	Horizontal or vertical installation. An "Y" strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Inlet pressure and required outlet pressure Capacity (maximum and minimum).

CAPACITIES			
Valve Size	***8***	***10***	***15***
KV's (m3/h)	0,7	0,8	0,9

LIMITING CONDITIONS	
Valve model	**PRV41SS**
Body design conditions	PN 320
Max.upstream pressure	220 bar
Max.downstream pressure	200 bar
Min.downstream pressure	3 bar
Max.design temperature *	80 ºC
Max.recommended reducing ratio	40:1

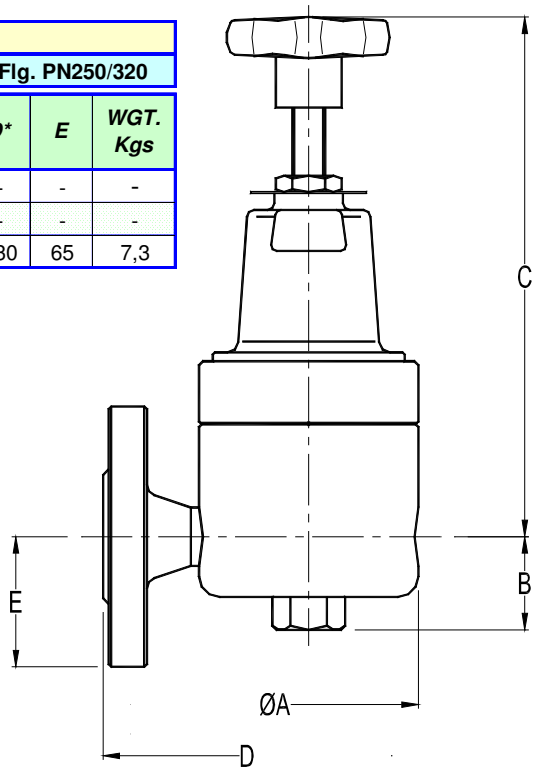
*Other on request.

CE MARKING (PED- European Directive 97/23/EC)	
PN 320	**Category**
DN10 to 15	SEP - art. 3, paragraph3

DIMENSIONS (mm)													
DIMENSIONS (mm)-Screwed					Flg. PN16/40			Flg. PN63/100			Flg. PN250/320		
SIZE DN	A	B	C	WGT. Kgs	D*	E	WGT. Kgs	D*	E	WGT. Kgs	D*	E	WGT. Kgs
1/4"	80	35	200	2,7	-	-	-	-	-	-	-	-	-
3/8"	80	35	200	2,7	-	-	-	-	-	-	-	-	-
1/2"-15	80	35	200	2,7	150	47,5	4,1	210	52,5	5	230	65	7,3

* Different lenghts on request.

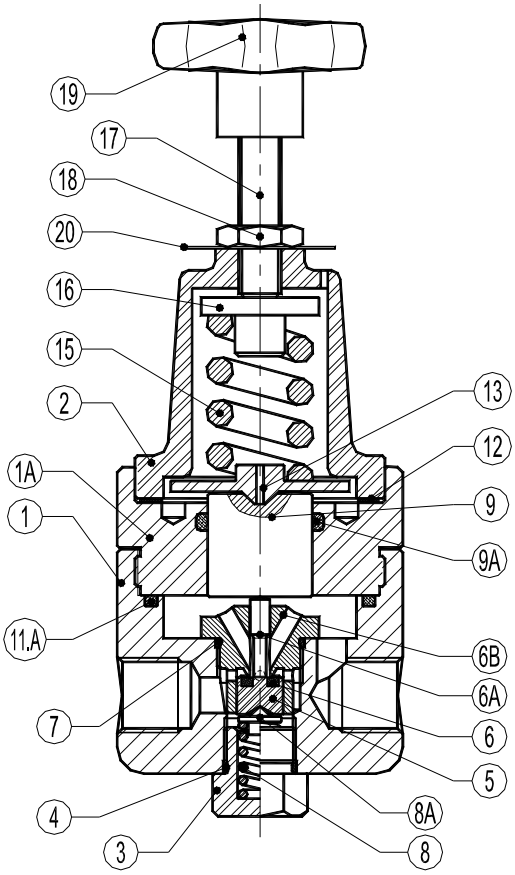
Note: DN15 PN16/40 face to face dim.was adopted as per DN20



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	AISI316 / 1.4401 ; CF8M / 1.4408
1A	PISTON SLEEVE	AISI316 / 1.4401 ; CF8M / 1.4408
2	TOP COVER	AISI316 / 1.4401 ; CF8M / 1.4408
3	SEAT COVER	AISI316 / 1.4401
4	* O-RING	NBR
5	* PISTON VALVE	AISI316 / 1.4401
6	* VALVE HEAD	NBR-EPDM-PTFE,etc
6A	PUSHROD	AISI304 / 1.4301
6B	* VALVE SEAT	HARDENED ST.STEEL
7	* O-RING	NBR-EPDM-PTFE,etc
8	* VALVE SPRING	AISI302 / 1.4300
8A	* STRAINER SCREEN	AISI304 / 1.4301
9	PISTON	AISI316 / 1.4401
9A	O -RING	NBR-EPDM-PTFE,etc
11A	O -RING	NBR-EPDM-PTFE,etc
12	GASKET	ALUMINIUM
13	SPRING PLATE	AISI304 / 1.4301
15	* ADJUSTMENT SPRING	SPRING STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
19	HANDWHEEL	PLASTIC
20	SPRING IDENT. PLATE	ALUMINIUM

* Available spare parts.

Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.



ORDERING CODES PRV41

Valve Model	R41	.	5	W	N	C		.		15	
PRV41SS - Piston sensing	R41										
Outlet spring range											
Nº5 - 3 to 30 bar			5								
Nº6 - 5 to 50 bar			6								
Nº7 - 20 to 200 bar			7								
Aplication											
Water				W							
Gases				G							
Oxygen (Degreased)				O							
Seal material											
NBR					N						
EPDM					E						
PTFE					T						
FPM/VITON					V						
Maximum inlet pressure											
80 bar						E					
220 bar						F					
Gauge port 1/4"											
Without gauge ports							(1)				
Gauge port on the left side (Related to the flow direction)							4				
Gauge port on the right side (Related to the flow direction)							3				
Gauge ports on both sides							2				
Relieving											
Non-relieving								(1)			
Relieving (Only for non-dangerous gases)								R			
Pipe connection											
Threaded BSP ISO 7/1 Rp									A		
Threaded NPT ANSI B1.20.1									C		
Socket weld SW ANSI B16.11									H		
Butt weld BW ANSI B16.25									I		
Flanged EN1092-1 PN40									N		
Flanged EN1092-1 PN63									O		
Flanged EN1092-1 PN100									P		
Flanged EN1092-1 PN160									Q		
Flanged EN1092-1 PN250									R		
Flanged EN1092-1 PN320									S		
Flanged ANSI B16.5 150#									U		
Flanged ANSI B16.5 300#									V		
Flanged ANSI B16.5 600#									W		
Size											
DN 1/4"										08	
DN 3/8"										10	
DN 1/2" or DN 15										15	
Special valves / Extras b)											E

(1) Omitted if a standard valve is requested

b)Full description or addicional codes have to be added in case of non-standard combination.

DIAPHRAGM SENSING PRESSURE SUSTAINING VALVE
PS4

DESCRIPTION

The ADCA PS4 series ***direct acting, spring-loaded diaphragm sensing,*** pressure sustaining valves are designed for use on compressed air , water and other gases or liquids compatible with the materials of the construction .
In general this valve maintains the upstream pressure under control. They are suitable for pressure sustaining applications where small loads are involved. They are also specifically recommended to operate as pilot valves in combination with other pressure regulators (SP4 and SP6).
Connections are female screwed.

MAIN FEATURES

Compact design.
High sensibility external diaphragm sensing connection

OPTIONS:	Different soft valves for water and gases. 1/4" pressure gauge connection on body. Regulating screw with top cap.
USE:	Compressed air, water and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	PS4S – Cast steel PS4I – Stainless steel wetted parts (complete stainless steel on request)
SIZES:	DN 1/2" to DN 1"
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) or NPT.
INSTALLATION:	Horizontal installation. An "Y" strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Required opening pressure Capacity (maximum and minimum).

CAPACITIES			
Valve Size	***15***	***20***	***25***
KVs (m3/h)	3,6	3,6	3,7

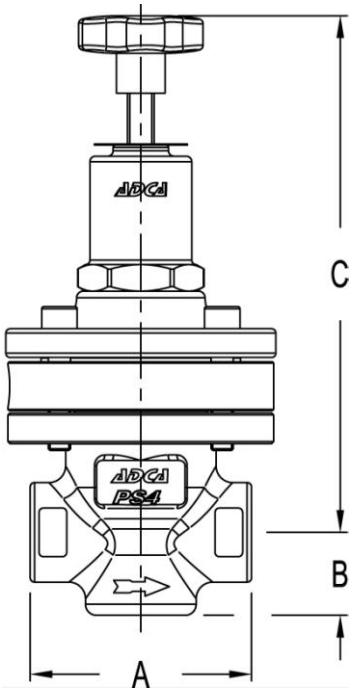
LIMITING CONDITIONS	
Valve model	**PS4**
Body design conditions	PN 40
Max.upstream pressure	15 bar
Min.upstream pressure	0,35 bar
Max.design temperature *	80 °C

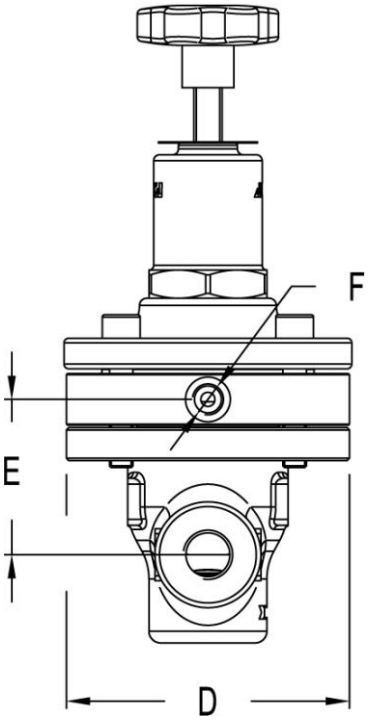
*Other on request.

Sustaining valves are not substitute of safety valves or vacuum relief valves

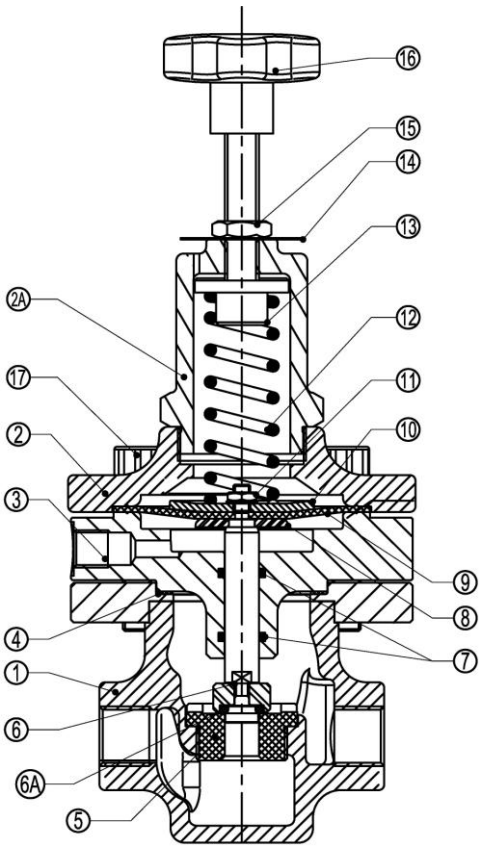
CE MARKING (PED-European Directive 97/23/EC)	
PN 16-PN40	**Category**
DN 15 to 25	SEP - art. 3, paragraph3

DIMENSIONS (mm)							
SIZE DN	A	B	C	D	E	F	WGT. Kgs
15	100	37,5	247	120	66	1/4"	8,6
20	100	37,5	247	120	66	1/4"	8,6
25	100	37,5	247	120	66	1/4"	8,6





MATERIALS			
POS.	DESIGNATION	PS4S	PS4I
1	VALVE BODY	ASTM A216WCB / 1.0619	CF8M / 1.4408
2	TOP COVER	CF8 / 1.4308	CF8 / 1.4308
2A	COVER SPRING	CF8 / 1.4308	CF8 / 1.4308
3	GUIDE PLATE	S355J2G3 / 1.0570	AISI316 / 1.4401
4	* GASKET	GRAPH.-EPDM-PTFE,...	GRAPH.-EPDM-PTFE,...
5	* VALVE SEAT	AISI316 / 1.4401	AISI316 / 1.4401
6	* STEM AND PLUG	AISI316 / 1.4401	AISI316 / 1.4401
6A	* VALVE SEALING	NBR-EPDM-PTFE,etc	NBR-EPDM-PTFE,etc
7	* O-RING	NBR-EPDM-PTFE,etc	NBR-EPDM-PTFE,etc
8	PUSHER DISC	AISI316 / 1.4401	AISI316 / 1.4401
9	* DIAPHRAGM	NBR-EPDM-PTFE,etc	NBR-EPDM-PTFE,etc
10	SPRING PLATE	AISI304 / 1.4301	AISI304 / 1.4301
11	NUT	ST.STEEL A2-70	ST.STEEL A2-70
12	* ADJUST. SPRING	SPRING STEEL	SPRING STEEL
13	TOP SPRING PLATE	BRASS	BRASS
14	SPRING ID. PLATE	ALUMINIUM	ALUMINIUM
15	LOCKNUT	ST.STEEL A2-70	ST.STEEL A2-70
16	HANDWHEEL	PLASTIC	PLASTIC
17	**BOLTS**	**STEEL 8.8**	**A2 - 70**



* Available spare parts.

Remarks: All valves has a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

ORDERING CODES PS4

Valve Model	PS4S	.	1	S		S		.A	08	
PS7S Carbon steel pilot regulator	PS4S									
PS7SS Stainless steel pilot regulator	PS4I									
Operating spring range (see table)										
Green (0,35 to 2 bar)			1							
Blue (1,5 to 5,5 bar)			2							
Red (3,5 to 8,5 bar)			3							
Black (7 to 17 bar)			4							
Aplication										
Gases				G						
Water				W						
Seal material										
EPDM					E					
PTFE					T					
FPM/VITON					V					
Diaphragm										
NBR						N				
Gauge port 1/8" *										
Without gauge ports							(1)			
Gauge port on the left side (Related to the flow direction)							4			
Gauge port on the right side (Related to the flow direction)							3			
Gauge ports on both sides							2			
Pipe connection										
Threaded BSP ISO 7/1 Rp								A		
Threaded NPT ANSI B1.20.1								C		
Size										
DN 1/2"									15	
DN 3/4"									20	
DN 1"									25	
Special valves / Extras a)										E

* Gauge port can also be used as external sensing line.

(1) Omitted if a standard valve is requested

a)Full description or addicional codes have to be added in case of non-standard combination.

DIAPHRAGM SENSING PRESSURE SUSTAINING VALVE
PS30SS
DN ½” – 2”; DN15 – DN50

DESCRIPTION

The ADCA PS30 series ***direct acting, spring-loaded diaphragm sensing,*** pressure sustaining valves are designed for use on compressed air , water and other gases or liquids compatible with the materials of the construction .
They are suitable for pressure sustaining applications where low capacity is required.
In general this valve maintains the upstream pressure under control.
Connections are female screwed or flanged.

Size shown: DN ½”

MAIN FEATURES

Compact design.
Machined from barstock materials or investment casting.

OPTIONS:	Different soft valves for water and gases. 1/4” gauge connection on body. Regulating screw with top cap.
USE:	Compressed air, water and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	PS30/SS – Stainless steel.
SIZES:	DN 1/2” to DN 2” DN 15 to DN 50
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) or NPT. Flanged EN 1092-1 PN40-PN63. Special flanges upon request.
INSTALLATION:	Horizontal installation. An “Y” strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Required opening pressure Capacity (maximum and minimum).

CAPACITIES						
Valve Size	***15***	***20***	***25***	***32***	***40***	***50***
KVs (m3/h)	2,1	2,4	6,5	7,2	12,7	13,7

LIMITING CONDITIONS	
Valve model	**PS30SS**
Body design conditions	PN 63
Max.upstream pressure	15 bar
Min.upstream pressure	0,2 bar
Max.design temperature *	80 °C

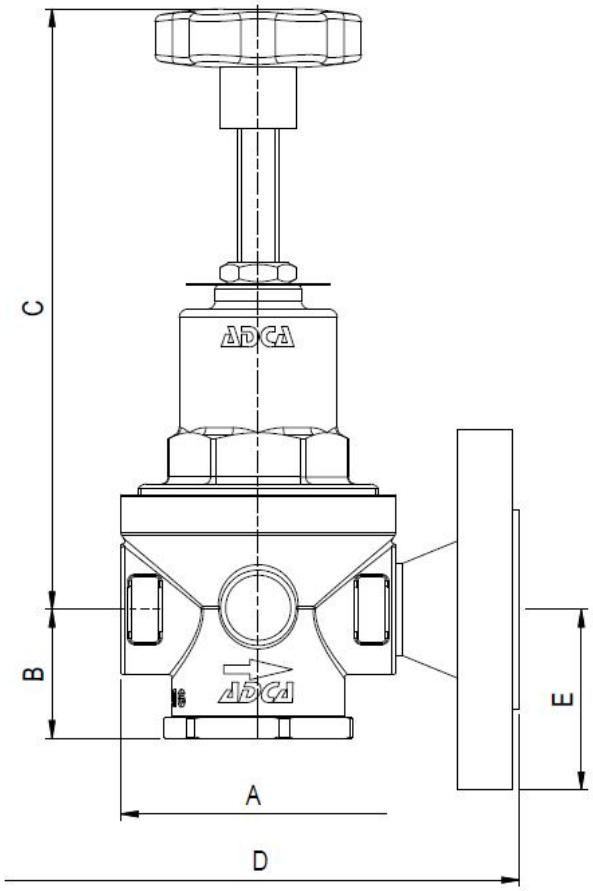
*Other on request.

Sustaining valves are not substitute of safety valves or vacuum relief valves

CE MARKING (PED-European Directive 97/23/EC)		
PN 16	**PN 40-PN63**	**Category**
DN 15 to 50	DN 15 to 32	SEP
/	DN 40 - DN50	1 (CE Marked)

DIMENSIONS (mm)-Screwed				
SIZE DN	A	B	C	WGT. Kgs
1/2"-15	80	38	175	1,8
3/4"-20	80	38	175	1,8
1" - 25	105	66	250	6,3
11/4"-32	125	66	250	7,5
11/2"-40	205	86	270	13
2" - 50	201	80	274	13,3

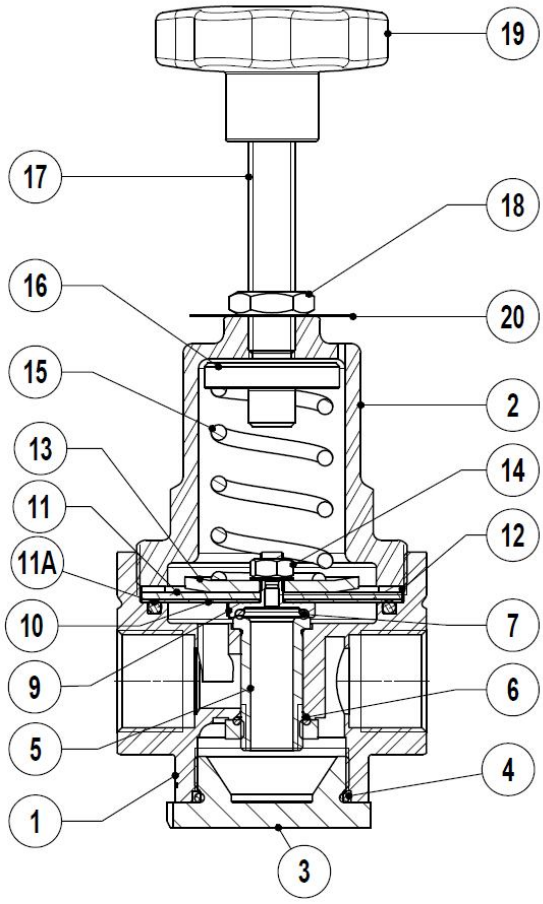
Different face to face dimentions on request.



DIMENSIONS (mm) - Flanged							
EN 1092-1 Flg.PN16/PN40				EN 1092-1 Flg.PN63/PN100			
SIZE DN	D*	E	WGT. Kgs	D*	E PN63	E PN100	WGT. Kgs
15	150	47,5	3,2	210	52,5	52,5	4
20	150	52,5	3,8	230	70	70	6
25	160 (230)	57,5	8,5(10,5)	230	70	70	12,8
32	260	70	11,4	260	77,5	77,5	14,4
40	200	75	16,3	260	85	85	20,3
50	**230	82,5	18,5	300	90	97,5	22,8

* Different lenghts and ANSI flanges available on request.
** Only available with flat flanges EN 1092-1 Type01 A. Welding neck Type11 B flanges as option with 300mm minimum face to face dimensions.
() Alternative

MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY (a)	CF8M / 1.4408 (AISI316 / 1.4401)
2	TOP COVER (b)	CF8M / 1.4408 (AISI316 / 1.4401)
3	SEAT COVER (a)	CF8M / 1.4408 (AISI316 / 1.4401)
4	* O-RING	NBR
5	VALVE SEAT	AISI316 / 1.4401
6	SEALING	NBR
7	* O-RING	NBR-EPDM-PTFE,etc
9	VALVE PLUG	AISI316 / 1.4401
10	* DIAPHRAGM	PTFE
11	* DIAPHRAGM	NBR
11A	*O-RING	NBR-EPDM-PTFE,etc
12	GASKET	ALUMINIUM
13	SPRING PLATE	AISI304 / 1.4301
14	NUT	ST.STEEL A2-70
15	* ADJUSTMENT SPRING	SPRING STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
19	HANDWHEEL	PLASTIC
20	SPRING IDENT. PLATE	ALUMINIUM



* Available spare parts.
Remarks: All valves has a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.
a) Barstock execution on request (standard for sizes DN32-50)
b) Barstock execution on request

PISTON SENSING PRESSURE SUSTAINING VALVE
PS31SS
DN ½" – 2"; DN15 – DN50

Size shown: DN15 - ½"

DESCRIPTION

The ADCA PS31 series ***direct acting, spring-loaded piston sensing,*** pressure sustaining valves are designed for use on compressed air , water and other gases or liquids compatible with the materials of the construction .
They are suitable for pressure sustaining applications where low capacity is required.
In general this valve maintains the upstream pressure under control.
Connections are female screwed or flanged.

MAIN FEATURES

Compact design.
Machined from barstock materials or investment casting.

OPTIONS:	Different soft valves for water and gases. Built-in strainer. 1/4" gauge connection on body. Regulating screw with top cap.
USE:	Compressed air, water and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	PS31/SS – Stainless steel.
SIZES:	DN 1/2" to DN 2" DN 15 to DN 50
CONNECTIONS:	Female screwed ISO7/1Rp(BS 21) or NPT. Flanged EN 1092-1 PN40 – PN63. Special flanges upon request.
INSTALLATION:	Horizontal installation. An "Y" strainer should be provided upstream the valve. See IMI, installation and maintenance instructions.
ORDER REQUIREMENTS :	Type of fluid Maximum operating temperature Required opening pressure Capacity (maximum and minimum).

CAPACITIES						
Valve Size	***15***	***20***	***25***	***32***	***40***	***50***
KVs (m3/h)	3	3,5	7,5	8,2	14,4	15,4

LIMITING CONDITIONS	
Valve model	**PS31SS**
Body design conditions	PN 63
Max.upstream pressure	50 bar
Min.upstream pressure	3 bar
Max.design temperature *	80 ºC

*Other on request.

Sustaining valves are not substitute of safety valves or vacuum relief valves

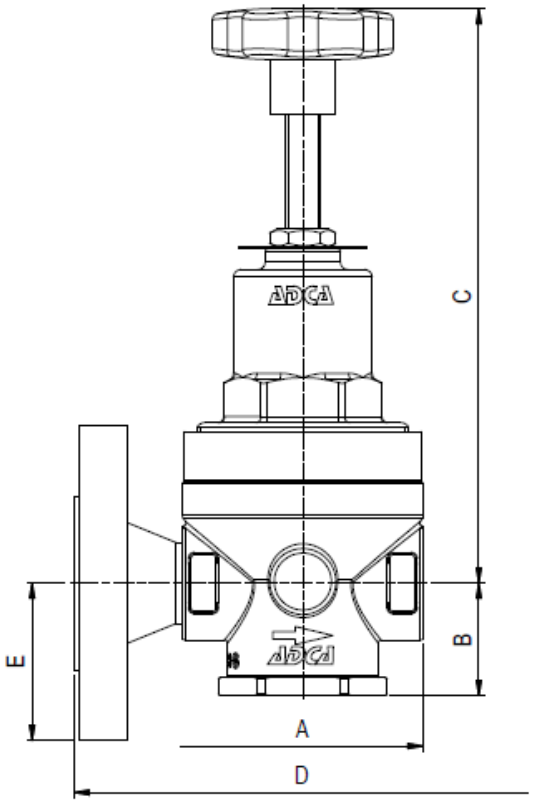
CE MARKING (PED-European Directive 97/23/EC)		
PN 16	**PN 40-PN63**	**Category**
DN 15 to 50	DN 15 to 32	SEP
/	DN 40 - DN50	1 (CE Marked)

DIMENSIONS (mm)-Screwed				
SIZE DN	A	B	C	WGT. Kgs
1/2"-15	80	38	175	2,6
3/4"-20	80	38	175	2,6
1" - 25	105	66	320	8,6
11/4"-32	125	66	320	9,7
11/2"-40	205	86	305	14,8
2" - 50	201	80	305	15,1

* Different face to face dimensions on request.

DIMENSIONS (mm) - Flanged							
EN 1092-1 Flg.PN16/PN40				EN 1092-1 Flg.PN63/PN100			
SIZE DN	D*	E	WGT. Kgs	D*	E PN63	E PN100	WGT. Kgs
15	150	47,5	4	210	52,5	52,5	4,9
20	150	52,5	4,7	230	70	70	6,9
25	160 (230)	57,5	10,7(12,4)	230	70	70	15,1
32	260	70	13,5	260	77,5	77,5	16,5
40	200	75	18,1	260	85	85	22,1
50	**230	82,5	20,3	300	90	97,5	24,6

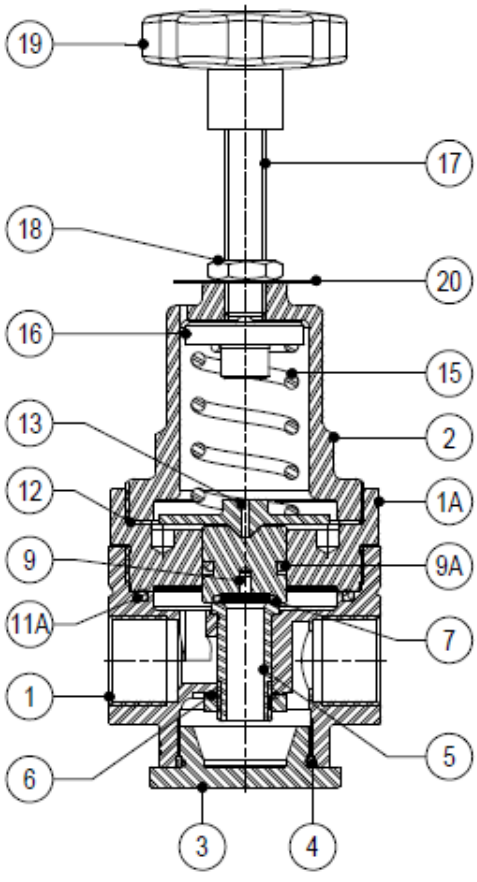
* Different lenghts and ANSI flanges available on request.
** Only available with flat flanges EN 1092-1 Type01 A. Welding neck Type11 B flanges as option with 300mm minimum face to face dimensions.
() Alternative



Size shown: DN15 - ½"

MATERIALS		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY (a)	CF8M / 1.4408 (AISI316 / 1.4401)
1A	PISTON SLEEVE	AISI316 / 1.4401
2	TOP COVER (b)	CF8M / 1.4408 (AISI316 / 1.4401)
3	SEAT COVER (a)	CF8M / 1.4408 (AISI316 / 1.4401)
4	* O-RING	NBR
5	VALVE SEAT	AISI316 / 1.4401
6	SEALING	NBR
7	* O-RING	NBR-EPDM-PTFE,etc
9	PISTON	AISI316 / 1.4401
9A	* O-RING	NBR-EPDM-PTFE,etc
11A	O-RING	NBR-EPDM-PTFE,etc
12	GASKET	ALUMINIUM
13	SPRING PLATE	AISI304 / 1.4301
15	* ADJUSTMENT SPRING	SPRING STEEL
16	TOP SPRING PLATE	BRASS
17	ADJUSTMENT SCREW	AISI304 / 1.4301
18	LOCKNUT	ST.STEEL A2-70
19	HANDWHEEL	PLASTIC
20	SPRING IDENT. PLATE	ALUMINIUM

* Available spare parts.
Remarks: All valves has a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.
a) Barstock execution on request (standard for sizes DN32-50)
b) Barstock execution on request



PILOT OPERATED PRESSURE SUSTAINING VALVES
PS47 (Steel) PS47I (St.Steel)

DESCRIPTION

The ADCA PS47 pilot operated pressure sustaining valves are designed for use on steam, compressed air, nitrogen and other gases compatible with the construction and they can be installed throughout all industries.
The pressure sustaining valves are particularly recommended in those systems where a limited flow rate is available and it is necessary to guaranty the supply to some critical process applications. Installing this valve in the supply of non-critical application limited to the minimum required pressure, they will close in case of excess of consumption and consequent pressure drop in the system, keeping the remaining flow available for the critical application.
In general this valve maintains the upstream pressure under control.
Connections are flanged or threaded.

MAIN FEATURES

Robust complete steel or stainless steel construction
Guided piston and valve stem
Hardened plug

OPTIONS:	Soft faced valve plug for gases and steam Special pressure top for low pressures Drain connection in bottom cover Stellited plug and seat
USE:	Saturated steam, compressed air and other gases (Group 2) compatible with the construction (except oxygen).

AVAILABLE MODELS:	PS47 - standard model for steam PS47G -compressed air and gases
VALVE SIZES:	DN15 to DN50
CONNECTIONS:	Flanged EN1092-1 PN40 or ANSI Threaded BSP, NPT, SW.
INSTALLATION:	Horizontal installation. An "Y" strainer, steam separator and steam trap should be provided upstream the valve.
ORDER REQUIREMENTS:	Type of fluid Maximum operating temperature Inlet and outlet pressure Flow rate (maximum and minimum)

HOW TO SELECT: Never size the valve according to the pipe diameter in which it has to be fitted but according to the required actual flow of fluid.
For valve selection please consult the factory.

VALVE LIMITING CONDITIONS:	Body design conditions: PN40 40 bar at 120ºC 32 bar at 239ºC 28 bar at 300ºC Min.working temperature: -10ºC
Maximum upstream pressure :	17 bar
Minimum upstream pressure :	0,7 bar

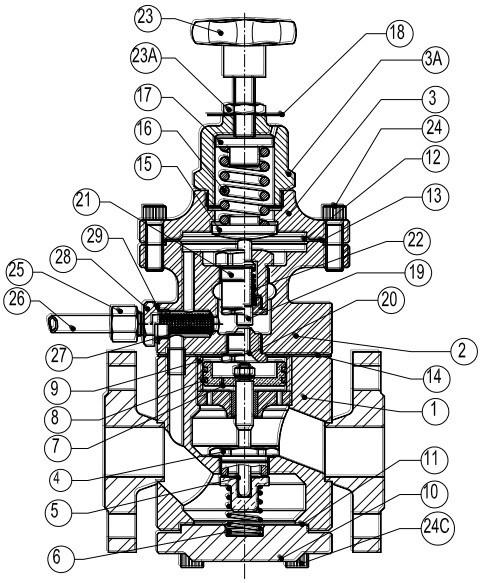
Pressure and temperature may change if soft seating or piston rings are used.

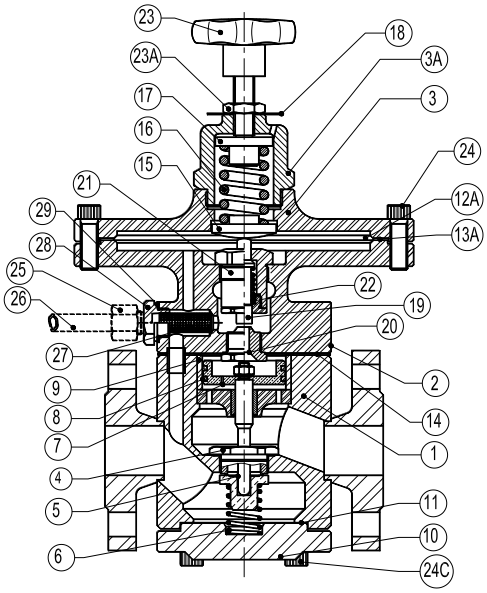
INSTALLATION
Installation instructions are available (IMI-PS47) and typical assembling drawing. Special assembling design may be produced on request.

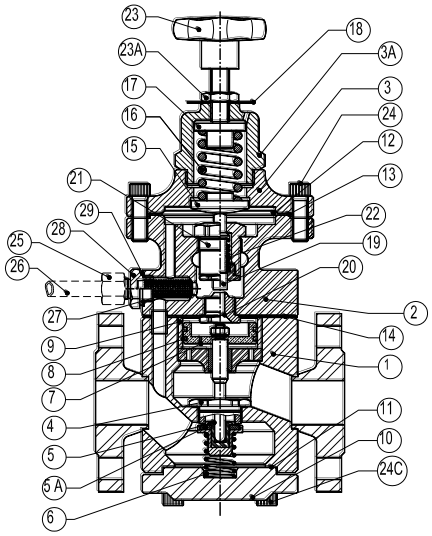
CE MARKING (PED - European Directive 97/23/EC)	
PN 40	**Category**
DN15 to DN32	SEP - art. 3, paragraph3
DN40 to DN50	1 (CE Marked)

MATERIALS - PS47 Steel construction		
POS.	**DESIGNATION**	**MATERIAL**
1	VALVE BODY	S355J2G3 / 1.0570 ; P20GH / 1.0460
2	PILOT VALVE BODY	CF8 / 1.4308
3	TOP COVER	CF8 / 1.4308
3A	COVER SPRING	CF8 / 1.4308
4	*MAIN VALVE SEAT	AISI316 / 1-4401
5	*MAIN VALVE	HARDENED ST.STEEL
5A	*MAIN VALVE (SOFT)	SS316 W/ PTFE/GR; RULON,...
6	*MAIN VALVE SPRING	AISI302 / 1.4300
7	*PISTON	BRASS/BRONZE
8	*PISTON RINGS	BRONZE / FKM / EPDM / NBR
9	PISTON LINER	AISI304L / 1.4306
10	BOTTOM COVER	S355J2G3 / 1.0570
11	*BOTTOM COVER GASKET	ST.ST/GRAPHITE
12	*DIAPHRAGM	AISI301 / 1.4310
12A	*LOW PRESSURE DIAPHRAGM	AISI301 / 1.4310
13	*DIAPHRAGM GASKET	ST.STEEL/GRAPHITE
13A	*DIAPHRAGM GASKET	ST.STEEL/GRAPHITE
14	*PILOT VALVE GASKET	ST.STEEL/GRAPHITE
15	LOWER SPRING CARRIER	BRASS
16	*ADJUSTMENT SPRING	STEEL
17	TOP SPRING CARRIER	BRASS
18	SPRING IDENT. PLATE	ALUMINIUM
19	*PILOT VALVE PLUG	AISI316 / 1.4401
19A	*PILOT VALVE PLUG (SOFT)	PTFE/GR; RULON, ETC
20	*PILOT VALVE SEAT	AISI316 / 1.4401
21	*PILOT VALVE BODY	CF8 / 1.4308
22	*PILOT VALVE SPRING	AISI302 / 1.4300
23	HANDWHEEL	PLASTIC/ST.STEEL
23A	LOCKNUT	AISI304 / 1.4301
24	BOLTS	STEEL 10.9
24C	BOLTS	STEEL 10.9
25	COMPRESSION FITTING	PLATED CARBON STEEL
26	BALANCE PIPE (optional)	COPPER
27	*PILOT VALVE STRAINER	ST.STEEL
28	STRAINER NUT	AISI304 / 1.4301
29	GASKET	COPPER

* Available spare parts

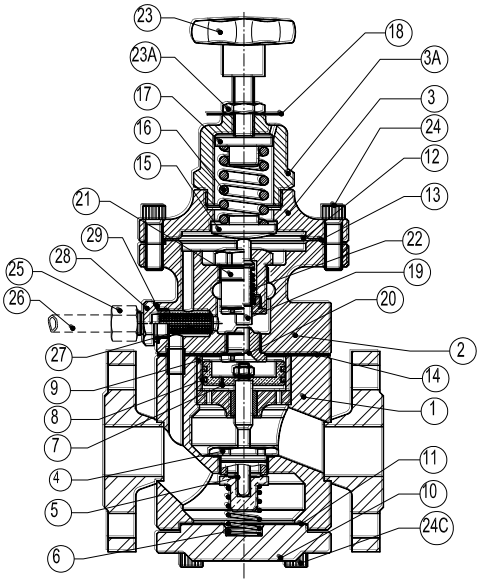


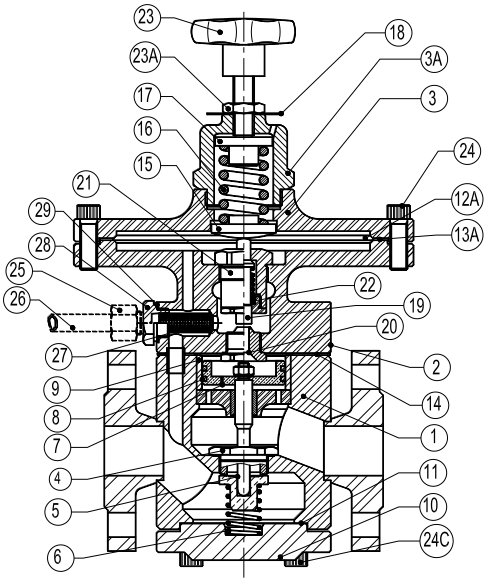


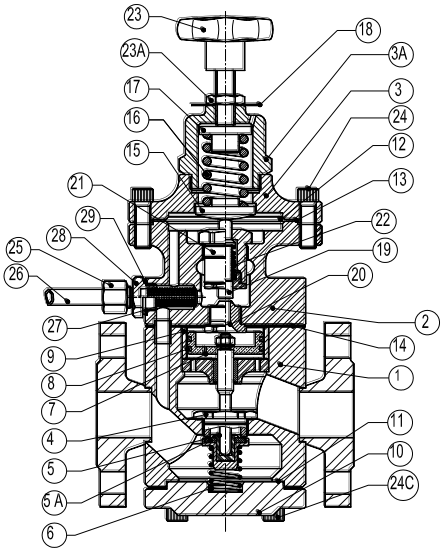


MATERIALS - PS47I Stainless steel construction		
POS.	**DESIGNATION**	**MATERIAL**
1	VALVE BODY	AISI316 / 1.4401
2	PILOT VALVE BODY	CF8 / 1.4308
3	TOP COVER	CF8 / 1.4308
3A	COVER SPRING	CF8 / 1.4308
4	*MAIN VALVE SEAT	AISI316 / 1.4401
5	*MAIN VALVE	HARDENED ST.STEEL
5A	*MAIN VALVE (SOFT)	SS317 W/ PTFE/GR / RULON,...
6	*MAIN VALVE SPRING	AISI302 / 1.4300
7	*PISTON	STAINLESS STEEL
8	*PISTON RINGS	BRONZE / FKM/ EPDM / NBR
9	PISTON LINER	AISI304L / 1.4306
10	*BOTTOM COVER	AISI316 / 1.4401
11	*BOTTOM COVER GASKET	ST.ST/GRAPHITE / PTFE
12	*DIAPHRAGM	AISI301 / 1.4310
12A	*LOW PRESSURE DIAPHRAGM	AISI301 / 1.4310
13	*DIAPHRAGM GASKET	ST.STEEL/GRAPHITE
13A	*DIAPHRAGM GASKET	ST.STEEL/GRAPHITE
14	*PILOT VALVE GASKET	ST.STEEL/GRAPHITE
15	LOWER SPRING CARRIER	BRASS / ST.STEEL
16	*ADJUSTMENT SPRING	STEEL / ST.STEEL
17	TOP SPRING CARRIER	BRASS
18	SPRING IDENT. PLATE	ALUMINIUM / ST.STEEL
19	*PILOT VALVE PLUG	ST.STEEL
19A	*PILOT VALVE PLUG (SOFT)	PTFE/GR; RULON, ETC
20	*PILOT VALVE SEAT	AISI316 / 1.4401
21	*PILOT VALVE BODY	CF8 / 1.4308
22	*PILOT VALVE SPRING	AISI302 / 1.4300
23	HANDWHEEL	PLASTIC/ST.STEEL
23A	LOCKNUT	AISI304 / 1.4301
24	BOLTS	ST.STEEL A-4
24C	BOLTS	ST.STEEL A-4
25	COMPRESSION FITTING	STAINLESS STEEL
26	BALANCE PIPE (optional)	STAINLESS STEEL
27	*PILOT VALVE STRAINER	AISI304 / 1.4301
28	STRAINER NUT	AISI304 / 1.4301
29	GASKET	COPPER / PTFE

*Available spare parts







PRESSURE RANGES IN bar				
SPRING COLOUR	GREEN W/1 Diaphragm	BLUE W/1 Diaphragm	RED W/2 Diaphragms	BLACK W/2 Diaphragms
Red. Pressure	0,07 to 0,5 bar *	1,5 to 5,5 bar **	3,5 to 8,5 bar **	7 to 17 bar **
Red. Pressure	0,35 to 2 bar **	/	/	/

* With low pressure top; **Standard diaphragm.

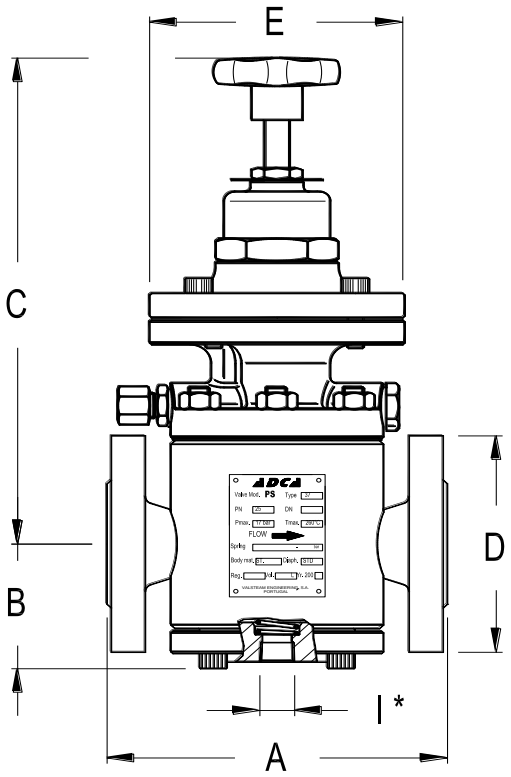


Fig.1

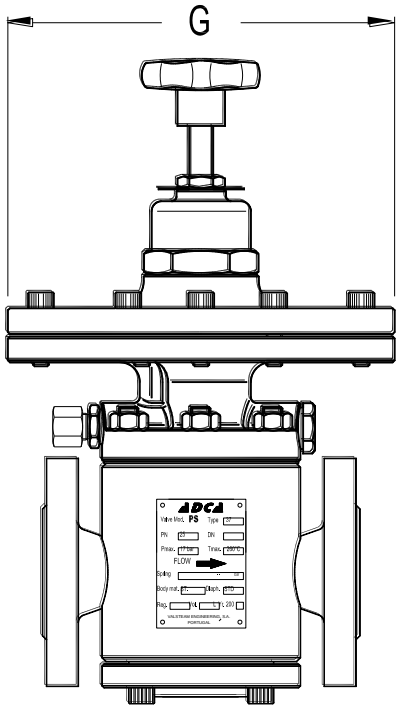


Fig.2

Fig.1 - Valve with standard diaphragm; Fig.2 - Valve with low pressure top.

Important: the PS47 valve can be supplied with internal orifice or external pipe for pilot valve upstream pressure signal supply.

*** Drain connection (option) for steam trapping. This drain connection does not replace the separator but can be useful if for example the valve stops operation for large periods.**

DIMENSIONS - VALVE BODY (mm)								
DN	A EN1092-1 Flanges	B	C	D	E	G	I	WEIGHT Kgs
15	150	56	275	95	120	195	3/8"	13
20	150	56	287	105	120	195	3/8"	13,5
25	160	56	287	115	120	195	3/8"	14
32	180	68	299	140	120	195	3/8"	18
40	200	75	307	150	130	195	3/8"	22
50	230	84	323	165	160	195	3/8"	31

PS 47 - STEAM CAPACITY TABLE (Kg/h)							
INLET bar	OUTLET bar	SATURATED STEAM					
		DN15	DN20	DN25	DN32	DN40	DN50
0,7	0,35	40	75	125	190	280	480
1	0,4	45	95	160	240	355	620
	0,6	40	83	140	210	308	535
2	0,4 ÷ 1	75	150	250	380	545	960
	1,2	65	138	230	345	515	900
	1,6	50	105	175	265	393	685
3	0,4 ÷ 1,5	100	200	335	510	750	1310
	2	85	170	290	450	660	1155
	2,2	80	165	277	416	613	1050
	2,6	60	127	203	315	467	818
4	0,4 ÷ 2	125	250	420	630	920	1580
	2,5	114	225	385	580	850	1465
	3,2	92	183	309	482	708	1205
	3,6	68	137	237	353	536	932
5	0,4 ÷ 2	150	310	512	755	1114	1895
	3	144	295	488	743	1095	1835
	4	115	225	373	578	846	1430
	4,2	105	213	343	525	770	1342
6	0,4 ÷ 3	175	355	602	919	1358	2298
	4	159	314	538	827	1217	2142
	5	119	250	411	637	941	1644
	5,2	109	217	360	568	839	1465
7	0,4 ÷ 3,5	197	410	670	1005	1540	2644
	5	178	358	587	908	1345	2306
	6	132	271	452	688	1027	1773
	6,2	122	251	416	635	934	1618
8	0,4 ÷ 4	225	471	778	1169	1759	3043
	5	221	339	730	1118	1659	2884
	6	192	385	639	976	1451	2513
	7	146	293	481	732	1085	1887
	7,2	137	274	453	692	1011	1782
9	0,4 ÷ 5	251	518	856	1325	1923	3358
	6	241	500	788	1222	1766	3095
	7	206	398	679	1068	1559	2676
	8	156	314	514	794	1142	2053
	8,2	145	292	483	741	1090	1888
10	0,4 ÷ 5	275	561	944	1468	2127	3718
	6	272	551	917	1419	2074	3619
	7	252	508	838	1268	1871	3249
	8	213	431	722	1118	1659	2831
	9	163	333	548	843	1244	2152
	9,2	150	298	493	756	1143	1929
12	1 ÷ 6	330	680	1124	1732	2541	4407
	8	311	629	1023	1575	2332	4034
	10	265	533	812	1271	1867	3202
	11	175	364	568	924	1350	2359
15	1 ÷ 8	408	839	1373	2138	3118	5403
	12	339	656	1068	1629	2441	4250
	14	199	401	662	1017	1503	2619
17	1 ÷ 9	425	863	1460	2178	3165	5343
	15	347	709	1190	1816	2694	4712
	16	207	416	717	1217	1608	2824

PS 47 - COMP. AIR CAPACITY TABLE (Nm3/h-0ºC-1,013bar)							
INLET bar	OUTLET bar	COMPRESSED AIR					
		DN15	DN20	DN25	DN32	DN40	DN50
0,7	0,35	15	31	50	70	111	191
1	0,4	16	33	51	79	113	194
	0,6	27	55	90	138	199	343
2	0,4 ÷ 1	60	122	201	307	444	763
	1,2	54	109	180	276	399	686
	1,6	45	91	150	230	333	572
3	0,4 ÷ 1,5	120	240	300	460	666	1150
	2	105	210	251	384	555	1050
	2,2	48	93	152	232	334	570
	2,6	45	61	101	154	223	384
4	0,4 ÷ 2	150	238	499	739	1089	1825
	2,5	135	208	449	568	978	1635
	3,2	119	177	398	492	867	1444
	3,6	60	124	202	154	444	763
5	0,4 ÷ 2	180	360	505	768	1110	1908
	3	165	330	556	691	997	1716
	4	151	298	404	613	885	1526
	4,2	136	285	383	582	840	1449
6	0,4 ÷ 3	210	468	696	1046	1523	2580
	4	195	437	646	969	1412	2389
	5	150	345	494	738	1079	1817
	5,2	135	315	443	664	968	1627
7	0,4 ÷ 3,5	240	480	804	1200	1740	2989
	5	210	421	701	1046	1524	2640
	6	150	301	499	756	1104	1829
	6,2	105	211	349	529	773	1280
8	0,4 ÷ 4	270	546	798	1353	1746	3411
	5	265	516	747	1276	1635	3220
	6	225	449	710	1125	1635	2762
	7	180	361	600	892	1296	2184
	7,2	156	312	540	768	1128	1978
9	0,4 ÷ 5	301	612	1011	1507	2244	3789
	6	270	553	910	1359	1980	3474
	7	240	492	816	1230	1798	2970
	8	180	360	598	903	1288	2247
	8,2	165	329	547	826	1176	2056
10	0,4 ÷ 5	330	659	1116	1692	2412	4173
	6	314	628	1065	1615	2301	3983
	7	288	599	1004	1503	2202	3810
	8	240	492	806	1212	1770	3022
	9	192	360	658	898	1350	2280
	9,2	181	342	628	852	1283	2165
12	1 ÷ 6	390	792	1300	1978	2844	4917
	8	360	732	1219	1827	2622	4497
	10	270	553	910	1359	1980	3474
	11	210	468	696	1046	1523	2580
15	1 ÷ 8	480	972	1602	2427	3564	6072
	12	375	762	1272	1923	2784	4692
	14	255	528	889	1332	1896	3398
17	1 ÷ 9	540	912	1819	2737	3984	6818
	15	315	708	1179	1764	2520	4418
	16	255	528	889	1332	1896	3398

Remarks:

A pressure sustaining valve is normally sized on the minimum alowable pressure drop across the valve.

A pressure sustaining valve is not a safety valve and should not be used for that purpose.

ORDERING CODES PS47

Valve Model	PS.47			S.	1			1.	A	15	
PS47-standard steam use	PS.47										
Material Construction											
Standard steel construction		(1)									
Stainless steel construction		I									
Remote Control and Pilots											
Not available											
Diaphragm Type											
Standard diaphragm				S.							
Low pressure diaphragm				L.							
Set Pressure											
Green spring 0,35 to 2 bar - single diaphragm					1						
Blue spring 1,5 to 5,5 bar - single diaphragm					2						
Red spring 3,5 to 8,5 bar - double diaphragm					3						
Black spring 7 to 17 bar - double diaphragm					4						
Pneumatic control top 0,35 to 4 bar - single diaphragm					6						
Pneumatic control top 2 to 17 bar - double diaphragm					7						
Piston Rings											
Bronze **c)**						(1)					
FKM **c)**						V					
EPDM **c)**						E					
NBR **c)**						N					
Drain Connection											
Standard valve							(1)				
Drain connection DN 3/8"							D				
Valve Plug											
Standard metal to metal with hardened plug								1.			
Stellited valve and plug								2.			
Soft plug - Virgin PTFE								3.			
Soft plug - PTFE/GR								4.			
Soft plug - Rulon								5.			
Connections											
Threaded BSP ISO 7/1 Rp									A		
Threaded NPT ANSI B1.20.1									C		
Flanged EN 1092-1 PN40									N		
Flanged ANSI B16.5 150#									U		
Flanged ANSI B16.5 300#									V		
SIZE											
DN 1/2" or DN15										15	
DN 3/4" or DN20										20	
DN …..											

PRESSURE SUSTAINING VALVE
PS45 (EN)

DESCRIPTION

The ADCA PS45 series pressure sustaining valves are single seat bellows sealed controllers, operating without auxiliary energy, designed for use on steam, compressed air, industrial inert gases and liquids compatible with the construction.
They are particularly suitable for sustaining steam pressure in all energy and process systems where upstream pressures should be kept constant.

OPERATION

Pressure sustaining is achieved by means of variable throttling of the inlet flow at the valve seat by variation of the flow area between seat and disc. The inlet pressure which is transmitted through the sensing line to the diaphragm or piston chamber counteracts the spring force acting on the valve spindle and controls the valve aperture corresponding to the spring setting and thus to the required inlet pressure.

MAIN FEATURES

Specially designed high durability bellows, providing pressure balancing and friction less plug stem.
Robust construction (fit-and-forget).
Suitable for use with high pressure turndowns.
Interchangeable actuators

OPTIONS:	Soft sealing for steam Nitrile rubber soft seated version for air and gas applications where tight shut-off is required.
USE:	Steam, compressed air and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	PS45G and PS45GT or N – PN16 SG iron PS45S and PS45ST or N – PN16 Cast steel PS45S and PS45ST or N – PN40 Cast steel PS45I and PS45IT or N – Stainless Steel (All wetted parts free of non-ferrous metal or in St.Steel.). Suffix T : Soft seated with PTFE/GR Suffix N : soft seated with nitrile rubber
SIZES:	DN 15 to DN 100
CONNECTIONS	PS45G Flanged EN 1092-2 PN16 PS45S or I Flanged EN 1092-1 PN16 – PN40 ANSI B16.5 flanged connections on request
INSTALLATION:	Horizontal installation. An “Y” strainer, steam separator and steam trap should be provided upstream the valve. See IMI, installation and maintenance instructions. **Sustaining valves are not substitute of safety valves or vacuum relief valves**

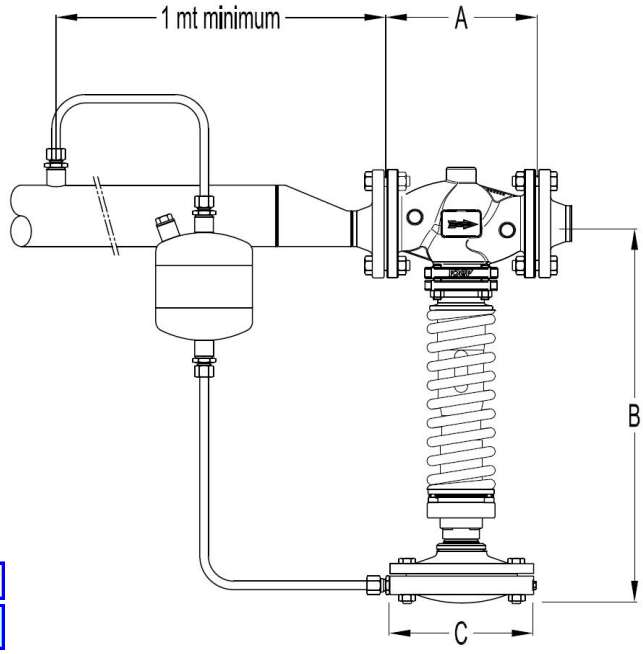
CE MARKING (PED - European Directive)		
PN 16	**PN 40**	**Category**
DN15 to DN50	DN15 to DN32	SEP - art. 3, paragraph3
DN65 to DN100	DN40 to DN100	1 (CE Marked)

LIMITING CONDITIONS									
	PS45G PS45S	PS45S	PS45I	PS45GT PS45ST	PS45ST	PS45IT	PS45GN* PS45SN*	PS45SN *	PS45IN *
Body design conditions	PN16	PN40	PN40	PN16	PN40	PN40	PN16	PN40	PN40
Max.upstream pressure **	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar
Max.downstream pressure	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar
Min.downstream pressure	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar
Max.operating temperature	200ºC	250ºC	250°C	200 ºC	200 °C	200 ºC	80 ºC	80 ºC	80 ºC
Max.reducing ratio	25:1	25:1	25:1	25:1	25:1	25:1	10:1	10:1	10:1
Rangeability	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1
Max.cold hydraulic test	24 bar	25 bar	25 bar	24 bar	25 bar	25 bar	24 bar	25 bar	25 bar
Max.hyd. factory valve body test	24 bar	60 bar	60 bar	24 bar	60 bar	60 bar	24 bar	60 bar	60 bar

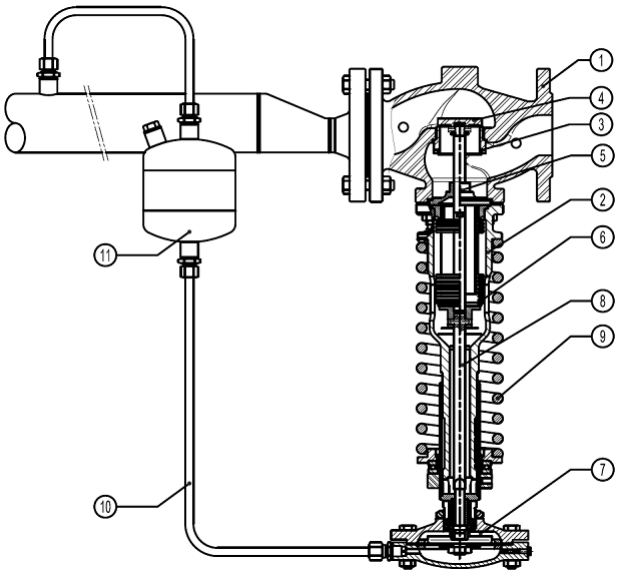
*Suffix N : - a maximum turndown ratio 10:1 should be observed. Other soft materials on request.

** Others on request with bellows or piston actuator

DIMENSIONS (mm)						
VALVE				ACTUATOR		
SIZE DN	A	B	WGT. Kgs	TYPE	C	WGT. Kgs
15	130	440	12,7	**A1**	172	4,3
20	150	440	12,7	**A11**	172	4,3
25	160	440	13,7	**A2**	220	7,3
32	180	445	15,7	**A21**	220	7,3
40	200	445	17,7	**A3**	282	11,3
50	230	540	25,7	**A4**	340	16,3
65	290	540	29,7			
80	310	610	36,7			
100	350	650	53,7			



MATERIALS		
POS.	DESIGNATION	MATERIAL
1	Valve body PS45G	GJS-400-15 / 0.7040
1	Valve body PS45S	A216WCB / 1.0619
1	Valve body PS45I	CF8M / 1.4408
2	Piston body PS45G and S	GJS-400-15 / 0.7040
2	Piston body PS45I	GJS-400-15 / 0.7040 Nickel plated
3	Valve seat	HARDENED ST.STEEL
4	* Valve disc	HARDENED ST.STEEL
4	* Soft valve disc	AISI304/1.4301 ;NBR (PTFE/GR,etc)
5	Guide	AISI 304 / 1.4301
6	* Bellows	AISI 316 Ti / 1.4571
7	* Diaph.chamber PS45G/S	GJL-250 / 0.6025
7	* Diaph. Chamber PS45I	CF8M / 1.4408
8	Spindle	AISI 304 / 1.4301
9	Regulating spring	SPRING STEEL
10	* Impulse line PS45G and S	COPPER
10	* Impulse line PS45I	AISI 316 / 1.4401
11	* Cond. vessel a) PS45S	S235JRG2 / 1.0038
11	* Cond. vessel a) PS45I	AISI 316 / 1.4401



* Available spare parts.

a) Not necessary when in operation with low temperature compressed air or water.

FLOW RATE CAPACITY Kvs m3/h								
VALVE SIZE								
DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
4,8	6,9	9,1	11,8	14,4	26,5	51,5	79,5	129,5

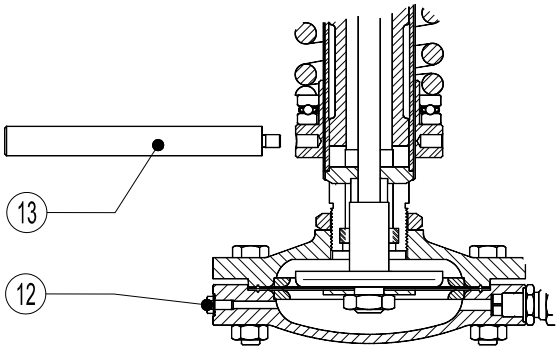
ORDER REQUIREMENTS: For the optimum selection of valve and actuator it is recommended that valve spring and actuator selection is made by the factory or an authorized distributor. For the proper selection following data should be supplied:
-Type of fluid and temperature (not necessary in case of saturated steam)
-Maximum operating pressure
-Required opening pressure
-Flow rate (maximum and minimum)

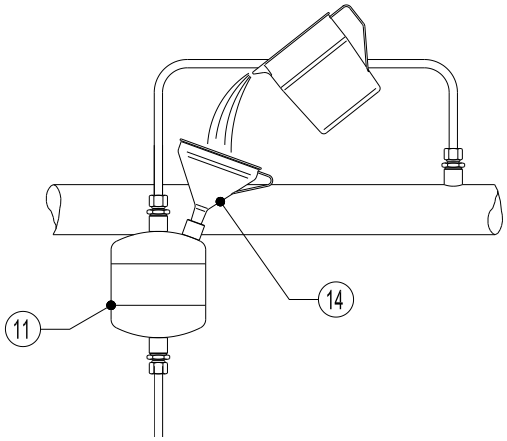
How to order: PS45G DN32 PN16 valve complete with spring Nr.60, type A-2 actuator, condensate vessel and copper tube impulse line.

HOW TO SIZE (using Kvs): please consult formulas on IS PV10.00 E or consult factory.

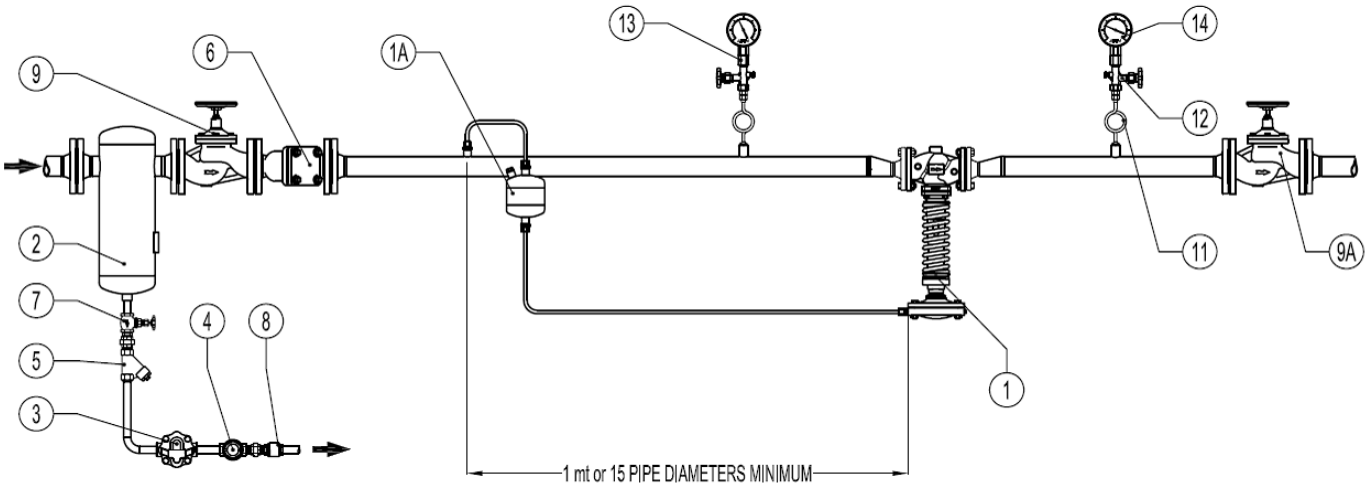
INSTALLATION RECOMMENDATIONS
PS45 is designed primarily for steam, compressed air and non inflammable gases. It has limited use for neutral liquids which can produce vibrations and water-hammer. Please consult the factory.
At service conditions where the temperature is more than 100ºC it is necessary to protect the diaphragm against overheating by using a seal pot.
Never size the valve according to the pipe diameter in which it has to be fitted but according to the required actual flow .Pipe sizing must also respect the maximum recommended flow velocities according to the medium.

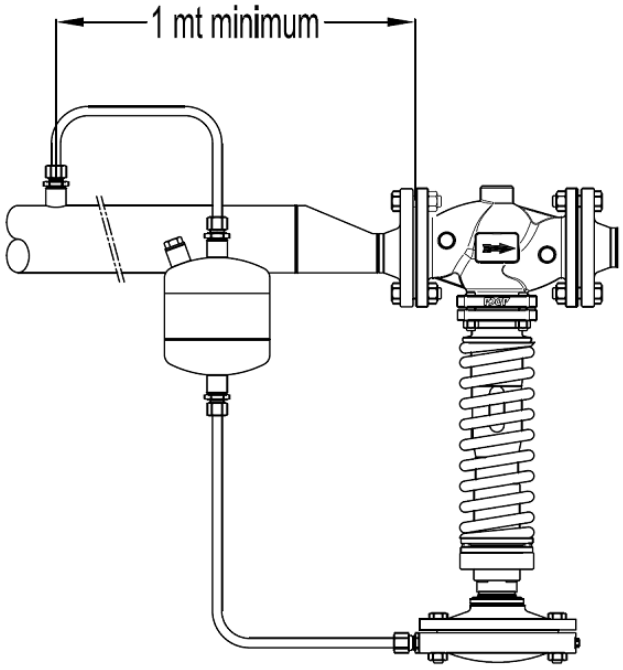
INSTALLATION
Service conditions less than 100ºC: with gases the valve is ready to work. In case of liquids the actuator must be filled completely with liquid, so, the vent screw (12) should be open till the water flow without bubbles.
The valve can be installed with the diaphragm pointing upwards or downwards.
Service conditions more than 100ºC : Fill the seal pot (11) using a funnel (14) until the water emerges from the actuator vent (12) without bubbles .Close the actuator vent screw (12) and proceed filling the pot until the water reaches the top and close it with the plug. The valve is now ready to work.
The valve must be installed with the diaphragm pointing downwards.
Upstream pressure should be adjusted with the key (13). Compressing the spring, spring force increase and upstream pressure aperture increase. Relaxing the spring, spring force decrease and upstream pressure aperture decrease.
The valve closes when the upstream pressure decreases.





Typical Installation





MATERIALS		
POS.	***DESIGNATION***	***MODEL***
1	Pressure sustaining valve	ADCA PS45
1A	Water seal pot	POT
2	Humidity separator	ADCA S 25
3	Steam trap	ADCA FLT series
4	Sigh glass	ADCA SW 12
5	Y Strainer	ADCA IS 16
6	Y Strainer	ADCA IS16F
7	Stop valve	ADCA GV32B
8	Check valve	ADCA RT
9	Stop valve	ADCA VF16
9A	Stop valve	ADCA VF16
11	Coil	ADCA GSC-40
12	Gauge cock	ADCA GC-400
13	Upsteam pressure gauge	ADCA MAN-100
14	Downstream pressure gauge	ADCA MAN-100

Remarks:

PN ratings and materials according to the operating pressures.
* The balance pipe connection is recommended to enter upstream pipe at a minimum of 1 meter from valve. Installation instructions are available (IMI-PS45) and typical assembling drawing.
Special assembling designs may be produced on request.

PRESSURE SUSTAINING VALVE
PS45 (ANSI)

DESCRIPTION

The ADCA PS45 series pressure sustaining valves are single seat bellows sealed controllers, operating without auxiliary energy, designed for use on steam, compressed air, industrial inert gases and liquids compatible with the construction.
They are particularly suitable for sustaining steam pressure in all energy and process systems where upstream pressures should be kept constant.

OPERATION

Pressure sustaining is achieved by means of variable throttling of the inlet flow at the valve seat by variation of the flow area between seat and disc. The inlet pressure which is transmitted through the sensing line to the diaphragm or piston chamber counteracts the spring force acting on the valve spindle and controls the valve aperture corresponding to the spring setting and thus to the required inlet pressure.

MAIN FEATURES

Specially designed high durability bellows, providing pressure balancing and friction less plug stem.
Robust construction (fit-and-forget).
Suitable for use with high pressure turndowns.
Interchangeable actuators

OPTIONS:	Soft sealing for steam Nitrile rubber soft seated version for air and gas applications where tight shut-off is required.
USE:	Steam, compressed air and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	PS45S and PS45ST or N – Cast steel PS45I and PS45IT or N – Stainless Steel (All wetted parts free of non-ferrous metal or in St.Steel.). Suffix T : Soft seated with PTFE/GR Suffix N : soft seated with nitrile rubber
SIZES:	½" to 4"
CONNECTIONS	Flanged ANSI B16.5 150# and 300#
INSTALLATION:	Horizontal installation. An "Y" strainer, steam separator and steam trap should be provided upstream the valve. See IMI, installation and maintenance instructions. **Sustaining valves are not substitute of safety valves or vacuum relief valves**

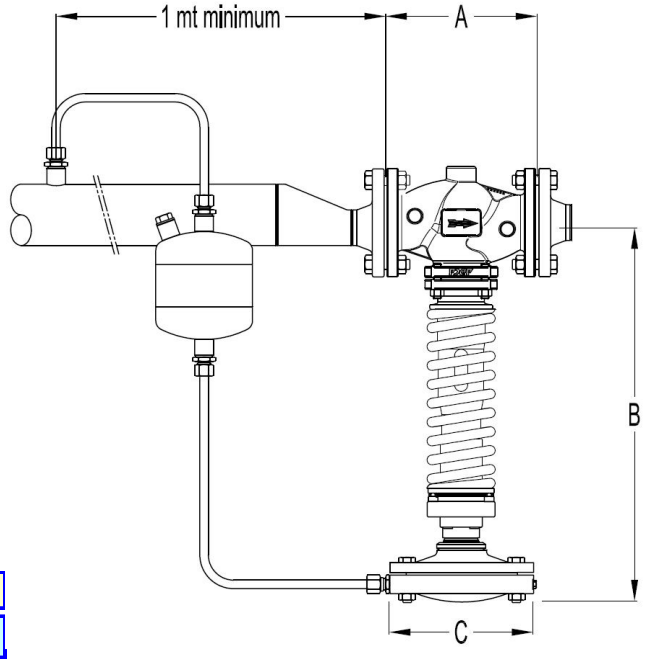
CE MARKING (PED - European Directive)		
ANSI 150	**ANSI 300**	**Category**
1/2" - 2" (DN15-50)	1" (DN25)	SEP - art. 3, paragraph3
3"-4" (DN80-100)	11/2"-4" (DN40-100)	1 (CE Marked)

Note: classification for gases - Group 2, for others see IMI

LIMITING CONDITIONS									
	PS45S	PS45S	PS45I	PS45ST	PS45ST	PS45IT	PS45SN*	PS45SN *	PS45IN *
Body design conditions	150 #	300 #	300 #	150 #	300 #	300 #	150 #	300 #	300 #
Max.upstream pressure **	13 bar	25 bar	25 bar	13 bar	25 bar	25 bar	13 bar	25 bar	25 bar
Max.downstream pressure	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar	13 bar
Min.downstream pressure	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar	0,15 bar
Max.operating temperature	200ºC	250ºC	250ºC	200 ºC	200 ºC	200 ºC	80 ºC	80 ºC	80 ºC
Max.reducing ratio	25:1	25:1	25:1	25:1	25:1	25:1	10:1	10:1	10:1
Rangeability	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1
Max.cold hydraulic test	24 bar	25 bar	25 bar	24 bar	25 bar	25 bar	24 bar	25 bar	25 bar
Max.hyd. factory valve body test	24 bar	60 bar	60 bar	24 bar	60 bar	60 bar	24 bar	60 bar	60 bar

*Suffix N : - a maximum turndown ratio 10:1 should be observed. Other soft materials on request.

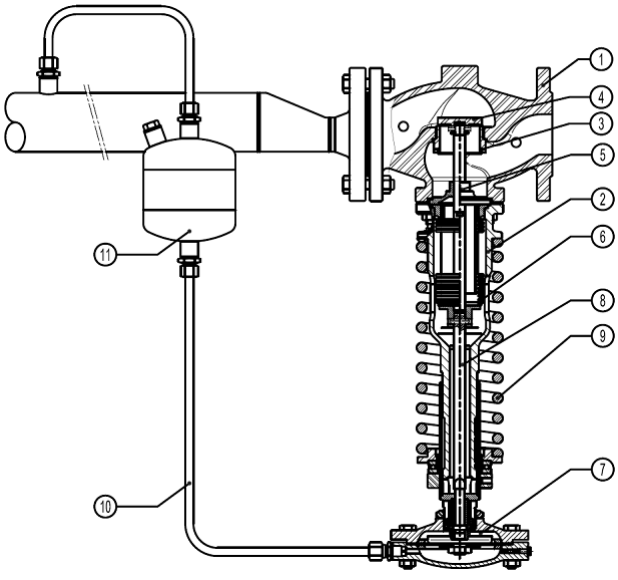
** Others on request with bellows or piston actuator



DIMENSIONS (mm)						
VALVE				ACTUATOR		
SIZE	A* ANSI 300	B	WGT. Kgs	TYPE	C	WGT. Kgs
1/2"	190	440	12,7	**A1**	172	4,3
3/4"	194	440	12,7	**A11**	172	4,3
1"	197	440	13,7	**A2**	220	7,3
11/2"	235	445	17,7	**A21**	220	7,3
2"	267	540	25,7	**A3**	282	11,3
3"	317	610	36,7	**A4**	340	16,3
4"	368	650	53,7			

* ANSI 150 is drilled with the same lenght.

MATERIALS		
POS.	DESIGNATION	MATERIAL
1	Valve body PS45S	A 216 WCB / 1.0619
1	Valve body PS45I	CF8M / 1.4408
2	Piston body PS45S	GJS-400-15 / 0.7040
2	Piston body PS45I	GJS-400-15 / 0.7040 Nickel plated
3	Valve seat	HARDENED ST.STEEL
4	* Valve disc	HARDENED ST.STEEL
4	* Soft valve disc	AISI304/1.4301 ;NBR (PTFE/GR,etc)
5	Guide	AISI 304 / 1.4301
6	* Bellows	AISI 316 Ti / 1.4571
7	* Diaph.chamber PS45S	GJL-250 / 0.6025
7	* Diaph. Chamber PS45I	CF8M / 1.4408
8	Spindle	AISI 304 / 1.4301
9	Regulating spring	SPRING STEEL
10	* Impulse line PS45S	COPPER
10	* Impulse line PS45I	AISI 316 / 1.4401
11	* Cond. vessel a) PS45S	S235JRG2 / 1.0038
11	* Cond. vessel a) PS45I	AISI 316 / 1.4401



* Available spare parts.

a) Not necessary when in operation with low temperature compressed air or water.

FLOW RATE CAPACITY Kvs m3/h								
VALVE SIZE								
1/2"	3/4"	1"	11/4"	11/2"	2"	21/2"	3"	4"
4,8	6,9	9,1	NA	14,4	26,5	NA	79,5	129,5

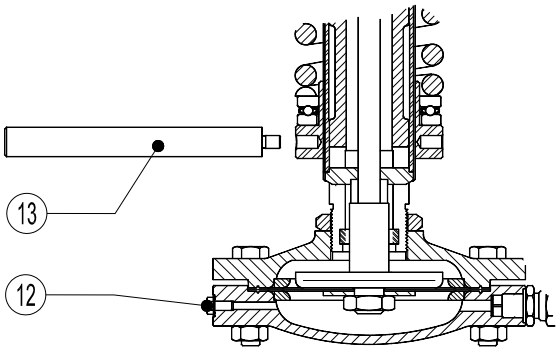
ORDER REQUIREMENTS: For the optimum selection of valve and actuator it is recommended that valve spring and actuator selection is made by the factory or an authorized distributor. For the proper selection following data should be supplied:
-Type of fluid and temperature (not necessary in case of saturated steam)
-Maximum operating pressure
-Required opening pressure
-Flow rate (maximum and minimum)

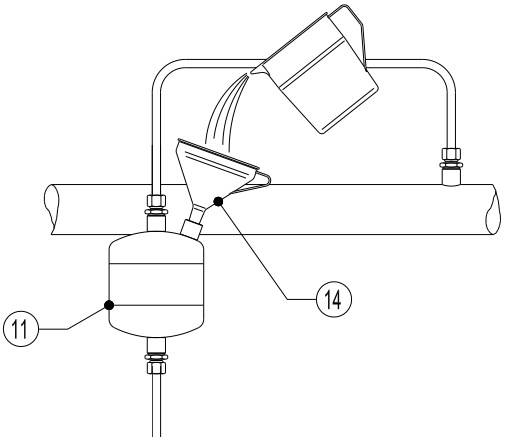
How to order: PS45G DN32 PN16 valve complete with spring Nr.60, type A-2 actuator, condensate vessel and copper tube impulse line.

HOW TO SIZE (using Kvs): please consult formulas on IS PV10.00 E or consult factory.

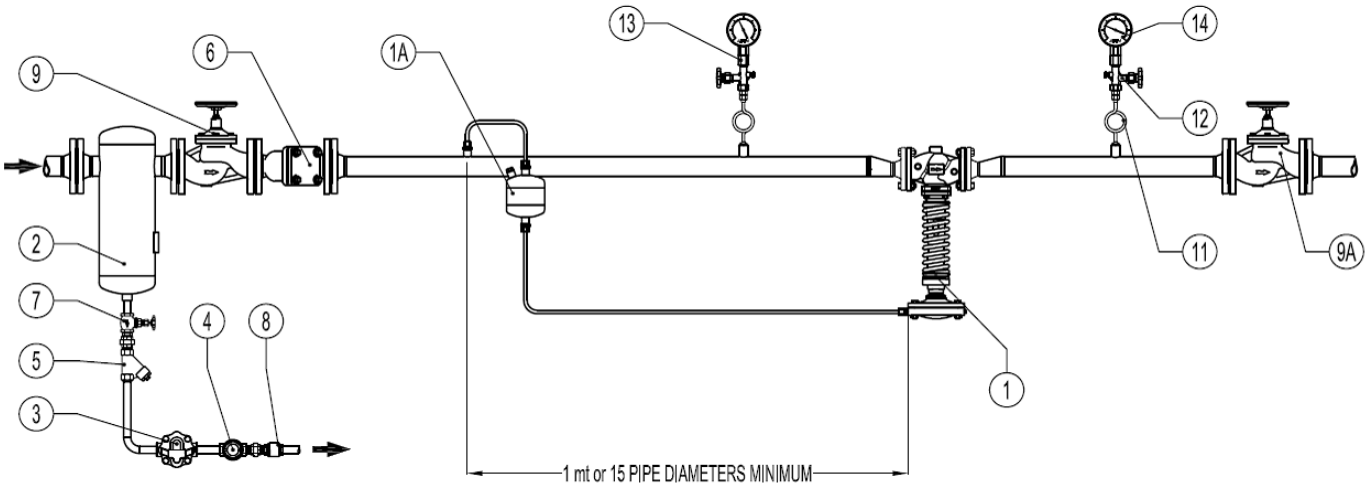
INSTALLATION RECOMMENDATIONS
PS45 is designed primarily for steam, compressed air and non inflammable gases. It has limited use for neutral liquids which can produce vibrations and water-hammer. Please consult the factory.
At service conditions where the temperature is more than 100ºC it is necessary to protect the diaphragm against overheating by using a seal pot.
Never size the valve according to the pipe diameter in which it has to be fitted but according to the required actual flow .Pipe sizing must also respect the maximum recommended flow velocities according to the medium.

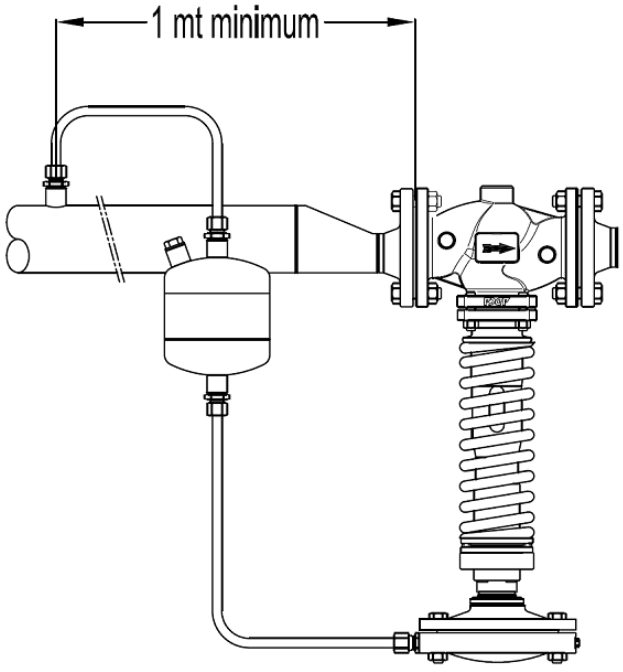
INSTALLATION
Service conditions less than 100ºC: with gases the valve is ready to work. In case of liquids the actuator must be filled completely with liquid, so, the vent screw (12) should be open till the water flow without bubbles.
The valve can be installed with the diaphragm pointing upwards or downwards.
Service conditions more than 100ºC : Fill the seal pot (11) using a funnel (14) until the water emerges from the actuator vent (12) without bubbles .Close the actuator vent screw (12) and proceed filling the pot until the water reaches the top and close it with the plug. The valve is now ready to work.
The valve must be installed with the diaphragm pointing downwards.
Upstream pressure should be adjusted with the key (13). Compressing the spring, spring force increase and upstream pressure aperture increase. Relaxing the spring, spring force decrease and upstream pressure aperture decrease.
The valve closes when the upstream pressure decreases.





Typical Installation





MATERIALS		
POS.	***DESIGNATION***	***MODEL***
1	Pressure sustaining valve	ADCA PS45
1A	Water seal pot	POT
2	Humidity separator	ADCA S 25
3	Steam trap	ADCA FLT series
4	Sigh glass	ADCA SW 12
5	Y Strainer	ADCA IS 16
6	Y Strainer	ADCA IS16F
7	Stop valve	ADCA GV32B
8	Check valve	ADCA RT
9	Stop valve	ADCA VF16
9A	Stop valve	ADCA VF16
11	Coil	ADCA GSC-40
12	Gauge cock	ADCA GC-400
13	Upsteam pressure gauge	ADCA MAN-100
14	Downstream pressure gauge	ADCA MAN-100

Remarks:

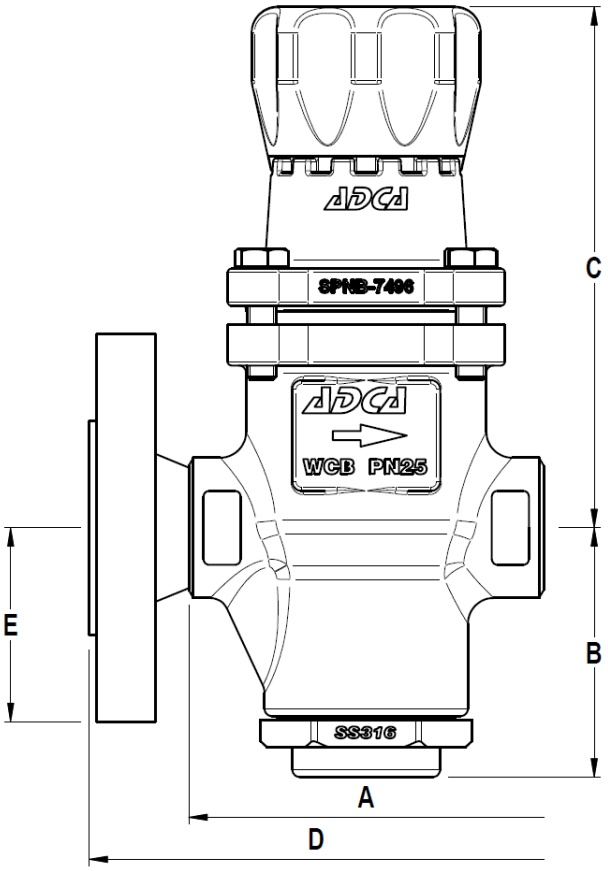
PN ratings and materials according to the operating pressures.
* The balance pipe connection is recommended to enter upstream pipe at a minimum of 1 meter from valve. Installation instructions are available (IMI-PS45) and typical assembling drawing.
Special assembling designs may be produced on request.

LIMITING CONDITIONS			
	PRV25/2S	PRV25/2SG	PRW25/2S
Body design conditions	PN25	PN25	PN25
Max.upstream pressure	17 bar	17 bar	14 bar
Max.downstream pressure	8,6 bar	8,6 bar	8,6 bar
Min.downstream pressure	0,14 bar	0,14 bar	0,35 bar
Max.design temperature	210ºC	180ºC	75ºC
Max.cold hydraulic test	38 bar	38 bar	38 bar
Max.reducing ratio	10:1	10:1	10:1

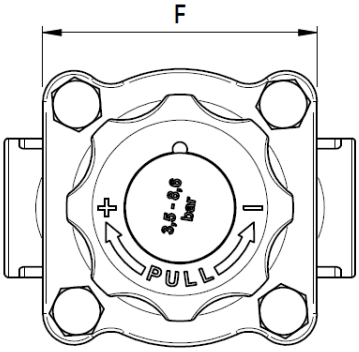
CAPACITIES (See selection table)			
Valve Size	*15*	*20*	*25*
KVs	1,7	2,6	3,1

PRESSURE RANGES				
Spring colour	*Blue **	*Yellow ***	*Green*	*Red*
Red.Press. bar	0,35 - 1,7	0,14 - 1,7	1,4 - 4,0	3,5 - 8,6

*Applicable only on the PRW ; ** Appl.only on the PRV
Where control spring ranges overlap,always use the lower range to give better control and precision.

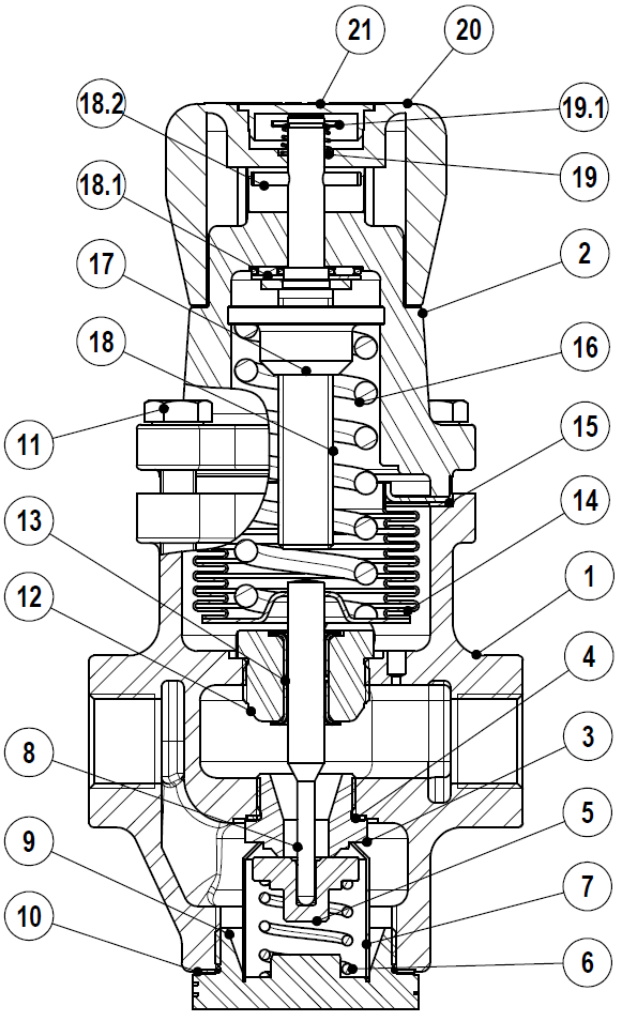


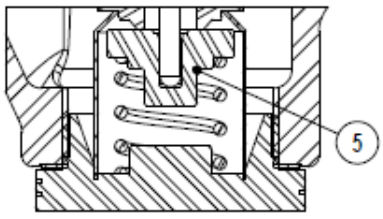
DIMENSIONS (mm)-Screwed						EN1092-1 Flanges		
SIZE DN	*A*	*B*	*C*	*F*	*WGT. Kgs*	*D*	*E*	*WGT. Kgs*
1/2"	96	68,5	141	74	3	150	47,5	4,4
3/4"	96	68,5	141	74	3	150	52,5	5
1"	96	68,5	141	74	2,9	160	57,5	5,5



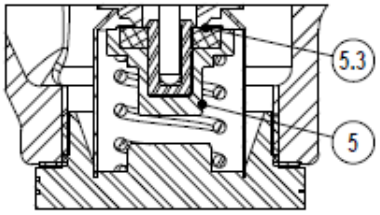
MATERIALS		
POS.	**DESIGNATION**	**MATERIAL**
1	VALVE BODY	A216WCB / 1.0619 or P250GH / 1.0460
2	COVER	A216WCB / 1.0619
3	*SEAT	AISI 316 / 1.4401
4	*GASKET	COPPER
5	*VALVE	HARDENED ST.STEEL
5.1	*O-RING	NBR
5.2	*VALVE HEAD	NBR
5.3	*VALVE HEAD	PTFE/GRAPHITE
6	*VALVE RETURN SPRING	AISI 302 / 1.4300
7	*STRAINER SCREEN	AISI 304 / 1.4301
8	PUSHROD	AISI 316 / 1.4401
9	BOTTOM CAP	CF8M / 1.4408
10	*CAP GASKET	ST.ST./ GRAPHITE
11	COVER BOLTS	STEEL 8.8
12	*GUIDE BUSH	AISI 316 / 1.4401
13	* PLAIN BEARING	BRONZE FILLED PTFE
14	*BELLOWS	AISI 316 TI / 1.4571
15	*BELLOWS GASKET	ST.ST./ GRAPHITE
16	*ADJUSTMENT SPRING	STEEL
17	TOP SPRING PLATE	BRASS
18	ADJUSTMENT SCREW	AISI 304 / 1.4301
18.1	BEARING	STEEL
18.2	PIN	AISI 304 / 1.4301
19	SPRING	AISI 302 / 1.4300
19.1	STARLOCK WASHER	AISI 302 / 1.4300
20	HANDWHEEL	PLASTIC
21	SPRING IDENT.PLATE	PLASTIC

* Available spare parts.

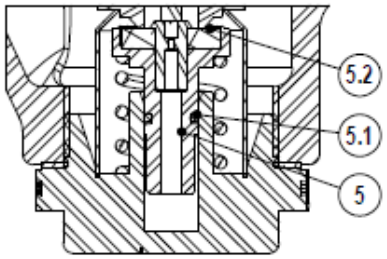




PRV25/2S



PRV25/2SG



PRW25/2S

STEAM CAPACITY TABLE (Kg/h)

INLET bar	OUTLET bar	SAT. STEAM		
		DN15	DN20	DN25
2	0,2	33	53	64
	1,2	57	87	104
	1,6	38	59	71
3	0,3	45	70	83
	1,2	76	116	138
	2,2	61	93	111
	2,6	46	70	83
4	0,4	56	87	104
	1	66	102	121
	2,5	95	145	173
	3,5	57	87	104
5	0,5	68	105	125
	2	91	139	166
	3	114	174	208
	4	85	130	155
6	0,6	79	122	145
	2	106	162	194
	3	133	203	243
	4	120	184	219
7	0,7	91	139	167
	2	121	185	222
	3,5	152	232	277
	5	132	201	240
8	0,8	102	157	187
	2	137	210	250
	3,5	171	262	312
	5	161	247	294
	6	142	217	259
9	0,9	114	174	208
	2,5	133	203	242
	4	152	233	277
	5	190	291	347
	7	152	232	277
10	1	125	192	228
	3	146	224	266
	4	167	256	305
	6	209	320	381
	8	161	247	294
11	1,1	136	210	249
	3	182	280	333
	6	228	350	416
	8	198	302	360
	8,6	182	279	331
12	1,2	148	227	270
	3	197	302	360
	6	247	378	451
	8	228	349	416
	8,6	217	332	396
13	1,3	159	244	291
	4	186	284	340
	6	212	325	388
	7	266	407	486
	8,6	246	378	451
15	1,5	182	259	321
	4	212	302	374
	6	243	345	427
	8	304	433	536
	8,6	298	426	512
17	1,7	205	279	333
	4	238	325	386
	6	273	372	441
	8	342	465	555
	8,6	339	449	541

COMPRESSED AIR CAPACITY TABLE (Nm3/h-0ºC-1,013bar)

INLET bar	OUTLET bar	COMPRESSED AIR		
		DN15	DN20	DN25
2	0,2	45	72	86
	1,2	77	117	140
	1,6	51	80	96
3	0,3	61	95	112
	1,2	103	157	186
	2,2	82	126	150
	2,6	62	95	112
4	0,4	76	117	140
	1	89	138	163
	2,5	128	196	234
	3,5	77	117	140
5	0,5	92	142	169
	2	123	188	224
	3	154	235	281
	4	115	176	209
6	0,6	107	165	196
	2	143	219	262
	3	180	274	328
	4	162	248	296
7	0,7	123	188	225
	2	163	250	300
	3,5	205	313	374
	5	178	271	324
8	0,8	138	212	252
	2	185	284	338
	3,5	231	354	421
	5	217	333	397
	6	192	293	350
9	0,9	154	235	281
	2,5	180	274	327
	4	205	315	374
	5	257	393	468
	7	205	313	374
10	1	169	259	308
	3	197	302	359
	4	225	346	412
	6	282	432	514
	8	217	333	397
11	1,1	184	284	336
	3	246	378	450
	6	308	473	562
	8	267	408	486
	8,6	246	377	447
12	1,2	200	306	365
	3	266	408	486
	6	333	510	609
	8	308	471	562
	8,6	293	448	535
13	1,3	215	329	393
	4	251	383	459
	6	286	439	524
	7	359	549	656
	8,6	332	510	609
15	1,5	246	350	433
	4	286	408	505
	6	328	466	576
	8	410	585	724
	8,6	402	575	691
17	1,7	277	377	450
	4	321	439	521
	6	369	502	595
	8	462	628	749
	8,6	458	606	730

WATER CAPACITY TABLE (m3/h)

D.P. bar	WATER		
	DN15	DN20	DN25
1,5	2,1	3,18	3,8
2	2,4	3,67	4,38
3	2,95	4,5	5,37
4	3,4	5,2	6,2
5	3,8	5,8	6,93
6	4,16	6,36	7,6
8	4,8	7,35	8,75
12	5,8	9	10,7