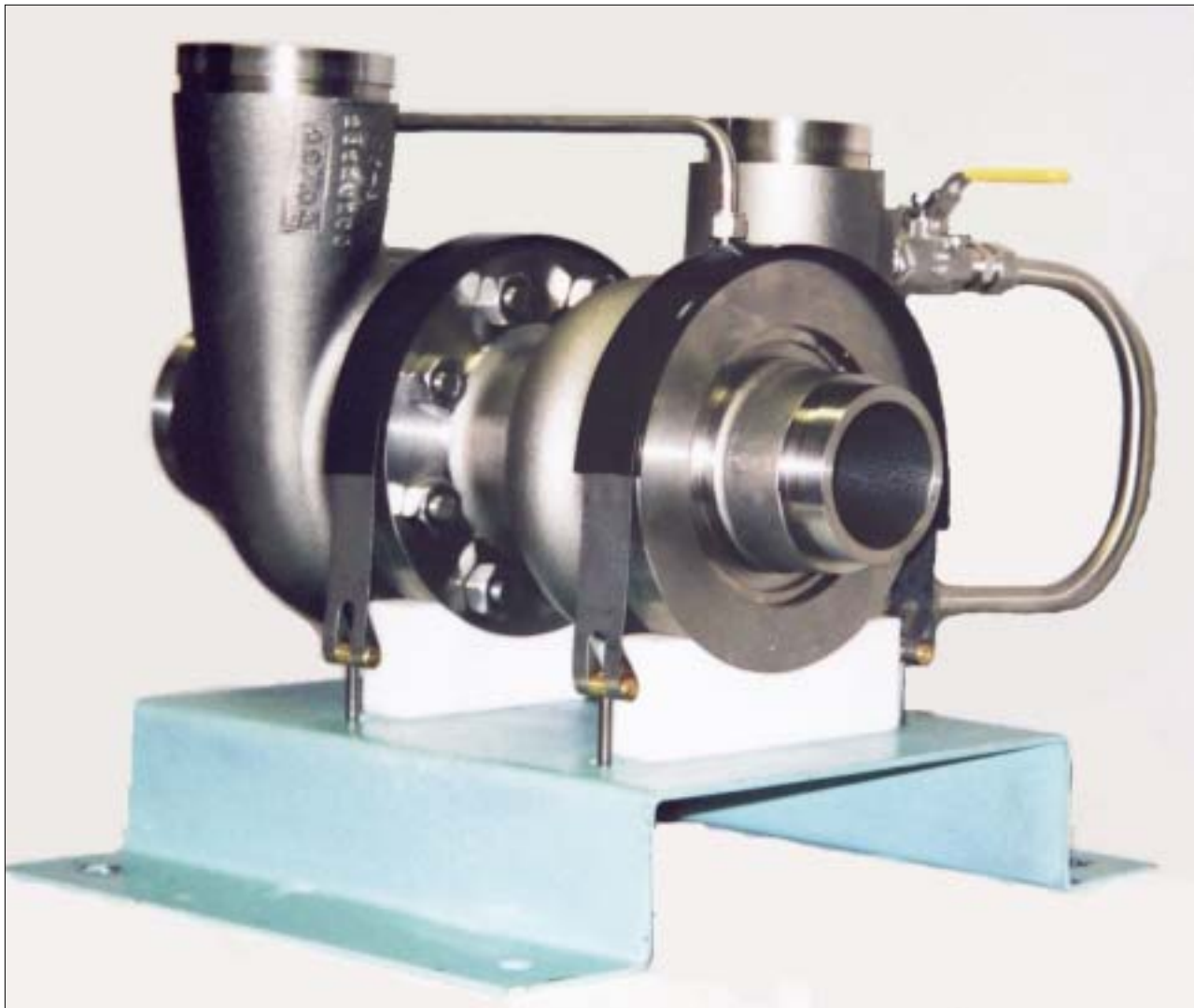


LPT for Low Pressure Multi Stage RO Systems

**Brine Driven
Interstage Booster Pump**



**Simplicity
Efficiency
Reliability
Affordability**

LPT Low Pressure TurboCharger

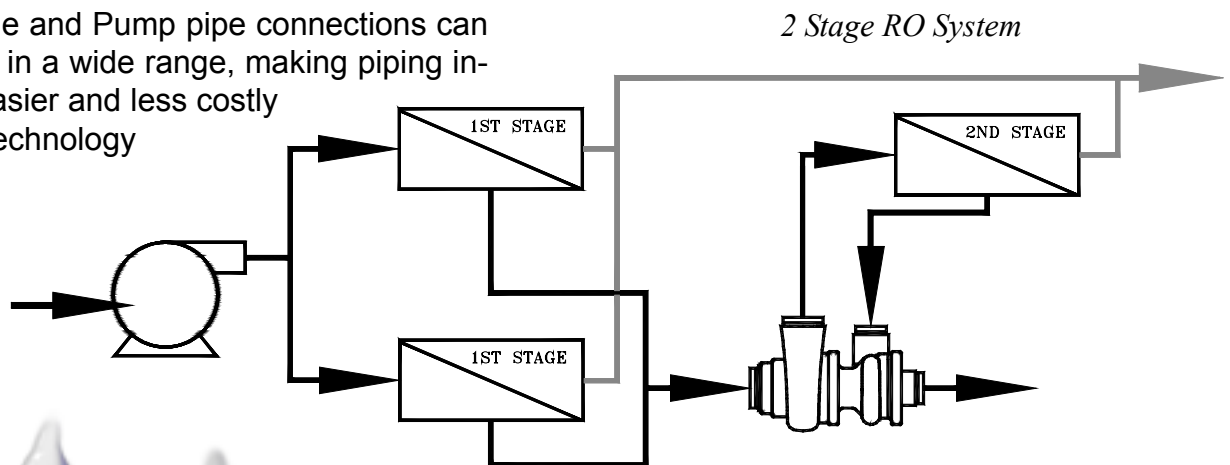
Now the RO OEM can obtain the advantages of interstage pressure boosting low pressure two stage RO systems and energy recovery at an affordable price.

LPT Features:

- ï Greatly reduced price - about 1/2 of PEI's sea-water HTC II models
- ï Zero energy cost for interstage pumping
- ï Saves capital cost - LPT replaces brine control valves.
- ï Zero maintenance cost - no shaft seals, product lubricated bearings insure years and years of zero maintenance trouble free service
- ï Very low installation cost - no electrical feed or controls
- ï Both Turbine and Pump pipe connections can be oriented in a wide range, making piping installation easier and less costly
- ï Patented Technology

Interstage Pressure Boosting Benefits:

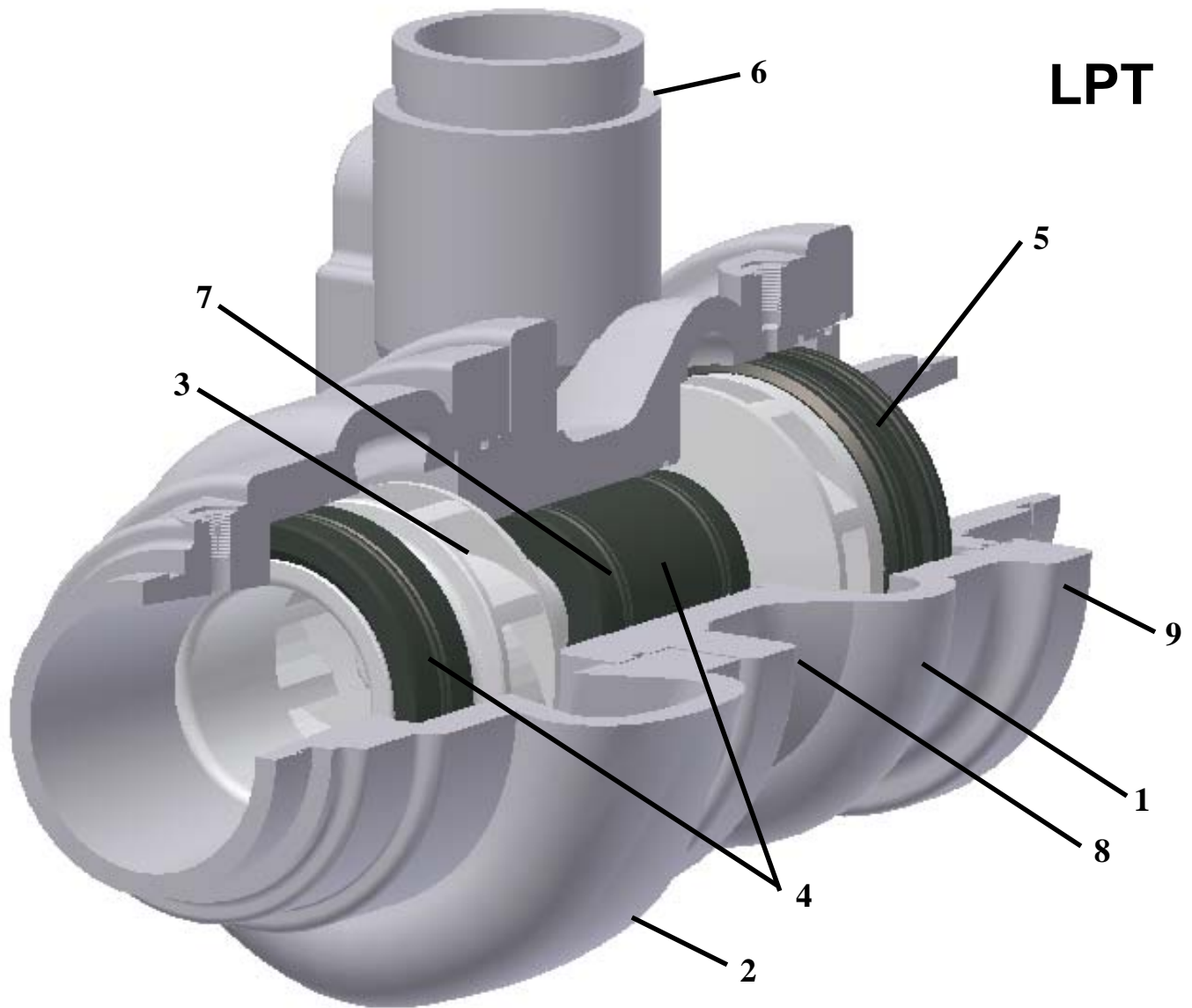
- ï Lowest energy consumption rate
- ï Balance flux rates between 1st and 2nd stages
- ï Reduce fouling potential of the 1st stage
- ï Increased 2nd stage feed pressure compensates for higher osmotic pressure - providing higher quality product water



**Energy Recovery
for Ultrapure
and Brackish
Water RO!**

Proven Technology!

Brackish and ultrapure multi stage RO water installations around the world, **totaling 25 mgd production**, have proven the value of Interstage Pressure Boosting and Energy Recovery with the TurboCharger.

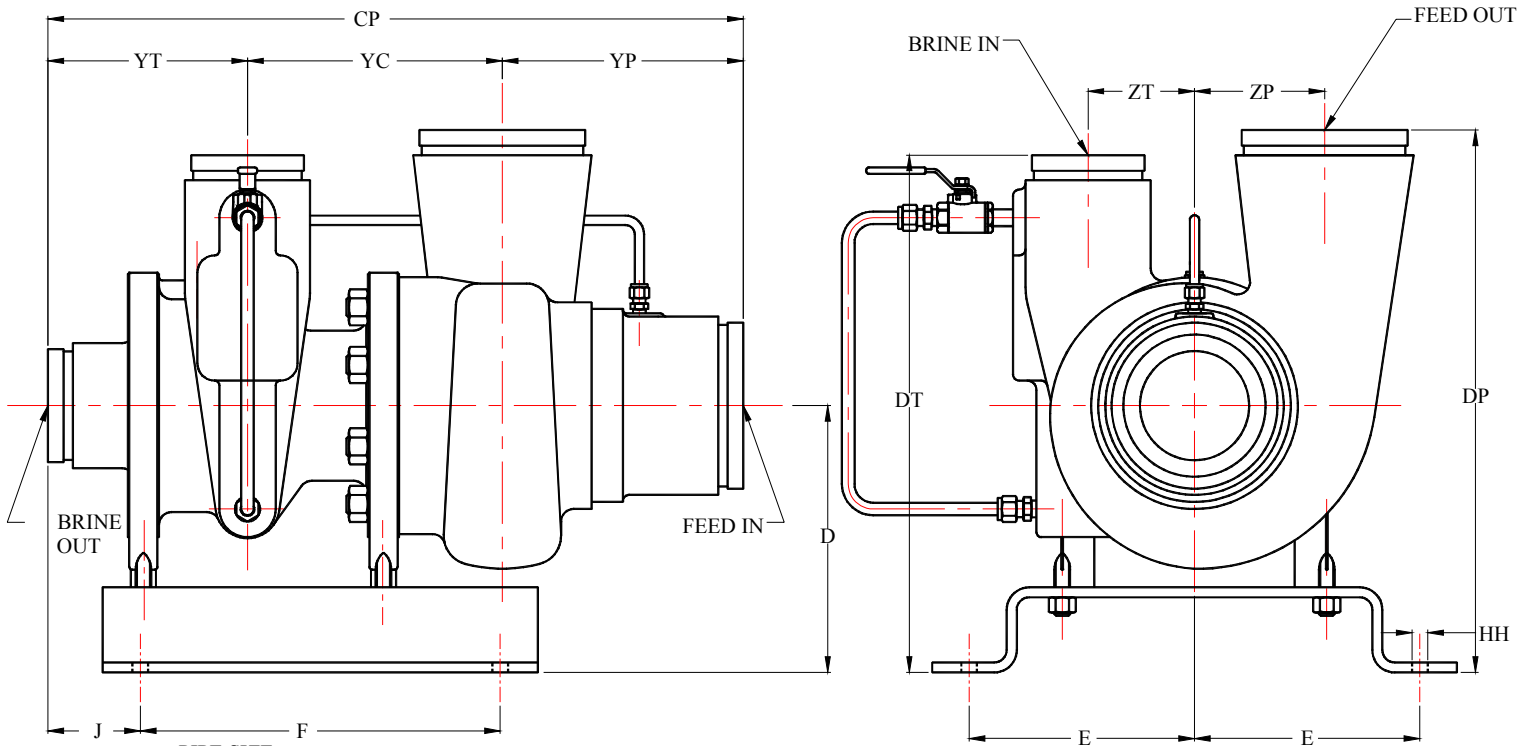


Design Features

1. **Casings** are designed for a maximum of 600 psi operating pressure. Turbine casing volutes are machined for high efficiency and correct turbine differential pressure.
2. **Pump Casings** are designed for a range of cast volutes achieving high efficiency throughout the capacity range.
3. **Dynamically Balanced Impellers** precision cast for maximum efficiency.
4. **Product lubricated journal bearings** eliminate shaft seals and oil/grease lubrication and provide years and years of maintenance free operation.
5. **Hydrostatic Thrust Bearing** - Product lubricated thrust bearing allows turbine to run with 98% volumetric efficiency.
6. **RO Standard Victaulic Pipe Connections** insure reliable leak free service.
7. **Heavy duty stiff shaft design** operates below critical speed insuring minimum vibration levels.
8. **Radially split casing** for complete and easy access for maintenance.
9. **Circumferential mounting** allows complete rotation of turbocharger pipe connections for easy piping fit up.
10. **Patented Design** - Interstage Pressure Boosting of a multi-stage RO system is covered by PEI patent U.S. 4,983,305.



LPT Dimensions

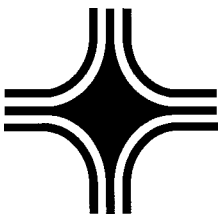


MODEL	PIPE SIZE		CP	YC	YT	YP	J	F	D	E	ZT	ZP	HH	DP	DT
	BRINE	FEED													
LPT-125	1.50	2.00	13.50	5.31	4.12	4.93	2.25	9.88	4.56	6.68	1.81	2.38	0.50	10.38	9.62
LPT-250	2.00	3.00	16.25	6.38	4.99	5.93	2.63	11.00	5.50	7.25	2.38	2.88	0.50	12.50	11.56
LPT-500	3.00	4.00	19.62	7.69	5.94	6.00	3.25	12.00	8.98	7.88	3.25	3.75	0.62	16.98	15.98
LPT-1000	4.00	6.00	27.78	10.18	7.97	9.63	3.68	14.38	10.65	9.00	4.25	5.20	0.62	21.65	20.65
LPT-2000	6.00	8.00	36.12	13.25	10.38	12.50	5.13	17.25	13.88	10.50	5.25	6.75	0.75	28.12	26.89

***Note: Dimensions not for construction purposes.**

Additional Information

<u>Model</u>	<u>Flow at 250 psi</u>	<u>Delivery</u>
LPT-125	up to 150 gpm	6 weeks
LPT-250	up to 300 gpm	6 weeks
LPT-500	up to 600 gpm	8 weeks
LPT-1000	up to 1200 gpm	14 weeks
LPT-2000	up to 2400 gpm	14 weeks



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