



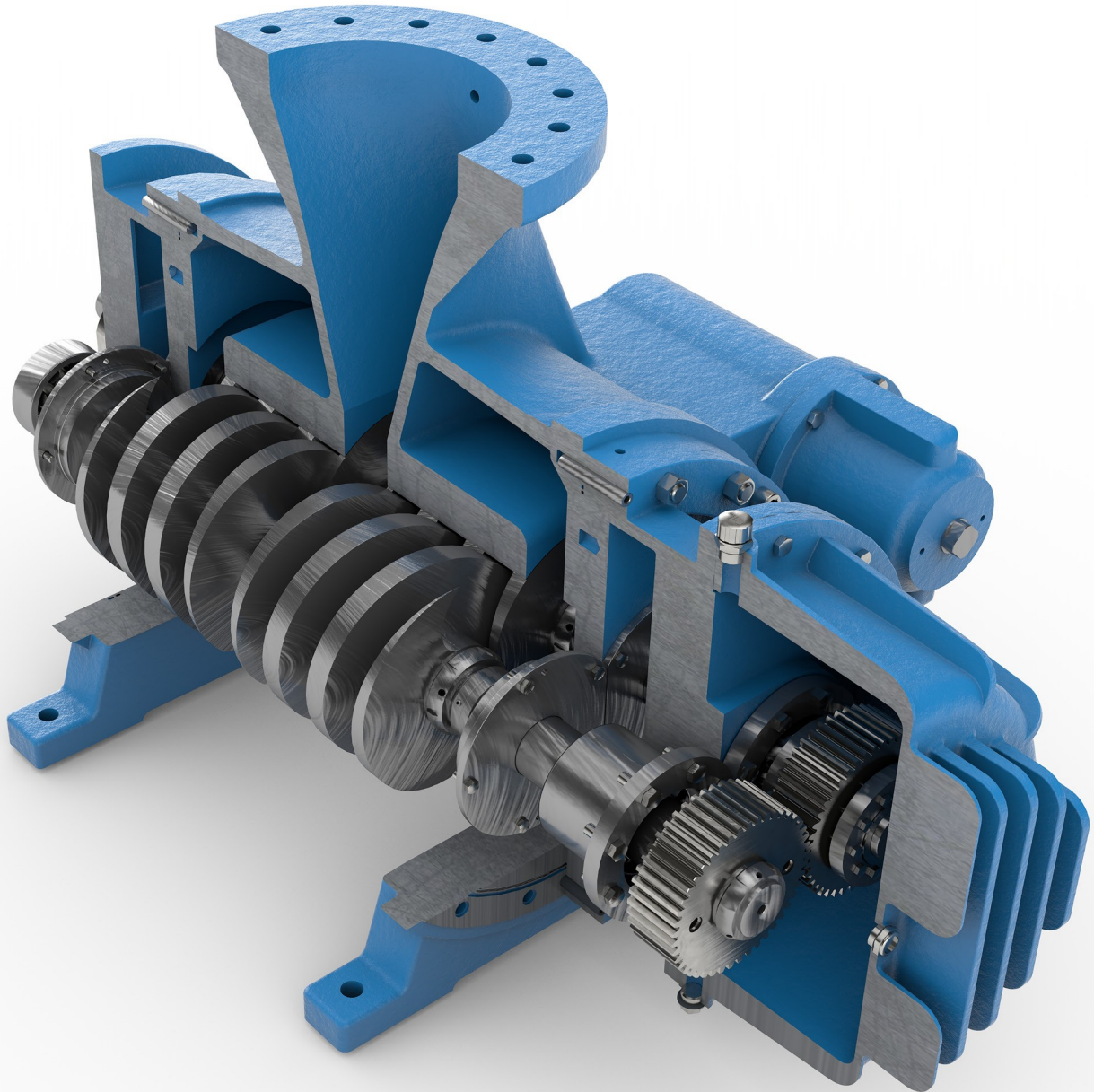
# HOUTTUIN™ TT SERIES

FOR UNLOADING AND  
TRANSFER APPLICATIONS

## YOUR KEY TO SMOOTHER TERMINAL & REFINERY LOGISTICS

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In transfer and unloading applications, the need is speed and flexibility. Now tank terminal and refinery operators can unload fluids faster than ever with the new Houttuin TT two-screw pump series – a solution that weighs less and has a smaller footprint, but doesn't skimp on performance.



## INDUSTRY-LEADING NPSH BOOSTS RELIABILITY

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The Houttuin TT series has an NPSH as low as 1.5mwc at full speed\*, making it especially well suited to reliable operation in difficult low NPSH/high vapor pressure fluid applications compared to alternatives. With it, you'll have peace of mind that variable storage fluid levels or inlet pressures won't compromise operation, while you safeguard the pump against cavitation.

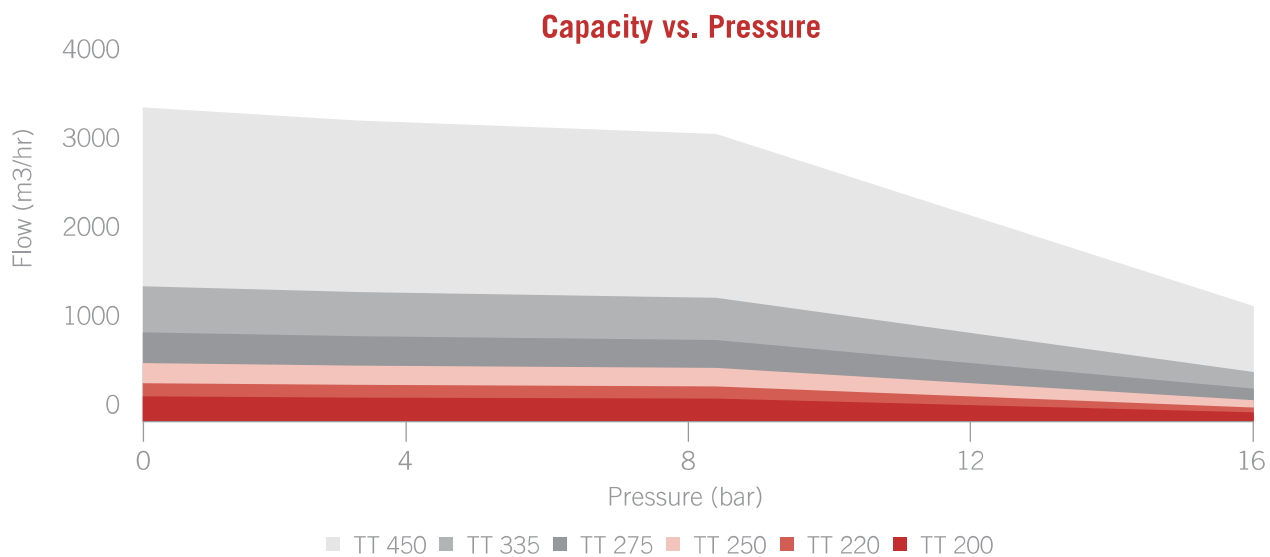
## SAY GOODBYE TO AVOIDABLE DEMURRAGE COSTS

Houttuin positive displacement pumps offer reliable delivery of a wide variety of fluids at a desired rate, even under changing or unpredictable process conditions. With the new TT series, your pump will load or unload cargo in the same amount of time, regardless of the liquid involved or the discharge head required.

## MORE FLOW IN A STREAMLINED PACKAGE

This series offers higher flow capability and NPSH than similarly sized pumps for these applications. With discharge pressure limited to 20 barg, this pump's narrower root diameter increases the displacement, resulting in greater flow at the same pressure.

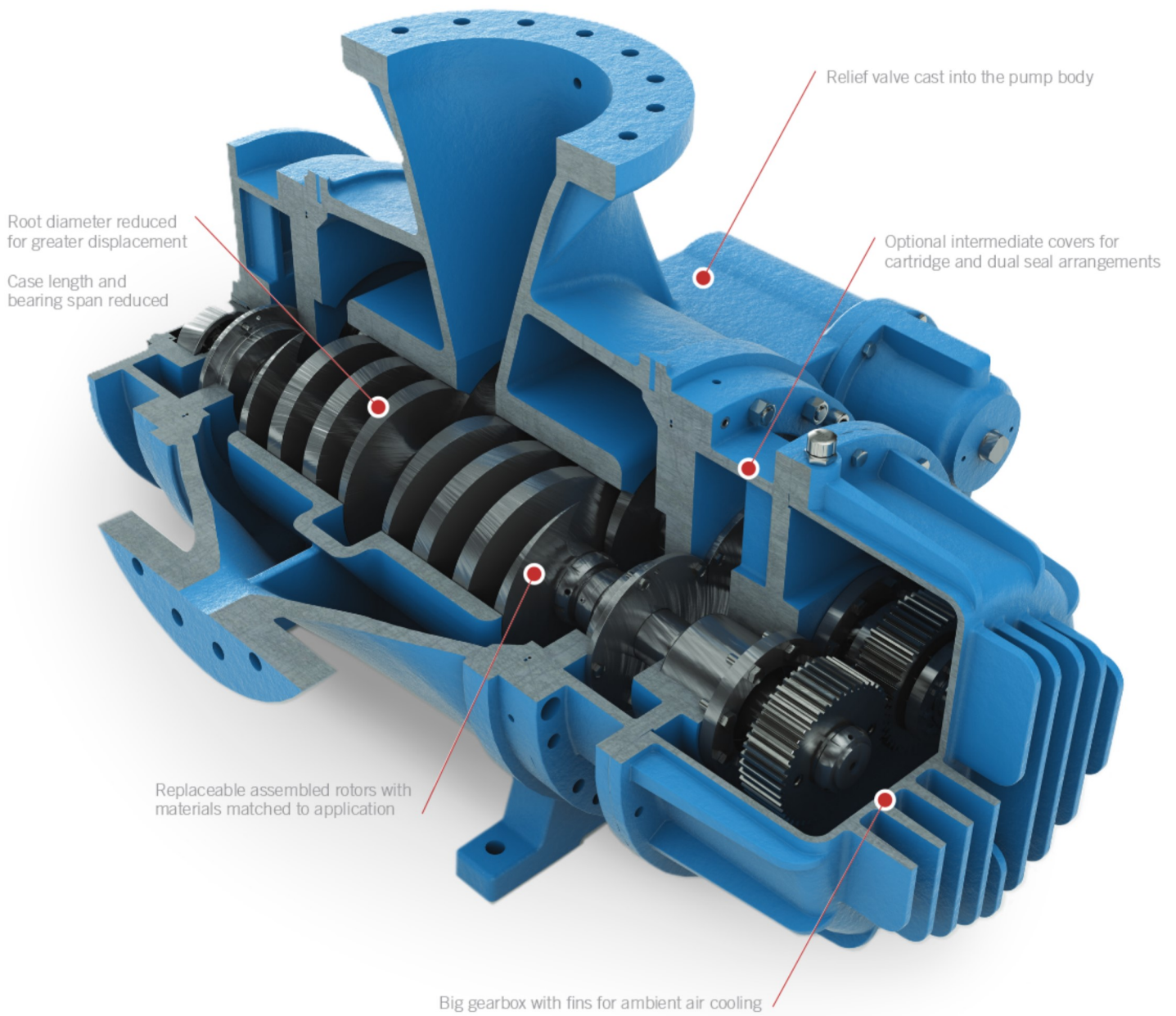
	Performance Data	Imperial units
Capacity	3,400 m <sup>3</sup> /hr	15,000 gpm
Discharge Pressure	up to 20 bar	290 psi
Differential Pressure	up to 16 bar	232 psi
Maximum Viscosity	up to 5,000 cSt	
Minimum Viscosity	as low as 1 cSt	
Speed	up to 1750 rpm	
NPSH	as low as 1.5 mwc	4.9 ft.
Temperature	up to 140 C	284 F





## HOUTTUIN TT FEATURES

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## NEW OPTIONS TO MANAGE COST AND EXPERIENCE

Pump Size	Length (mm)	Width (mm)	Width w/ RV (mm)	Height (mm)	Suction Flange (mm PN 16 FF)*	Discharge Flange (mm PN 16 FF)*	Weight w/ RV (kgs)
TT 200	524	735	1010	797	250	200	1100
TT 220	590	780	1090	850	300	250	1380
TT 250	684	830	1150	905	350	300	1877
TT 275	788	858	1178	955	400	350	2138
TT 335	900	1020	1350	1150	450	400	3163
TT 450	1300	1300	1700	1500	600	550	8000

\*300# ANSIF available

You have choices in the grade of materials you select for your Houttuin TT solution.

Standard Configuration	Case and Cover			
Cast iron	Ductile iron	D-4 Ni-resist iron	Bronze	Cast steel and stainless steel
	Rotor			
Ductile iron	C45N carbon steel	A276/431 stainless steel	316 stainless steel	Bronze
	Gearbox			
Cast iron	Ductile iron			
	Shaft			
1045 Carbon steel	17-4PH Stainless steel			
	Seals			
Single component	Single cartridge (API 682 intent)	Dual cartridge (API 682 intent)		

## WHEREVER YOU NEED IT, IT FITS

Compliant with API 676-3rd, the Houttuin TT series is ideal for oil & gas applications. It's also suitable for process and transport duties for fluids typically handled in the chemical, food and beverage, shipbuilding and other segments.

### OIL & GAS



- › BS&Ws
- › Crude Oil
- › Distillation Fractions
- › Fuel Oil
- › Naphtha
- › Slops & Slurries

### SHIPBUILDING



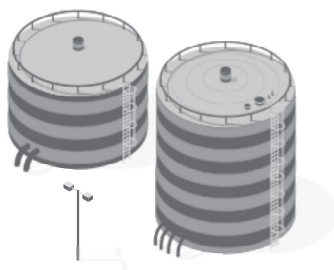
- › Fuel Oils
- › Light Products
- › Bilge/Ballast Water
- › Fresh/Sea Water
- › Transfer Oils
- › Crude Oils

### CHEMICAL & PETROCHEMICAL



- › Glycerine
- › Fuel Oils
- › Slops & Slurries
- › Solvents

### APPLICATIONS

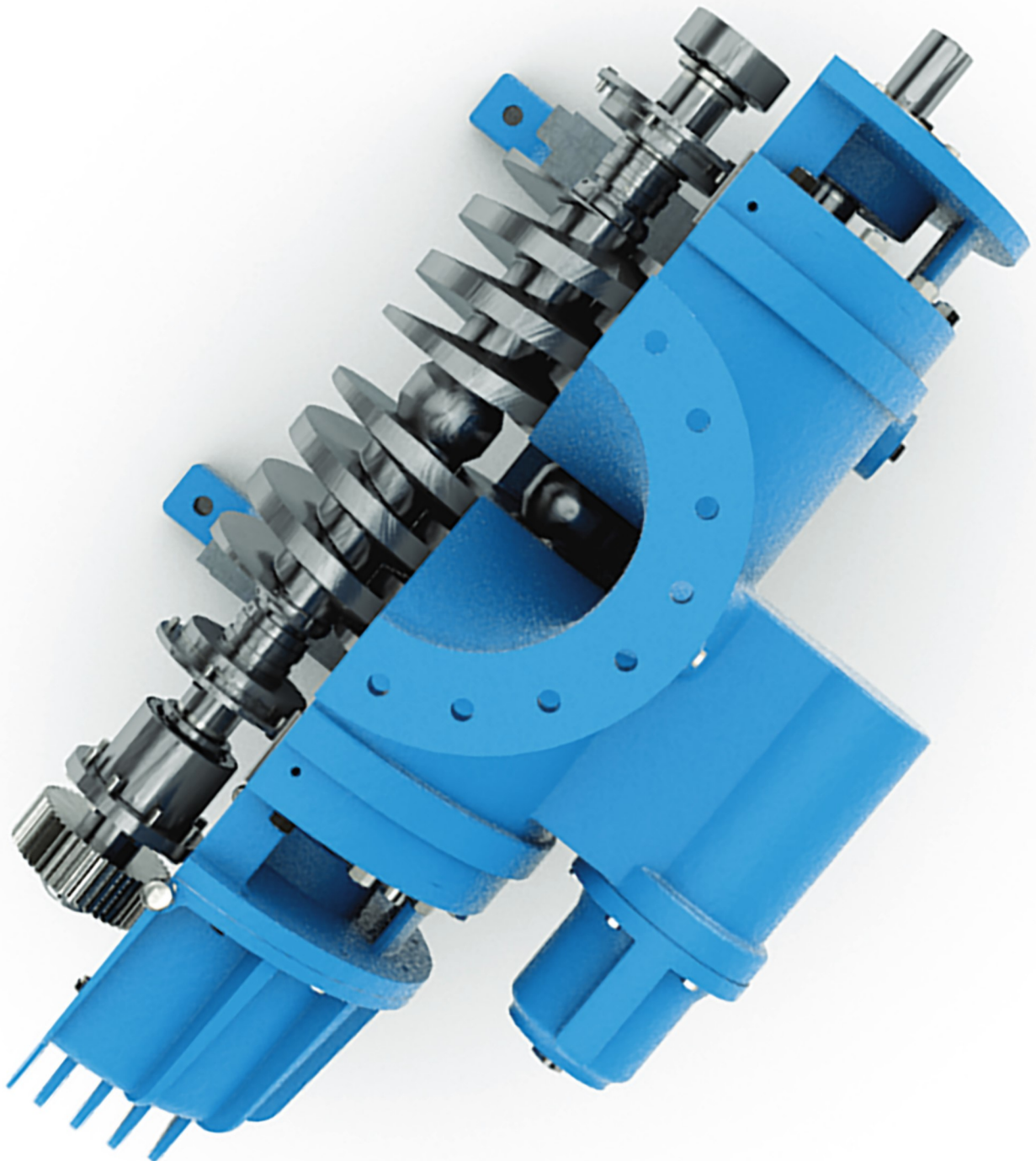


- › Loading
- › Unloading
- › General transfer
- › Bottoms removal

## EXCEEDING YOUR EFFICIENCY EXPECTATIONS

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As a Houttuin two-screw customer, you can be assured that when you bring us your unique challenges, part of what you will get in return is peace of mind that the solution we provide is tailored to your requirements. Let us know what those requirements are, and we'll get started.





CIRCOR is a market-leading, global provider of integrated flow control solutions, specializing in the manufacture of highly engineered valves, instrumentation, pumps, pipeline products and services, and associated products, for critical and severe service applications in the oil and gas, power generation, industrial, process, maritime, aerospace, and defense industries.

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