

DBX - DBAX ball valves technical description



● Manual DBX



● Automated DBAX

● Design

These valves are normally available in a butt weld version from DN 8 to DN 50, with full port or Venturi (reduced port : valve using the next ball size down).

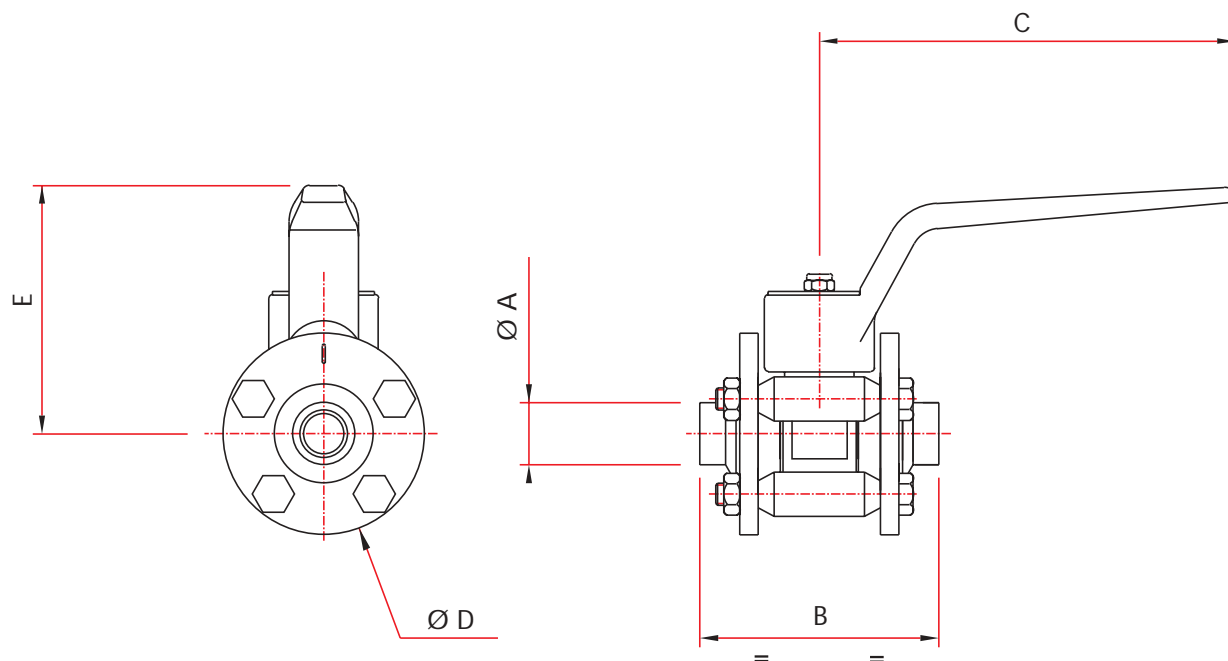
ISO, SMS or DIN valve ends are available. The Definox butterfly valve actuator can be fitted to valves equipped with an ISO plate which covers the main models on the market.

The actuator can therefore be fitted with the same signal-back equipment as the butterfly valve actuator.

Note: The pressure rating depends on the temperature.

Manual DBX - automated DBAX ball valve dimensions

Manual DBX ball valve

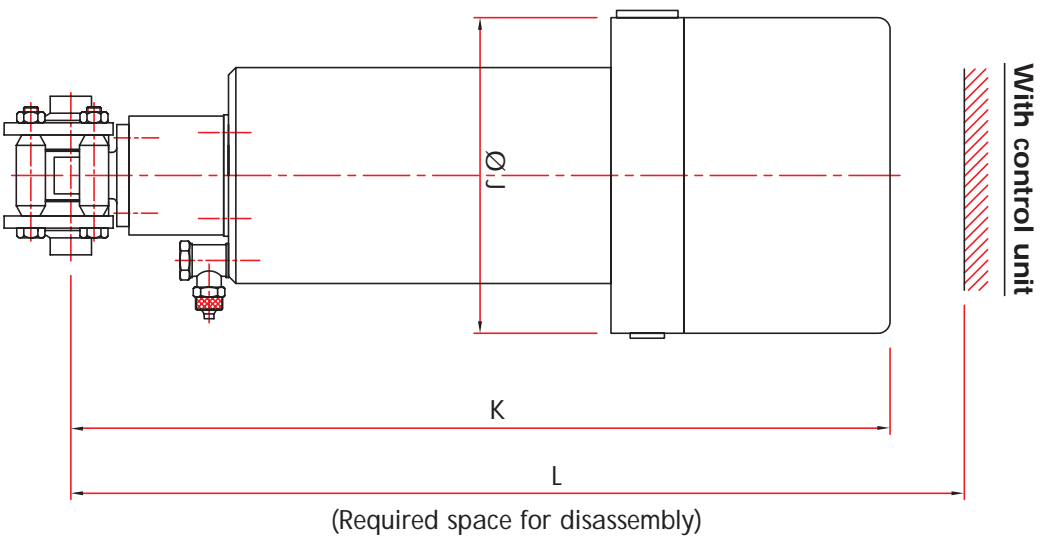
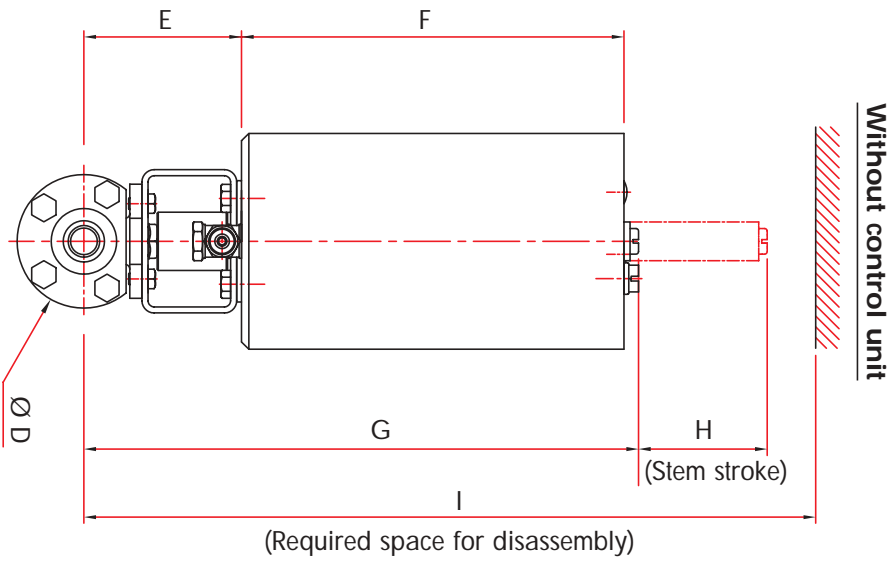
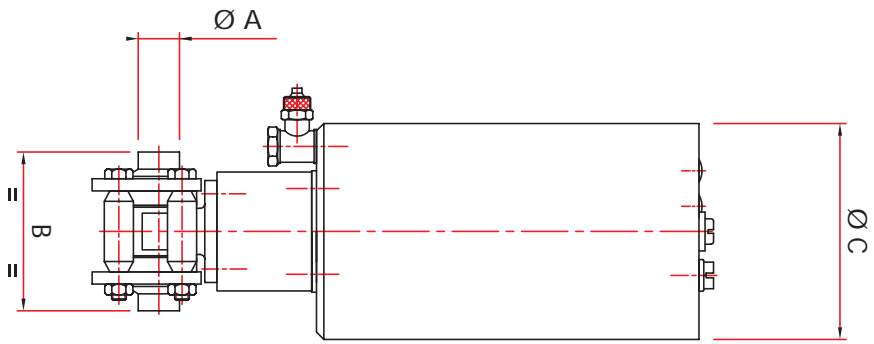


DN		Ø A	B	C	Ø D	E	Weight in kg
FULL PORT	REDUCED PORT						
8		13,5 x 10,3	65	115	55	74	0,575
12		17,2 x 13,2	65	115	55	74	0,575
15		21,3 x 17,3	70	115	60	76	0,585
	15	21,3 x 17,3	65	115	55	74	0,575
	20	26,9 x 22,9	70	115	60	76	0,695
20		26,9 x 22,9	85	135	76	95	1,200
25		33,7 x 29,7	100	155	80	115	1,585
	25	33,7 x 29,7	85	135	76	95	1,210
	32	42,4 x 38,4	100	155	80	115	1,615
32		42,4 x 38,4	110	155	98	119	2,440
40		48,3 x 44,3	125	200	111	121	3,780
	40	48,3 x 44,3	110	155	98	119	2,460
	50	60,3 x 56,3	125	200	111	121	2,890
50		60,3 x 56,3	150	220	140	144	7,500
	65	76,1 x 72,1	150	220	140	144	7,700

Manual DBX - automated DBAX ball valve dimensions



Automated DBAX ball valve



Manual DBX - automated DBAX ball valve dimensions

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Automated DBAX ball valve

DN		Ø A	B	Ø C	Ø D	E	F	G	H	I	Ø J	K	L	Weight** in kg
FULL PORT	REDUCED PORT													
8		13,5 x 9,5	65	89	56	70	157	235	53	303	130	342	362	4,23
12		17,2 x 13,2	65	89	56	70	157	235	53	303	130	342	362	4,18
15		21,3 x 17,3	70	89	63	74	157	239	53	307	130	346	366	4,3
	15	21,3 x 17,3	65	89	56	70	157	235	53	303	130	342	362	4,15
	20	26,9 x 22,9	70	89	63	74	157	239	53	307	130	346	366	4,29
20		26,9 x 22,9	85	89	80	85	157	250	53	318	130	357	377	4,9
25		33,7 x 29,7	100	89	88	90	157	255	53	323	130	362	382	5,1
	25	33,7 x 29,7	85	89	80	85	157	250	53	318	130	357	377	4,85
	32	42,4 x 37,2	100	89	88	90	157	255	53	323	130	362	382	5
32		42,4 x 37,2	110	89	104	106	157	271	53	339	130	378	398	6,3
40		48,3 x 43,1	125	89	117	112	157	277	53	345	130	384	404	7,44
	40	48,3 x 43,1	110	89	104	106	157	271	53	339	130	378	398	6,1
	50	60,3 x 54,5	125	89	117	112	157	277	53	345	130	384	404	7,2
50		60,3 x 54,5	150	115	148	132	174	319	53	387	130	424	444	14,5
	65	76,1 x 70,3	150	115	148	132	174	319	53	387	130	424	444	13,9

* Without control unit

Manual DBX - automated DBAX ball valve working conditions

Manual DBX ball valve

DN		Maximum temperature (°C)	Minimum temperature (°C)	Temperature difference (°C)	Maximum working pressure (Bar)
FULL PORT	REDUCED PORT				
8		160	-30	160	20
12		160	-30	160	20
15		160	-30	160	20
	15	160	-30	160	20
	20	160	-30	160	20
20		160	-30	160	20
25		140	-30	140	20
	25	160	-30	160	20
	32	140	-30	140	20
32		140	-30	140	20
40		120	-30	120	20
	40	140	-30	140	20
	50	120	-30	120	20
50		120	-30	120	20
	65	120	-30	120	20

Automated DBAX ball valve

DN		Maximum temperature (°C)	Minimum temperature (°C)	Temperature difference (°C)	Air consumption (NI)
FULL PORT	REDUCED PORT				
8		160	-30	160	2
12		160	-30	160	2
15		160	-30	160	2
	15	160	-30	160	2
	20	160	-30	160	2
20		160	-30	160	2
25		140	-30	140	2
	25	160	-30	160	2
	32	140	-30	140	2
32		140	-30	140	2
40		120	-30	120	2
	40	140	-30	140	2
	50	120	-30	120	2
50		120	-30	120	4
	65	120	-30	120	4

FOR ALL DBAX AUTOMATED BALL VALVE DIAMETERS

Supply pressure: 8 Bar	Minimum supply pressure: 4,5 Bar	Maximum working pressure: 20 Bar
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Automated DBAX ball valve signal back equipment

The choice of signal back equipment depends on the functions to be performed.

Remarks regarding the standard signal back equipment

1 - On request, we can fit Eex microcontacts or Namur pneumatic switches in control units for explosive environments.

2 - Specific detection devices can be studied (lantern detection).

3 - The supply of a control unit includes the entry gland, wiring to the electric components terminal strip and the 4/6 pneumatic hose from the unit to the actuator.

4 - Standard signal-back equipment can also be complemented by the following accessories:

- Rapid air release
- Stainless steel or semi-rigid wiring
- Stainless steel air connection
- Etc...

AS-i network

The AS-i network provides a reliable, cost-effective valve networking solution.

An AS-i module installed in each of the signal back units allows the control of all pneumatic functions

on DEFINOX valves (valve opening and closing, stroke of the plugs ...) and read the information sent by the opening and closing sensors, via the AS-i network.

Advantages of the AS-i network

- Open standard.
- Quick and easy to install and put into operation.
- Quick to wire up due to the use of "vampire" connectors and a non-shielded two-core cable.
- Free topology.
- Several AS-i masters available (PLC couplers or Profibus-DP, Device-Net, Interbus-S, WorldFip, Modbus, Modbus-Plus or other gateways).
- Max. 62 nodes on AS-i network distributed over 100 m of cable (300 m with repeaters).
- Cycle time : approx. 5ms for 31 nodes and 10 ms for 62 nodes.
- Transmission error control mechanisms.
- Extension possibilities.



Standard signal back equipment suitable for the automated DBAX ball valves

Model	Signal back equipment & Fixing device	Components						Remarks
		Switch or Contact		Solenoid valve		Electronic		
		Reference	Characteristics	Reference	Characteristics	Reference	Characteristics	
Bracket	Figure 2 St. St. bracket for M18 switch (M12 on request)	7007906 7007911 7007949 (M12)	PNP 10 - 36 V DC 20 - 250 V AC/DC PNP 10 - 36 V DC		None		None	1 or 2 switch(es) assembled Moulded cable: Lg 6 m
	Figure 3 Double St. St. bracket for prismatic switches (40x26x12)	7007922 7007930 7007991	PNP 10 - 36 V DC 20 - 250 V AC/DC NAMUR		None		None	1 or 2 switch(es) assembled Moulded cable: Lg 2 m
Classic control unit	Figure 4 Ø130 control unit H: 120 fixed on the actuator st. st. or smoked housing for switches and solenoid valve	7007922 7007930 7007991	PNP 10 - 36 V DC 20 - 250 V AC/DC NAMUR	7007943 7007944 7007947 7007948	24 V AC/DC 2,5 W 48 V AC/DC 2,5 W 110 V AC 2,5 VA 220 V AC 2,5 VA		None	1 or 2 switch(es) assembled, as well as 1 solenoid valve 3/2
	Figure 5 Ø130 control unit H: 120 fixed on the actuator st. st. or smoked housing for contacts and solenoid valve	7007923	Contacteur I max: 100 mA 20 - 250 V AC/DC	7007943 7007944 7007947 7007948	24 V AC/DC 2,5 W 48 V AC/DC 2,5 W 110 V AC 2,5 VA 220 V AC 2,5 VA		None	1 or 2 contact(s) assembled, as well as 1 solenoid valve 3/2
	Figure 6 Ø104 control unit H: 120 fixed on the actuator st. st. housing for switches and solenoid valve	7007922 7007930 7007991	PNP 10 - 36 V DC 20 - 250 V AC/DC NAMUR	7007943 7007944 7007947 7007948	24 V AC/DC 2,5 W 48 V AC/DC 2,5 W 110 V AC 2,5 VA 220 V AC 2,5 VA		None	1 or 2 switch(es) assembled, as well as 1 solenoid valve 3/2
DN 130 control unit AS-i link	Figure 7 Ø104 control unit H: 120 fixed on the actuator st. st. housing for contacts and solenoid valve	7007923	Contacteur I max: 100 mA 20 - 250 V AC/DC	7007943 7007944 7007947 7007948	24 V AC/DC 2,5 W 48 V AC/DC 2,5 W 110 V AC 2,5 VA 220 V AC 2,5 VA		None	1 or 2 contact(s) assembled, as well as 1 solenoid valve 3/2
	Figure 8 Ø130 control unit H: 110 fixed on the actuator st. st. or smoked housing for switches, 1 solenoid valve & AS-i module	7008045	Prismatic switch	7810504 7007952	Pilot & Interface	7707999 7010015	AS-i module with link cable and vampire connector	1 or 2 switch(es) assembled and 1 solenoid valve

Standard signal back equipment suitable for the automated DBAX ball valves

Photos and drawings of the figures mentioned on the data sheet



Fig. 2: St. St. bracket



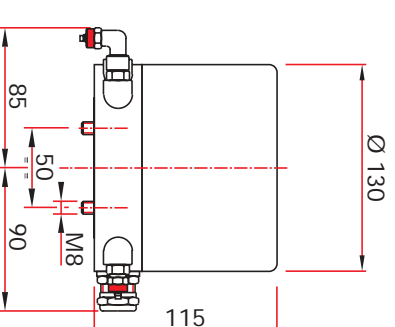
Fig. 4: Ø 130 control unit



Fig. 6: Ø 104 control unit



Fig. 8 : Ø 130 control unit



Ø 130 standard control housing



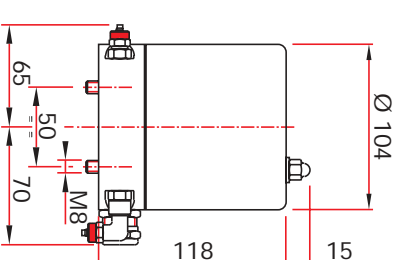
Fig. 3: Double st. st. bracket



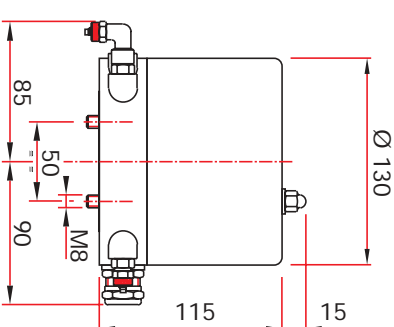
Fig. 5: Ø 130 control unit



Fig. 7: Ø 104 control unit



Ø 104 control unit st. st. housing



Ø 130 standard control unit st. st. housing