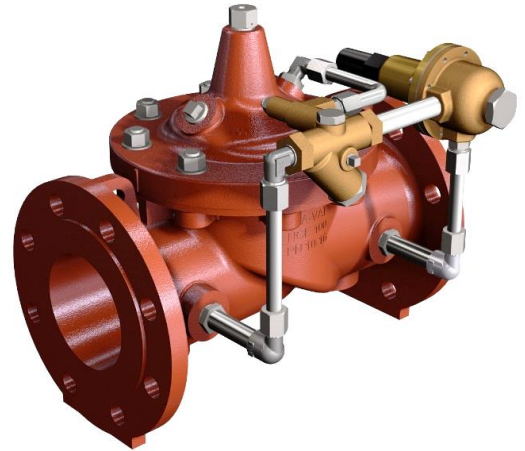
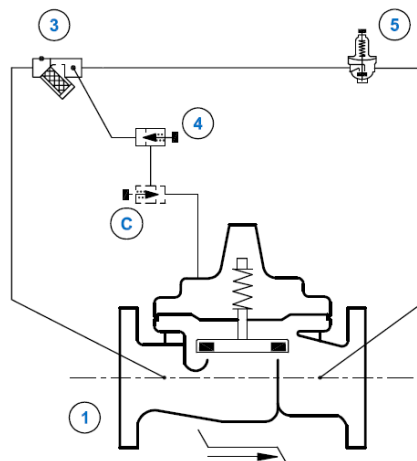


- Extremely accurate control of set-point
- Positive drip tight shut-off at zero flow
- Exceptional reliability
- Adjustable over a wide range of pressures
- 3 year warranty



CLA-VAL Models NGE-B90-01/LFS and B90GE-01/LFS Pressure Reducing Valves automatically reduce a higher inlet pressure to a steady lower downstream pressure, regardless of changing flow rate and/or varying inlet pressure. This valve is an accurate, pilot-operated regulator capable of holding downstream pressure to a pre-determined limit. When downstream pressure exceeds the pressure setting of the control pilot, the main valve and pilot valve close drip-tight. If a check feature is added, and a pressure reversal occurs, the downstream pressure is admitted in the main valve cover chamber, closing the valve to prevent return flow.



STANDARD EQUIPMENT

No	Description	Qty	Type
1	MAIN VALVE HYTROL AE/GE/NGE	1	100-01
3	STRAINER WITH INCORPORATED ORIFICE	1	X44-A
4	ONE-WAY FLOW CONTROL	1	CV
5	PRESSURE REDUCING CONTROL	1	CRD

OPTIONAL FEATURES

No	Description	Qty	Type
C	ONE-WAY FLOW CONTROL (CLOSING SPEED)	1	CV



CLA-VAL Series B90-01/LFS

Pressure Reducing Valve for Building Service

Minimum Pressure Drop:	0.5 bar
Maximum Operating Temperature:	70° C
Maximum Velocity:	5 m/s*
Pressure Turndown Ratio:	50:1**

* Limit velocity to 2 m/s in noise sensitive areas

** Cavitation risk at ratios greater than 5:1 Contact CLA-VAL for guidance

Materials

Component	Standard Material Combinations
Body & Cover	Ductile Iron - Fusion Bonded Epoxy Coated
Available sizes	32mm - 400mm*
Disc Retainer & Diaphragm Washer	Cast Iron - Fusion Bonded Epoxy Coated
Trim: Disc guide, Seat and Cover Bearing	Stainless Steel
Disc	EPDM
Diaphragm	EPDM - Nylon Reinforced
Stem, Nut & Spring	Stainless Steel

Pressure Ratings

Valve Body & Cover		Pressure Class				Threaded Ends
		Flanged				
Grade	Material	PN10	PN16	PN25	PN40	Ends
ASTM A536	Ductile Iron	10	16	25	40	20

Pilot System Specification

Outlet pressure adjustment ranges

0.1 to 2.0 bar

1.4 to 7.2 bar *

2.1 to 21 bar

* Supplied unless otherwise specified - other ranges available please consult CLA-VAL

Materials for Standard pilot control system

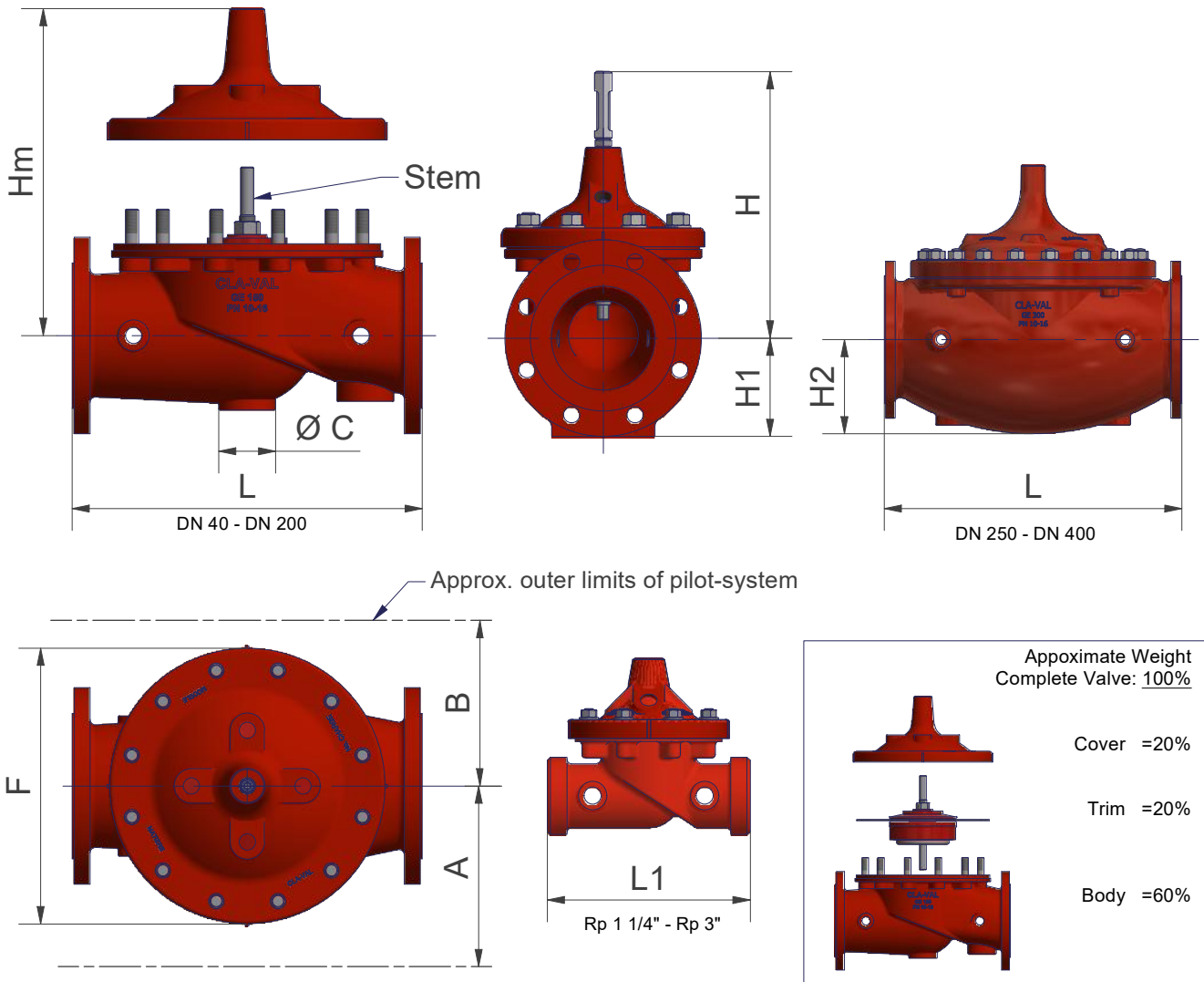
Pilot Control	Bronze ASTM B62
Trim	Stainless Steel
Rubber	EPDM
Tubing and Fittings	Stainless Steel

Flow vs Velocity

For application specific sizing, request a copy of the CLA-VAL valve sizing guide

*Valve Size	Model	Kvs [M3/h]	Flow at 1 m/s			Flow at 2 m/s			Flow at 3 m/s		
			L/s	M3/h	L/min	L/s	M3/h	L/min	L/s	M3/h	L/min
1 ½" 32mm	B-90GE-01/LFS	26	0.95	3.4	57	1.95	7	117	2.8	10.1	168
1 ½" 40mm	B-90GE-01/LFS	28	1.45	5.2	87	2.85	10.3	171	4.3	15.5	258
2" 50mm	B-NGE90-01/LFS	32	2.2	7.9	132	4.2	15.1	252	6.2	22.3	372
2 ½ 65mm	B-NGE90-01/LFS	43	3.2	11.5	192	6.5	23.4	390	9.5	34.2	570
3" 80mm	B-NGE90-01/LFS	58	5.2	18.7	312	10.2	36.7	612	15.3	55.1	918
4" 100mm	B-NGE90-01/LFS	119	8.0	28.8	480	16.0	57.6	960	24.0	86.4	1440
6" 150mm	B-NGE90-01/LFS	209	18.0	64.8	1080	35.0	126	2100	54.0	194.4	3240

* Larger sizes on request



► Technical Data:

	-	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 150	DN 200	DN 250	DN 300	DN 400
Flanged (mm)	-	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 150	DN 200	DN 250	DN 300	DN 400
Screwed (in)	* 1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	-	-	-	-	-	-
L	-	215	215	254	280	305	381	508	645	756	864	1051
L1	184.5	184.5	184.5	238	280	318	-	-	-	-	-	-
F	145	145	145	170	205	235	295	400	510	600	712	900
H	214	214	214	241	269	286	380	448	541	631	723	850
H1 (PN 10-16)	-	-	75	82.5	93	100	110	142.5	170	-	-	-
H1 (PN 25)	-	-	75	82.5	93	100	117.5	150	180	-	-	-
H2	-	-	-	-	-	-	-	-	-	236	274	395
H _m	252	252	252	285	320	345	450	540	645	780	905	1120
A	200	200	200	210	220	220	250	270	310	365	435	520
B	145	145	145	150	160	160	165	220	280	345	400	470
$\varnothing C$	-	-	-	47	60	60	82	82	82	82	-	-
Weight (Kg)	13	13	13	20	25	30	50	95	170	310	470	970

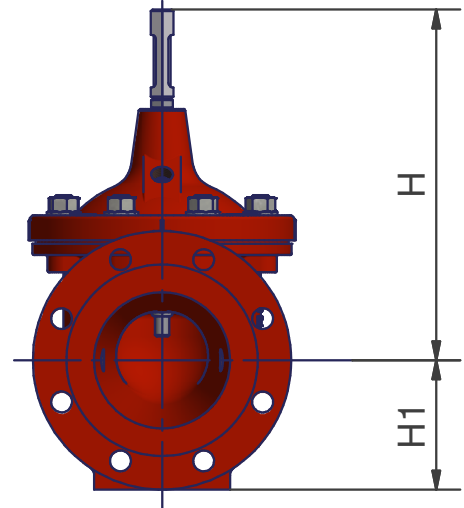
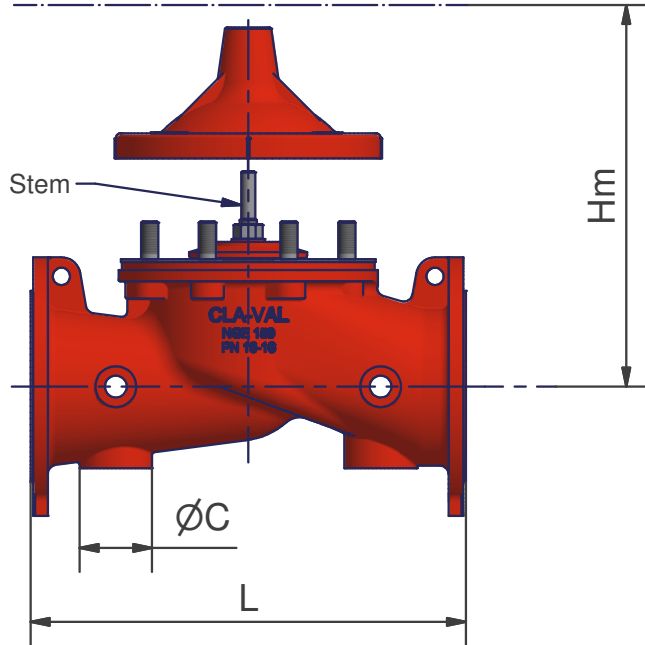
► Hydraulic Data:

	-	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 150	DN 200	DN 250	DN 300	DN 400
Flanged (mm)	-	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 150	DN 200	DN 250	DN 300	DN 400
Screwed (in)	* 1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	-	-	-	-	-	-
Kv (m ³ /h)	17	26	28	47	72	101	173	400	666	1076	1490	2542
Cv (l/s)	5	7	8	13	20	28	48	111	185	299	414	706

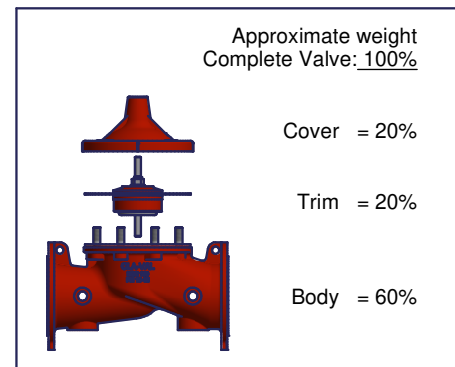
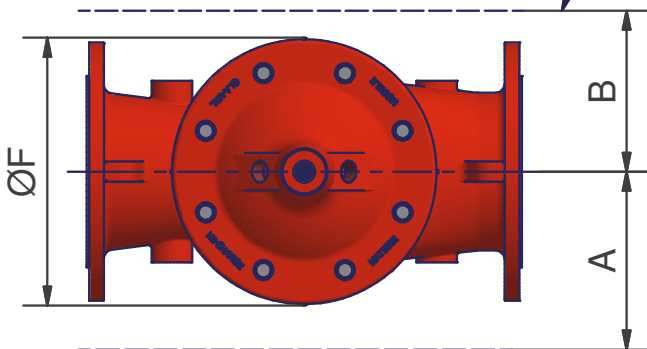
* : Screwed valve size 1" with trim 1-1/4"

Kv or Cv = m³/h or l/s @ 100kPa (1 bar) head loss with 15°C water (valve totally open).

Minimum lenght to remove the cover



Approx. outer limits of pilot-system



► Technical Data:

Flanged (mm)	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300	DN 350	DN 400	DN 450	DN 500	DN 600
L	230	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
F	145	170	170	235	295	295	400	510	600	712	712	712	900	900
H	220	250	260	305	395	410	490	590	730	850	850	850	1030	1030
H1 (PN10-16)	82.5	93	100	110	125	142.5	170	200	227.5	260	290	325	370	430
H1 (PN25)	82.5	93	100	117.5	135	150	188	225	242.5	277.5	310	335	370	430
Hm	255	290	300	390	470	480	585	700	890	1030	1030	1030	1310	1310
A	200	210	210	220	235	250	270	310	365	400	425	435	520	520
B	145	150	150	160	165	165	220	280	345	385	395	400	460	470
øC	45	60	60	60	60	80	80	80	80	80	80	80	120	120
Weight (Kg)	15	20	25	40	60	70	120	190	350	540	620	650	980	1080

► Hydraulic Data:

Flanged (mm)	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300	DN 350	DN 400	DN 450	DN 500	DN 600
Kv (m ³ /h)	32	43	58	119	162	209	479	799	1292	1638	1789	2070	3049	3222
Cv (l/s)	9	12	16	33	45	58	133	222	359	455	497	575	847	895

Kv or Cv = m³/h or l/s @ 100kPa (1 bar) head loss with 15°C water (valve totally open).