

CHEMICAL PUMPS SINCE 1992



**60Hz PERFORMANCE
CURVES**

MAG DRIVE CENTRIFUGAL PUMPS

In seal-less magnetic drive centrifugal pumps, the external magnet is directly connected to the motor shaft and it transmits the torque to the internal magnet. The magnetic field created produces a rotation without physical contact between the parts so the impeller spins and moves the fluid. The rear casing is placed between the two magnet joints and it hermetically closes the hydraulic part from the motor.

HTM PP/PVDF



HCM PP/PVDF



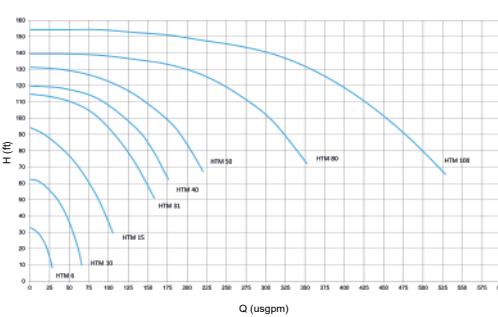
HTM SS 316



TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	2-528 USGPM	0,4-120 m ³ /h
MAX HEAD	148 ft	45 m
TEMPERATURE	+32/+190°F	+0/+90°C
MAX NP @ 20°C	90 PSI	6 bar

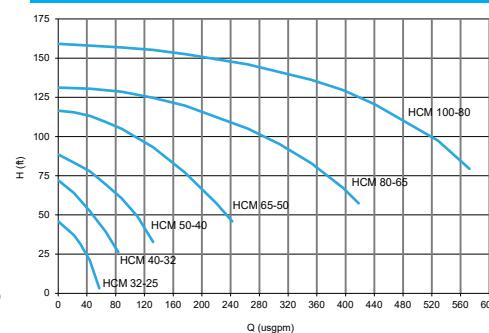
CURVES 60 Hz - 3500 RPM



TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	2-528 USGPM	0,4-120 m ³ /h
MAX HEAD	148 ft	45 m
TEMPERATURE	+32/+190°F	+0/+90°C
MAX NP @ 20°C	90 PSI	6 bar

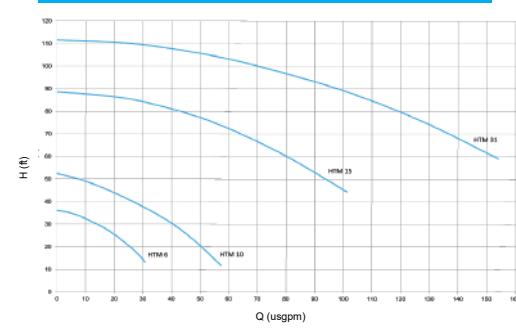
CURVES 60 Hz - 3500 RPM



TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	3-175 USGPM	0,6 -39 m ³ /h
MAX HEAD	110 ft	33 m
TEMPERATURE	-40/+320°F	-40/+160°C
MAX NP @ 20°C	230 PSI	16 bar

CURVES 60 Hz - 3500 RPM



MAG DRIVE TURBINE PUMPS

In seal-less magnetic drive turbine pumps, the external magnet is directly connected to the motor shaft and it transmits the torque to the internal magnet. The magnetic field created produces a rotation without physical contact between the parts and the turbine spins and moves the fluid. The rear casing is placed between the two magnet joints and it hermetically closes the hydraulic part from the motor.

HTT PP/PVDF



HTT-SP PP/PVDF



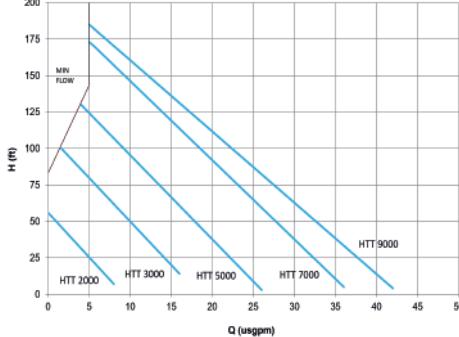
HTA AISI 316



TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	1- 42 USGPM	0,2- 9 m ³ /h
MAX HEAD	180 ft	54 m
TEMPERATURE	+32-190°F	0-90°C
MAX NP @ 20°C	90 PSI	6 bar

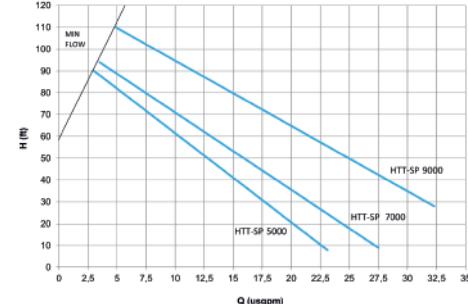
CURVES 60 Hz - 3500 RPM



TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	3-32 USGPM	1-7 m ³ /h
MAX HEAD	110 ft	33 m
TEMPERATURE	+32/+190°F	0/+90°C
MAX NP @ 20°C	90 PSI	6 bar

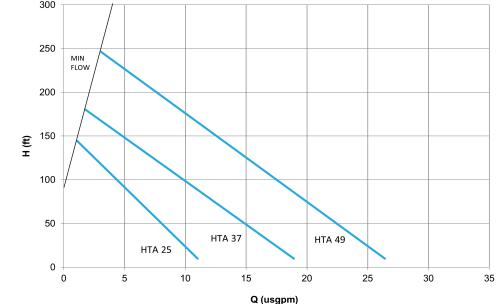
CURVES 60 Hz - 3500 RPM



TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	2-26 USGPM	6 m ³ /h
MAX HEAD	250 ft	76 m
TEMPERATURE	-40/+320°F	-40/+160°C
MAX NP @ 20°C	360 PSI	25 bar

CURVES 60 Hz - 3500 RPM



SELF-PRIMING MAG DRIVE CENTRIFUGAL PUMPS

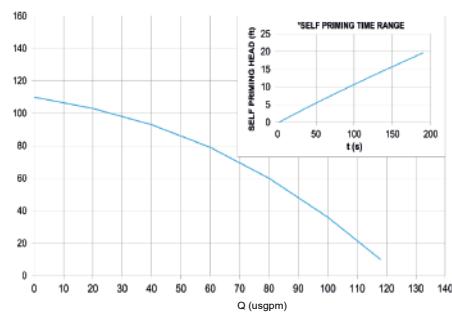
HTM SP PP/PVDF



TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	13-120 USGPM	2-27 m ³ /h
MAX HEAD	110 ft	33 m
TEMPERATURE	+32/190°F	0/90°C
MAX NP @ 20°C	90 PSI	6 bar

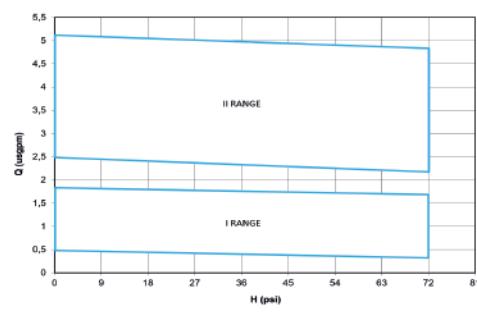
CURVES 60 Hz - 3500 RPM



TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	0,33 - 5 USGPM	0,07-1,1 m ³ /h
MAX HEAD	72 PSI	5 bar
TEMPERATURE	-40 / +32°F	0 / +90°C
MAX NP @ 20°C	72 PSI	5 bar

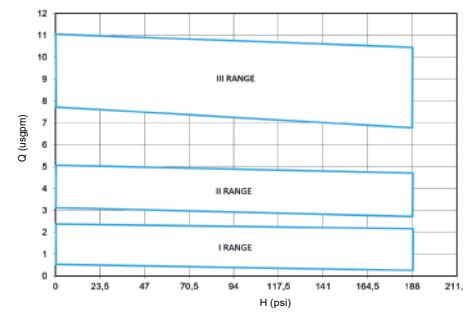
CURVES 60 Hz - 3500 RPM



TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	0,33-11 USGPM	0-2,5 m ³ /h
MAX HEAD	190 PSI	13 bar
TEMPERATURE	-94/+392°F	-70/+200°C
MAX NP @ 20°C	362 PSI	25 bar

CURVES 60 Hz - 3500 RPM



VERTICAL PUMPS

Vertical centrifugal pumps are suitable for installations with the column immersed directly in the tank.

HV PP/PVDF



TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	3-212 USGPM	0,6-48 m ³ /h
MAX HEAD	110 ft	33 m
TEMPERATURE	+32/+194°F	0/+90°C
MAX COLUMN LENGTH	1000 mm	1000 mm

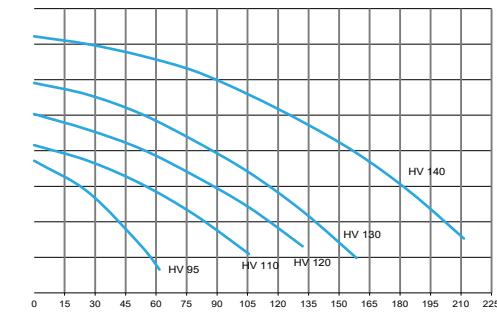
HVL PP/PVDF



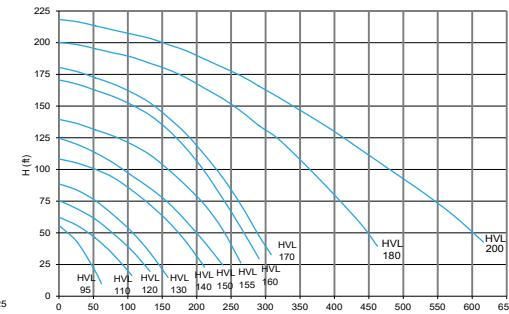
TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	3-600 USGPM	0,6-130 m ³ /h
MAX HEAD	225 ft	70 m
TEMPERATURE	32/+194°F	0/+90°C
MAX COLUMN LENGTH	2000 mm	2000 mm

CURVES 60 Hz - 3500 RPM



CURVES 60 Hz - 3500 RPM



MECHANICAL SEAL CENTRIFUGAL PUMPS

Mechanical seal pumps are the right solution when pumping fluids containing solids in suspension.

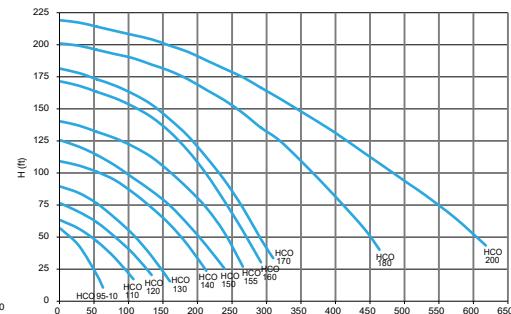
HCO PP/PVDF



TECHNICAL DATA

	60 Hz	60 Hz
CAPACITY	3-600 USGPM	0,6-130 m ³ /h
MAX HEAD	225 PSI	70 bar
TEMPERATURE	+32/+194°F	0/+90°C
MAX NP @ 20°C	90 PSI	6 bar

CURVES 60 Hz - 3500 RPM



AIR-OPERATED DOUBLE DIAPHRAGM PUMPS

HAOD



TECHNICAL DATA

AIR PRESSURE	8 bar - 115 PSI
CAPACITY	21-310 l/min - 5-80 USGPM
MAX HEAD	80 m - 262 ft
TEMPERATURE	PP 60°C-PVDF 95°C-AISI 316 95°C PP 140°F-PVDF 200°F-AISI 316 200°F
MATERIALS	PP, PVDF, AISI 316
CONNECTIONS	G 3/8", G 1/2", G 3/4", G 1", G 1 1/2"

The double diaphragm pumps series HAOD is suitable to pump aggressive liquids, even with very high viscosity and solids in suspension. These pumps are built with an anti-stalling pneumatic circuit that ensures the highest possible level of security and efficiency and it doesn't require lubricated air. The HAOD pumps are available in several materials and dimensions and they can operate in potentially explosive atmospheres.

GemmeCotti ATEX certified pumps are suitable for zone 1 II 2G e 2 II 3G.

The ATEX certified pumps models available are:

- EM-C in AISI 316: for zone 1 and 2 (see pump model HTM SS 316)
- EM-T in AISI 316: for zone 1 and 2 (see pump model HTA AISI 316)
- EM-P in AISI 316: for zone 1 and 2 (see pump model HTP AISI 316)

- EM-C in PP or PVDF: only for zone 2 (see pump model HTM PP/PVDF)
- EM-C SP in PP or PVDF: only for zone 2 (see pump model HTM SP PP/PVDF)
- EM-T in PP or PVDF: only for zone 2 (see pump model HTT PP/PVDF)
- EM-P in PP or PVDF: only for zone 2 (see pump model HPP/HPF PP/PVDF)
- EM-T SP in PP or PVDF: only for zone 2 (see pump model HTT-SP PP/PVDF)
- EM-CO in PP or PVDF: only for zone 2 (see pump model HCO PP/PVDF)

DRY-RUNNING PROTECTION DEVICE

To prevent damages to the pumps due to the lack of liquid, GemmeCotti supplies the dry running protection device. This device is particularly recommended during the operations of tanker unloading and for all the applications in which there is the risk of liquid shortage. Thanks to the adjustable threshold and timer, it is possible to set up the minimum power and operation time of the device. If the power is lower than the set value, the pump will automatically stop.

Single Phase CURRENT RELAY
Multirange 15-35A
2 set points MAX / min
Also for motors with INVERTER



BOLTS AND NUTS

GemmeCotti also supplies a variety of bolts and nuts:

BOLTS:

M16x110
Max tightening torque: 15 Nm
Material: PVDF

M12x50
Max tightening torque: 7 Nm
Material: PVDF

M10x25
Max tightening torque: 4,5 Nm
Material: PVDF

NUTS:

M16 / M12 / M16
Material: PVDF



FLANGES

GemmeCotti pumps are usually supplied with threaded connections. Upon request we can also supply DIN or ANSI flanges for thermoplastic pumps (flat stub + free flange) and welded DIN or ANSI flanges for AISI 316 pumps.

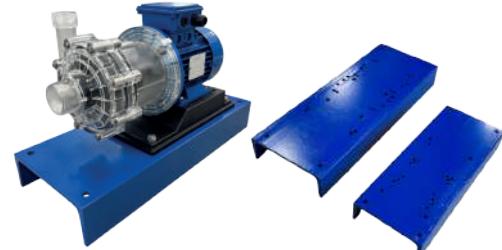


ATEX PUMPS AISI 316 AND PP/PVDF



ACCESSORIES

METALLIC UPN BASEPLATES



GemmeCotti can supply UPN baseplates as an optional for our chemical horizontal pumps, both magnetic drive (PP/PVDF/AISI 316) and mechanical seal (PP/PVDF).

Each pump model has a specific baseplate configuration. We offer four configurations, optimized for different pump types, to ensure best performance and structural fastening.

BASEPLATES IN PP



Baseplate in PP suitable for pumps complete with motors B3/B5.

Available in 3 different dimensions:

- BASEPLATE TYPE "A" suitable for: IEC motors B3/B5 from size 56 to size 71.
- BASEPLATE TYPE "B" suitable for: IEC motors from size 80 to size 90 and NEMA motors 56TC and 145TC.
- BASEPLATE TYPE "C" suitable for: IEC motors from size 100 to size 112 and NEMA motors 184TC.

PT 100 THERMOPROBE

For pumps installed in ATEX zone 1 II 2G areas, GemmeCotti can offer the PT 100 thermoprobe, a high-precision temperature sensor specifically designed for accurate monitoring of mag-drive pump operating temperatures.



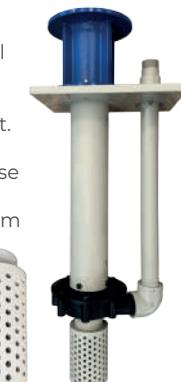
DIAPHRAGM SEAL PRESSURE GAUGE

GemmeCotti offers diaphragm seal pressure gauges in Polypropylene and PVDF, designed to protect pressure measuring instruments from harsh process conditions.



SUCTION STRAINER

GemmeCotti can supply suction strainers as an accessory for vertical pumps. The suction strainer has a length of 200mm and can be tightened to the pump suction port. Suction strainers protect pumps from contamination, trapping coarse impurities and they prevent solids present in the liquid or at the bottom of the tank or sump from entering the pump.



CHEMICAL COMPATIBILITY GUIDE

Legend: **A**= Very Good | **B**=Good | **C**=Poor, not recommended | **D**=Very poor, not recommended | **1**= Good until 22°C | **2**=Good until 48°C (120°F)

CHEMICAL	FORMULA	PUMP MATERIALS			O-RING MATERIALS		
		PP	PVDF	AISI 316	EDPM	Viton	V/FEP*
ACETIC ACID	CH ₃ COOH	B	C	B	A	B	A
ACETIC ACID 20%	CH ₃ COOH	A	A	A	A2	B	A
ACETIC ACID 60%	CH ₃ COOH	A	B	B	A	D	A
ACETIC ACID, GLACIAL	CH ₃ COOH	A1	A1	A	D	D	A
ACETONE	CH ₃ COOH	A	D	A	A	D	A
ADBBLUE	CO(NH ₂) ₂	A	A	A	A	C	A
ALCOHOLS:ETHYL	CH ₃ CH ₂ OH	A	A	A	A	A	A
ALCOHOLS:ISOPROPYL	(CH ₃) ₂ CHOH	A	A	B	A	A	A
ALCOHOLS:METHYL	CH ₃ OH	A	A	A	A	C	A
ALCOHOLS:PROPYL	C ₃ H ₇ OH	A	A	A	A	A	A
ALUMINUM SULFATE	Al ₂ (SO ₄) ₃	A	A	C	A	A	A
AMMONIA, LIQUID	NH ₃	A	D	A2	A	D	A
CHLORINE, ANHYDROUS LIQUID	Cl ₂	D	A2	D	C	A	A
CHLOROFORM		C1	A	A	D	A	A
CHROMIC ACID < 50%	H ₂ CrO ₄	C	A	D	C	A	A
COPPER CHLORIDE	CuCl ₂	A	A	D	A	A	A
COPPER SULFATE > 5%	CuSO ₄	A	A	A	A	A	A
DETERGENTS		A	A	A2	A	A	A
DIESEL FUEL		C	A	A1	D	A	A
ETHYL ACETATE		A1	D	B	B	D	A
FERRIC CHLORIDE	FeCl ₃	A	A	D	A	A	A
FORMALDEHYDE 100%	HCHO	A	A	A	A	A	A
FUEL OILS		C	A	A	D	A	A
GASOLINE (HIGH-AROMATIC)	C ₁₂ H ₂₆	D	A	A	D	A	A
GLUCOSE	C ₆ H ₁₂ O ₆	A	A	A	A	A	A
HYDRAULIC OIL (PETRO)		A1	A	A	D	A	A
HYDROCHLORIC ACID <33%	HCl	A2	A	D	A2	A	A
HYDROFLUORIC ACID 50%	HF	D	A	D	D	A	A
HYDROGEN PEROXIDE 10%	H ₂ O ₂	A	A	B	A	A	A
HYDROGEN PEROXIDE 30%	H ₂ O ₂	B1	A	B	B	A	A
KEROSENE		A	B	A	D	A	A
NAPHTHA		A1	A	A	D	A	A
NICKEL CHLORIDE	NiCl ₂	A	A	C	A	A	A
NITRIC ACID < 50%	HNO ₃	D	A	A1	D	A	A
OLIVE OIL		A	A	A	D	A	A
PHENOL (CARBOLIC ACID)	C ₆ H ₅ OH	A2	A2	B	B	A	A
POTASSIUM PERMANGANATE	KMnO ₄	A1	A	B	A	A	A
PHOSPHORIC ACID < 40%	H ₃ PO ₄	A	A	C	A	A	A
PHOSPHORIC ACID > 40%	H ₃ PO ₄	A	A	D	A	A	A
PHOTOGRAPHIC DEVELOPER		A	-	A	B	A	A
POTASSIUM CYANIDE	KCN	A	A	A	A	A	A
PROPYLENE GLYCOL	C ₃ H ₈ O ₂	A	A	B	A	A	A
RESINS		A2	-	A1	-	A	A
SALT BRINE		A	A	C	A	A	A
SEA WATER		A	A	C	A	A	A
SOAP SOLUTIONS		A	A	A	A	A	A
SODIUM BICARBONATE	NaHCO ₃	A	A	A	A	A	A
SODIUM BISULFITE	NaHSO ₃	A	A	A1	A	A	A
SODIUM CHLORIDE	NaCl	A	A	A2	A	A	A
SODIUM HYDROXIDE (10%)	NaOH	A	C	A	A	C	A
SODIUM HYDROXIDE (40%)	NaOH	A	C	A	A	C	A
SODIUM HYDROXIDE (50%)	NaOH	A	D	A	A	D	A
SODIUM HYPOCHLORITE 12,5%	NaOCl	C	A	C	C	A	A
SULFURIC ACID (10-75%)	H ₂ SO ₄	A	A	D	C	A	A
SULFURIC ACID (75-98%)	H ₂ SO ₄	D	A	C	D	A	A
TOLUENE (TOLUOL)	C ₆ H ₅ CH	C	C	A	D	A	A
UREA	CH ₄ N ₂ O	A	A	B	A	A	A
WATER, ACID, MINE	H ₂ O	A	A	B	A	A	A
WATER, DISTILLED	dH ₂ O	A	A	A	A	A	A
XYLENE	C ₈ H ₁₀	D	A	B	D	C	A
ZINC CHLORIDE	ZnCl ₂	A	A	B	A	A	A

*Viton/FEP

All the information in this chart is only approximate and should only be used for an initial choice of the type of materials best suited for the customers' pumps. The data comes from various highly reliable sources. Despite this, GemmeCotti itself did not carry out the relative tests, and is not responsible for the precision of the data. Therefore, GemmeCotti has no responsibility for possible malfunctions or damage of any type caused by the incorrect selection of construction materials and/or of the incorrect choice of pump size if it is not made by GemmeCotti itself after having received all suitable information regarding the application and the characteristics of the pumped liquid.



OUR COMPANY

GemmeCotti srl has been designing and manufacturing chemical pumps for acids and dangerous liquids since 1992, when its founders started their own company after considerable experience in pump design and production.

Over the years, GemmeCotti has created its own range of industrial pumps designed and manufactured by its experienced team of experts. We are now specialized in magnetic drive pumps, mechanical seal pumps and vertical pumps.

GemmeCotti pumps are valued worldwide and they are successfully used in many different industries including: chemical and petrochemical, pharmaceutical, oil refinery, electroplating, printed circuits, electronic, photography, military, water treatments, biotechnology, paper mills, textile, sugar plants, food processing, dairies and many others.



100% MADE IN ITALY

