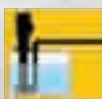


IM VERTICAL PUMPS



The vertical centrifugal pumps made in resin are high-efficiency pumps for fixed installations with the pump immersed directly in a tank, operated by an electric motor in direct drive (max. 3000 rpm) for rapid emptying of fluid, with a flow rate of from 1.6 to 55 m³/hour.

The particular form of construction of this pump, in addition to not using internal mechanical seals (subject to high wear), guarantees that any accidental leakage of the fluid is collected in the tank.

The open rotor allows very dirty fluids, with an apparent viscosity of up to 500 cps (at 20°C) and small sized suspended solids, to be pumped with a continuous flow. The choice of the pump's composition materials allows you to determine the best chemical compatibility with the fluid and/or the environment without forgetting the correct temperature field.

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QUALITIES

DESCRIPTION OF THE PUMP

The vertical centrifugal pumps in resin are made up of a sturdy body and a column fixed to the bracket plate, above which is fixed the lantern that is the fixing element for the electric motor.

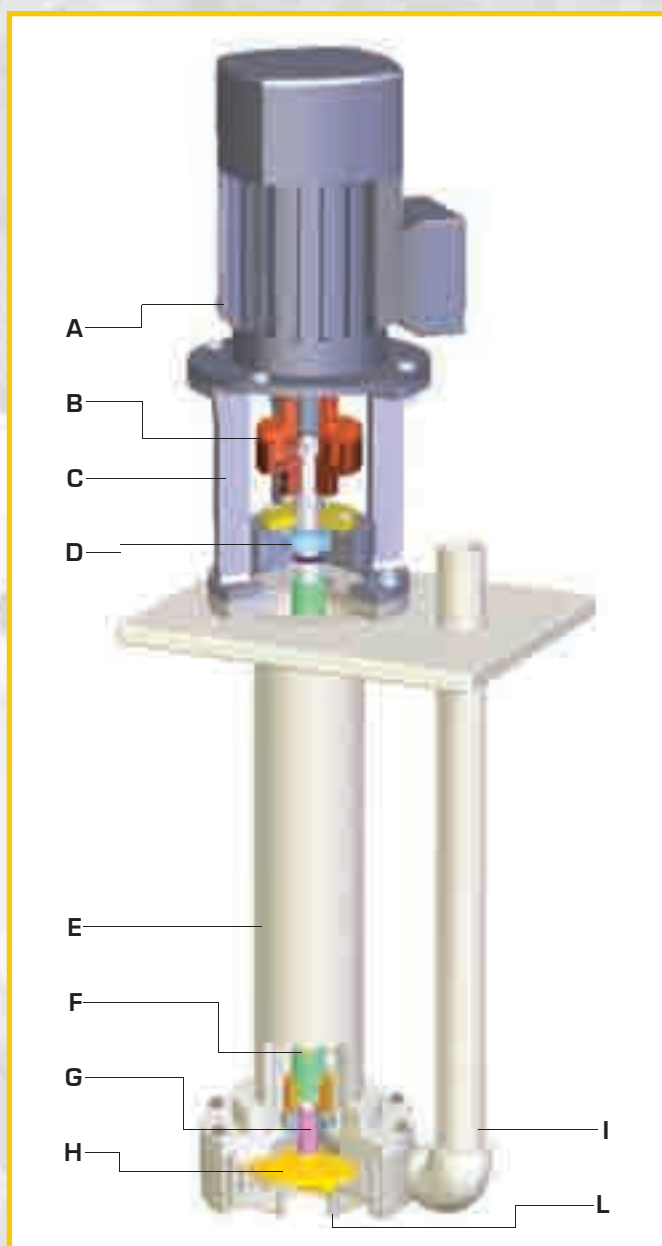
The motor is direct drive mounted onto the pump's shaft using an elastic joint, supported by a radial bearing. The open rotor is fixed at the opposite end of the shaft.

The construction of this pump allows the motor to be disassembled without having to remove the pump from the system.

- A = electric motor
- B = transmission joint
- C = lantern
- D = radial bearing
- E = external column
- F = internal column
- G = ceramic bushing
- H = rotor
- I = delivery duct
- L = intake duct

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.



- 1 - executions in: Polypropylene, PVDF;
- 2 - pump immersed in tank;
- 3 - motor can be disassembled with the pump installed;
- 4 - no welds;
- 5 - can also be used with very dirty fluids;
- 6 - high flow rates: from 15 to 55 m³/hour;
- 7 - motor replacement without removing the pump;
- 8 - simple replacement of wearable bushings;
- 9 - extreme ease of maintenance;
- 10 - can be disassembled completely;
- 11 - can be supplied without a motor.



The vertical centrifugal pumps must only be installed with the axis positioned vertically and the pump immersed in the tank. Suitable devices must be used to avoid dry operation, the formation of vortices and the possible intake of air. The vertical centrifugal pumps must only operate when the PUMP IS FLOODED; operation when dry or with air bubbles can cause damage to the internal bushing.

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 (Halar®)	EPDM (Dutral®)	PTFE (Teflon®)	FPM (Viton®)
Acetaldehyde	A1	D	A	A	D
Acetamide	A1	C	A	A	B
Vinyl acetate	B1	A2	B2	A2	A1
Acetylene	A1	A	A	A	A
Vinegar	A	B	A	A	A
Acetone	A	D	A	A	D
Fatty acids	A	A	D	A	A

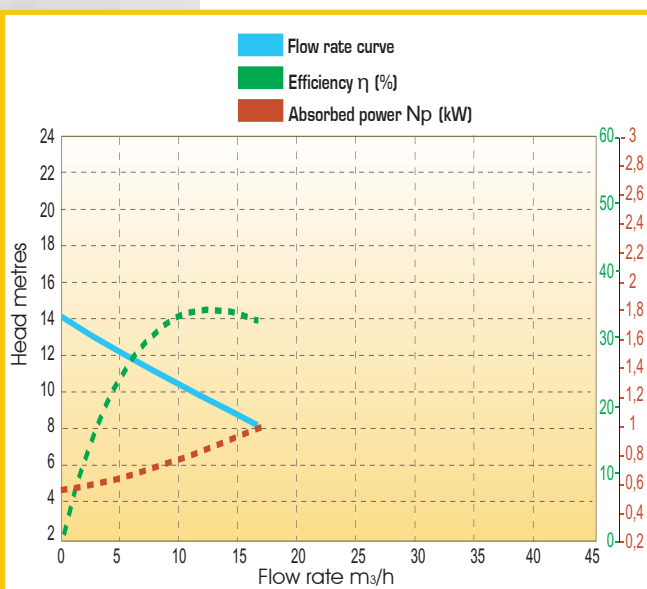
CHEMICAL COMPATIBILITY

- 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.

IM 95	P	V	0800	N
PUMP MODEL	PUMP MATERIAL	O RING	COLUMN LENGTH	TYPE OF MOTOR
IM 95 = IM 95 IM 110 = IM 110 IM 120 = IM 120 IM 130 = IM 130 IM 140 = IM 140 IM 150 = IM 150 IM 155 = IM 155 IM 160 = IM 160	P = polypropylene F = PVDF	D = EPDM V = Viton	0500 = 500 mm 0800 = 800 mm 1000 = 1000 mm 1250 = 1250 mm	*N = three-phase motor M = single-phase motor A = ATEX motor

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



Intake		G 2" m	
Delivery connection		G 1 1/2" m	
Max. flow rate *		16 m ³ /h	
Max. head *		14 m	
		IM 95 - PP	IM 95 - PVDF
Max. temperature		60°C	90°C
Column lenght and	500	27 Kg	28 Kg
weight including motor	800	31 Kg	32 Kg
	1000	34 Kg	35 Kg
	1250	36 Kg	37 Kg
Construction materials		PP - PVDF	
Motor power		Kw 0,75	HP 1
Motor IP 55 - 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.

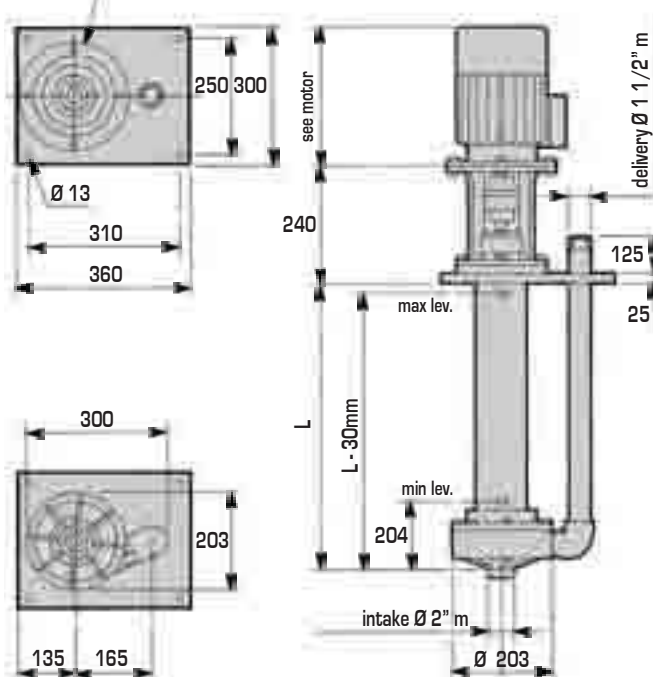
L = available 500-800-1000-1250 mm; for special sizes refer to Debern

f = female

m = male

Adaptor flange IM - B5 oppure IM - 3001

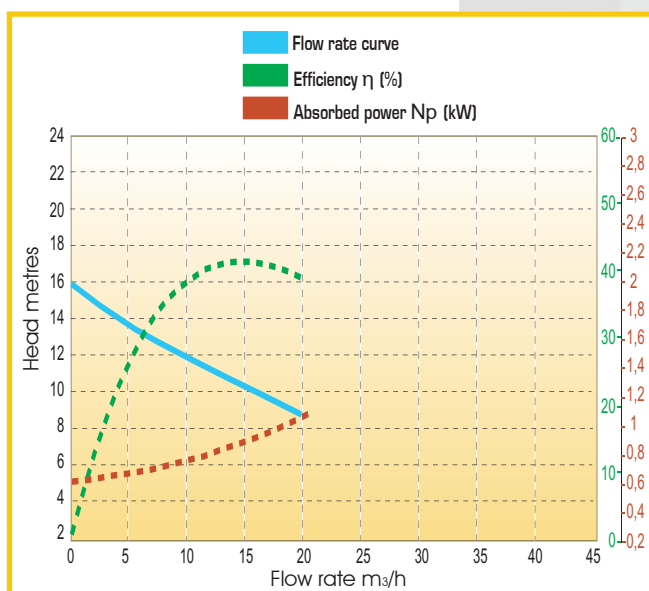
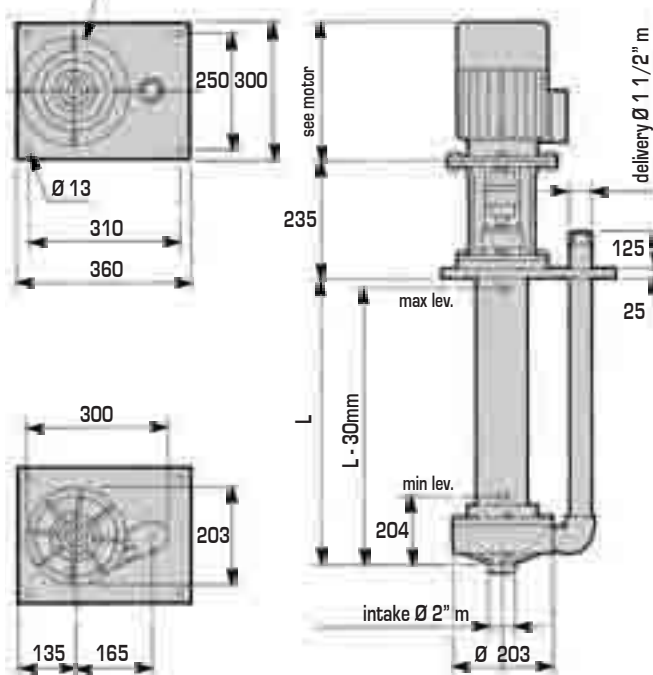
Shaft hole DIN748 part 3 or IEC - 72



DIMENSIONS



Adaptor flange IM - B5 oppure IM - 3001
Shaft hole DIN748 part 3 or IEC - 72

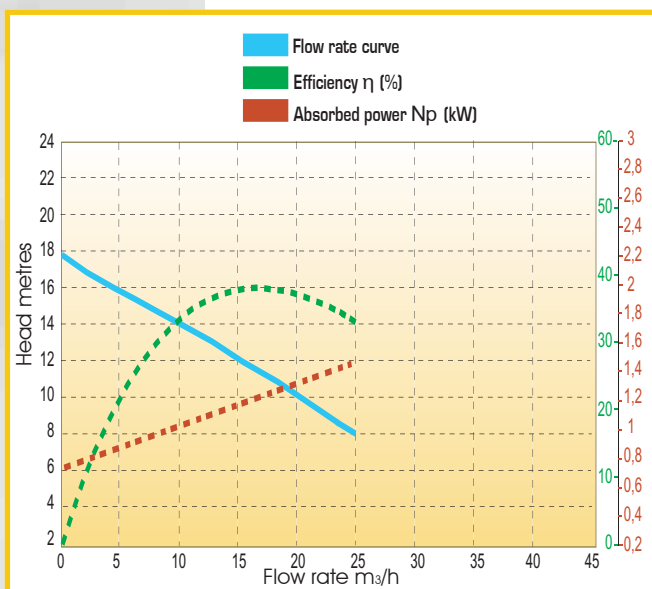


Intake		G 2" m	
Delivery connection		G 1 1/2" m	
Max. flow rate*		20 m ³ /h	
Max. head*		16 m	
Max. temperature		IM 110 - PP 60°C	IM 110 - PVDF 90°C
Column length and	500	28 Kg	29 Kg
weight including motor	800	32 Kg	33 Kg
	1000	35 Kg	36 Kg
	1250	37 Kg	38 Kg
Construction materials		PP - PVDF	
Motor power		Kw 1,1	HP 1,5
Motor IP 55 - 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

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

TECHNICAL DATA.. PERFORMANCE ...

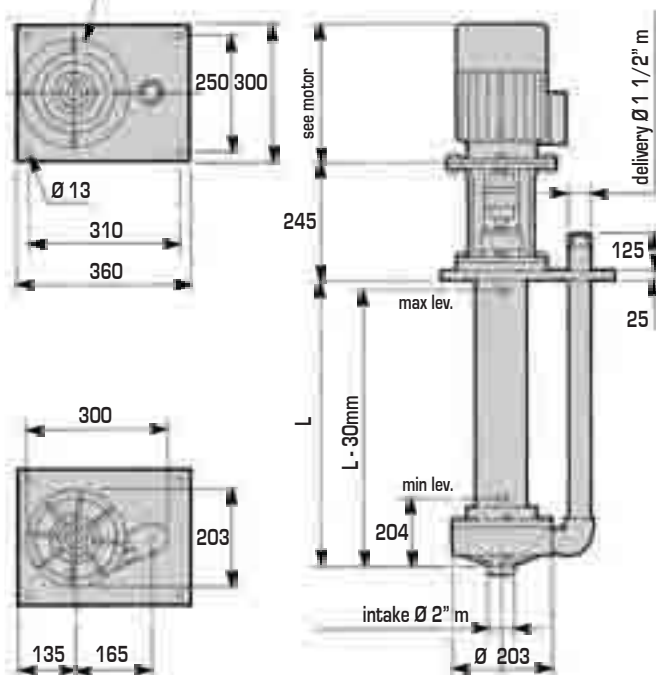


Intake		G 2" m	
Delivery connection		G 1 1/2" m	
Max. flow rate*		25 m³/h	
Max. head*		18 m	
		IM 120 - PP	IM 120 - PVDF
Max. temperature		60°C	90°C
Column length and	500	32 Kg	33 Kg
weight including motor	800	36 Kg	37 Kg
	1000	39 Kg	40 Kg
	1250	41 Kg	42 Kg
Construction materials		PP - PVDF	
Motor power		Kw 1,5	HP 2
Motor IP 55 - 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.

m = male

Shaft hole DIN748 part 3 or IEC - 72

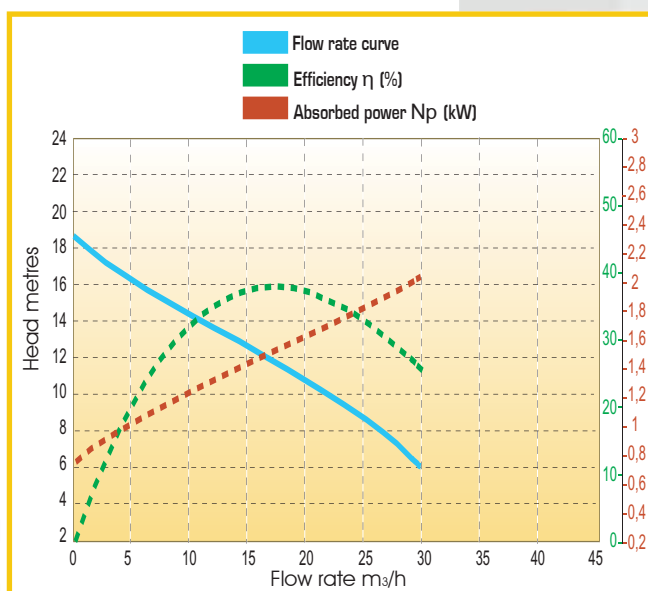
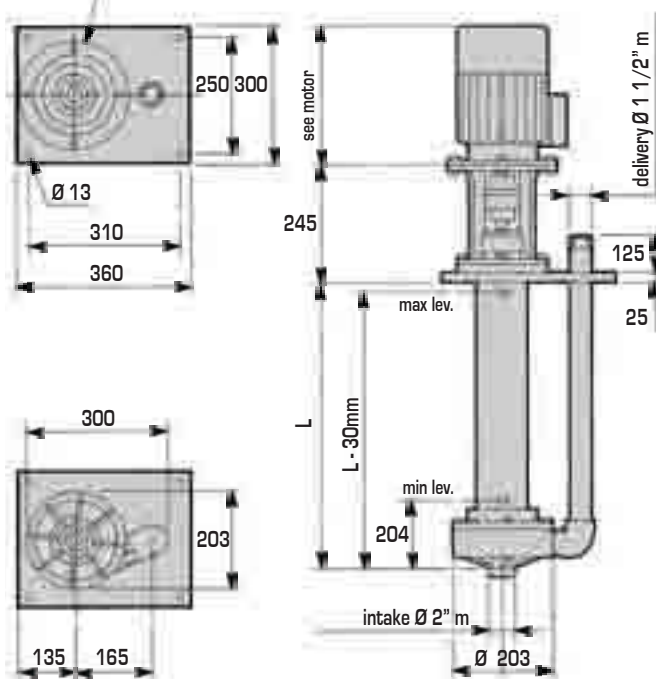


DIMENSIONS

DIMENSIONS



Adaptor flange IM - B5 oppure IM - 3001
Shaft hole DIN748 part 3 or IEC - 72

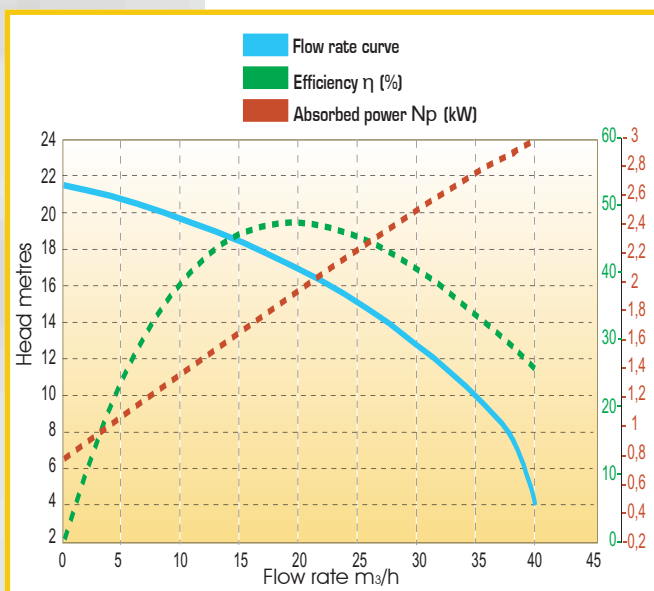


Intake		G 2" m	
Delivery connection		G 1 1/2" m	
Max. flow rate *		30 m³/h	
Max. head *		19 m	
		IM 130 - PP 60°C	IM 130 - PVDF 90°C
Column length and	500	35 Kg	36 Kg
weight including motor	800	39 Kg	40 Kg
	1000	42 Kg	43 Kg
	1250	44 Kg	45 Kg
Construction materials		PP - PVDF	
Motor power		Kw 2,2	HP 3
Motor IP 55 - 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.. PERFORMANCE ...

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



Intake		G 2" m	
Delivery connection		G 1 1/2" m	
Max. flow rate *		40 m ³ /h	
Max. head *		21 m	
Max. temperature		IM 140 - PP 60°C	IM 140 - PVDF 90°C
Column length and weight including motor	500	49 Kg	50 Kg
	800	53 Kg	54 Kg
	1000	56 Kg	57 Kg
	1250	58 Kg	59 Kg
Construction materials		PP - PVDF	
Motor power		Kw 3	HP 4
Motor IP 55 - 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.



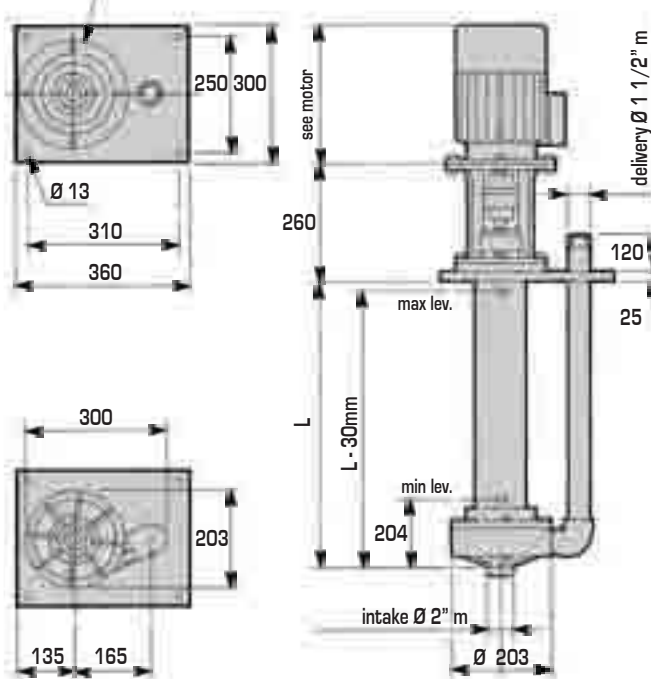
L = available 500-800-1000-1250 mm; for special sizes refer to Debern

f = female

m = male

Adaptor flange IM - B5 oppure IM - 3001

Shaft hole DIN748 part 3 or IEC - 72



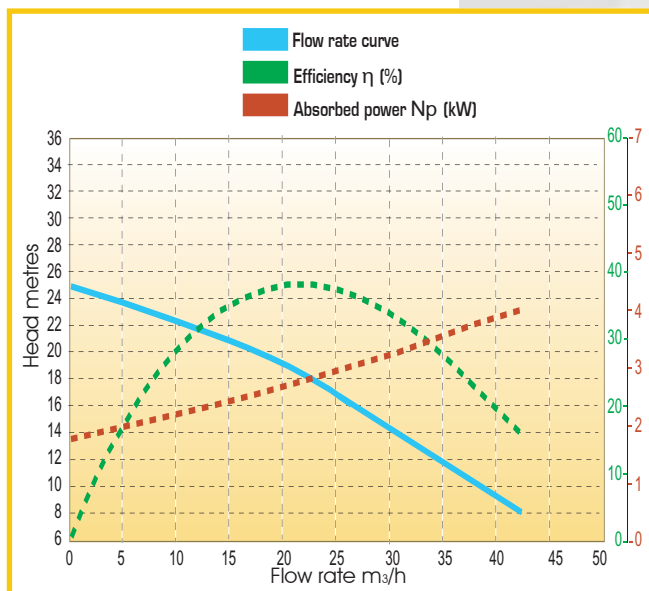
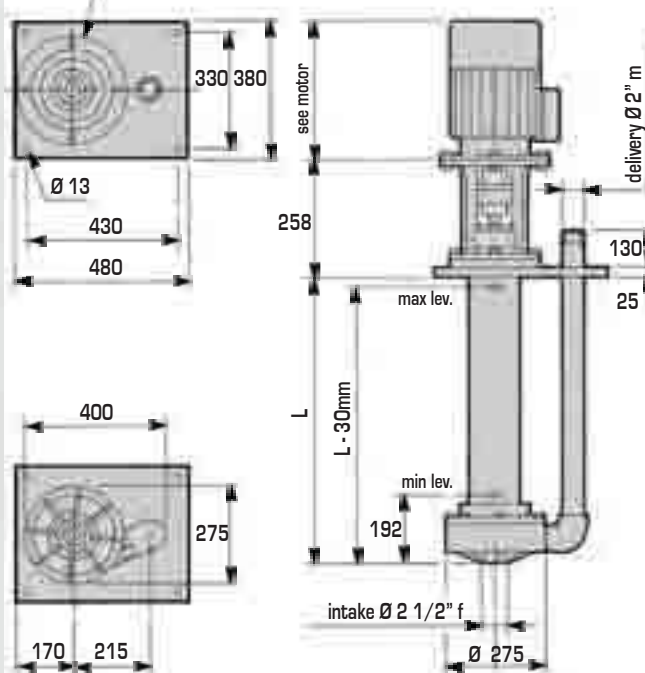
delivery connection 2" m

IM 150



L = available 500-800-1000-1250 mm; for special sizes refer to Debem
f = female
m = male

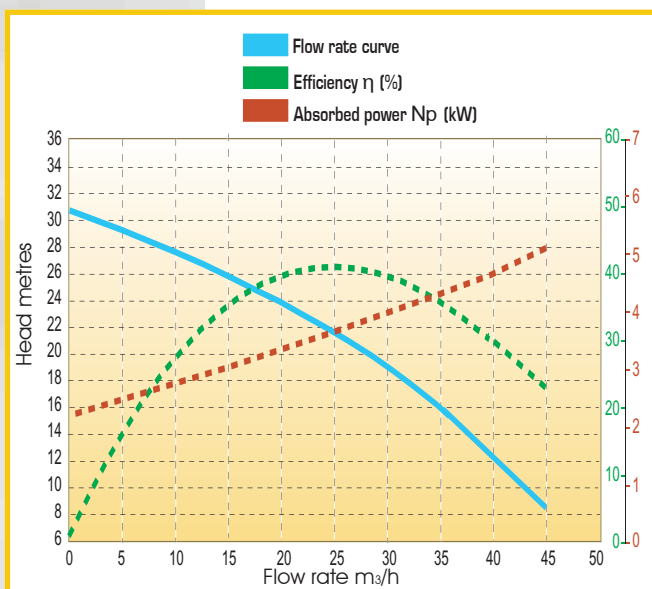
Adaptor flange IM - B5 oppure IM - 3001
Shaft hole DIN748 part 3 or IEC - 72



Intake		G 2" 1/2 f	
Delivery connection		G 2" m	
Max. flow rate *		42 m³/h	
Max. head *		25 m	
Max. temperature		IM 150 - PP 60°C	IM 150 - PVDF 90°C
Column length and weight including motor	500	64 Kg	66 Kg
	800	67 Kg	69 Kg
	1000	69 Kg	71 Kg
	1250	72 Kg	73 Kg
Construction materials		PP - PVDF	
Motor power		Kw 4	HP 5,5
Motor IP 55 - 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.

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

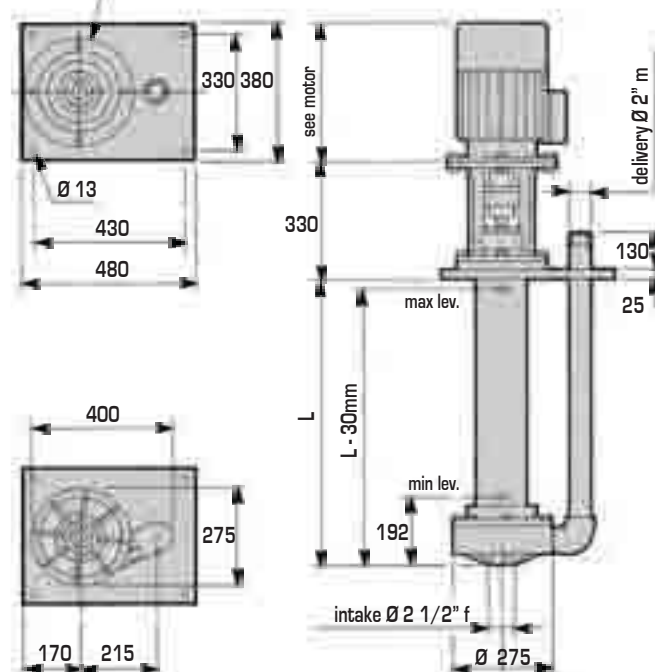


Intake		G 2" 1/2 f	
Delivery connection		G 2" m	
Max. flow rate*		45 m³/h	
Max. head*		31 m	
Max. temperature		IM 155 - PP 60°C	IM 155 - PVDF 90°C
Column length and weight including motor	500	82 Kg	84 Kg
	800	85 Kg	87 Kg
	1000	87 Kg	89 Kg
	1250	90 Kg	92 Kg
Construction materials		PP - PVDF	
Motor power		Kw 5,5	HP 7,5
Motor IP 55 - 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.

L = available 500-800-1000-1250 mm; for special sizes refer to Debm
f = female
m = male

Adaptor flange IM - B5 oppure IM - 3001
Shaft hole DIN748 part 3 or IEC - 72



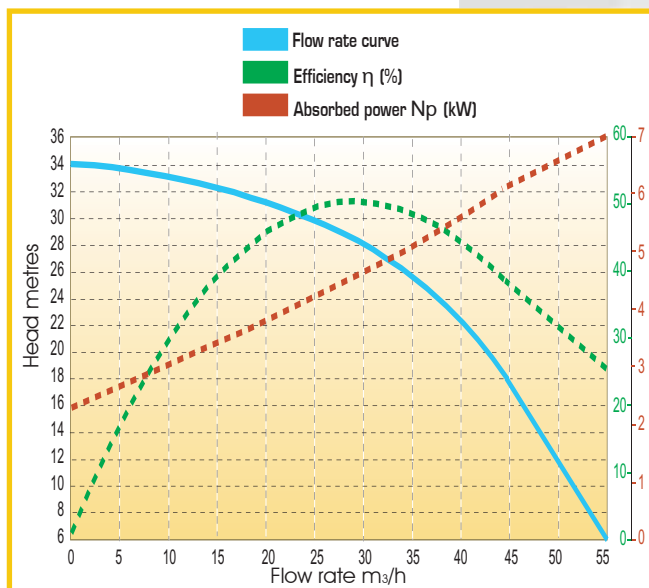
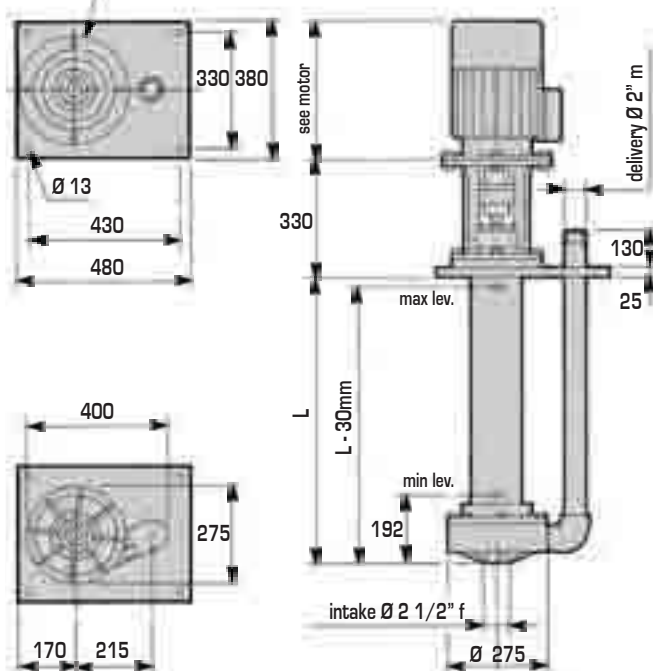
delivery connection 2"

IM 160



L = available 500-800-1000-1250 mm; for special sizes refer to Debem
f = female
m = male

Adaptor flange IM - B5 oppure IM - 3001
Shaft hole DIN748 part 3 or IEC - 72



Intake		G 2" 1/2 f	
Delivery connection		G 2" m	
Max. flow rate *		55 m³/h	
Max. head *		34 m	
Max. temperature		IM 160 - PP 60°C	IM 160 - PVDF 90°C
Column length and weight including motor	500	92 Kg	94 Kg
	800	95 Kg	97 Kg
	1000	97 Kg	99 Kg
	1250	100 Kg	102 Kg
Construction materials		PP - PVDF	
Motor power		Kw 7,5	HP 10
Motor IP 55 - 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.

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