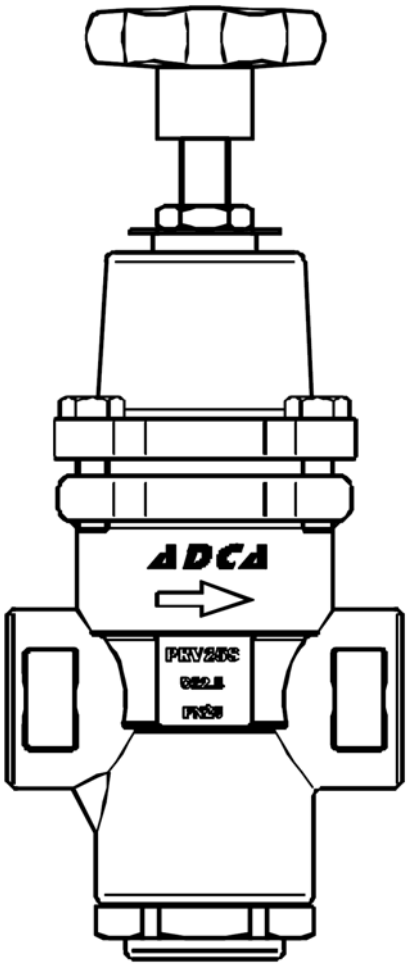
Pressure Reducing Valve Direct Acting
PRV 25 S

DESCRIPTION

The ADCA PRV25 series direct acting pressure reducing valves, are designed for use on steam, compressed air and 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.
Built-in strainer.

OPTIONS: Regulating screw with top cap.
USE: Saturated steam,compressed air and other gases compatible with the construction.

AVAILABLE MODELS: PRV25/S – Steel construction
SIZES: 1/2", 3/4" ,1"– DN15 ,DN 20and DN 25.
CONNECTIONS: Female screwed ISO7/1Rp(BS 21) .
Flanged DIN or ANSI.

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

LIMITING CONDITIONS :

Body design conditions :	PN 25
Maximum upstream pressure :	17 bar
Maximum downstream pressure :	8.6 bar
Minimum downstream pressure :	0.14 bar
Maximum design temperature :	210 ºC
Maximum cold hydraulic test :	38 bar
Maximum reducing ratio :	10:1

CAPACITIES (see selection table)

Valve Size	1/2"	3/4"	1"
KVs	1.5	2.5	3.0

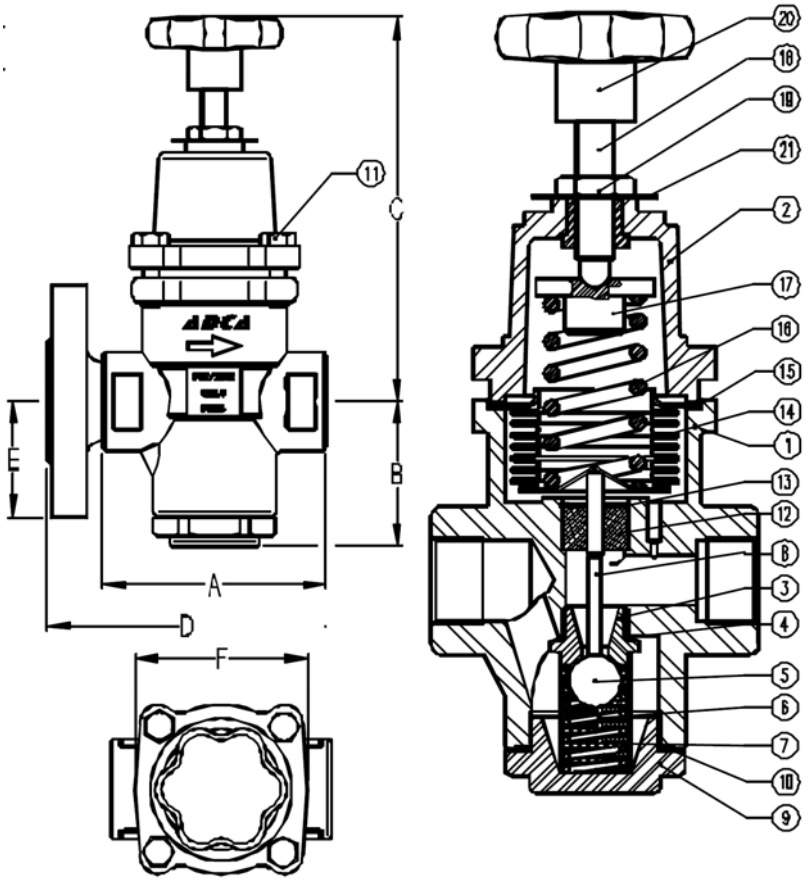
PRESSURE RANGES

Spring colour	Yellow	Green	Red
Red. pressure (bar)	0.14 – 1.7	1.4 – 4.0	3.5 – 8.6

Where control spring ranges overlap, always use the lower range to give better control and precision.

CAPACITY TABLE

Pressure bar		Steam Kg/h			Compressed Air Nm3/h -0°C-1,013bar		
Inlet	Outlet	1/2"	3/4"	1"	1/2"	3/4"	1"
	0,2	6	7	10	8	9	14
2	1	26	32	42	35	39	58
	1,5	30	37	52	40	48	71
	0,3	12	15	21	15	18	27
	1	30	37	54	33	49	74
3	1,5	42	52	73	54	67	101
	2	50	64	89	67	82	123
	2,5	66	70	99	75	93	138
	0,4	19	24	32	25	30	43
	1	38	45	69	49	61	89
4	1,5	50	62	87	67	82	121
	2	62	77	108	82	100	150
	2,5	70	87	122	91	114	172
	3	75	92	129	98	121	189
	0,5	42	52	79	57	69	98
	1,5	60	75	105	79	100	144
5	2	68	85	120	90	113	168
	3	88	108	153	115	143	213
	4	96	120	168	125	155	232
	0,6	46	57	82	60	74	108
	2	74	92	132	98	123	181
6	3	98	120	171	126	159	236
	4	110	136	192	142	180	265
	5	106	132	188	139	175	260
	0,7	50	63	89	67	84	119
	2	81	102	142	106	133	194
7	3	104	131	182	135	171	254
	4	118	148	206	154	194	288
	6	114	142	201	150	188	278
	0,8	54	67	94	71	88	129
	2	87	108	152	113	141	213
8	3	112	138	196	146	181	272
	4	129	162	227	169	221	314
	6	138	173	245	180	253	338
	0,9	48	63	92	67	82	125
	2	90	120	157	116	147	216
9	3	116	145	204	151	189	280
	4	136	170	239	177	221	333
	5	150	187	264	195	244	363
	6	152	190	270	198	252	378
	7	155	194	275	199	250	374
	1	58	73	105	77	95	142
	2	92	121	164	122	151	227
10	3	120	150	214	158	196	293
	4	142	178	250	186	233	347
	6	170	212	297	208	277	412
	8	178	220	307	229	286	426
	1,1	66	82	121	88	108	160
	2	96	123	171	127	159	240
	3	130	162	227	170	212	316
11	4	158	195	276	205	255	380
	6	196	242	339	221	317	473
	8	214	266	374	278	347	518
	8,6	218	271	383	284	355	530
	1,2	73	95	132	99	126	186
	2	108	128	178	135	167	249
	3	138	170	240	177	221	332
12	4	165	205	290	214	268	398
	6	206	255	360	268	332	492
	8	230	285	404	300	374	578
	8,6	233	289	414	305	380	579
	1,3	85	106	148	111	140	208
	2	110	134	187	141	175	260
	3	141	175	249	185	231	343
13	4	170	213	298	224	278	412
	6	217	281	382	283	350	527
	8	246	307	435	325	403	604
	8,6	251	314	445	356	412	615
	1,5	92	113	161	117	148	220
	2	112	138	196	142	179	266
	3	144	177	252	187	236	348
15	4	172	208	308	229	285	420
	6	202	290	390	284	365	544
	8	222	318	448	336	419	626
	8,6	240	355	459	343	428	639
	1,7	104	123	173	128	160	239
	2	116	141	196	145	183	270
	3	147	181	258	191	241	355
17	4	174	221	314	233	328	429
	6	206	296	404	300	373	556
	8	229	340	469	349	434	650
	8,6	252	344	478	359	444	673



MATERIALS (PRV25/SS)

POS.	DESIGNATION	MATERIAL
1	BODY	C 22.8
2	COVER	GGG40
3*	SEAT	AISI 316
4*	GASKET	COPPER
5 *	VALVE	ST.ST. AISI 440
6 *	VALVE RETURN SPRING	ST.ST. AISI 302
7 *	STRAINER SCREEN	ST.ST. AISI 304
8	PUSHROD	ST.ST. AISI 316
9	CAP	A 105
10 *	CAP GASKET	ST.ST. / GRAPHITE
11*	COVER BOLTS	STEEL 8.8
12	GUIDE BUSH	GRAPHITE / PTFE
13	STOP RING	AISI 304
14 *	BELLOWS	ST.ST. AISI 316TI
15 *	BELOWS GASKET	ST.ST. / GRAPHITE
16 *	ADJUSTMENT SPRING	STEEL
17	TOP SPRING PLATE	BRASS
18	ADJUSTMENT SCREW	ST.ST. AISI 304
19	LOCKNUT	ST.ST. AISI 304
20	HANDWHEEL	PLASTIC
21	SPRING IDENT. PLATE	ALUMINIUM

*Available spare parts.

DIMENSIONS(mm

SCREWED ENDS						DIN FLANGES		
DN	A	B	C	F	Kg	D	E	Kg
1/2"	90	65	175	74	3.2	150	47.5	4.6
3/4"	90	65	175	74	3.2	150	52.5	5.2
1"	100	65	175	74	3.7	160	57.5	6

INSTALLATION AND MAINTENANCE INSTRUCTIONS
PRESSURE REDUCING VALVES
(PRV25S - PRV25SS - PRW25SS)

GENERAL

1.These instructions must be carefully read before any work involving products supplied by VALSTEAM ADCA ENGINEERING S.A. is undertaken.

2.The installation procedure is a critical stage in a life of a valve and care should be taken to avoid damage to the valve or equipment.Reducing valves are designed to give accurate control of down-stream pressures.They give their maximum performance only when the equipment associated with them is correctly sized and installed in accordance with our recommendations.

Warning !

-If malfunction of any other equipment or system opperation failure may result in a dangerous overpressure ,overtemperature or even vacuum condition, a safety device must be included in the system to prevent such situations .

-At start up , the presence of small particles in the fluid (dirt,scale,weld splatters,etc) may cause an unperfect closure of the seat . If this occur, proceed to an accurate cleaning.

-Do not touch the equipment without appropriate protection during working operation because it may conduct heat if the used fluid is at high temperature.

-Before starting maintenance be sure that the equipment is not pressurized or hot .

-The equipments must be used within the working temperature and pressure limits laid down for them, otherwise they may fail (refer to nameplate and/or IS- Information Sheet).

-Do not remove the nameplate attacched to the equipment.Serial number and other useful information is stamped on it.

INSTALLATION

1.Prior to install check that the product is suitable for the intended application : materials and pressure/temperature ratings.

2.Before to install remove plastic covers placed on flanges or connection ends. The equipment has an arrow or Inlet/Outlet designations.Be sure that it will be installed on the appropriate direction.

3.Take care with jointing material to ensure that none may be permitted to block or enter the valve.

4.Reducing valves are recommended to be fitted with the centre line of the valve in a vertical position to ensure that the best results are obtained.

5.An ADCA pipeline strainer should be installed upstream of the valve to protect from dirt which could damage the valve or cause mal-functioning.

6.The reducing valve pipework should be properly supported and free from strain and it should not be subjected to undue surges of pressure.

For steam installations we strong recommend that the reducing valve is positioned where condensation is unable to collect or that, alternatively, separators and steam traps are are fitted so that the pipework drains correctly.The start up condition should be considered.

MAINTENANCE

1.We recommend that the pressure reducing valves are serviced as necessary.Pressure reducing valves should be checked periodically (at least yearly), to verify that they are operating correctly and to clean the internal parts and screen (if any).

2.When reassembling make sure that all gasket faces are clean and always use a new gasket. Tighten cover bolts uniformly in a diagonal sequence.

3.Valves in store for long periods should have their adjusting spring relaxed.

4.For further information refer to the relevant PRV brochure or consult our Sales Office.

LIMITING CONDITIONS PRV 25:

Body design conditions : PN 25
Maximum upstream pressure : 17 bar
Maximum downstream pressure : 8,6 bar
Minimum downstream pressure : 0,14 bar
Maximum design temperature : 210ºC
Maximum cold hydraulic test : 38 bar
Maximum reducing ratio : 10:1

LIMITING CONDITIONS PRW 25:

Body design conditions : PN 25
Maximum upstream pressure : 14 bar
Maximum downstream pressure : 8,6 bar
Minimum downstream pressure : 0,35 bar
Maximum design temperature : 75ºC
Maximum cold hydraulic test : 38 bar
Maximum reducing ratio : 10:1

CE Marking :

This product have been designed for use on steam,air and other gases wich are in Group 2 of the PED-European Pressure Equipment Directive 97/23/EC and it comply with those requirements.
The product fall within category SEP and must not be CE marked.

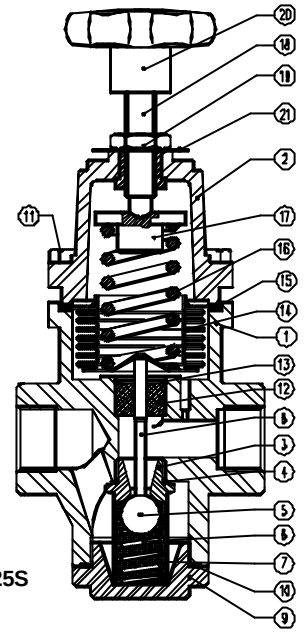
PARTS LIST FOR PRV25S PRESSURE REDUCING VALVES:

Code	Designation	Valve size	Pos.Nr.	Qty.
VR.9210.015	Bellows& body gasket	DN1/2”-1”	14,15	1set
VR.9210.115	Spring&body gasket (0,14-1,7bar)	DN1/2”-1”	15,16,21	1set
VR.9210.215	Spring&body gasket (1,4 - 4bar)	DN1/2”-1”	15,16,21	1set
VR.9210.315	Spring&body gasket (3,5 - 8,6bar)	DN1/2”-1”	15,16,21	1set
VR.9213.015	Seat & plug package	DN1/2”	3,4,5,6,7,10	1set
VR.9213.020	Seat & plug package	DN3/4”	3,4,5,6,7,10	1set
VR.9213.025	Seat & plug package	DN1”	3,4,5,6,7,10	1set

Recommended tightening torques for PRV25S :

Pos.Nr.	Size	Nm
3	1/2”-1”	100-110
9	1/2”-1”	65-75
11	1/2”-1”	20-25

Remarks: Tighten cover bolts uniformly.



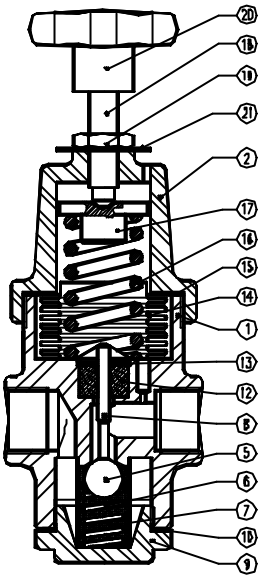
PRV25S

PARTS LIST FOR PRV25SS PRESSURE REDUCING VALVES:

Code	Designation	Valve size	Pos.Nr.	Qty.
VR.9232.015	Bellows& body gasket	DN1/2”-1”	14,15	1set
VR.9232.215	Spring&body gasket (0,14-1,7bar)	DN1/2”-1”	15,16,21	1set
VR.9232.315	Spring&body gasket (1,4 - 4bar)	DN1/2”-1”	15,16,21	1set
VR.9232.415	Spring&body gasket (3,5 - 8,6bar)	DN1/2”-1”	15,16,21	1set
VR.9233.015	Plug package	DN1/2”	5,6,7,10	1set
VR.9233.020	Plug package	DN3/4”	5,6,7,10	1set
VR.9233.025	Plug package	DN1”	5,6,7,10	1set

Recommended tightening torques for PRV25SS :

Pos.Nr.	Size	Nm
2	1/2”-1”	90-100
9	1/2”-1”	65-75



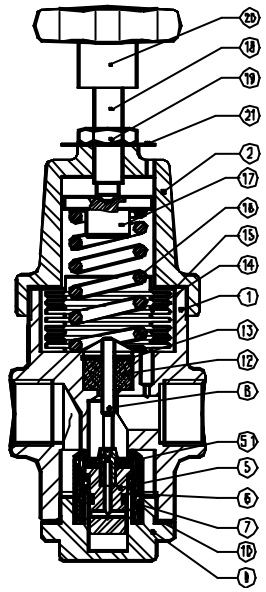
PRV25SS

PARTS LIST FOR PRW25SS PRESSURE REDUCING VALVES:

Code	Designation	Valve size	Pos.Nr.	Qty.
VR.9232.015	Bellows& body gasket	DN1/2”-1”	14,15	1set
VR.9232.115	Spring&body gasket (0,35-1,7bar)	DN1/2”-1”	15,16,21	1set
VR.9232.315	Spring&body gasket (1,4 - 4bar)	DN1/2”-1”	15,16,21	1set
VR.9232.415	Spring&body gasket (3,5 - 8,6bar)	DN1/2”-1”	15,16,21	1set
VR.9234.015	Plug package	DN1/2”	5,6,7,10	1set
VR.9234.020	Plug package	DN3/4”	5,6,7,10	1set
VR.9234.025	Plug package	DN1”	5,6,7,10	1set

Recommended tightening torques for PRW25SS :

Pos.Nr.	Size	Nm
2	1/2”-1”	90-100
9	1/2”-1”	65-75

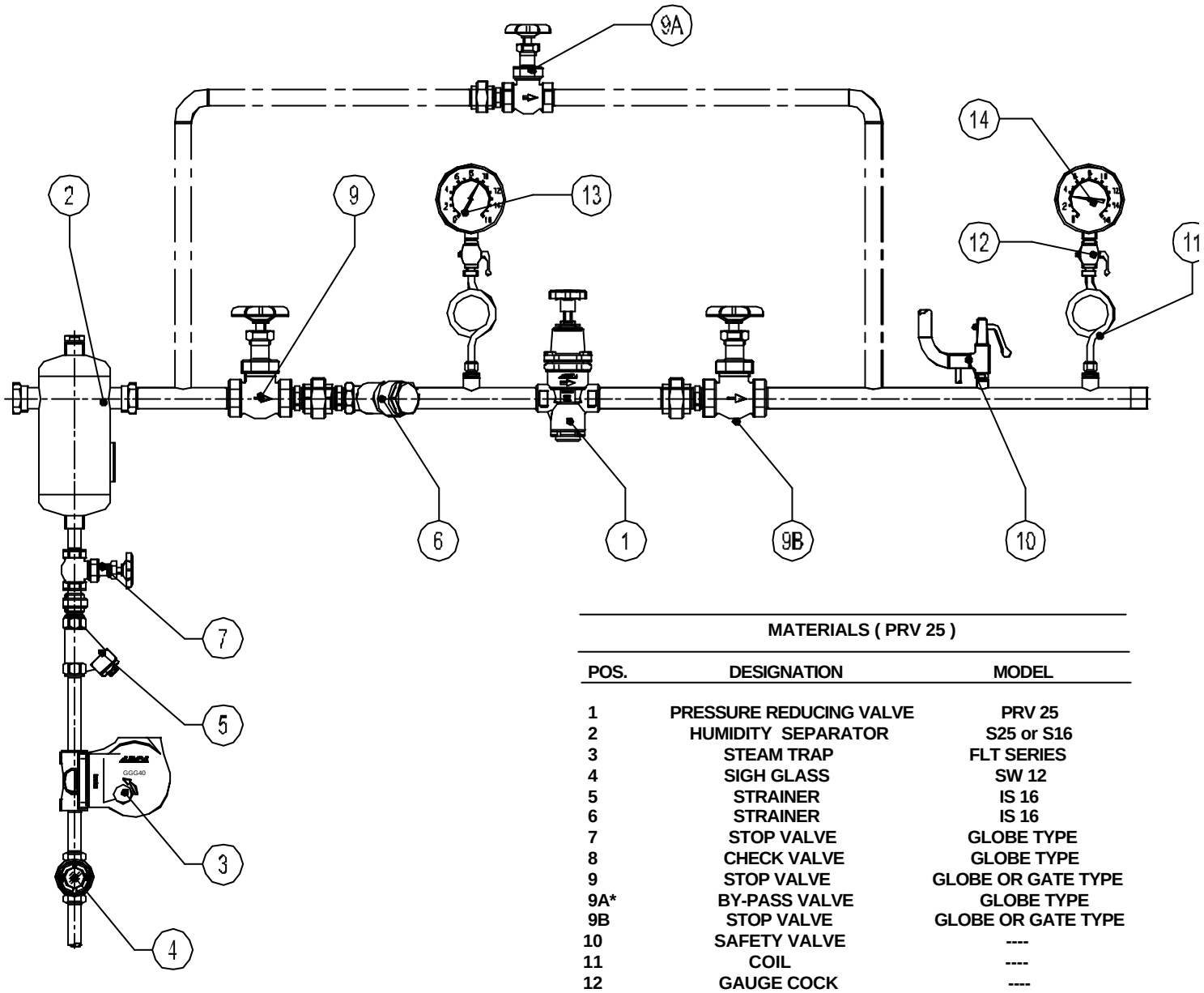


PRW25SS

STEAM EQUIPMENT

PRESSURE REDUCING VALVE PRV25

Typical Reducing Valve Installation



MATERIALS (PRV 25)

POS.	DESIGNATION	MODEL
1	PRESSURE REDUCING VALVE	PRV 25
2	HUMIDITY SEPARATOR	S25 or S16
3	STEAM TRAP	FLT SERIES
4	SIGH GLASS	SW 12
5	STRAINER	IS 16
6	STRAINER	IS 16
7	STOP VALVE	GLOBE TYPE
8	CHECK VALVE	GLOBE TYPE
9	STOP VALVE	GLOBE OR GATE TYPE
9A*	BY-PASS VALVE	GLOBE TYPE
9B	STOP VALVE	GLOBE OR GATE TYPE
10	SAFETY VALVE	----
11	COIL	----
12	GAUGE COCK	----
13	UPSTREAM PRESSURE GAUGE	----
14	DOWNSTREAM PRESSURE GAUGE	----

Remarks :

*** By-pass is optional .In case the by-pass is not allowed than stop valve 9B should be placed after pressure gauge 14 allowing the isolation of safety valve.**

PN classes and materials according to the operating pressures.

Installation instructions are available (IMI - PRV25) and typical assembling drawing .

Special assembling designs may be produced on request .