



MECHANICAL SEAL CENTRIFUGAL PUMPS

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Mechanical seal centrifugal pumps are the right solution for applications involving solids in the liquid because their design with open impeller allows to pump dirty liquids and fluids.

The seal in mechanical seal pumps is composed by a static ring and a rotating ring placed on the pump shaft which is directly coupled to the motor shaft. The two surfaces sliding together need to be lubricated and the seal lubricant is the liquid itself that is being pumped.

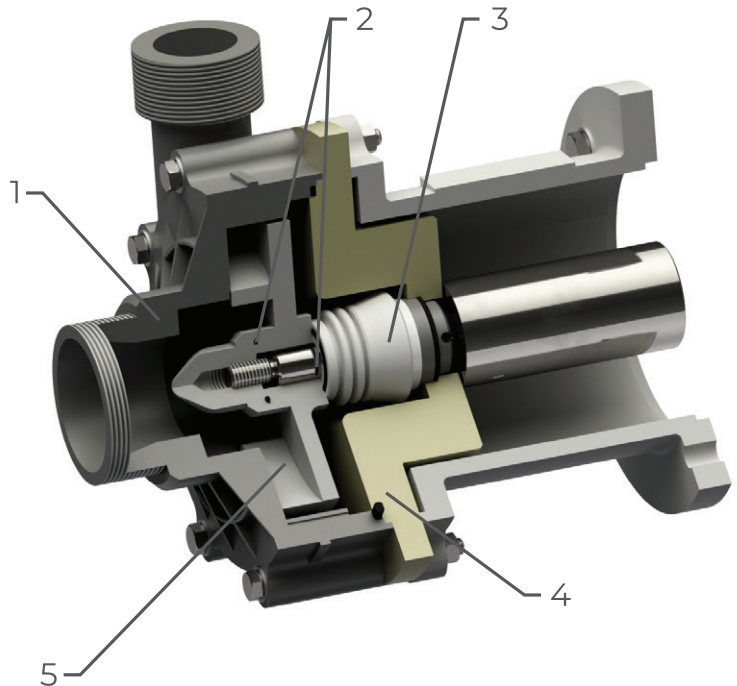
GemmeCotti supplies the following model of mechanical seal pump:

HCO PP/PVDF

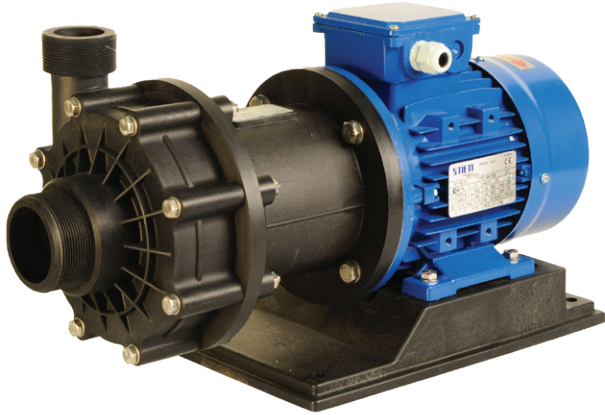
- Thermoplastic pumps made of PP or PVDF.
- Capacity up to 130 m³/h.
- Head up to 48 mlc.

■ **Three different kinds of mechanical seals** are available:

1. The seal of pumps HCO size 95-10 is guaranteed by a **special elastomeric lip seal**.
2. HCO pumps from size 110 to 170 are equipped with an **Internal PTFE bellows mechanical seal** (sic/ceramic), which is manufactured by GemmeCotti.
3. HCO 180-200 are equipped with a **single or double mechanical seal back to back**.



PART NUMBER - DESCRIPTION	MATERIALS IN CONTACT WITH THE LIQUID
	MECHANICAL SEAL PUMPS
1 - PUMP HEAD	HCO PP or PVDF
2 - O-RING	EPDM or VITON
3 - MECHANICAL SEAL	SIC + Al ₂ O ₃ or Graphite + Al ₂ O ₃
4 - COVER	PP or PVDF
5 - IMPELLER + IMPELLER NUT	PP or PVDF



Centrifugal pumps series HCO with mechanical seal are made of thermoplastic materials (**Polypropylene** and **PVDF**) and are suitable for **highly corrosive liquids containing solids in suspension**. Three different kinds of mechanical seals are available:

1. The seal of pumps HCO size 95-10 is guaranteed by a **special elastomeric lip seal**.
2. HCO pumps from size 110 to 170 are equipped with an **internal PTFE bellows mechanical seal** (sic/ceramic), which is manufactured by GemmeCotti.
3. HCO 180-200 are equipped with a **single or double mechanical seal back to back**.

STANDARD

- BSP threaded in and out connections.
- Direct starting motor.

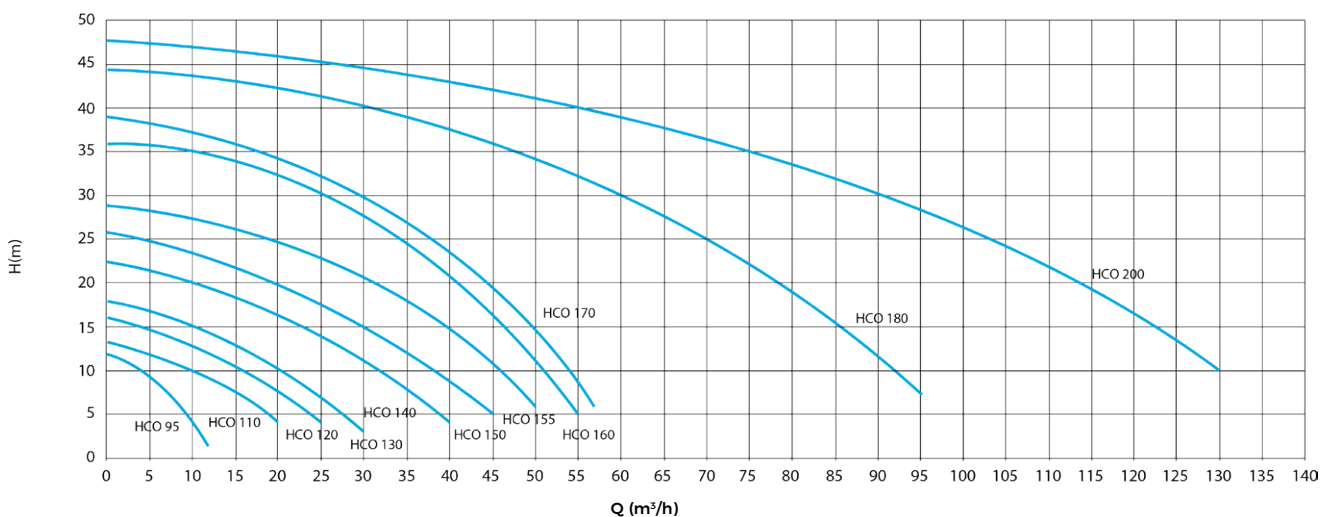
OPTIONAL

- Flanges available (DIN or ANSI).
- Dry-running protection device.
- Baseplate (from HCO 95 to HCO 140).
- Available in ATEX version for zone 2 II 3G (pump mod. EM-CO).

MAIN FEATURES

- **Materials available:** PP / PVDF.
- **Max flow:** 130 m³/h; **Max head:** 48 m.
- **Temperature:** PP: max 70°C - PVDF: max 90°C.
- **Max viscosity:** 200 cSt.
- **Pressure rating:** NP 6 at 20°C.
- Suitable for highly corrosive liquids containing solids in suspension (non-abrasive solids - max. 5% - dimension max. 3 mm).

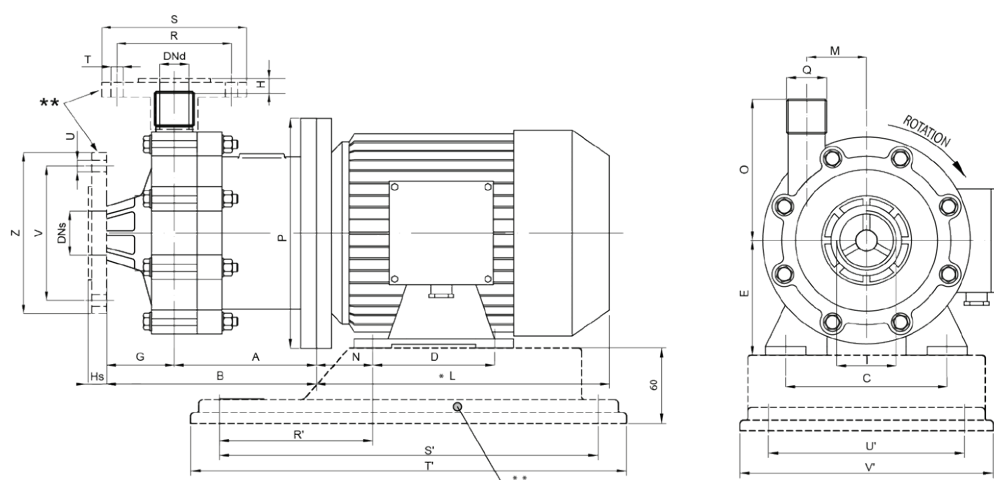
PERFORMANCE CURVES 50Hz - 2900 RPM



HCO 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 (USCPM)	50Hz (m/c)	60Hz (ft)			PP	PVDF		
HCO 95-10	PP- PVDF	12	52	12	47	1" 1/2 FEMALE	1" MALE	10	12	0.55	71B - B3 / B5
HCO 110	PP- PVDF	20	88	13	59	2" 1/2 MALE	2" MALE	10	12	1.1	80B - B3 / B5
HCO 120	PP- PVDF	25	100	16	75	2" 1/2 MALE	2" MALE	10	12	1.5 - 2.2	90S - 90L - B3 / B5
HCO 130	PP- PVDF	30	158	18	90	2" 1/2 MALE	2" MALE	10	12	2.2	90L - B3 / B5
HCO 140	PP- PVDF	40	212	22	104	2" 1/2 MALE	2" MALE	11	13	3-4	100L - 112M - B3 / B5

HCO 95/10 - 110 - 120 - 130 - 140 PP/PVDF



DIMENSIONS - mm -

PUMP TYPE	MOTOR FLANGE B3 - B5	kW	DIMENSIONS - mm -														
			A	B	C	D	E	G	Hs	H	I	*L	M	N	O	P	Q
HCO 95-10	71B	0.55	110	180	112	90	71	70	20	9	1" 1/2 FEMALE	215	45	45	100	160	1" MALE
HCO 110	80B	1.1	199	290	125	100	80	91	10	13	2" 1/2 MALE	232	66	50	140	200	2" MALE
HCO 120	90S	1.5	209	290	140	100	90	91	10	13	2" 1/2 MALE	262	66	56	140	200	2" MALE
	90L	2.2	209	290	140	125	90	91	10	13	2" 1/2 MALE	287	66	56	140	200	2" MALE
HCO 130	90L	2.2	209	290	140	125	90	91	10	13	2" 1/2 MALE	280	66	56	140	200	2" MALE
HCO 140	100L	3	219	310	160	140	100	91	10	13	2" 1/2 MALE	315	66	63	140	250	2" MALE
	112M	4	219	310	190	140	112	91	10	13	2" 1/2 MALE	325	66	70	140	250	2" MALE

FLANGES DIMENSIONS - mm -

PUMP TYPE	R	S	T	U	V	Z	DNs	DNd
HCO 95-10	85	115	14	18	110	150	40	25
HCO 110 - 120 - 130 - 140	125	168	18	18	145	188	65	50

BASEPLATE DIMENSIONS - mm -

PUMP TYPE	R'	S'	T'	U'	V'
HCO 95-10	112	244	280	130	160
HCO 110 - 120 - 130	120	302	350	157	205
HCO 140	140	352	400	202	250

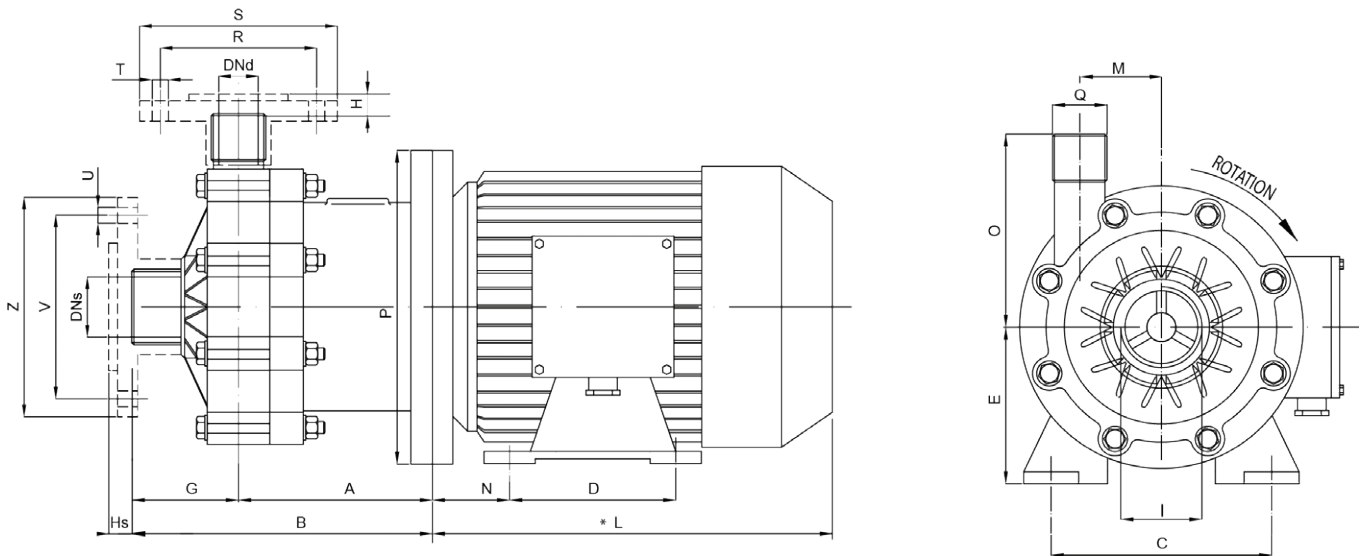
* Different according to the motor supplier. ** OPTIONAL UPON REQUEST: DIN or ANSI Flanges and Baseplates (from HCO 95 to HCO 140).
NOTE: DIRECTION OF ROTATION IS COUNTER CLOCKWISE AS SEEN WHEN FACING THE MOTOR.
PUMPS AVAILABLE THREADED OR FLANGED.



HCO 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		
HCO 150	PP- PVDF	45	242	26	124	3" MALE	2" 1/2 MALE	11	13	5.5 - 7.5 - 9.2	132 SA - 132 SB - 132 MA - B3/B5
HCO 155	PP- PVDF	50	265	29	140	3" MALE	2" 1/2 MALE	11	13	5.5 - 7.5 - 9.2	132 SA - 132 SB - 132 MA - B3/B5
HCO 160	PP- PVDF	55	290	36	170	3" MALE	2" 1/2 MALE	11	13	7.5 - 9.2	132 SB - 132 MA - B3/B5
HCO 170	PP- PVDF	58	300	38	175	3" MALE	2" 1/2 MALE	11	13	7.5 - 9.2	132 SB - 132 MA - B3/B5

HCO 150 - 155 - 160 - 170 PP/PVDF



DIMENSIONS - mm -

PUMP TYPE	MOTOR FLANGE B3 - B5	kW	DIMENSIONS - mm -														
			A	B	C	D	E	G	Hs	H	I	*L	M	N	O	P	Q
HCO 150 - HCO 155	132 SA-SB	5.5	184	275	216	140	132	91	10	10	3" MALE	380	82.5	89	170	300	2" 1/2 MALE
	132 SA-SB	7.5	184	275	216	140	132	91	10	10	3" MALE	380	82.5	89	170	300	2" 1/2 MALE
	132 MA	9.2	184	275	216	178	132	91	10	10	3" MALE	418	82.5	89	170	300	2" 1/2 MALE
HCO 160 - HCO 170	132 SB	7.5	184	275	216	140	132	91	10	10	3" MALE	380	82.5	89	170	300	2" 1/2 MALE
	132 MA	9.2	184	275	216	178	132	91	10	10	3" MALE	418	82.5	89	170	300	2" 1/2 MALE

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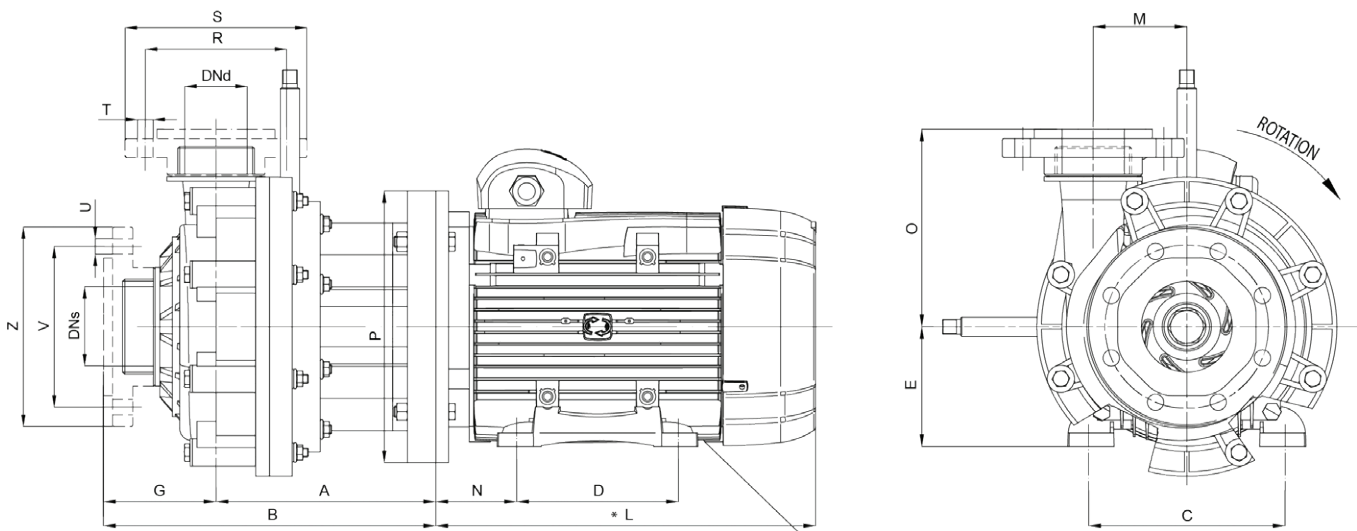
FLANGES DIMENSIONS - mm -

PUMP TYPE	R	S	T	U	V	Z	DNs	DNd
HCO 150 - 155 - 160 - 170	145	188	18	18	160	203	80	65

HCO 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 (USCPM)	50Hz (m/c)	60Hz (ft)			PP	PVDF		
HCO 180	PP- PVDF	95	502	44	208	3" 1/2 MALE	2" 1/2 MALE	13	15	11 - 15 - 18.5 - 22	160MA - 160MB - 160 L -180 M - B3/B5
HCO 200	PP- PVDF	130	687	48	227	4" MALE	3" 1/2 MALE	13	15	15 - 18.5 - 22 - 37	160MB - 160L - 180M 200LB - B3/B5

HCO 180 - 200 PP/PVDF



DIMENSIONS - mm -

PUMP TYPE	MOTOR FLANGE B3 - B5	kW	DIMENSIONS - mm -										
			A	B	C	D	E	G	*L	M	N	O	P
HCO180	160 MA	11	272	397	254	210	160	126	555	103	108	215.5	350
	160 MB	15	272	397	254	210	160	126	555	103	108	215.5	350
	160 L	18.5	272	397	254	254	160	126	575	103	108	215.5	350
	180 M	22	272	397	279	241	180	126	620	103	121	215.5	350
HCO 200	160 MB	15	272	395.5	254	210	160	125	555	103	108	218	350
	160 L	18.5	272	395.5	254	254	160	125	575	103	108	218	350
	180 M	22	272	395.5	279	241	180	125	620	103	121	218	350
	200 LB	37	272	395.5	318	305	200	125	675	103	133	218	400

FLANGES DIMENSIONS - mm -

PUMP TYPE	R	S	T	U	V	Z	DNs	DNd
HCO 180	145	185	18	18	160	200	80	65
HCO 200	160	200	18	18	180	220	100	80

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