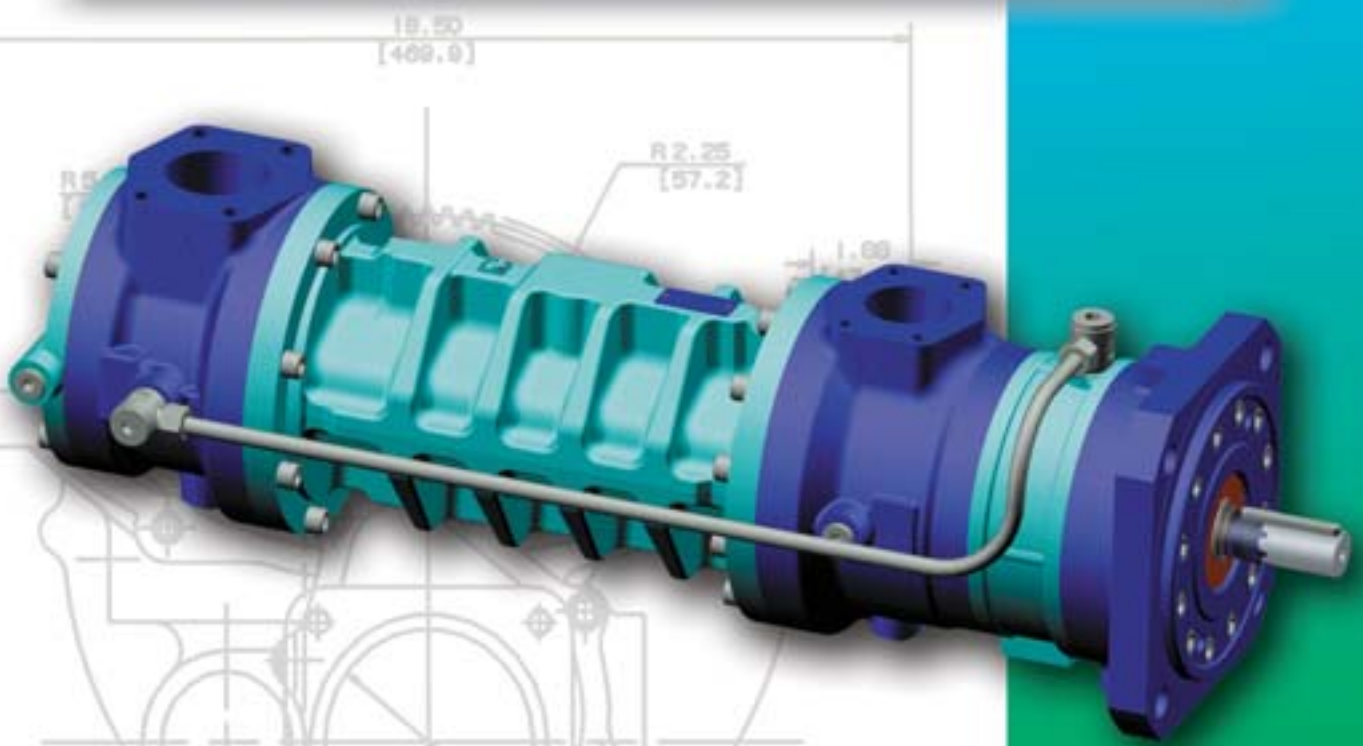




EMTEC Series 3-Screw *Coolant and Emulsion Pumps*



The reliable pump people

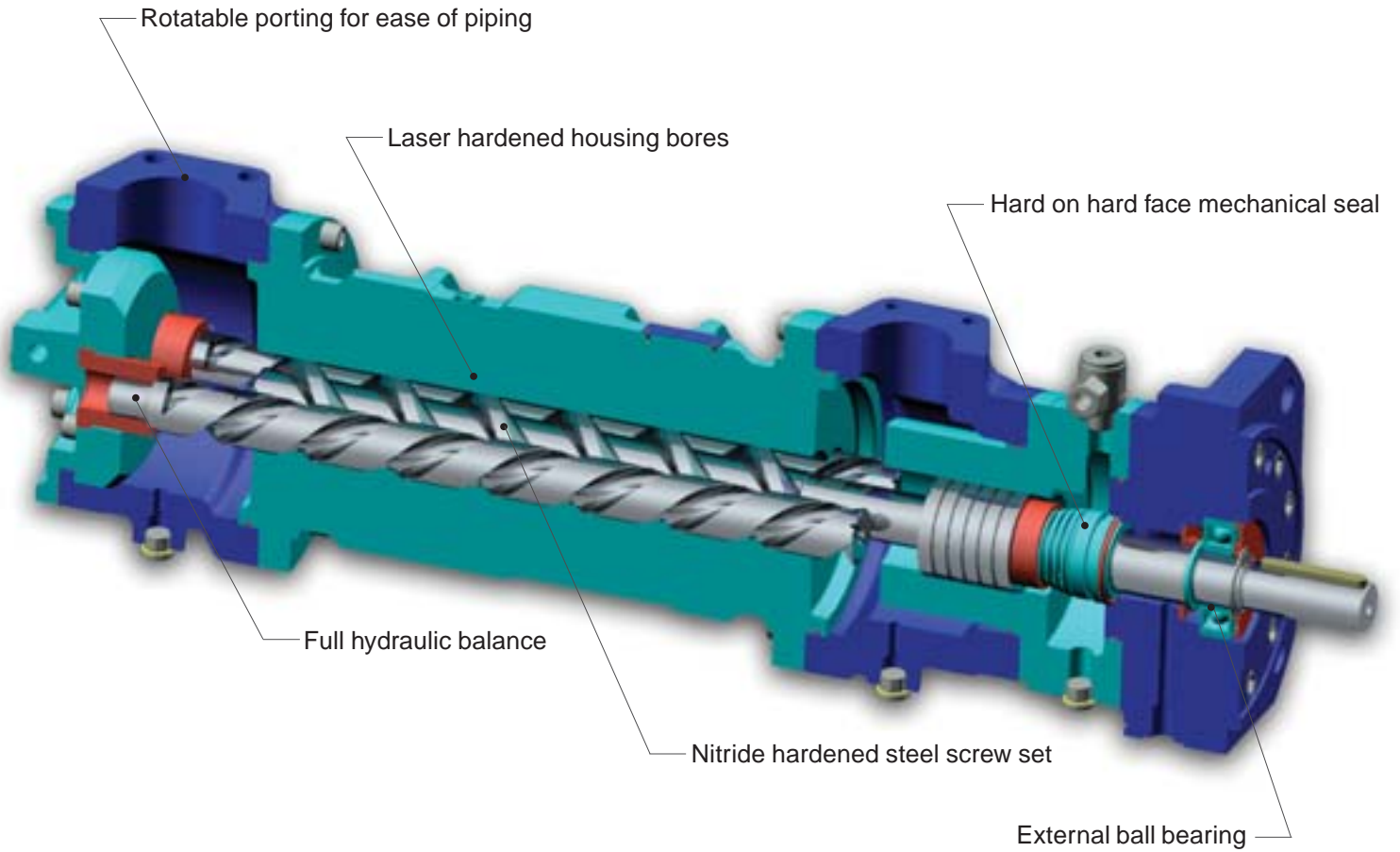
Rotary Screw Pumps

Performance Shown at 1.8 cSt, 3500 RPM

Differential Pressure – PSI

	Size	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300
20-38	GPM	8.2	7.6	7.1	6.8	6.4	6.1	5.8	5.5	5.2	5.0	4.7	4.5	4.3
	BHP	2.3	3.0	3.6	4.2	4.9	5.5	6.1	6.8	7.4	8.1	8.7	9.3	10.0
20-46	GPM	10.9	10.2	9.7	9.3	8.8	8.5	8.1	7.8	7.5	7.2	6.9	6.6	6.3
	BHP	2.5	3.4	4.2	5.0	5.9	6.7	7.6	8.4	9.2	10.1	10.9	11.8	12.6
20-56	GPM	15.1	14.1	13.2	12.5	11.9	11.3	10.8	10.2	9.8	9.3	8.9	8.4	8.0
	BHP	2.9	4.0	5.2	6.4	7.6	8.7	9.9	11.1	12.3	13.4	14.6	15.8	17.0
40-38	GPM	16.5	15.1	14.0	13.1	12.2	11.4	10.7	10.0	9.4	8.8	8.2	7.6	7.1
	BHP	2.1	3.4	4.7	6.1	7.4	8.7	10.0	11.4	12.7	14.0	15.3	16.6	18.0
40-46	GPM	22.9	21.6	20.5	19.5	18.7	17.9	17.2	16.5	15.8	15.2	14.6	14.1	13.5
	BHP	2.5	4.3	6.1	7.8	9.6	11.4	13.1	14.9	16.6	18.4	20.2	21.9	23.7
80-36	GPM	31.2	29.2	27.7	26.3	25.1	24.0	22.9	22.0	21.0	20.2	19.3	18.5	17.7
	BHP	3.6	6.0	8.5	10.9	13.3	15.7	18.1	20.5	22.9	25.3	27.7	30.1	32.5
80-46	GPM	46.3	44.3	42.8	41.4	40.2	39.1	38.1	37.1	36.2	35.3	34.4	33.6	32.9
	BHP	4.7	8.1	11.6	15.0	18.4	21.9	25.3	28.8	32.2	35.6	39.1	42.5	46.0
140-39	GPM	59.5	57.0	54.9	53.2	51.6	50.2	48.8	47.5	46.3	45.2	44.1	43.1	42.0
	BHP	6.4	10.8	15.2	19.7	24.1	28.5	32.9	37.4	41.8	46.2	50.7	55.1	59.5
140-46	GPM	79.1	76.5	74.5	72.7	71.1	69.7	68.3	67.1	65.9	64.7	63.6	62.6	61.6
	BHP	7.7	13.5	19.2	25.0	30.8	36.5	42.3	48.1	53.8	59.6	65.3	71.1	76.9
210-40	GPM	95.6	92.3	89.7	87.5	85.5	83.6	81.9	80.3	78.7	77.3	75.9	74.5	73.2
	BHP	10.3	17.3	24.3	31.3	38.3	45.3	52.3	59.3	66.3	73.3	80.3	87.3	94.3
210-46	GPM	121.8	118.5	115.9	113.7	111.6	109.8	108.1	106.4	104.9	103.4	102.0	100.7	99.4
	BHP	12.1	20.9	29.7	38.5	47.3	56.0	64.8	73.6	82.4	91.2	100.0	108.7	117.5
280-43	GPM	142.4	138.6	135.6	133.0	130.7	128.6	126.6	124.7	123.0	121.3	119.7	118.1	116.6
	BHP	15.9	26.1	36.4	46.6	56.9	67.1	77.4	87.7	97.9	108.2	118.4	128.7	138.9
280-46	GPM	162.2	158.5	155.5	152.9	150.6	148.4	146.4	144.6	142.8	141.1	139.5	138.0	136.5
	BHP	17.2	28.8	40.4	52.0	63.7	75.3	86.9	98.5	110.1	121.7	133.3	144.9	156.6
440-40	GPM	202.2	197.3	193.5	190.2	187.2	184.5	182.0	179.6	177.3	175.2	173.1	171.1	169.2
	BHP	23.1	37.6	52.1	66.6	81.1	95.5	110.0	124.5	139.0	153.5	168.0	182.5	197.0
440-46	GPM	260.0	255.2	251.4	248.0	245.1	242.3	239.8	237.4	235.2	233.0	230.9	229.0	227.07
	BHP	27.1	45.5	63.9	82.4	100.8	119.3	137.7	156.1	174.6	193.0	211.5	229.9	248.3

Imo Series EMTEC Pump



Model No. Code Example: EMTEC 80 R 46 D 8.6 - W110111

Series	EMTEC	Material Code	W110111
Case Size	80	Shaft Seal	8.6 = Mechanical Seal
Right Hand Rotation	R	Special Design Feature	D = Ball Bearing, Uncooled, Unheated Mechanical Seal
Screw Pitch in Degrees	46		

Specifications

Casing	Cast iron inlet and discharge covers.
Housing	Cast iron with laser hardened bores. Metal ceramic optional.
Rotors	Nitride hardened alloy steel.
Shaft Seal	Silicon carbide on silicon carbide, fluorocarbon fitted mechanical seal. Optionally, pumps can be supplied without shaft seal for vertical in-tank mounting. In this case, the seal chamber is drained overboard.
Bearing	Permanently grease packed external ball bearing.
O-Rings	Fluorocarbon.
Viscosity	1.0 cSt minimum for differential pressure to 870 PSI (60 BAR). 1.8 cSt minimum for differential pressure to 1300 PSI (90 BAR.) 9000 SSU (2000 cSt) maximum.
Inlet Pressure	145 PSIG (10 BAR) maximum.



EMTEC pump on production test

Outlet Pressure
1300 PSIG (90 BAR) maximum.

Differential Pressure
Operation at differential pressures below 40 psi (2.8 BAR) may require pump modification to assure sufficient shaft seal cooling flow. Consult Imo Pump.

Temperature
0 to 210°F (-18 to 100°C)

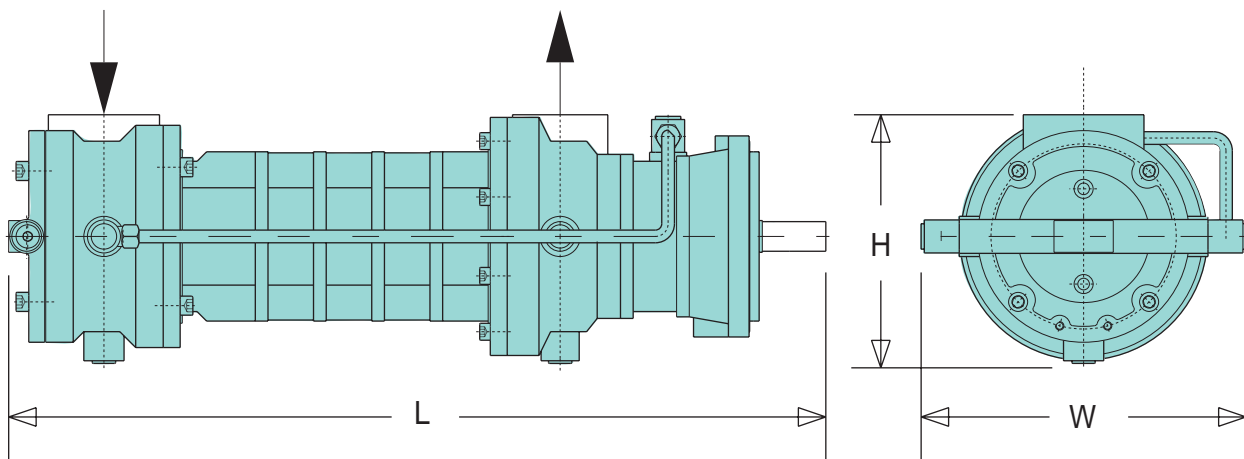
Drive/Rotation
Direct drive, clockwise rotation only facing pump shaft.

Speed
3600 RPM maximum.

Mounting	Shaft end flange mounting, horizontal or vertical, shaft up.
Connections	SAE 4-bolt flange pads for use with 3000 PSI rated 4-bolt flanges, metric bolts.
Filtration	A fine degree of filtration compatible with the expected type and quantity of contaminant will maximize pump service life.
Accessories	Completely mounted pump/driver assemblies with baseplates or NEMA "C" face motor adapters are available.

5-240 GPM (19-910 L/M) Pressure to 1300 PSIG (90 BAR)

EMTEC pumps are designed with withstand the harsh environment of high pressure machine tool coolant service. Special hardening techniques produce wear resistance within the housing bores offering cost effective pumping. Balance diameters at the inlet end of the idler rotors provide hydraulic balance eliminating thrust loads due to differential pressure. These diameters are special coated resist wear and rotate within journals. The power rotor (drive shaft) includes a hardened and specially grooved balance piston. It provides the counteracting force to eliminate thrust loads on the shaft due to differential pressure. It is extra long to minimize flow loss. Leakage crossing the balance piston provides cooling flow to the mechanical shaft seal before being returned to pump inlet. In the case where the pump is mounted vertically within the coolant supply tank, the shaft seal can be eliminated for further cost effectiveness. Leakage across the balance piston is then allowed to escape back to the coolant supply by leaving a seal chamber exit tap unplugged. A labyrinth ring on the pump side of the ball bearing prevents coolant splash from washing out the bearing grease.



Case Size	SAE Pad		Dimensions in Inches			Weight Lbs.
	Inlet	Outlet	L	W	H	
20	1-1/2	1	19.1	7.36	7.4	51
40	1-1/2	1	21.3	7.36	7.4	62
80	2	1-1/2	24.5	24.7	7.4	111
140	2	1-1/2	28.3	10.2	9.13	150
210	2-1/2	2	30.4	12	9.13	205
280	3	2-1/2	35.2	12	11.4	320
440	4	3	37.7	13.3	11.4	463



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