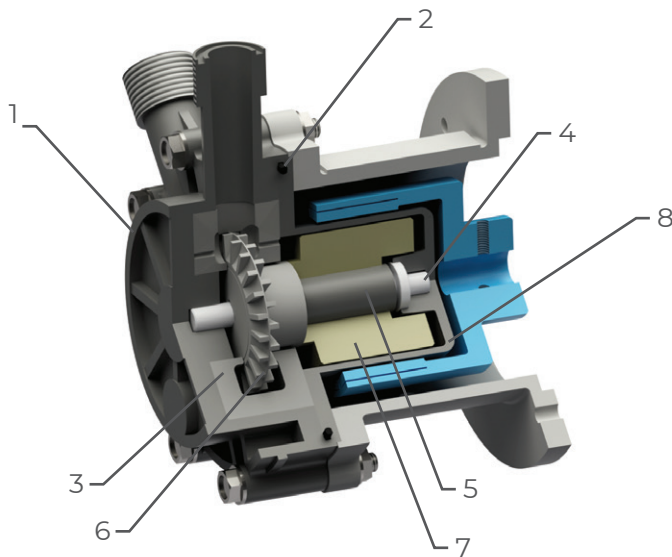




MAG-DRIVE TURBINE PUMPS

SEAL-LESS 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.



GemmeCotti supplies three different models of mag drive turbine pumps:

HTT PP/PVDF

- Thermoplastic pumps made of PP or PVDF.
- Capacity up to 9 m³/h.
- Head up to 48 mlc.

HTT-SP PP/PVDF

- Thermoplastic pumps made of PP or PVDF.
- Capacity up to 6 m³/h.
- Head up to 24 mlc.
- Machined from a block.
- Self-priming up to 5 m.

HTA AISI 316

- Metallic pumps made of stainless steel AISI 316.
- Capacity up to 7 m³/h.
- Head up to 76 mlc.

MATERIALS IN CONTACT WITH THE LIQUID

PART NUMBER - DESCRIPTION	TURBINE PUMPS		
	HTT	HTT-SP	HTA
1 - PUMP HEAD	PP or PVDF	PP or PVDF	AISI 316
2 - O-RING	EPDM or VITON	EPDM or VITON	EPDM or VITON
3 - FRONT AND REAR DISC	PP or PVDF	PP or PVDF	PTFEC
4 - SHAFT + RING	CERAMIC Al ₂ O ₃ 99,7%	CERAMIC Al ₂ O ₃ 99,7%	HASTELLOY-C 276
5 - BEARING	PTFEC	PTFEC	PTFEC
6 - IMPELLER	PVDF	PVDF	AISI 316
7 - INTERNAL MAGNET	PP or PVDF + NdFeB	PP or PVDF + NdFeB	AISI 316 + SmCo
8 - REAR CASING	PP or PVDF	PP or PVDF	AISI 316

THERMOPLASTIC MAG-DRIVE REGENERATIVE TURBINE PUMPS



STANDARD

- Gas threaded In and Out connections.
- Static shaft in high purity ceramic.
- Chemical resistant PTFE/carbon sleeve bearings.
- High torque magnetic coupling.
- Direct starting motor.

OPTIONAL

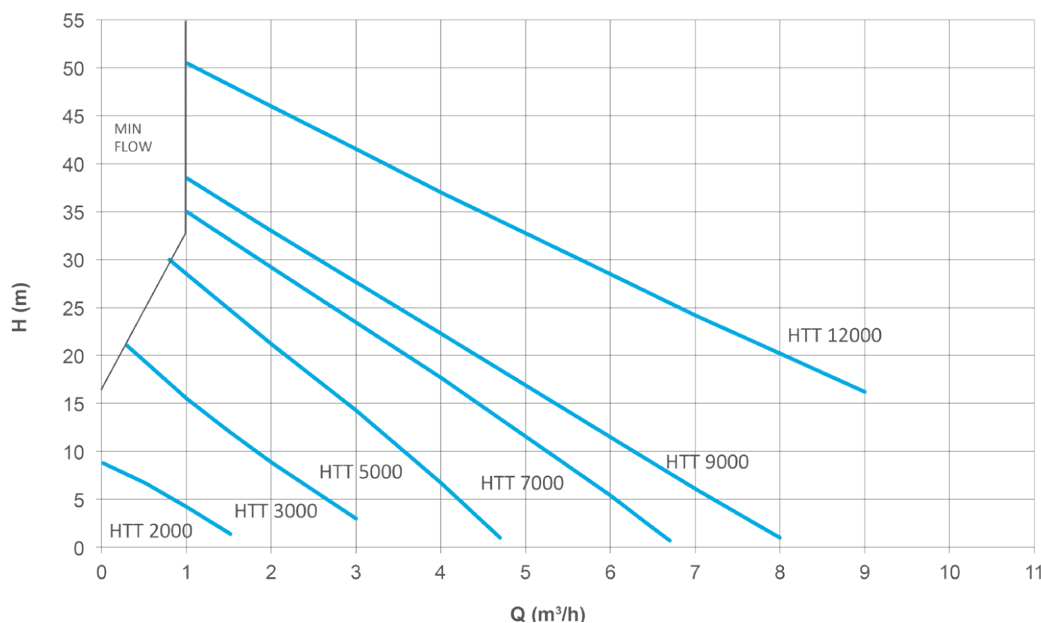
- DIN or ANSI 150 flanges available.
- Baseplate.
- Dry-running protection device.
- Available in ATEX version for zone 2II 3G (pump mod. EM-T PP/PVDF).

Mag drive regenerative turbine pumps series HTT are made of thermoplastic materials (**Polypropylene-PP** and **PVDF**) and are suitable for pumping high corrosive liquids. Thanks to the innovative mag drive system, pumps model HTT **reduce risks of leakage and emissions and the maintenance costs**. The transmission of the motion occurs through magnetic joints without any mechanical seal. This seal-less design guarantees the **maximum safety and efficiency**. The pumped liquid has to be clean and without solids in suspension.

MAIN FEATURES

- **Materials available:** PP / PVDF.
- **Plastic injection moulded.**
- **Materials in contact with the liquid:** casing and rear casing: PP/PVDF; Impeller: PVDF; o-ring: EPDM (standard for PP pumps); VITON (standard for PVDF pumps); shaft: ceramic Al_2O_3 99,7%; bearing: PTFEC.
- **Max flow:** 9 m³/h; **Max head** 48 m.
- **Max Temperature:** PP: max 70°C – PVDF: max 90°C.
- **Max viscosity:** 45 cPs.
- **Pressure rating:** NP 6 at 20°C.
- It handles up to 20% entrained gas.
HTT pump resists cavitation.

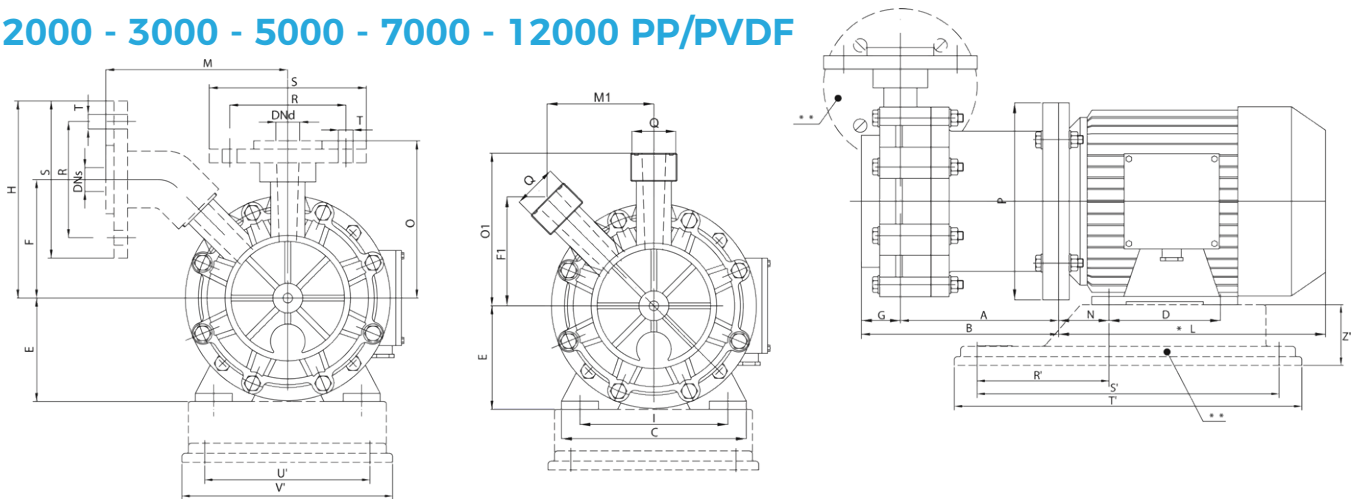
PERFORMANCE CURVES 50Hz - 2900 RPM



HTT TECHNICAL DATA

PUMP SIZE	MATERIAL	Q MAX		H MAX		SUCTION CONNECTION	DISCHARGE CONNECTION	PUMP WEIGHT (kg)		SUITABLE MOTOR POWER (kW) 2900 rpm	MOTOR FLANGE AND FRAME
		50Hz (m³/h)	60Hz (USGPM)	50Hz (m/c)	60Hz (ft)			PP	PVDF		
HTT 2000	PP- PVDF	1.7	8.8	10	50	1" MALE	1" MALE	2.8	3.8	0.37	71 - B3 / B5
HTT 3000	PP- PVDF	3	15	21	102	1" MALE	1" MALE	2.8	3.8	0.37 0.55	71 - B3 / B5 71 - B3 / B5
HTT 5000	PP- PVDF	5	26	30	140	1" 1/2 MALE	1" 1/2 MALE	8	10	0.75 1.1	80 - B3 / B5 80 - B3 / B5
HTT 7000	PP- PVDF	7	37	36	162	1" 1/2 MALE	1" 1/2 MALE	8	10	1.1 1.5 2.2	80 - B3 / B5 90 S - B3 / B5 90 L - B3 / B5
HTT 9000	PP- PVDF	8	41	36	177	1" 1/2 MALE	1" 1/2 MALE	8	10	2.2 3	90 - B3 / B5 100 - B3 / B5
HTT 12000	PP- PVDF	9	42	48	235	1" 1/2 MALE	1" 1/2 MALE	8	10	3 4	100 - B3 / B5 112 - B3 / B5

HTT 2000 - 3000 - 5000 - 7000 - 12000 PP/PVDF



PUMP TYPE	MOTOR FLANGE B3-B5	kW	DIMENSIONS - mm -																	BASEPLATE DIMENSIONS - mm						
			A	B	C	D	E	F	Fl	G	H	I	*L	M	M1	N	O	O1	P	Q	R'	S'	T	U'	V'	Z'
HTT 2000	71 2A	0.37	118	146	142	90	71	87.5	78	28	145	112	192	135	78	45	115	110	160	1" MALE	112	244	280	130	160	48
HTT 3000	71 2A 71 2B	0.37 0.55	118	146	142	90	71	86	78	28	145	112	192 215	135	78	45	115	110	160	1" MALE	112	244	280	130	160	48
HTT 5000	80 A 80 B	0.75 1.1	187	221	160	100	80	110	95	34	186	125	215 232	189	95	50	148	135	200	1" 1/2 MALE	120	302	350	157	205	60
HTT 7000	80 B 90 S 90 L	1.1 1.5 2.2	187	221	160 170 170	100 100 125	80 90 90	110	95	34	187	125 140 140	232 255 280	189	95	50 56 56	148	135	200	1" 1/2 MALE	120 120 132	302	350	157	205	60
HTT 9000	90 L2 100 L2	2.2 3	187 207	221 241	170 200	125 140	90 100	110	95	34	186	140 160	280 316	189	95	56 63	148	135	200 250	1" 1/2 MALE	132 140	302 352	350 400	157 202	205 250	60
HTT 12000	100 L 112 M	3 4	207	241	200 230	140	100 112	110	95	34	186	160 190	316 324	189	95	63 70	148	135	250	1" 1/2 MALE	140 156	352	400	202	250	60

FLANGES DIMENSIONS - mm -

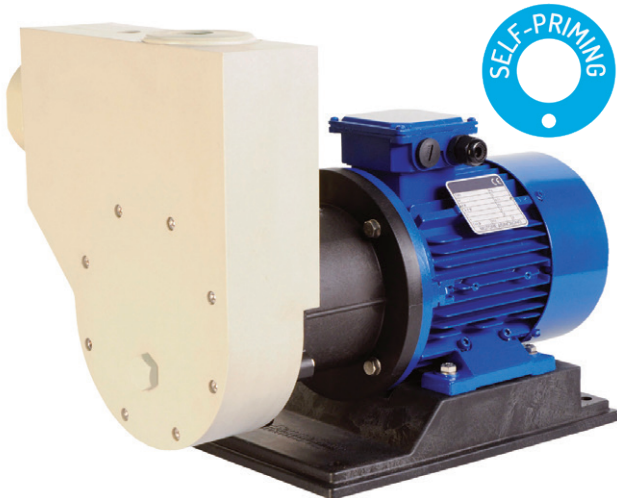
PUMP TYPE	R	S	T	DNs	DNd
HTT 2000 - 3000	85	115	14	25	25
HTT 5000 - 7000 - 9000 - 12000	110	153	18	40	40

* Different according to the manufacturer. ** OPTIONAL UPON REQUEST: DIN or ANSI Flanges and Baseplates. NOTE: DIRECTION OF ROTATION IS COUNTER CLOCKWISE AS SEEN WHEN FACING THE MOTOR. PUMPS AVAILABLE THREADED OR FLANGED.



HTT-SP PP/PVDF

THERMOPLASTIC MAG-DRIVE REGENERATIVE TURBINE PUMPS - SELF-PRIMING



HTT-SP pumps can **prime up to 5 m** with water at ambient temperature. **The casing is made from a PP solid machined block and the impeller in PVDF** for maximum chemical resistance. The casing is machined from a solid block. The impeller in PVDF is self-balanced to eliminate thrust bearing wear and it is separate to minimize the maintenance costs. This kind of pump offers **maximum resistance with standing also external corrosion**. It handles up to 20% entrained gas and resists cavitation.

STANDARD

- High torque magnetic coupling.
- Chemical resistant PTFE/carbon sleeve bearings.
- Direct starting motors.

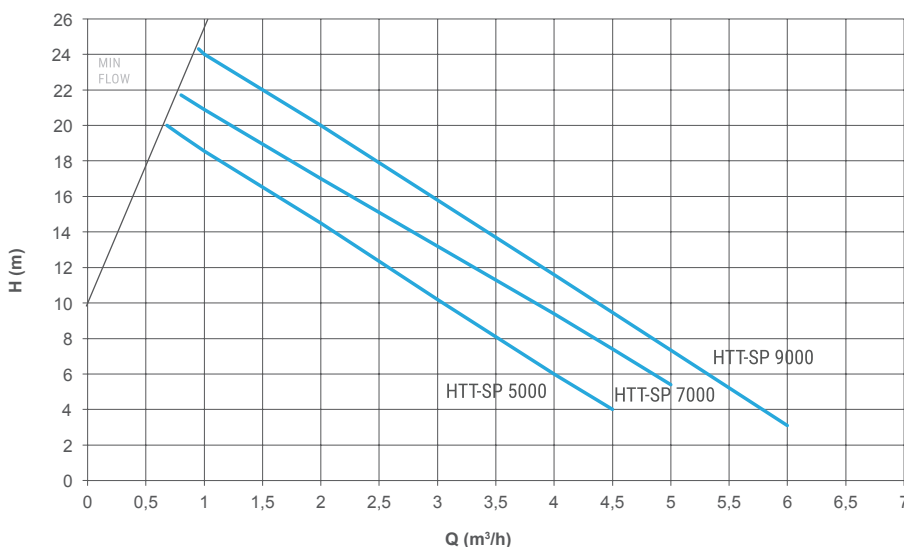
OPTIONAL

- DIN or ANSI flanges available.
- Baseplate.
- Available in ATEX version for zone 2II 3G (pump mod. EM-T SP PP/PVDF).

MAIN FEATURES

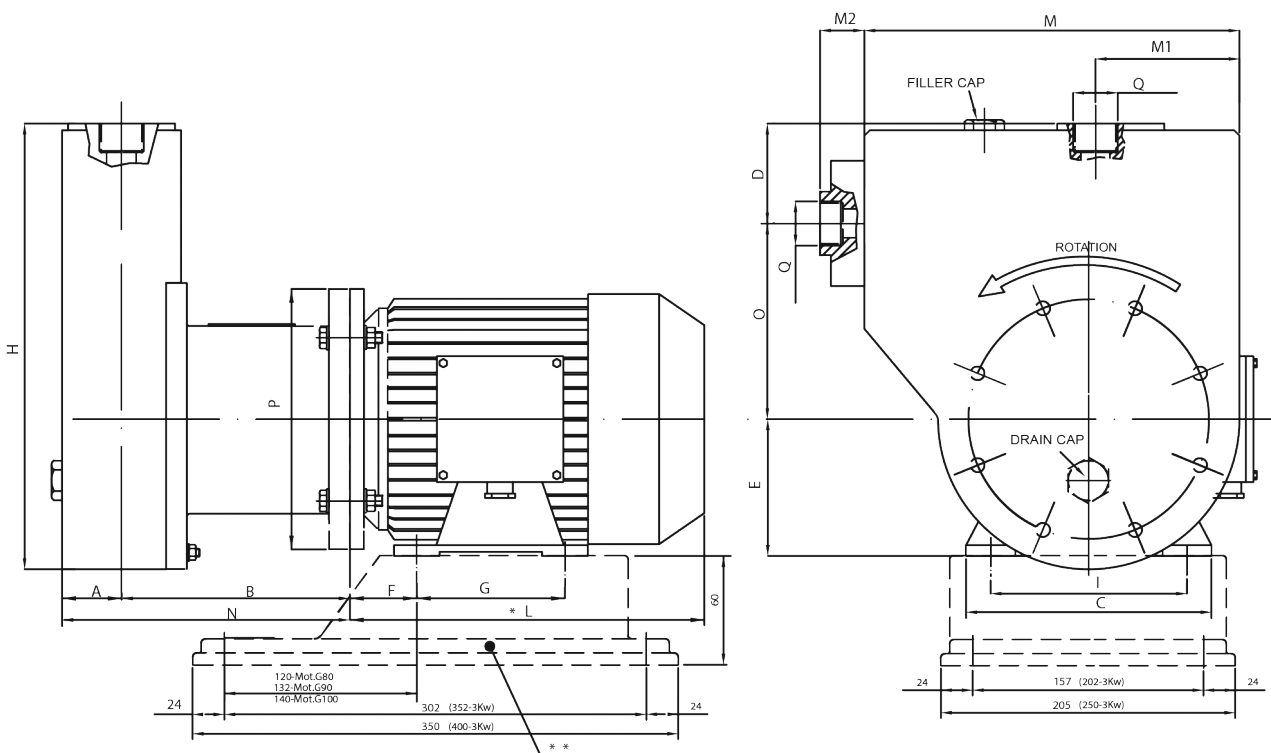
- **Materials available:** PP / PVDF.
- **Materials in contact with the liquid:**
Pump housing: PP or PVDF; Impeller: PVDF; O-ring: EPDM (standard for PP pumps) / VITON (standard for PVDF pumps); Static shaft: ceramic Al₂O₃ 99.7%; Bearing: PTFEC.
- **Max flow:** 6 m³/h; **Max head** 24 mlc.
- **Max Temperature:** PP: 70°C – PVDF: 90°C.

PERFORMANCE CURVES 50Hz - 2900 RPM



HTT-SP TECHNICAL DATA

PUMP SIZE	MATERIAL	Q MAX		H MAX		SUCTION CONNECTION	DISCHARGE CONNECTION	SUITABLE MOTOR POWER (kW) 2900 rpm	MOTOR FLANGE AND FRAME
		50Hz (m³/h)	60Hz (USGPM)	50Hz (m/c)	60Hz (ft)				
HTT-SP 5000	PP- PVDF	4.5	23	18	90	1" FEMALE	1" FEMALE	0.75 1.1	80 - B3 / B5 80 - B3 / B5
HTT-SP 7000	PP- PVDF	5	27	20	98	1" FEMALE	1" FEMALE	1.1 1.5 2.2	80 - B3 / B5 90 S - B3 / B5 90 L - B3 / B5
HTT-SP 9000	PP- PVDF	6	32	24	110	1" FEMALE	1" FEMALE	2.2 3	90 - B3 / B5 100 - B3 / B5



DIMENSIONS - mm -

PUMP TYPE	MOTOR FLANGE B3 - B5	kW	A	B	C	D	E	F	G	H	I	* L	M	M1	M2	N	O	P	Q
HTT-SP 5000	80 2A 80 2B	0.75 1.1	PP = 45 PVDF = 41	175	160	70	80	50	100	325	125	215 232	270	97.5	33	PP = 220 PVDF = 216	147	200	1" FEMALE
HTT-SP 7000	80 2B 90 S 90 L	1.1 1.5 2.2	PP = 45 PVDF = 41	175	160 170 170	70	80 90 90	56	100 100 125	325	125 140 140	232 255 280	270	97.5	33	PP = 220 PVDF = 216	152	200	1" FEMALE
HTT-SP 9000	90 L 100 L	2.2 3	PP = 45 PVDF = 41	186 206	175 200	72	90 100	56 63	125 140	329	140 160	290 315	275	102	37	PP = 231 / PVDF = 227 PP = 251 / PVDF = 247	150	200 250	1" FEMALE

* Different according to the manufacturer. ** OPTIONAL UPON REQUEST: DIN or ANSI Flanges and Baseplates.



METALLIC MAG-DRIVE REGENERATIVE TURBINE PUMPS



Mag drive regenerative turbine pumps series HTA are made of **AISI 316** and are suitable for solvents, hydrocarbons, dangerous and inflammable liquids. Thanks to the innovative mag drive system, pumps model HTA **reduce the risks of leakage and emissions and maintenance costs**. The transmission of the motion occurs through magnetic joints without any mechanical seal. This design guarantees the maximum **hermetic safety and efficiency**. The pumped liquid has to be clean and without solids in suspension. Pumps series HTA are also available in **ATEX version for zone 1 and 2** (pump model EM-T AISI 316).

STANDARD

- Static shaft in HC 276.
- Chemical resistant PTFE/Carbon sleeve bearings standard.
- High torque magnetic coupling.
- Direct starting motors.

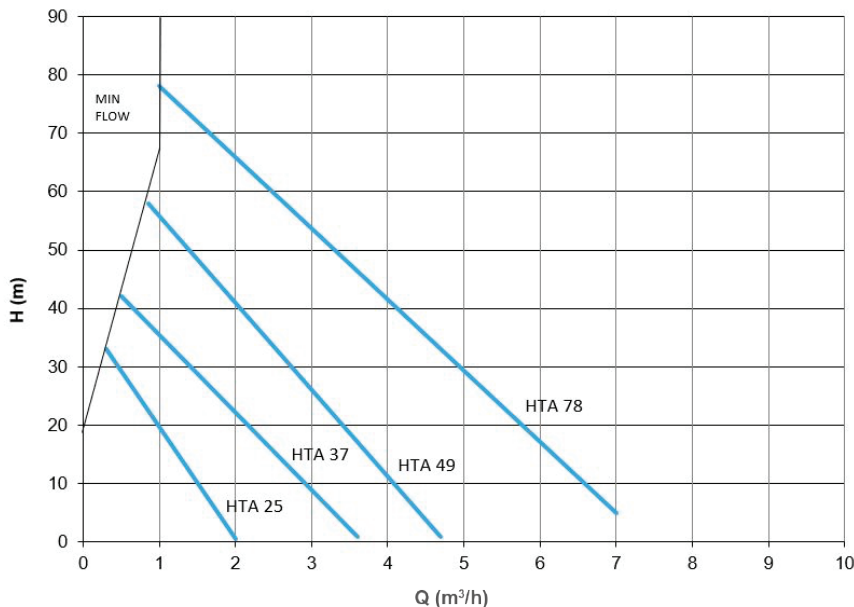
OPTIONAL

- DIN or ANSI flanges available.
- Explosion proof motor.
- Dry-running protection device.
- Baseplate.
- Available in ATEX version for zone 1 II2G and zone 2 II 3G (pump mod. EM-T AISI 316).

MAIN FEATURES

- **High head / low flow capability** minimizes by-pass requirements.
 - **Materials available:** AISI 316.
 - **Materials in contact with the liquid:** casing and impeller: stainless steel AISI 316; o-ring EPDM/VITON; bushing: PTFEC; shaft: Hastelloy C276.
 - **Max flow** 7 m³/h; **Max head:** 76 mlc.
 - **Max temperature:** 160°C.
 - **Max viscosity:** 45 cPs.
 - **Pressure Rating** NP 25 at 20°C.
 - Impeller design handles up to 20% entrained gas.
- Ideal for pumping liquefied gas.**

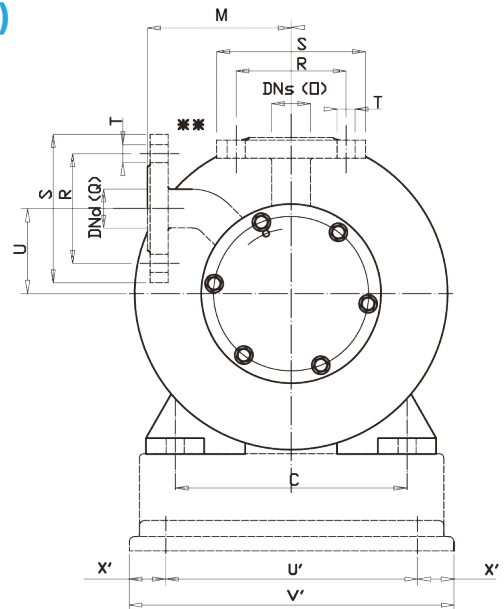
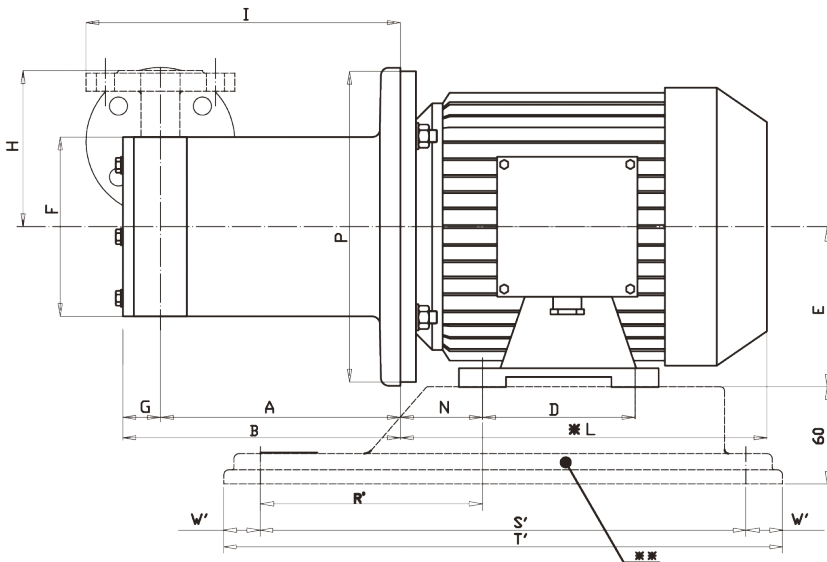
PERFORMANCE CURVES 50Hz - 2900 RPM



HTA TECHNICAL DATA

PUMP SIZE	MATERIAL	Q MAX		H MAX		SUCTION CONNECTION	DISCHARGE CONNECTION	PUMP WEIGHT (kg)	SUITABLE MOTOR POWER (kW) 2900 rpm	MOTOR FLANGE AND FRAME
		50Hz (m³/h)	60Hz (USGPM)	50Hz (m/c)	60Hz (ft)					
HTA 25	AISI 316	2	10	32	140	3/4" FEMALE	3/4" FEMALE	7.5	1.1	80 - B3 / B5
HTA 37	AISI 316	3.5	19	43	180	3/4" FEMALE	3/4" FEMALE	7.5	1.1 2.2	80 - B3 / B5 90 - B3 / B5
HTA 49	AISI 316	4.7	25	58	235	1" FEMALE	1" FEMALE	14.2	2.2 3	90 - B5 100 - B5
HTA 78	AISI 316	7	36	76	320	1" FEMALE	1" FEMALE	19	3 4	100 - B5 112 - B5

HTA 25-37 SS / EM-T 25-37 SS (ATEX VERSION)



DIMENSIONS - mm -

PUMP TYPE	MOTOR FLANGE B3-B5		DIMENSIONS - mm -														BASEPLATE DIMENSIONS - mm -								
	SIZE	kW	A	B	C	D	E	F	G	H	I	*L	M	N	O	P	Q	U	R'	S'	T'	U'	V'	W'	Z'
HTA 25	802B	11	167	192	125	100	80	123	25	100	218	232	98	50	3/4" FEMALE	200	3/4" FEMALE	61	120	302	350	157	205	24	24
HTA 37	802B 90L2	11 22	167 177	192 202	125 140	100 125	80 90	123	25	100	220 230	232 280	98	50 56	3/4" FEMALE	200	3/4" FEMALE	61	120 132	302	350	157	205	24	24

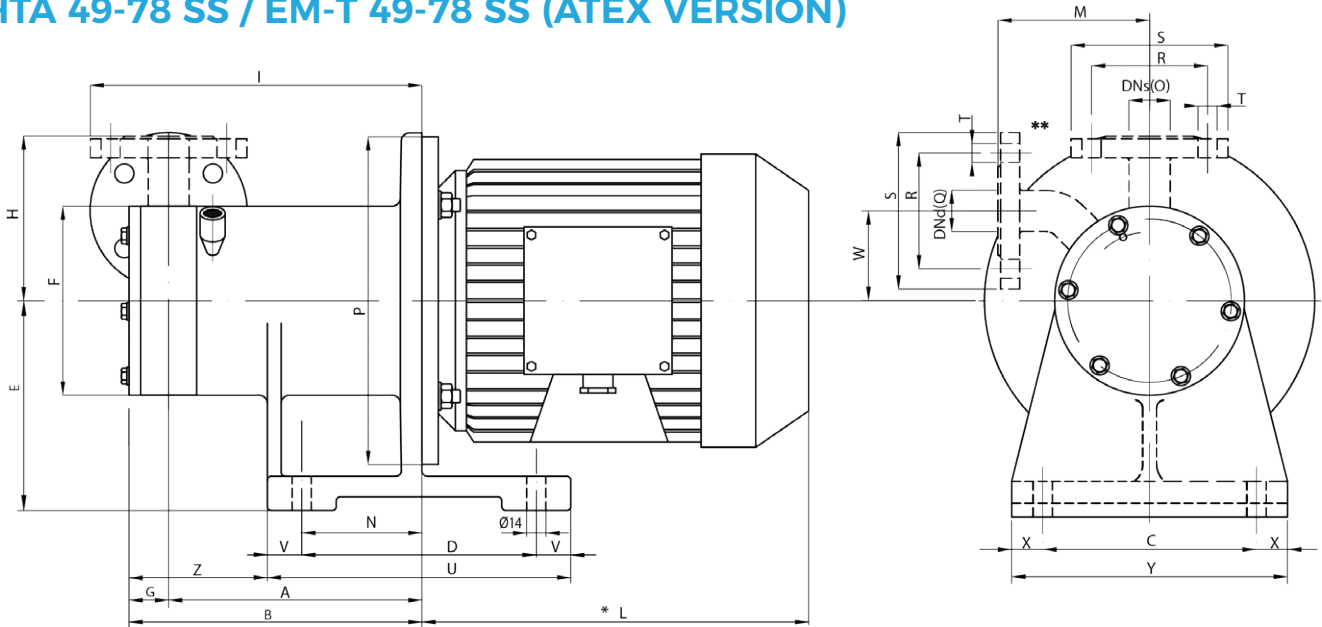
FLANGES DIMENSIONS - mm -

PUMP TYPE	R	S	T	DNs	DNd	
HTA 25-37	75	105	14	20	20	DN20 PN40

* Different according to the motor supplier. ** OPTIONAL UPON REQUEST: DIN or ANSI Flanges and Baseplates. NOTE: DIRECTION OF ROTATION IS COUNTER CLOCKWISE AS SEEN WHEN FACING THE MOTOR. PUMPS AVAILABLE THREADED OR FLANGED.



HTA 49-78 SS / EM-T 49-78 SS (ATEX VERSION)



DIMENSIONS - mm -

PUMP TYPE	MOTOR B5		DIMENSIONS - mm -																				
	SIZE	kW	A	B	C	D	E	F	G	H	I	*L	M	N	O	P	Q	U	V	W	X	Y	Z
HTA 49	90 L2	22	185	215	155	170	150	139	30	121	253	280	111	109	1"	200	1"	220	25	62.5	22.5	200	91
	100 L2	3	205	235							263	316		119	FEMALE	250	FEMALE						
HTA 78	100 L2	3	205	235	155	170	150	158	30	133	263	316	133	119	1"	250	1"	220	25	85.5	22.5	200	91
	112 M2	4									324				FEMALE		FEMALE						

FLANGES DIMENSIONS - mm -

PUMP TYPE	R	S	T	DNs	DNd	
HTA 49-78	85	115	14	25	25	DN25 PN40

* Different according to the motor supplier. ** OPTIONAL UPON REQUEST: DIN or ANSI Flanges.
NOTE: DIRECTION OF ROTATION IS COUNTER CLOCKWISE AS SEEN WHEN FACING THE MOTOR.
PUMPS AVAILABLE THREADED OR FLANGED.