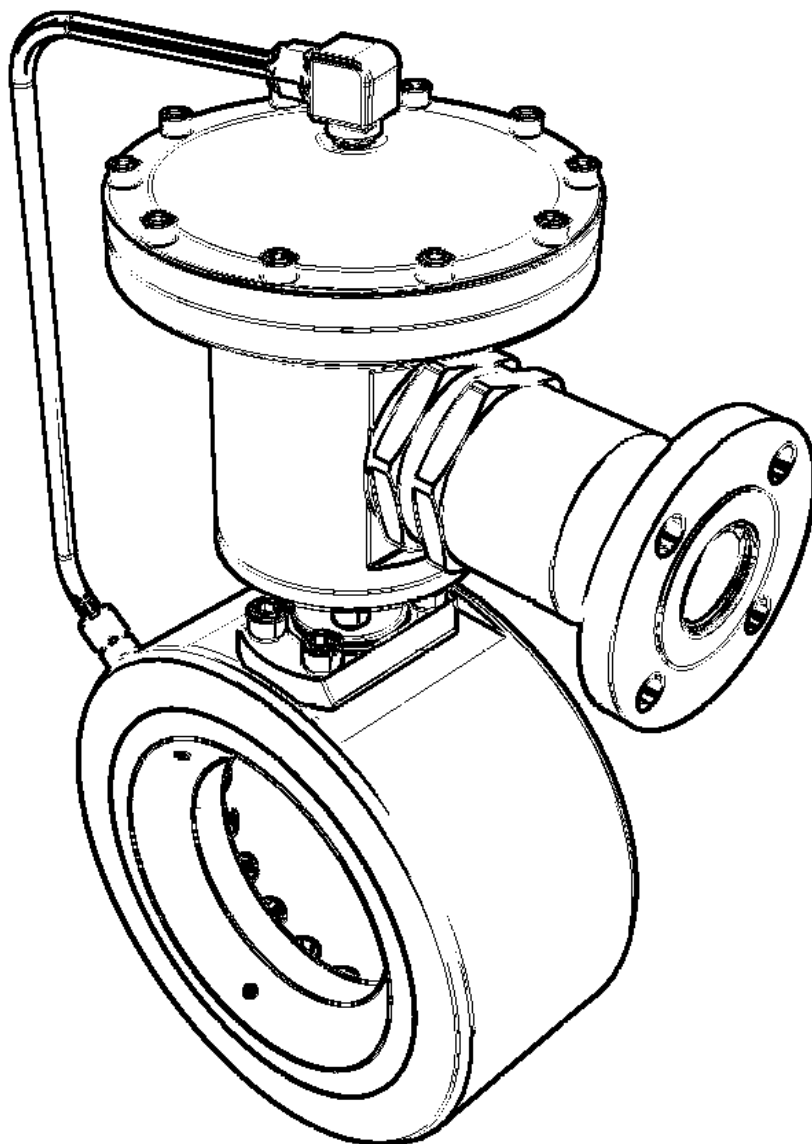


Data sheet for

MATRE BALANCED FOAM PROPORTIONERS





Datasheet for MATRE© Balanced Foam Proportioners

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2 General product information

Matre Balanced Foam Proportioners are known for their reliability. They are extremely reliable and precise. Pressurized water within the performance range and foam is what is required for a perfect proportioning.

The range is from 100% flow and down to 10% (some are slightly less).

For test purposes or to run the system with water only it is possible to close the foam inlet or to insert water also in the foam inlet.

Recommended maintenance is inspection and service each 5th year.

Note:

Various choices and combinations for flow, pressures, materials, connection standards and insertion rate will influence on dimensions. Final confirmation of dimensions will therefore be given in order confirmation. Please contact Matre for further information.

3 General product features:

Characteristics	Standard	Options
Material	Bronze BS 1400 LG2 Bronze BS 1400 AB2 Titanium Gr.2	On request
Interface for water supply	ANSI 16.5 150 lb DIN PN16	
Design pressure	20 bar	
Test pressure	30 bar	
Water pressure range	5-19 bar	
Foam concentrate inlet pressure*	1-10 bar higher than the water pressure limited to 20 bar.	
Insertion rate	Nominal 1% (Within 1% - 1,3%) Nominal 3% (Within 3% - 3,9%) Nominal 6% (Within 6% - 7%) (Tolerance according to NFPA 11)	
Check valve in foam port		In the same material as the proportioner
Activating / closing valve in foam port		A wide range of valves for opening and closing foam supply automatic or activated with or without positive feedback for valve position.
Installation recommendations	The proportioner can be installed in any position. In- and outlet piping to same diameter as the proportioner Straight pipe should be 3 x DN at inlet. Outlet piping to same specification as inlet, but no requirements for straight pipe length.	

** Any valves put in front of the foam inlet that have a cracking pressure or gives a significant resistance has to be considered. The minimum foam inlet pressure must be increased accordingly.*

Example:

A valve with cracking pressure or resistance of 2 bar and a water pressure of 8 bar gives the equation of minimum foam pressure of $8+2+1=11$ bar. Maximum $8+2+10=20$ bar



4 Flow range and interface guide

All the flow ranges are available with different interfaces. In the following tables you can find the available interface dimensions for the different flow ranges.

5 Dimensions and interfaces

Standard product dimensions and interfaces can be found in this section. All information in the following table apply to standard Balanced Proportioners. For information about different interfaces and materials contact us. On general basis water connection is based on ANSI 150lb and DIN PN16 the same unit will fit both. The foam inlet is BSPP F. Check valves are NPT M, ANSI 150lb and DIN PN16.

. For the related figures go to section 6.

6 Standard balanced proportioners

All types in the specified materials are available according to options visualised in section 8 and 10. For options not included in the tables below, please contact Matre for detailed info.

6.1 General models

Type	Water conn.	Foam inlet	Material	Range (l/min)	Insertion rate
BP15	1 ½" DN 32 DN 40	1" BSPP F	BS 1400 LG2	140-700	1%
			BS 1400 AB2	140-700	3%
			Titanium Gr2	140-700	6%
BP15	1 ½" DN 32 DN 40	CV 1" NPT M	BS 1400 LG2	140-700	1%
			BS 1400 AB2	140-700	3%
			Titanium Gr2	140-700	6%
BP15	1 ½" DN 32 DN 40	CV 1" ANSI	BS 1400 LG2	140-700	1%
			BS 1400 AB2	140-700	3%
			Titanium Gr2	140-700	6%
BP20	2" ANSI DN 50	1" BSPP F	BS 1400 LG2	260-1300	1%
			BS 1400 AB2	230-1300	3%
			Titanium Gr2	260-1300	6%
BP20	2" ANSI DN 50	CV 1" NPT M	BS 1400 LG2	260-1300	1%
			BS 1400 AB2	260-1300	3%
			Titanium Gr2	260-1300	6%
BP20	2" ANSI DN 50	CV 1" ANSI	BS 1400 LG2	260-1300	1%
			BS 1400 AB2	260-1300	3%
			Titanium Gr2	260-1300	6%
BP30	3" ANSI DN 80	1" BSPP F	BS 1400 LG2	600-2900	1%
			BS 1400 AB2	600-2900	3%
			Titanium Gr2	600-2400	6%
BP30	3" ANSI DN 80	CV 1" NPT M	BS 1400 LG2	600-2900	1%
			BS 1400 AB2	600-2900	3%
			Titanium Gr2	600-2400	6%
BP30	3" ANSI DN 80	CV 1" ANSI	BS 1400 LG2	600-2900	1%
			BS 1400 AB2	600-2900	3%
			Titanium Gr2	600-2400	6%
BP40	4" ANSI DN 100	1 ½" BSPP F	BS 1400 LG2	1060-5300	1%
			BS 1400 AB2	1060-5300	3%
			Titanium Gr2	1060-5300	6%



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MATRE Balanced foam Proportioners

Type	Water conn.	Foam inlet	Material	Range (l/min)	Insertion rate
BP40	4" ANSI DN 100	CV 1 ½" NPT M	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	1060-5300 1060-5300 1060-5300	1% 3% 6%
BP40	4" ANSI DN 100	CV 1 ½" ANSI	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	1060-5300 1060-5300 1060-5300	1% 3% 6%
BP40	4" ANSI DN 100	1" BSPP F	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	530-5300 530-5300	1% 3%
BP60	6" ANSI DN150	1 ½" BSPP F	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	2800-14000 2800-11500 2800-5500	1% 3% 6%
BP60	6" ANSI DN150	CV 1 ½" NPT M	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	2800-14000 2800-11500 2800-5500	1% 3% 6%
BP60	6" ANSI DN150	CV 1 ½" ANSI	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	2800-14000 2800-11500 2800-5500	1% 3% 6%
BP60	6" ANSI DN150	1" BSPP F	BS 1400 LG2	1000-14000	1%
BP60	6" ANSI DN150	2" BSPP F	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	2800-14000 2800-11500 2800-7000	1% 3% 6%
BP60	6" ANSI DN150	CV 2" NPT M	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	2800-14000 2800-11500 2800-7000	1% 3% 6%
BP60	6" ANSI DN150	CV 2" ANSI	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	2800-14000 2800-11500 2800-7000	1% 3% 6%
BP80	8"ANSI DN200	1 ½" BSPP F	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	5000-22000 5000-11500	1% 3%
BP80	8"ANSI DN200	CV 1 ½" NPT M	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	5000-22000 5000-11500	1% 3%
BP80	8"ANSI DN200	CV 1 ½" ANSI	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	5000-22000 5000-11500	1% 3%
BP80	8"ANSI DN200	2" BSPP F	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	6000-22000 6000-20000 6000-10000	1% 3% 6%
BP80	8"ANSI DN200	CV 2" NPT M	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	6000-22000 6000-20000 6000-10000	1% 3% 6%
BP80	8"ANSI DN200	CV 2" ANSI	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	6000-22000 6000-20000 6000-10000	1% 3% 6%
BP100	10" ANSI DN250	1 ½" BSPP F	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	6000-24000 6000-11500	1% 3%
BP100	10" ANSI DN250	CV 1 ½" NPT M	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	6000-24000 6000-11500	1% 3%

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MATRE Balanced foam Proportioners

Type	Water conn.	Foam inlet	Material	Range (l/min)	Insertion rate
BP100	10" ANSI DN250	CV 1 ½" ANSI	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	6000-24000 6000-11500	1% 3%
BP100	10" ANSI DN250	2" BSPP F	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	6000-24000 6000-20000 6000-10000	1% 3% 6%
BP100	10" ANSI DN250	CV 2" NPT M	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	6000-24000 6000-20000 6000-10000	1% 3% 6%
BP100	10" ANSI DN250	CV 2" ANSI	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	6000-24000 6000-20000 6000-10000	1% 3% 6%
BP120	12" ANSI DN350	2" BSPP F	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	12000-36000 12000-20000	1% 3%
BP120	12" ANSI DN350	CV 2" NPT M	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	12000-36000 12000-20000 12000-10000	1% 3% 6%
BP120	12" ANSI DN300	CV 2" ANSI	BS 1400 LG2 BS 1400 AB2 Titanium Gr2	12000-36000 12000-20000	1% 3%

6.2 Current models

Type	Dry wight (kg)	Water conn.	Foam inlet	Material	Range (l/min)	Insertion rate	Item no
BP15	16	1 ½" DN 32 DN 40	1" BSPP F	BS 1400 LG2	140-700 140-700 140-700	1% 3% 6%	2359 2415 X
BP15	16	1 ½" DN 32 DN 40	CV 1" NPT M	BS 1400 LG2	140-700 140-700 140-700	1% 3% 6%	7319 X X
BP15	8,5	1 ½" DN 32 DN 40	CV 1" NPT M	Titanium Gr2	140-700 140-700 140-700	1% 3% 6%	7326 X X
BP20	17	2" ANSI DN 50	1" BSP F	BS 1400 LG2	260-1300 260-1300 260-1300	1% 3% 6%	3068 8805 8806
BP20	17	2" ANSI DN 50	CV 1" NPT M	BS 1400 LG2	260-1300 260-1300 260-1300	1% 3% 6%	X 9726 X
BP30	16	3" ANSI DN 80	1" BSP F	BS 1400 AB2	600-2900 600-2900 600-2400	1% 3% 6%	X 8921 X
BP30	18	3" ANSI DN 80	CV 1" NPT M	BS 1400 AB2	600-2900 600-2900 600-2400	1% 3% 6%	X 6279 X
BP30	19	3" ANSI DN 80	CV 1" NPT M	BS 1400 LG2	600-2900 600-2900 600-2400	1% 3% 6%	X 9727 X



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MATRE Balanced foam Proportioners

Type	Dry weight (kg)	Water conn.	Foam inlet	Material	Range (l/min)	Insertion rate	Item no
BP30	19	3" ANSI DN 80	1" BSP F	BS 1400 LG2	600-2900	1%	3386
					600-2900	3%	3387
					600-2400	6%	X
BP40	27	4" ANSI DN 100	CV 1 ½" ANSI	BS 1400 AB2	1060-5300	1%	X
					1060-5300	3%	3762
					1060-5300	6%	X
BP40	27	4" ANSI DN 100	CV 1 ½" NPT M	BS 1400 LG2	1060-5300	1%	1339
					1060-5300	3%	2420
					1060-5300	6%	X
BP40	21	4" ANSI DN 100	1" BSPP F	BS 1400 LG2	530-5300 530-5300	1% 3%	7995 X
BP40	31	4" ANSI DN 100	CV 1 ½" ANSI	BS 1400 LG2	1060-5300	1%	3192
					1060-5300	3%	10224
					1060-5300	6%	
BP40	30	4" ANSI DN 100	1 ½" BSPP F	BS 1400 LG2	1060-5300	1%	2237
					1060-5300	3%	2417
					1060-5300	6%	10267
BP40	32	4" ANSI DN 100	CV ND40	BS 1400 LG2	1060-5300	1%	X
					1060-5300	3%	4450
					1060-5300	6%	X
BP40	17	4" ANSI DN 100	CV 1 ½" ANSI	Titanium Gr2	1060-5300	1%	7056
					1060-5300	3%	X
					1060-5300	6%	X
BP40	18	4" ANSI DN 100	CV 1 ½" NPT M	Titanium Gr2	1060-5300	1%	8134
					1060-5300	3%	X
					1060-5300	6%	X
BP60	31	6" ANSI DN150	1 ½" BSPP F	BS 1400 AB2	2800-14000	1%	8922
					2800-11500	3%	X
					2800-5500	6%	X
BP60	35	6" ANSI DN150	CV 1 ½" ANSI	BS 1400 AB2	2800-14000	1%	X
					2800-11500	3%	3764
					2800-5500	6%	X
BP60	36	6" ANSI DN150	1 ½" BSPP F	BS 1400 LG2	2800-14000	1%	3400
					2800-11500	3%	3578
					2800-5500	6%	X
BP60	30	6" ANSI DN150	1" BSPP F	BS 1400 LG2	1000-14000	1%	7996
BP60	47	6" ANSI DN150	2" BSPP F	BS 1400 LG2	2800-14000	1%	6069
					2800-11500	3%	
					2800-7000	6%	9003
BP60	40	6" ANSI DN150	CV 1 ½" ANSI	BS 1400 LG2	2800-14000	1%	X
					2800-11500	3%	9013
					2800-5500	6%	X
BP60	18	6" ANSI DN150	CV 1 ½" ANSI	Titanium Gr2	2800-14000	1%	6330
					2800-11500	3%	X
					2800-5500	6%	X
BP60	35	6" ANSI DN150	CV 1 ½" NPT M	Titanium Gr2	2800-14000	1%	7923
					2800-11500	3%	X
					2800-5500	6%	X
BP60	40	6" ANSI DN150	CV 1 ½" NPT M	BS 1400 LG2	2800-14000	1%	X
					2800-11500	3%	9728
					2800-5500	6%	X



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MATRE Balanced foam Proportioners

Type	Dry wight (kg)	Water conn.	Foam inlet	Material	Range (l/min)	Insertion rate	Item no
BP80	38	8"ANSI DN200	1 ½" BSPP F	BS 1400 AB2	5000-22000 5000-11500	1% 3%	8965 X
BP80	54	8"ANSI DN200	CV 2" ANSI	BS 1400 AB2	6000-22000 6000-20000 6000-10000	1% 3% 6%	X 8106 X
BP80	45	8"ANSI DN200	1 ½" BSPP F	BS 1400 LG2	5000-22000 5000-11500	1% 3%	4666 X
BP80	56	8"ANSI DN200	2" BSPP F	BS 1400 LG2	6000-22000 6000-20000 6000-10000	1% 3% 6%	X 4836 9942
BP80	63	8"ANSI DN200	CV 2" ANSI	BS 1400 LG2	6000-22000 6000-20000 6000-10000	1% 3% 6%	X 8266 X
BP80	26	8"ANSI DN200	CV 1 ½" NPT M	Titanium Gr2	5000-22000 5000-11500	1% 3%	7922 X
BP100	65	10" ANSI DN250	1 ½" BSPP F	BS 1400 AB2	6000-24000 6000-11500	1% 3%	8967 X
BP100	81	10" ANSI DN250	CV 2" ANSI	BS 1400 AB2	6000-24000 6000-20000 6000-10000	1% 3% 6%	X 3776 X
BP100	73	10" ANSI DN250	1 ½" BSPP F	BS 1400 LG2	6000-24000 6000-11500	1% 3%	7067 X
BP100	86	10" ANSI DN250	2" BSPP F	BS 1400 LG2	6000-24000 6000-20000 6000-10000	1% 3% 6%	X 9410 X
BP100	80	10" ANSI DN250	CV 1 ½" ANSI	BS 1400 LG2	6000-24000 6000-11500	1% 3%	5031 X
BP100	43	10" ANSI DN250	1 ½" BSPP F	Titanium Gr2	6000-24000 6000-11500	1% 3%	7054 X
BP100	43	10" ANSI DN250	CV 1 ½" NPT M	Titanium Gr2	6000-24000 6000-11500	1% 3%	7921 X
BP120	109	12" ANSI DN300	CV 2" ANSI	BS1400 AB2	12000-36000 12000-20000	1% 3%	8603 X

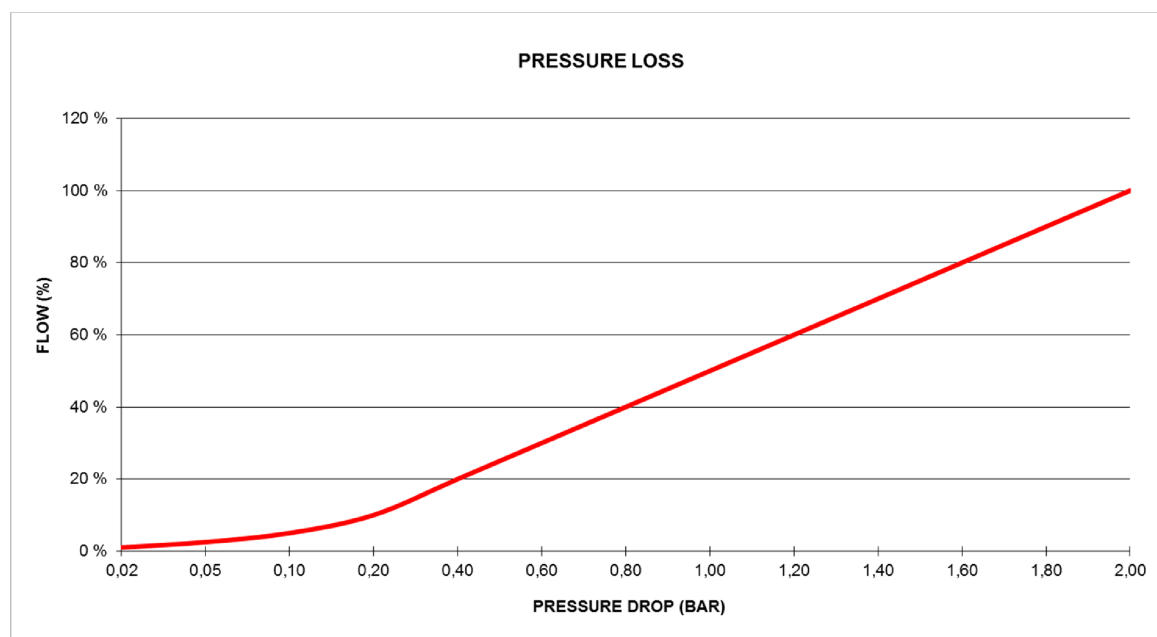
CV= check valve

X= available on request

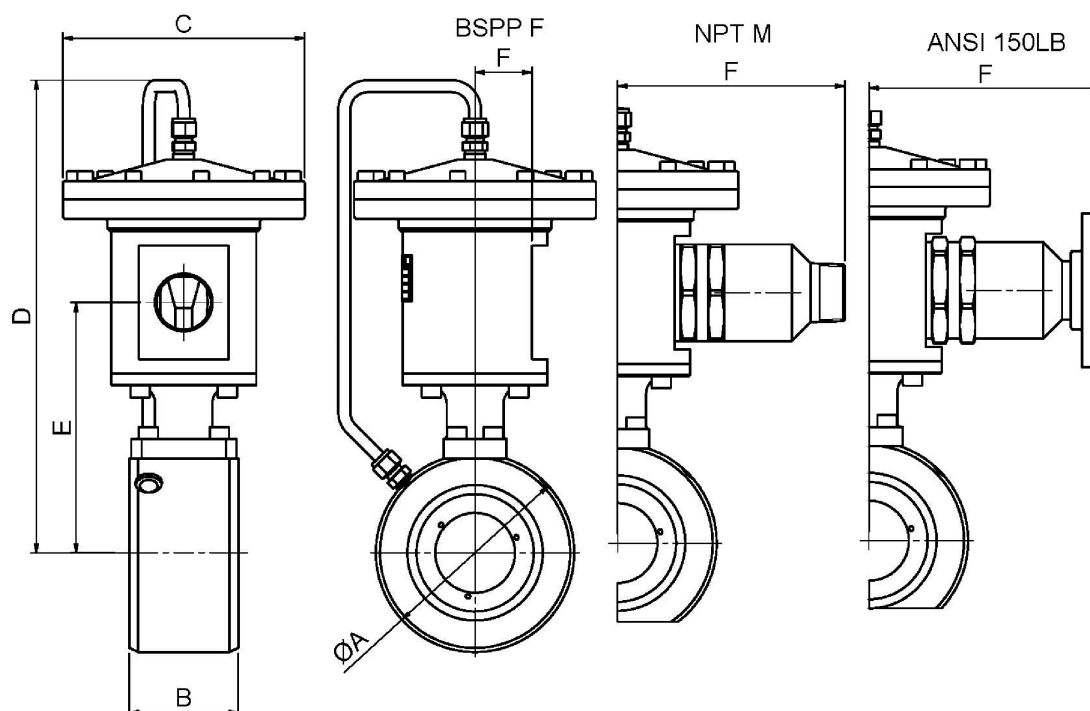
The green lines is optimised 1% proportioners. They will have more precise performance especially at the lowest flow area.

7 Pressure loss

The curve shows pressure loss related to the proportioners relative capacity
If the proportioner model has several insertion options 100% capacity is according to the lowest insertion rate.



8 Dimensional figures



**9 General dimensions**

Size	Foam inlet	øA (mm)	B (mm)	øC (mm)	D ±5 (mm)	E (mm)	F (mm)
BP15	BSPP F	100	70	188	286	154	42
BP15	NPT M	100	70	188	286	154	132
BP15	ANSI 150LB	100	70	188	286	154	136 (±2,5)
BP20	BSPP F	102	85	188	287	168	42
BP20	NPT M	102	85	188	287	168	132
BP20	ANSI 150LB	102	85	188	287	168	136 (±2,5)
BP30	BSPP F	133	90	188	314,5	168	42
BP30	NPT M	133	90	188	314,5	168	132
BP30	ANSI 150LB	133	90	188	314,5	168	136 (±2,5)
BP40	BSPP F	164	90	200	391	207	47
BP40	NPT M	164	90	200	391	207	192
BP40	ANSI 150LB	164	90	200	391	207	196 (±2,5)
BP40	BSPP F	164	90	188	340	183	42
BP40	NPT M	164	90	188	340	183	132
BP40	ANSI 150LB	164	90	188	340	183	136 (±2,5)
BP60	BSPP F	220	110	200	416	232	47
BP60	NPT M	220	110	200	416	232	192
BP60	ANSI 150LB	220	110	200	416	232	196 (±2,5)
BP60	BSPP F	220	110	240	477	270,5	59
BP60	NPT M	220	110	240	477	270,5	225
BP60	ANSI 150LB	220	110	240	477	270,5	229 (±2,5)
BP60	BSPP F	220	110	188	365	208	42
BP60	NPT M	220	110	188	365	208	132
BP60	ANSI 150LB	220	110	188	365	208	136 (±2,5)
BP80	BSPP F	274	130	200	399	256	47
BP80	NPT M	274	130	200	399	256	192
BP80	ANSI 150LB	274	130	200	399	256	196 (±2,5)
BP80	BSPP F	274	130	240	502	294,5	59
BP80	NPT M	274	130	240	502	294,5	225
BP80	ANSI 150LB	274	130	240	502	294,5	229 (±2,5)
BP100	BSPP F	329	170	200	471,5	289	47
BP100	NPT M	329	170	200	471,5	289	192
BP100	ANSI 150LB	329	170	200	471,5	289	196 (±2,5)
BP100	BSPP F	329	170	240	564,5	362,5	59
BP100	NPT M	329	170	240	564,5	362,5	225
BP100	ANSI 150LB	329	170	240	564,5	362,5	229 (±2,5)
BP120	BSPP F	406	190	240	569	364,5	59
BP120	NPT M	406	190	240	569	364,5	225
BP120	ANSI 150LB	406	190	240	569	364,5	229 (±2,5)

**10 Dimensions for current models**

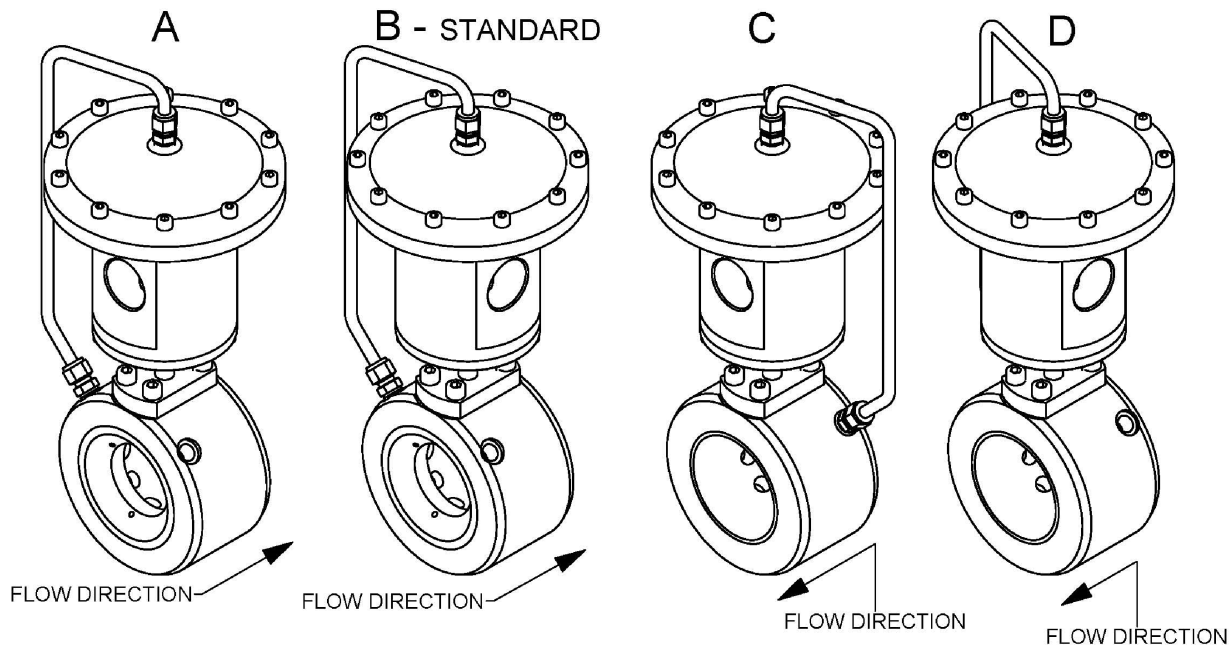
Size	Item no	øA (mm)	B (mm)	øC (mm)	D ±5 (mm)	E (mm)	F (mm)
BP15	2359	100	70	188	286	154	42
BP15	2415	100	70	188	286	154	42
BP15	7319	100	70	188	286	154	132
BP15	7326	100	70	188	286	154	132
BP20	3068	102	85	188	287	168	42
BP30	3386	133	90	188	314,5	168	42
BP30	3387	133	90	188	314,5	168	42
BP30	6279	133	90	188	314,5	168	132
BP30	8921	133	90	188	314,5	168	42
BP40	1339	164	90	200	391	207	47
BP40	2267	164	90	200	391	207	188
BP40	2417	164	90	200	391	207	188
BP40	2420	164	90	200	391	207	47
BP40	3192	164	90	200	391	207	192 (±2,5)
BP40	3762	164	90	200	391	207	192 (±2,5)
BP40	4450	164	90	200	391	207	196 (±2,5)
BP40	7056	164	90	200	391	207	192 (±2,5)
BP40	7995	164	90	188	340	183	42
BP40	8134	164	90	200	391	207	188
BP60	3400	220	110	200	416	232	47
BP60	3570	220	110	200	416	232	47
BP60	3764	220	110	200	416	232	192 (±2,5)
BP60	6069	220	110	240	477	270,5	59
BP60	6330	220	110	200	416	232	192 (±2,5)
BP60	7923	220	110	200	416	232	188
BP60	7996	220	110	188	365	208	42
BP60	9003	220	110	240	477	270,5	59
BP80	4666	274	130	200	399	256	47
BP80	4836	274	130	240	502	294,5	59
BP80	6328	274	130	200	399	256	196 (±2,5)
BP80	7922	274	130	200	399	256	188
BP80	8106	274	130	240	502	294,5	229 (±2,5)
BP80	8266	274	130	240	502	294,5	229 (±2,5)
BP80	8965	274	130	200	399	256	47
BP100	5031	329	170	200	471,5	289	196 (±2,5)
BP100	7054	329	170	200	471,5	289	47
BP100	7067	329	170	200	471,5	289	47
BP100	7921	329	170	200	471,5	289	47
BP100	8967	329	170	200	471,5	289	47
BP100	9410	329	170	240	564,5	362,5	59
BP120	3776	406	190	240	569	364,5	59

Dimensions can be changed without notice. Please contact Matre for final confirmation



11 Assembly options

Foam inlet position options



Position B is standard and will be supplied if no option is specified.