



Introduction

Valves and filters form an essential part of any process plant or system in a wide range of applications from relatively simple on/off functions to flow control, pressure relief and filtering.

All wetted parts of valves and filters described in this section of the catalogue are constructed from either borosilicate glass, PTFE, ceramic, FEP, PFA or tantalum thus ensuring maximum resistance to corrosion. In addition, as valves have a glass body, visual monitoring of the valve operation is possible at all times.

With the exception of Beaded Straight Through Regulating Valves shown on page 3.4/E and Ball-Type Non-Return Valves shown on page 3.5, all glass components have a standard flat buttress end. Further details of both this and the beaded end form are provided in Section 1 – *Technical Information*. Standard flat buttress end components can only be coupled to beaded end components by means of the special adaptors described on page 2.10.1/E.

For standard flat buttress end connections from DN 15 to DN 150, it is possible to achieve a 3° deflection in the joint by using a flexible gasket. Details of these and all other couplings and gaskets can be found in Section 9 – *Couplings*.

The valves described in this section of the catalogue comply with ISO 3587 and ISO 4704 which means that 90° bends, tee pieces and equal crosses (see Section 2 – *Pipeline Components*) are interchangeable with certain types such as angle valves described on page 3.2.

DN refers to the nominal bore. Unless otherwise stated, all dimensions are given in mm.

For permissible operating conditions, **unless otherwise stated in the individual descriptions**, please see Section 1 – *Technical Information*. Generally, the maximum operating temperatures for valves is 200°C but temperatures above ambient, particularly in the range from 120°C to 200°C, impose restrictions on the permissible operating pressure. In case of doubt, please consult our Technical Department for further information.

To comply with the German TA Luft regulations most bellows sealed valves can be fitted with a secondary seal. This is a standard feature on hand operated valves and an optional feature, where shown, for actuated versions.

The majority of valves can be either CORWRAPped or CORCOATed and these are identified by a bold blue line at the foot of each appropriate page. Full details of both CORWRAP and CORCOAT can be found in Section 1 – *Technical Information*. For CORWRAP items, add a suffix **C** to the standard catalogue reference. For CORCOAT items, add a suffix **L**. Therefore a PVD 07 becomes a PVD 07C or a PVD 07L respectively.

For details of supporting equipment, please see Section 10 – *Structures*.

On/Off Valves

Straight through valves and their PVE angle type equivalents are essentially on/off valves and are available in sizes from DN80 to DN150. In applications where smaller diameter on/off valves are required or where a coarse control of flow is needed, type PVD and PED valves should be used. See page 3.2.

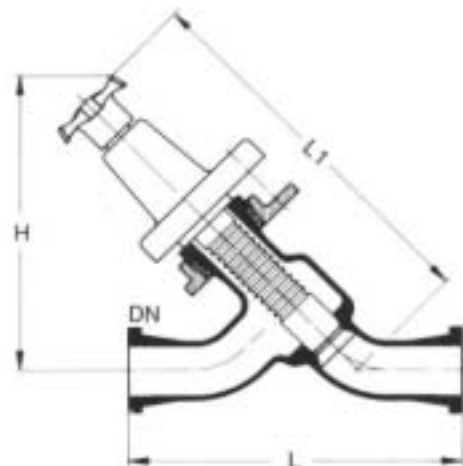
Straight Through Valves



DN	L	L1	H	Catalogue reference
80	375	430	330	PV 3
100	575	600	445	PV 4
150	600	680	500	PV 6A

The following standard spares are available for these items:

- Glass body
- Handwheel and bonnet assembly
- Bellows plug



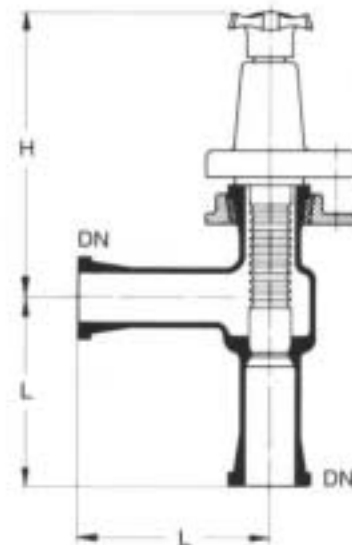
Angle Valves



DN	L	H	Catalogue reference
80	200	310	PVE 3A
100	250	390	PVE 4
150	250	470	PVE 6A

The following standard spares are available for these items:

- Glass body
- Handwheel and bonnet assembly
- Bellows plug



Drain Valves

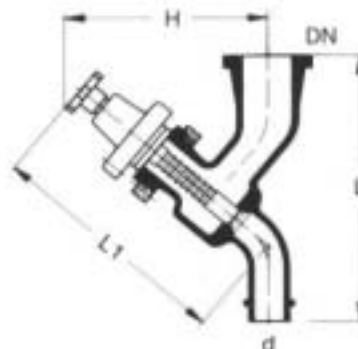


DN	d ¹	L	L1	H	Catalogue reference
25	16	140	120	85	PV 1/58
40	16	150	120	85	PV 1.5/58
40	26	200	210	150	PV 1.5/1

¹d is the bore of the mating hose

The following standard spares are available for these items:

- Glass body
- Handwheel and bonnet assembly
- Bellows plug



For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

Valves & Filters

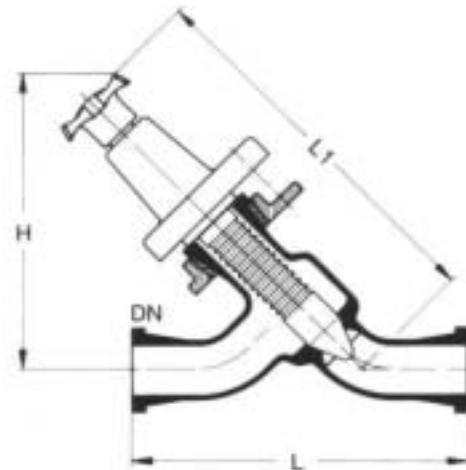
Regulating Valves

Straight through regulating valves and their PED angle type equivalents are ideal for applications in which a coarse control of flow is required such as in connections to pumps. They differ from the type PV and PVE valves in that they have a conically shaped bellows plug.

Straight Through Regulating Valves



DN	L	L1	H	Catalogue reference
15	125	120	90	PVD 07
25	175	220	170	PVD 1
40	225	285	215	PVD 1.5
50	300	295	225	PVD 2



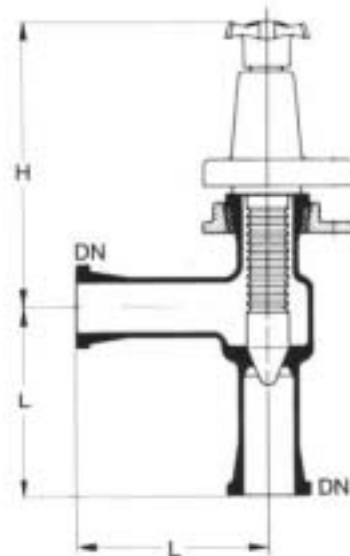
The following standard spares are available for these items:

- Glass body
- Handwheel and bonnet assembly
- Bellows plug

Angle Type Regulating Valves



DN	L	H	Catalogue reference
15	50	85	PED 07
25	100	170	PED 1A
40	150	215	PED 1.5
50	150	210	PED 2



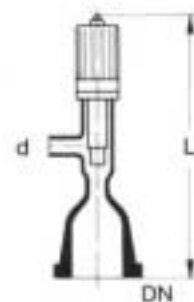
The following standard spares are available for these items:

- Glass body
- Handwheel and bonnet assembly
- Bellows plug

Vent Valves



DN	L	d	Catalogue reference
15	120	10	PVL 07
25	145	10	PVL 1
40	150	10	PVL 1.5




For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

Jacketed Regulating Valves

Jacketed straight through regulating valves and their DPED angle type equivalents are ideal for applications in which a coarse control of flow is required such as in connections to pumps.

Further information on the operating conditions of jacketed valves can be found in Section 1 of this catalogue – *Technical Information*.

Jacketed Straight Through Regulating Valves

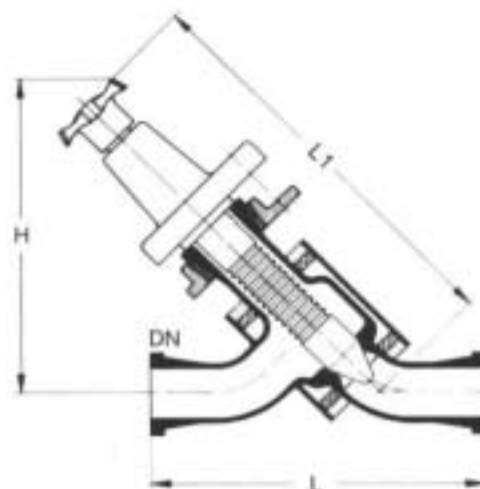


DN	L	L1	H	d ¹	Catalogue reference
15	125	130	100	13	DPVD 07
25	175	240	185	16	DPVD 1
40	225	285	225	18	DPVD 1.5
50	300	310	240	18	DPVD 2


¹d is the bore of the mating hose to the jacket

The following standard spares are available for these items:

- Jacketed glass body
- Handwheel and bonnet assembly
- Bellows plug



Jacketed Angle Type Regulating Valves

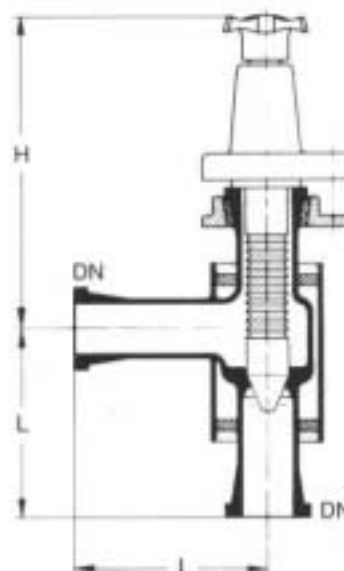


DN	L	H	d ¹	Catalogue reference
15	50	95	13	DPED 07
25	100	190	16	DPED 1
40	150	215	18	DPED 1.5
50	150	230	18	DPED 2

¹d is the bore of the mating hose to the jacket

The following standard spares are available for these items:

- Jacketed glass body
- Handwheel and bonnet assembly
- Bellows plug



Valves & Filters

Loading Valves

Loading valves (or constant pressure valves) are used to maintain constant pressure in a pipeline and to create an artificial head, typically for a pump to work against. They are particularly suitable for installation on the outlet of centrifugal and dosing pumps. They must not be used as safety or pressure relief valves.

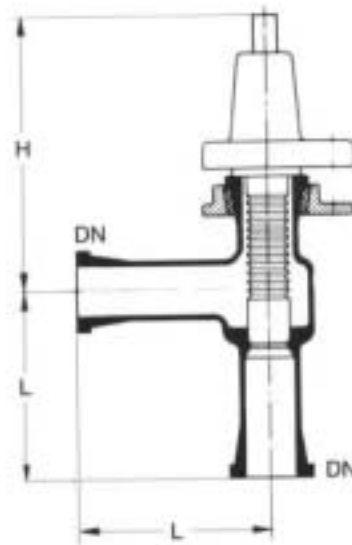
The valves comprise a spring assembly (in place of the normal handwheel and bonnet assembly) which can be adjusted to vary the pressure from 0.2 bar.g to the maximum operating pressure of the valve.



DN	L	H	Catalogue reference
15	50	85	PVF 07
25	100	155	PVF 1A
40	150	190	PVF 1.5
50	150	190	PVF 2

The following standard spares are available for these items:

- Glass body
- Spring assembly
- Bellows plug



Beaded Straight Through Regulating Valves

These valves are identical to type PVD straight through regulating valves except that they are designed specifically for use in beaded process systems having beaded ends rather than standard buttress ends.

Beaded straight through regulating valves have a different end form to the valves described previously in this section and are joined to other beaded components by means of a simple, one-bolt coupling. Details of the coupling can be found in section 9 – *Couplings*.

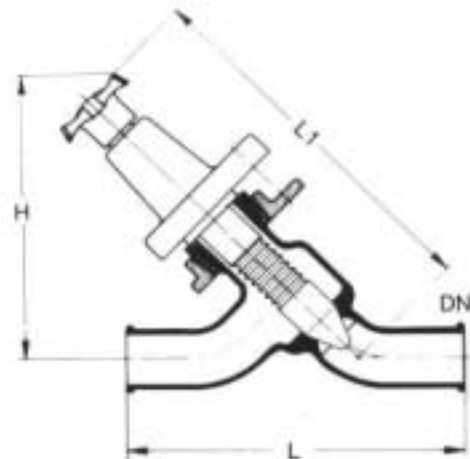
For further information on operating conditions for beaded components, please see section 1 – *Technical Information*.



DN	L	L1	H	Catalogue reference
25	175	220	170	BPV1
40	225	285	215	BPV1.5
50	300	295	225	BPV2

The following standard spares are available for these items:

- Glass body
- Handwheel and bonnet assembly
- Bellows plug

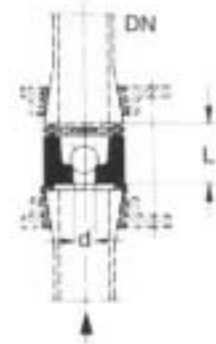


For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

Ball-Type Non-Return Valves

These valves are for use only in vertical pipelines. Like glass spacers, they are fitted between standard buttress end components using longer coupling bolts.

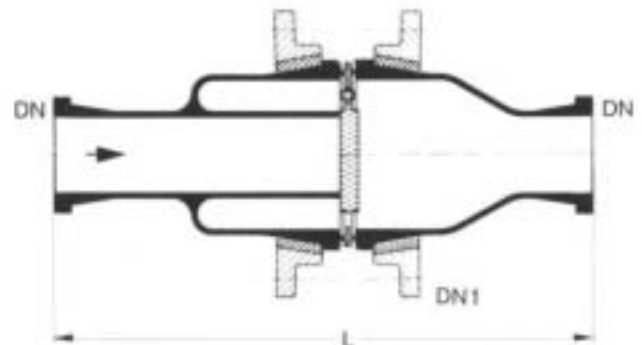
Ball-type non-return valves are supplied complete with glass body, glass ball and PTFE retaining plate.



DN	L	d	Catalogue reference
15	19	5	NRD 07
25	25	10	NRD 1
40	33	15	NRD 1.5
50	41	19	NRD 2
80	65	30	NRD 3

Flap-Type Non-Return Valves

Flap-type non-return valves can be installed in both vertical and horizontal pipelines. The flap is manufactured from PTFE and is mounted on a tantalum hinge to ensure maximum corrosion resistance.



DN	DN1	L	Catalogue reference
25	50	225	RK 1
40	80	275	RK 1.5
50	100	325	RK 2

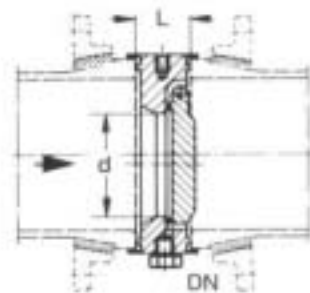
The following standard spares are available for these items:

- Glass body
- Flap assembly

Flap-Type Non-Return Valves

These larger sizes of flap-type non-return valve are, like NRD type non-return valves, fitted between standard buttress end components using longer coupling bolts. They can be used in both vertical and horizontal pipelines. As they are manufactured from PTFE, no gasket is required on either side of the valve between the PTFE face and the standard glass buttress end.

RKP type non-return valves incorporate a tantalum hinge and are supplied complete.



DN	L	d	Catalogue reference
80	24	55	RKP 3
100	24	82	RKP 4
150	24	125	RKP 6

For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

Valves & Filters

Pneumatically Actuated On/Off Valves

These valves are fitted with either a Samson or Kämmer pneumatic actuator.

The required supply pressure to the actuator for valves fitted with the Samson actuator is 3.0 bar.g for diameters from DN 25 to DN 100 and 4.5 bar.g for the DN 150 version. For valves fitted with the Kämmer actuator, the required supply pressure is 2.5 bar.g. These figures should not be exceeded by more than 10%.

When ordering these valves, a suffix 1 should be added to the catalogue reference for 'spring to open' and a suffix 2 for 'spring to close.'

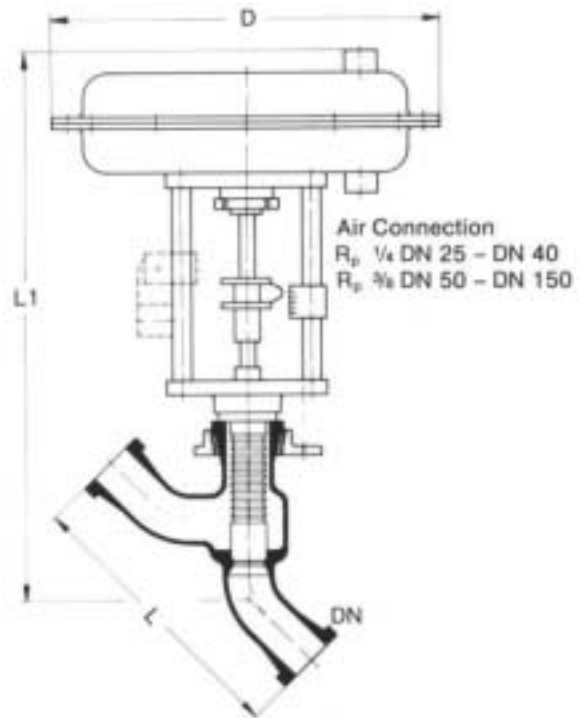
Straight Through Type with Samson Actuator

DN	L	L1	L1 [†]	D	Catalogue reference	Catalogue [†] reference
25	175	345	390	150	PVS 1/..	PVS 1S/..
40	225	405	445	240	PVS 1.5/..	PVS 1.5S/..
50	300	425	495	280	PVS 2/..	PVS 2S/..
80	375	590	690	390	PVS 3/..	PVS 3S/..
100	575	710	810	390	PVS 4/..	PVS 4S/..
150	600	790	895	390	PVS 6/..	PVS 6S/..

[†]For valves fitted with secondary seal

The following standard spares are available for these items:

- Glass body
- Actuator assembly
- Bellows plug



Straight through valve with Samson actuator

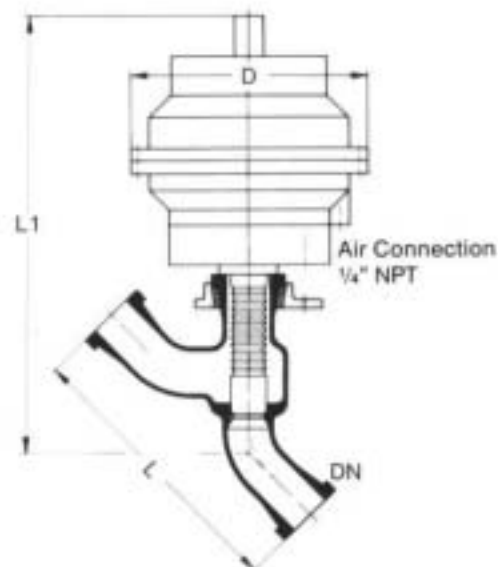
Straight Through Type with Kämmer Actuator

DN	L	L1	L1 [†]	D	Catalogue reference	Catalogue [†] reference
25	175	265	380	150	PVM 1/..	PVM 1S/..
40	225	400	565	205	PVM 1.5/..	PVM 1.5S/..
50	300	385	565	205	PVM 2/..	PVM 2S/..
80	375	525	705	300	PVM 3/..	PVM 3S/..
100	575	640	825	300	PVM 4/..	PVM 4S/..
150	600	725	900	300	PVM 6/..	PVM 6S/..

[†]For valves fitted with secondary seal

The following standard spares are available for these items:

- Glass body
- Actuator assembly
- Bellows plug



Straight through valve with Kämmer actuator and without secondary seal

For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

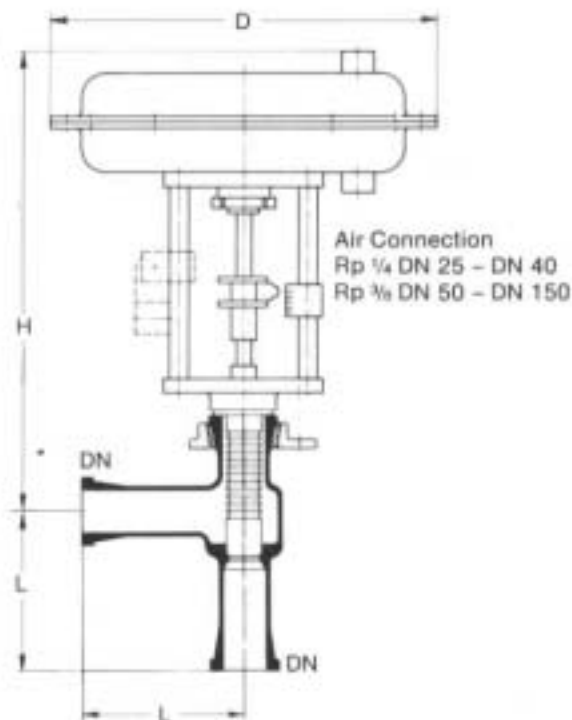
Angle Type with Samson Actuator

DN	L	H	H ¹	D	Catalogue reference	Catalogue ¹ reference
25	100	290	335	150	PES 1/..	PES 1S/..
40	150	325	370	240	PES 1.5/..	PES 1.5S/..
50	150	350	420	280	PES 2/..	PES 2S/..
80	200	475	575	390	PES 3/..	PES 3S/..
100	250	500	600	390	PES 4/..	PES 4S/..
150	250	585	685	390	PES 6/..	PES 6S/..

¹For valves fitted with secondary seal

The following standard spares are available for these items:

- Glass body
- Actuator assembly
- Bellows plug



Angle type valve with Samson actuator

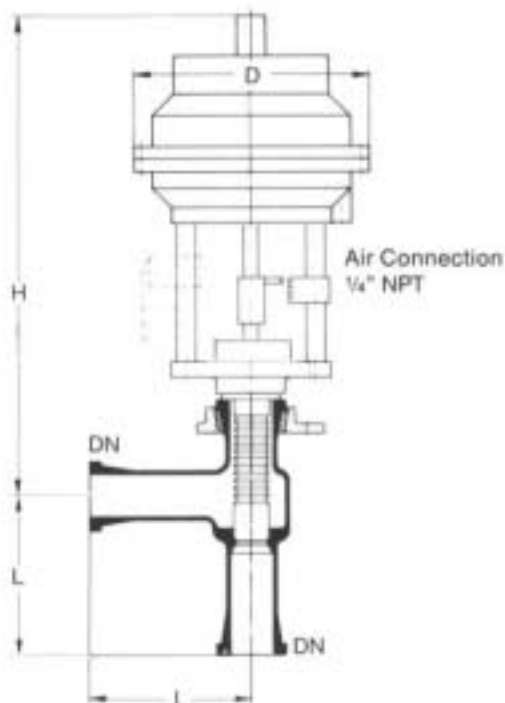
Angle Type with Kämmer Actuator

DN	L	H	H ¹	D	Catalogue reference	Catalogue ¹ reference
25	100	215	330	150	PEM 1/..	PEM 1S/..
40	150	325	490	205	PEM 1.5/..	PEM 1.5S/..
50	150	310	490	205	PEM 2/..	PEM 2S/..
80	200	410	590	300	PEM 3/..	PEM 3S/..
100	250	430	615	300	PEM 4/..	PEM 4S/..
150	250	510	695	300	PEM 6/..	PEM 6S/..

¹For valves fitted with secondary seal

The following standard spares are available for these items:

- Glass body
- Actuator assembly
- Bellows plug



Angle type valve with Kämmer actuator and secondary seal

For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

Valves & Filters

Control Valves

These valves can be used to obtain a fine variation in flow rate. They can be used with both liquids and gases and give accurate linear or equal percentage control.

All valves are angle-type units and are available with handwheel and bonnet assembly for manual operation (type PRV) or with either Samson or Kämmer actuators for pneumatic operation (types PRS and PRM).

For each nominal bore of valve, a range of K_{vs} values as shown in the table below is available. These are achieved through a combination of valve plug and seat. K_{vs} values are in m^3/h with a pressure drop of 1 bar, valve fully open. The normal operating characteristics of each valve can be either linear or of equal percentage. The valve stroke is 10mm for the DN25 and 20mm for the DN40 and DN50 valves.

Available K_{vs} Values

DN	OPERATING CHARACTERISTIC	K_{vs} Value m^3/h													
		0.1	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6.3	10	16	25	40
25	Equal Percentage	01	03	05	07	09	11	13	15	17	19				
	Linear	02	04	06	08	10	12	14	16	18	20				
40	Equal Percentage										01	03	05		
	Linear										02	04	06		
50	Equal Percentage												01	03	05
	Linear												02	04	06

Catalogue Reference Key

Example



Hand Control Valves

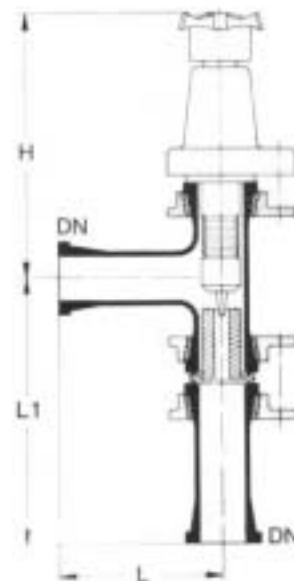
Hand control valves incorporate a handwheel and bonnet assembly but can be fitted with any of our standard pneumatic actuators at a later stage.

DN	L	L1	H	Catalogue reference
25	100	170	170	PRV 1/..
40	150	185	195	PRV 1.5/..
50	150	195	205	PRV 2/..

¹ See table above for specifying complete catalogue reference.

The following standard spares are available for these items:

- Handwheel and bonnet assembly
- Glass body
- Bellows plug and seat



For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

Control Valves with Samson Actuator

The special feature of these valves is their low installation height. They are equipped with a rolling diaphragm and internal springs. It is possible to attach any conventional positioner to the connecting rods between the valve and drive at a later stage. Manual adjustment can be provided for, but cannot be incorporated once the valve has been installed.

The actuator action can be reversed without special tools by turning around the actuator internals. The signal range is between 0.2 and 1.0 bar.g.

DN	L	L1	H	H ²	D	Catalogue reference ¹	Catalogue reference ^{1,2}
25	100	170	300	335	150 ² /240	PRS 1/..	PRS 1S/..
40	150	185	345	395	280	PRS 1.5/..	PRS 1.5S/..
50	150	195	355	405	280	PRS 2/..	PRS 2S/..

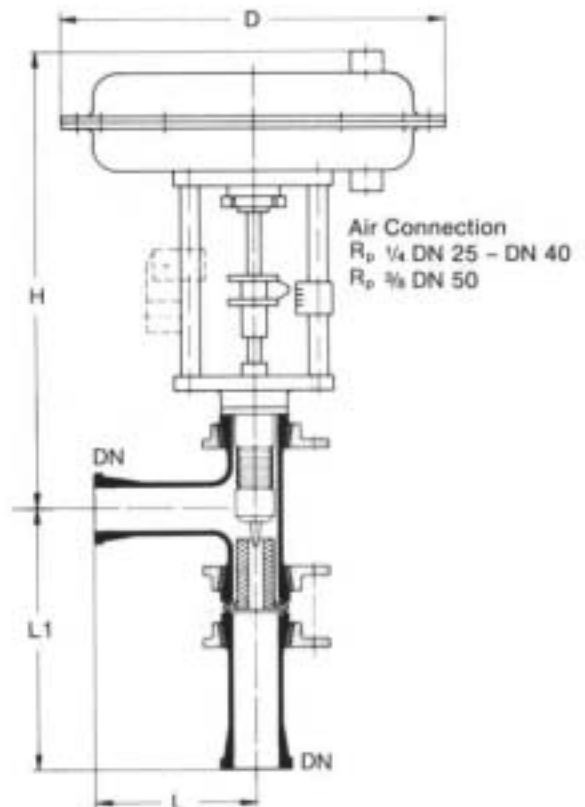
¹ See table on previous page specifying complete catalogue reference

² For valves fitted with secondary seal

³ For valves without secondary seal and K_{vs} values up to 0.4

The following standard spares are available for these items:

- Actuator assembly
- Glass body
- Bellows plug and seat



Control Valves with Kämmer Actuator

The main advantage of control valves fitted with a Kämmer actuator is that they can be supplied with or without an integral positioner.

On valves supplied with integral positioner when the signal is altered a double diaphragm operates a valve which applies pressure to the rolling diaphragm. The required supply pressure to the actuator with integral positioner is 1.4 to 3.0 bar.g.

Actuators without an integral positioner can be combined with any conventional make of positioner. Manual adjustment can also be provided at a later stage.

The action of the actuator can be reversed without additional parts.

DN	L	L1	H	H ²	D	Catalogue reference ¹	Catalogue reference ^{1,2}
25	100	170	365	365	150	PRM 1/..	PRM 1S/..
40	150	185	460	505	205	PRM 1.5/..	PRM 1.5S/..
50	150	195	470	515	205	PRM 2/..	PRM 2S/..

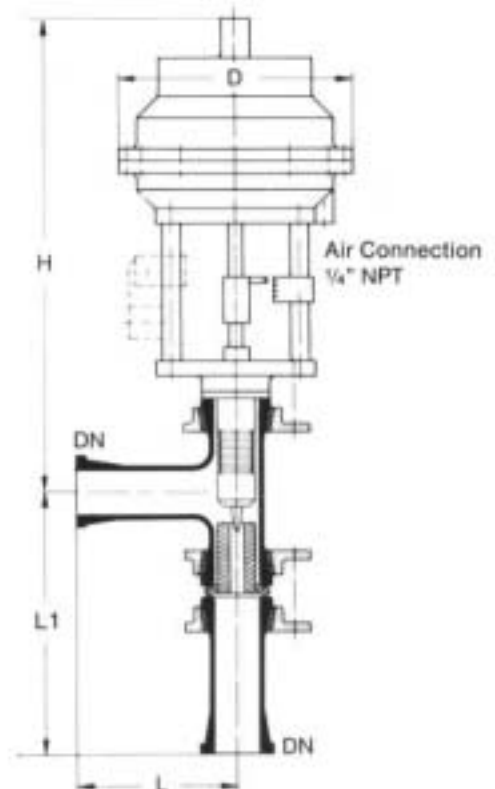
¹ See table on previous page specifying complete catalogue reference

² For valves fitted with secondary seal

The following standard spares are available for these items:

- Actuator assembly
- Glass body
- Bellows plug and seat

The signal range for valves with or without integral positioner is 0.2 to 1.0 bar.g.



For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

Valves & Filters

Pressure Relief Valves

Two types of pressure relief valve can be supplied: weight operated or spring operated. Both are constructed of glass and PTFE, without glands. Sealing of moving parts is effected by a PTFE bellows.

The valves are designed to meet the requirements of the German Technical Control Association (TÜV) and are supplied complete with TÜV certificate.

The maximum recommended operating temperature is 150°C and a range of pressures, as indicated below, can be accommodated. Please note that any change in the setting of the blow-off pressure should only be made by ourselves when the valve will be subsequently lead sealed and the rating plate altered.

Both types of pressure relief valves should be installed with the spindle vertical and adequate support should be given. For blow off pressure greater than 1.5 bar.g, it is important that the valve outlet branch is restrained.

No standard spares are available for these items which must be returned to QVF for service.

Catalogue Reference Key

Example

SVG 1/2/1.5/

1/

0.25

Blow off pressure (bar.g)

Code for blow off pressure range
(see pressure range tables below)

Catalogue reference

Weight-Operated Pressure Relief Valves



DN	DN1	d	L	L1	L2	H	Catalogue ¹ reference
50	40	27	100	125	240	250	SVG 1/2/1.5/..
80	80	38	125	150	240	245	SVG 1.5/3/3/..

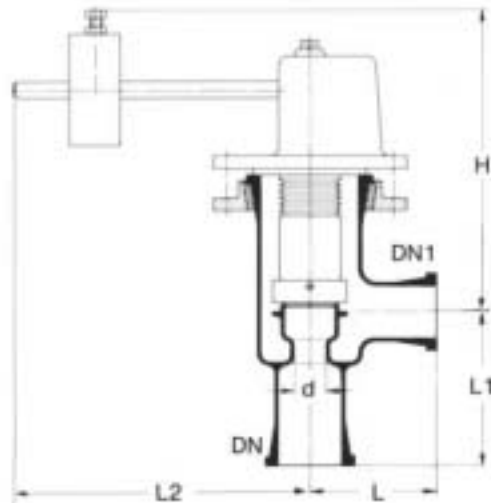
¹See tables above and below for specifying complete catalogue reference

Pressure Ranges

Code	0	1	2	3	4	5	6
Pressure range (bar.g)	0.1	0.2-0.27	0.25-0.4	0.3-0.6	0.5-1.1	0.9-1.4	1.5-2.2

Approval Test Numbers

Catalogue reference	Pressure range (bar.g)	Approval test numbers
SVG 1/2/1.5	0.1	TÜV · SV · ...-452 · 27 · D/G · 0.48 · p
	0.2-2.2	TÜV · SV · ...-452 · 27 · D/G · 0.19 · p
SVG 1.5/3/3	0.1	TÜV · SV · ...-453 · 38 · D/G · 0.39 · p
	0.2-2.2	TÜV · SV · ...-453 · 38 · D/G · 0.11 · p



For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

Spring-Operated Pressure Relief Valves



DN	DN1	d	L	L1	L2	H	Catalogue ¹ reference
50	40	27	100	125	100	415	SVF 1/2/1.5/..
80	80	38	125	150	100	445	SVF 1.5/3/3/..

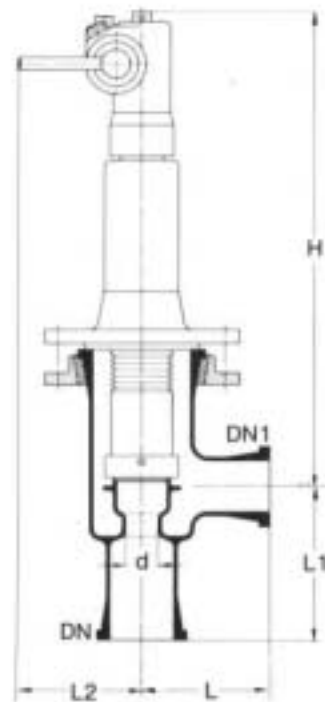
¹See tables on previous page and below for specifying complete catalogue reference

Pressure Ranges

Code	0	1	2	3	4	5	6
Pressure range (bar.g)	0.1-0.2	0.2-0.5	0.5-0.7	0.8-1.3	1.4-2.0	2.1-2.9	3.0-3.5

Approval Test Numbers

Catalogue reference	Pressure range (bar.g)	Approval test numbers
SVF 1/2/1.5	0.1-0.5	TÜV · SV · -450 · 27 · D/G · 0.55 · p
	0.5-3.5	TÜV · SV · -450 · 27 · D/G · 0.23 · p
SVF 1.5/3/3	0.1-0.5	TÜV · SV · -451 · 38 · D/G · 0.39 · p
	0.5-3.5	TÜV · SV · -451 · 38 · D/G · 0.14 · p



For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

Valves & Filters

Adjustable Overflow Valves

These valves provide a means of externally adjusting the level inside a vessel. They are ideal for use with liquid separators or liquid/liquid extractors.

Within the valve, the lower end of the PTFE bellows is in the form of a tube of accurately machined external diameter which operates inside a precision bore glass tube. Its position can be adjusted within given limits to set the required overflow level.

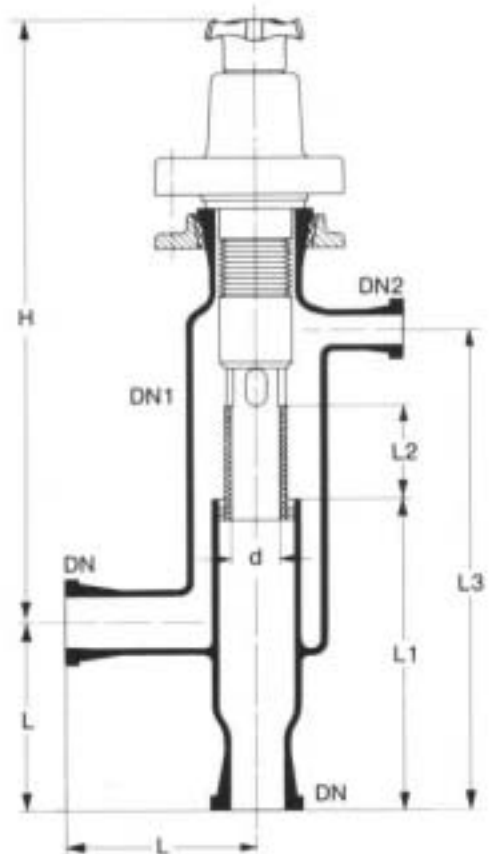
In applications where the system is not self-venting via the overflow line, a vent line can be connected to the DN2 branch.

DN	DN1	DN2	d	L	L1	L2	L3	H	I/h ¹	Catalogue reference
25	80	15	25	100	165	50	255	340	600	OF 1
40	80	15	25	150	265	90	435	470	900	OF 1.5A
50	100	15	35	150	270	90	435	470	1600	OF 2
80	150	15	60	200	330	120	555	580	3200	OF 3A

¹The figure in litres/hour is the maximum flowrate.

The following standard spares are available for these items:

- Handwheel and bonnet assembly
- Glass body
- Bellows/weir assembly



Bottom Outlet Valves

Type BAS and BAL bottom outlet valves are designed specifically for use with QVF glass items which have an integral glass seat sealed into the bottom outlet such as the HES 9 immersion heat exchanger.

The position of the valve seat is such that it reduces the accumulation of solids in the vessel or drain neck.

Valve seats can be sealed into either spherical or cylindrical vessels to special order.

DN	DN1	d	L	L1	L2	L3	L4	Catalogue reference
40	25	30	270	105	75	110	120	BAS 1.5
40	25	30	270	105	155	190	120	BAL 1.5

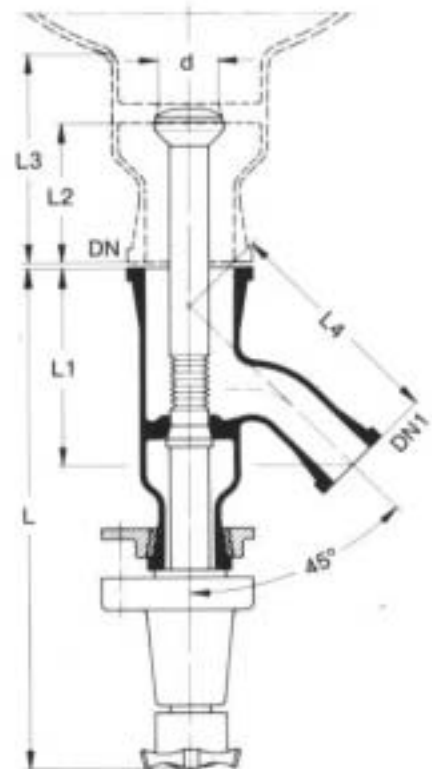
The following standard spares are available for these items:

- Handwheel and bonnet assembly
- Glass body
- Plug
- Bellows
- Bellows extension (BAL only)

Typical Applications

BAS 1.5 HES 9 immersion heat exchanger and spherical and cylindrical vessels with a standard length DN40 bottom outlet fitted with sealed-in valve seat.

BAL 1.5 Spherical and cylindrical vessels with a DN40 long bottom outlet fitted with sealed-in valve seat. For example where a vessel is to be installed in an oil bath or heating mantle.



For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

Ball Valves

As a result of the careful selection of materials, these ball valves represent an excellent complement to our range of glass components. They are ideal for applications where a low pressure drop is desirable.

The ball valves are available for either manual or pneumatic actuation with a 90° rotation in each case. The FEP-lined body and coated ball allow operating temperatures up to 150°C at the maximum permissible pressures detailed in Section 1 – *Technical Information*. For temperatures up to 180°C, a PFA-lined body and coated ball version is available.

Pneumatically-actuated ball valves with a single acting actuator are supplied with the correct number of springs corresponding to the air supply pressures

detailed below. On request, we can also supply actuators with a lower number of springs for lower air supply pressures.

In addition to the ball valves described below, other alternatives are available moulded from epoxy with a PTFE lining and ceramic ball. Further details are available on request.

Please note:

To avoid the sudden build up of pressure between the coated ball and the seat especially during the opening and closing of pneumatically-actuated versions, we recommend that air flow controls are incorporated in the supply lines.

Manually-Operated Ball Valves

The installation length of these units is identical to that of type PV straight through valves.

DN	L	L1	H	Catalogue reference
25	175	145	85	PH 1
40	225	165	115	PH 1.5
50	300	165	135	PH 2
80	375	290	185	PH 3

The following standard spares are available for these items:

- PTFE seals
- Coated ball

Pneumatically-Actuated Ball Valves

For installation dimensions, see manually-operated versions above.

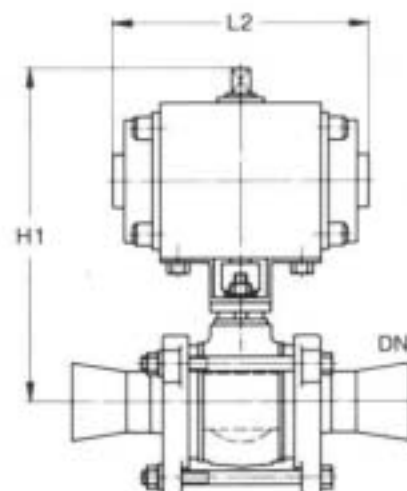
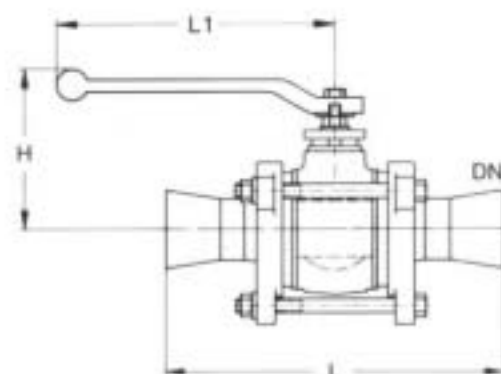
Double acting actuator

DN	L2	H1	Air supply (bar.g)	Catalogue reference
25	155	195	2.5 - 10	PHP 1
40	235	265	2.5 - 10	PHP 1.5
50	235	275	2.5 - 10	PHP 2
80	325	390	2.5 - 10	PHP 3

Single acting actuator

DN	L2	H1	Air supply (bar.g)	Catalogue ¹ reference
25	195	225	5.5	PHQ 1
40	270	290	5.5	PHQ 1.5
50	270	300	5.5	PHQ 2
80	415	445	5.5	PHQ 3

¹When ordering, please specify whether "spring to open" or "spring to close."



The following standard spares are available for these items:

- PTFE seals
- Coated ball

For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

Dirt traps

Dirt traps are designed for pipelines where high product purity is required. They are of particular importance when pumps have to be protected against abrasive constituents and other impurities. They can be supplied as coarse filters with 2mm diameter holes as standard or fine filters with mesh sizes of 100, 300 or 500µm. Pressure drops are shown in the table below.

The filter element is PTFE and the casing borosilicate glass providing almost universal corrosion-resistance.

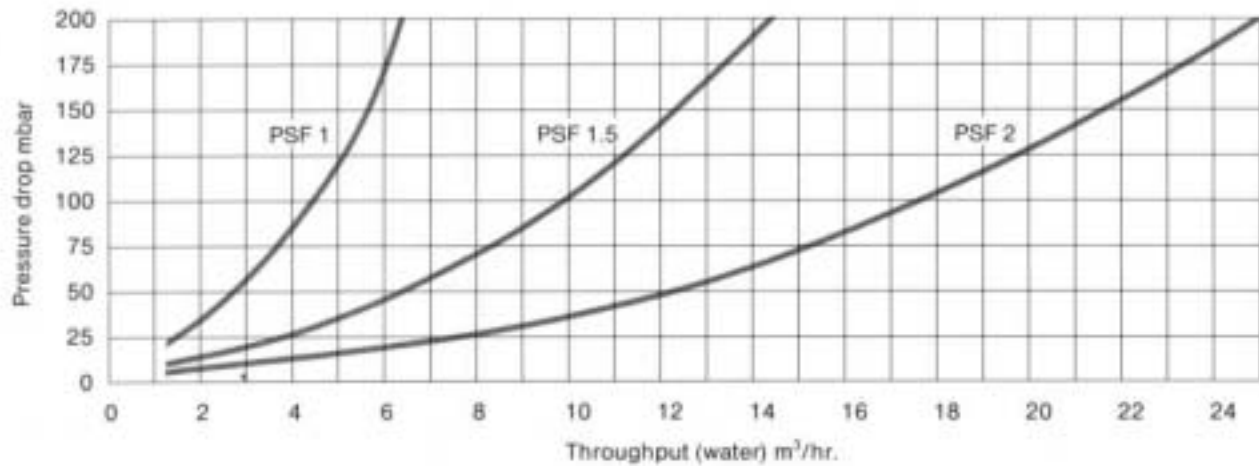
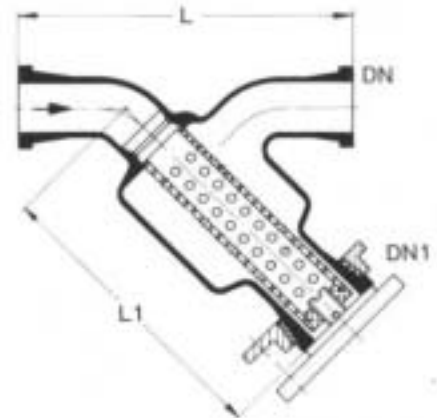
Coarse filter

DN	DN1	L	L1	Catalogue reference
25	40	175	180	PSF 1
40	50	225	190	PSF 1.5
50	80	300	280	PSF 2

Fine filter

DN	DN1	L	L1	Catalogue reference ¹
25	40	175	180	PSF 1/..
40	50	225	190	PSF 1.5/..
50	80	300	280	PSF 2/..

¹Catalogue reference to be completed by mesh size
i.e. 100, 300 or 500 e.g. PSF 1.5/300



Pressure drop versus throughput for coarse filters.

The following standard spares are available for these items:

- Glass body
- Filter assembly
- Closure

For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.

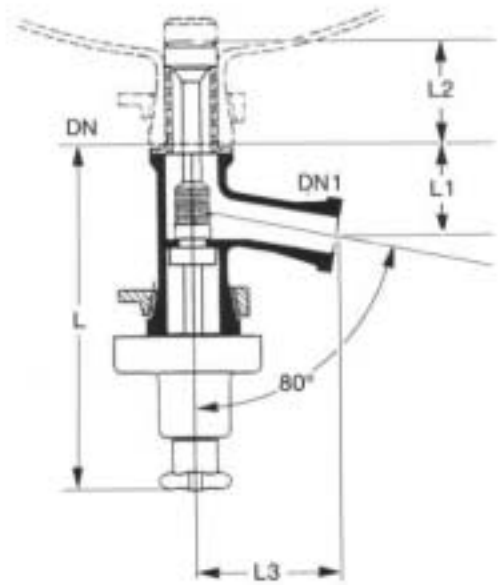
Bottom Outlet Valves

Unlike type BAS and BAL bottom outlet valves shown on page 3.12, the type RFC bottom outlet valve is designed for use with spherical and cylindrical vessels which do not have an integral glass seat sealed into the bottom outlet.

DN	DN1	L	L1	L2	L3	Catalogue reference
40	25	240	72	65	100	RFC 1.5

The following standard spares are available for these items:

- Handwheel and bonnet assembly
- Bellows and retaining nut
- Seat
- Glass body



For CORWRAP items, add a suffix C to the standard catalogue reference. For CORCOAT items, add a suffix L.