



1908 Doolittle Dr.
San Leandro, CA
94577, USA
Phone: 1-510-483-7370
FAX: 1-510-483-7371

Energy Recovery, Inc.
Pressure Exchanger
Specifications Sheet
PX-220

REV	BY	CKD	REVISION	DATE
4	JMP	IBC	Update data for 40009-02-3	9/24/07
5	JMP	IBC	Update data for 40009-02-3	10/7/2007
6	JMP	IBC	Update data for Lub flow and DP	7/9/2008
7	JMP	JGM	Update test, inspection & weights sections	3/11/2009

DESCRIPTION:
TECHNICAL DATA SHEET, POSITIVE
DISPLACEMENT ENERGY RECOVERY
DEVICE

Sheet
Page 1 of 1
Document number:
80006-01

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	220 gpm (50 m3/hr)	49	Witnessed Test	Optional	
	10	Maximum Low-Pressure Outlet Flow	220 gpm (50 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	19 psig (1.32 bar) @ 220 gpm	59	Visual	Standard
		20	Maximum Low Pressure Differential	14 psig (0.97 bar) @ 220 gpm	60	Packing and Crating	Standard
21		Maximum Lubrication Flow	3.5 gpm (0.80 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-220 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-220 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-220 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	3" Grooved-end Flexible Pipe Coupling	77			
	38	Low Pressure Outlet Port Fitting		78			
	39	High Pressure Inlet Port Fitting		79			
	40	High Pressure Outlet Port Fitting		80			
	41			81			
	42			82			
	43			83			
TESTS							
INSPECTION							
SHIPPING WEIGHT AND DIMENSIONS							
MISCELLANEOUS							

*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.

PRICE: sales@energyrecovery.com	
MANUFACTURER: Energy Recovery Inc	MODEL: PX-220