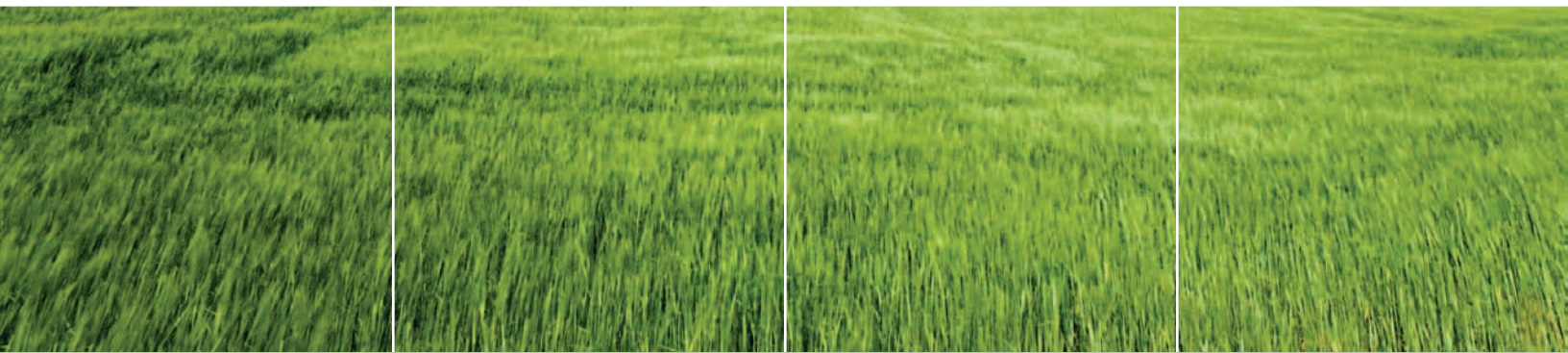
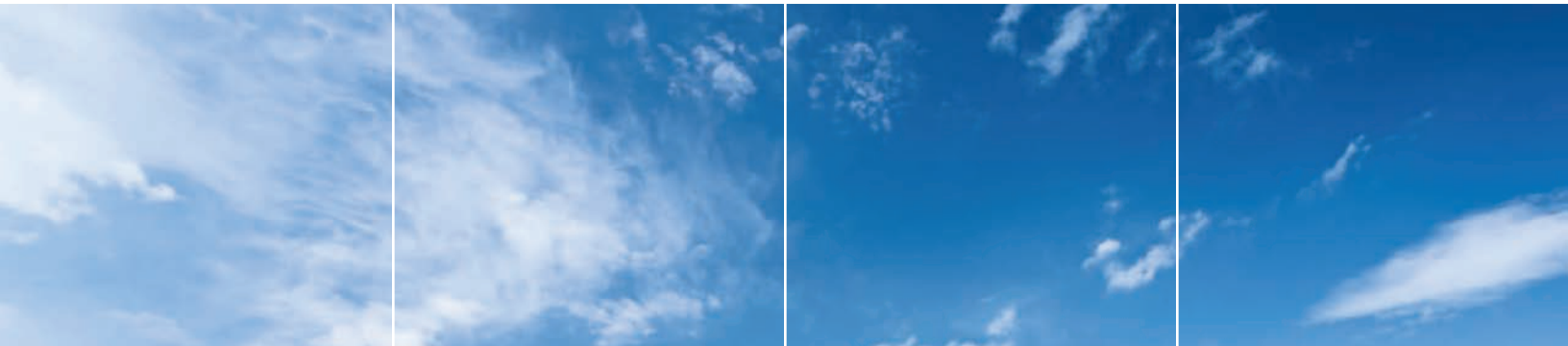




## Moving Biogas to Energy

Gas Pressure-Booster Blowers



## Biogas innovation for the 21st century

### The right equipment, for reliable biogas transfer

In today's environment, biogas is an attractive, energy neutral fuel source. However, raw biogas is very caustic as feedstocks break down during the anaerobic digestion process. In fact, even after it is purified, biogas remains corrosive and can still harm equipment. That is why the right equipment solution is crucial at every phase of production.

Eurovent is designed and built to be an integral part of production, from helping to process raw biogas to boosting it once it is purified. Our experienced technical team understands that even though requirements may differ and feedstocks can vary from yogurt whey to animal waste to treated wastewater, the challenge is the same: provide a reliable, durable design that withstands corrosive gas. Our engineers work with you to determine requirements, and then custom design the right equipment for your application.

Eurovent can effectively and efficiently process and boost biogas at a variety of production stages, helping to complete the transfer to combined heating and power usage; or to use as vehicle fuel for buses, police cars, waste transfer trucks and other municipal fleets. Spencer blowers can also be used in sludge drying to make compost and fertilizer.



**MAb Bio-Gas**

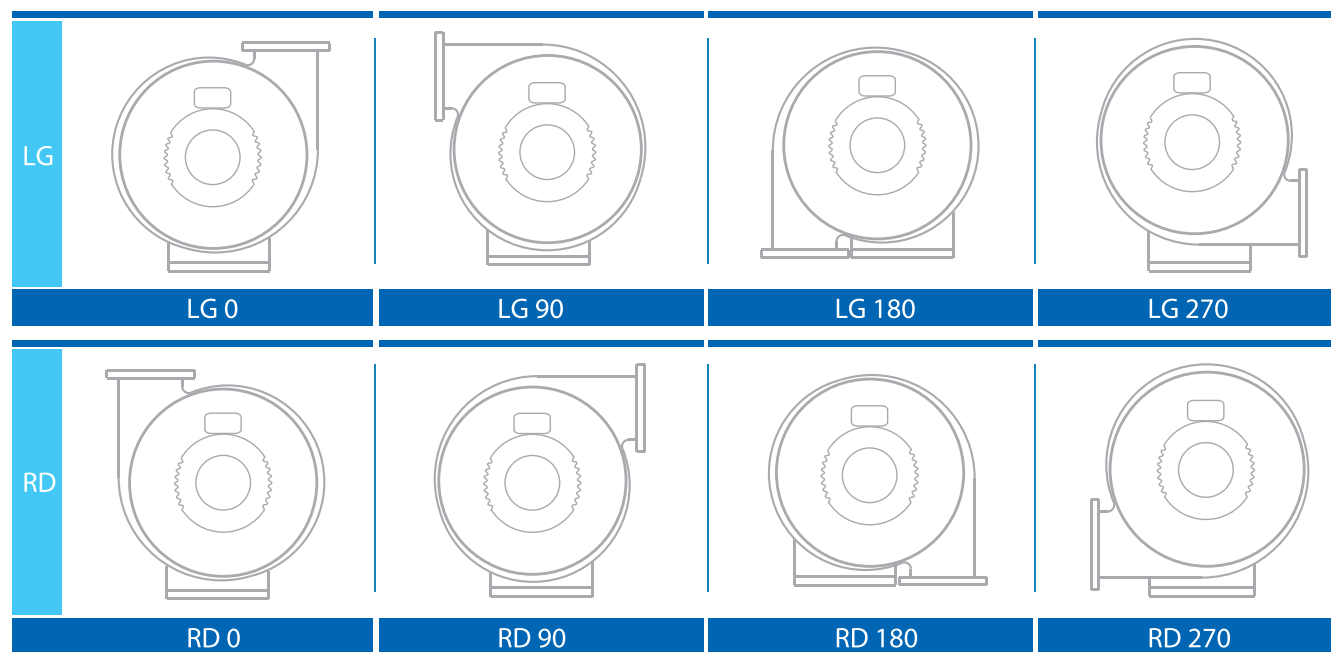
High Pressure Blowers

Air Volume : 2.5 cmm – 120cmm.

Pressure : 500 Pa – 9,800 Pa.



## HOUSING POSITION AND ROTATION



In the standard version, the equipment is supplied with the terminal box position 270° (top), look at driver side.

### Housing positions, terminal box positions, cable entry

#### Housing Positions

The housing position is determined when facing the Driven side

Positions RD = Clockwise rotation

Positions LG = Anti-clockwise rotation

### Influence of the density

The following tables show the characteristics of an operating device at air 15 °C , barometric pressure 760 mm Hg , spcific gravity 1,226 Kg/m<sup>3</sup> . If customer wishes get different perfomances with intermediary value in respect of the value shown in the tables or if he prefers a device operating with air suction at different temperature in respect of 15°C and with different specific gravity in respect of 1,226.

### Rotation speed

The standard blower are fitted with 2 poles motor. For change-pole motor ( 4 Poles ) or use variable speed drive the total pressure , the volumetric flow rate and power requirement change as follows.

#### Variation of rotation speed(n) with air specific gravity constant.

1. The delivery (V) varies directly with rotations ratio.

$$V_1 = V \cdot \frac{n^1}{n}$$

2. The pressure varies with square number of rotations ratio :

$$Pt_1 = Pt \left( \frac{n^1}{n} \right)^2$$

3. The energy (P) varies with cube of rotations ratio :

$$P_1 = P \cdot \left( \frac{n^1}{n} \right)^3$$

### Variations of specific gravity (γ) of the air when rotation speed is constant.

1. The delivery (V) remains constant.
2. The pressure (pt) and the energy (P) vary directly with the ratio of specific gravities.

$$Pt_1 = Pt \cdot \frac{\gamma^1}{\gamma} \quad P_1 = P \cdot \frac{\gamma^1}{\gamma}$$

The specific gravity of the air at different temperatures is obtained through the formula

$$\gamma = \frac{1,293 \cdot 273}{(273+t)} \text{ (kg/m}^3\text{)}$$

The air density depending on a change of the atmospheric pressure is given by the following formula

$$\gamma = \frac{Pb \cdot 13.56}{29.27 \cdot (273+t)} \text{ (kg/m}^3\text{)}$$

#### Where :

- γ = specific gravity at 0 °C
- 1,293 = specific gravity of the air at 0 °C
- t = air temperature indicated in °C
- 273 = absolute zero
- Pb = atmospheric pressure mm Hg

### Eurovent Aluminium blowers offer

- Logical performance graduation
- Ready-to-install design with three or single phase a.c. motors
- High performance at compact design
- Long service life with low operation cost
- High efficiency
- Favourable noise characteristics
- Robust cast aluminium casings
- Useful accessories

# TECHNICAL INFORMATION MAb

Type	Max flow rate	Total pressure difference	Voltage	Frequency	Current consumption	Motor rating	Number of revolutions	Blower speed	Weight
MAb	m³/min	Pa	V	Hz	A	kW	min <sup>-1</sup>	min <sup>-1</sup>	kg
MAB-50A/T	11,5	9700	230/400	50	10,6/6,1	3,0	2880	6100	55
MAB-50B/T	20	10150	400 Δ	50	8,2	4,0	2905	6100	67
MAB-50C/T	38	10150	400 Δ	50	11,3	5,5	2910	6100	67
MAB-50D/T	47	11400	400 Δ	50	14,7	7,5	2915	6350	87
MAB-55A/T	40	3900	230/400	50	8,7/5,0	2,2	2875	3900	63
MAB-55B/T	52	5900	400 Δ	50	8,2	4,0	2905	4850	73
MAB-55C/T	56	7500	400 Δ	50	11,3	5,5	2910	5300	73
MAB-55D/T	62	8700	400 Δ	50	14,7	7,5	2915	5800	89
MAB-60A/T	80	10000	400 Δ	50	21,5	11	2910	4950	190
MAB-60B/T	90	13000	400 Δ	50	32,5	18,5	2940	5600	max. 250
MAB-60C/T	96	16400	400 Δ	50	40,5	22	2925	6350	max. 270

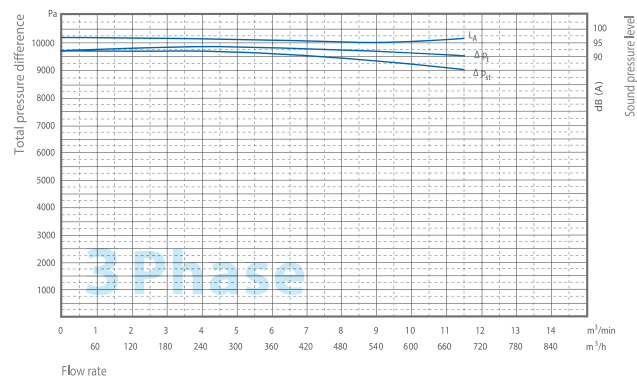
Deviation in the revointion of ± % are possible



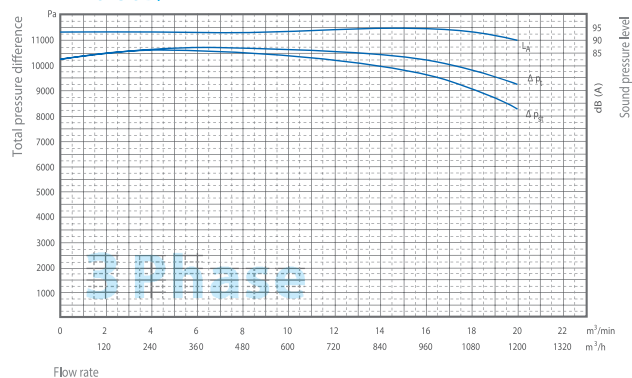


# PERFORMANCE CURVE MAb

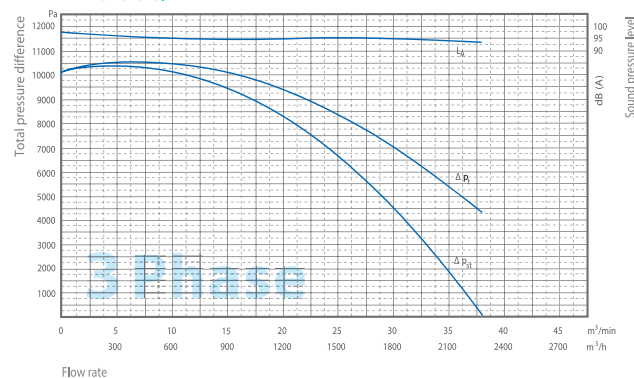
MAb-50A/T



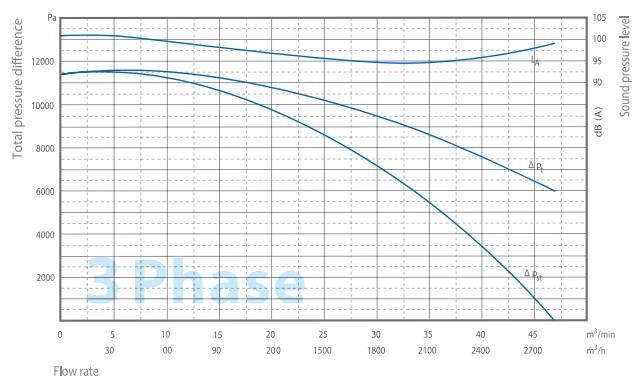
MAb-50B/T



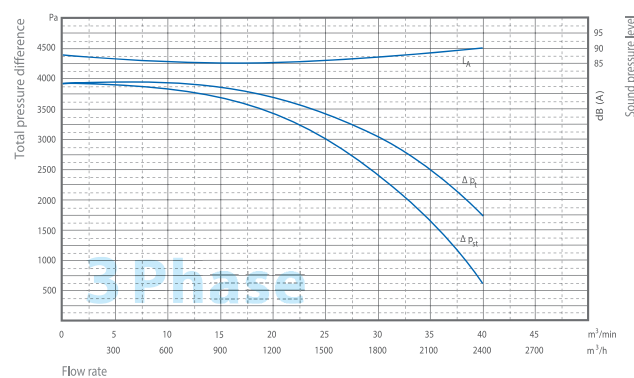
MAb-50C/T



MAb-50D/T

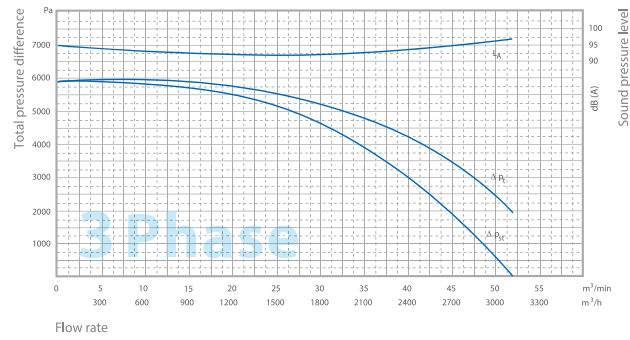


MAb-55A/T

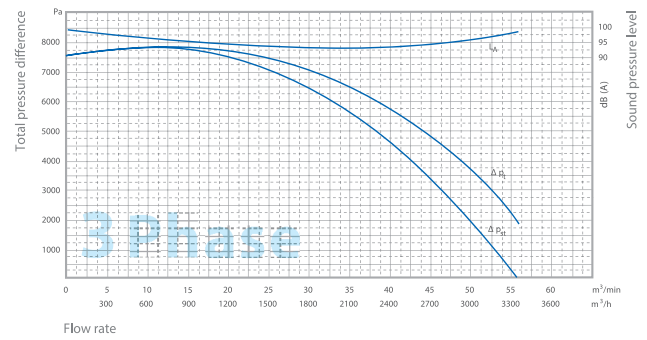


# PERFORMANCE CURVE MAb

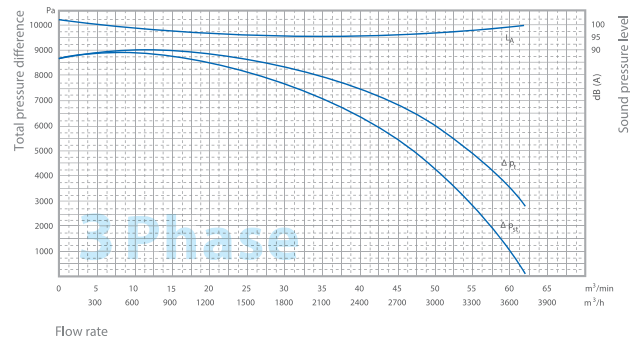
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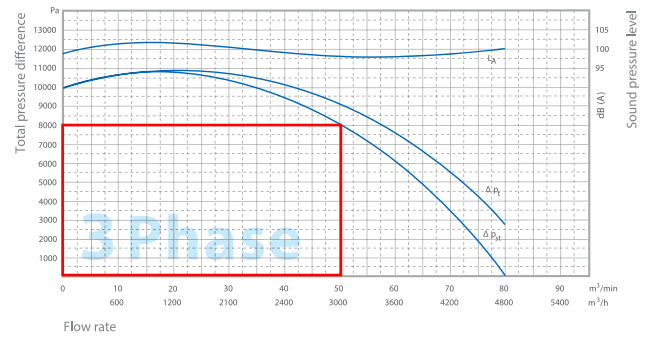
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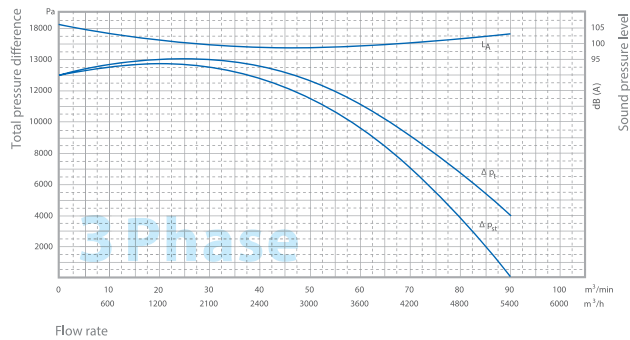
MAb-55D/T



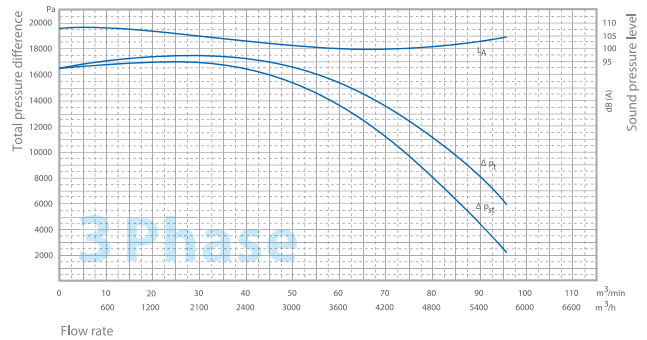
MAb-60A/T



MAb-60B/T

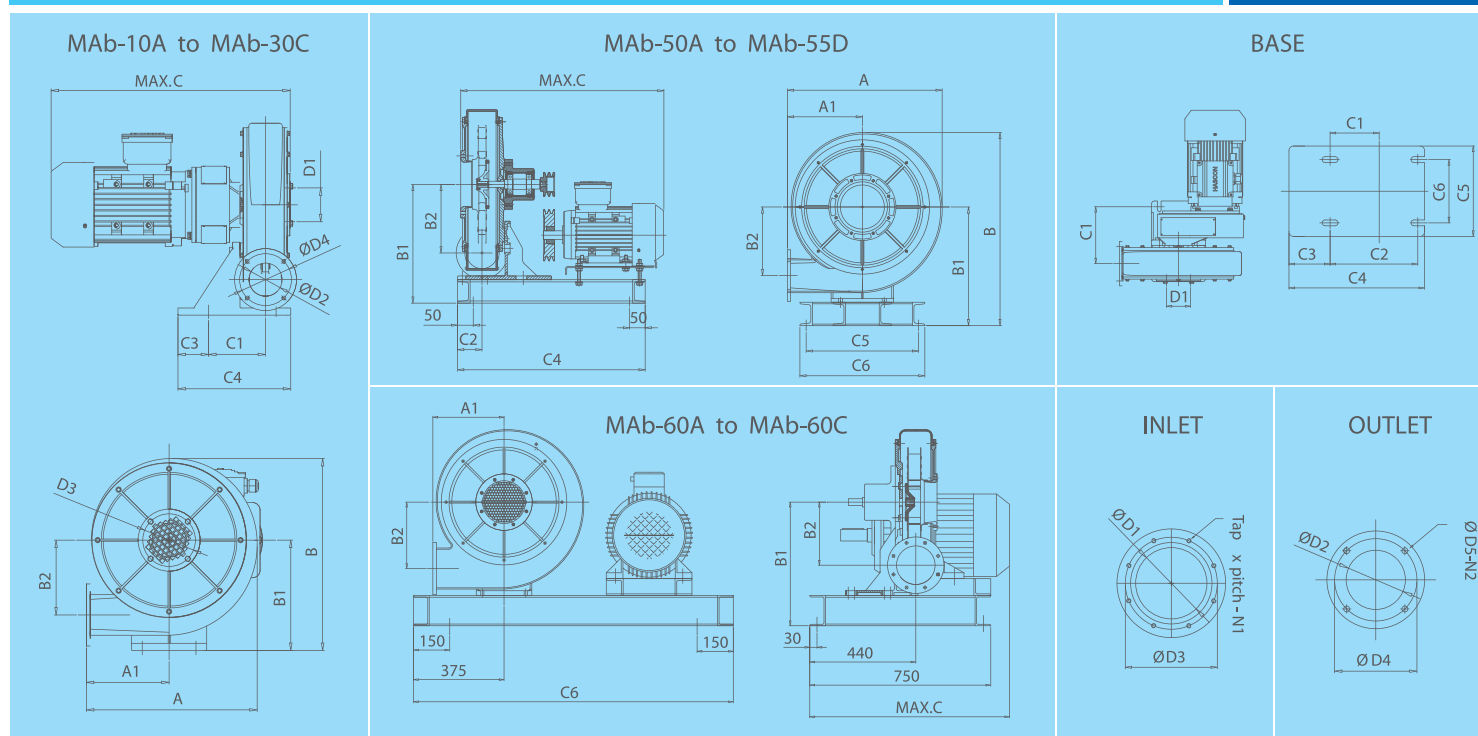


MAb-60C/T





## DIMENSION MAb



MODEL	A	A1	B	B1	B2	C	C1	C2	C3	C4	C5	C6	ØD1	ØD2	ØD3	ØD4	ØD5	N1	N2	Tap x pitch
MAb-50A/T	496	240	620	380	219	700	-	78	-	600	360	400	141	100	182	139	10	8	4	M10 x 1.5
MAb-50B/T	496	240	620	380	219	700	-	78	-	600	360	400	141	100	182	139	10	8	4	M10 x 1.5
MAb-50C/T	496	240	620	380	219	700	-	78	-	600	360	400	141	100	182	139	10	8	4	M10 x 1.5
MAb-50D/T	496	240	620	380	219	700	-	78	-	600	360	400	141	100	182	139	10	8	4	M10 x 1.5
MAb-55A/T	560	280	690	431	237	750	-	118	-	635	360	400	156	140	200	182	12	8	8	M8x 1.25
MAb-55B/T	560	280	690	431	237	750	-	118	-	635	360	400	156	140	200	182	12	8	8	M8x 1.25
MAb-55C/T	560	280	690	431	237	750	-	118	-	635	360	400	156	140	200	182	12	8	8	M8x 1.25
MAb-55D/T	560	280	690	431	237	750	-	118	-	635	360	400	156	140	200	182	12	8	8	M8x 1.25
MAb-60A/T	625	295	812	512	275	900	-	-	-	-	-	1325	160	160	200	200	12	8	8	M10x 1..5
MAb-60B/T	625	295	812	512	275	900	-	-	-	-	-	1325	160	160	200	200	12	8	8	M10x 1..5
MAb-60C/T	625	295	812	512	275	900	-	-	-	-	-	1325	160	160	200	200	12	8	8	M10x 1..5