CONTROL VALVE

SERIE

italberta

VFX-VFF INOX series valves + ITB DRIVE

TECHNICAL SPECIFICATIONS

Free-flow modulating valves

Material: **AISI 316** stainless steel

Seals: **PEEK + Carbon**

NC-Normally closed

Nominal diameter
From **DN 15 to DN 100**

Nominal pressure
PN 10 - PN 16

Operating temperature
From **min -30°C to max + 190°C**

Connections:
- Butt weld;
- Flanged
- Threaded

Standardised adjustable **servo controls**
Type ATL1 and ATL2
Power supply: compressed air, min. pressure **5 bar - max. 8 bar**

PAST

FUTURE

THE DIFFERENCE THAT SETS OUR VALVES APART
FROM THE CAST IRON VALVES NORMALLY USED FOR
MODULATING FLUID FLOW RATES

- Valve **body** and all parts in contact with the fluid made of **AISI 316 stainless steel**;
- Significantly **lower weight and dimensions**, making the system more compact and lighter;
- Hydraulic seal guaranteed for the rated pressure until the electrical signal requiring opening is received;
- Pneumatic control functioning like that for ON-OFF valves, thus eliminating membranes that often need to be replaced;
- More **efficient adjustment** thanks to increased stroke;
- **Shutters** manufactured with excellent materials: **PEEK + CARBON**, perfect for almost all applications, from steam to water to chemicals;
- Valve positioning curves programmable via the **'ITB-VISUAL'** software, which allows for repeatable valve positioning accuracy.

  The relevant software is installed on the ITALBERTA USB stick, which can be used to vary the valve opening, and therefore the fluid flow rate, for the same electrical signal.

  The USB stick is supplied on request and can be programmed both by ITALBERTA and easily by the user;
- **ITB DRIVE system power supply** that doesn't require pressure reducers;
- **7 response curves** to achieve valve positioning accuracy according to your needs;
- Control systems (transducers), such as **ITB-DRIVE, ITB-DOME and ITB-BOARD**, which, depending on the variable electrical signals received (4-20 mA or 0-10 Vdc), provide a wide air pressure difference, thus achieving greater valve positioning accuracy.

  After the signals have been processed by a microprocessor, these devices control the pneumatic servo control of the valve, modulating its opening.

  They can be connected to any device capable of providing a variable electrical signal, such as industrial PCs, PLCs or controllers.

ITALBERTA FLASH DRIVE

FLOW CONTROL DEVICES

For steam and any fluid

ITB devices can be installed:

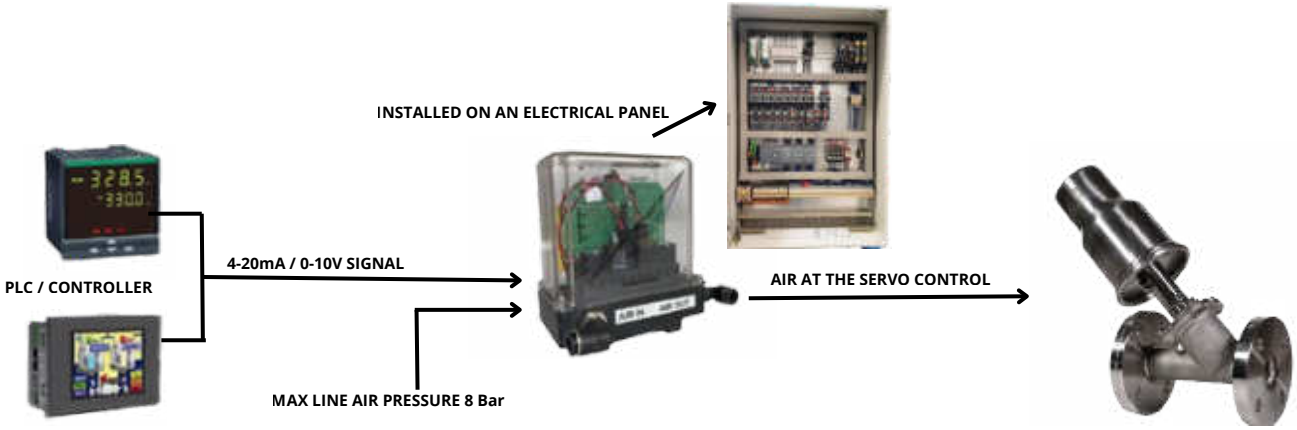
- ITB-DRIVE: installed in the electrical control panel
- ITB-DOME: installed on the servo control of VFX VSX type valves
-ITB-BOARD: installed on board the servo control of VFX VSX type valves

DESCRIPTION OF OPERATION

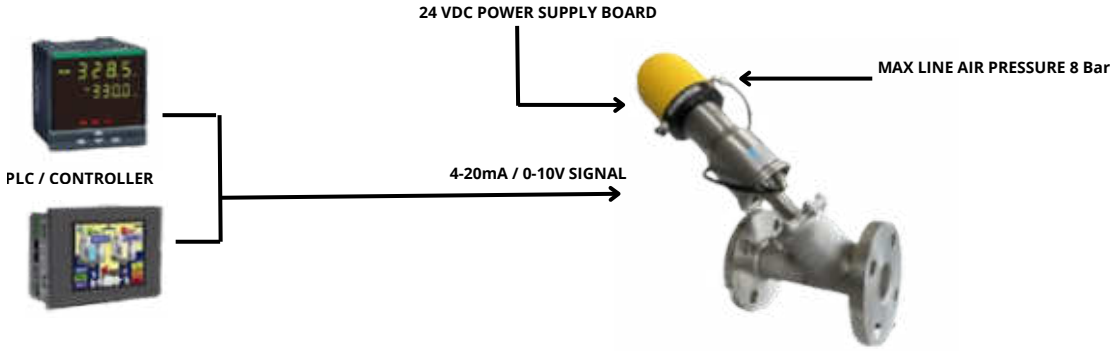
ITB-DRIVE, ITB-DOME and ITB-BOARD REPLACE THE REGULATION SYSTEMS CURRENTLY MADE WITH DIAPHRAGM VALVES, IMPROVING THEIR PRECISION.

The devices are controlled by a variable electrical input signal (4-20 mA / 0-10Vdc).
After the values have been processed by the internal microprocessor, the ITB-DRIVE, ITB-DOME and ITB-BOARD devices control the pneumatic servo control of the valve, modulating its opening. They can be connected to any device capable of supplying a variable electrical signal, such as industrial PCs, PLCs, regulators, potentiometers, etc.

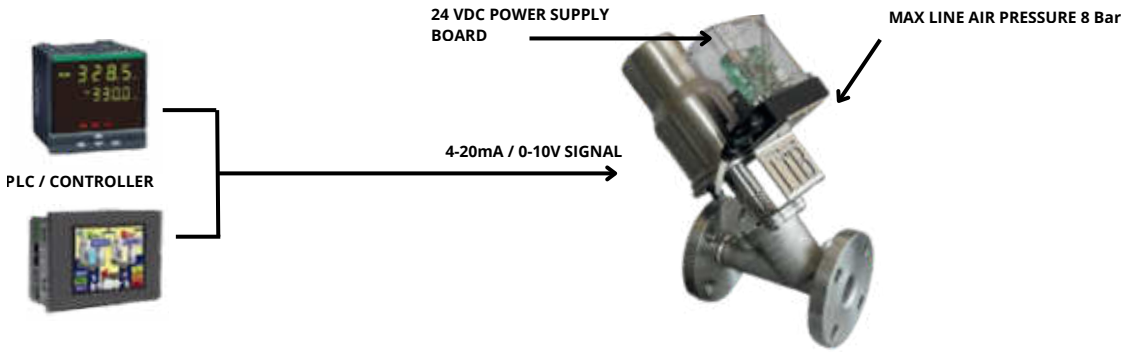
ITB-DRIVE MECHANISM



ITB-DOME MECHANISM



ITB-BOARD MECHANISM



TECHNICAL DATA

MODULATING VALVES

MAXIMUM PRESSURES UNDER THE SHUTTER Δp (bar) **									
Servocomando Servocontrol	DN 15 ND 1/2"	DN 20 ND	DN 25 ND 1"	DN 32 ND 1 1/4"	DN 40 ND 1	DN 50 ND 2"	DN 65 ND 2	DN 80 ND 3"	DN 100 ND 4"
ATL 1	16	16	16	16	12	7			
ATL 2					16	16	13	8	5

Kv (m3/h) **									
Servocomando Servocontrol	DN 15 ND 1/2"	DN 20 ND	DN 25 ND 1"	DN 32 ND 1 1/4"	DN 40 ND 1	DN 50 ND 2"	DN 65 ND 2	DN 80 ND 3"	DN 100 ND 4"
ATL 1 - 2	7	11	16	25,5	39	54,4	101	147	182,5

TECHNICAL SPECIFICATIONS OF ITB PRODUCTS **

POWER SUPPLY VOLTAGE	24VDC ± 10%
CONTROL SIGNAL	4-20mA / 0-10V
AIR SUPPLY PRESSURE	5 ÷ 8 bar
ITB-DRIVE - DOME - BOARD PROTECTION RATING	IP64
MODBUS PROTOCOL	RS485
RAIL MOUNTING	DIN 35 mm
MAXIMUM TEMPERATURE	60 °C
ITB-DRIVE -BOARD - DOME ARE AVAILABLE ON	VFF - VFX VALVES

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For specific requests regarding data not included in the tables, please contact our technical service.

TECHNICAL DATA

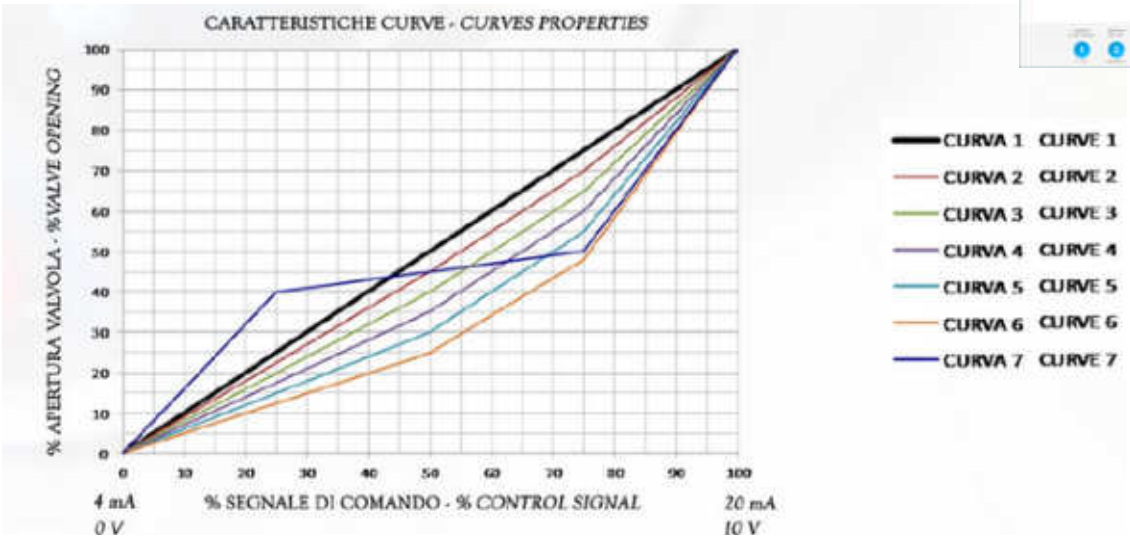
ITB device programming

ITB-VISUAL

Using the ITB visual application, you can:

- Create/modify the valve configuration
- Save the configurations made on your PC
- Read the valve configuration
- Communicate directly with the valve using the MODBUS RTU protocol on RS-485 serial
- Create a USB stick to update its parameters.

PROGRAMMING



The curves can be used to customise the type of valve opening and closing via the device, with the same electrical control signal.

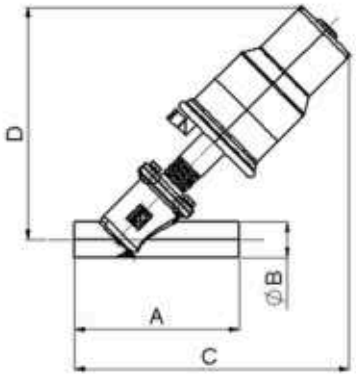
Curve no. 1 - the valve opens in direct proportion to the control signal
(the device is supplied with this selection as default)

Curves 2-3-4-5-6-7 vary the ratio between the percentage of the control signal and the corresponding percentage of downward valve opening.

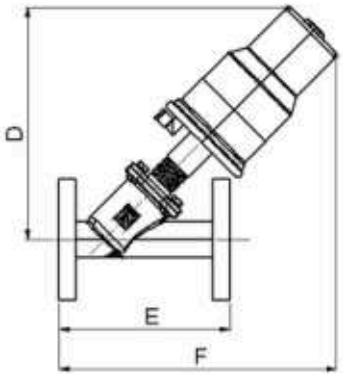
USER curve - it is possible to create a customised curve based on specific requirements using the ITB-VISUAL software.

DIMENSIONS MODULATING VALVES + ITB-DRIVE

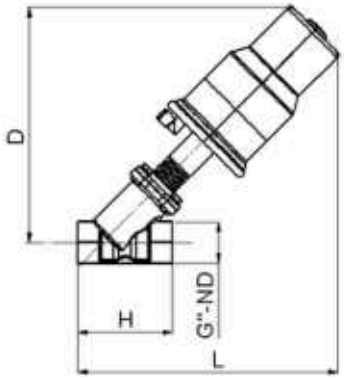
WELDED VFX



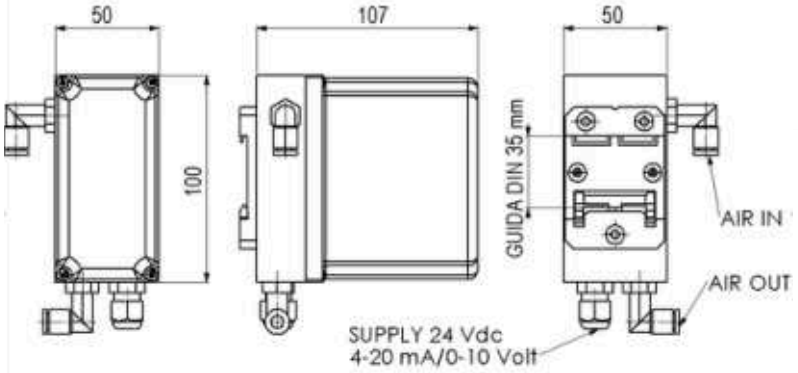
FLANGED VFX



THREADED VFX



ITB-DRIVE



VFX	Tabella dimensioni (mm) **								
DN				ACTUATOR ATL1			ACTUATOR ATL2		
	A	ØB	E	C	D	F	C	D	F
15	146	21,3	150	240	206	242			
20	146	26,9	150	244	208	246			
25	156	33,7	160	245	208	247			
32	176	42,4	180	256	216	258			
40	196	48,3	200	266	225	268	355	286	357
50	226	60,3	230	292	247	294	382	308	384
65							415	337	415
80							440	350	440
100							456	375	458

VFF	Tabella dimensioni (mm) **					
DN			ACTUATOR ATL1		ACTUATOR ATL2	
	G"-ND	H	D	L	D	L
15	1/2"	65	206	220		
20	3/4"	75	208	227		
25	1"	90	208	230		
32	1-1/4"	110	216	246		
40	1-1/2"	120	225	259	286	318
50	2"	150	247	290	308	349

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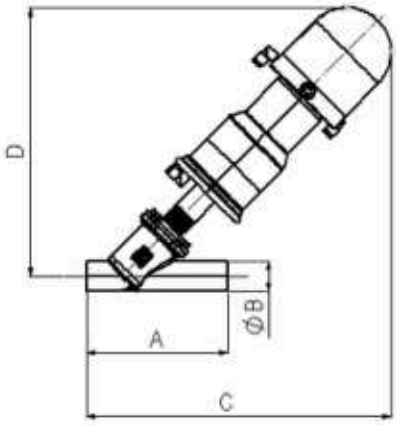
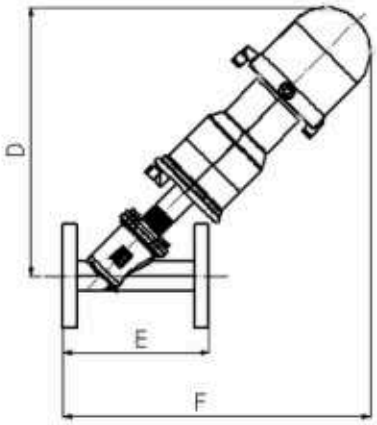
DIMENSIONS MODULATING VALVES + ITB-DOME

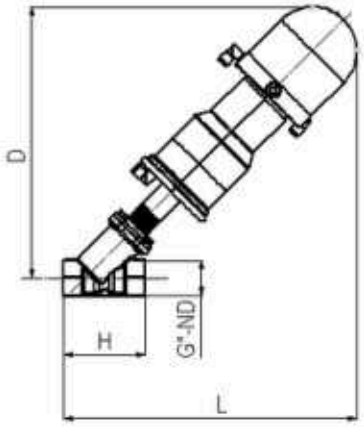
WELDED VFX



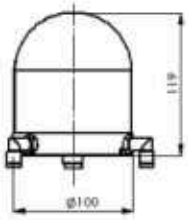
FLANGED VFX

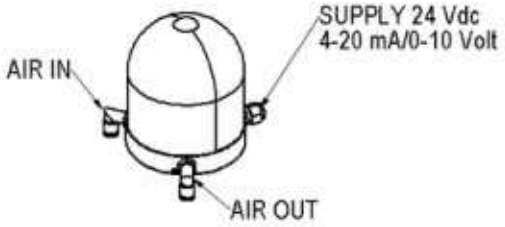


THREADED VFX



ITB-DOME





VFX	Tabella dimensioni (mm) **								
DN				ACTUATOR ATL1			ACTUATOR ATL2		
	A	ØB	E	C	D	F	C	D	F
15	146	21,3	150	318	284	320			
20	146	26,9	150	322	286	324			
25	156	33,7	160	323	286	325			
32	176	42,4	180	334	294	336			
40	196	48,3	200	344	303	346	423	354	425
50	226	60,3	230	370	325	372	450	376	452
65	290	76,1	290				483	405	483
80	310	89	310				508	418	508
100	345	114,3	350				524	443	526

VFF	Tabella dimensioni (mm) **					
DN			ACTUATOR ATL1		ACTUATOR ATL2	
	G"-ND	H	D	L	D	L
15	1/2"	65	284	298		
20	3/4"	75	286	305		
25	1"	90	286	308		
32	1-1/4"	110	294	324		
40	1-1/2"	120	303	337	354	386
50	2"	150	325	368	376	417

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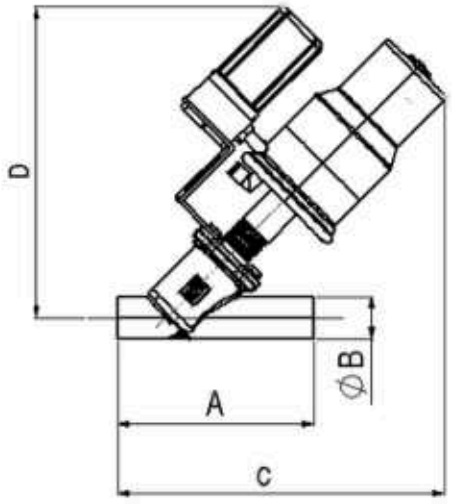
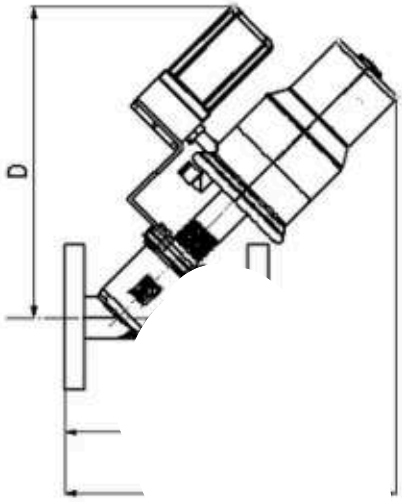
DIMENSIONS MODULATING VALVES + ITB-BOARD

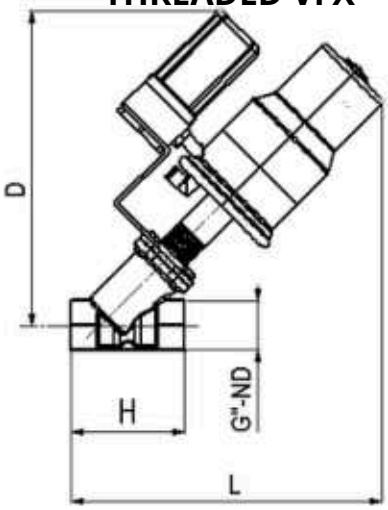
WELDED VFX



FLANGED VFX



THREADED VFX



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20	146	26,9	150	244	235	246			
25	156	33,7	160	245	235	247			
32	176	42,4	180	256	243	258			
40	196	48,3	200	266	252	268	355	286	357
50	226	60,3	230	292	24	294	382	308	384
65	290	76,1	290				415	337	415
80	310	89	310				440	350	440
100	345	114,3	350				456	375	458

VFF	Tabella dimensioni (mm) **					
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15	1/2"	65	233	220		
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25	1"	90	235	230		
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50	2"	150	274	290	308	349

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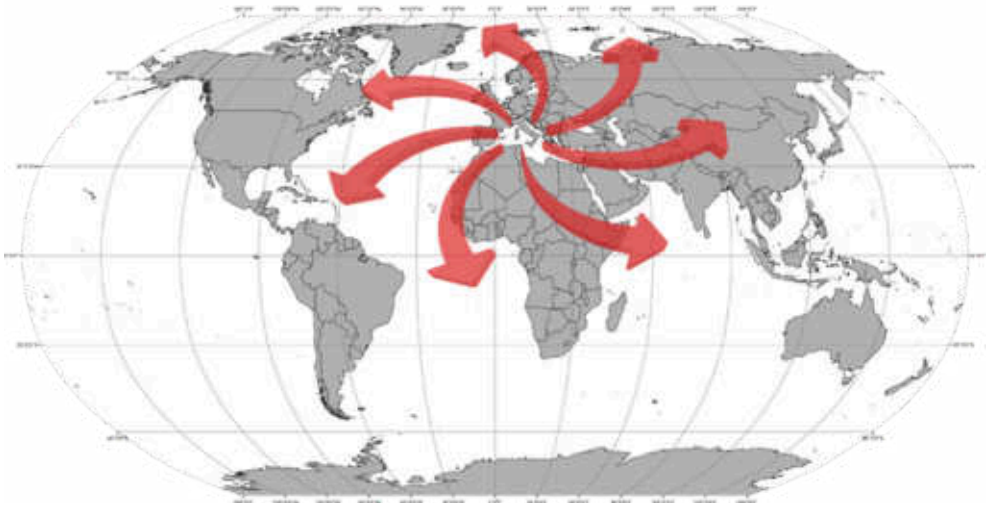
CONTROL VALVE

SERIE



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