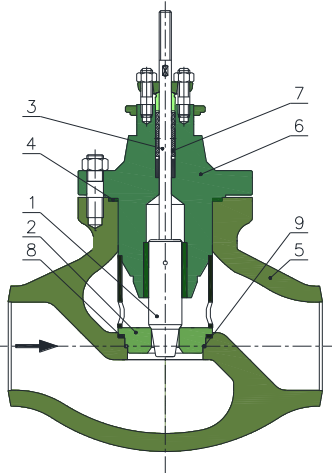


# HCVA1 PN40÷PN160 GLOBE CONTROL VALVE TECHNICAL BRIEF



Client:	Quotation No:	Valve desc:	KKS:	Valve specification:
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High Trim Control Valves **HCVA** are dedicated to operate under extremely tough conditions PN40÷600, T(-50÷600°C). The construction is based on cast body for PN40÷160 and cored forged shape body for PN250÷600, which is unique. The seat is put-in type, sealed with spiral gasket and additionally by metal C-ring. A wide variety of different trim designs makes the valves able to cope with heavy cavitation, flashing, choked flow and noise excessive conditions. This particular **HCVA1** type is applicable specially as water-injection valve, all kinds of other liquids flow regulating and small and medium steam pressure reduction valve. FTO direction recommended. FTC feasible with electric actuator only.

**Benefits:**  
 Interchangeable trim designs of wide variety  
 Rangeability 1:100 available  
 High leakage class available  
 Metal/metal planed bonnet with spiral gasket  
 Any soft seals inside the body  
 Easy maintenance – put-in seat.  
 Butt weld ends / flange connection matching the pipe size  
 All actuator systems are adaptable

**Alternative solutions: Economic- MCV**

Rangeability:	1:50 (standard), 1:100 (option)
Profiled plug 100% open- main coefficients	FL=0.9; XT=0.72; Fd=0.46; xFz=0.65
Perforated plug 100% open- main coefficients	FL=0.95; XT=0.78; Fd=0.1; xFz=0.75

Kvs	Stroke	Seat diam.C	Seat diam.P	DN min	DN max
0,1	20	6	-	15	50
0,16	20	6	-	15	50
0,25	20	6	-	15	50
0,4	20	6	-	15	50
0,63	20	6	-	15	50
1	20	9	9	15	50
1,6	20	9	14	15	50
2,5	20	14	14	15	50
4	20	14	19	15	50
6,3	20	19	19	20	50
10	20	19	25	25	50
16	20	25	34	32	65
25	20	34	44	40	80
40	20	44	50	50	100
63	40	50	70	65	150
94	40	70	90	80	200
125	40	90	100	100	250
160	40	100	110	125	250
250	50	110	125	150	250
320	50	125	160	150	250
500	63	160	194	200	300
630	63	194	194	200	300
800	100	194	240	250	300
1000	100	240	240	300	300
1300	100	240	270	300	300

C – profiled plug , P – perforated plug

Part No	Part Name	Specification position	Symbol	Material/performance	Part No	Part Name	Specification position	Symbol	Material/performance
1	Plug	<b>X1 Performance</b>	C	Profiled	5	Body	<b>X8 Performance</b>	1	DIN/PN Flanged
			P	Perforated				2	ANSI Flanged
			U	Unballanced				3	BW Standard
				4				BW Specified	
		<b>X2 Balancing</b>	1	1.4571			<b>X9 Material</b>	1	1.0460, DN15-50
			2	1.4571+stellite				2	1.0619
			3	1.4571+nitrogen				3	1.5415, DN15-50
			4	1.4057 hard. 35 HRC				4	1.7335, DN15-40
			5	1.4125 hard. 55 HRC				5	1.5419
		<b>X3 Material</b>	33	Other			6	1.7357	
			L	Linear			7	1.4541, DN15-50	
			P	Equal-percentage			8	1.4404, DN15-50	
			M	Modified			9	1.4308	
			S	Other			10	1.4408	
							15	1.7379	
		<b>X4 Characteristic</b>	1	1.4571			33	Other	
			2	1.4541+Stellite			1	Standard	
			3	1.4571+PTFE			2	Spring strained	
4	1.4571+NBR		3	TA-LUFT					
5	1.4057 hard. 35 HRC		4	Bellows					
<b>X5 Material</b>	6	1.4125 hard. 55 HRC							
	33	Other	1	PTFE					
	1	IV Standard	2	PTFE V					
	2	V Enhanced	3	PTFE Oxygen					
	3	VI Special	4	Graphite Brained					
	FO	Flow to Open	5	Graphite Expanded					
<b>X6 Leakage class EN-60534-4</b>	FC	Flow to Close							
			1.4404+Graphite Spiral	Metal					
3	Stem	1.4571, 1.4057 Hardened 35 HRC	8	Seat Gasket					
4	Body Gasket	1.4404+Graphite Spiral	9	C-ring					

**VALVE SPECIFICATION**

Full specification of the valve consists of:  
**HCVA1** – symbol  
**X1...X11** – symbols from the table on left  
**PN, DN, Kvs**

**Medium**  
**Design medium parameters**  
**Shut-off pressure**

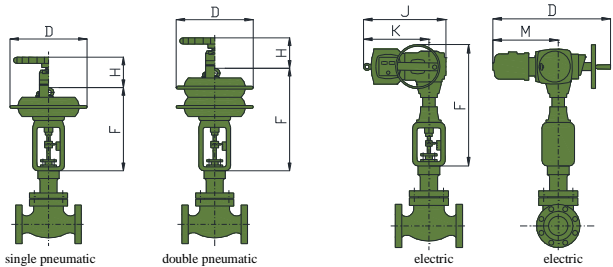
Example:  
**HCVA1-C-U-2-P-2-2-FO-1-2-1-5, DN100, PN63, Kvs94.**

**Medium Water, Td=200°C, Pd=40bar**  
**Shut-off pressure=20bar**

It is also recommended to specify working parameters as working pressure, temperature, pressure drop, flow and additional remarks if needed.

**CAUTION:**

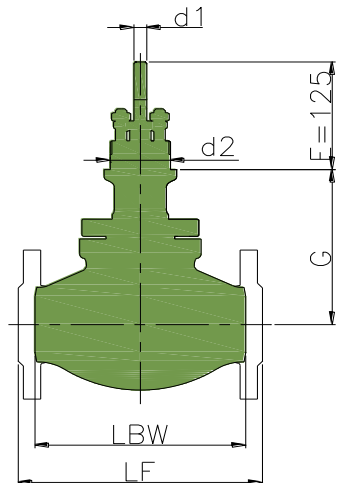
The client is not obligated to specify the valve when order. You can simply describe your expectations and INTEC sales person will specify adequate valve for you.



PNEUMATIC	Stroke	F	H	D	-	-	Mass
250	-	-	-	-	-	-	-
400	25	385	175	305	-	-	20
2x400	25	500	175	305	-	-	40
630	40	485	315	375	-	-	40
2x630	40	715	315	375	-	-	55
1000	60	650	300	480	-	-	70
2x1000	60	920	300	480	-	-	95
ELECTRIC	Stroke	F	M	D	J	K	Mass
XIRa, XIRSa	50	612	318	586	393	322	25
XIRb, XIRsb	50	651	335	602	422	335	34
XIRc, XIRSc	80	841	449	765	490	374	78
XIRa, XIRSa	100	732	318	586	393	322	25
XIRb, XIRsb	100	771	335	602	422	335	34
XIRc, XIRSc	160	991	449	765	490	374	85

Other actuators adaptable. For example AUMA actuators have closely similar dimensions and the same mechanical connections.

PN/DN	Dim.	15	20	25	32	40	50	65	80	100	125	150	200	250	300	
40	LF	130	150	160	180	200	230	290	310	350	400	480	600	730	850	
	LBW	130	150	160	180	200	230	290	310	350	400	480	600	730	850	
	G	107	107	107	114	118	122	166	166	173	248	305	458	475	590	
	GM*	241	241	241	243	253	257	410	410	417	485	510	623	623	735	
	d1	M12x1,25			M16x1,5			M20x1,5			M24x1,5					
	d2	Ø57,15						Ø84,15			Ø95,25					
	Mass	8	8	8	12	16	22	31	40	65	105	132	195	320	510	-
	LF	210	230	230	260	260	300	340	380	430	500	550	650	-	-	-
	LBW	160	160	160	230	230	300	340	380	430	500	550	650	-	-	-
	G	135	135	135	140	145	155	180	206	217	252	287	439	-	-	-
GM*	306	306	306	306	306	326	350	375	407	413	426	539	-	-	-	
d1	M12x1,25			M16x1,5			M20x1,5									
d2	Ø57,15						Ø84,15			Ø95,25						
Mass	9	9	9	13	18	25	33	43	72	101	147	220	-	-	-	
LF	210	230	230	260	260	300	340	380	430	500	550	650	-	-	-	
LBW	160	160	160	230	230	300	340	380	430	500	550	650	-	-	-	
G	135	135	135	140	145	155	180	206	217	252	287	439	-	-	-	
GM*	306	306	306	306	306	326	350	375	407	413	426	539	-	-	-	
d1	M12x1,25			M16x1,5			M20x1,5									
d2	Ø57,15						Ø84,15			Ø95,25						
Mass	9	9	9	13	18	25	33	43	72	101	147	220	-	-	-	
LF	210	230	230	260	260	300	340	380	430	500	550	650	-	-	-	
LBW	160	160	160	230	230	300	340	380	430	500	550	650	-	-	-	
G	149	149	149	160	172	175	200	233	252	304	365	528	-	-	-	
GM*	320	320	320	335	348	345	370	402	442	463	483	615	-	-	-	
d1	M12x1,25			M16x1,5			M20x1,5									
d2	Ø57,15						Ø84,15			Ø95,25						
Mass	9	9	9	14	19	28	37	44	75	111	156	243	-	-	-	



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