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Energy Recovery, Inc.
Technical Data Sheet
CPXP 12

REV	BY	CKD	REVISION	DATE
00	SYB	EK	Initial Release	11/20/2025

Sheet
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Document number:
81005-01

DESCRIPTION:
TECHNICAL DATA SHEET
CPXP 12 High-Pressure Pump

1. Part number **81005-01** 2. Service **SWRO** 3. Reference

Line	Category	Description	Value	Code	Reference
1	OPERATING CONDITIONS	Medium	Seawater	37	Flow -Pressure Curve See Pump Curve Doc# 81035-01
2		Operating Temperature	35.6°F-122°F (2-50°C)	38	Flow-Speed Curve See Pump Curve Doc# 81035-01
3		Operating State	Continuous	39	Shaft Power-Pressure Curve See Pump Curve Doc# 81035-01
4		Medium Characteristics	Corrosive	40	
5		Specific Gravity	1030 kg/m³	41	Shaft / Shell / Wetted Metals 2507
6		Viscosity	1.060 cP @ 70°F (21.1°C)	42	Shaft Coupling Galv. Steel w/ Zn-Ni Alloy
7		Filtration Requirement*	10 µm	43	Gaskets FKM
8				44	Mechanical Seal Hastelloy Alloy
9	PUMP PERFORMANCE	Geometric Displacement	16 cm³/rev	45	Fasteners 2507
10		Max Outlet Pressure	1200 psi (83 bar)	46	Required Motor Power* * Refer to pump calculation results
11		Min Outlet Pressure	290 psi (20 bar)	47	Motor Technical Details Refer to Motor TDS document
12		Inlet Pressure	14.5-72.5 psi (1-5 bar)	48	
13		Min Speed	1500 rpm	49	Space Heater/Fungus Proof/Tropicalization Optional
14		Max Speed	3000 rpm	50	Thermal Protection Optional
15		Rated Flow@3000rpm&80bar	2.7 m³/h	51	
16		Flow Control	Speed Regulated	52	
17	PUMP DESIGN	Inlet	G3/4 (DN 25) Female Thread	53	Shipping Dimensions & Weight See Packaging Drawing Doc# 92505-01
18		Outlet	G3/4 (DN 25) Female Thread	54	
19		Inlet & Outlet Piping Connections	Grooved-End Flexible Coupling DN25 (Optional)	55	
20		Discharge High-Pressure Flexible Hose	DN25, 1m (Optional)	57	
21		Pump Base	NO	58	Scope of Supply Pump Head, Motor, Bell Housing, Shaft Coupling. (Optional: Inlet Joint, Outlet Check Valve, Discharge High-Pressure Flexible Hose)
22		Internal Intergrated Flushing Valve	YES	59	
23		Sealing Cooling Method	Self-cooling	60	
24		Bearing Lubrication Method	Self-lubricating	61	
25	INSPECTION & TESTS	Rotation Direction	Clockwise (viewed from the motor towards the pump head)	62	Material Conformance Material Certificate
26				63	Dimensional and Visual Inspection Certified Drawing
27				64	External Leakage Test Test Reports
28				65	Performance Test Test Reports
29			66	Shipping Authorization Client Shipment Release	
30			67		
31			68		
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36			73		

NOTES:
 * ERI recommends to use a precision depth filter cartridge with efficiency of 99.98% at 10 micron and β10>5000 to protect the key components of the pump. Bag filters or string-wound filter cartridges are not recommended.
 ** The required motor power depends on your flow rate and pressure. Please contact ERII for accurate motor power information.

PRICE: sales@energyrecovery.com	
MANUFACTURER: Energy Recovery, Inc	MODEL: CPXP 12