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Energy Recovery, Inc.
Pressure Exchanger
Specifications Sheet
PX-180

REV	BY	CKD	REVISION	DATE
0	RBC	RLS	Issued for distribution	3/30/04
1	IBC	RLS	Update data for 40009-02-3	3/7/2007
2	JMP	JGM	Update test, inspection & weights sections	3/10/2009

DESCRIPTION:
TECHNICAL DATA SHEET, POSITIVE
DISPLACEMENT ENERGY RECOVERY
DEVICE

Sheet
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Document number:
80005-01

1. Part number 40009			2. Service		3. Reference	
OPERATING CONDITIONS	4	Liquid	Seawater	44	Performance	Standard
	5	Operating Temperature	33°F-120°F (0.6-49°C)	45	Case Hydrotest	Standard
	6	Max. Temperature	120°F (49°C)	46	Rotation Speed Test	Standard
	7	Specific Gravity	1025.18 kg/cu.m	47	Die Penetrant Test (ceramics)	Standard
	8	Viscosity	1.060 cP @ 70°F (21.1°C)	48	Cavitation Test	Standard
	9	Maximum High-Pressure Inlet Flow	180 gpm (40.8 m3/hr)	49	Witnessed Test	Optional
	10	Maximum Low-Pressure Outlet Flow	180 gpm (40.8 m3/hr)	50		
	11	Maximum Outlet High Pressure	1200 psig (82.7 bar)	51		
	12	Maximum Outlet Low Pressure	300 psig (20.7 bar)	52		
	13	Maximum Inlet High Pressure	1200 psig (82.7 bar)	53		
	14	Minimum Inlet Low Pressure	N/A	54	Outside Dimensions	Standard
	15	Minimum Discharge Pressure	9 psig (0.6 bar)	55	Internal Components	Standard
	16	Filtration Requirement (Nominal)	10µm	56	Housing Dimensions	Standard
	17			57	Ceramic Dimensions	Standard
PERFORMANCE	18	Peak Efficiency	98%	58	Material Certificates	Standard
	19	Maximum High Pressure Differential	20 psig (1.4 bar) @ 180 gpm	59	Visual	Standard
	20	Maximum Low Pressure Differential	14 psig (0.97 bar) @ 180 gpm	60	Packing and Crating	Standard
	21	Maximum Lubrication Flow	3.2 gpm (0.72 m3/hr)	61		
	22	Maximum Rotational Speed	1400 rpm	62		
	23	Maximum Salinity Increase at Membranes	3% @ 40% Recovery	63		
	24	Sound level	94 dBA	64		
	25			65		
MATERIALS	26	Housing	**GRP	66	PX-180 unit Shipping Dimensions	47x17x14 inch 119.3 43x35.5 cm
	27	Rotor, Sleeve, Endcover Assembly	Ceramic-alumina	67	Cartridge Shipping Dimensions	20x12x12 inch 50.8x30.5x30.5 cm
	28	Low Pressure Inlet Port Fitting	CN3MN	68		
	29	Low Pressure Outlet Port Fitting	CN3MN	69	PX-180 unit Shipping Weight	196 lbs. (88.9 kg)
	30	High Pressure Inlet Port Fitting	CN3MN	70	Cartridge Weight	65 lbs. (29 kg)
	31	High Pressure Outlet Port Fitting	CN3MN	71	Dry PX-180 unit weight	185 lbs. (83.9 kg)
	32	Internal Low Pressure Interconnector	Titanium, *AL6XN or Super Duplex	72		
	33			73		
	34	Fasteners/Hardware (non-wetted)	316SS	74		
	35	Tension Rod Assembly	*AL-6XN / C-276	75		
36	O-rings	EPDM	76			
PIPING CONNECTIONS	37	Low Pressure Inlet Port Fitting		77		
	38	Low Pressure Outlet Port Fitting	3" Grooved-end Flexible Pipe Coupling	78		
	39	High Pressure Inlet Port Fitting		79		
	40	High Pressure Outlet Port Fitting		80		
	41			81		
	42		82			
43			83			

*AL-6XN is a registered trademark of Allegheny Ludlum

**Housing designed in accordance with the engineering standards of the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers.

ERI RESERVES THE RIGHT TO MAKE SPECIFICATION CHANGES AT ANY TIME WITHOUT PRIOR NOTICE.

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MANUFACTURER: Energy Recovery Inc

MODEL: PX-180