

Pressure retaining valve V 186 - V 86

FACTS | FIGURES | DATA



Pressure retaining valve V 186 - V 86

Pressure retaining valve

V 186 · V 86

DN 10 to DN 100



V186 PVDF



V186 PP



V186 PVC

USE

Pressure retaining valves V186/V86 are used where a constant back pressure is required for operating process systems. When installed as a bypass, it can also be used as a relief valve for reducing pressure peaks. The Type V186 (DN 10-50) has an almost zero-static lower body that makes it particularly suitable for use in very high-purity water applications. The variety of available materials covers a wide range of applications.

FUNCTION

The set spring force presses the diaphragm onto the seal seat. If the system pressure exceeds the operating pressure value, the valve opens.

SPECIAL FEATURES

- All parts that come into contact with the medium are made of highly-resistant plastics
- The control diaphragm separates the actuating drive from the flow section
- The operating pressure is adjusted with an adjustment screw and is secured with a lock nut. The setting can also be lead sealed if required
- The shape of the housing that assists flow results in good flow values
- Control deviations are kept low by the large control surface and the spiral spring
- No auxiliary energy is required in order to operate the valve
- The valve is largely maintenance-free and can be installed in any position

MATERIALS

Housing	Permissible operating temperature	Diaphragm
PVC-U	0 to +60 °C	EPDM
PP	-10 to +80 °C	EPDM/PTFE coated
PVDF	-20 to +100 °C	

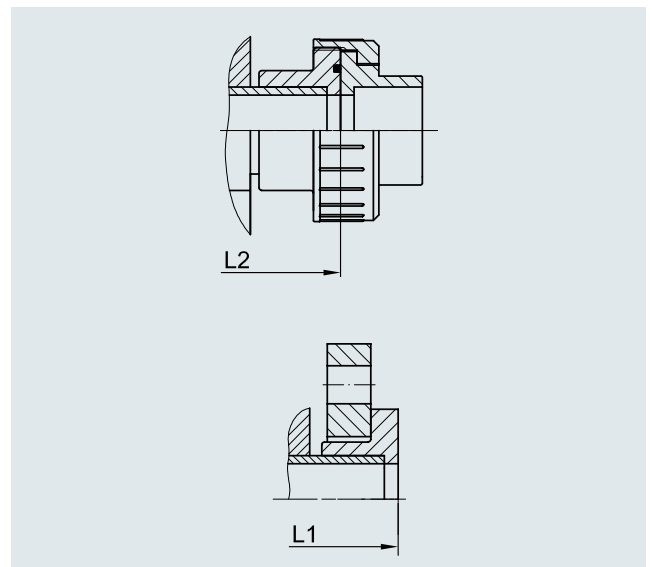
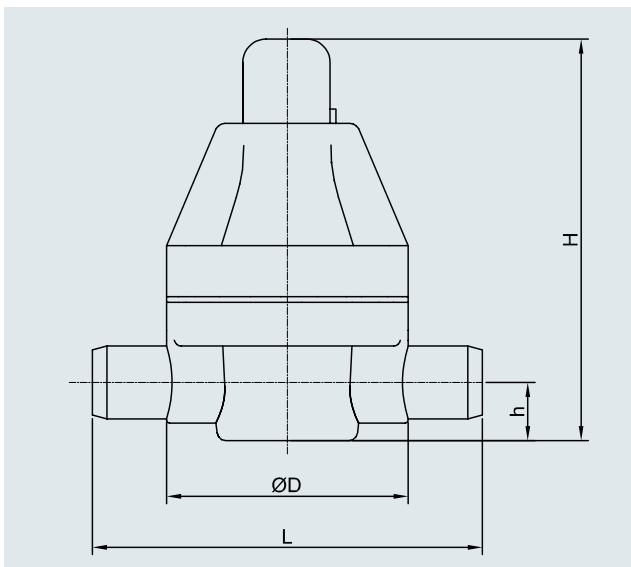
TECHNICAL DATA

Type	Size	PN	Pressure range in bar
V186	DN 10 - 50	10	0.5 - 10
V86	DN 65-80	6	1 - 6
	DN 100	4	1 - 4

DIMENSIONS IN MM (GUIDELINE VALUES)

d	DN	PVC			PP/PVDF			PVC			PP			PVDF		
		L	L	L _s	L1	L1	L1	L2	L2	L2	D	h	H			
16	10	134	158	-	140	168	168	154	180	180	83	20	137			
20	15	134	158	158	140	168	168	154	182	182	83	20	137			
25	20	134	158	158	140	168	168	154	182	182	83	20	137			
32	25	174	198	198	180	208	208	194	222	222	112	27	199			
40	32	174	202	202	180	212	212	198	230	230	112	27	199			
50	40	224	256	256	230	266	266	252	288	288	165	43	290			
63	50	244	256	256	250	266	266	280	296	296	165	43	290			
75	65	284	284	284	290	294	-	320	320	-	180	-	275			
90	80	360	360	300	370	374	-	396	396	-	200	-	410			
110	100	380	380	380	390	394	-	402	424	-	250	-	485			

L = standard connection, L_s = IR butt fusion spigot, standard, for material PP/PVDF, L1 = with flange, L2 = with screw connection



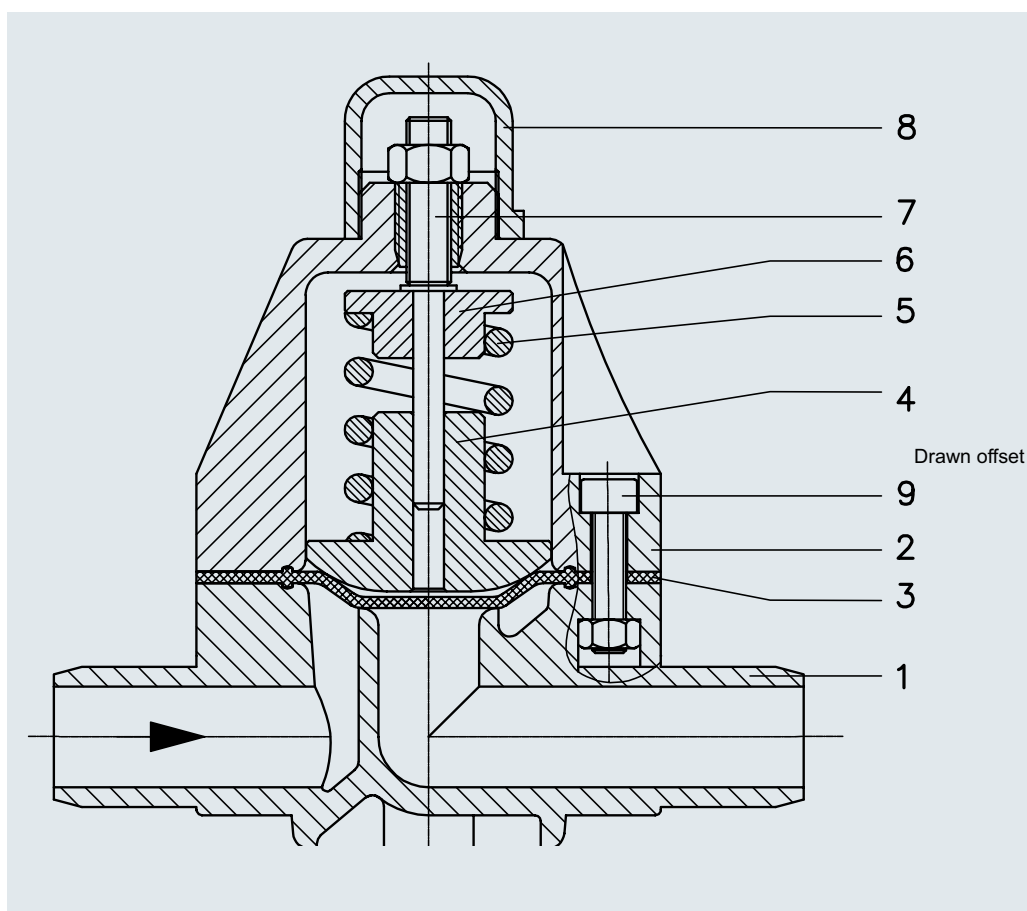
Pressure retaining valve V 186 - V 86

ARTICLE NUMBERS

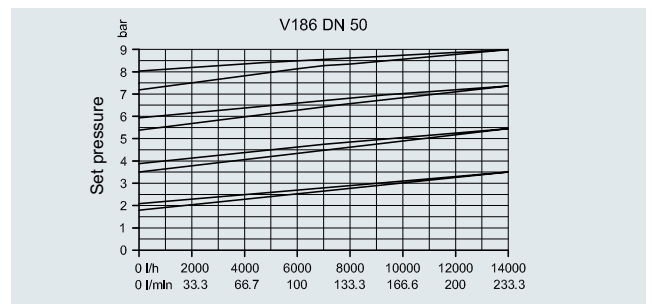
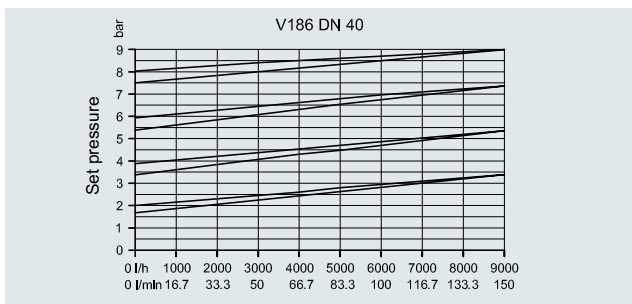
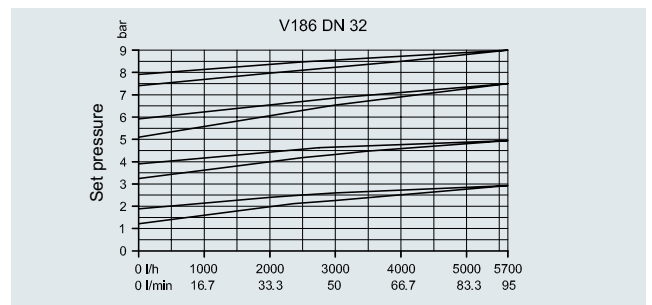
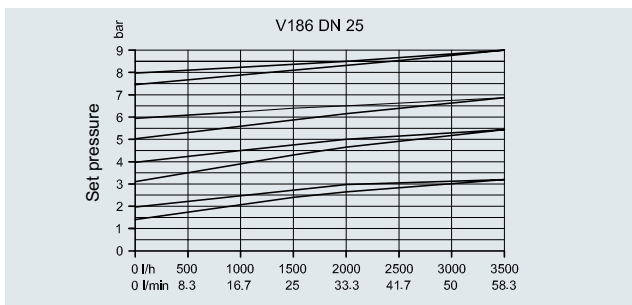
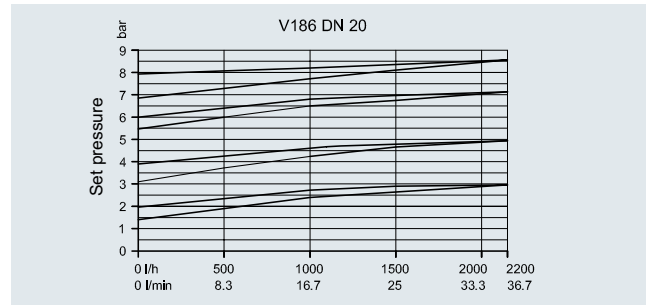
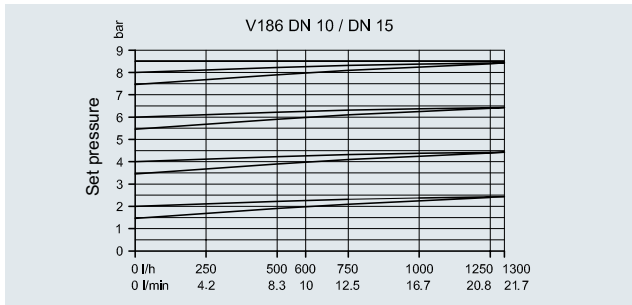
d	DN	Type	PVC/EPDM	PVC/PTFE	PP/EPDM IR-spigots	PP/PTFE IR-spigots	PVDF/PTFE IR-spigots
16	10	V 186	17.000.134	17.000.149	17.005.472	17.005.479	17.005.486
20	15	V 186	17.000.135	17.000.150	17.005.473	17.005.480	17.005.487
25	20	V 186	17.000.136	17.000.151	17.005.474	17.005.481	17.005.488
32	25	V 186	17.000.137	17.000.152	17.005.475	17.005.482	17.005.489
40	32	V 186	17.000.138	17.000.153	17.005.476	17.005.483	17.005.490
50	40	V 186	17.000.139	17.000.154	17.005.477	17.005.484	17.005.491
63	50	V 186	17.000.140	17.000.155	17.005.478	17.005.485	17.005.492
75	65	V 86	17.003.093	17.003.097	17.005.493	17.005.496	17.005.499
90	80	V 86	17.003.101	17.003.105	17.005.494	17.005.497	–
110	100	V 86	17.003.109	17.003.113	17.005.495	17.005.498	–

INDIVIDUAL PARTS

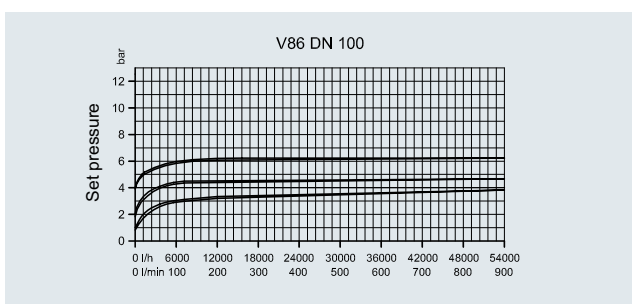
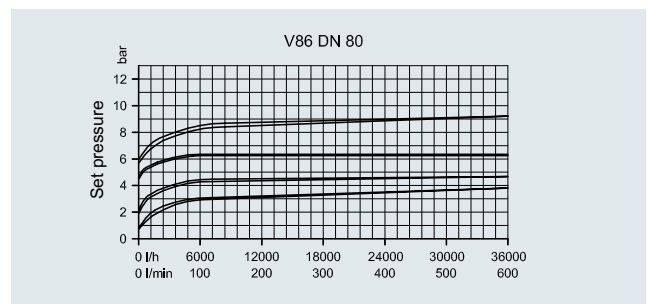
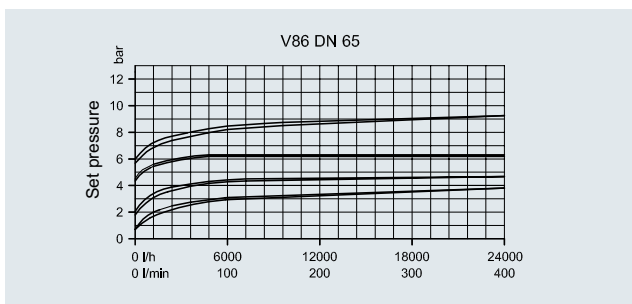
Pos.	Designation
1	Lower body
2	Upper body
3	Diaphragm
4	Compressor
5	Compression spring
6	Spring plate
7	Adjustment screw
8	Cap
9	Set of screws



CHARACTERISTIC GRAPHS V 186



CHARACTERISTIC GRAPHS V 86



The characteristic curves on the graphs show the increase in the set pressure from 0 through to the maximum permissible flow rate. The upper and lower lines plot the course of the opening and closing pressure respectively. All characteristic curves apply to water at a temperature of 20 °C.

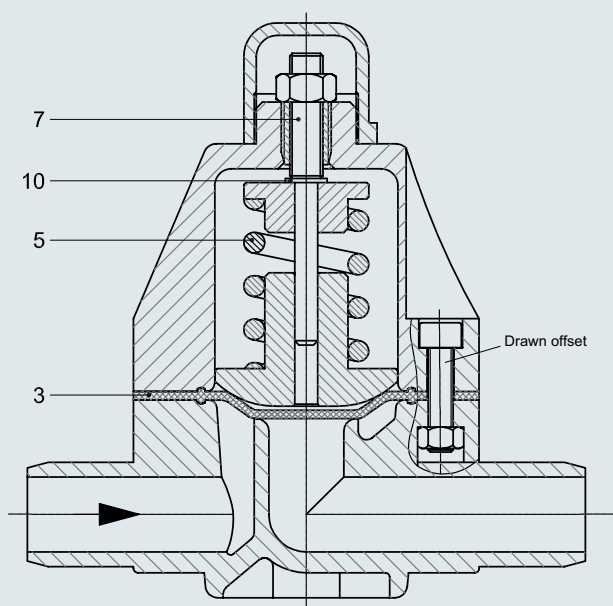
Pressure retaining valve V 186 - V 86

SPARE PARTS SET FOR V 186 / V86 PVC-U / PP / PVDF

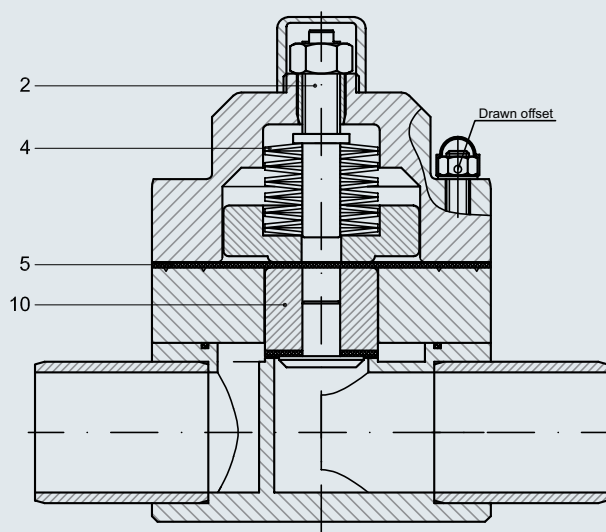
Set consisting of:	Type	DN	PVC/EPDM Article No.	PVC/PTFE Article No.	PP/EPDM Article No.	PP/PTFE Article No.	PVDF/PTFE Article No.
Pos. 3 diaphragm	V 186	10/15/20	17.006.007	17.006.020	17.006.007	17.006.020	17.006.020
Pos. 5 compression ring	V 186	25/32	17.006.008	17.006.021	17.006.008	17.006.021	17.006.021
Pos. 7 adjustment screw	V 186	40/50	17.006.009	17.006.022	17.006.009	17.006.022	17.006.022
Pos. 10 washer							

Set consisting of:	Type	DN	PVC/EPDM Article No.	PVC/PTFE Article No.	PP/EPDM Article No.	PP/PTFE Article No.	PVDF/PTFE Article No.
Pos. 5 diaphragm	V 86	65	17.006.256	17.006.259	17.006.268	17.006.271	17.006.275
Pos. 4 spring assembly	V 86	80	17.006.257	17.006.260	17.006.269	17.006.272	–
Pos. 2 adjustment screw	V 86	100	17.006.258	17.006.261	17.006.270	17.006.273	–
Pos. 10 piston, complete							

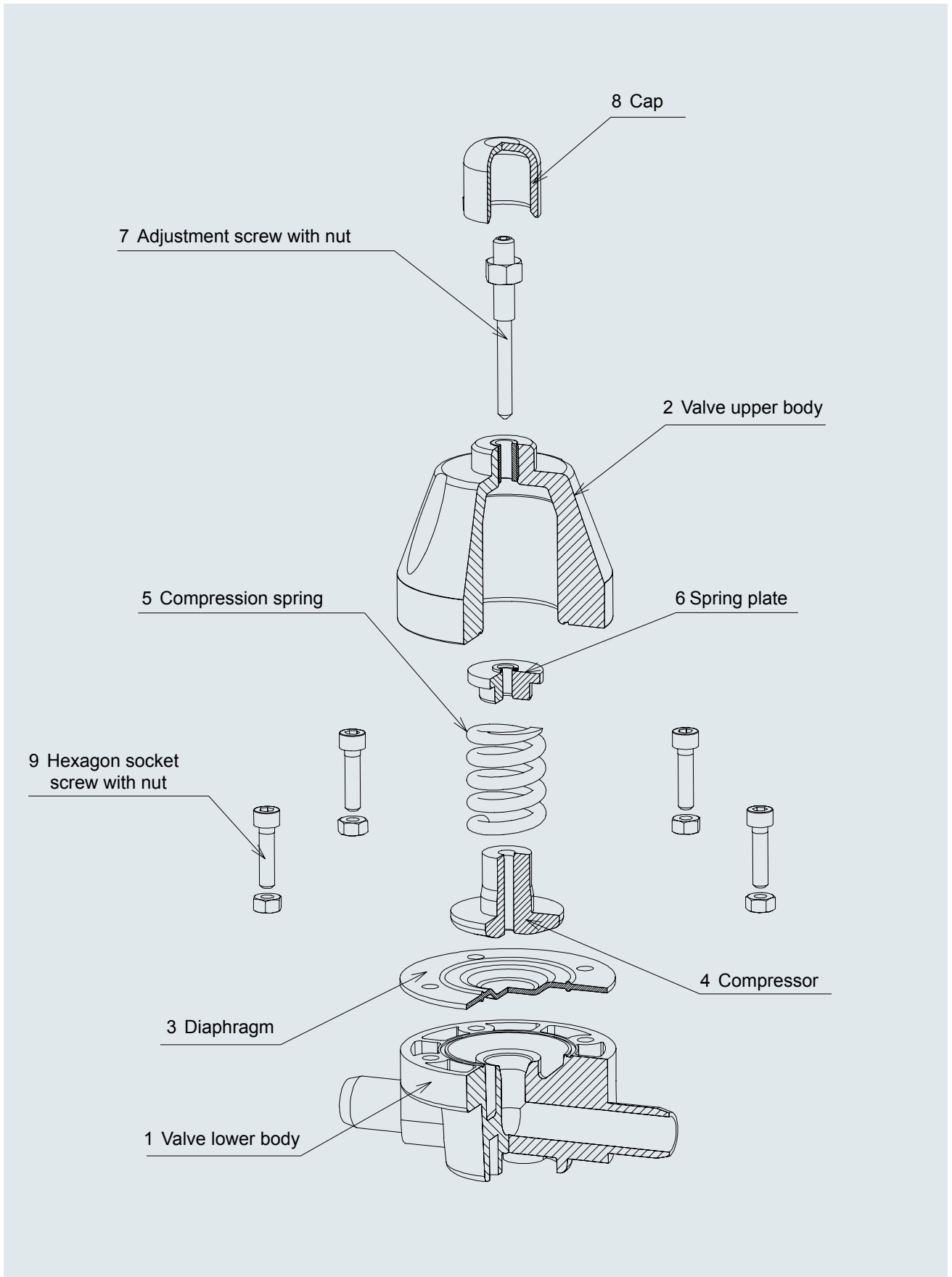
V 186



V 86



PRESSURE RETAINING VALVE V 186





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Pressure relief valve V 185 - V 85

FACTS | FIGURES | DATA



Pressure relief valve V 185 - V 85 . DN 10 à DN 100

Pressure relief valve

V 185 · V 85

DN 10 to DN 100



V 185 PVDF



V 185 PP



V 185 PVC

USE

The pressure relief valve V 185/V 85 protects systems and pipelines against overpressure and pressure peaks. The third pipe spigot integrated in the valve body allows installation in the main line.

The flow-efficient and almost zero-static design of the lower body means that there is only minimum pressure loss in the valve opening.

FUNCTION

The set spring force presses the diaphragm onto the seal seat. If the system pressure exceeds the operating pressure value, the valve opens.

SPECIAL FEATURES

- All parts that come into contact with the medium are made of highly-resistant plastics
- The control diaphragm separates the actuating drive from the flow section
- The operating pressure is adjusted with an adjustment screw and is secured with a lock nut. The setting can also be lead sealed if required
- The shape of the housing that assists flow results in good flow values
- Control deviations are kept low by the large control surface and the spiral spring
- No auxiliary energy is required in order to operate the valve
- The valve is largely maintenance-free and can be installed in any position

MATERIALS

Housing	Permissible operating temperature	Diaphragm
PVC-U	0 to +60 °C	EPDM
PP	-10 to +80 °C	EPDM/PTFE coated
PVDF	-20 to +100 °C	

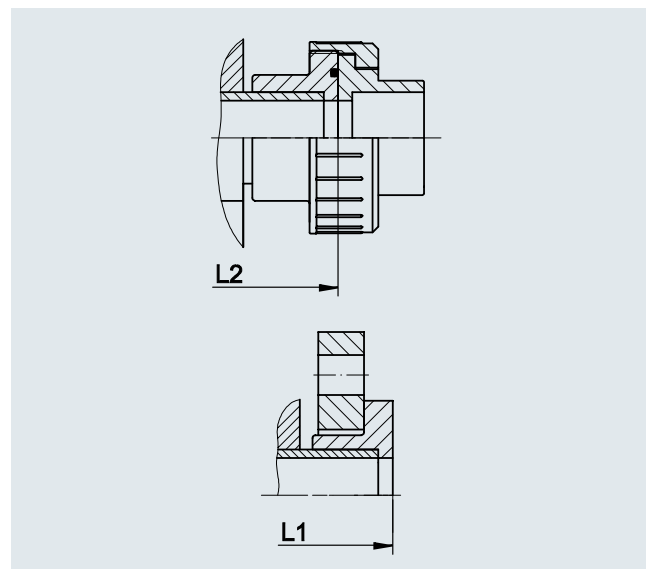
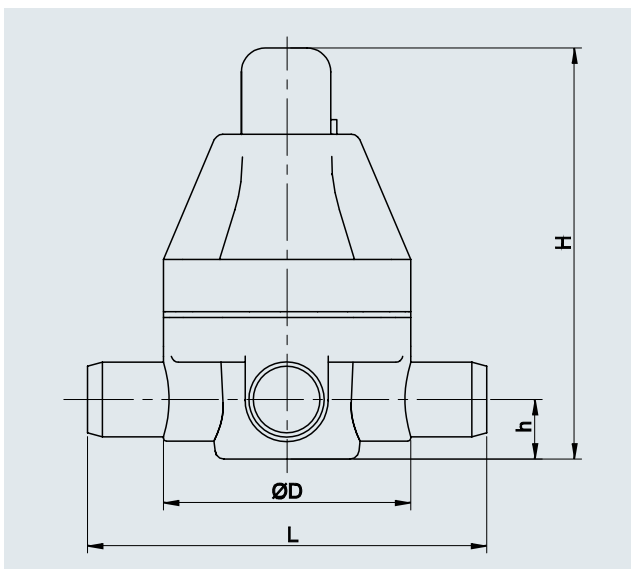
TECHNICAL DATA

Type	Size	PN	Pressure range in bar
V185	DN 10-50	10	0.5-10
V85	DN 65-80	6	1-6
	DN 100	4	1-4

DIMENSIONS IN MM (GUIDELINE VALUES)

d	DN	PVC			PP/PVDF			PVC			PP			PVDF		
		L	L	L _s	L1	L1	L1	L2	L2	L2	D	h	H			
16	10	134	158	-	140	168	168	154	180	180	83	20	137			
20	15	134	158	158	140	168	168	154	182	182	83	20	137			
25	20	134	158	158	140	168	168	154	182	182	83	20	137			
32	25	174	198	198	180	208	208	194	222	222	112	27	199			
40	32	174	202	202	180	212	212	198	230	230	112	27	199			
50	40	224	256	256	230	266	266	252	288	288	165	43	290			
63	50	244	256	256	250	266	266	280	296	296	165	43	290			
75	65	284	284	284	290	294	-	320	320	-	180	-	275			
90	80	360	360	300	370	374	-	396	396	-	200	-	410			
110	100	380	380	380	390	394	-	402	424	-	250	-	485			

L = standard connection, L_s = IR butt fusion spigot, standard, for material PP/PVDF, L1 = with flange, L2 = with screw connection



The pressure relief valve can be set to a specified opening pressure at our plant if desired.

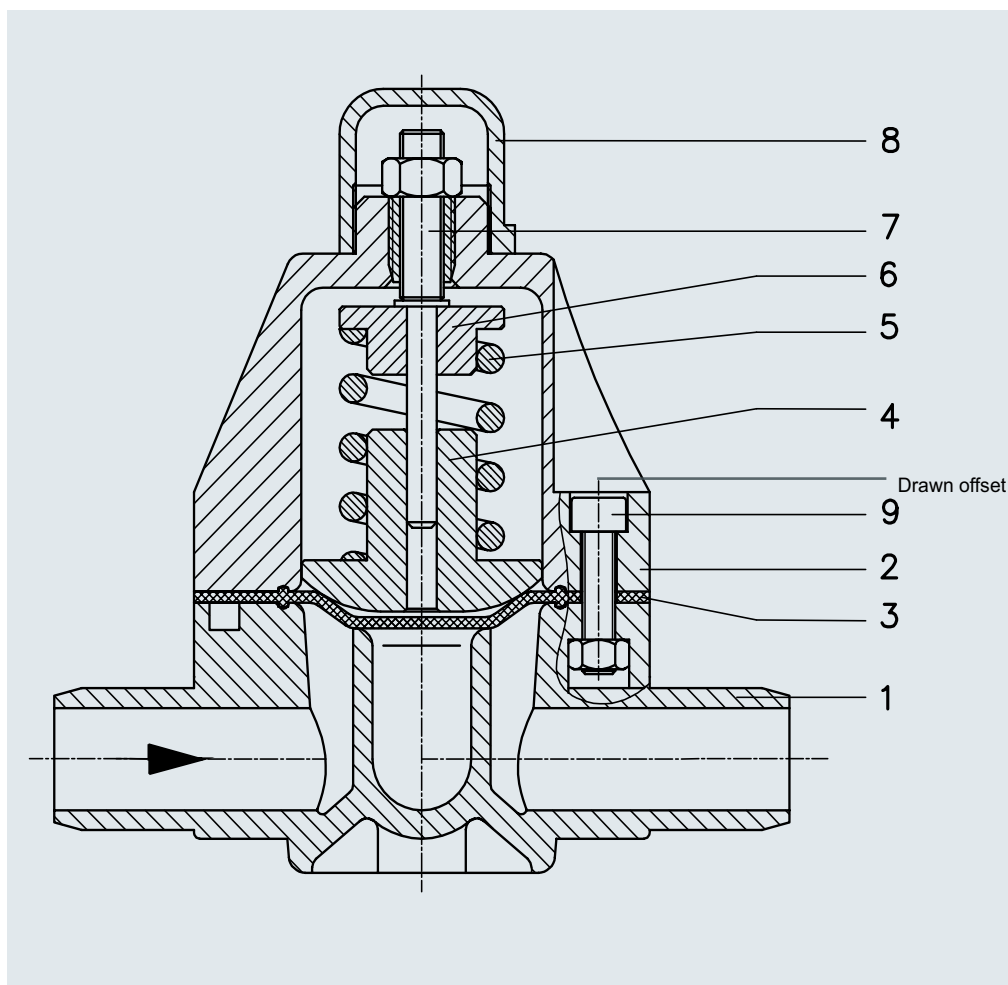
Pressure relief valve V 185 - V 85 . DN 10 à DN 100

ARTICLE NUMERBS

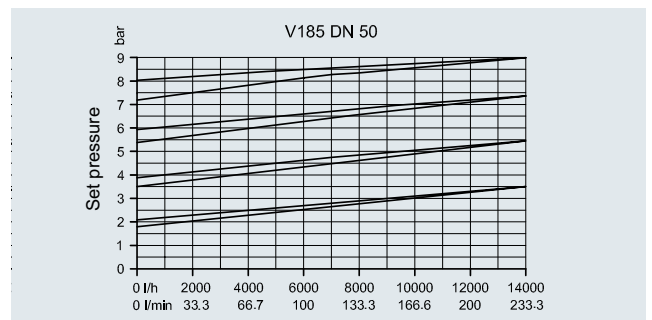
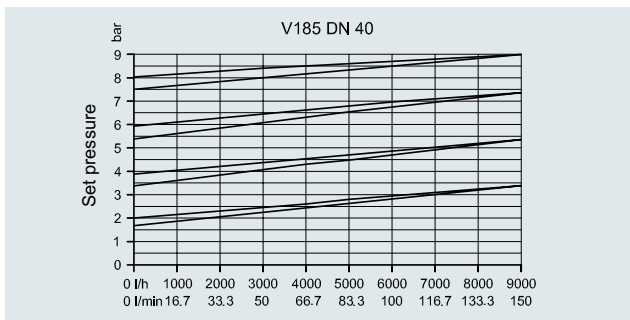
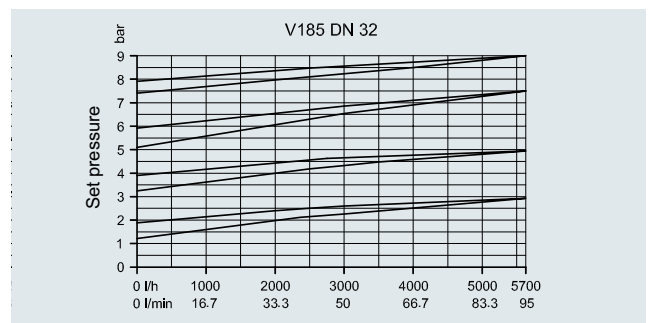
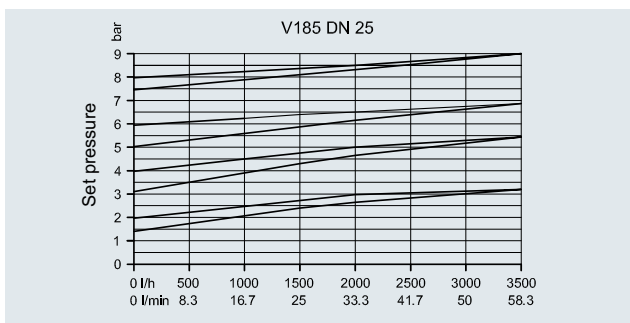
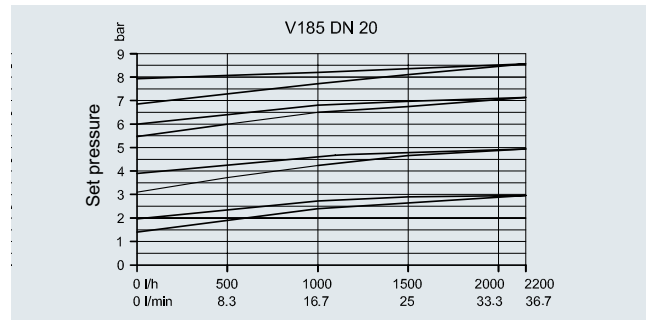
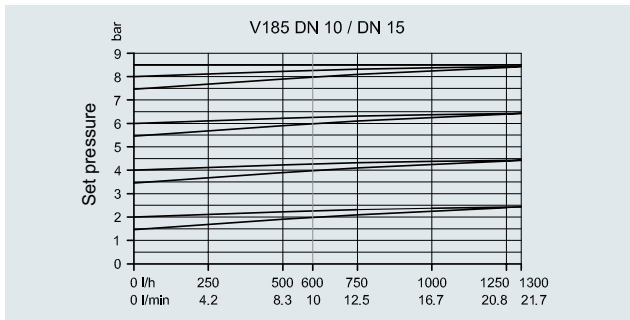
d	DN	Type	PVC/EPDM	PVC/PTFE	PP/EPDM IR-spigots	PP/PTFE IR-spigots	PVDF/PTFE IR-spigots
16	10	V 185	17.000.120	17.000.179	17.005.444	17.005.451	17.005.458
20	15	V 185	17.000.121	17.000.180	17.005.445	17.005.452	17.005.459
25	20	V 185	17.000.122	17.000.181	17.005.446	17.005.453	17.005.460
32	25	V 185	17.000.123	17.000.182	17.005.447	17.005.454	17.005.461
40	32	V 185	17.000.124	17.000.183	17.000.448	17.005.455	17.005.462
50	40	V 185	17.000.125	17.000.184	17.005.449	17.005.456	17.005.463
63	50	V 185	17.000.126	17.000.185	17.005.450	17.005.457	17.005.464
75	65	V 85	17.002.709	17.002.713	17.005.465	17.005.468	17.005.471
90	80	V 85	17.002.717	17.002.721	17.005.466	17.005.469	-
110	100	V 85	17.002.725	17.002.729	17.005.467	17.005.470	-

INDIVIDUAL PARTS

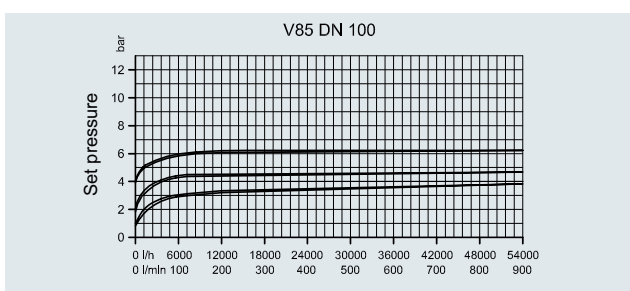
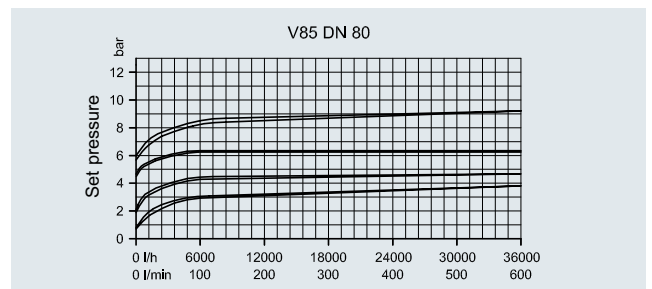
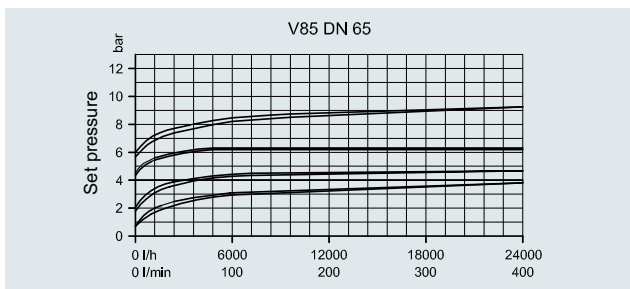
- Pos. Designation
- 1 Lower body
 - 2 Upper body
 - 3 Diaphragm
 - 4 Compressor
 - 5 Compressor spring
 - 6 Spring plate
 - 7 Adjustment screw
 - 8 Cap
 - 9 Set of screws



CHARACTERISTIC GRAPHS V 185



CHARACTERISTIC GRAPHS V 85



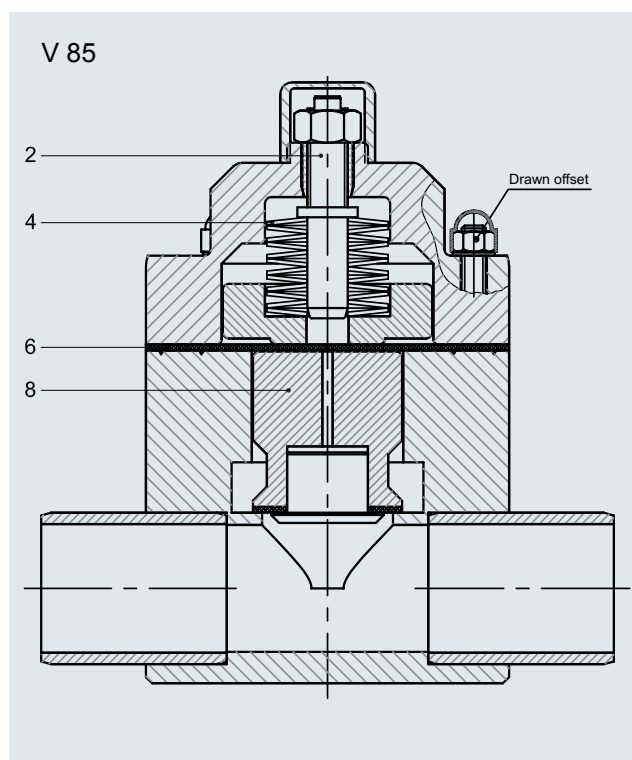
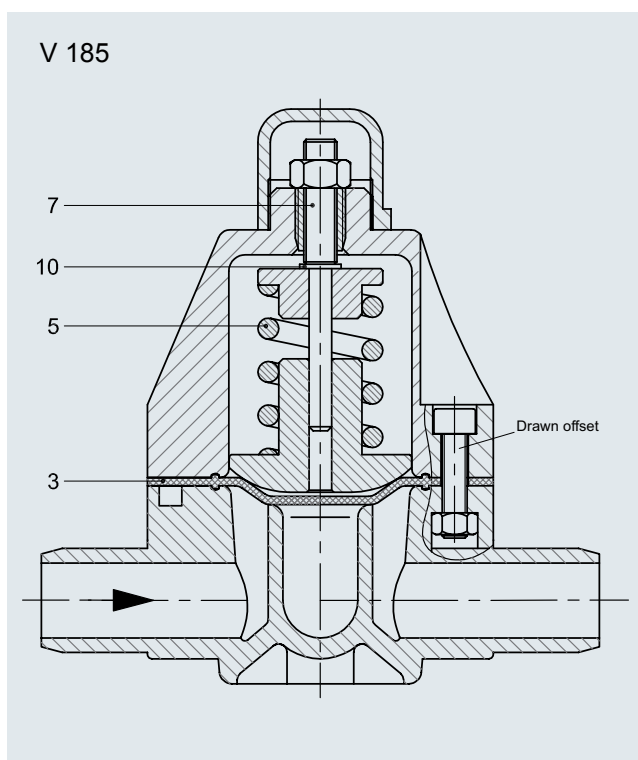
The characteristic curves on the graphs show the increase in the set pressure from 0 through to the maximum permissible flow rate. The upper and lower lines plot the course of the opening and closing pressure respectively. All characteristic curves apply to water at a temperature of 20 °C.

Pressure relief valve V 185 - V 85 . DN 10 à DN 100

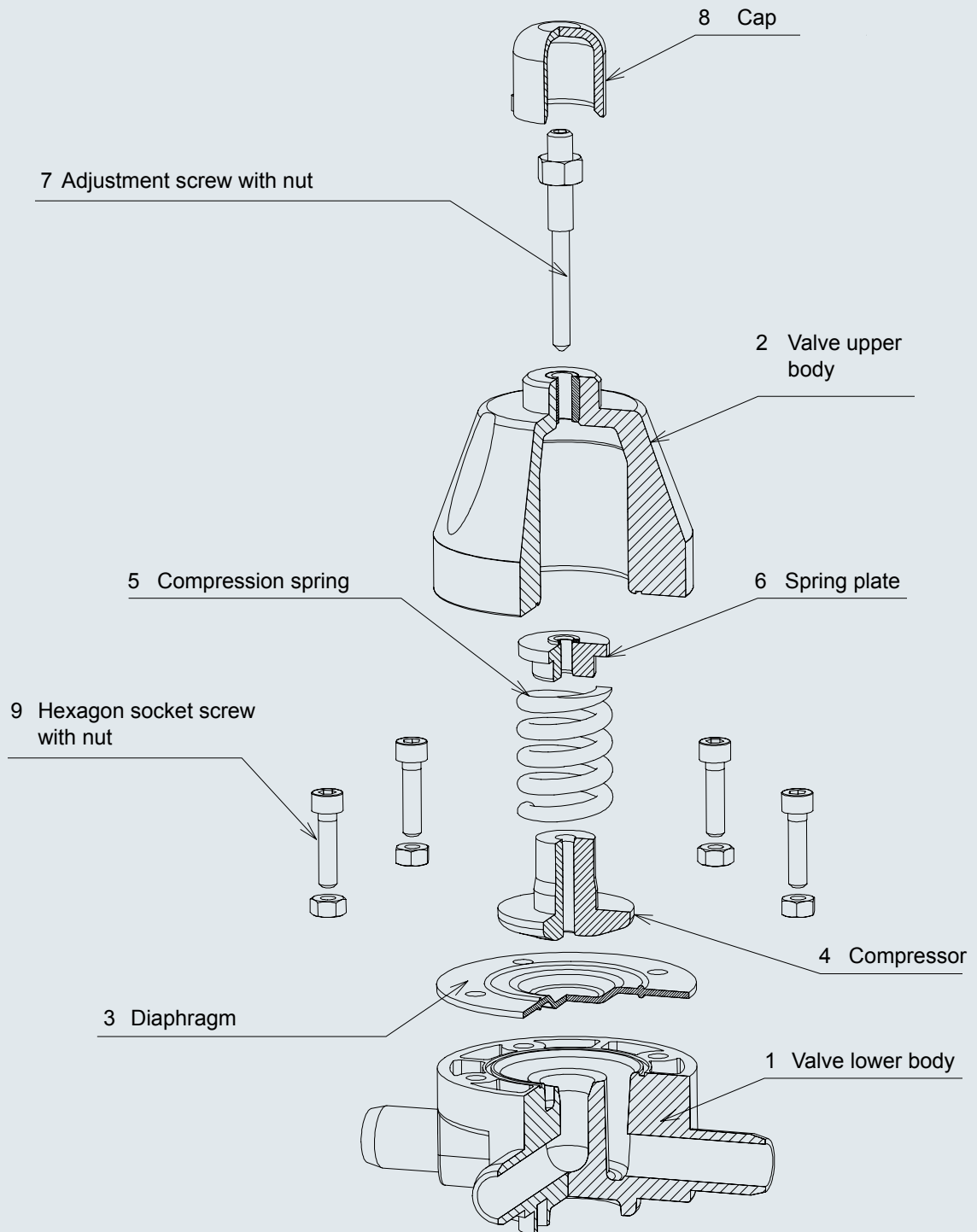
SPARE PARTS SET FOR V 185 / V 85 PVC-U / PP / PVDF

Set consisting of:	Type	DN	PVC/EPDM Article No.	PVC/PTFE Article No.	PP/EPDM Article No.	PP/PTFE Article No.	PVDF/PTFE Article No.
Pos. 3 diaphragm	V 185	10/15/20	17.006.007	17.006.020	17.006.007	17.006.020	17.006.020
Pos. 5 compression spring	V 185	25/32	17.006.008	17.006.021	17.006.008	17.006.021	17.006.021
Pos. 7 adjustment screw	V 185	40/50	17.006.009	17.006.022	17.006.009	17.006.022	17.006.022
Pos. 10 washer							

Set consisting of:	Type	DN	PVC/EPDM Article No.	PVC/PTFE Article No.	PP/EPDM Article No.	PP/PTFE Article No.	PVDF/PTFE Article No.
Pos. 6 diaphragm	V 85	65	17.006.140	17.006.143	17.006.262	17.006.265	17.006.274
Pos. 4 spring assembly	V 85	80	17.006.141	17.006.144	17.006.263	17.006.266	–
Pos. 2 adjustment screw	V 85	100	17.006.142	17.006.145	17.006.264	17.006.267	–
Pos. 8 piston, complete							



PRESSURE RELIEF VALVE V 185





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Pressure reducer V182-V82

FACTS | FIGURES | DATA



Pressure reducer V182-V82

Pressure reducer

V182 · V82

DN 10 to DN 100



V 182 PVDF



V 182 PP



V 182 PVC

USE

The pressure reducer V182/V82 reduces the system pressure to a defined value. Utilising the differential pressure, the pressure reducer sets itself to the set operating pressure. There is no direct relationship between the output pressure and the inlet pressure.

FUNCTION

The output pressure is exerted onto the diaphragm surface through a control bore and counteracts the set spring force. Once balance of pressure has been achieved, the valve closes and keeps the operating pressure constant by doing so. If the pressure decreases at the output side, then the set spring force is greater, and the valve opens until the balance of pressure has once more been achieved.

SPECIAL FEATURES

- All parts that come into contact with the medium are made of highly-resistant plastics
- The counter mechanism is hermetically sealed from the medium
- Good control properties thanks to optimisation of the piston, spring and control surface
- No auxiliary energy required
- Largely maintenance-free and can be installed in any position
- Diaphragm-protected pressure gauge for reading off the output pressure
- Valve adjustment also possible under operating pressure

MATERIALS

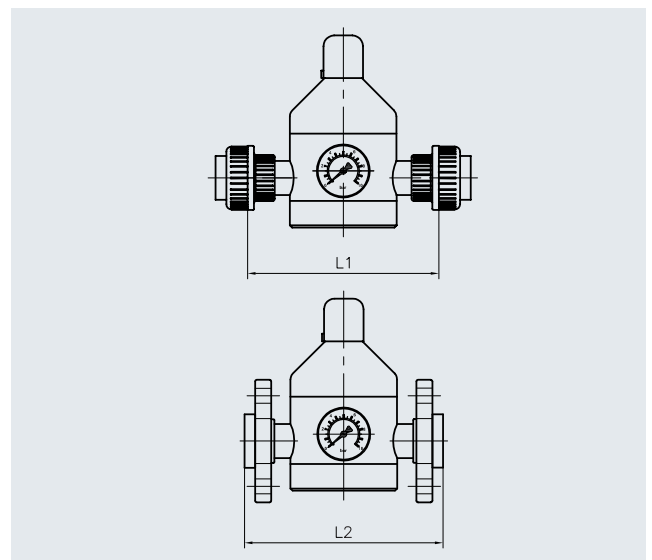
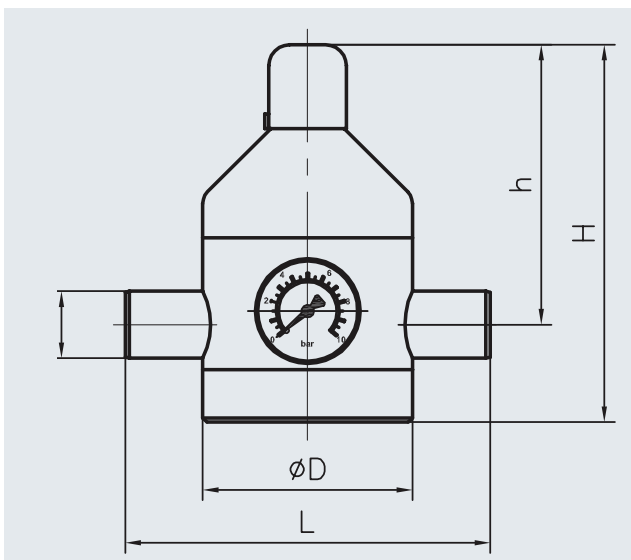
Housing	Permissible operating temperature	Diaphragm / V 82	Seal / V 182
PVC-U	o to + 60 °C	EPDM	EPDM
PP	- 10 to + 80 °C	EPDM / PTFE coated	Viton
PVDF	- 20to + 100 °C		

TECHNICAL DATA

Type	Size	PN	Adjustment range in bar
V 182	DN 10-50	10	o.5-9
V 82	DN 65-80	6	0.5-5
V 82	DN 100	4	1-3

DIMENSIONS IN MM (GUIDELINE VALUES)

d	DN	ØD	H	h	L PVC-U adhesive PP-PVDF fusion spigot	L PVDF- HP, PP Butt fusion spigot WNF/IR	L1	L2
16	10	70	147	112	134	–	154	140
20	15	70	147	112	134	150	154	140
25	20	100	18o	130	174	190	185	18o
32	25	100	180	130	174	190	185	18o
40	32	130	230	175	224	240	248	230
50	40	130	230	175	224	240	252	230
63	50	150	250	210	244	260	280	250
75	65	200	350	250	300	300	–	306
90	75	250	425	305	360	360	–	370
110	100	300	495	345	420	420	–	430



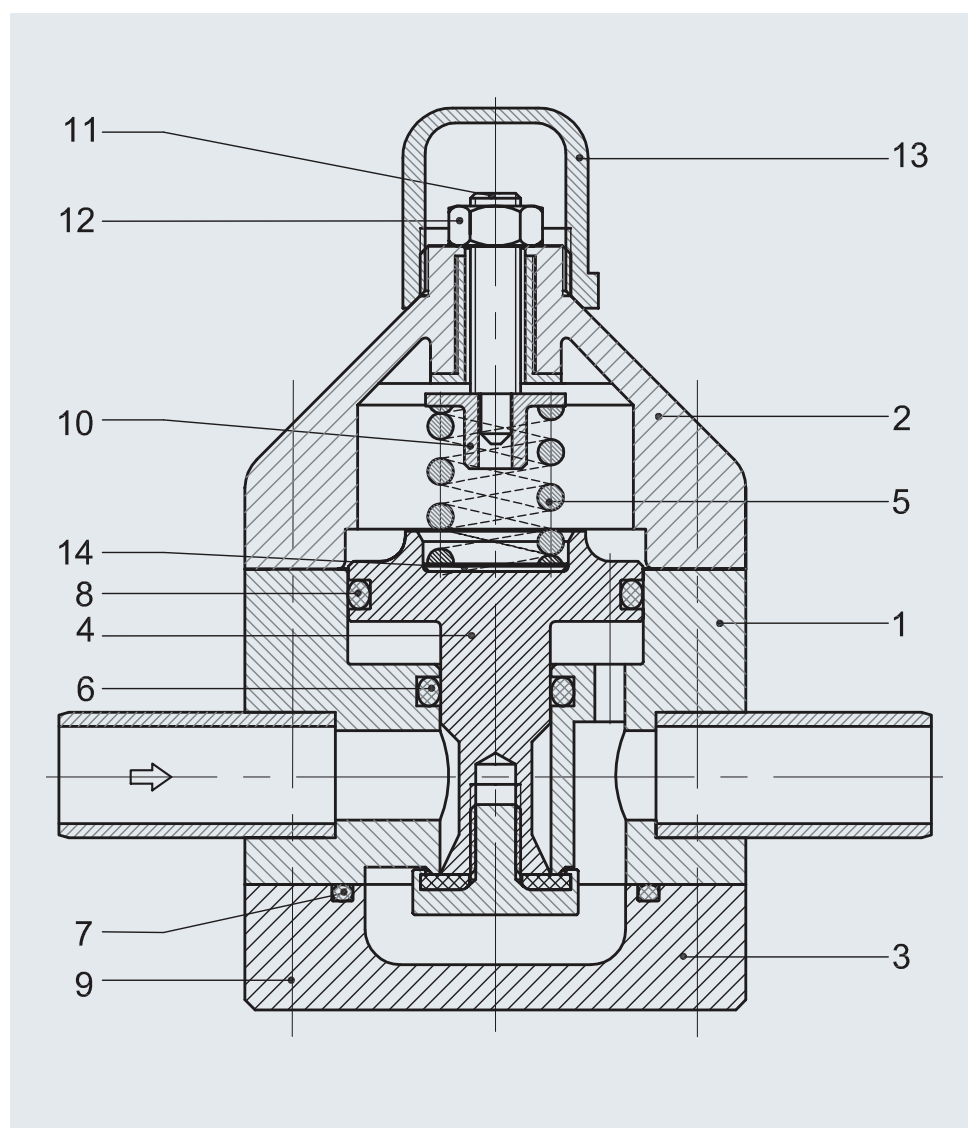
Pressure reducer V182-V82

ARTICLE NUMBERS

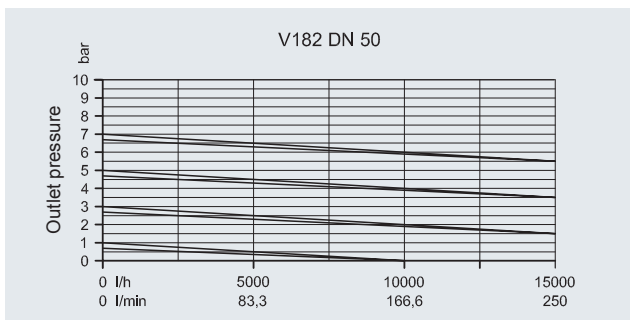
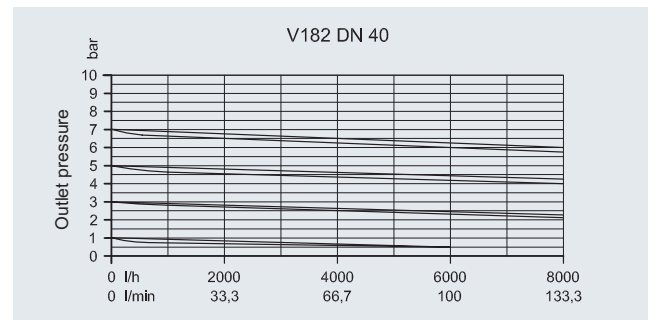
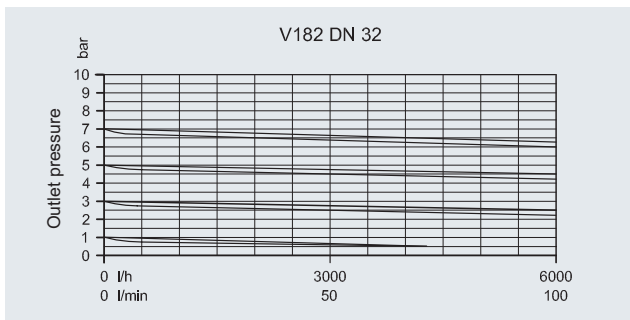
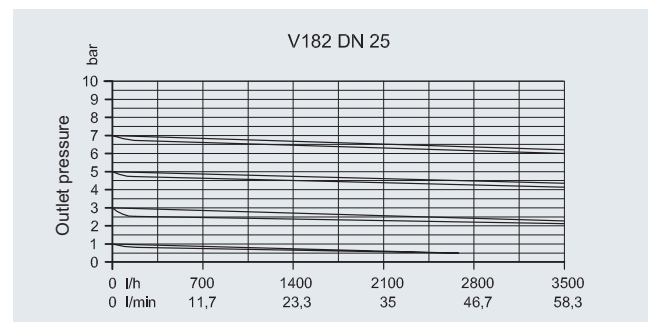
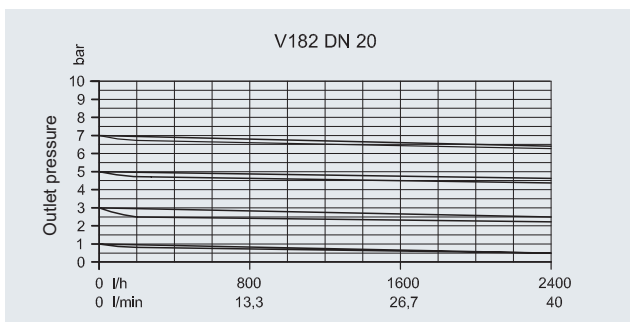
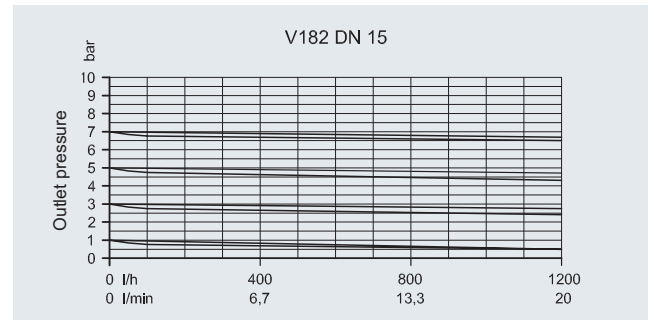
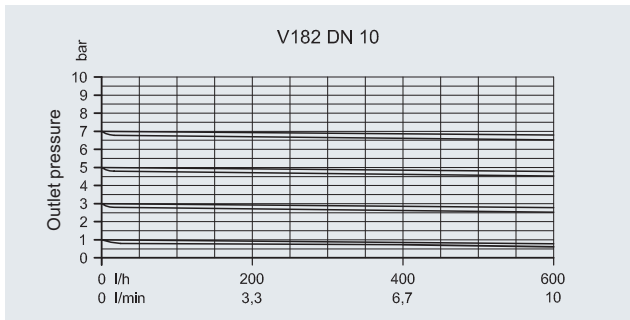
d	DN	Type	PVC/EPDM	PVC/FPM	PP/EPDM	PP/FPM	PP/EPDM IR	PP/FPM IR	PVDF/FPM	PVDF/FPM IR
16	10	V182	17.005.510	17.005.520	17.005.530	17.005.540	17.005.550	17.005.560	17.005.570	17.005.580
20	15	V182	17.005.511	17.005.521	17.005.531	17.005.541	17.005.551	17.005.561	17.005.571	17.005.581
25	20	V182	17.005.512	17.005.522	17.005.532	17.005.542	17.005.552	17.005.562	17.005.572	17.005.582
32	25	V182	17.005.513	17.005.523	17.005.533	17.005.543	17.005.553	17.005.563	17.005.573	17.005.583
40	32	V182	17.005.514	17.005.524	17.005.534	17.005.544	17.005.554	17.005.564	17.005.574	17.005.584
50	40	V182	17.005.515	17.005.525	17.005.535	17.005.545	17.005.555	17.005.565	17.005.575	17.005.585
63	50	V182	17.005.516	17.006.286	17.006.287	17.006.288	17.006.302	17.006.303	17.005.576	17.006.304
Diaphragm			EPDM	PTFE	EPDM	PTFE	EPDM	PTFE	PTFE	PTFE
75	65	V82	17.002.509	17.002.511	17.002.609	17.002.611	17.005.557	17.005.567	17.003.559	17.005.587
90	80	V82	17.002.513	17.002.515	17.002.613	17.002.615	17.005.558	17.005.568	-	-
110	100	V82	17.002.517	17.002.519	17.002.617	17.002.619	17.005.559	17.005.569	-	-

INDIVIDUAL PARTS

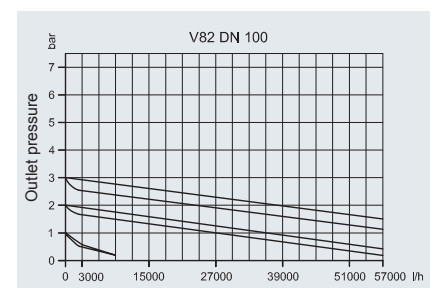
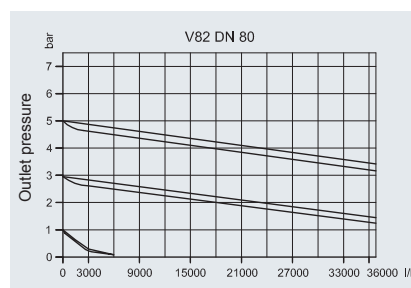
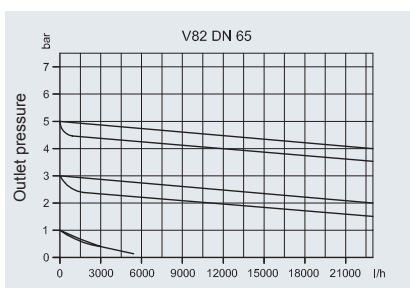
Pos.	Designation
1	Valve body assembly
2	Valve upper body assembly
3	Valve lower body
4	Piston assembly
5	Compression spring
6	Piston O-ring (bottom)
7	O-ring (bottom)
8	Piston O-ring (top)
9	Housing screws
10	Spring plate
11	Adjustment screw
12	Lock nut
13	Cap
14	Spring support plate



CHARACTERISTIC GRAPHS V 182



CHARACTERISTIC GRAPHS V 82



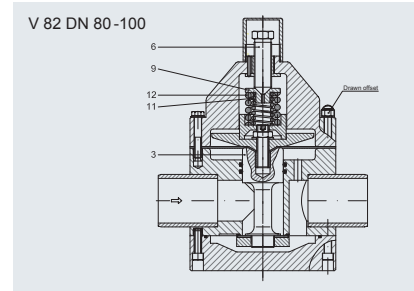
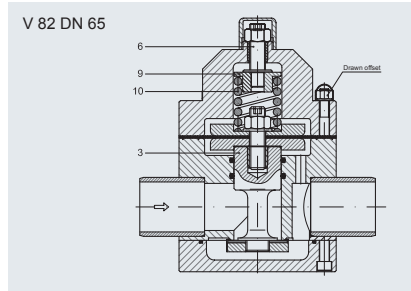
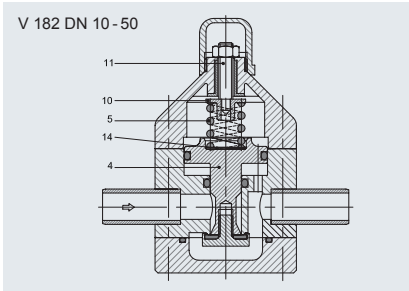
The characteristic curves on the graphs show the decrease in the set outlet pressure from 0 through to the maximum permissible flow rate. The upper and lower lines plot the course of the opening and closing pressure respectively. All characteristic curves apply to water at a temperature of 20 °C.

Pressure reducer V182-V82

SPARE PART REGULATOR SET FOR V 182 / V 82 PVC-U / PP / PVDF

Set consisting of:	Type	DN	PVC/EPDM Article No.	PVC/FPM Article No.	PP/EPDM Article No.	PP/FPM Article No.	PVDF/FPM Article No.
Pos. 4 piston	V 182	10/15	17.006.010	17.006.109	17.006.126	17.006.133	17.006.182
Pos. 5 compression spring	V 182	20/25	17.006.011	17.006.110	17.006.127	17.006.134	17.006.183
Pos. 10 spring plate	V 182	32/40	17.006.012	17.006.111	17.006.128	17.006.135	17.006.184
Pos. 11 adjustment screw	V 182	50	17.006.295	17.006.296	17.006.297	17.006.298	17.006.299
Pos. 14 pressure disc							

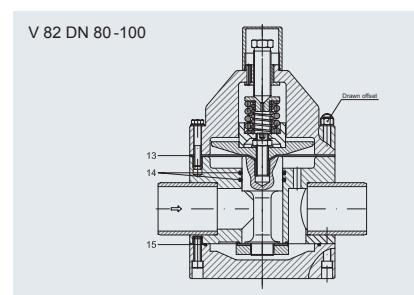
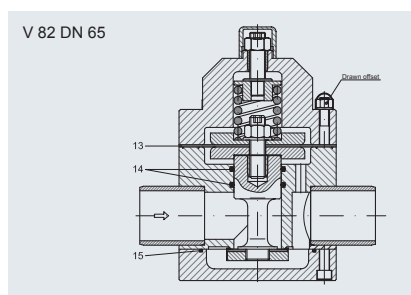
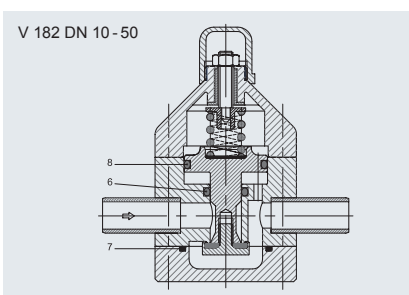
Set consisting of:	Type	DN	PVC/EPDM Article No.	PVC/PTFE Article No.	PP/EPDM Article No.	PP/PTFE Article No.	PVDF/FPM Article No.
Pos. 3 piston	V 82	65	17.006.106	17.006.113	17.006.130	17.006.137	17.006.186
Pos. 6 adjustment screw	V 82	80	17.006.107	17.006.114	17.006.131	17.006.138	–
Pos. 9 spring plate	V 82	100	17.006.108	17.006.115	17.006.132	17.006.139	–
Pos. 10- 12 compression springs							



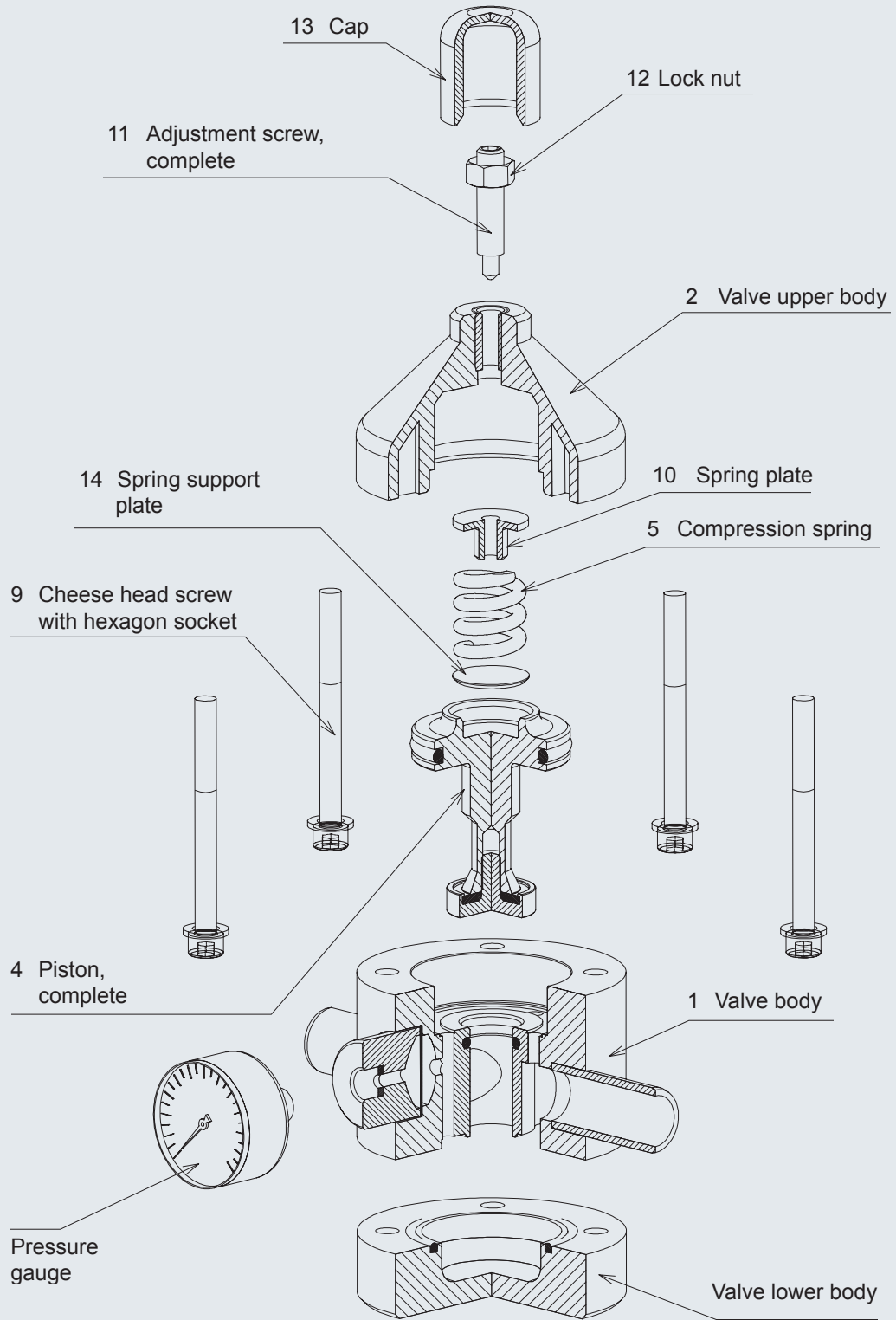
SPARE PART SEAL SET FOR V 182 / V 82 PVC-U / PP / PVDF

Set consisting of:	Type	DN	PVC/EPDM Article No.	PVC/FPM Article No.	PP/EPDM Article No.	PP/FPM Article No.	PVDF/FPM Article No.
Pos. 6 valve body O-ring	V 182	10/15	17.006.014	17.006.119	17.006.014	17.006.119	17.006.119
Pos. 7 O-ring (bottom)	V 182	20/25	17.006.015	17.006.120	17.006.015	17.006.120	17.006.120
Pos. 8 piston O-ring	V 182	32/40	17.006.016	17.006.121	17.006.016	17.006.121	17.006.121
	V 182	50	17.006.300	17.006.301	17.006.300	17.006.301	17.006.301

Set consisting of:	Type	DN	PVC/EPDM Article No.	PVC/PTFE Article No.	PP/EPDM Article No.	PP/PTFE Article No.	PVDF/FPM Article No.
Pos. 13 diaphragm	V 82	65	17.006.116	17.006.123	17.006.116	17.006.123	17.006.123
Pos. 14 valve body O-ring	V 82	80	17.006.117	17.006.124	17.006.117	17.006.124	–
Pos. 15 O-ring (bottom)	V 82	100	17.006.118	17.006.125	17.006.118	17.006.125	–



PRESSURE REDUCER V 182





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