DEBEM
PUMP YOUR NEEDS

Industrial Pumps

General catalogue

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Tradition and innovation

Debem has been leader in the fluid handling sector since 1982

DEBEM'S DNA

Quality

Innovation

Cohesion

Customer first

40 years of history

1982 — **Founfromtion**
Birth of Debem with the first headquarters in Via Modena in Busto Arsizio

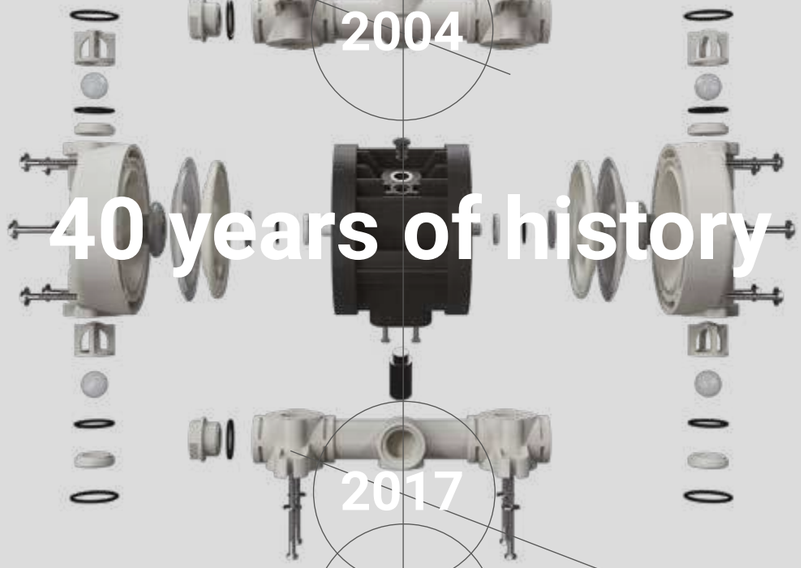
1985 — **First project**
First design of pneumatic double diaphragm pump (AODD) with crystalline-free PTFE diaphragms

1987 — **First patent**
First patent - BOXER 0

1998 — **First Midgetbox**
The first MIDGETBOX pump, the smallest and most compact on the market

2000 — **Patented pneumatic system**
Patent of the new coaxial pneumatic exchanger

2004 — **Current location**



2017 — **FullFlow**
Market launch of the pump with horizontal clapper circuit (FullFlow)

2019 — **Rebranding**

2020 — **Debem Deutschland**
Debem Deutschland Gmbh in Holzkirchen

2021 — **Hygienic Line**
New range pumps for food and pharma industry: Debem Hygienic Solution

2022 — **Yamaha**
Partnership with Yamaha Racing

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Certifications

ATEX
All BOXER pneumatic pumps comply with the Community Directives for the free circulation of goods applicable to them. They are also designed to operate in Atex explosion risk environments (ATmosphères and Explosives) for use in Zone 2 – Zone 22 (stanfromrd version), Zone M2 and Zone 1 – Zone 21.1.

IECEX
BOXER AODD Pneumatic pumps have IECEx Certification and are produced in compliance with the Ex stanfromrds of products intended for installation in areas at risk of explosion.

ISO 9001
Debem is ISO 9001 certified –the most widespread and famous quality procedure as a funfrommental tool for achieving the group's objectives and continuous commitment aimed at proposing products characterized by an excellent quality-priceratio, studying customized solutions, guaranteeing reliability and punctuality, offering a service that meets customer expectations.

American Bureau of Shipping
Debem produces AODD pumps, for applications in the naval sector, in accorfromnce with the A.B.S. rules. - American Bureau of Shipping.

Lean thinking

Efficiency optimization

Our Lean Thinking is a path that makes our company increasingly oriented towards making processes lean and reducing waste, while maintaining the quality of the products unchanged. The focus is always the same: Customer First.

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Products

Our products

CUBIC

BOXER

REMOTE CONTROL

FULLFLOW

DM HORIZONTAL MAGNETIC DRIVE

KM HORIZONTAL MAGNETIC DRIVE

MB HORIZONTAL WITH MECHANICAL SEALS

IM VERTICAL CENTRIFUGAL PUMPS

Air-operated double diaphragm pumps

Our air-operated diaphragm pumps are sturdy and powerful, self-priming (dry negative vacuum), also in demanding conditions. They can transfer liquids with high viscosity and/or with suspended solids.

Centrifugal pumps

Horizontal, vertical or magnetic driven plastic centrifugal pumps.

EQUAFLUX

Pulsation frommpers

Automatic diaphragm pulsation frommpers. Compressed air driven devices that are installed on the delivery side of air-operated pumps. They minimise the pulsations of the fluid and the consequent vibrations, or water hammer, to protect the process equipment.

TR PUMPS

Drum pumps

Pneumatic or electrical motor driven drum pumps. Their portable design makes them ideally suited to quickly transfer clean corrosive liquids from drums.

Products

Main application sectors

- Chemical Industry
- Galvanic Industry
- Water and Sludge Treatment
- Gold processing Industry
- Textile and Leather Industry
- Paint Industry
- Graphic Industry
- Automotive and Naval Industry
- Mechanical and Metallurgic Industry
- Ceramic, Stolne, Marble, Glass and Mining Industry
- Production and storage of Biodiesel
- Oil & Gas
- Packaging, Glue, Paper and Paper Mills Industry

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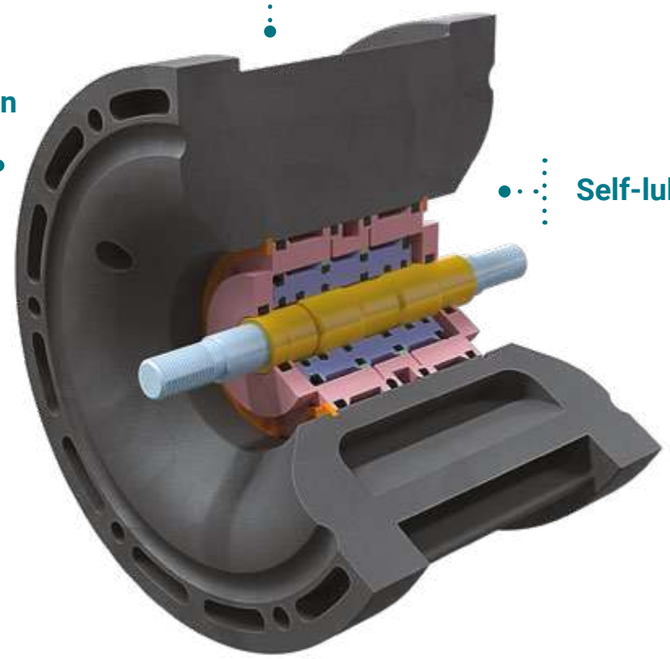
Patented exchanger

Amongst the lowest air consuptions on the market

Patented coaxial system

Easy installation and repair

Stall-prevention system



Self-lubricated system

No metal parts (only the shaft)

Long-life device: more than 50,000,000 cycles

Debem special diaphragms

Long Life Diaphragms

A modern design process, destructing testing, as well as an in depth analysis of the results have allowed Debem to develop the new generation LONG LIFE diaphragms.
Thanks to their profile and construction shape, these products offer a larger working surface and improved redistribution of the load, reducing the stress and yield of the material to a minimum.

NBR

EPDM

HYTREL®

SANTOPRENE®

PTFE

PTFE CONDUCTIVE

RUBBER DIAPHRAGMS

They are produced with rubber mixtures and special additives that improve their chemical characteristics as well as their mechanical flexural and resistance characteristics.
These diaphragms have a nylon cloth reinforcement that improves stress distribution.

NBR
Inexpensive and particularly suited for petroleum based liquids, oil and abrasive fluids.

EPDM
Good resistance to acids, alkaline and abrasion as well as a good flexibility also at low temperatures.

THERMOPLASTIC DIAPHRAGMS

Made with thermoplastic polymers, these diaphragms provide a high level of mechanical resistance and stress distribution.

HYTREL®
Exceptional toughness and springback: high resistance to creep, impact and fatigue under bending: excellent flexibility at low temperatures, also retaining its properties to a good extent at high temperatures. It is also resistant to the attack of many industrial chemicals, oils and solvents.

SANTOPRENE®
Excellent resistance to acid and alkaline fluids, high flexural resistance and good abrasion resistance.

PTFE DIAPHRAGMS

This material is known for its considerable resistance to temperature and chemical and corrosive agents. Diaphragms in Debem PTFE undergo a double heat treatment to increase their elasticity and service life. A sample of each batch is subject to destructive tests to check their compliance with the technical requirements.
This diaphragm can be installed combined with one of the ones examined earlier, in order to increase the resistance to the corrosive chemical agents and temperature of the fluid.

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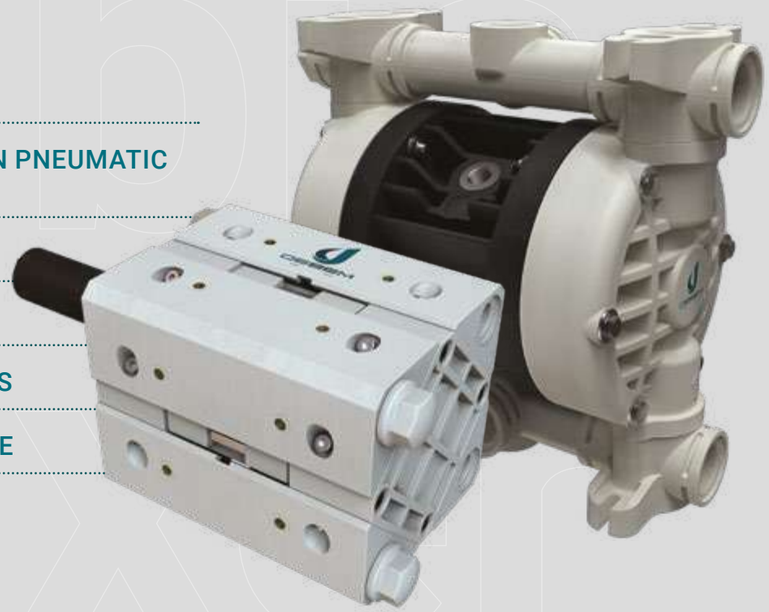
Line introduction
Cubic // Boxer

AODD pumps of the Cubic and Boxer series are characterized by high performance and great versatility. The high power and their mechanical resistance make them suitable for handling fluids with high viscosity, even with solid parts in suspension. The anti-stall pneumatic circuit guarantees safe operation and does not require lubricated air. The ability to self-prime dry from significant dra ft heights, combined with the possibility of adjusting the speed without pressure losses and the possibility of running empty without suffering frommage, have given these pumps versatility of use. The vast choice of composition materials allows you to determine the most suitable configuration for the fluid to be moved. Their construction pri nciple makes them particularly suitable even for heavy-duty applications with high humidity.

Main advantages

- PATENTED STALL PREVENTION PNEUMATIC CIRCUIT
- LONG LIFE DIAPHRAGMS
- HIGH ENERGY EFFICIENCY
- CUSTOMIZABLE CONNECTIONS
- EASY AND FAST MAINTENANCE



CODING BOXER FAMILY CODES

ex. IB07-P-HTTPV--
Internal distributor, Boxer 07, PP casing, Hytrel® air side diaphragm, PTFE product side diaphragm, AISI 316 L balls, PP ball seats, EPDM. O-ring.

Pump Model	Pump Body	Membrane Air Side	Membrane Fliud Side	Balls	Ball Seats	O-Ring	Manifold	Version
IB07 - Boxer 07 IB15 - Boxer 15 IMICR - Micr-boxer IB35 - Boxer 35 IB50 - Boxer 50 IMIN - Miniboxer IB81 - Boxer 81 IB90 - Boxer 90 IB100 - Boxer 100 IB150 - Boxer 150 IB251 - Boxer 251 IB252 - Boxer 252 IB522 - Boxer 522 IB502 - Boxer 502 IB503 - Boxer 503	P - PP PC - PP+CF FC - PVDF+CF A - AISI 316 (L) AL - ALU	N - NBR D - EPDM H - Hytrel® M - Santoprene®	T - PTFE	T - PTFE A - AISI 316 L D - EPDM N - NBR	P - Polypropylene F - PVDF A - AISI 316 L I - PE-UHMW R - PPS L - Aluminium	D - EPDM V - Viton® N - NBR T - PTFE	X* 3* Y* W* K*	C* Z*

Example table, for table with complete codes contact Debem sales department.

Cubic / Boxer RC version
RC Remote Control

Debem's double diaphragm pumps of the RC line have been designed for all the needs of controlling the pump remotely or directly from the machinery on which the pump is installed, ex. during product measurements or dosages. The operation of RC pumps always occurs through compressed air. All the pumps in the RC line are ATEX compliant, in Polypropylene or PVDF for the plastic version or in Aluminum or AISI 316 L for the metal versions. The properties of the hydraulic part remain the same as the Cubic and Boxer series pumps.

CODING CUBIC FAMILY CODES

Example table, for table with complete codes contact Debem sales department.
ex. ICU15P-NTTPV- - Internal distributor, Cubic 15, PP casing, NBR air side diaphragm, PTFE product side diaphragm, PTFE balls, PP ball seats, Viton® o-ring.

Pump Model	Pump Body	Membrane Air Side	Membrane Fliud Side	Balls	Ball Seats	O-Ring	Manifold	Version
MID - Midgetbox CU15 - Cubic 15	P - Polypropylene EC - ECTFE (Halar®) PC - PP+CF	N - NBR	T - PTFE	G - Pyrex®[1] A - AISI 316 L T - PTFE	R - PPS K - PEEK[1] P - PP E - ECTFE A - AISI 316 L I - PE-UHMW	D - EPDM V - Viton® N - NBR T - PTFE	X *Split manifold* Y *NPT thread*	C*

1) Only for Midgetbox

*C CONDUCT version for ATEX ZONE 1

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Optional

Aluminium cores

Boxer series pumps, irrespective of the material of construction of casing and manifolds, can be supplied with an aluminium control unit. Our aluminium cores are die-cast and manufactured from material of certified Italian origin. The aluminium core conducts heat and electricity excellently. The high conductivity of aluminium makes it a good electrical conductor, excellent for installation on conductive pumps for ATEX ZONE 1. The aluminium core gives the metal pumps an 88% recyclability rate.

Cubic Midgetbox

Specifications and types

Zone 2 – Zone 22	II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21	II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21	II 2G Ex h IIC T4 Gb (**)

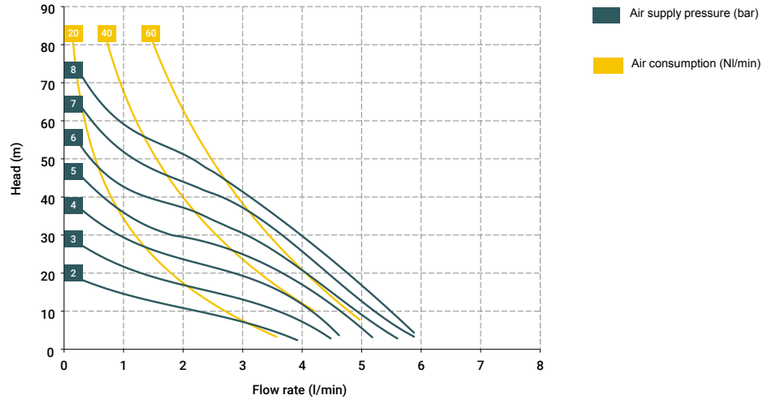
(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Available in the Remote Control version

Suction / delivery connections	1/4” f BSPP (*)
Air fitting	1/8” f BSPP
Max. flow rate*	6 l/min
Max. supply air pressur	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	3 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	0 mm
Noise	60 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL - PP (GF/CF)	Midgetbox
Maximum dimensions	
Height	75 mm
Width	122 mm
Depth	60 mm
Construction mat. (casing and manifolds) and net weight	
POLYPROPYLENE (with glass additive)	1,52 Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	1,52 Kg
	Temp. 3°C min.
	65°C max

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Cubic 15

Any colour variations in our plastic products are due to the special mixtures of the raw materials used. The use of high fillers, glass and long-fibre carbon, provides a distinctive aesthetic that in no way de-tracts from the quality of the product, but rather emphasises its high technical content, to the benefit of performance.

Specifications and types

Ex

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21 II 2G Ex h IIC T4 Gb (**)

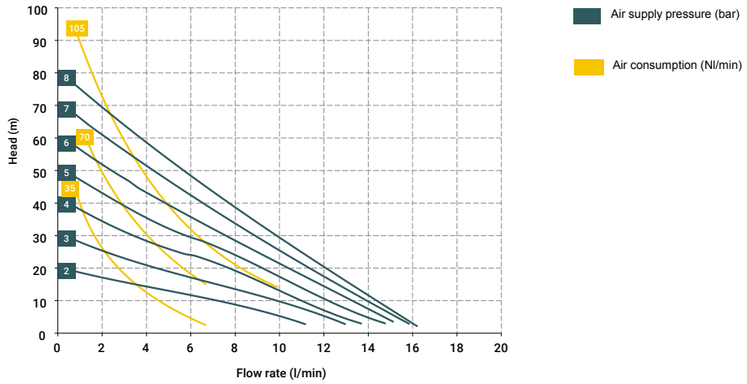
(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Disponibile anche nella versione Controllo Remoto

Suction / delivery connections	3/8" f BSPP (*)
Air fitting	3/8" f BSPP
Max. flow rate*	17 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	3 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	0 mm
Noise	65 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL (GF/CF)	Cubic 15
Maximum dimensions	
Height	105 mm
Width	201 mm
Depth	105 mm
Construction mat. (casing and manifolds) and net weight	
POLYPROPYLENE (with glass additive)	1,35 Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	1,35 Kg
	Temp. 3°C min.
	65°C max

PLASTIC MATERIAL PP (GF/CF)	Cubic 15
Maximum dimensions	
Height	105 mm
Width	201 mm
Depth	105 mm
Construction mat. (casing and manifolds) and net weight	
ECTFE	1,6 Kg
	Temp. 3°C min.
	95°C max

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Boxer 7

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21 II 2G Ex h IIC T4 Gb (**)

(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Zone M2 I M2 Ex h I Mb X (*)

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

IECEx Ex h IIB T4 Gb e Ex h IIIB T135°C Db

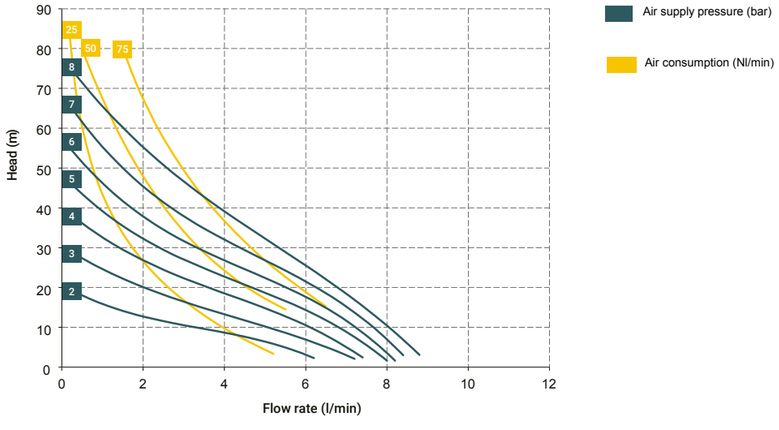
(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

Available in the Remote Control version

Suction / delivery connections	1/4" f BSPP(*)
Air fitting	1/8" f BSPP
Max. flow rate*	9 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	4 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	0,5 mm
Noise	65 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL - PP (GF/CF)	Boxer 7
Maximum dimensions	
Height	120 mm
Width	138 mm
Depth	69 mm
Construction mat. (casing and manifolds) and net weight	
POLYPROPYLENE (with glass additive)	0,7 Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	0,7 Kg
	Temp. 3°C min.
	65°C max

PLASTIC MATERIAL - PVDF	Boxer 7
Maximum dimensions	
Height	120 mm
Width	138 mm
Depth	70 mm
Construction mat. (casing and manifolds) and net weight	
PVDF (with carbon additive)	0,9 Kg
	Temp. 3°C min.
	95°C max

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Boxer 15

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21 II 2G Ex h IIC T4 Gb (**)

(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Zone M2 I M2 Ex h I Mb X (*)

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

IECEx Ex h IIB T4 Gb e Ex h IIIB T135°C Db

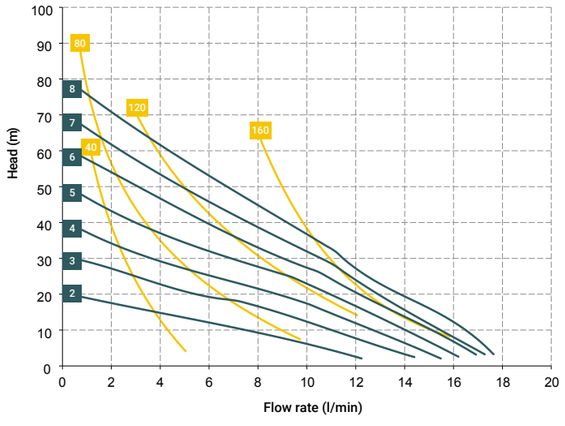
(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

Available in the Remote Control version

Suction / delivery connections Boxer 15	3/8" f BSPP (*)
Suction / delivery connections FFrom Boxer 15	BS 4825
Air fitting	3/8" f BSPP
Max. flow rate*	17 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	3 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	0,5 mm
Noise	65 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL PP (GF/CF) - PVDF	Boxer 15
Maximum dimensions	
Height	149 mm
Width	148 mm
Depth	80 mm
Construction mat. (casing and manifolds) and net weight	
POLYPROPYLENE (with glass additive)	1,1 Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	1,1 Kg
	Temp. 3°C min.
	65°C max
PVDF (with carbon additive)	1,4 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - ALU	Boxer 15
Maximum dimensions	
Height	151 mm
Width	148 mm
Depth	80 mm
Construction mat. (casing and manifolds) and net weight	
ALU	1,9 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 L	Boxer 15
Maximum dimensions	
Height	141 mm
Width	153 mm
Depth	80 mm
Construction mat. (casing and manifolds) and net weight	
ALU	2,4 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 L	FDA Boxer 15
Maximum dimensions	
Height	162 mm
Width	160 mm
Depth	80 mm
Construction mat. (casing and manifolds) and net weight	
ALU	1,9 Kg
	Temp. 3°C min.
	95°C max
Roughness	2,7 µm

Microboxer

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21 II 2G Ex h IIC T4 Gb (**)

(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Zone M2 I M2 Ex h I Mb X (*)

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

IECEx Ex h IIB T4 Gb e Ex h IIIB T135°C Db

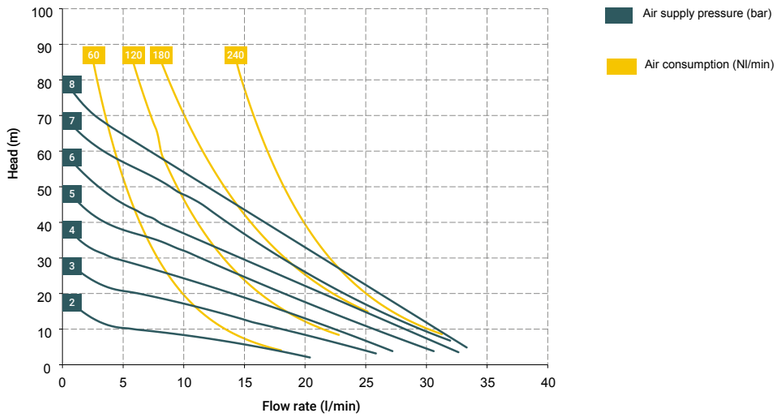
(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

Available in the Remote Control version
Available with Aluminium cores

Suction / delivery connections Microboxer	1/2" f BSPP (*)
Suction / delivery connections FFrom Boxer	BS 4825
Air fitting	1/4" f BSPP
Max. flow rate*	35 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	4 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	2 mm
Noise	65 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL (GF/CF) - PVDF	Microboxer
Maximum dimensions	
Height	168 mm
Width	168 mm
Depth	120 mm
Construction mat. (casing and manifolds) and net weight	
POLYPROPYLENE (with glass additive)	1,6 Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	1,6 Kg
	Temp. 3°C min.
	65°C max
PVDF (with carbon additive)	1,9 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - ALU	Microboxer
Maximum dimensions	
Height	172 mm
Width	164 mm
Depth	120 mm
Construction mat. (casing and manifolds) and net weight	
ALU	2 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 L	Microboxer
Maximum dimensions	
Height	171 mm
Width	177 mm
Depth	120 mm
Construction mat. (casing and manifolds) and net weight	
AISI 316 L	3,8 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 L	FDA Boxer 30
Maximum dimensions	
Height	192 mm
Width	210 mm
Depth	80 mm
Construction mat. (casing and manifolds) and net weight	
AISI 316 L	3,8 Kg
	Temp. 3°C min.
	95°C max
Roughness	2,7 µm

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Boxer 50 Miniboxer

Specifications and types

Ex

Zone 2 – Zone 22	II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21	II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21	II 2G Ex h IIC T4 Gb (**)

(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Zone M2	I M2 Ex h I Mb X (*)

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

IECEx	Ex h IIB T4 Gb e Ex h IIIB T135°C Db

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

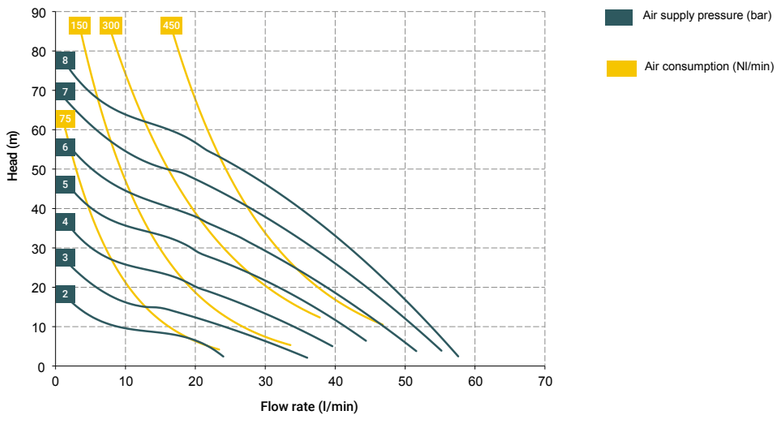
Available in the Remote Control version

Available with Aluminium cores

Suction / delivery connections Boxer 50 / Miniboxer	1/2" f BSPP (*)
Suction / delivery connections FFrom Boxer 50	BS 4825
Air fitting	3/8"f BSPP
Max. flow rate*	60 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	4 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	4 mm
Noise	70 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL (GF/CF) - PVDF	Boxer 50
Maximum dimensions	
Height	240 mm
Width	246 mm
Depth	153 mm
Construction mat. (casing and manifolds) and net weight	
POLYPROPYLENE (with glass additive)	3,6Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	3,6 Kg
	Temp. 3°C min.
	65°C max
PVDF (with carbon additive)	4,2 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - ALU	Boxer 50
Maximum dimensions	
Height	234 mm
Width	241 mm
Depth	153 mm
Construction mat. (casing and manifolds) and net weight	
PVDF (with carbon additive)	4 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 L	FDA Boxer 50
Maximum dimensions	
Height	260 mm
Width	262 mm
Depth	152 mm
Construction mat. (casing and manifolds) and net weight	
AISI 316 L	6 Kg
	Temp. 3°C min.
	95°C max
Roughness	2,7 µm

METAL MATERIAL - AISI 316 L	Miniboxer
Maximum dimensions	
Height	232 mm
Width	232 mm
Depth	152 mm
Construction mat. (casing and manifolds) and net weight	
AISI 316 L	6,5 Kg
	Temp. 3°C min.
	95°C max

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Boxer 81

Boxer 90

Specifications and types

Ex

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21 II 2G Ex h IIC T4 Gb (**)

(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Zone M2 I M2 Ex h I Mb X (*)

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

IECEx Ex h IIB T4 Gb e Ex h IIIB T135°C Db

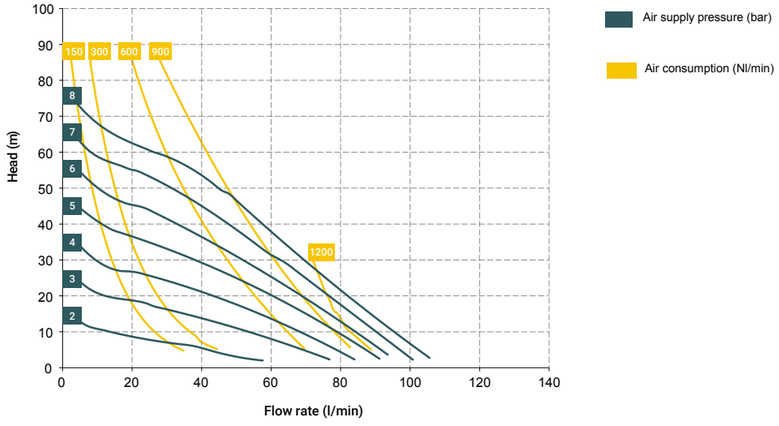
(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

Available in the Remote Control version
Available with Aluminium cores

Suction / delivery connections Boxer 81 / 90	1” f BSPP (*)
Suction / delivery connections FFrom Boxer 81	BS 4825
Air fitting	3/8”f BSPP
Max. flow rate*	110 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	4 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	4 mm
Noise	70 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL PP (GF/CF) - PVDF	Boxer 81
Maximum dimensions	
Height	274 mm
Width	308 mm
Depth	170 mm
Construction mat. (casing and manifolds) and net weight	
POLYPROPYLENE (with glass additive)	5 Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	5 Kg
	Temp. 3°C min.
	65°C max
PVDF (with carbon additive)	6,5 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316	Boxer 81
Maximum dimensions	
Height	275 mm
Width	305 mm
Depth	170 mm
Construction mat. (casing and manifolds) and net weight	
AISI 316	10,6 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 L	FDA Boxer 81
Maximum dimensions	
Height	305 mm
Width	315 mm
Depth	170 mm
Construction mat. (casing and manifolds) and net weight	
AISI 316 L	10,6 Kg
	Temp. 3°C min.
	95°C max
Roughness	2,7 µm

METAL MATERIAL - ALU	Boxer 90
Maximum dimensions	
Height	291 mm
Width	293 mm
Depth	170 mm
Construction mat. (casing and manifolds) and net weight	
ALU	7 Kg
	Temp. 3°C min.
	95°C max

#unboxingdebem

Boxer 100

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21 II 2G Ex h IIC T4 Gb (**)

(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Zone M2 I M2 Ex h I Mb X (*)

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

IECEx Ex h IIB T4 Gb e Ex h IIIB T135°C Db

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

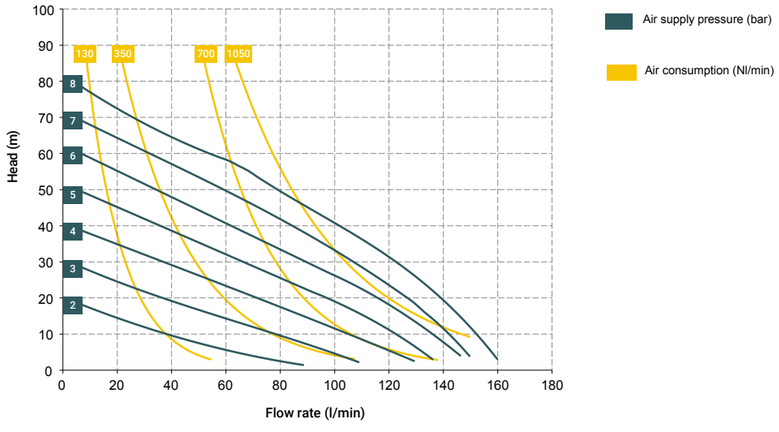
Available in the Remote Control version

Available with Aluminium cores

Suction / delivery connections Boxer 100	1” f BSPP (*)
Suction / delivery connections FFrom Boxer 100	BS 4825
Air fitting	3/8”f BSPP
Max. flow rate*	160 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	4 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	4 mm
Noise	75 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL (GF/CF) - PVDF	Boxer 100
Maximum dimensions	
Height	325 mm
Width	329 mm
Depth	202 mm
Construction mat. (casing and manifolds) and net weight	
POLYPROPYLENE (with glass additive)	7,5 Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	7,5 Kg
	Temp. 3°C min.
	65°C max
PVDF (with carbon additive)	8,5 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - ALU	Boxer 100
Maximum dimensions	
Height	324 mm
Width	315 mm
Depth	202 mm
Construction mat. (casing and manifolds) and net weight	
ALU	8,2 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316	Boxer 100
Maximum dimensions	
Height	327 mm
Width	308 mm
Depth	202 mm
Construction mat. (casing and manifolds) and net weight	
AISI 316	11 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316	FDA Boxer 100
Maximum dimensions	
Height	358 mm
Width	342 mm
Depth	202 mm
Construction mat. (casing and manifolds) and net weight	
AISI 316	11,7 Kg
	Temp. 3°C min.
	95°C max
Roughness	2,7 µm

#unboxingdebem

Boxer 150

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21 II 2G Ex h IIC T4 Gb (**)

(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Zone M2 I M2 Ex h I Mb X (*)

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

IECEx Ex h IIB T4 Gb e Ex h IIIB T135°C Db

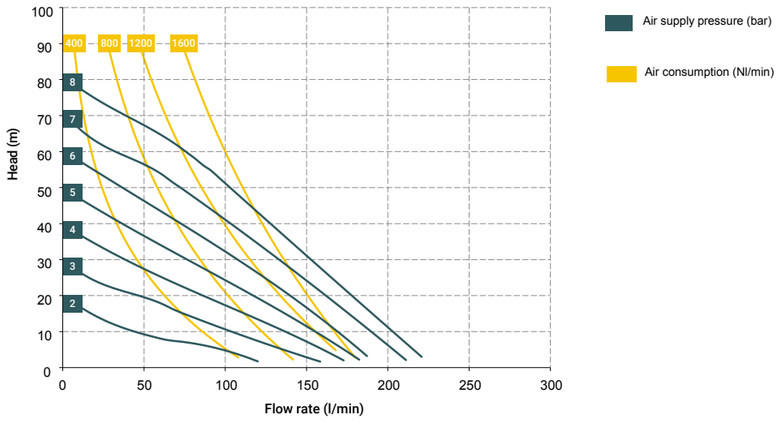
(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

Available with Aluminium cores

Suction / delivery connections Boxer 150	1”1/4 f BSPP (*)
Suction / delivery connections FFrom Boxer 150	BS 1”1/4 Clamp (ISO)
Air fitting	1/2” f BSPP
Max. flow rate*	220 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	4 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	5 mm
Noise	75 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL PP (GF/CF) - PVDF	Boxer 150
Maximum dimensions	
Height	386 mm
Width	399 mm
Depth	220 mm
Construction mat. (casing and manifolds) and net weight	
POLYPROPYLENE (with glass addi-tive)	12 Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	12 Kg
	Temp. 3°C min.
	65°C max
PVDF (with carbon additive)	14 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - ALU	Boxer 150
Maximum dimensions	
Height	385 mm
Width	394 mm
Depth	220 mm
Construction mat. (casing and manifolds) and net weight	
ALU	16 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316	Boxer 150
Maximum dimensions	
Height	390 mm
Width	388 mm
Depth	220 mm
Construction mat. (casing and manifolds) and net weight	
AISI 316	21 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316	FDA Boxer 150
Maximum dimensions	
Height	404 mm
Width	450 mm
Depth	220 mm
Construction mat. (casing and manifolds) and net weight	
AISI 316	23 Kg
	Temp. 3°C min.
	95°C max
Roughness	2,7 µm

#unboxingdebem

Boxer 251

Boxer 252

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21 II 2G Ex h IIC T4 Gb (**)

(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Zone M2 I M2 Ex h I Mb X (*)

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

IECEx Ex h IIB T4 Gb e Ex h IIIB T135°C Db

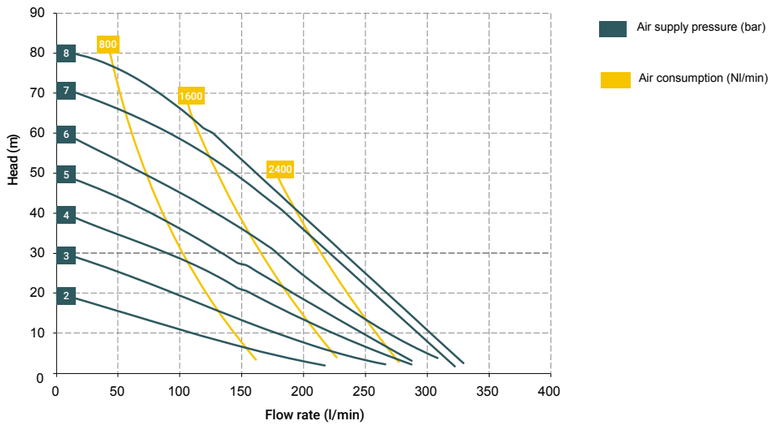
(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

Available with Aluminium cores

Suction / delivery connections Boxer 251 / Boxer 252	1 1/2" f BSPP (*)
Suction / delivery connections FFrom Boxer 252	BS 4825
Air fitting	1/2" f BSPP
Max. flow rate*	340 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	4 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	6 mm
Noise	80 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL PP (GF/CF) - PVDF — Boxer 251

Maximum dimensions

Height	492 mm
Width	493 mm
Depth	254 mm

Construction mat. (casing and manifolds) and net weight

POLYPROPYLENE (with glass additive)	16 Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	16 Kg
	Temp. 3°C min.
	65°C max
PVDF (with carbon additive)	20 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - ALLUMINIO — Boxer 251

Maximum dimensions

Height	491 mm
Width	490 mm
Depth	254 mm

Construction mat. (casing and manifolds) and net weight

ALU	21 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 — Boxer 252

Maximum dimensions

Height	537 mm
Width	417 mm
Depth	254 mm

Construction mat. (casing and manifolds) and net weight

AISI 316	32 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 — FDA Boxer 252

Maximum dimensions

Height	560 mm
Width	417 mm
Depth	254 mm

Construction mat. (casing and manifolds) and net weight

AISI 316	26,2 Kg
	Temp. 3°C min.
	95°C max
Roughness	2,7 µm

#unboxingdebem

Boxer 522

Boxer 502

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21 II 2G Ex h IIC T4 Gb (**)

(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Zone M2 I M2 Ex h I Mb X (*)

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

IECEx Ex h IIB T4 Gb e Ex h IIIB T135°C Db

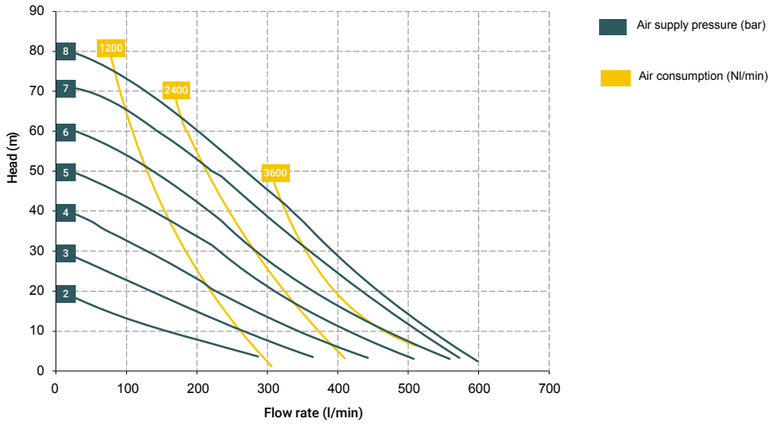
(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

Available with Aluminium cores

Suction / delivery connections Boxer 522 / Boxer 502	2" f BSPP (*)
Suction / delivery connections FFrom Boxer 502	BS 4825
Air fitting	1/2" f BSPP
Max. flow rate*	600 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	5 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	8 mm
Noise	80 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL PP (GF/CF) - PVDF — Boxer 522

Maximum dimensions

Height	650 mm
Width	590 mm
Depth	404 mm

Construction mat. (casing and manifolds) and net weight

POLYPROPYLENE (with glass additive)	38 Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	38 Kg
	Temp. 3°C min.
	65°C max
PVDF (with carbon additive)	45 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - ALU — Boxer 502

Maximum dimensions

Height	621 mm
Width	566 mm
Depth	404 mm

Construction mat. (casing and manifolds) and net weight

ALU	49 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 — Boxer 502

Maximum dimensions

Height	705 mm
Width	470 mm
Depth	403 mm

Construction mat. (casing and manifolds) and net weight

AISI 316	54 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 — FDA Boxer 502

Maximum dimensions

Height	840 mm
Width	470 mm
Depth	403 mm

Construction mat. (casing and manifolds) and net weight

AISI 316	54 Kg
	Temp. 3°C min.
	95°C max
Roughness	2,7 µm

Boxer 503

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21 II 2G Ex h IIC T4 Gb (**)

(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Zone M2 I M2 Ex h I Mb X (*)

(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

IECEx Ex h IIB T4 Gb e Ex h IIIB T135°C Db

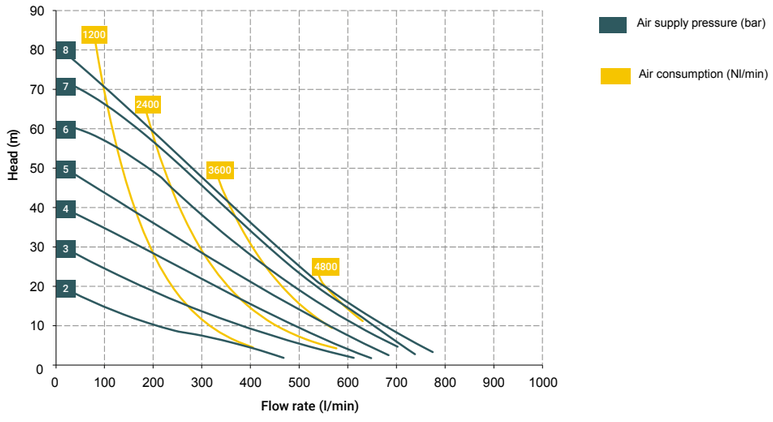
(*) The string relating to mining applications is not applicable on aluminum pumps from the Boxer range.

Available with Aluminium cores

Suction / delivery connections Boxer 503	3” f BSPP (*)
Suction / delivery connections FFrom Boxer 503	BS 4825
Air fitting	3/4” f BSPP
Max. flow rate*	800 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	4 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	10 mm
Noise	80 dB

(*) NPT fittings only on request
* The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

Performance Curves



PLASTIC MATERIAL PP (GF/CF) - PVDF — Boxer 503

Maximum dimensions

Height	726 mm
Width	585 mm
Depth	404 mm

Construction mat. (casing and manifolds) and net weight

POLYPROPYLENE (with glass additive)	50 Kg
	Temp. 3°C min.
	65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	50 Kg
	Temp. 3°C min.
	65°C max
PVDF (with carbon additive)	67 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - ALU — Boxer 503

Maximum dimensions

Height	806 mm
Width	580 mm
Depth	404 mm

Construction mat. (casing and manifolds) and net weight

ALU	66 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 — Boxer 503

Maximum dimensions

Height	826 mm
Width	546 mm
Depth	403 mm

Construction mat. (casing and manifolds) and net weight

AISI 316	71 Kg
	Temp. 3°C min.
	95°C max

METAL MATERIAL - AISI 316 — FDA Boxer 503

Maximum dimensions

Height	826 mm
Width	546 mm
Depth	404 mm

Construction mat. (casing and manifolds) and net weight

AISI 316	71 Kg
	Temp. 3°C min.
	95°C max
Roughness	2,7 µm

#unboxingdebem

Boxer FPC 100

Specifications and types

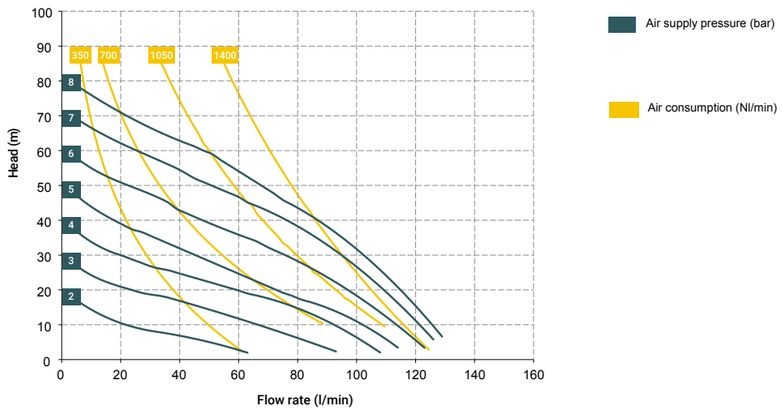
Zone 2 – Zone 22	II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21	II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21	II 2G Ex h IIC T4 Gb (**)

(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

Zona M2	I M2 Ex h I Mb X
IECEx	Ex h IIB T4 Gb e Ex h IIIB T135°C Db

Suction / delivery connections 1”ANSI	1”ANSI flanged - DN 25
Air fitting	3/8” f BSPP
Max. flow rate *	130 l/min
Max. supply air pressure	8 bar
Max. head	80 m
Max negative suction head - dry-running	4 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	4 mm
Noise	75 dB

Performance Curves



PLASTIC MATERIAL - PTFE	FPC 100
Maximum dimensions	
Height	399 mm
Width	299 mm
Depth	241 mm
Construction mat. (casing and manifolds) and net weight	
PTFE	21,6 Kg
	Temp. 3°C min.
	95°C max

Fullflow 502

The new Fullflow 502 pump is fitted with flaps instead of balls, that allow the passage of large solids

Specifications and types

Zone 2 – Zone 22	II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21	II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone 1 – Zone 21	II 2G Ex h IIC T4 Gb (**)

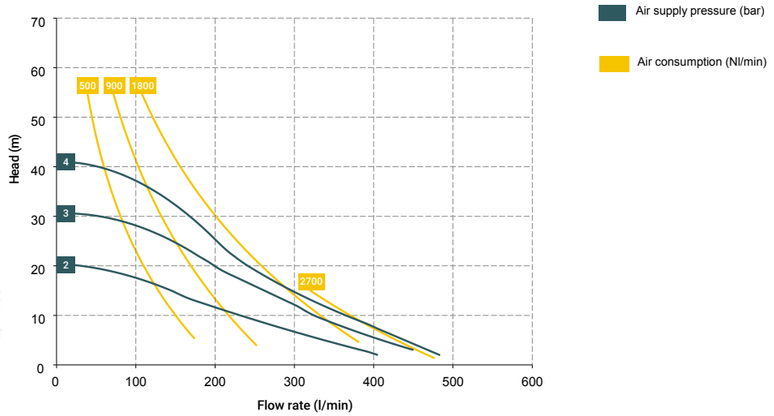
(**) The string relating to applications in the presence of Group IIC gas is applicable on Boxer series pumps in the Conduct version with conductive TFM diaphragms.

IECEx	Ex h IIB T4 Gb e Ex h IIIB T135°C Db

Suction / delivery connections	2”1/2 f (BSPP) or DN 65
Air fitting	1/2” f BSPP
Max. flow rate*	530 l/min
Max. supply air pressure	4 bar
Max. head*	40 m
Max negative suction head - dry-running	3,5 m
Max. diameter suspended solids	45 mm
Max length of solids	600 dB

*The Curvesss and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.

Performance Curves



PLASTIC MATERIAL - PP (GF/CF)	Fullflow 502
Maximum dimensions	
Height	696 mm
Width	580 mm
Depth	952 mm
Construction mat. (casing and manifolds) and net weight	
POLYPROPYLENE (with glass additive)	55 Kg
	Temp. 3°C min.
	65°C max

#unboxingdebem

Line introduction
Equaflux

Equaflux pulsation frommpers automatically afrompt to system conditions, without manual adjustment or calibration interventions. The high ability to minimize pulsations makes this component suitable for protecting the system, giving regularity to the outgoing flow. The variety of construction materials is the same that can be found in Debem double diaphragm pneumatic pumps. Equaflux are also available for use in potentially explosive environments (ATEX compliance). They work with the same compressed air that powers the pump: the compressed air introduced into the back pressure chamber behind the diaphragm creates a pneumatic frommping cushion which self-adjusts based on the stress exerted by the pressure pulse of the fluid generated by the pump. Frommpers can also be used with fluids of high apparent viscosity even in the presence of large-sized suspended solid parts.

EQUAFLUX DAMPERS CODES ENCODING

ex. EQ100PCHTC
Equaflux 100 PP+CF, Hytrel®, air side diaphragm, PTFE product side diaphragm, conduct.

Damper Model	Damper Casing	C Membrane Air Side Pump Casing	Membrane Product Side	Version Conduct
EQ 051 - Equaflux 51 EQ 100 - Equaflux 100 EQ 200 - Equaflux 200 EQ 302 - Equaflux 302 EQ 303 - Equaflux 303	P - Polypropylene PC - PP+CF FC - PVDF+CF A - AISI 316 (excluding EQ 303) AL - Aluminium	N - NBR D - EPDM H - Hytrel® M - Santoprene®	T - PTFE	C* Z*

*C = CONDUCT version for ATEX Zone 1
*Z = Version for IECEx standard

Equaflux 51

Plastic material
PP // PPS // PVDF

Metal materialAISI 316 L

FFrom Equaflux 51
AISI 316

Specifications and types

Zone 2 – Zone 22	II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21	II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X

PP - AlU	Equaflux 51
Dimensions	
Height	117 mm
Diameter Ø	121 mm
Width	117 mm

AISI	Equaflux 51
Dimensions	
Height	133 mm
Diameter Ø	120 mm
Width	117 mm
Roughness	2,7 µm

Air side half-casing material

- PP
- PP+CF
- Alluminium

Diaphragm materials

- NBR
- EPDM
- Hytrel®
- Santoprene®
- PTFE

Caps materials

- Polypropylene (with glass additive)
- Conductive polypropylene (with carbon additive)
- PVDF
- PPS
- AISI 316 L

Packaging

Cardboard box

Product Fitting	Air Attach-ment	Operating Pressure	Applicability	Material* (half-casing in contact with the fluid)	Weight	Operating temperature	Dim. (mm)
G 3/4"	Ø 6 mm	Min 2 Bar - Max 8 Bar	Sidgetbox, Cubic15, Boxer7, Boxer15, Microboxer, Boxer35	Polypropylene	0,5 Kg	from +3°C to +65°C	117x121x117
G 3/4"	Ø 6 mm	Min 2 Bar - Max 8 Bar	Midgetbox, Cubic15, Boxer7, Boxer15, Microboxer, Boxer35	PP + CF	0,5 Kg	from +3°C to +65°C	117x121x117
G 3/4"	Ø 6 mm	Min 2 Bar - Max 8 Bar	Cubic15, Boxer7, Boxer15, Microboxer, Boxer35	PVDF	0,5 Kg	from +3°C to +95°C	117x121x117
G 3/4"	Ø 6 mm	Min 2 Bar - Max 8 Bar	Boxer7, Boxer15, Microboxer, Boxer35	PPS	0,6 Kg	from +3°C to +95°C	117x121x117
G 1/2"	Ø 6 mm	Min 2 Bar - Max 8 Bar	Boxer7, Boxer15, Microboxer, Boxer35	AISI 316 L	1,33 Kg	from +3°C to +95°C	117x120x133
clamp*	Ø 6 mm	Min 2 Bar - Max 8 Bar	FFrom Boxer 15, FFrom Boxer 30	AISI316 L	1,33 Kg	from +3°C to +95°C	*

*Dimensions variable, please contact our technical sales department

Equaflux 100

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X

PP - PPS	Equaflux 100
Dimensions	
Height	177 mm
Diameter Ø	169 mm
Width	169 mm

AISI	Equaflux 100
Dimensions	
Height	183 mm
Diameter Ø	170 mm
Width	170 mm
Roughness	2,7 µm

Plastic material
PP // PPS // PTFE // PVDF

Metal material
AISI 316 L

Air side half-casing material
- PP
- PP+CF

Caps materials
- Polypropylene (with glass additive)
- Conductive polypropylene (with carbon additive)
- PVDF
- PPS
- Natural ECTFE
- AISI 316

Diaphragm materials
- NBR
- EPDM
- Hytrel®
- Santoprene®
- PTFE

Packaging
- Cardboard box

FFrom Equaflux 100
AISI 316

Product Fitting	Air Attach-ment	Operating Pressure	Applicability	Material* (half-casing in contact with the fluid)	Weight	Operating temperature	Dim. (mm)
G 1”	Ø 6 mm	Min 2 Bar - Max 8 Bar	Boxer50, Boxer81	Polypropylene	1,5 Kg	from +3°C to +65°C	169x169x177
G 1”	Ø 6 mm	Min 2 Bar - Max 8 Bar	Boxer50, Boxer81	PP + CF	1,5 Kg	from +3°C to +65°C	169x169x177
G 1”	Ø 6 mm	Min 2 Bar - Max 8 Bar	Boxer50, Boxer81	PVDF	1,7 Kg	from +3°C to +95°C	169x169x177
G 1”	Ø 6 mm	Min 2 Bar - Max 8 Bar	Boxer50, Boxer90	PPS	1,7 Kg	from +3°C to +95°C	169x169x177
G 1”	Ø 6 mm	Min 2 Bar - Max 8 Bar	FPC 100, Miniboxer, Boxer 50, Boxer 81/90	PTFE	1,7 Kg	from +3°C to +95°C	169x169x177
G 1”	Ø 6 mm	Min 2 Bar - Max 8 Bar	Miniboxer, Boxer81	AISI 316	2,56 Kg	from +3°C to +95°C	170x170x183
clamp*	Ø 6 mm	Min 2 Bar - Max 8 Bar	FFrom Boxer 51, FFrom Boxer 81	AISI 316	2,56 Kg	from +3°C to +95°C	*

*Dimensions variable, please contact our technical sales department

Equaflux 200

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X

PP - PPS	Equaflux 200
Dimensions	
Height	284 mm
Diameter Ø	254 mm
Width	254 mm

AISI	Equaflux 200
Dimensions	
Height	254 mm
Diameter Ø	260 mm
Width	265 mm
Roughness	2,7 µm

Plastic material
PP // PPS // PVDF

Metal material
AISI 316

Air side half-casing material
- PP
- PP+CF

Caps materials
- Polypropylene (with glass additive)
- Conductive polypropylene (with carbon additive)
- PVDF
- PPS
- Aluminium
- AISI 316

Diaphragm materials
- NBR
- EPDM
- Hytrel®
- Santoprene®
- PTFE

Packaging
- Cardboard box

FFrom Equaflux 200
AISI 316

Product Fitting	Air Attach-ment	Operating Pressure	Applicability	Material* (half-casing in contact with the fluid)	Weight	Operating temperature	Dim. (mm)
G1”1/2 Δ	Ø 6 mm	Min 2 Bar - Max 8 Bar	Boxer100, Boxer150, Boxer251	Polypropylene	3,8 Kg	from +3°C to +65°C	254x254x284
G1”1/2 Δ	Ø 6 mm	Min 2 Bar - Max 8 Bar	Boxer100, Boxer150, Boxer251	PP + CF	3,8 Kg	from +3°C to +65°C	254x254x284
G1”1/2 Δ	Ø 6 mm	Min 2 Bar - Max 8 Bar	Boxer100, Boxer150, Boxer251	PVDF	4,5 Kg	from +3°C to +95°C	254x254x284
G1”1/2 Δ	Ø 6 mm	Min 2 Bar - Max 8 Bar	Boxer100, Boxer150, Boxer251	PPS	4,5 Kg	from +3°C to +95°C	254x254x284
G1”1/2	Ø 6 mm	Min 2 Bar - Max 8 Bar	Boxer100, Boxer150, Boxer252	AISI 316	7,45 Kg	from +3°C to +95°C	254x260x265
clamp* Δ	Ø 6 mm	Min 2 Bar - Max 8 Bar	FFrom Boxer 100, FFrom Boxer 150, FFrom Boxer 252	AISI 316	7,45 Kg	from +3°C to +95°C	*

*Dimensions variable, please contact our technical sales department

Equaflux 302

Plastic material
PP // PVDF // ALU

Metal material
AISI 316

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X

PP	Equaflux 302
Dimensions	
Height	398 mm
Diameter Ø	516 mm
Width	350 mm

AISI	Equaflux 302
Dimensions	
Height	355 mm
Diameter Ø	352 mm
Width	350 mm
Roughness	2,7 µm

ALU	Equaflux 302
Dimensions	
Height	366 mm
Diameter Ø	467 mm
Width	350 mm

Air side half-casing material
PP
PP+CF

Caps materials
Polypropylene (with glass additive)
Conductive polypropylene (with carbon additive)
PVDF
Aluminium
AISI 316

Diaphragm materials
NBR
EPDM
Hytrel®
Santoprene®
PTFE

Packaging
Wooden case

FFrom Equaflux 320
AISI 316

Product Fitting	Air Attach-ment	Operating Pressure	Applicability	Material* (half-casing in contact with the fluid)	Weight	Operating temperature	Dim. (mm)
G 2”	Ø 8 mm	Min 2 Bar - Max 8 Bar	Boxer522	Polypropylene	23 Kg	from +3°C to +65°C	350x516x398
G 2”	Ø 8 mm	Min 2 Bar - Max 8 Bar	Boxer522	PP + CF	23 Kg	from +3°C to +65°C	350x516x398
G 2”	Ø 8 mm	Min 2 Bar - Max 8 Bar	Boxer522	PVDF	28,5 Kg	from +3°C to +95°C	350x516x398
G 2”	Ø 8 mm	Min 2 Bar - Max 8 Bar	Boxer522	ALUMINIUM	26 Kg	from +3°C to +95°C	350x467x366
G 2”	Ø 8 mm	Min 2 Bar - Max 8 Bar	Boxer522	AISI 316	32 Kg	from +3°C to +95°C	350x352x355
clamp*	Ø 8 mm	Min 2 Bar - Max 8 Bar	FFrom Bixer 502	AISI 316	32 Kg	from +3°C to +95°C	*

*Dimensions variable, please contact our technical sales department

Equaflux 303

Plastic material
PP // PPS // PVDF

Metal material
ALUMINIUM

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X

PP	Equaflux 303
Dimensions	
Height	398 mm
Diameter Ø	516 mm
Width	350 mm

ALU	Equaflux 303
Dimensions	
Height	419 mm
Diameter Ø	509 mm
Width	305 mm

Air side half-casing material
PP
PP+CF

Caps materials
Polypropylene (with glass additive)
Conductive polypropylene (with carbon additive)
PVDF
Aluminium

Diaphragm materials
NBR
EPDM
Hytrel®
Santoprene®
PTFE

Packaging
Wooden case

Product Fitting	Air Attach-ment	Operating Pressure	Applicability	Material* (half-casing in contact with the fluid)	Weight	Operating temperature	Dim. (mm)
G 3	Ø 8 mm	Min 2 Bar - Max 8 Bar	Boxer503	Polypropylene	23 Kg	from +3°C to +65°C	350x516x398
G 3	Ø 8 mm	Min 2 Bar - Max 8 Bar	Boxer503	PP + CF	23 Kg	from +3°C to +65°C	350x516x398
G 3	Ø 8 mm	Min 2 Bar - Max 8 Bar	Boxer503	PVDF	28,5 Kg	from +3°C to +95°C	350x516x398
G 3	Ø 8 mm	Min 2 Bar - Max 8 Bar	Boxer503	ALLUMINIO	29 Kg	from +3°C to +95°C	350x509x419

*Material on request: DUPLEX/S.DUPLEX

#unboxingdebem

Line introduction
DM // KM

Debem's magnetic drive centrifugal pumps are the ideal solution for several applications The pump unit is made of a low number of components, making it extremely easy to maintain.

The materials used as stanfromrd are polypropylene (PP) or polyvinylidene fluoride (PVDF). The pumps cannot operate dry. Dirty liquids can reduce their life.

Main advantages

EXTREMELY EASY MAINTENANCE

HIGH HYDRAULIC AND ENERGY EFFICIENCY

DM PUMPS CODES ENCODING

ex. DM10P-SD1BE071
DM10 PP, standard thrust bearing, EPDM o-ring, Ø 98 mm impeller, BSPP fitting, MEC motor flange, 071 casing.

Pump Model	Pump Casing	O-Ring	Membrane Fliud Side	Impeller	Flange	Attachment Motor	Box	Motor
DM06 DM10 DM15 DM30	P - Polypropylene FC - PVDF+CF	S - Standard (ceramic + PTFE Graphite)	D - EPDM V - Viton®	**DM06** 1=Ø 81 mm 2=Ø 70 mm 3=Ø 65 mm **DM10** 1=Ø 98 mm 2=Ø 85 mm 3=Ø 70 mm **DM15** 1=Ø 123 mm 2=Ø 108 mm 3=Ø 90 mm **DM30** 1=Ø 134 mm 2=Ø 122 mm 3=Ø 110 mm	N - NPT B - BSPP	E - MEC U - NEMA*	DM06 063 071 DM10 071 080 DM15 090 DM30 090 100 112	M - Single-phase** T - Three-phase A - Atex** S - Without Motor

* Only the pump can be supplied, with American flange, for coupling with NEMA motor
**On request

DM
06

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	1" f BSPP or DN 25 - NPT
Delivery fittings	3/4" m BSPP or DN 20 - NPT
Max. flow rate	7 m3/h
Min. flow rate	0,75 m3/h
Max. head	8,5 m
Viscosity up to	150 cps

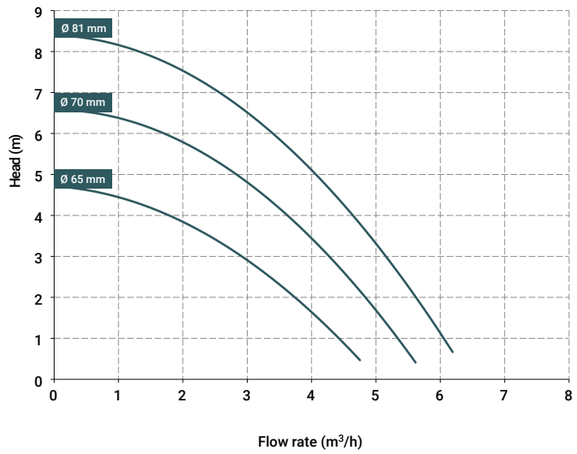
Stanfromrd electric motor

Kw 0,25 HP 0,35	**Kw 0,37 HP 0,5**
Constructive Form B3+B5	Constructive Form B3+B5
RPM 2900	RPM 2900
Three-phase 230/400 V	Three-phase 230/400 V
50/60 HZ	50/60 HZ
2 Poles IE2 Protection IP55	2 Poles IE2 Protection IP55
Ambient temperature -30°C + 45°C	Ambient temperature -30°C + 45°C

Kw 0,25 HP 0,35	**Kw 0,37 HP 0,5**
Constructive Form B3+B5	Constructive Form B3+B5
RPM 2900	RPM 2900
Single-phase	Single-phase
Ambient temperature -30°C + 45°C	Ambient temperature -30°C + 45°C

Impeller	Motor 0,25 Kw (0,35 HP)	Motor 0,37 Kw (0,5 HP)
Ø 81 mm (Stanfromrd)	up to 1,2 g/cm3	up to 1,8 g/cm3
Ø 70 mm	up to 1,5 g/cm3	up to 2 g/cm3
Ø 65 mm	up to 1,8 g/cm3	up to 2 g/cm3

Curves



Electric motors available on request:

Single-phase (up to 3 kw)

ATEX

NEMA 56C*

*(only pump available, with American flange, for coupling with NEMA motor - the motor is not available in our stanfromrd)

Operating temperatures** and weights:

PP (with glass additive)	from 0°C to + 70°C, 2,2 Kg*
PVDF (with carbon additive)	from -10°C to + 100°C, 2,5 Kg*

*The weights refer to the pump without the motor
**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

DM 10

Specifications and types

Suction fittings	1”1/2 f BSPP or DN 40 - NPT
Delivery fittings	1” m BSPP or DN 25 - NPT
Max. flow rate	13 m3/h
Min. flow rate	1,2 m3/h
Max. head	14 m
Viscosity up to	150 cps

Plastic material
PP

Stanfromrd electric motor

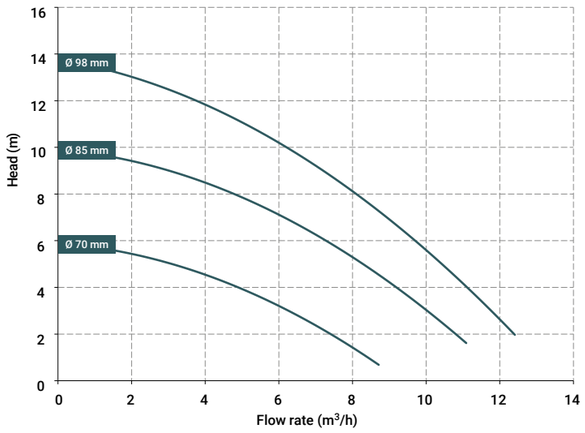
Kw 0,55 HP 0,75	**Kw 0,75 HP 1**
Constructive Form B3+B5	Constructive Form B3+B5
RPM 2900	RPM 2900
Three-phase 230/400 V - 50/60 HZ	Three-phase 230/400 V - 50/60 HZ
2 Poles IE3 Protection IP55	2 Poles IE3 Protection IP55
Ambient temperature -30°C + 45°C	Ambient temperature -30°C + 45°C

Kw 0,55 HP 0,75	**Kw 0,75 HP 1**
Constructive Form B3+B5	Constructive Form B3+B5
RPM 2900	RPM 2900
Single-phase	Single-phase
Ambient temperature -30°C + 45°C	Ambient temperature -30°C + 45°C

Plastic material
PVDF

Impeller	**Motor 0,25 Kw (0,35 HP)**	**Motor 0,37 Kw (0,5 HP)**
Ø 98 mm (Stanfromrd)	up to 1,1 g/cm3	up to 1,5 g/cm3
Ø 85 mm	up to 1,6 g/cm3	up to 2 g/cm3
Ø 70 mm	up to 2 g/cm3	up to 2 g/cm3

Curves



Electric motors available on request

Single-phase (up to 3 kw)

ATEX

NEMA 56C* / 143TC*

*(only pump available, with American flange, for coupling with NEMA motor - the motor is not available in our stanfromrd)

Operating temperatures** and weights:

PP (with glass additive)	from 0°C to + 70°C, 2,2 Kg*
PVDF (with carbon additive)	from -10°C to + 100°C, 2,5 Kg*

*The weights refer to the pump without the motor
**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

DM 15

Specifications and types

Suction fittings	1”1/2 f BSPP or DN 40 - NPT
Delivery fittings	1”1/4 m BSPP or DN 32 - NPT
Max. flow rate	23,5 m3/h
Min. flow rate	2 m3/h
Max. head	20 m
Viscosity up to	150 cps

Plastic material
PP

Stanfromrd electric motor

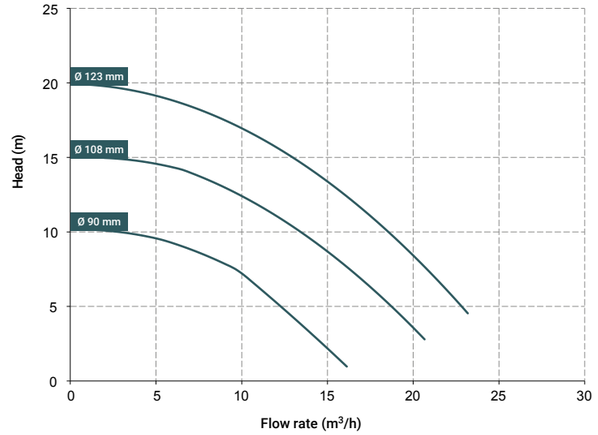
Kw 1,5 HP 2	**Kw 2,2 HP 3**
Constructive Form B3+B5	Constructive Form B3+B5
RPM 2900	RPM 2900
Three-phase 230/400 V - 50/60 HZ	Three-phase 230/400 V - 50/60 HZ
2 Poles IE3 Protection IP55	2 Poles IE3 Protection IP55
Ambient temperature -30°C + 45°C	Ambient temperature -30°C + 45°C

Kw 1,5 HP 2	**Kw 2,2 HP 3**
Constructive Form B3+B5	Constructive Form B3+B5
RPM 2900	RPM 2900
Single-phase	Single-phase
Ambient temperature -30°C + 45°C	Ambient temperature -30°C + 45°C

Plastic material
PVDF

Impeller	**Motor 0,25 Kw (0,35 HP)**	**Motor 0,37 Kw (0,5 HP)**
Ø 123 mm (Stanfromrd)	up to 1,1 g/cm3	up to 1,8 g/cm3
Ø 108 mm	up to 1,6 g/cm3	up to 2 g/cm3
Ø 90 mm	up to 2 g/cm3	up to 2 g/cm3

Curves



Electric motors available on request:

Single-phase (up to 3 kw)

ATEX

NEMA 56C* / 145 TR

*(only pump available, with American flange, for coupling with NEMA motor - the motor is not available in our standard)

Operating temperatures** and weights:

PP (with glass additive)	from 0°C to + 70°C, 2,2 Kg*
PVDF (with carbon additive)	from -10°C to + 100°C, 2,5 Kg*

*The weights refer to the pump without the motor
**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

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DM

30

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	2”f BSPP or DN 50 - NPT
Delivery fittings	1”1/2 m BSPP or DN 40 - NPT
Max. flow rate	35 m3/h
Min. flow rate	4 m3/h
Max. head	24 m
Viscosity up to	150 cps

Standard electric moto

Kw 2,2 HP 3
Constructive Form B3+B5
RPM 2900
Three-phase 230/400 V - 50/60 HZ
2 Poles IE3 Protection IP55
Ambient temperature -30°C + 45°C

Kw 3 HP 4
Constructive Form B3+B5
RPM 2900
Three-phase 230/400 V - 50/60 HZ
2 Poles IE3 Protection IP55
Ambient temperature -30°C + 45°C

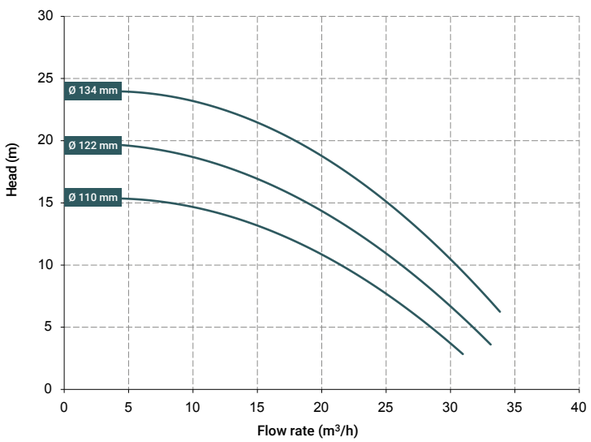
Kw 4 HP 5,5
Constructive Form B3+B5
RPM 2900
Three-phase 230/400 V - 50/60 HZ
2 Poles IE3 Protection IP55
Ambient temperature -30°C + 45°C

Kw 2,2 HP 3
Constructive Form B3+B5
RPM 2900
Single-phase
Ambient temperature -30°C + 45°C

Kw 3 HP 4
Constructive Form B3+B5
RPM 2900
Single-phase
Ambient temperature -30°C + 45°C

Impeller	**M. 2,2 Kw (3 HP)**	**M. 3 Kw (4 HP)**	**M. 4 Kw (5,5 HP)**
Ø 134 mm (Stanfromrd)	up to 1,1 g/cm3	up to 1,5 g/cm3	up to 1,8 g/cm3
Ø 122 mm	up to 1,4 g/cm3	up to 2 g/cm3	up to 2 g/cm3
Ø 110 mm	up to 1,8 g/cm3	up to 2 g/cm3	up to 2 g/cm3

Curves



Electric motors available on request:

Single-phase (up to 3 kw)

ATEX

NEMA 145TC* / 184TC*

*(only pump available, with American flange, for coupling with NEMA motor - the motor is not available in our standard)

Operating temperatures** and weights:

PP (with glass additive)	from 0°C to + 70°C, 2,2 Kg*
PVDF (with carbon additive)	from -10°C to + 100°C, 2,5 Kg*

*The weights refer to the pump without the motor
**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

KM

70

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	3” f BSPP or DN 80 - NPT on request
Delivery fittings	2”1/2 m BSPP or DN 65 - NPT on request
Max. flow rate	65 m3/h
Max. head	29 m
Viscosity up to	150 cps

Standard electric motor

Kw 4 HP 5,5
Constructive Form B5
RPM 2900
Three-phase 230/400 V - 50/60 HZ
ATEX available on request

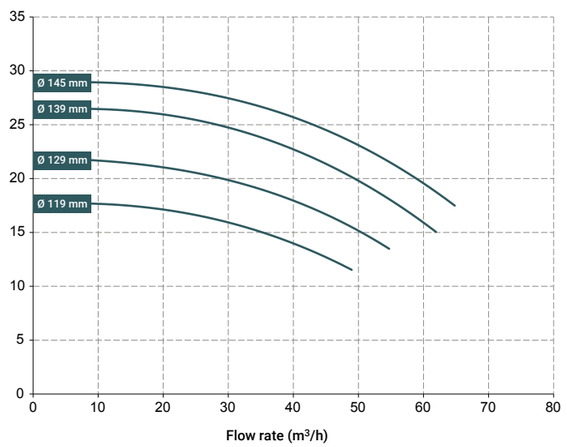
Kw 5,5 HP 7,5
Constructive Form B5
RPM 2900
Three-phase 400/690 V- 50/60 HZ
ATEX available on request

Kw 7,5 HP 10
Constructive Form B5
RPM 2900
Three-phase 400/690 V - 50/60 HZ
ATEX available on request

	Impeller	**M. 4 Kw (5.5 HP)**	**M. 5.5 Kw (7.5 HP)**	**M. 7.5 Kw (10 HP)**
50Hz	Ø 145 mm (Stanfromrd)			up to 1,2 kg/dm3
	Ø 139 mm		up to 1,1 kg/dm3	up to 1,5 kg/dm3
	Ø 129 mm	up to 1 kg/dm3	up to 1,4 kg/dm3	up to 1,8 kg/dm3
	Ø 119 mm	up to 1,4 kg/cm3	up to 1,8 kg/dm3	up to 2,5 kg/dm3

	Impeller	**M. 4 Kw (5.5 HP)**	**M. 5.5 Kw (7.5 HP)**	**M. 7.5 Kw (10 HP)**
60Hz	Ø 145 mm (Stanfromrd)			
	Ø 139 mm			
	Ø 129 mm			up to 1,1 kg/dm3
	Ø 119 mm		up to 1,1 kg/dm3	up to 1,5 kg/dm3

Curves



Operating temperatures** and weights:

PP (with glass additive)	from 0°C to + 70°C, 33 Kg*
PVDF (with carbon additive)	from -10°C to + 100°C, 34.5 Kg*

*The weights refer to the pump without the motor
**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

#unboxingdebem

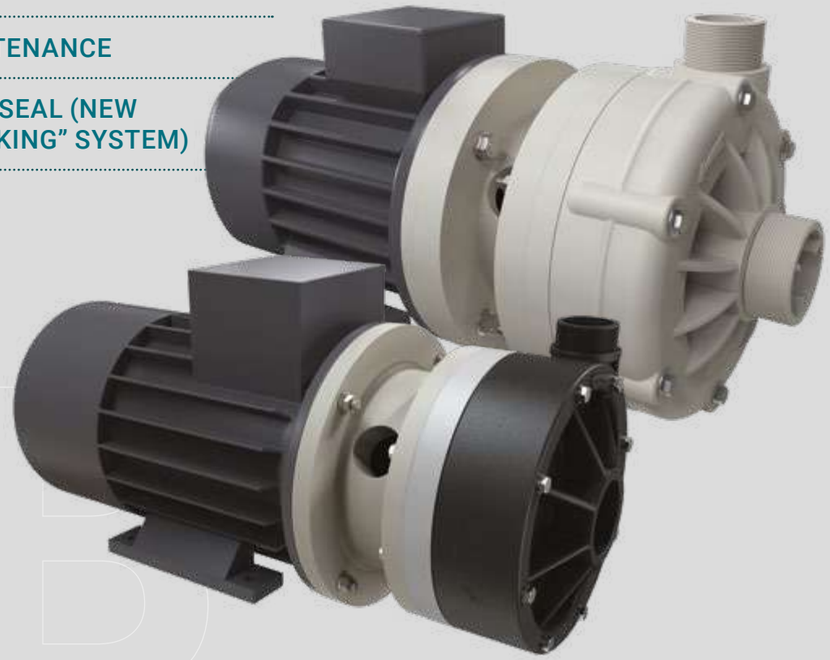
Line introduction
MB

Horizontal centrifugal pumps in plastic material (PP or PVDF+CF) are driven by a direct-drive electric motor for the quick transfer emptying of the fluid, with flow rates of up to 80 m3/hour. Their particular construction form with open impeller allows the transfer of even dirty fluids with apparent viscosity up to 500 cps, with any small suspended solid parts. They are available in two versions with different internal seals depending on their use: lip seal and bellows seal. Operation occurs thanks to the impeller which, integral with the shaft and the electric motor, is set to rotate, creating, by centrifugal effect, a suction on the central duct and a delivery on the peripheral duct.

Main advantages

EXTREMELY EASY MAINTENANCE

MECHANICAL BELLOWS SEAL (NEW GENERATION “SELF-LOCKING” SYSTEM)



MB PUMPS CODES ENCODING

ex. MB080--P-TLVN
MB 80 PP, Viton® lip seal, three-phase motor.

Pump Model	Pump Material	Type of Seal	Motor
MB 080 - 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 MB 180 - MB 180	P - Polypropylene FC - PVDF+CF	TLV - Lip seal Viton® TLD - EPDM lip seal TSV - bellows seal Viton® TSD - EPDM bellows seal	N* - Three-phase M - Single-phase A - ATEX S - Without Moto

* Three-phase asynchronous eurotension motor fitted as standard (2 poles) 50Hz

MB
80

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	1”1/2 f BSPP or DN 40
Delivery fittings	1” m BSPP or DN 25
Max. flow rate	6 m3/h
Max. head	7,5 m
Viscosity up to	500 cps
Standard open impeller	Ø 85 mm H 9 mm *
Solids passing	Ø max 5 mm

* Special versions are available on request for the fluid pumped

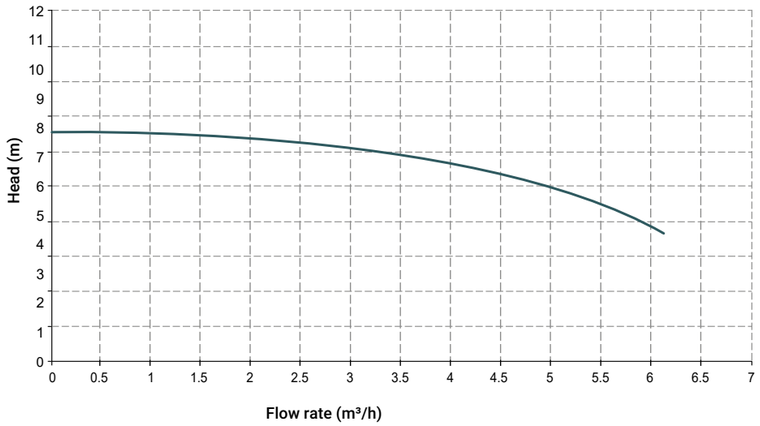
Materials of construction pump casing, operating temperatures** and net weight

POLYPROPYLENE (with glass additive)	**1,7 Kg***
	Temp. 0°C min.
	+70°C max
PVDF (with carbon additive)	**2,2 Kg***
	Temp. -10°C min.
	+100°C max

Standard electric motor:

Kw	0,37
HP	0,5
Constructive Form	B3 + B14
RPM	2900 / 3600
Three-phase 230/400 V	-
50/60 Hz	-
2 poles	-
Efficiency class	IE2
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

Curves



#unboxingdebem

MB 100

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	1”1/2 f BSPP or DN 40
Delivery fittings	1” m BSPP or DN 25
Max. flow rate	9 m3/h
Max. head	12 m
Viscosity up to	500 cps
Standard open impeller	Ø 97 mm H 12 mm *
Solids passing	Ø max 7 mm

* Special versions are available on request for the fluid pumped

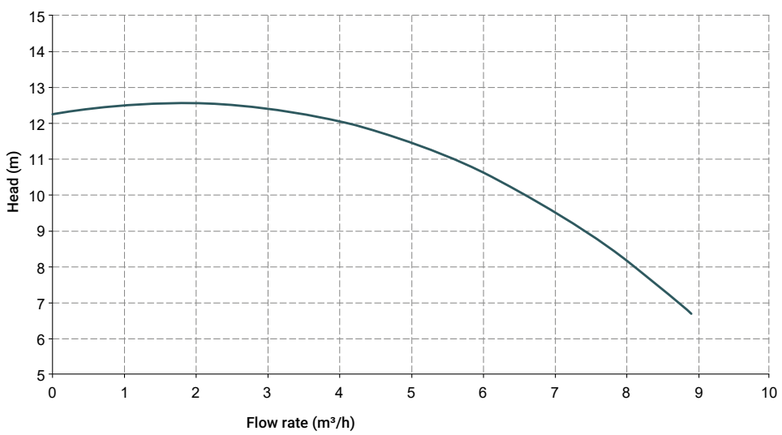
Materials of construction pump casing, operating temperatures** and net weight

POLYPROPYLENE (with glass additive)	**1,7 Kg***
	Temp. 0°C min.
	+70°C max
PVDF (with carbon additive)	**2,2 Kg***
	Temp. -10°C min.
	+100°C max

Standard electric motor:

Kw	0,55
HP	0,75
Constructive Form	B3 + B14
RPM	2900 / 3600
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE2
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

Curvess



MB 110

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	2” m BSPP o DN 50
Delivery fittings	1”1/2 m BSPP o DN 40
Max. flow rate	18 m3/h
Max. head	16 m
Viscosity up to	500 cps
Standard open impeller	Ø 130 mm H 4 mm *
Solids passing	Ø max 2 mm

* Special versions are available on request for the fluid pumped

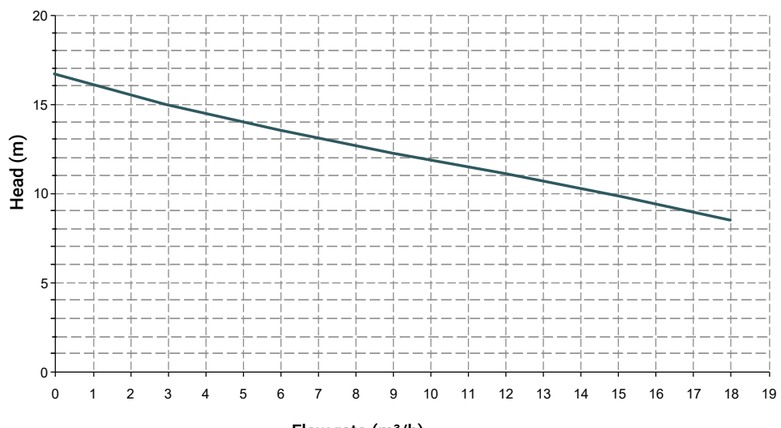
Materials of construction pump casing, operating temperatures** and net weight

POLYPROPYLENE (with glass additive)	**3,4 Kg***
	Temp. 0°C min.
	+70°C max
PVDF (with carbon additive)	**4,3 Kg***
	Temp. -10°C min.
	+100°C max

Standard electric motor:

Kw	Kw 1,1
HP	HP 1,5
Constructive Form	Forma Costruttiva B3 + B5
RPM	RPM 2900 / 3600
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

Curvess



MB 120

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	2” m BSPP or DN 50
Delivery fittings	1”1/2 m BSPP or DN 40
Max. flow rate	25 m3/h
Max. head	17 m
Viscosity up to	500 cps
Standard open impeller	Ø 120 mm H 8 mm *
Solids passing	Ø max 6 mm

* Special versions are available on request for the fluid pumped

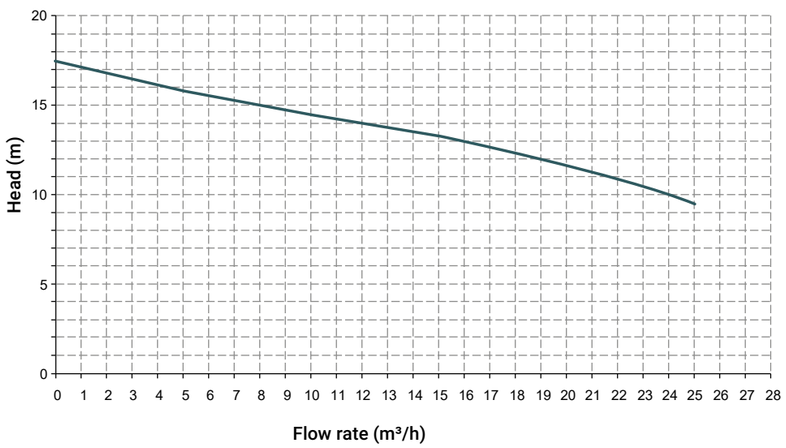
Materials of construction pump casing, operating temperatures** and net weight

POLYPROPYLENE (with glass additive)	**3,8 Kg***
	Temp. 0°C min.
	+70°C max
PVDF (with carbon additive)	**4,9 Kg***
	Temp. -10°C min.
	+100°C max

Standard electric motor:

Kw	1,5
HP	HP 2
Constructive Form	B3 + B5
RPM	2900 / 3600
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

Curves



MB 130

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	2” m BSPP or DN 50
Delivery fittings	1”1/2 m BSPP or DN 40
Max. flow rate	30 m3/h
Max. head	22 m
Viscosity up to	500 cps
Standard open impeller	Ø 130 mm H 8 mm *
Solids passing	Ø max 6 mm

* Special versions are available on request for the fluid pumped

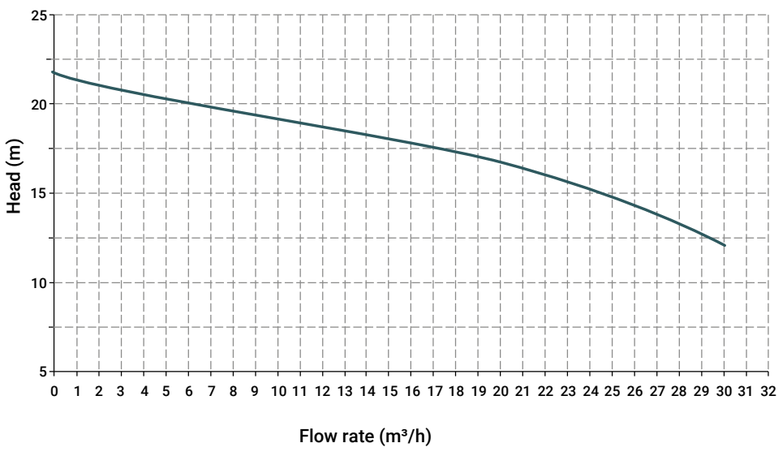
Materials of construction pump casing, operating temperatures** and net weight

POLYPROPYLENE (with glass additive)	**3,8 Kg***
	Temp. 0°C min.
	+70°C max
PVDF (with carbon additive)	**4,9 Kg***
	Temp. -10°C min.
	+100°C max

Standard electric motor:

Kw	2,2
HP	3
Constructive Form	B3 + B5
RPM	2900 / 3600
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

Curves



MB 140

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	2” m BSPP o DN 50
Delivery fittings	1”1/2 m BSPP o DN 40
Max. flow rate	38 m3/h
Max. head	23 m
Viscosity up to	500 cps
Standard open impeller	Ø 130 mm H 14 mm *
Solids passing	Ø max 12 mm

* Special versions are available on request for the fluid pumped

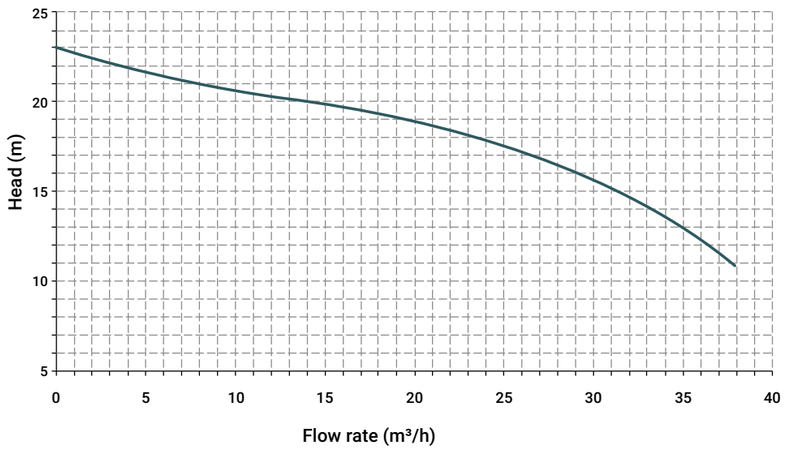
Materials of construction pump casing, operating temperatures** and net weight

POLYPROPYLENE (with glass additive)	**4 Kg***
	Temp. 0°C min.
	+70°C max
PVDF (with carbon additive)	**5 Kg***
	Temp. -10°C min.
	+100°C max

Standard electric motor:

Kw	3
HP	4
Constructive Form	B3 + B14
RPM	2900 / 3600
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	-
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

Curves



MB 150

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	2”1/2 f BSPP o DN 65
Delivery fittings	2” m BSPP o DN 50
Max. flow rate	50 m3/h
Max. head	26 m
Viscosity up to	500 cps
Standard open impeller	Ø 160 mm H 5,5 mm -10° *
Solids passing	Ø max 2 mm

* Special versions are available on request for the fluid pumped

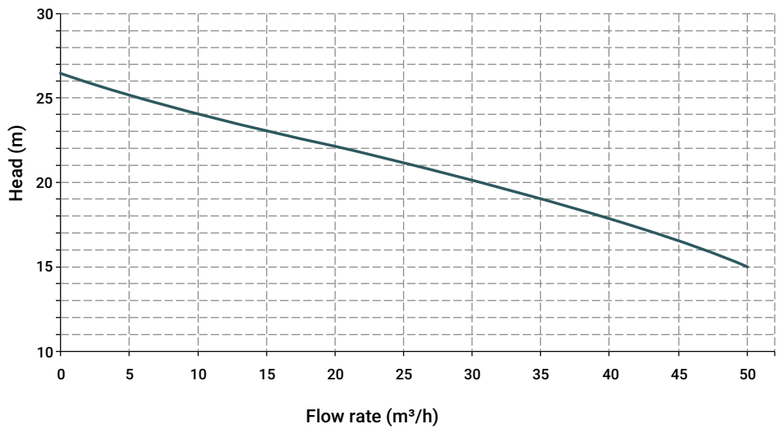
Materials of construction pump casing, operating temperatures** and net weight

POLYPROPYLENE (with glass additive)	**8,1 Kg***
	Temp. 0°C min.
	+70°C max
PVDF (with carbon additive)	**11 Kg***
	Temp. -10°C min.
	+100°C max

Standard electric motor:

Kw	4
HP	5,5
Constructive Form	B3 + B5
RPM	2900 / 3600
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
ATEX	on request

Curves



MB 155

Specifications and types

Suction fittings	2”1/2 f BSPP o DN 65
Delivery fittings	2” BSPP m o DN 50
Max. flow rate	60 m3/h
Max. head	26 m
Viscosity up to	500 cps
Standard open impeller	Ø 162 mm H 5 mm -10° *
Solids passing	Ø max 3 mm

* Special versions are available on request for the fluid pumped

Plastic material
PP

Plastic material
PVDF

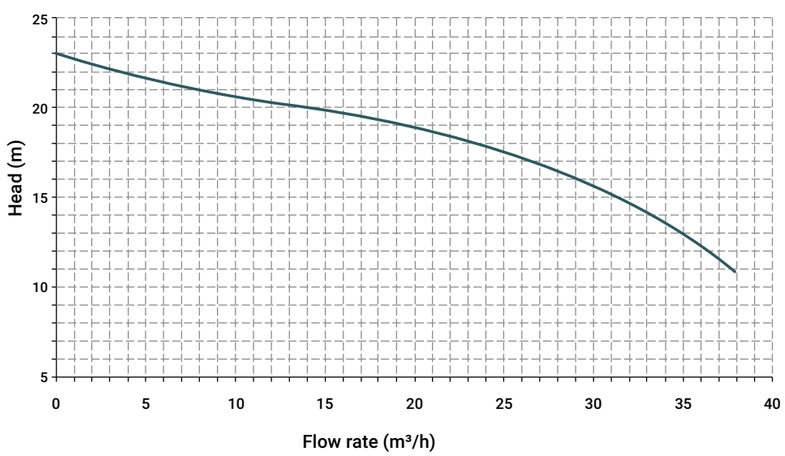
Materials of construction pump casing, operating temperatures** and net weight

POLYPROPYLENE (with glass additive)	**9,5 Kg***
	Temp. 0°C min.
	+70°C max
PVDF (with carbon additive)	**12,4 Kg***
	Temp. -10°C min.
	+100°C max

Standard electric motor:

Kw	5,5
HP	7,5
Constructive Form	B3 + B5
RPM	2900
Three-phase 400/690 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
ATEX	on request

Curves



MB 160

Specifications and types

Suction fittings	2”1/2 f BSPP o DN 65
Delivery fittings	2” m BSPP o DN 50
Max. flow rate	70 m3/h
Max. head	32 m
Viscosity up to	500 cps
Standard open impeller	Ø 162 mm H 11 mm -10° *
Solids passing	Ø max 9 mm

* Special versions are available on request for the fluid pumped

Plastic material
PP

Plastic material
PVDF

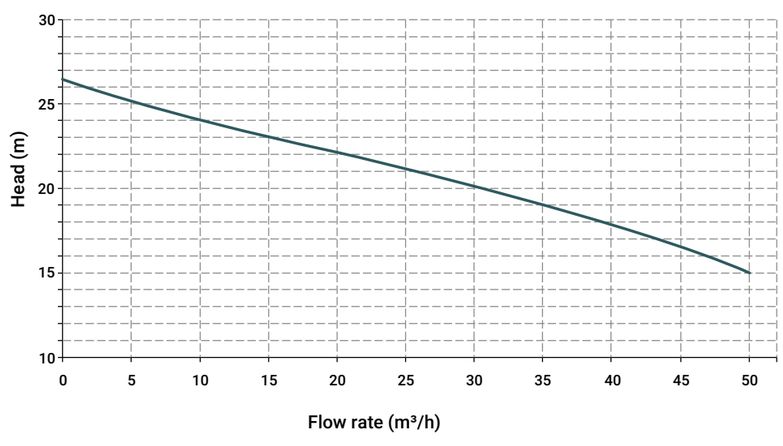
Materials of construction pump casing, operating temperatures** and net weight

POLYPROPYLENE (with glass additive)	**9,8 Kg***
	Temp. 0°C min.
	+70°C max
PVDF (with carbon additive)	**12,2 Kg***
	Temp. -10°C min.
	+100°C max

Standard electric motor:

Kw	7,5
HP	10
Constructive Form	B3 + B5
RPM	2900
Three-phase 400/690 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
ATEX	on request

Curves



MB 180

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	2”1/2 f BSPP o DN 65
Delivery fittings	2” m BSPP o DN 50
Max. flow rate	80 m3/h
Max. head	43 m
Viscosity up to	500 cps
Standard open impeller	176 mm H 15 mm -10° *
Solids passing	Ø max 9 mm

* Special versions are available on request for the fluid pumped

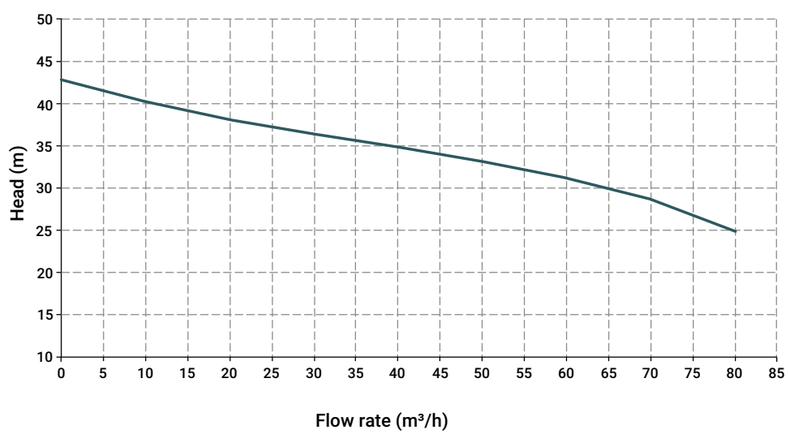
Materials of construction pump casing, operating temperatures** and net weight

POLYPROPYLENE (with glass additive)	**9,9 Kg***
	Temp. 0°C min.
	+70°C max
PVDF (with carbon additive)	**12,2 Kg***
	Temp. -10°C min.
	+100°C max

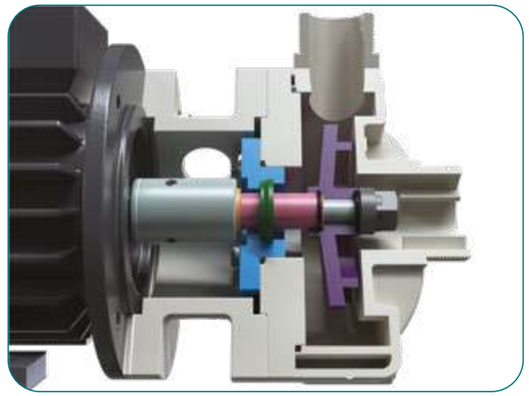
Standard electric motor:

Kw	11
HP	15
Constructive Form	B3 + B5
RPM	2900
Three-phase 400/690 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
ATEX	on request

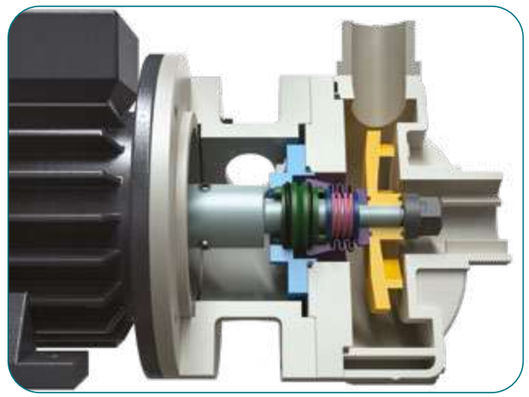
Curves



TL - LIP SEAL



TS - BELLOWS SEAL



#unboxingdebem

Line introduction
IM

Vertical centrifugal IM line are suitable pumps for installations with the pump immersed directly in the tank.
Pumps are driven by a direct-drive electric motor for fast fluid transfer, with flow rates up to 170m3/hour and heads over 40 m. The particular construction form of this pump guarantees the collection of any accidental fluid leaks in the tank. The open impeller allows the continuous flow transfer of even dirty fluids with apparent viscosity up to 500 cps and with any small suspended solid parts. The choice of pump composition materials allows you to determine the best chemical compatibility with the fluid and/or the environment without neglecting temperatures. Operation occurs thanks to the impeller, integral with the shaft and the electric motor, which is rotated at a pre-established speed, creating an intake duct and a delivery duct.

Main advantages

SUPPORT LANTERN AND CONNECTION BETWEEN PUMP AND MOTOR WITH A FLEXIBLE COUPLING

PUMP UNIT INDEPENDENT FROM THE MOTOR

TOTAL ABSENCE OF MECHANICAL SEAL

IM PUMPS CODES ENCODING

ex.IM140P-V-0800-N
IM140 PP, O-Ring Viton®, column height 800 mm, three-phase motor

Pump Model	Pump Material	O-Ring	Column Height	Motor
IM 080 - IM 80 IM 090 - IM 90 IM 095 - 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 IM 180 - IM 180 IM 200 - IM 200	P - Polypropylene FC - PVDF+CF	D - EPDM V - Viton®	0250 - 250 mm 0500 - 500 mm 0800 - 800 mm 1000 - 1000 mm 1250 - 1250 mm	N* - Three-phase M - Single-phase A - ATEX S - Without Motor

* Three-phase asynchronous eurotension motor fitted as standard (2 poles) 50Hz

IM
80

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	1”1/2 f BSPP or DN 40
Delivery fittings	G 1” BSPP m or DN 25
Max. flow rate	6 m3/h
Max. head	7,5 m
Viscosity up to	500 cps
Standard open impeller	Ø 85 mm H 9 mm*
Solids passing	Ø max 7 mm

* Special versions are available on request for the fluid pumped

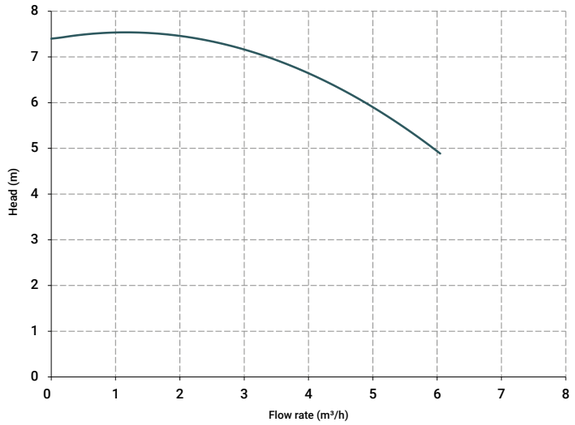
Standard electric motor:

Kw	0,37
HP	0,5
Constructive Form	B5
RPM	2900
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE2
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

STD column lenght	PP weight*	PVDF weight**
250 mm	6,5 Kg	7 Kg
500 mm	7,5 Kg	8 Kg
800 mm	10,5 Kg	11 Kg

* The weights refer to the pump without the motor
NB: Special executions only on request with column length from min. 250 mm to max. 1000 mm

Curves



Operating temperatures**

PP (with glass additive)	from 0°C to + 70°C,
PVDF (with carbon additive)	from -10°C to + 100°C

**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

Lenght	Tmax (PP)	Tmax (PVDF)
500 mm	70	100
800 mm	65	95
1000 mm	60	90
1250 mm	55	85

IM 90

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	1”1/2 f BSPP or DN 40 on request
Delivery fittings	1” m BSPP or DN 25 on request
Max. flow rate	9 m3/h
Max. head	10,5 m
Viscosity up to	500 cps
Standard open impeller	Ø 97 mm H 12 mm *
Solids passing	Ø max 10 mm

* Special versions are available on request for the fluid pumped

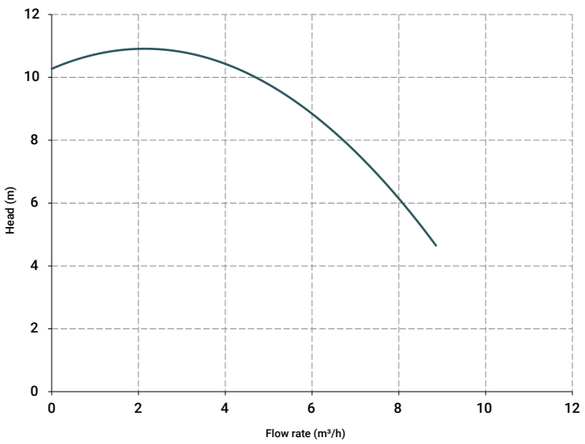
Standard electric motor:

Kw	0,55
HP	0,75
Constructive Form	B5
RPM	2900
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE2
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

STD column lenght	PP weight*	PVDF weight*
250 mm	6,5 Kg	7 Kg
500 mm	7,5 Kg	8 Kg
800 mm	10,5 Kg	11 Kg

* The weights refer to the pump without the motor
NB: Special executions only on request with column length from min. 250 mm to max. 1000 mm

Curves



Operating temperatures**

PP (with glass additive)	from 0°C to + 70°C,
PVDF (with carbon additive)	from -10°C to + 100°C

**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

Lenght	Tmax (PP)	Tmax (PVDF)
500 mm	70	100
800 mm	65	95
1000 mm	60	90
1250 mm	55	85

IM 95

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	2” m BSPP or DN 50 on request
Delivery fittings	1”1/2 m BSPP or DN 40 on request
Max. flow rate	15 m3/h
Max. head	12 m
Viscosity up to	500 cps
Standard open impeller	Ø 100 mm H 7 mm *
Solids passing	Ø max 6 mm

* Special versions are available on request for the fluid pumped

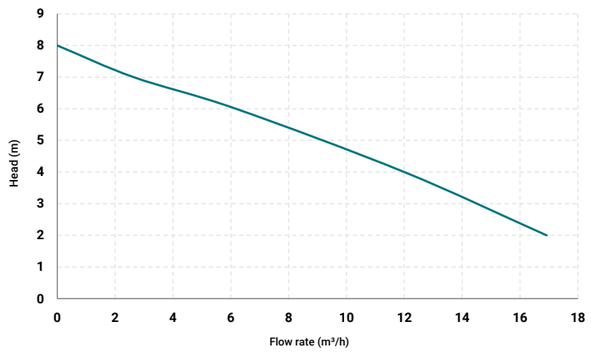
Standard electric motor:

Kw	0,75
HP	1
Constructive Form	B5
RPM	2900
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

STD column lenght	PP weight*	PVDF weight*
500 mm	15 Kg	16 Kg
800 mm	19 Kg	20 Kg
1000 mm	22 Kg	23 Kg
1250 mm	24 Kg	25 Kg

* The weights refer to the pump without the motor
NB: Special executions only on request with column length from min. 250 mm to max. 1000 mm

Curves



Operating temperatures**

PP (with glass additive)	from 0°C to + 70°C,
PVDF (with carbon additive)	from -10°C to + 100°C

**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

Lenght	Tmax (PP)	Tmax (PVDF)
500 mm	70	100
800 mm	65	95
1000 mm	60	90
1250 mm	55	85

IM 110

Specifications and types

Suction fittings	2” m BSPP or DN 50 on request
Delivery fittings	1”1/2 m BSPP or DN 40 on request
Max. flow rate	20 m3/h
Max. head	15 m
Viscosity up to	500 cps
Standard open impeller	Ø 120 mm H 8 mm *
Solids passing	Ø max 6 mm

* Special versions are available on request for the fluid pumped

Standard electric motor:

Kw	1,1
HP	1,5
Constructive Form	B5
RPM	2900
Three-phase 230/400 V	230/400 V
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

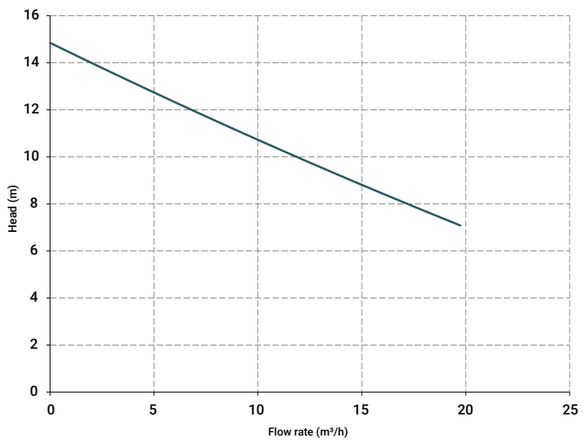
Plastic material
PP

STD column lenght	PP weight*	PVDF weight*
500 mm	15 Kg	16 Kg
800 mm	19 Kg	20 Kg
1000 mm	22 Kg	23 Kg
1250 mm	24 Kg	25 Kg

* The weights refer to the pump without the motor
NB: Special executions only on request with column length from min. 250 mm to max. 1000 mm

Plastic material
PVDF

Curves



Operating temperatures**

PP (with glass additive)	from 0°C to + 70°C,
PVDF (with carbon additive)	from -10°C to + 100°C

**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

Lenght	Tmax (PP)	Tmax (PVDF)
500 mm	70	100
800 mm	65	95
1000 mm	60	90
1250 mm	55	85

IM 120

Specifications and types

Suction fittings	2” m BSPP or DN 50 on request
Delivery fittings	1”1/2 m BSPP or DN 40 on request
Max. flow rate	25 m3/h
Max. head	15,5 m
Viscosity up to	500 cps
Standard open impeller	Ø 125 mm H 8 mm *
Solids passing	Ø max 6 mm

* Special versions are available on request for the fluid pumped

Standard electric motor:

Kw	1,5
HP	2
Constructive Form	B5
RPM	2900
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

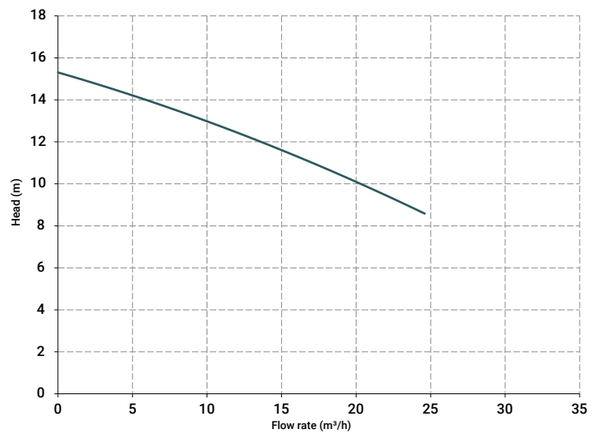
Plastic material
PP

STD column lenght	PP weight*	PVDF weight*
500 mm	15 Kg	16 Kg
800 mm	19 Kg	20 Kg
1000 mm	22 Kg	23 Kg
1250 mm	24 Kg	25 Kg

* The weights refer to the pump without the motor
NB: Special executions only on request with column length from min. 250 mm to max. 1000 mm

Plastic material
PVDF

Curves



Operating temperatures**

PP (with glass additive)	from 0°C to + 70°C,
PVDF (with carbon additive)	from -10°C to + 100°C

**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liqui

Lenght	Tmax (PP)	Tmax (PVDF)
500 mm	70	100
800 mm	65	95
1000 mm	60	90
1250 mm	55	85

IM 130

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	2” m BSPP or DN 50 on request
Delivery fittings	G 1”1/2 m BSPP or DN 40 on request
Max. flow rate	30 m3/h
Max. head	20 m
Viscosity up to	500 cps
Standard open impeller	Ø 130 mm H 8 mm *
Solids passing	Ø max 6 mm

* Special versions are available on request for the fluid pumped

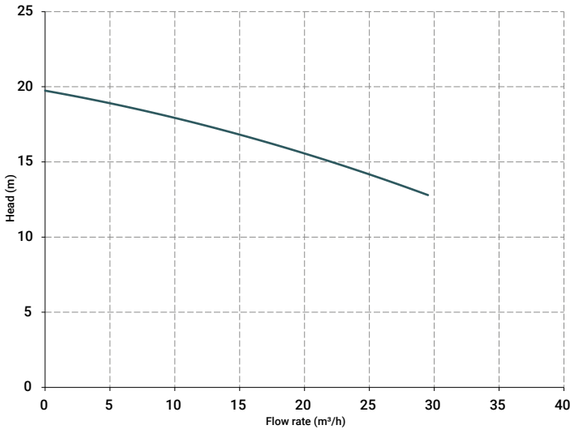
Standard electric motor:

Kw	2,2
HP	3
Constructive Form	B5
RPM	2900
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

STD column lengh	PP weight*	PVDF weight*
500 mm	15 Kg	16 Kg
800 mm	19 Kg	20 Kg
1000 mm	22 Kg	23 Kg
1250 mm	24 Kg	25 Kg

* The weights refer to the pump without the motor
NB: Special executions only on request with column length from min. 250 mm to max. 1000 mm

Curves



Operating temperatures**

PP (with glass additive)	from 0°C to + 70°C,
PVDF (with carbon additive)	from -10°C to + 100°C

**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

Lenght	Tmax (PP)	Tmax (PVDF)
500 mm	70	100
800 mm	65	95
1000 mm	60	90
1250 mm	55	85

IM 140

Plastic material
PP

Plastic material
PVDF

Specifications and types

Suction fittings	2” m BSPP or DN 50 on request
Delivery fittings	1”1/2 m BSPP or DN 40 on request
Max. flow rate	40 m3/h
Max. head	21 m
Viscosity up to	500 cps
Standard open impeller	Ø 130 mm H 14 mm *
Solids passing	Ø max 12 mm

* Special versions are available on request for the fluid pumped

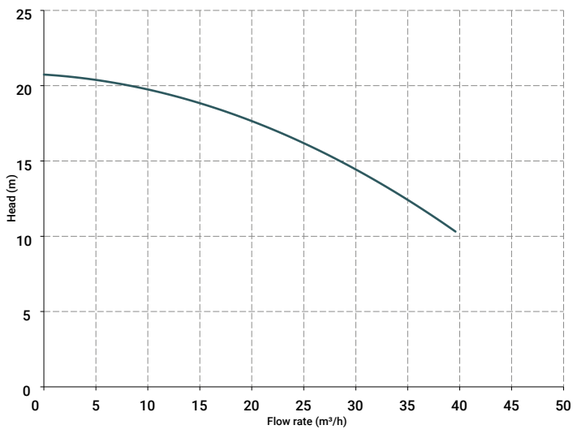
Standard electric motor:

Kw	3
HP	4
Constructive Form	B5
RPM	2900
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
Single-phase (up to 3 kw)	on request
ATEX	on request

PP weight*	PP weight*	PVDF weight*
500 mm	15 Kg	16 Kg
800 mm	19 Kg	20 Kg
1000 mm	22 Kg	23 Kg
1250 mm	24 Kg	25 Kg

* The weights refer to the pump without the motor
NB: Special executions only on request with column length from min. 250 mm to max. 1000 mm

Curves



Operating temperatures**

PP (with glass additive)	from 0°C to + 70°C,
PVDF (with carbon additive)	from -10°C to + 100°C

**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

Lenght	Tmax (PP)	Tmax (PVDF)
500 mm	70	100
800 mm	65	95
1000 mm	60	90
1250 mm	55	85

IM 150

Plastic material PP

Plastic material PVDF

Specifications and types

Suction fittings	2”1/2 f BSPP or DN 65 on request
Delivery fittings	2” m BSPP or DN 50 on request
Max. flow rate	42 m3/h
Max. head	24 m
Viscosity up to	500 cps
Standard open impeller	Ø 160 mm H 4 mm -10° *
Solids passing	Ø max 2 mm

* Special versions are available on request for the fluid pumped

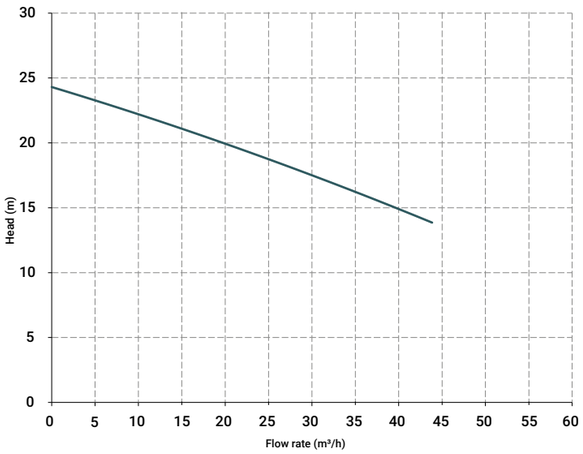
Standard electric motor:

Kw	4
HP	5,5
Constructive Form	B5
RPM	2900
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
ATEX	on request

STD column lenght	PP weight*	PVDF weight*
500 mm	28 Kg	30 Kg
800 mm	31 Kg	33 Kg
1000 mm	33 Kg	35 Kg
1250 mm	36 Kg	38 Kg

* The weights refer to the pump without the motor.
NB: Special executions only on request with column length from min. 250 mm to max. 1000 mm

Curvess



Operating temperatures**

PP (with glass additive	from 0°C to + 70°C,
PVDF (with carbon additive)	from -10°C to + 100°C

**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

Lenght	Tmax (PP)	Tmax (PVDF)
500 mm	70	100
800 mm	65	95
1000 mm	60	90
1250 mm	55	85

IM 155

Plastic material PP

Plastic material PVDF

Specifications and types

Suction fittings	2”1/2 f BSPP or DN 65 on request
Delivery fittings	2” m BSPP or DN 50 on request
Max. flow rate	42 m3/h
Max. head	27 m
Viscosity up to	500 cps
Standard open impeller	Ø 162 mm H 4 mm -10° *
Solids passing	Ø max 2 mm

* Special versions are available on request for the fluid pumped

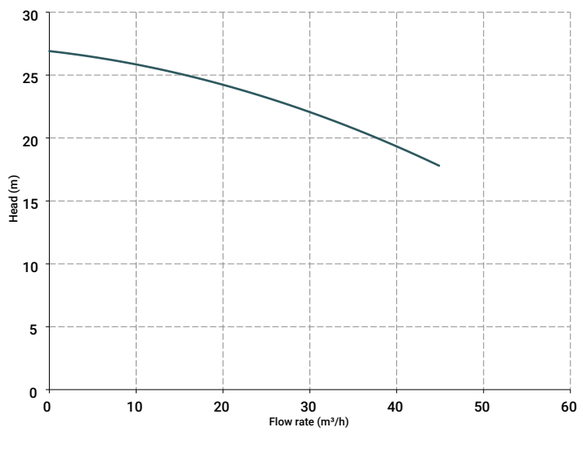
Standard electric motor:

Kw	5,5
HP	7,5
Constructive Form	B5
RPM	2900
Three-phase 230/400 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
ATEX	on request

STD column lenght	PP weight*	PVDF weight*
500 mm	28 Kg	30 Kg
800 mm	31 Kg	33 Kg
1000 mm	33 Kg	35 Kg
1250 mm	36 Kg	38 Kg

* The weights refer to the pump without the motor.
NB: Special executions only on request with column length from min. 250 mm to max. 1000 mm

Curvess



Operating temperatures**

PP (with glass additive	from 0°C to + 70°C,
PVDF (with carbon additive)	from -10°C to + 100°C

**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

Lenght	Tmax (PP)	Tmax (PVDF)
500 mm	70	100
800 mm	65	95
1000 mm	60	90
1250 mm	55	85

IM 160

Plastic material PP

Plastic material PVDF

Specifications and types

Suction fittings	2”1/2 f BSPP or DN 65 on request
Delivery fittings	2” m BSPP or DN 50 on request
Max. flow rate	55 m3/h
Max. head	32 m
Viscosity up to	500 cps
Standard open impeller	Ø 162 mm H 11 mm -10° *
Solids passing	Ø max 9 mm

* Special versions are available on request for the fluid pumped

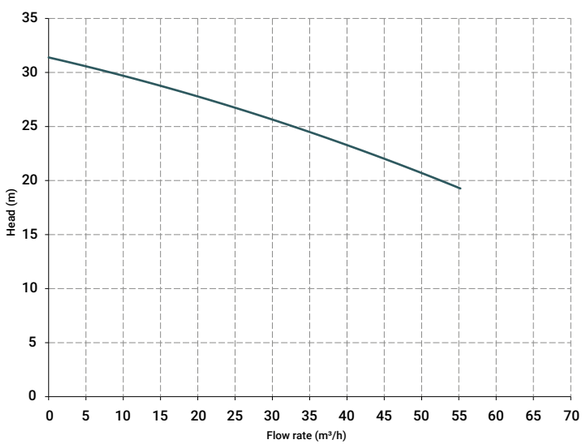
Standard electric motor:

Kw	7,5
HP	10
Constructive Form	B5
RPM	2900
Three-phase 400/690 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
ATEX	on request

STD column lenght	PP weight*	Peso PVDF*
500 mm	31 Kg	33 Kg
800 mm	34 Kg	36 Kg
1000 mm	36 Kg	38 Kg
1250 mm	39 Kg	41 Kg

* The weights refer to the pump without the motor
NB: Special executions only on request with column length from min. 250 mm to max. 1000 mm

Curves



Operating temperatures**

PP (with glass additive)	from 0°C to + 70°C,
PVDF (with carbon additive)	from -10°C to + 100°C

**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

Lenght	Tmax (PP)	Tmax (PVDF)
500 mm	70	100
800 mm	65	95
1000 mm	60	90
1250 mm	55	85

IM 180

Plastic material PP

Plastic material PVDF

Specifications and types

Suction fittings	2”1/2 f BSPP or DN 65 on request
Delivery fittings	2” m BSPP or DN 50 on request
Max. flow rate	75 m3/h
Max. head	38 m
Viscosity up to	500 cps
Standard open impeller	Ø 176 mm H 13 mm -10° *
Solids passing	Ø max 11 mm

* Special versions are available on request for the fluid pumped

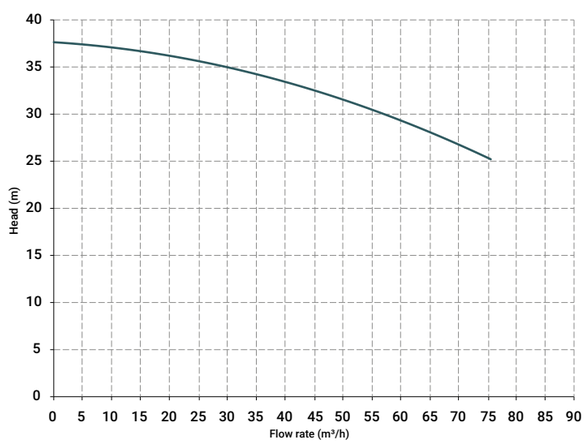
Standard electric motor:

Kw	11
HP	15
Constructive Form	B5
RPM	2900
Three-phase 400/690 V	-
50/60	-
2 poles	-
Efficiency class	IE3
Protection	IP55
Ambient temperature	-30°C + 45°C
Aluminium/Cast iron	-
ATEX	on request

STD column lenght	PP weight*	Peso PVDF*
500 mm	31 Kg	33 Kg
800 mm	34 Kg	36 Kg
1000 mm	36 Kg	38 Kg
1250 mm	39 Kg	41 Kg

* The weights refer to the pump without the motor
NB: Special executions only on request with column length from min. 250 mm to max. 1000 mm

Curves



Operating temperatures**

PP (with glass additive)	from 0°C to + 70°C,
PVDF (with carbon additive)	from -10°C to+ 100°C

**Measurements should be taken with agitated water; temperatures may vary depending on the conditions of the system and/or the processed liquid

Lenght	Tmax (PP)	Tmax (PVDF)
500 mm	70	100
800 mm	65	95
1000 mm	60	90
1250 mm	55	85

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Line introduction
Drum pumps

Drum pumps consist of a dip tube, at the end of which the open impeller is fitted. It is secured to the drive shaft, connected to the pump with a ring nut.

The operation consists of an impeller integrated with the shaft, connected to the electric or pneumatic motor with a coupling joint.

Drum pumps must be used exclusively vertically and with the pump immersed in the fluid.

TR PUMPS CODES ENCODING

ex. TRPH1200
TR PP, Hastelloy shaft, dip tube length 1200 mm

Pump Model	Pump Material	Shaft Material	Tube Length
TR - Drum transfer	P - Polypropylene F - PVDF A - AISI 316	H - Hastelloy A - AISI 316	0900 - 900 mm 1200 - 1200 mm

TRP
Polypropylene Casing

Specifications and types

Dip tube	Ø 42,5 mm
Hose holder	Ø 25 mm
Max Operating temp	65° C
Total weight in Kg*	1.4 for length of 900 mm / 1.7 for length of 1200 mm
Mat. Dip tube	Polypropylene
Mat. Shaft	HASTELLOY or AISI 316
Mat. Impeller	ECTFE
Mat. Suction outlet	Polypropylene
Mat. Seal gasket in contact with the fluid - MIM Viton®	Viton® - EPDM
Length mm	900 or 1200
Max Operating temp	from 3°C to 65°C

*The weight refers to the pump without the motor.

TRF
PVDF casing

Specifications and types

Dip tube	Ø 40 mm
Hose holder	Ø 25 mm
Max Operating temp	95° C
Total weight in Kg*	1.6 for length of 900 mm / 1.9 for length of 1200 mm
Mat. Dip tube	PVDF
Mat. Shaft	HASTELLOY
Mat. Impeller	ECTFE
Mat. Suction outlet	ECTFE
Mat. Seal gasket in contact with the fluid - MIM Viton®	Viton® - EPDM
Length mm	900 or 1200
Max Operating temp	from 3°C to 95°C

*The weight refers to the pump without the motor.

TRA
AISI 316 casing

Specifications and types

Dip tube	Ø 42,5 mm
Hose holder	Ø 25 mm
Max Operating temp	95° C
Total weight in Kg*	4.3 for length of 900 mm / 5.3 for length of 1200 mm
Mat. Dip tube	AISI 316
Mat. Shaft	AISI 316
Mat. Impeller	ECTFE
Mat. Suction outlet	ECTFE
Mat. Seal gasket in contact with the fluid - MIM Viton®	Viton® - EPDM
Length mm	900 or 1200
Max Operating temp	from 3°C to 95°C

*The weight refers to the pump without the motor.

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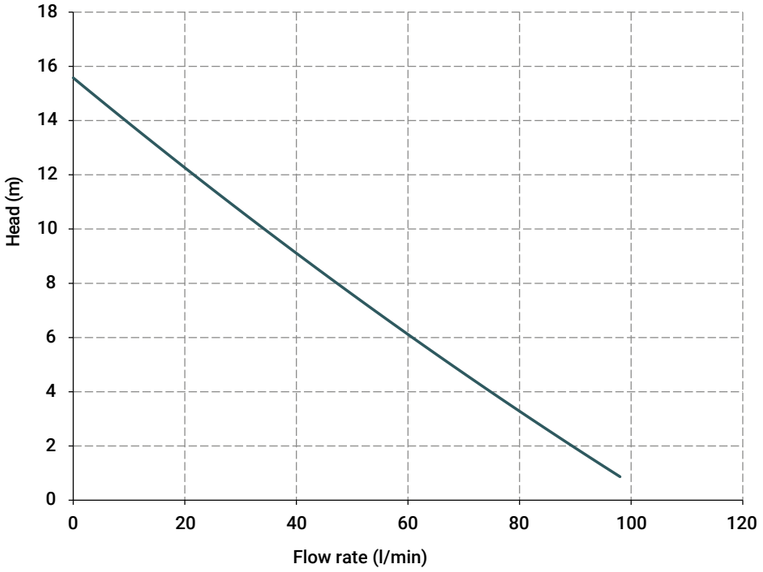
TR-EL SERIES - Electric motor

Drum pumps with electric motor at 800 Watt equipped with open impeller that allows the continuous pumping of clean corrosive fluids with apparent viscosity up to 900 cps.



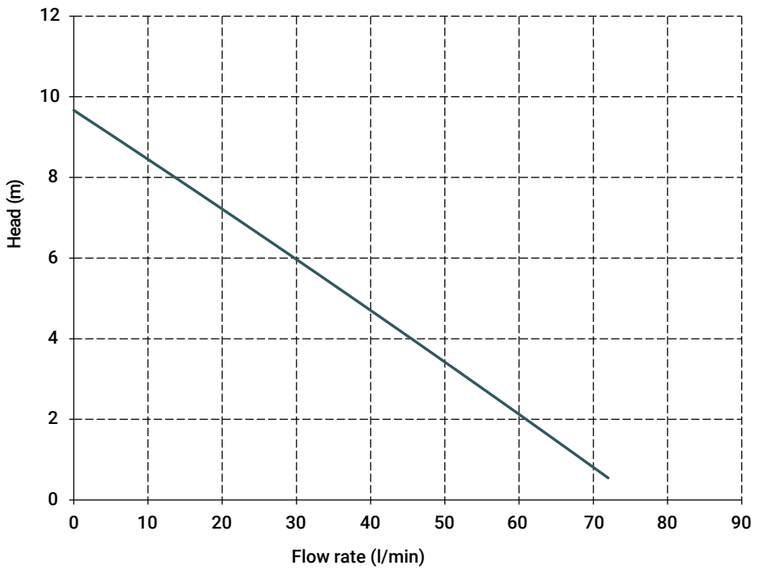
Technical Specifications Electric Motors

Power	800 Watt
Voltage	230 V single-phase (50/60 HZ)
RPM	10500
Class	F
Flow rate	90 l/min
Viscosity	900 cps
Density	1,6 g/cm3
Weight in kg	3,8
ATEX motor	on request

(NB: The electrical cable is supplied without plug)
Contact the sales office for information on the ATEX motor

TR-PM SERIES - Pneumatic motor

Drum pumps with pneumatic motor equipped with open impeller that allows the continuous pumping of clean corrosive fluids with apparent viscosity up to 600 cps. The pump allows the flow rate adjustment.



Technical Specifications Electric Motors

Pneumatic motor	Standard
Power	0,42 HP (300 Watt)
Flow rate	70 l/min
Viscosity	600 cps
Density	1,2 g/cm3
Weight in Kg	1,1
ATEX motor	on request

Contact the sales office for information on the ATEX motor

Products
Pump protection basket strainer

Thanks to the large total passage surface of the bas-ket, these filters are ideally suited to be installed on the suction fitting of the pumps, to protect them from suspended solids, filaments, algae and foreign bod-ies, without causing excessivedrops in capacity.

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Products

Mixers

Compact mixers designed for a wide range of applications, they can be used regardless of the shape and size of the basin.

Peristaltic pumps

Peristaltic pumps operate with a “flowing pressure” exerted on a flexible hose with rollers, rotating parallel to an axis, and supported by a rollers holder.

Optional

Accessories

Debem offers a wide range of accessories for all the types of pumps in its catalogue. Accessories from other manufacturers or designed and built directly by the company, which are the result of our technical experience and specific research in pump applications.

Cycle counter
BOXER FAMILY

Anti-vibration feet kit
BOXER FAMILY

Air regulation kit
BOXER FAMILY

Three-way valves
BOXER FAMILY

Foot valve
BOXER FAMILY

Dispensers
BOXER FAMILY

Truck for Boxer pumps
BOXER FAMILY

Dip tube filter
TR FAMILY

Microvalves
BOXER FAMILY

IM Filter
IM FAMILY

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Why choose us

Debem DNA: cohesion, quality, innovation, customer first.

History
Over 40 years of innovation, research, quality and excellence.

Patents Made in Italy
The products are entirely designed, patented and built in Italy by Debem.

International distribution
Debem's products can count on an extensive global distribution (see network).

Materials and Technology
Debem's products are constructed with the finest quality, certified Italian materials. We use the latest generation technologies in line with the industry 4.0 standards.

Service and consultancy
Customer service able to resolve questions tied to product selection and the most suitable chemical compatibility for their requirements. Support service that responds to technical, installation and pump optimisation queries.

Customised solutions
Debem's air-operated double diaphragm pumps can be customised based on the customer's requirements and application needs.

Research & Development –Innovation
Debem's technical office, alongside the research and development department, is constantly developing new projects and innovating current products.

Ability to handle emergencies
Extremely quick deliveries of finished products and of sparparts for every pump model in the catalogue.

Quality
All the products that leave the company are stamped with a code that includes the production data entered into a database, to ensure utmost quality through every stage of the production process.

Sustainability

A concrete commitment, in line with planet needs

Sustainable energy, positive impact
We embrace solar energy as the primary source of energy. The solar panels installed on our structure allow us to generate clean energy and significantly reduce CO2 emissions.

Page reduction, zero compromises
We have reduced the size of our catalog and trimmed some non essential pages to reduce paper usage. However, this has not compromised the quality of the information provided.

At the heart of our corporate philosophy
We create internal programs that stimulate energy conservation, responsible use of resources and the promotion of sustainable practices to spread eco-friendly practices throughout the company.

Our commitment is just the beginning
We are aware that our commitment to sustainability is just the beginning of a long journey. We want to involve our partners and customers in this vision, to take a step forward towards a greener future.

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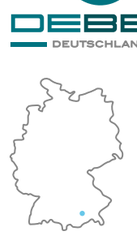
Officially engaged
with performance.

Web and contacts

Visit our website to learn more about all the products and their characteristics.

The new mobile responsive website is available in English, German, French, Italian, Spanish.



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