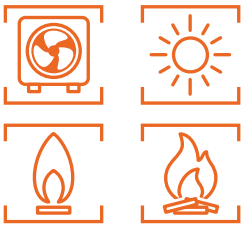
MXW - Combined buffer store / DHW pipe in pipe Maxiwarm

Mild steel hot water thermal buffer for the storage of primary water produced from continuous and discontinuous heat sources.
Instantaneous production of domestic hot water (DHW) through a high efficiency heat exchanger made of a corrugated stainless steel pipe.
Available in:
- only storage + DHW production
- storage + DHW production + one auxiliary fixed coil
- storage + DHW production + two auxiliary fixed coils.

The thermal fluid contained in the cylinder and in the primary heat exchangers must operate in closed circuit (without oxygen), in order to avoid corrosion phenomena.
Cylinders are also prepared to host a backup immersion heater (not supplied).

HEAT SOURCE



APPLICATION

TECHNICAL FEATURES

DHW Heat exchanger	**Material**	AISI 316L Stainless steel (1.4404)
	Internal protective treatment	Pickling and passivation
	External protective treatment	Pickling and passivation
	Type	High exchanging surface corrugated pipe
	Rating (P max. / T max.)	6 bar / 95°C
Buffer vessel	**Material**	S 235 Jr Carbon steel
	Internal protective treatment	None
	External protective treatment	Anti rust protection + epoxy painting
	Rating (P max. / T max.)	3 bar / 95°C
Auxiliary heat exchanger	**Material**	S 235 Jr Carbon steel
	Internal protective treatment	None
	External protective treatment	None
	Type	Fixed coil
	Rating (P max. / T max.)	10 bar / 95°C
General features	**Capacity**	600 - 2000 L
	Warranty	5 years
	Insulation	- Soft insulation with polyester + PVC: Fire retardant class B2 (DIN 4102) - Hard insulation: - Polyurethane foam + PVC for 600/800/100/1500/2000 litres capacity: Fire retardant class B3 (DIN 4102) - Polyester (15mm) + polystyrene (85mm) + PVC for 1250 litres capacity: Fire retardant class B2 (DIN 4102)
	In compliance with	- Pressure Equipment Directive (PED) 2014/68/UE Art. 4 Para 3 - Italian MOH specifications (products suitable to contain potable water) - Energy related Products (Erp) Directive 2009/125/CE

ACCESSORIES (page 218)

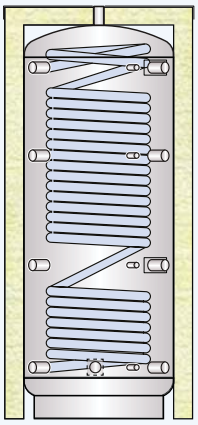
DHW Recirculation kit

Electronic control unit

Thermostat

Thermometer

1"½ electric immersion heater

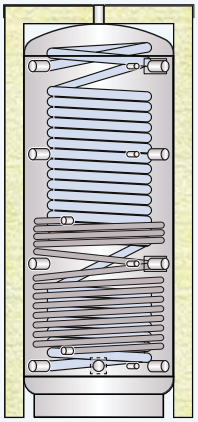


MX0W - Hard insulation with rigid polyurethane foam and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW HEAT EXCHANGER (m^2) / (L) *
MX0W 00600 R	50	C	94,7	585,2	5,5 / 31,9
MX0W 00800 R	100	C	109,9	749,3	7,0 / 40,6
MX0W 01000 R	100	C	113,8	931,0	7,5 / 43,5
MX0W 01250 R	100	C	140,0	1266,8	8,5 / 49,3
MX0W 01500 R	100	C	132,8	1472,4	10,0 / 58,0
MX0W 02000 R	100	C	143,5	1950,0	12,0 / 69,6

MX0W - Soft insulation with polyester and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW HEAT EXCHANGER (m^2) / (L) *
MX0W 00800 F	130	C	129,4	749,3	7,0 / 40,6
MX0W 01000 F	130	C	141,2	931,0	7,5 / 43,5
MX0W 01250 F	130	C	159,6	1266,8	8,5 / 49,3
MX0W 01500 F	130	C	168,2	1472,4	10,0 / 58,0
MX0W 02000 F	130	C	184,0	1950,0	12,0 / 69,6

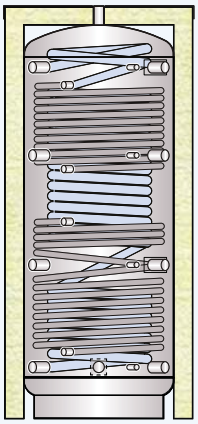


MX1W - Hard insulation with rigid polyurethane foam and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW HEAT EXCHANGER (m^2) / (L) *	AUXILIARY HEAT EXCHANGER (m^2) / (L) *
MX1W 00600 R	50	C	94,7	585,2	5,5 / 31,9	2,5 / 24,5
MX1W 00800 R	100	C	109,9	749,3	7,0 / 40,6	2,5 / 24,5
MX1W 01000 R	100	C	113,8	931,0	7,5 / 43,5	3,5 / 34,3
MX1W 01250 R	100	C	140,0	1266,8	8,5 / 49,3	3,8 / 37,2
MX1W 01500 R	100	C	132,8	1472,4	10,0 / 58,0	4,0 / 39,2
MX1W 02000 R	100	C	143,5	1950,0	12,0 / 69,6	4,8 / 47,0

MX1W - Soft insulation with polyester and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW HEAT EXCHANGER (m^2) / (L) *	AUXILIARY HEAT EXCHANGER (m^2) / (L) *
MX1W 00800 F	130	C	129,4	749,3	7,0 / 40,6	2,5 / 24,5
MX1W 01000 F	130	C	141,2	931,0	7,5 / 43,5	3,5 / 34,3
MX1W 01250 F	130	C	159,6	1266,8	8,5 / 49,3	3,8 / 37,2
MX1W 01500 F	130	C	168,2	1472,4	10,0 / 58,0	4,0 / 39,2
MX1W 02000 F	130	C	184,0	1950,0	12,0 / 69,6	4,8 / 47,0



MX2W - Hard insulation with rigid polyurethane foam and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW HEAT EXCHANGER (m^2) / (L) *	AUXILIARY HEAT EXCHANGER LOWER (m^2) / (L) *	UPPER (m^2) / (L) *
MX2W 00600 R	50	C	94,7	585,2	5,5 / 31,9	2,5 / 24,5	1,8 / 17,6
MX2W 00800 R	100	C	109,9	749,3	7,0 / 40,6	2,5 / 24,5	2,0 / 19,6
MX2W 01000 R	100	C	113,8	931,0	7,5 / 43,5	3,5 / 34,3	2,5 / 24,5
MX2W 01250 R	100	C	140,0	1266,8	8,5 / 49,3	3,8 / 37,2	2,6 / 25,5
MX2W 01500 R	100	C	132,8	1472,4	10,0 / 58,0	4,0 / 39,2	2,8 / 27,4
MX2W 02000 R	100	C	143,5	1950,0	12,0 / 69,6	4,8 / 47,0	3,8 / 37,2

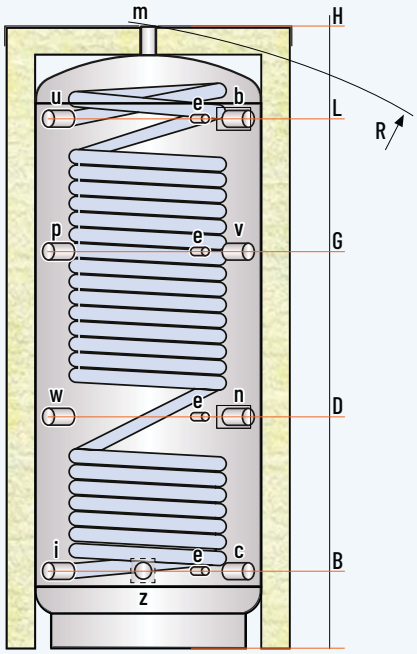
MX2W - Soft insulation with polyester and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW HEAT EXCHANGER (m^2) / (L) *	AUXILIARY HEAT EXCHANGER LOWER (m^2) / (L) *	UPPER (m^2) / (L) *
MX2W 00800 F	130	C	109,9	749,3	7,0 / 40,6	2,5 / 24,5	2,0 / 19,6
MX2W 01000 F	130	C	113,8	931,0	7,5 / 43,5	3,5 / 34,3	2,5 / 24,5
MX2W 01250 F	130	C	140,0	1266,8	8,5 / 49,3	3,8 / 37,2	2,6 / 25,5
MX2W 01500 F	130	C	132,8	1472,4	10,0 / 58,0	4,0 / 39,2	2,8 / 27,4
MX2W 02000 F	130	C	143,5	1950,0	12,0 / 69,6	4,8 / 47,0	3,8 / 37,2

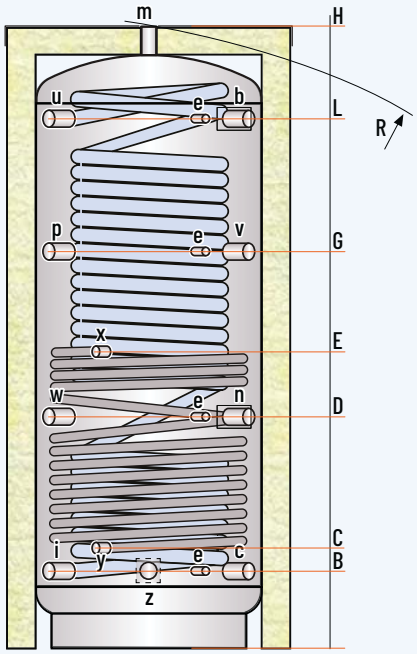
** Volume occupied by the heat exchanger and its support structure*

Dimensions and heights

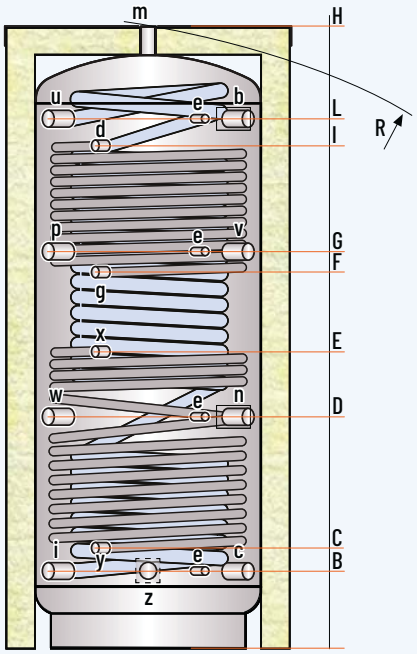
MX0W

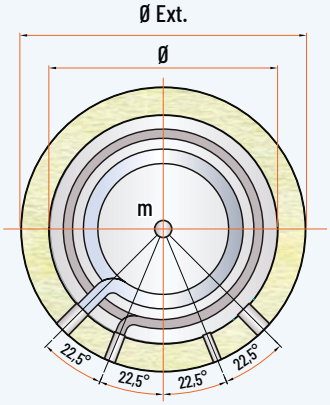


MX1W



MX2W





LEGEND

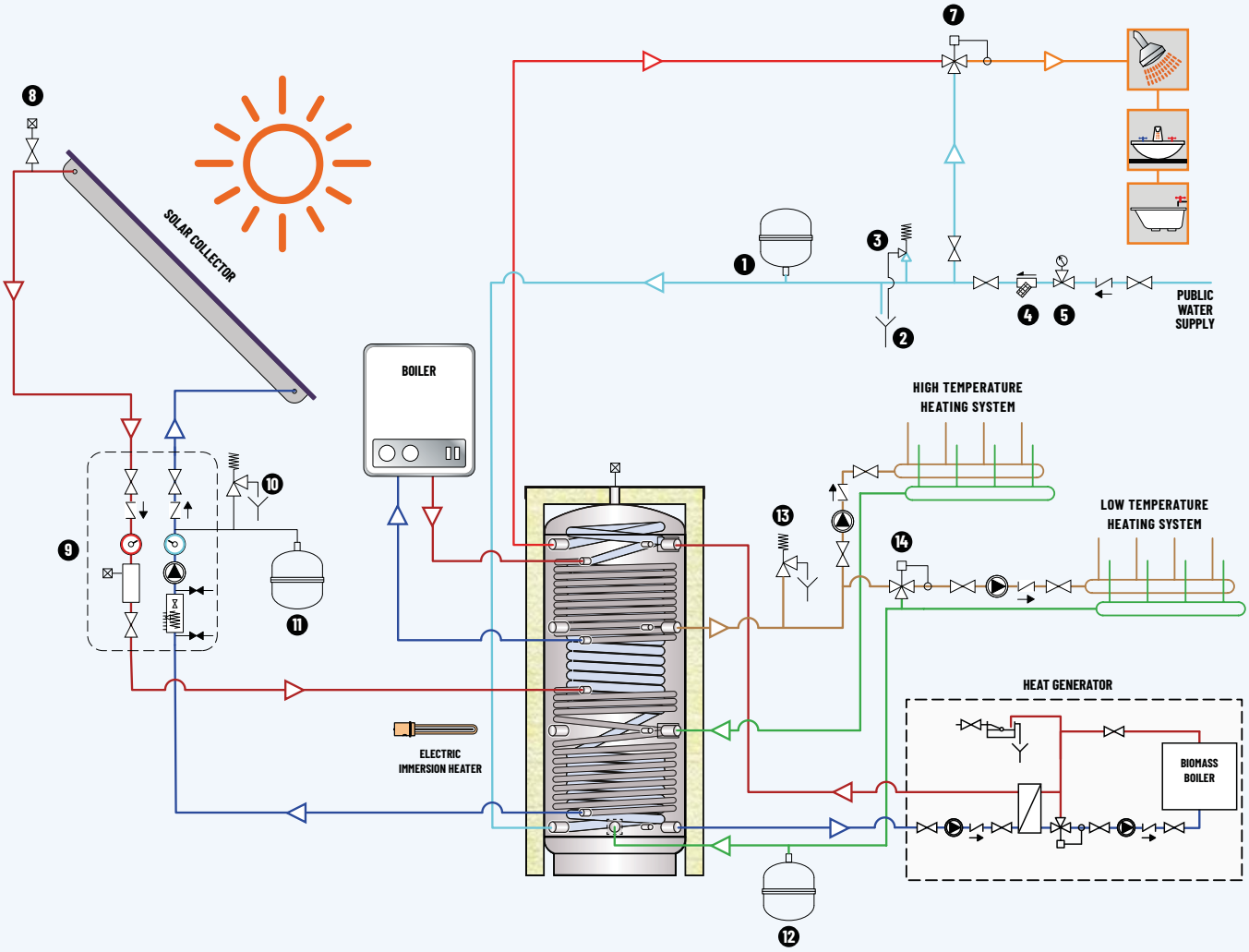
- **b .** Biomass boiler flow
- **c .** Biomass boiler return
- **d .** Boiler flow
- **e .** Thermometer - Sensor
- **g .** Boiler return
- **i .** Domestic cold water inlet
- **m.** Buffer vent
- **n .** Heating system return
- **p .** Free connection
- **u .** Domestic hot water outlet
- **v .** Heating system flow
- **w.** Opening for immersion heater
- **x .** Solar system flow
- **y .** Solar system return
- **z .** Low temperature heating system return

MODEL	DIMENSIONS (mm) Ø	H	Ø EXT ** (Hard/Soft ins.)	R	HEAT EXCHANGER (m²) LOWER	UPPER	SS DHW HEAT EXCHANGER	WEIGHT MX2W (kg)
MX_W 00600 R	650	1895	750	2050 *	2,50	1,80	5,50	175
MX_W 00800_	790	1750	990/1050	1745	2,50	2,00	7,00	212
MX_W 01000_	790	2110	990/1050	2095	3,50	2,50	7,50	253
MX_W 01250_	950	2075	1150/1210	2090	3,80	2,60	8,50	289
MX_W 01500_	1000	2115	1200/1260	2145	4,00	2,80	10,00	316
MX_W 02000_	1100	2380	1300/1360	2385	4,80	3,80	12,00	371

** For the 600 litres model, the tilt height refers to the insulated cylinder*
*** The insulation is removable except for the 600 litres model*

MODEL	HEIGHTS (mm) B	C	D	E	F	G	I	L	CONNECTIONS (GAS) d g x y	e	i u	b c m n p v w z
MX_W 00600 R	235	315	700	1000	1120	1270	1480	1630	1"	½"	1"¼	1"½
MX_W 00800_	275	355	655	875	1015	1145	1345	1410	1"	½"	1"¼	1"½
MX_W 01000_	275	350	810	1035	1195	1355	1675	1755	1"	½"	1"¼	1"½
MX_W 01250_	320	400	745	1060	1200	1380	1600	1705	1"	½"	1"¼	1"½
MX_W 01500_	340	420	765	1080	1220	1400	1620	1725	1"	½"	1"¼	1"½
MX_W 02000_	370	450	930	1090	1230	1435	1710	1945	1"	½"	1"¼	1"½

Disclaimer: *this layout is purely indicative. It does not replace consultant's design*



LEGEND

1 . Domestic water expansion vessel
2 . Domestic water drain
3 . Domestic water safety valve (6 bar)
4 . Strainer
5 . Pressure reducing valve
7 . DHW 3-way valve
8 . Vent with valve
9 . Solar system control unit
10 . Solar system safety kit (6 bar)
11 . Solar system expansion vessel
12 . Heating system expansion vessel
13 . Heating system safety valve
14 . 3-way valve low temperature heating system

	Lower heat exchanger performance					Upper heat exchanger performance				
CODE	m^2 (L)	Power (kW) ΔT* 10 °C	ΔT* 15 °C	ΔT* 20 °C	ΔT* 25 °C	m^2 (L)	Power (kW) ΔT* 10 °C	ΔT* 15 °C	ΔT* 20 °C	ΔT* 25 °C
MX_W 00600 R	2,5 (17,8)	16,0	24,0	32,0	40,0	1,8 (12,8)	11,5	17,3	23,0	28,8
MX_W 00800_	2,5 (17,8)	16,0	24,0	32,0	40,0	2,0 (14,2)	12,8	19,2	25,6	32,0
MX_W 01000_	3,5 (24,9)	22,4	33,6	44,8	56,0	2,5 (17,8)	16,0	24,0	32,0	40,0
MX_W 01250_	3,8 (27,0)	24,3	36,5	48,6	60,8	2,6 (18,5)	16,6	24,9	33,3	41,6
MX_W 01500_	4,0 (28,4)	25,6	38,4	51,2	64,0	2,8 (19,9)	17,9	26,9	35,8	44,8
MX_W 02000_	4,8 (34,1)	30,7	46,0	61,4	76,7	3,8 (27,0)	24,3	36,5	48,6	60,8

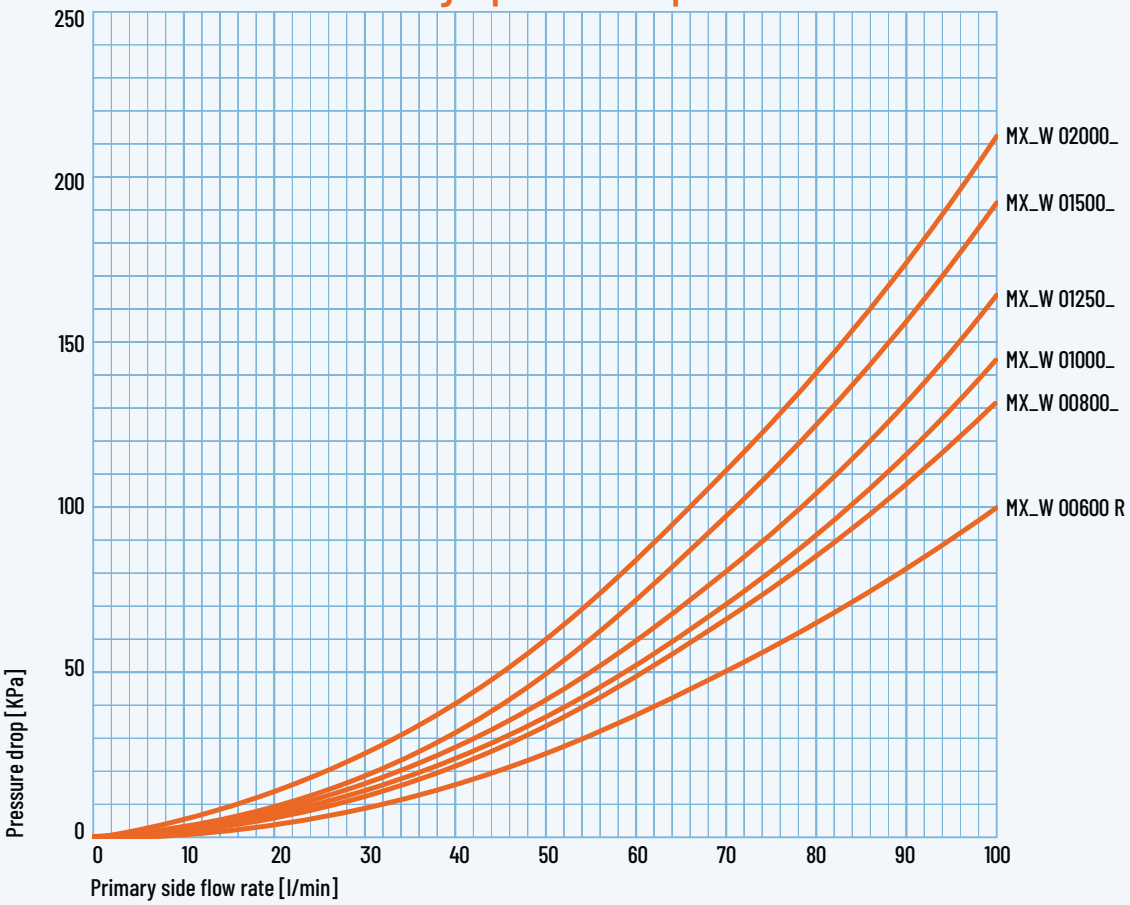
** ΔT: difference between the average temperature of the heating fluid (inside the heat exchanger) and the average temperature of the heated fluid (internal to the buffer in the area affected by the coil).*

MX_W Domestic Hot Water performance

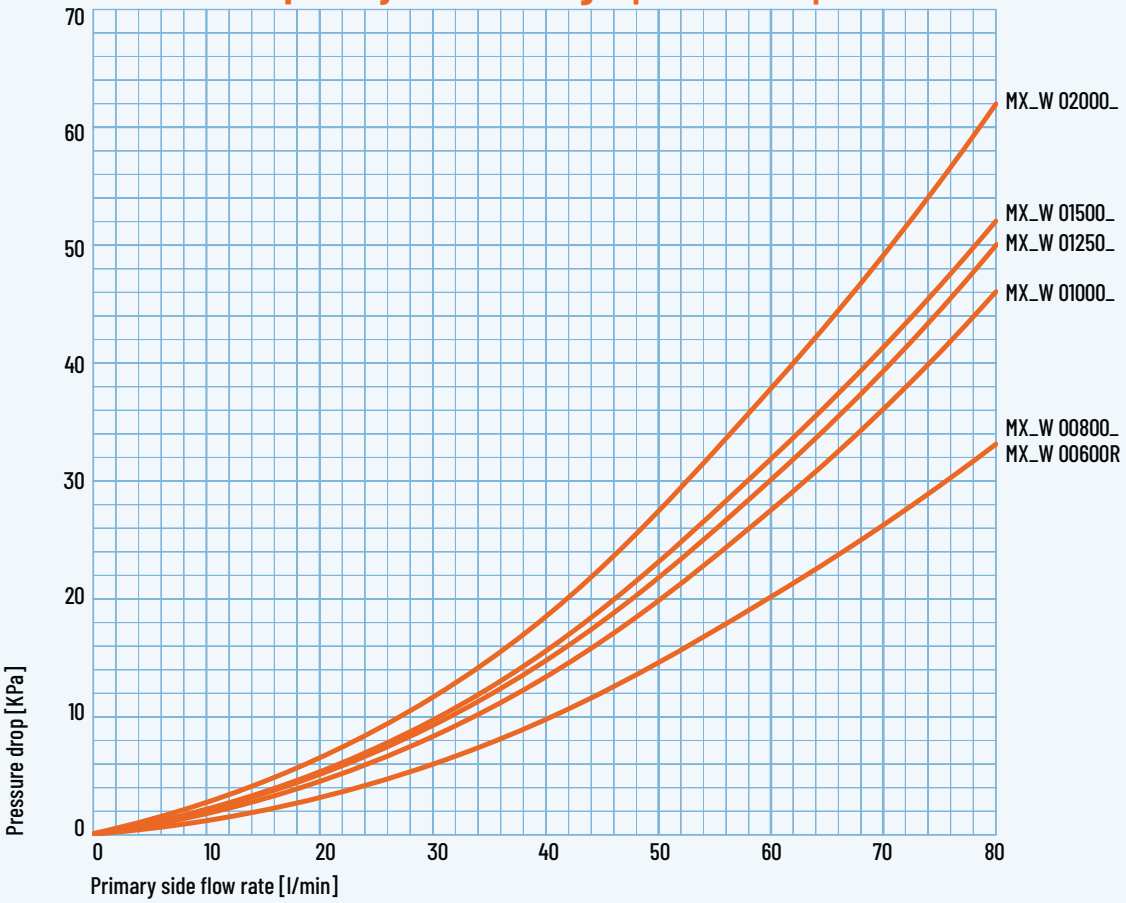
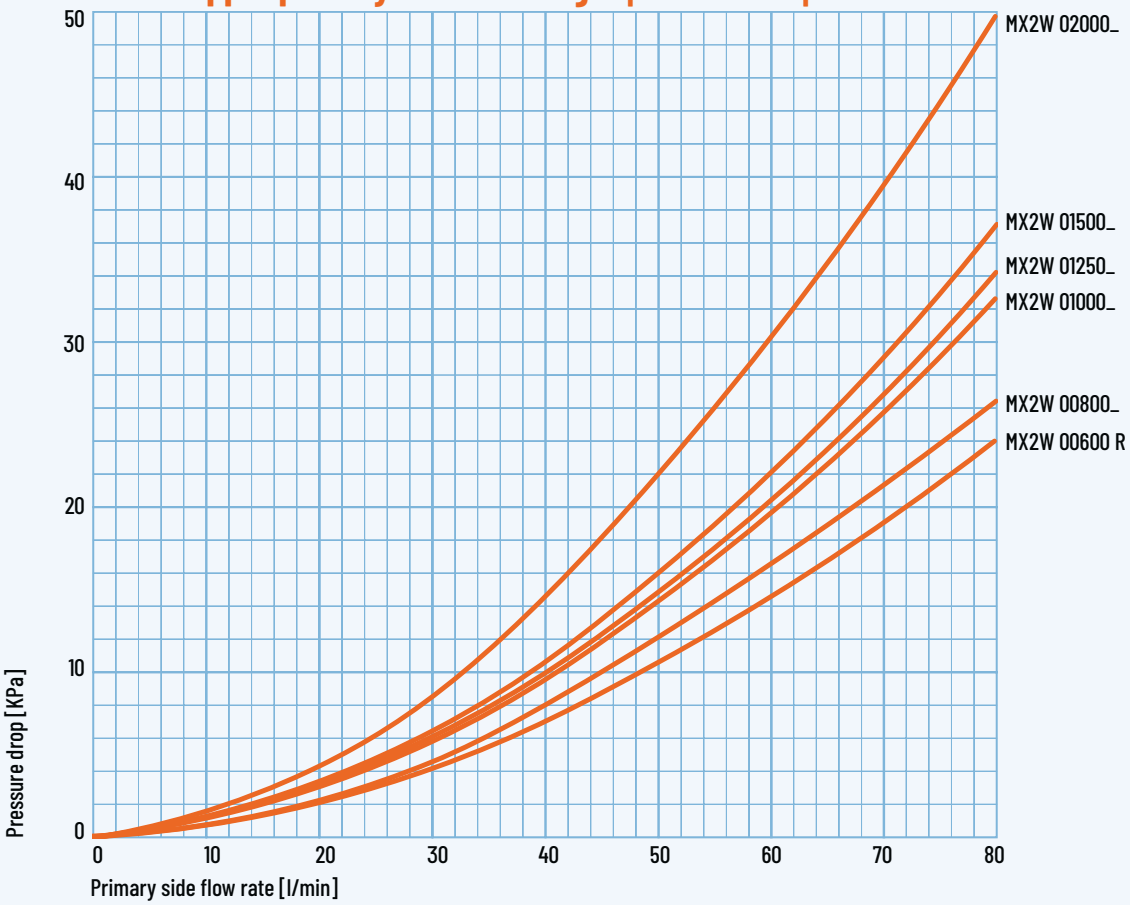
CODE	MX_W 00600 R	MX_W 00800_	MX_W 01000_	MX_W 01250_	MX_W 01500_	MX_W 02000_
DHW Heat exchanger m² (L)	5,5 (27,5)	7,0 (35,0)	7,5 (37,5)	8,5 (42,5)	10,0 (50,0)	12,0 (60,0)
DHW Power and flow rate (from 10 to 45 °C) in continuos draw at different primary side temperatures						
Primary at 55 °C Kw (L/h)	31,8 (744)	45,7 (1069)	50,5 (1182)	58,9 (1739)	73,4 (1717)	91,3 (2137)
Primary at 65 °C Kw (L/h)	49,1 (1207)	70,6 (1733)	78,0 (1917)	91,0 (2236)	113,4 (2786)	141,1 (3467)
Primary at 75 °C Kw (L/h)	57,5 (1412)	82,5 (2028)	91,3 (2242)	106,5 (2616)	132,7 (3259)	165,1 (4056)
DHW* producible with a 10 L/min flow rate from a totally heated buffer and a not running heat source						
Buffer at 55 °C (L)	170	265	352	527	698	1113
Buffer at 65 °C (L)	232	357	476	712	941	1244
Buffer at 70 °C (L)	441	564	701	953	1107	1465
DHW* producible with a 20 L/min flow rate from a totally heated buffer and a not running heat source						
Buffer at 55 °C (L)	115	170	221	324	417	642
Buffer at 65 °C (L)	157	248	331	498	664	1067
Buffer at 70 °C (L)	263	376	486	702	888	1333
DHW* producible with a 10 L/min flow rate, from a buffer heated only on the upper part and a not running heat source						
Buffer at 55 °C (L)	107	166	217	338	446	678
Buffer at 65 °C (L)	146	224	293	456	600	758
Buffer at 70 °C (L)	278	353	432	611	707	893
DHW* producible with a 20 L/min flow rate, from a buffer heated only on the upper part and a not running heat source						
Buffer at 55 °C (L)	73	106	136	208	266	391
Buffer at 65 °C (L)	99	155	331	319	424	650
Buffer at 70 °C (L)	166	235	486	450	567	812
NL **	2,1	3,2	4,0	4,2	4,4	5,3

** from 10 to 45 °C*
*** Buffer at 70 °C, DHW from 10 to 45° C*

MXW - DHW heat exchanger pressure drops



MXW - Lower primary heat exchanger pressure drops



MXW - Upper primary heat exchanger pressure drops