



1717 Doolittle Dr.
San Leandro, CA
94577, USA
Phone: 1-510-483-7370

Energy Recovery, Inc.
Technical Data Sheet
CPXP 53

REV	BY	CKD
00	SYB	EK

REVISION

Initial Release

DATE

11/20/2025

Sheet
Page 1 of 1

DESCRIPTION:
TECHNICAL DATA SHEET
CPXP 53 High-Pressure Pump

Document number:
81014-01

1. Part number **81014-01** 2. Service **SWRO** 3. Reference

OPERATING CONDITIONS	1	Medium	Seawater	37	CURVES	Flow -Pressure Curve	See Pump Curve Doc# 81044-01	
	2	Operating Temperature	35.6°F-122°F (2-50°C)	38		Flow-Speed Curve	See Pump Curve Doc# 81044-01	
	3	Operating State	Continuous	39		Shaft Power-Pressure Curve	See Pump Curve Doc# 81044-01	
	PUMP PERFORMANCE	4	Medium Characteristics	Corrosive	40	MATERIALS		
		5	Specific Gravity	1030 kg/m ³	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		Geometric Displacement	145 cm ³ /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	
PUMP DESIGN	12	Inlet Pressure	29-72.5 psi (2-5 bar)	48	TYPICAL MOTOR SIZE			
	13	Min Speed	700 rpm	49		Space Heater/Fungus Proof/Tropicalization	Optional	
	14	Max Speed	1,500 rpm	50		Thermal Protection	Optional	
	15	Rated Flow@1500rpm&80bar	12.1 m ³ /h	51				
	16	Flow Control	Speed Regulated	52				
	17	Inlet	M52X1.5 (DN 50) Female Thread	53		DIMENSIONS	Shipping Dimensions & Weight	See Packaging Drawing Doc# 92514-01
	18	Outlet	M52X1.5 (DN 50) Female Thread	54				
	19	Inlet & Outlet Piping Connections	Grooved-End Flexible Coupling DN50 (Optional)	55			SCOPE OF SUPPLY	Pump Head, Motor, Bell Housing, Shaft Coupling. (Optional: Inlet Joint, Outlet Check Valve, Discharge High-Pressure Flexible Hose)
20	Discharge High-Pressure Flexible Hose	DN50, 1m (Optional)	57					
21	Pump Base	NO	58					
22	Internal Intergrated Flushing Valve	YES	59					
23	Sealing Cooling Method	Self-cooling	60					
24	Bearing Lubrication Method	Self-lubricating	61					
INSPECTION & TESTS	25	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				
	32			69				
33			70					
34			71					
35			72					
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 53