aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

Shell&Tube Cooler-OST Range

Parker OLAER

ENGINEERING YOUR SUCCESS.

Shell&Tube Cooler

Why use Shell&Tube Cooler

Two fluids, of different starting temperatures, flow through the water oil cooler. One fluid flows through the internal tubes and the other flows around the tubes inside the shell. Heat is transferred from one fluid to the other through the tube walls, either from inside the tubes to the surrounding fluid or vice versa.

Gearbox lubrication system.

Shell and Tube water/oil coolers in short:

- Robust and reliable
- Light and compact
- Suitable for many applications
- Easy installation
- Cost-efficient

The PARKER Shell and tube can be used in many different applications.

- Industrial: Gearbox and machinery cooling (e.g. injection molding machine)
- Mobile: Transmission cooling

Contact your PARKER representative for more information.

Product Specification:

OST	MATERIAL
Shell	Aluminum
Tubes	Copper with Aluminum fins
Covers	Cast Iron
Bundle Configuration	Removable

FLUID COMBINATIONS	
Mineral oil	HL/HLP in accordance with DIN 51524
Oil/water emulsion	HFA, HFB in accordance with CETOP RP 77H
Water glycol	HFC in accordance with CETOP RP 77H
Phosphate ester	HFD-R in accordance with CETOP RP 77H

TECHNICAL DATA	Oil	Water
Max working pressure	15 bar	10 bar
Test pressure	22 bar	15 bar
Max temperature	100 °C	100 °C

CONTACT PARKER FOR ADVICE ON

Oil temperature >100℃
Oil viscosity > 100cSt
Aggressive environments
Ambient air rich in particles
High-altitude locations

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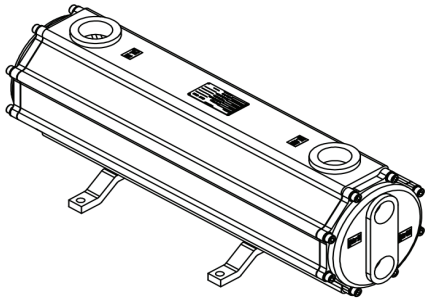
Accumulator and Cooler division
Asia Pacific

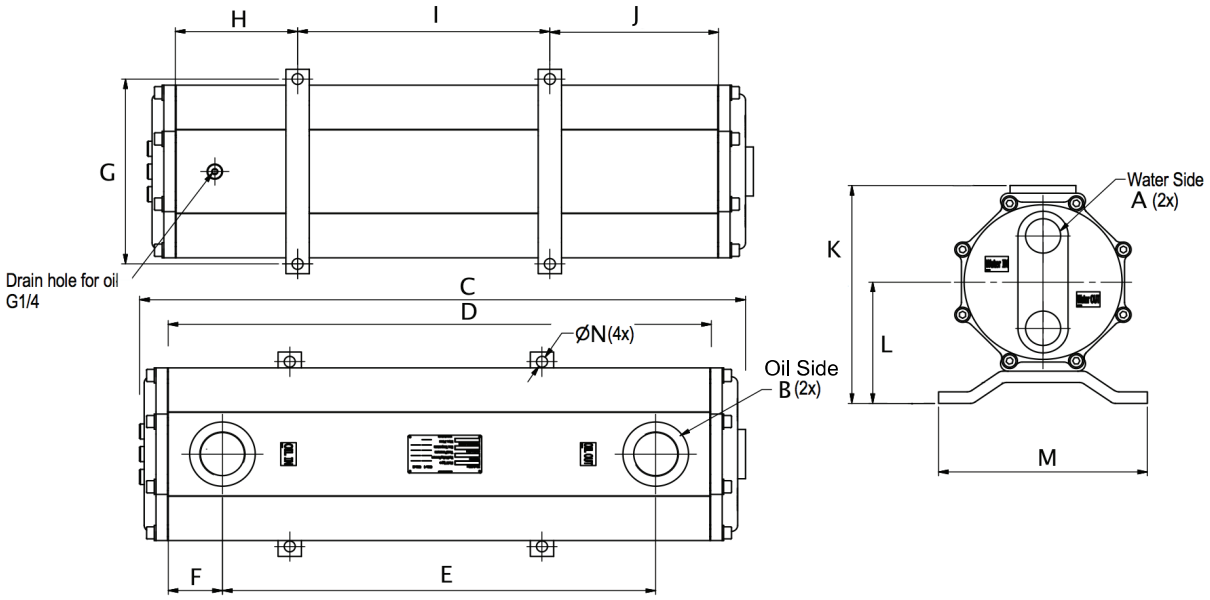
Product Overview

Product Overview



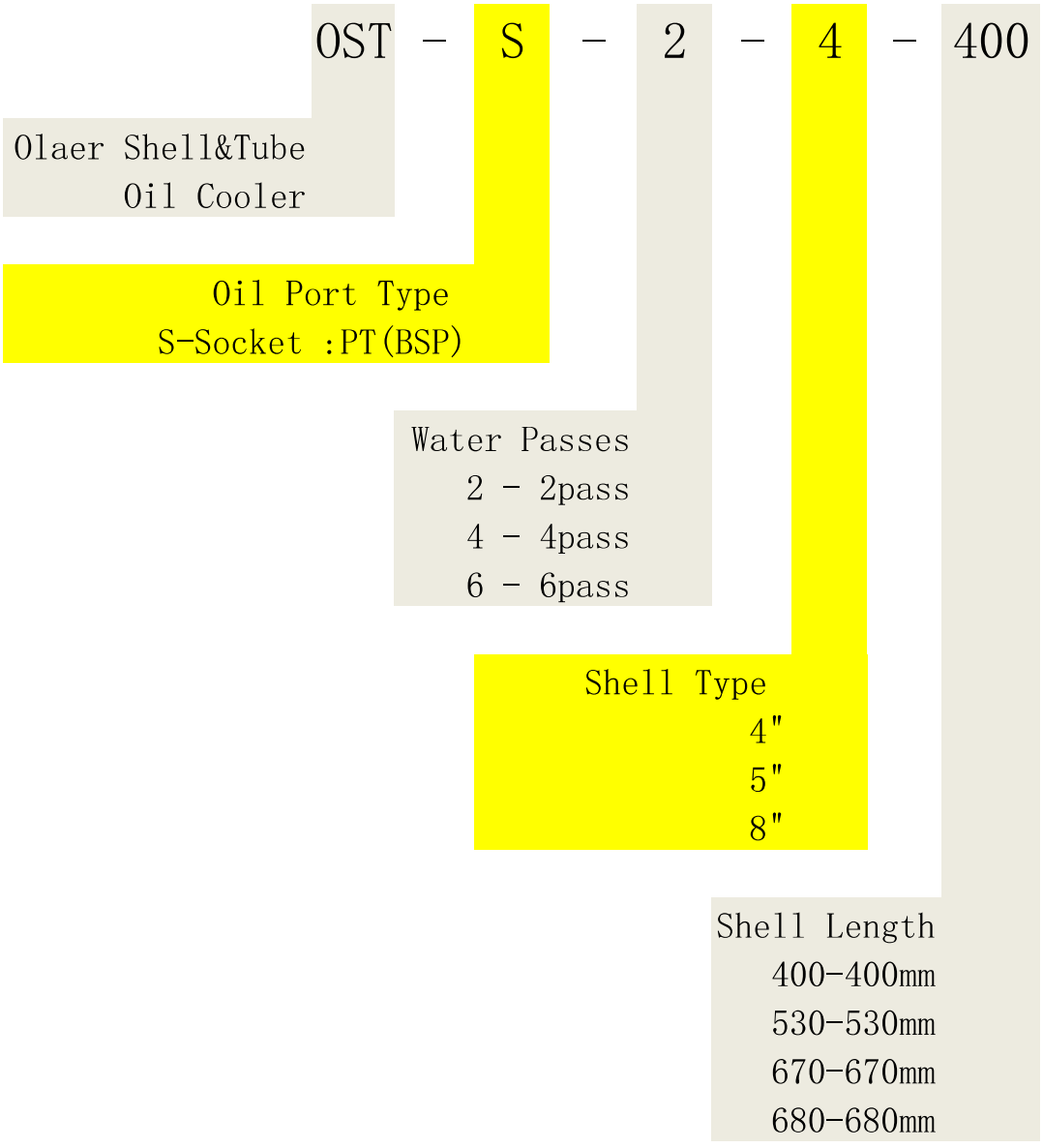
The Shell & Tube Cooler is a product which keeps ideal temperature for optimum oil viscosity index in the hydraulic system. Maintaining an appropriate oil viscosity index in the hydraulic systems extends the life cyle of the valves, pumps, and parts in the system, thereby reducing maintenance costs of the system.
The Shell & Tube Cooler will provide solutions to help your hydraulic systems to operate under optimum conditions with a number of different models.

Standard Dimensions



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Weight (kg)
OST-S2/4/6-4-400	¾"	¾"	455	400	290	55	150	75	250	75	174.5	100	170	9	13
OST-S2/4/6-4-530	¾"	1¼"	589	530	420	55	150	140	250	140	174.5	100	170	9	15
OST-S2/4/6-5-680	1"	1¼"	733	680	570	55	164	162	318	200	225.5	130	180	9	27
OST-S2/4/6-8-670	1½"	2"	753	670	530	70	244	173	326	171	287.5	160	270	14	50

Model Code

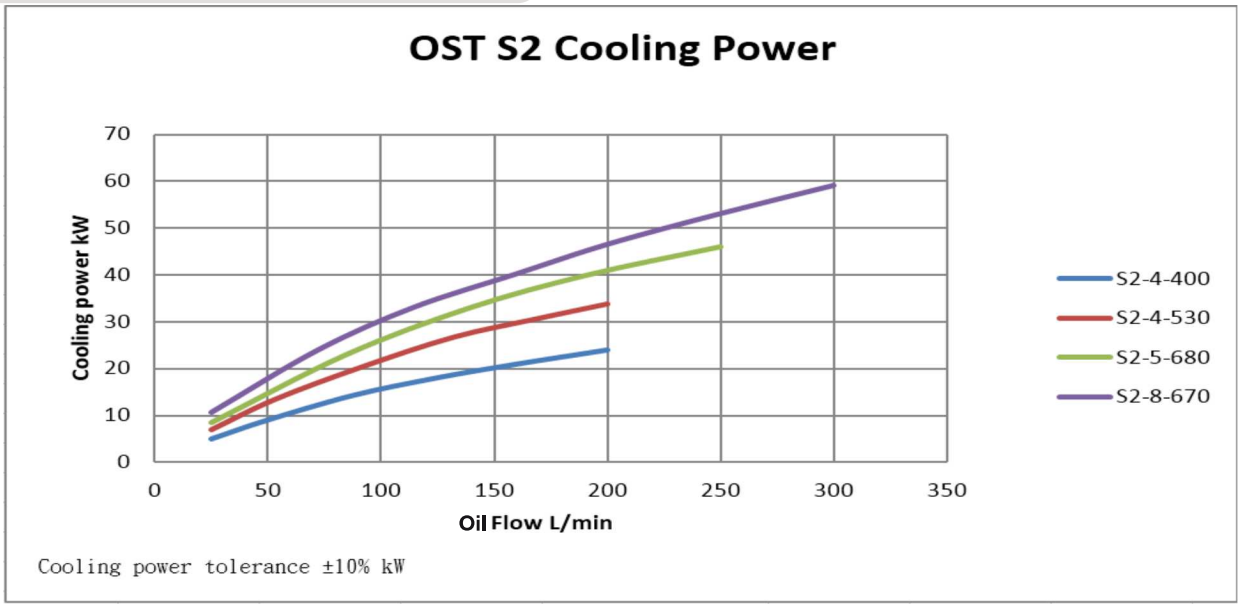


* ex:OST-S6-4-400(6pass Type)

Cooling Power

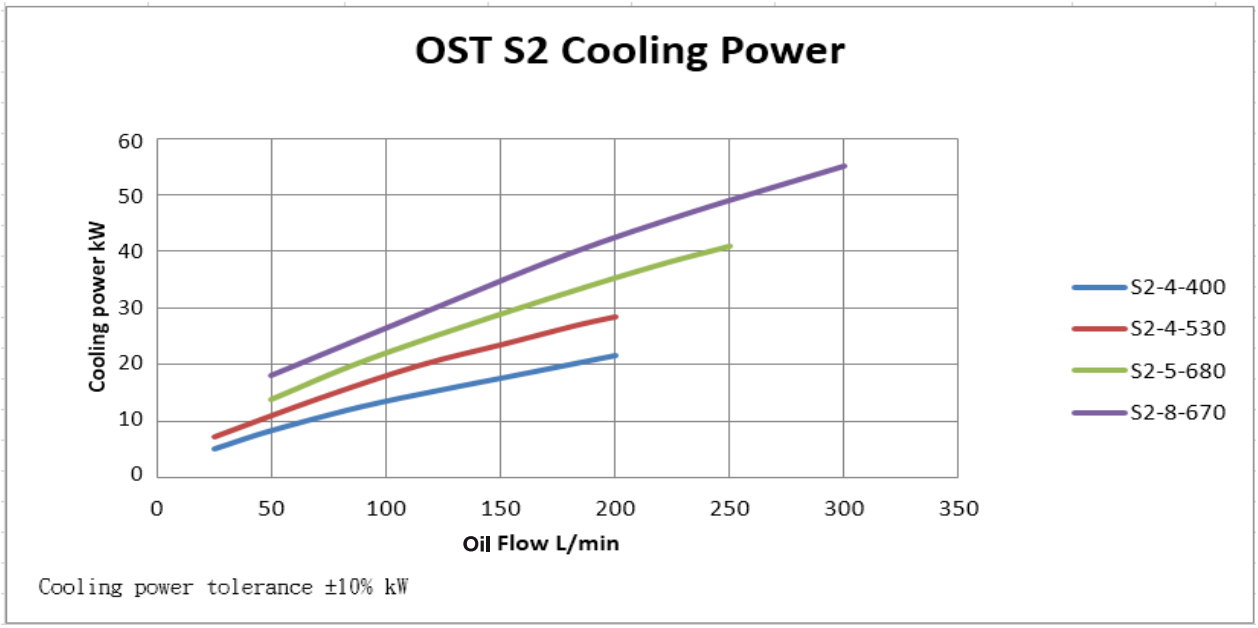
The Curve is based on :

Oil	ISO VG 46
Oil Inlet Temperature	60℃
Water Inlet Temperature	25℃
Oil / Water Inlet Ratio	1:1
Configuration	2Pass



The Curve is based on :

Oil	ISO VG 46
Oil Inlet Temperature	60℃
Water Inlet Temperature	25℃
Oil / Water Inlet Ratio	2:1
Configuration	2Pass



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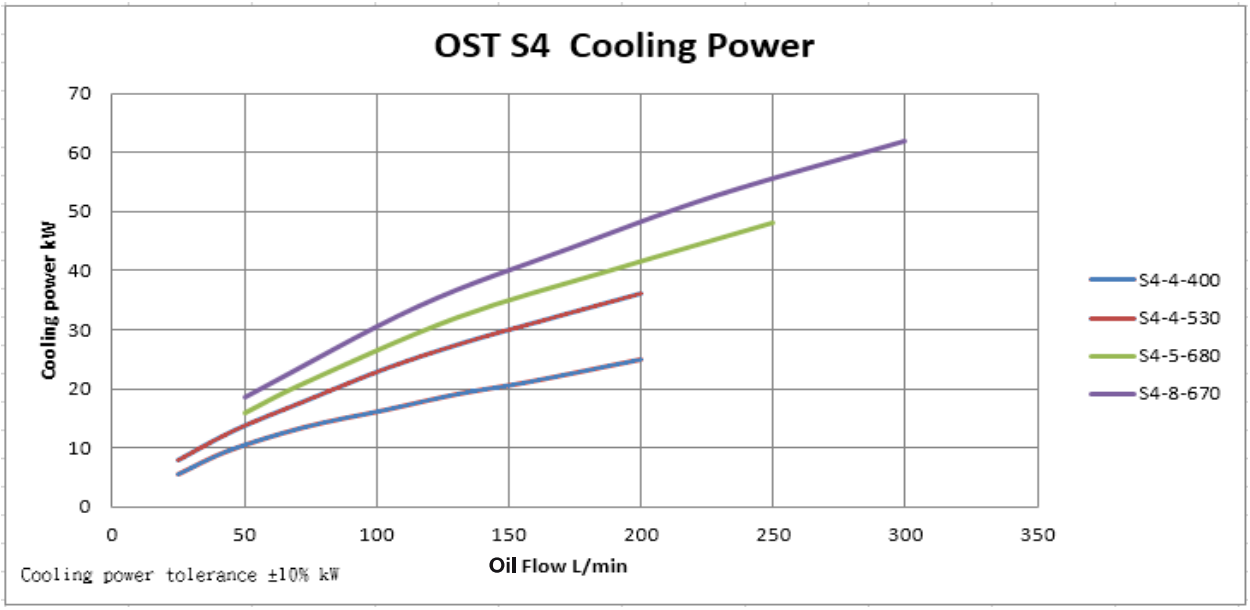
Cooling Power

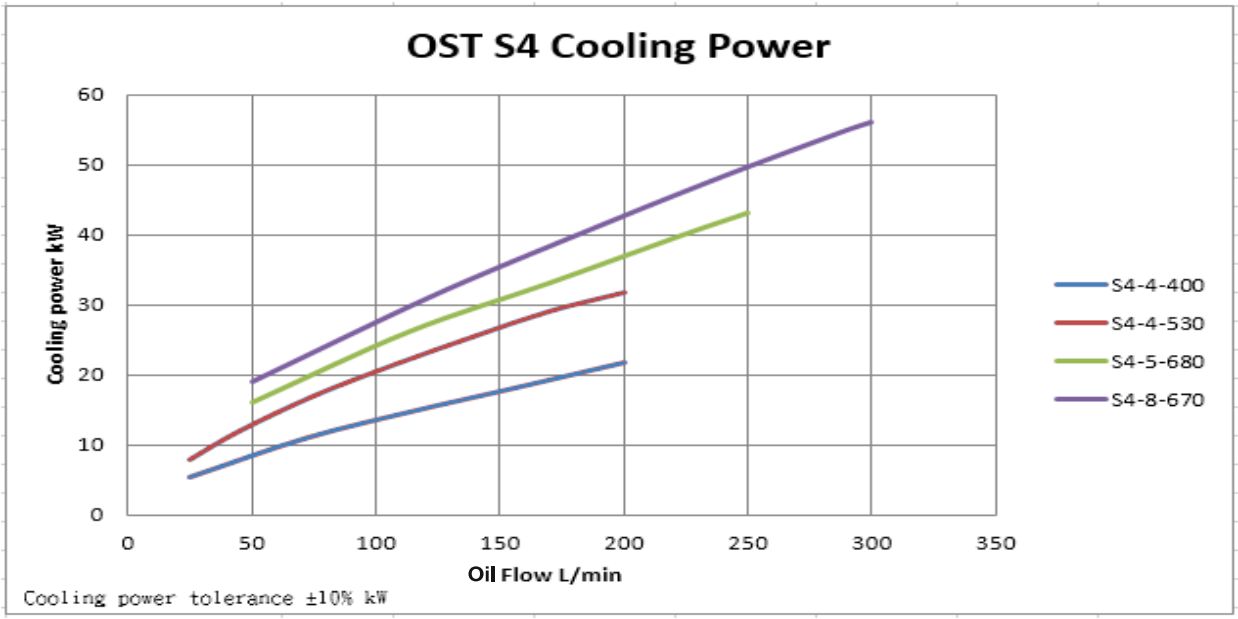
The Curve is based on :

Oil	ISO VG 46
Oil Inlet Temperature	60℃
Water Inlet Temperature	25℃
Oil / Water Inlet Ratio	1:1
Configuration	4Pass



The Curve is based on :

Oil	ISO VG 46
Oil Inlet Temperature	60℃
Water Inlet Temperature	25℃
Oil / Water Inlet Ratio	3:1
Configuration	4Pass



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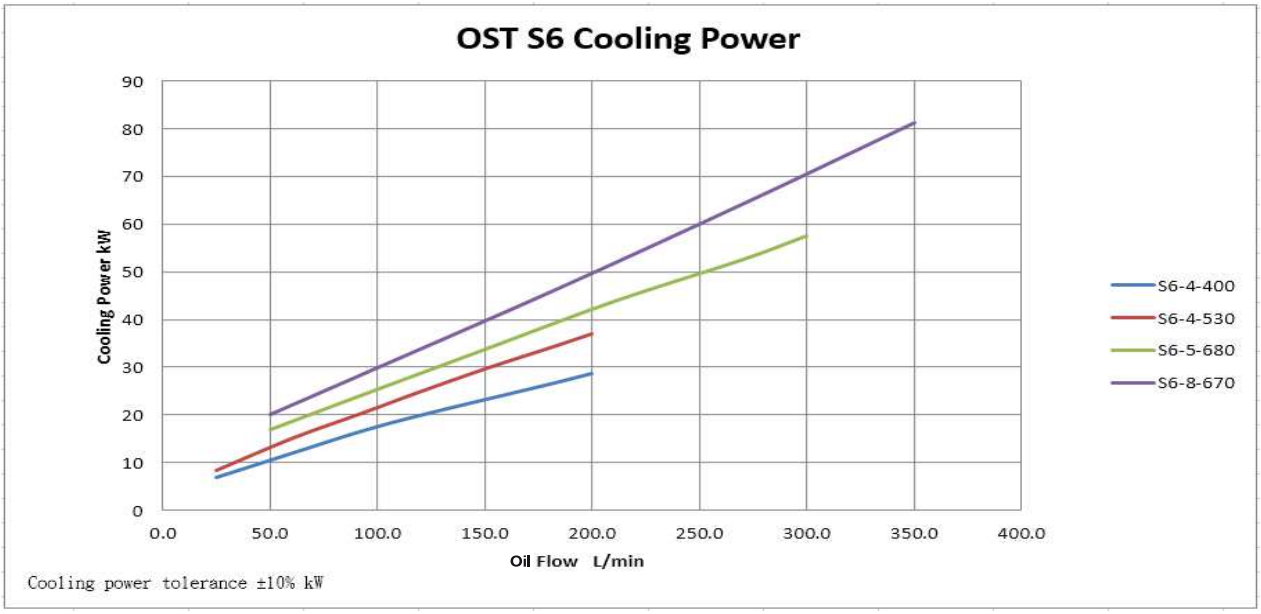
Cooling Power

The Curve is based on :

Oil	ISO VG 46
Oil Inlet Temperature	60℃
Water Inlet Temperature	25℃
Oil / Water Inlet Ratio	3 :1
Configuration	6Pass



The Curve is based on :

Oil	ISO VG 46
Oil Inlet Temperature	60℃
Water Inlet Temperature	25℃
Oil / Water Inlet Ratio	6 :1
Configuration	6Pass

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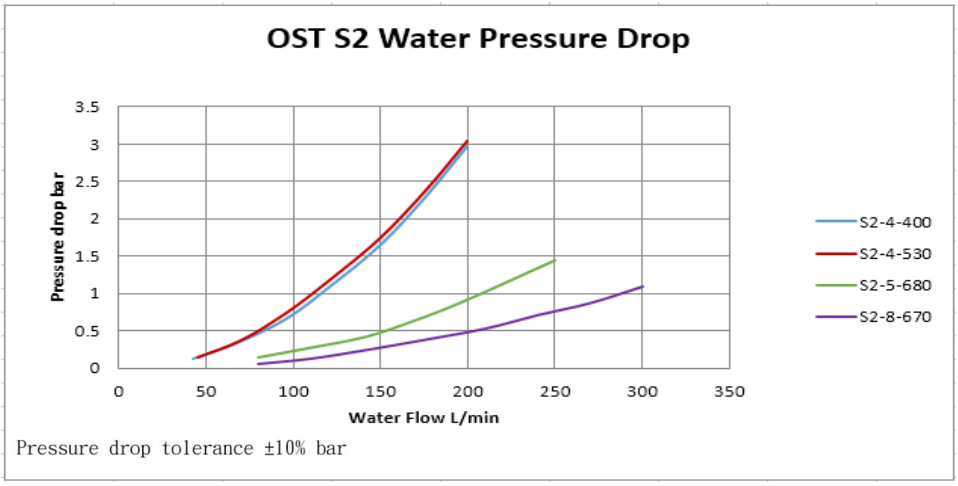
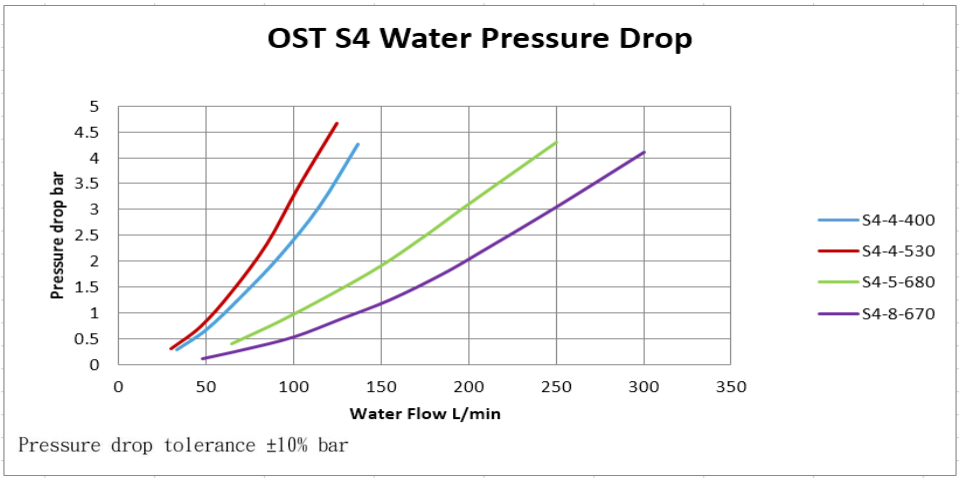
Water Flow Pressure Drop

The Curve is based on :

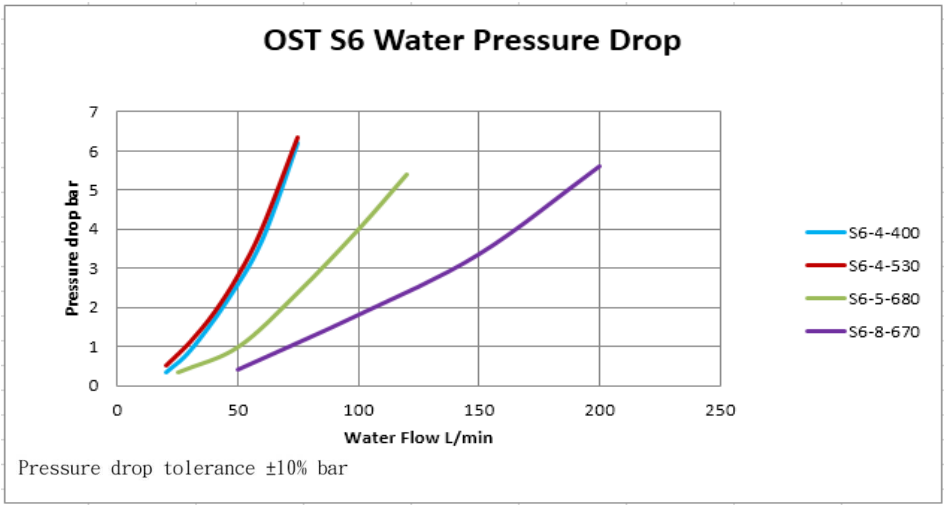
Water Inlet Temperature	25℃
Configuration	2/4/6Pass



Pressure drop tolerance ±10% bar



Pressure drop tolerance ±10% bar

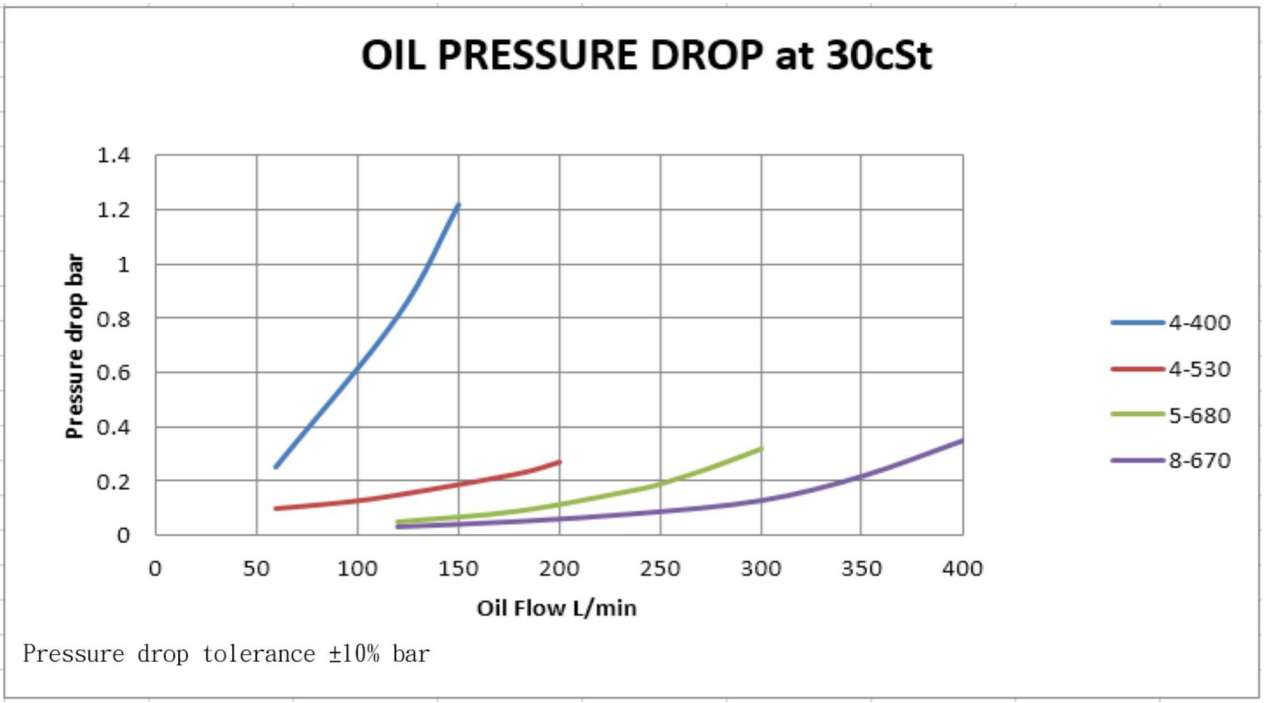


Pressure drop tolerance ±10% bar

Oil Flow Pressure Drop

The Curve is based on :

Oil	ISO VG 46
Oil Inlet Temperature	60℃
Configuration	2/4/6Pass



Pressure drop tolerance ±10% bar

Handling / Installation manual

Thank you for choosing the OST-series, Parker Olaer's representative oil coolers. In order to apply the product more safely, please carefully read the handling/installation manual and observe the precautions and disclaimers listed prior to use.

Disclaimers / Caution

Where the products are used contrary to the manner outlined in the product manual, the products shall be excluded from warranty, regardless of the duration of said product use.

(1) Usage

Do not use the product for any purposes other than as an oil cooler.

[Examples of usages not permitted]

- Heater
- Where the fluid used is other than oil, (air, gas, or water discharged into the shell side).

(2) Fluid types

Do not use any fluid types other than general mineral oil. (Where there is a fluid spray symbol indicated for fluid handling, follow the instructions carefully).

If the product is intended to be used for fluids other than those designated, ensure to contact our Technical Sales Department prior to use.

(3) Operating pressure

Under no circumstances should you use the product above the maximum operating pressure or Design temperature levels.

Maximum Working pressure

Outside the tube (oil side) : 15bar

Inside the tube (water side) : 10bar

Design temperature

100°C (The oil and water inlet temperatures should be 80°C or lower).

(4) **Operating cooling water**

Tap water, underground water, or industrial water should be used as cooling water for Hyundai Olaer standard oil coolers, adhering to the water quality standards below.Do not use contaminated water

Standard Values for Cooling Water Quality

	Item	Standard	Tendency	
			Corrosion	Scale Formation
Standard Items	Ph(25℃)	6.5 ~ 8.2	○	○
	Electric conductivity(25℃) μS/㎝	800 or lower	○	○
	Chlorine ions($C1^-$) mgCl^-/ℓ	200 or lower	○	
	Sulfur ions (SO_4^{2-}) mgSO_4^{2-}/ℓ	200 or lower		○
	Ph4-8 mg$CaCO_3$/ℓ	100 or lower		○
	Total hardness mg$CaCO_3$/ℓ	200 or lower	○	○
Reference Items	Iron (Fe) mgFe/ℓ	1.0 or lower	○	
	Sulfurized ions(S^{2-}) mgS^{2-}/ℓ	Not to be detected	○	
	Ammonium ions(NH_4^+) mgNH_4^+/ℓ	1.0 or lower	○	
	Ionized silica (SiO_2) mgSiO_2/ℓ	50 or lower	○	○

※ Note1) In the case of use of untreated water from a river, lake, or pond, ensure the water is not contaminated.

※ Note2) This standard has been adopted to extend the cooler's maximum life, maintain efficiency, and/or prevent any decrease in efficiency. Corrosion may occur even within the standard range.

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