

MB HORIZONTAL PUMPS



The horizontal centrifugal pumps made in resin are high-efficiency pumps operated by an electric motor in direct drive (max. 3000 rpm) for rapid transfer and/or emptying of fluid, with a flow rate of from 5 to 55 m³/hour.

The particular open rotor construction allows fluids, even when very dirty, with an apparent viscosity of up to 500 cps (at 20°C) and with small sized suspended solids, to be pumped with a continuous flow.

Two versions are available with different internal mechanical seals according to the service:

TL = LIP SEAL (in polymer): for light services;

TS = BELLOWS SEALS (in PTFE with silicon carbide and ceramic rings): for more severe services and with very dirty fluids.

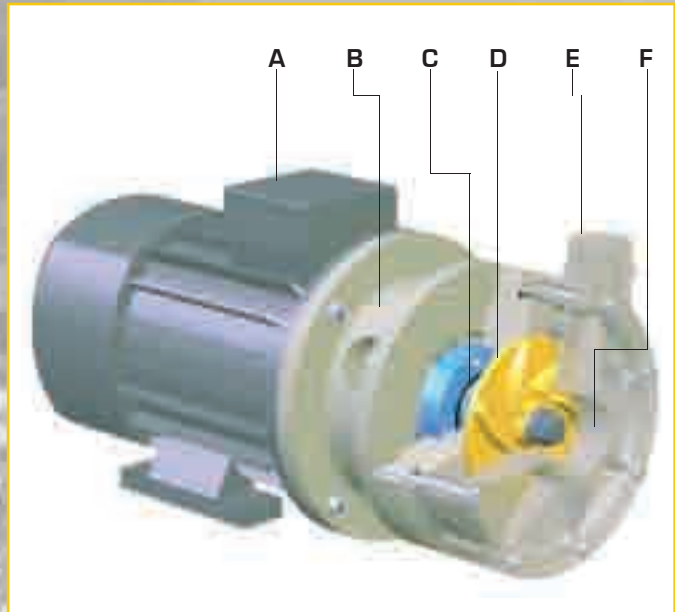
The choice of the pump's composition materials allows you to determine the best chemical compatibility with the fluid and/or the environment without neglecting the temperature aspect.

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QUALITIES

DESCRIPTION OF THE PUMP

The horizontal centrifugal pumps in resin are made up of a sturdy body and a lantern for fixing the electric motor and inspection of the mechanical seal.

The pump's shaft, on which the open rotor is fixed, is integral with the shaft of the electric motor. The mechanical seal of the shaft is housed on the back of the rotor.



HOW IT WORKS

The rotor, integral with the shaft and the electric motor, mounted in direct drive, is rotated at a pre-set speed creating, due to a centrifugal effect, intake on the central duct and delivery on the peripheral duct.



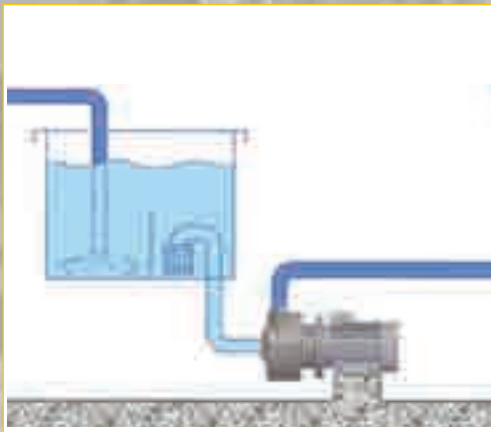
TL = lip seal

A = electric motor
B = inspection lantern
C = mechanical seal
D = rotor
E = delivery duct
F = intake duct



TS = bellow seal

- 1 - executions in: Polypropylene, PVDF/ECTFE;
- 2 - positive suction head service;
- 3 - no welds;
- 4 - mechanical seal with lip seal or bellow seal;
- 5 - can also be used with very dirty fluids (TS seal);
- 6 - high flow rates: from 5 to 55 m³/hour;
- 7 - extreme ease of maintenance;
- 8 - low cost of spare parts.



The horizontal centrifugal pumps must only be installed with the axis positioned horizontally in positive suction head. Suitable devices must be used to avoid dry operation, the formation of vortices and the possible intake of air.

The horizontal centrifugal pumps must only operate when the pump is flooded; operation when dry or with air bubbles causes damage to the mechanical seal.

CHEMICAL COMPATIBILITY

The type of fluid, the temperature and the area of use are all influencing factors in determining the choice of materials for the pump and their correct chemical compatibility. The following table is shown here below as an example related to some of the more commonly used substances.

SUBSTANCE	Polypropylene	PVDF ECTFE (Halatr®)	EPDM (Duftra®)	FPM (Viton®)
Acetaldehyde	A1	D	A	D
Acetamide	A1	C	A	B
Vinyl acetate	B1	A2	B2	A1
Acetylene	A1	A	A	A
Vinegar	A	B	A	A
Acetone	A	D	A	D
Fatty acids	A	A	D	A

CHEMICAL COMPATIBILITY

- A = very good
- B = good
- C = poor, not recommended
- D = severe etching, not recommended
- = information not available
- 1 = satisfactory up to 22°C (72°F)
- 2 = satisfactory up to 48°C (120°F)

For further information, please do not hesitate to contact DEBEM's technical service department.

MB	P	TLV	N
PUMP MODEL	PUMP MATERIAL	TYPE OF SEAL	MOTOR
MB 80 = MB 80 MB 100 = MB 100 MB 110 = MB 110 MB 120 = MB 120 MB 130 = MB 130 MB 140 = MB 140 MB 150 = MB 150 MB 155 = MB 155 MB 160 = MB 160	P = polypropylene EC = ECTFE	TLV = Viton lip seal TLD = EPDM lip seal TSV = Viton bellow seal TSD = EPDM bellow seal	*N = three-phase motor M = single-phase motor A = ATEX motor

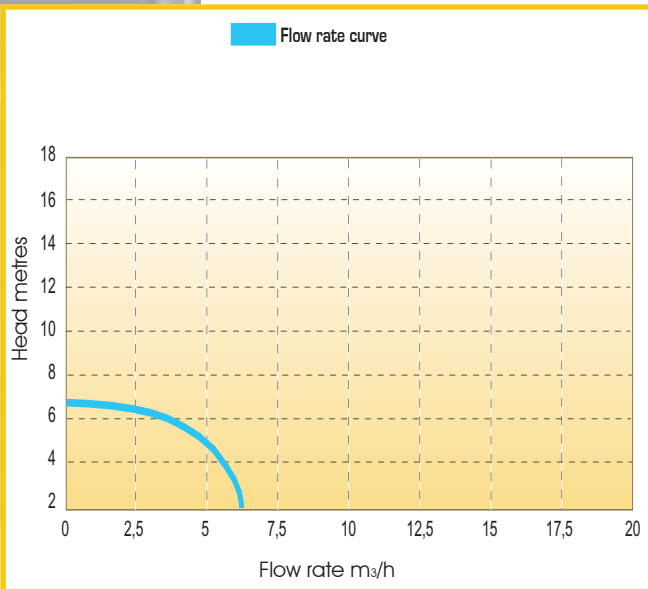
* Standard supply with three-phase asynchronous eurotension motor (2 poles) 50Hz



MB 80



PERFORMANCE ...



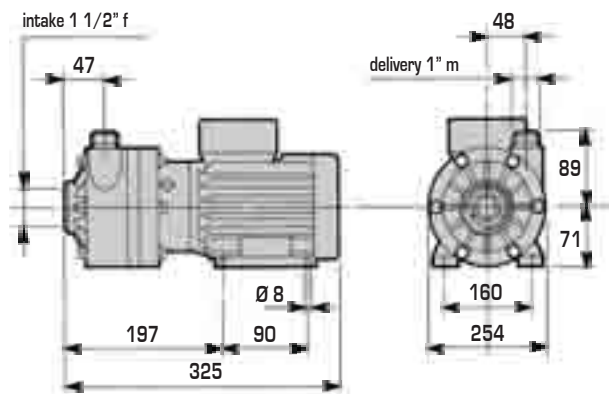
Intake connection	G 1 1/2" f		
Delivery connection	G 1" m		
Max. flow rate *	6 m³/h		
Max. head *	6 m		
Seal	TL - TS		
Net weight	PP	8,5 Kg	60°C Max. Temp.
	PVDF/ECTFE	9,5 Kg	90°C Max. Temp.
Construction materials	PP - ECTFE/PVDF		
Motor power	Kw 0,37 - HP 0,5		

Motor IP55 - Class F - 2 poles - 50 Hz - three-phase

* The curves and performance values refer to pumps with a free delivery outlet and water at 20°C.

TECHNICAL DATA..

DIMENSIONS



f = female
m = male

The dimensions shown are in millimetres, are indicative and are not binding; ask for the specific drawing.

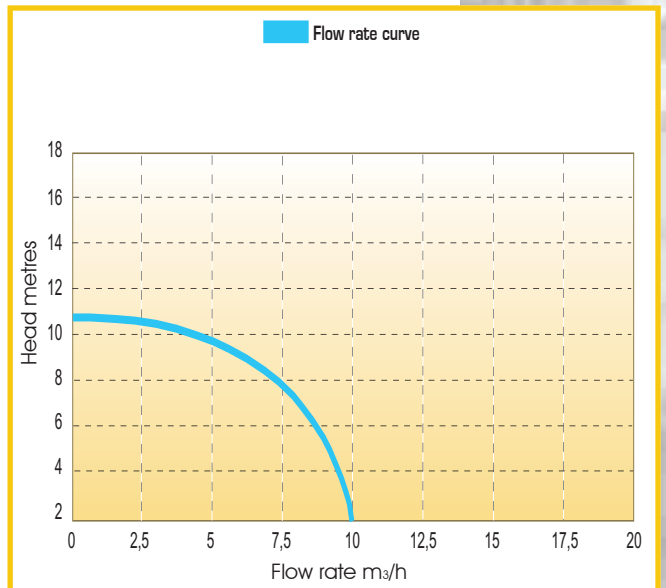
MB 100



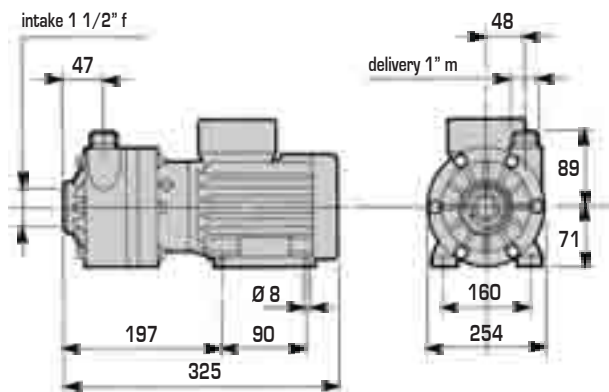
TECHNICAL DATA..

Intake connection	G 1 1/2" f		
Delivery connection	G 1" m		
Max. flow rate *	10 m ³ /h		
Max. head*	10 m		
Seal	TL - TS		
Net weight	PP	9,5 Kg	60°C Max. Temp.
	PVDF/ECTFE	10,5 Kg	90°C Max. Temp.
Construction materials	PP - ECTFE/PVDF		
Motor power	Kw 0,55 - HP 0,75		
Motor	IP55 - Class F - 2 poles - 50 Hz - three-phase		

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PERFORMANCE ...



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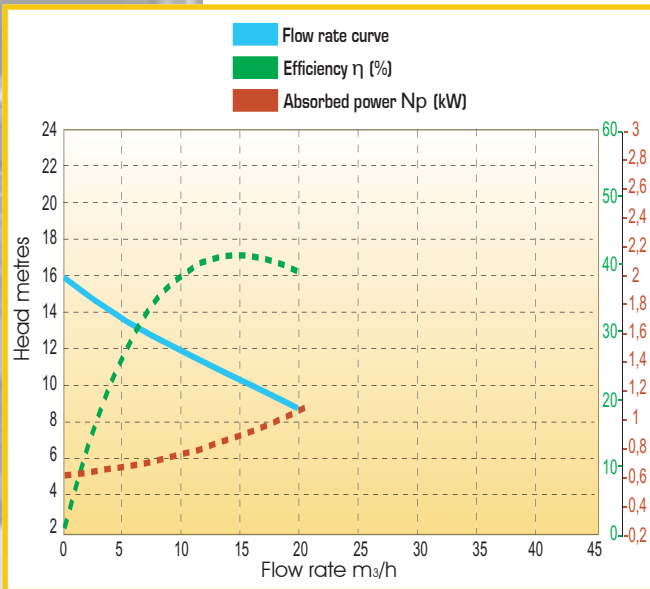
DIMENSIONS



MB 110



PERFORMANCE ...

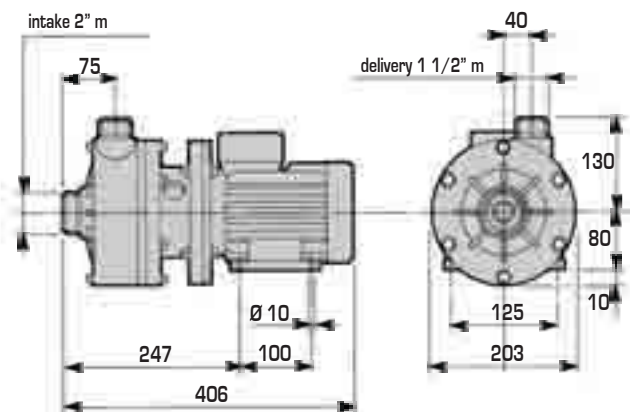


Intake connection	G 2" m		
Delivery connection	G 1 1/2" m		
Max. flow rate *	20 m³/h		
Max. head *	16 m		
Seal	TL - TS		
Net weight	PP	16 Kg	60°C Max. Temp.
	PVDF/ECTFE	17 Kg	90°C Max. Temp.
Construction materials	PP - ECTFE/PVDF		
Motor power	Kw 1,1 - HP 1,5		
Motor	IP55 - Class F - 2 poles - 50 Hz - three-phase		

* The curves and performance values refer to pumps with a free delivery outlet and water at 20°C.

TECHNICAL DATA..

DIMENSIONS



m = male

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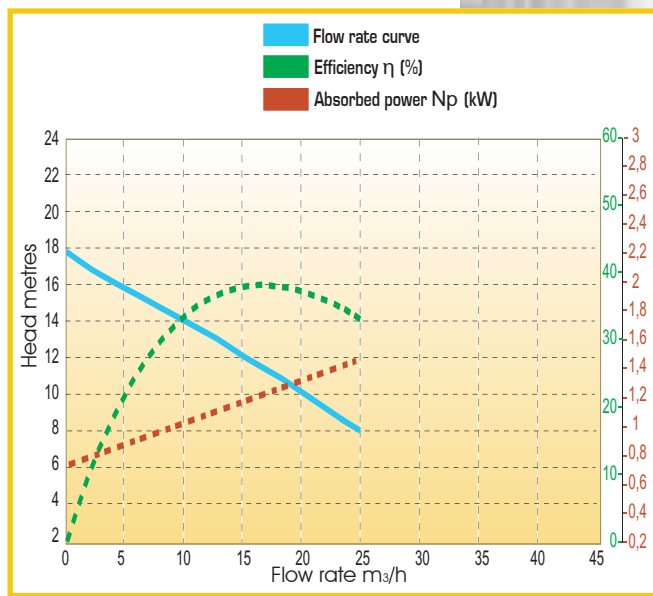
MB 120



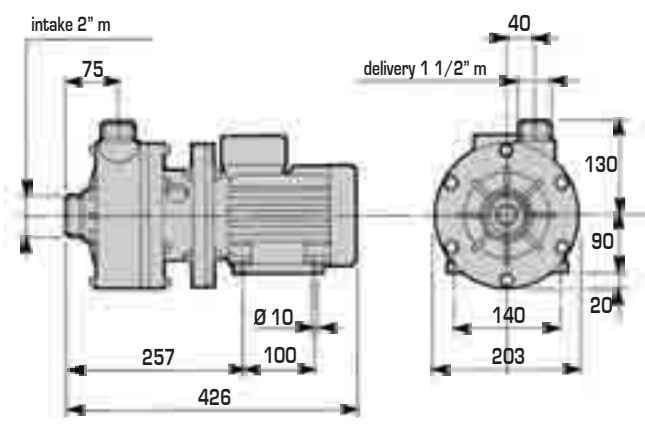
TECHNICAL DATA..

Intake connection	G 2" m		
Delivery connection	G 1 1/2" m		
Max. flow rate *	25 m ³ /h		
Max. head*	18 m		
Seal	TL - TS		
Net weight	PP	20 Kg	60°C Max. Temp.
	ECTFE/PVDF	21 Kg	90°C Max. Temp.
Construction materials	PP - ECTFE - PVDF		
Motor power	Kw 1,5 - HP 2		
Motor	IP55 - Class F - 2 poles - 50 Hz - three-phase		

* The curves and performance values refer to pumps with a free delivery outlet and water at 20°C.



PERFORMANCE ...



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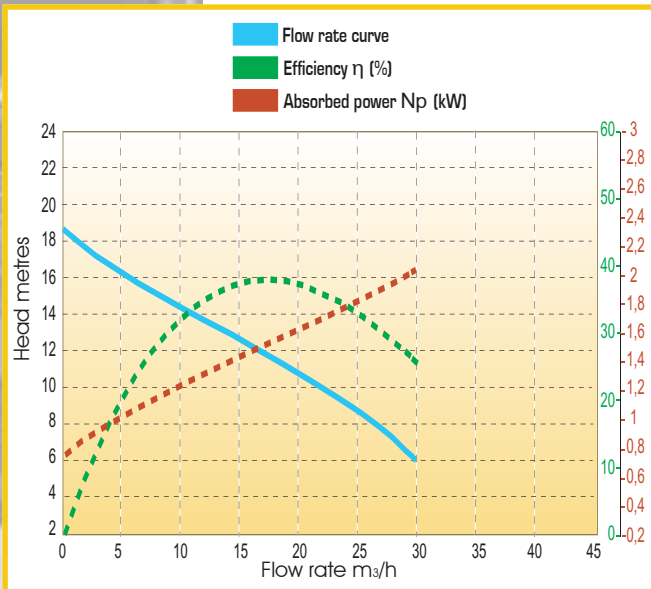
DIMENSIONS



MB 130



PERFORMANCE ...

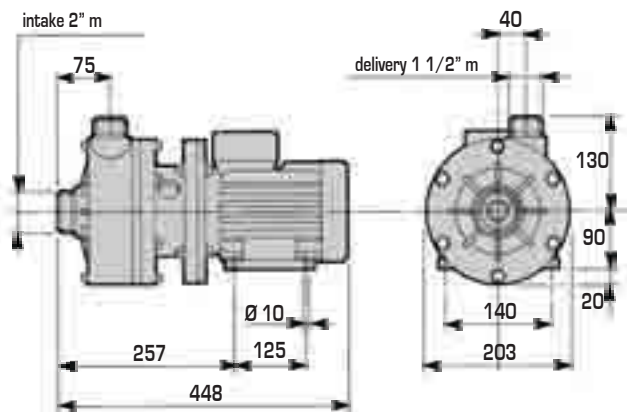


Intake connection	G 2" m		
Delivery connection	G 1 1/2" m		
Max. flow rate *	30 m³/h		
Max. head *	19 m		
Seal	TL - TS		
Net weight	PP	22,5 Kg	60°C Max. Temp.
	ECTFE/PVDF	23,5 Kg	90 °C Max. Temp.
Construction materials	PP - ECTFE/PVDF		
Motor power	Kw 2,2 - HP 3		
Motor	IP55 - Class F - 2 poles - 50 Hz - three-phase		

* The curves and performance values refer to pumps with a free delivery outlet and water at 20°C.

TECHNICAL DATA..

DIMENSIONS



m = male

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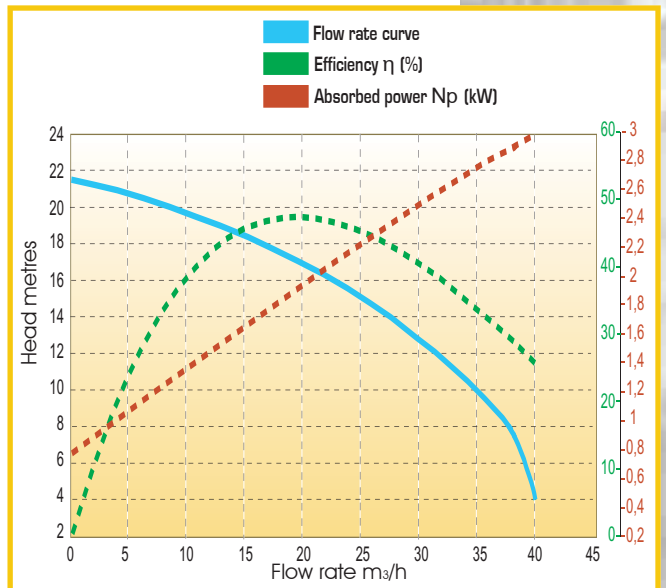
MB 140



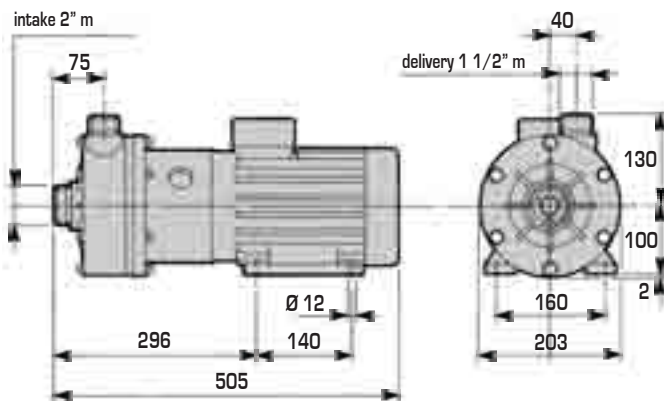
TECHNICAL DATA..

Intake connection	G 2" m		
Delivery connection	G 1 1/2" m		
Max. flow rate *	40 m ³ /h		
Max. head*	21 m		
Seal	TL - TS		
Net weight	PP	29 Kg	60°C Max. Temp.
	ECTFE/PVDF	30 Kg	90°C Max. Temp.
Construction materials	PP - ECTFE/PVDF		
Motor power	Kw 3 - HP 4		
Motor	IP55 - Class F - 2 poles - 50 Hz - three-phase		

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PERFORMANCE ...



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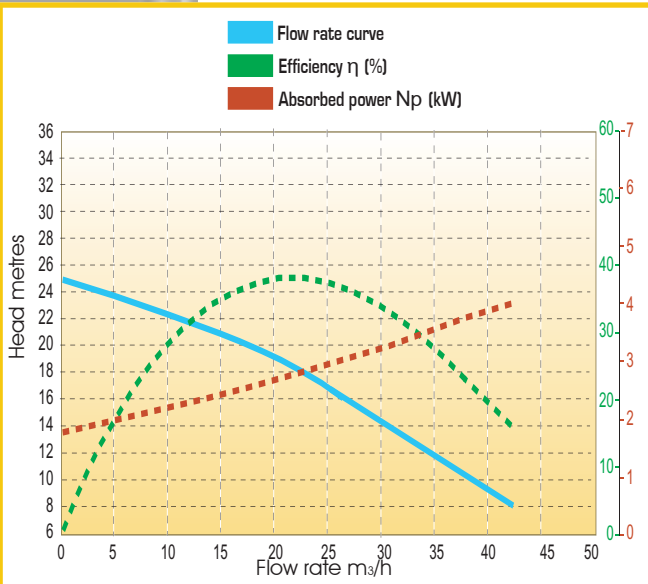
DIMENSIONS



MB 150



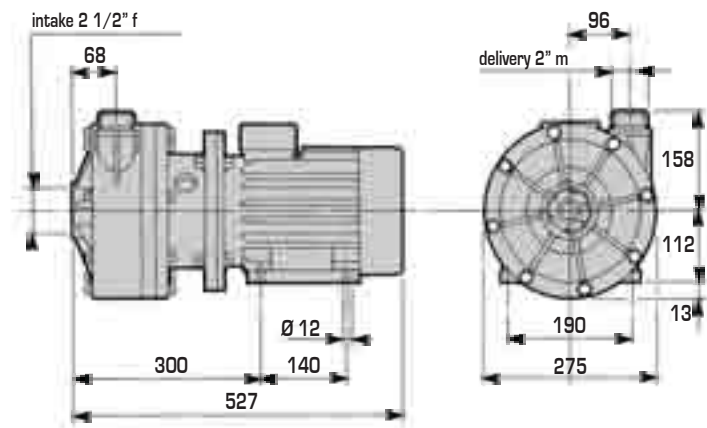
PERFORMANCE ...



Intake connection	G 2 1/2" f		
Delivery connection	G 2" m		
Max. flow rate *	42 m³/h		
Max. head *	25 m		
Seal	TL - TS		
Net weight	PP	42 Kg	60°C Max. Temp.
	ECTFE/PVDF	45 Kg	90°C Max. Temp.
Construction materials	PP - ECTFE/PVDF		
Motor power	Kw 4 - HP 5,5		
Motor	IP55 - Class F - 2 poles - 50 Hz - three-phase		
* The curves and performance values refer to pumps with a free delivery outlet and water at 20°C.			

TECHNICAL DATA..

DIMENSIONS



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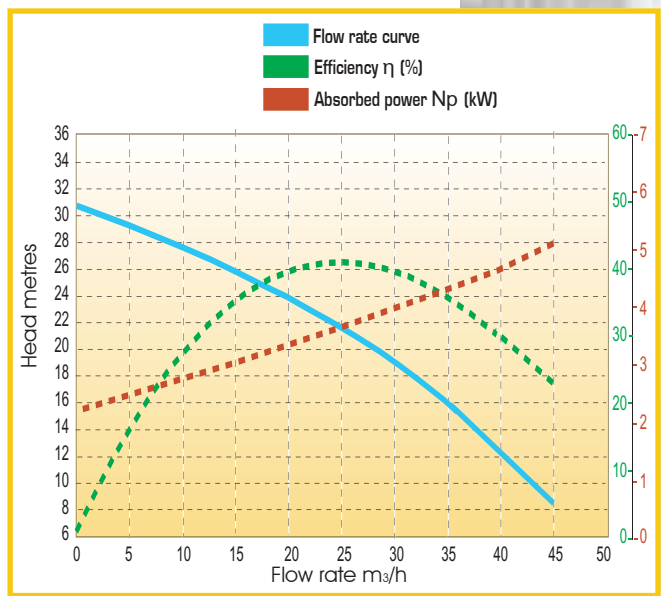
MB 155



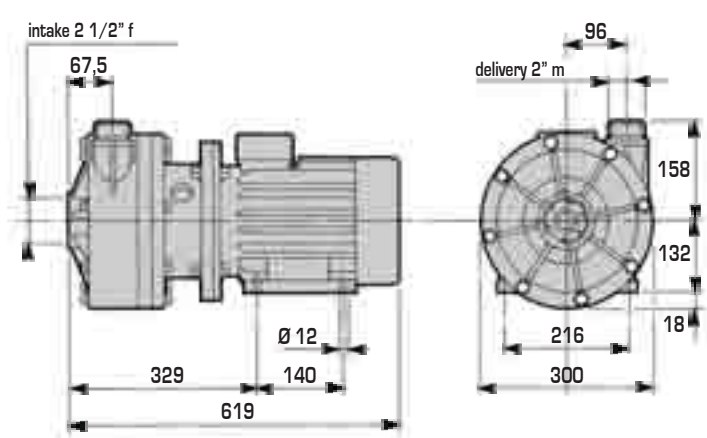
TECHNICAL DATA..

Intake connection	G 2 1/2" f		
Delivery connection	G 2" m		
Max. flow rate *	45 m ³ /h		
Max. head*	31 m		
Seal	TL - TS		
Net weight	PP	60 Kg	60°C Max. Temp.
	ECTFE/PVDF	63 Kg	90°C Max. Temp.
Construction materials	PP - ECTFE/PVDF		
Motor power	Kw 5,5 - HP 7,5		
Motor	IP55 - Class F - 2 poles - 50 Hz - three-phase		

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PERFORMANCE ...



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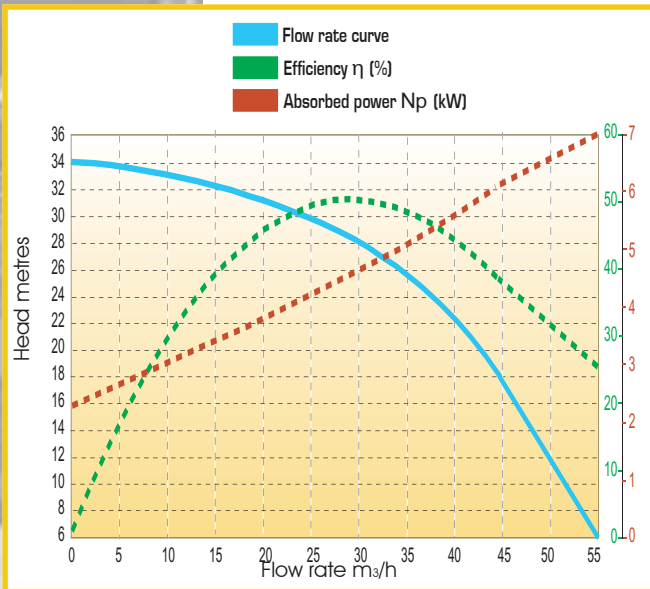
DIMENSIONS



MB 160



PERFORMANCE ...

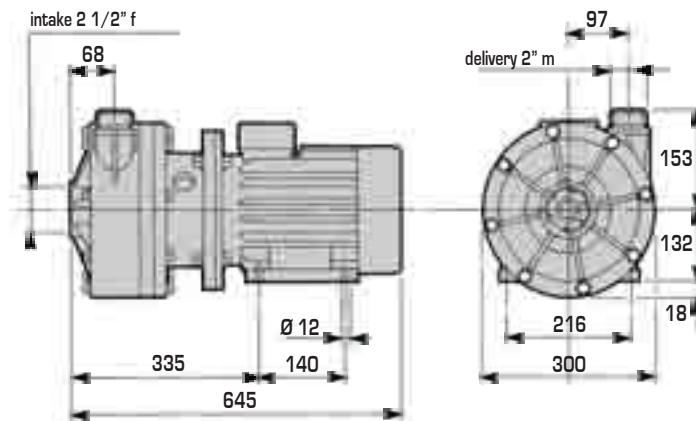


Intake connection	G 2 1/2" f		
Delivery connection	G 2" m		
Max. flow rate *	55 m³/h		
Max. head *	34 m		
Seal	TL - TS		
Net weight	PP	70 Kg	60°C Max. Temp.
	ECTFE/PVDF	73 Kg	90°C Max. Temp.
Construction materials	PP - ECTFE/PVDF		
Motor power	Kw 7,5 - HP 10		
Motor	IP55 - Class F - 2 poles - 50 Hz - three-phase		

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TECHNICAL DATA..

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