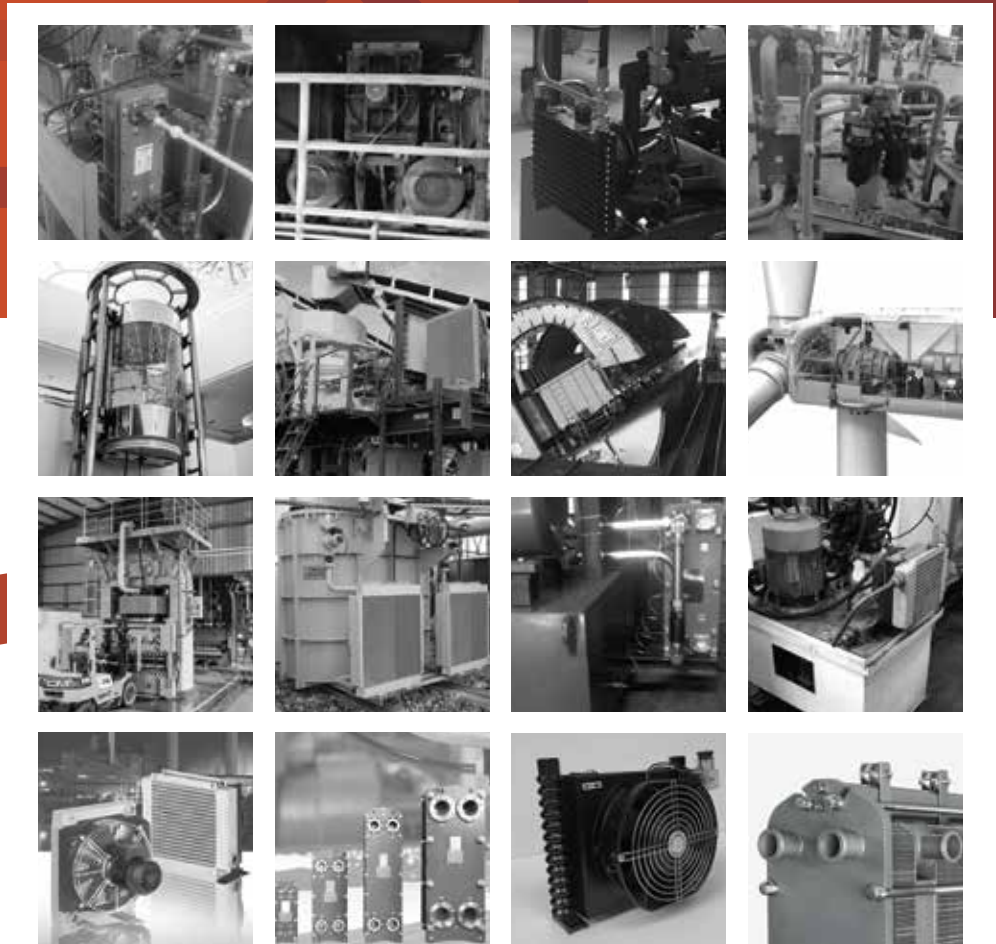
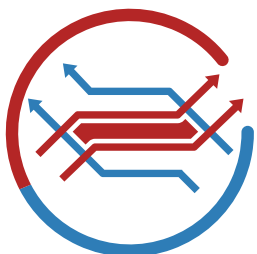


Oil Cooler Selection Catalogue

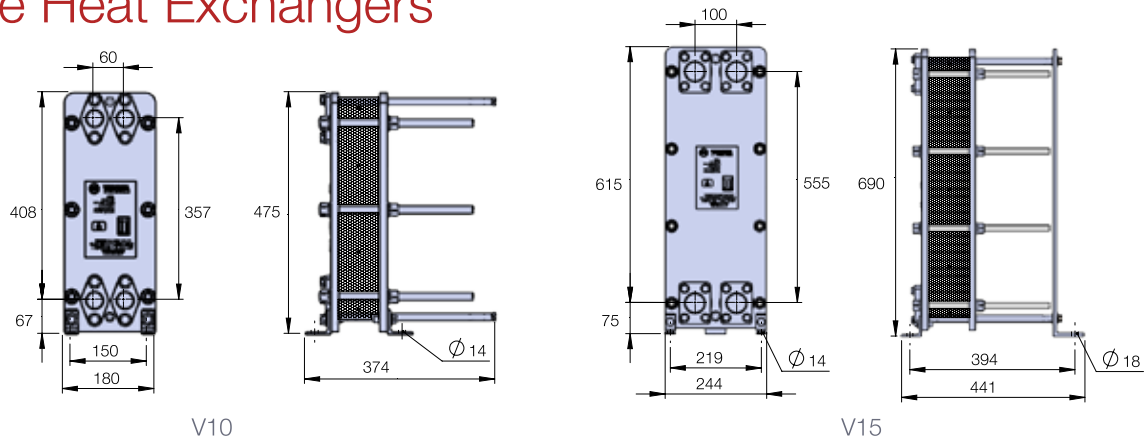


A commitment of consistent quality &
wide range of air/oil coolers &
plate heat exchangers



VARALKA
QUALITY • VALUE • COMPETENCE

Plate Heat Exchangers



How to Select a Suitable PHE

- Step 1** Shortlist models matching Oil Flow thru the PHE
- Step 2** Choose PHE which matches the heat dissipation required
- Example** Select PHE for Oil Flow of 50 lpm & heat dissipation of 6500 kcal/hour or more
- Solution** There are many models for 50 lpm. Out of these, V10Px24 should be selected as it will dissipate 8000 kcal/hour

| Heat Dissipation Kcal/Hour | kW | Oil Flow lpm | Model |
|-------------------------------|------|-----------------|---------|
| 1000 | 1.2 | 5-30 | V10PX8 |
| 1500 | 1.7 | 5-30 | V10PX10 |
| 2000 | 2.3 | 10-50 | V10PX12 |
| 3000 | 3.5 | 20-60 | V10PX14 |
| 4000 | 4.7 | 30-80 | V10PX16 |
| 5000 | 5.8 | 30-90 | V10PX18 |
| 6000 | 7.0 | 30-90 | V10PX20 |
| 8000 | 9.3 | 40-125 | V10PX24 |
| 10000 | 11.6 | 30-150 | V15PX18 |
| 12000 | 14.0 | 40-200 | V15PX20 |
| 15000 | 17.4 | 40-200 | V15PX22 |
| 20000 | 23.3 | 50-200 | V15PX24 |
| 25000 | 29.1 | 50-200 | V15PX26 |
| 30000 | 34.9 | 50-250 | V15PX28 |
| 40000 | 46.5 | 50-250 | V15PX36 |

For higher oil flow/heat dissipation, contact Varalka

How Much Heat Dissipation is Required?

Friction, mechanical losses and system inefficiencies generate heat in hydraulic systems leading to heating of oil. This oil is cooled to ensure smooth and trouble-free performance of the hydraulic system. Generally, designer or manufacturer of hydraulic system specifies the heat dissipation capacity of the PHE or oil cooler. If this information is not available, please use the following guide:

| | |
|--------------------------|-------------------------|
| Off Line Cooling | 40% of Main Motor kW |
| Return Line Cooling | 50% of Main Motor kW |
| Hydraulic Press | 60-80% of Main Motor kW |
| Special Purpose Machines | 30% of Main Motor kW |

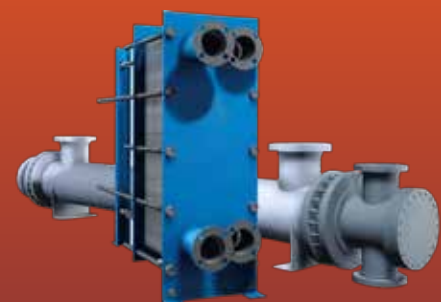
| Technical Information | |
|------------------------------|--------------------|
| Oil Outlet Temperature | 50-52 degree C |
| Cooling water Temperature | 30-32 degree C |
| Cooling Water Flow | 50-75% of Oil Flow |
| Oil Pressure Drop, ISO VG 68 | 1 Bar |
| Water Pressure Drop | 1 Bar |
| Maximum Working Pressure | 10 Bar |
| Maximum Working Temperature | 110 degree C |

Construction Details

| | |
|----------------------|--------------------------|
| Contact Parts | SS316L or Nitrile Rubber |
| Non-Contact Parts | SS304 or MS |
| Heat Transfer Plates | SS316L |
| Gaskets | NBR (Clip-On) |
| Flanged Connection | Oil and Water Side |

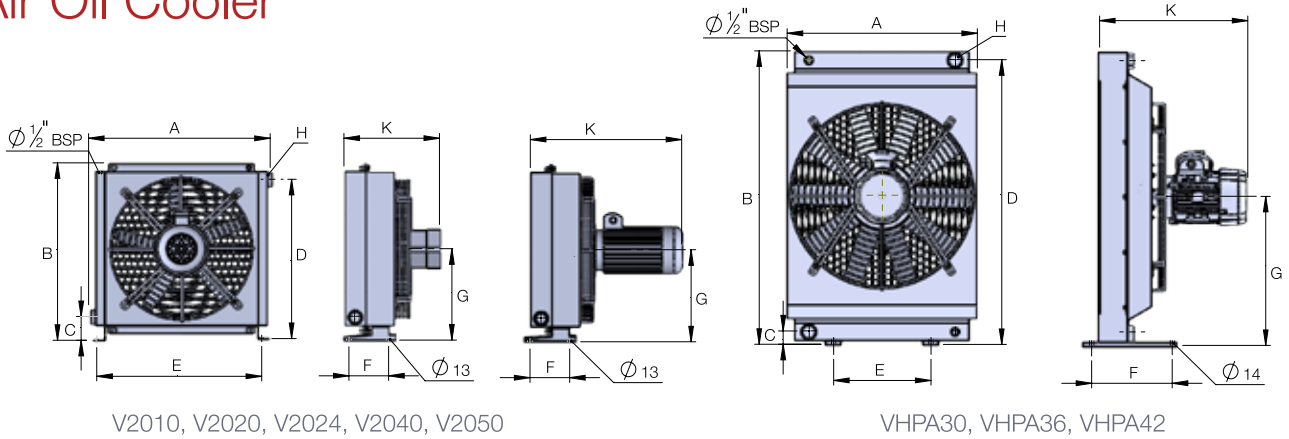
PHEs available in All Stainless-Steel construction also.

Advantages of PHE over Shell and Tube



Compact Size - 1/6th of Shell and Tube Cooler
 Easy to clean - Just open a few bolts and clean the plates
 Capacity can be increased easily by adding Plates

Air Oil Cooler



V2010, V2020, V2024, V2040, V2050

VHPA30, VHPA36, VHPA42

| Heat Dissipation | | Cooler Selection | | | Dimensional Details | | | | | | | | |
|------------------|------|------------------|--------|--------------------|---------------------|-----|----|-----|-----|-----|-----|---------|-----|
| Kcal/Hr | kW | Oil Flow (lpm) | Model | Min/Max Flow (lpm) | A | B | C | D | E | F | G | H (BSP) | K |
| 1000 | 1.2 | 5-30 | V2010 | 10 - 60 | 224 | 249 | 55 | 233 | 120 | 125 | 144 | Ø½" | 175 |
| 2000 | 2.3 | 10-50 | V2010 | 10 - 60 | 224 | 249 | 55 | 233 | 120 | 125 | 144 | Ø½" | 175 |
| 3000 | 3.5 | 20-75 | V2020 | 10 - 150 | 320 | 305 | 83 | 241 | 273 | 125 | 162 | Ø1" | 168 |
| 5000 | 5.8 | 40-90 | V2020 | 10 - 150 | 320 | 305 | 83 | 241 | 273 | 125 | 162 | Ø1" | 168 |
| 7500 | 8.7 | 40-125 | V2024 | 10 - 170 | 380 | 366 | 82 | 304 | 325 | 125 | 193 | Ø1" | 168 |
| 10000 | 11.6 | 60 - 150 | V2024 | 10 - 170 | 380 | 366 | 82 | 304 | 325 | 125 | 193 | Ø1" | 168 |
| 12500 | 14.5 | 80 - 175 | V2040 | 50 - 200 | 540 | 526 | 79 | 468 | 485 | 125 | 274 | Ø1¼" | 239 |
| 15000 | 17.4 | 100 - 200 | V2040 | 50 - 200 | 540 | 526 | 79 | 468 | 485 | 125 | 274 | Ø1¼" | 239 |
| 17500 | 20.3 | 100 - 200 | V2050 | 50 - 220 | 620 | 665 | 35 | 640 | 380 | 180 | 340 | Ø1¼" | 426 |
| 20000 | 23.3 | 100 - 220 | V2050 | 50 - 220 | 620 | 665 | 35 | 640 | 380 | 180 | 340 | Ø1¼" | 426 |
| 25000 | 29.1 | 100 - 250 | VHPA30 | 25 - 300 | 465 | 685 | 43 | 657 | 200 | 250 | 350 | Ø1¼" | 452 |
| 30000 | 34.9 | 150 - 300 | VHPA30 | 25 - 300 | 465 | 685 | 43 | 657 | 200 | 250 | 350 | Ø1¼" | 452 |
| 35000 | 40.7 | 175 - 300 | VHPA36 | 25 - 300 | 610 | 785 | 43 | 757 | 310 | 250 | 400 | Ø1¼" | 460 |
| 40000 | 46.5 | 200 - 325 | VHPA36 | 25 - 300 | 610 | 785 | 43 | 757 | 310 | 250 | 400 | Ø1¼" | 460 |
| 45000 | 52.3 | 200 - 325 | VHPA42 | 25 - 300 | 606 | 935 | 43 | 907 | 310 | 250 | 475 | Ø1¼" | 502 |
| 50000 | 58.1 | 230 - 325 | VHPA42 | 25 - 300 | 606 | 935 | 43 | 907 | 310 | 250 | 475 | Ø1¼" | 502 |

Technical Information

Heat dissipation data is based on ISO VG68,
Oil Inlet Temperature: 70 °C and Ambient Temperature 40 °C

Oil pressure drop (ISO VG68):1 bar maximum

Heat dissipation will be same for higher viscosity oils. But pressure drop will be more

Noise Level: < 85 dBA at 1 meter distance

Test Pressure 35 bar, Working Pressure 20 bar

Material of cooler: Aluminium Bar & plate type - Vacuum Brazed

Detailed technical offer can be provided on request

We manufacture coolers upto 800 lpm oil flow and 700 kW Heat dissipation. Please contact for offer

Motor Information

Power Supply

415V, 3 Phase, 50 Hz,
V2010 / V2020 / V2024 available in 220V / 1 phase also

Motor Type

V2010, V2020, V2024, V2040

Motor integrated with fan - compact and cost effective motor suggested for intermittent duty.

V2050, VHPA30, VHPA36, VHPA42

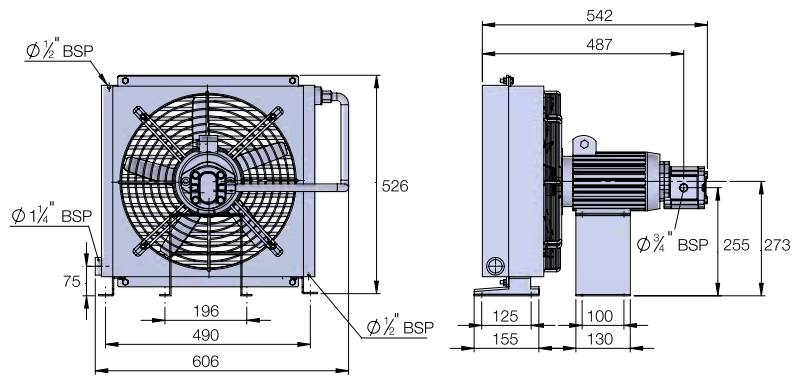
Squirrel Cage Induction Motor suggested for heavy duty and dusty environments

Optional Accessories

- Thermostat (fixed or variable temperature range)
- Stone Guard for coolers installed on stone crushers
- Bypass pressure valve
- Special Motors – Flame Proof, non-standard power supply

Offline Cooling Systems

Varalka offline coolers are highly compact cooling systems specially designed for Gear Boxes, Hydraulic Lifts, Machine Tools, Wind Mills. Standard Model for heat transfer upto 10 kW. Other models are in development.

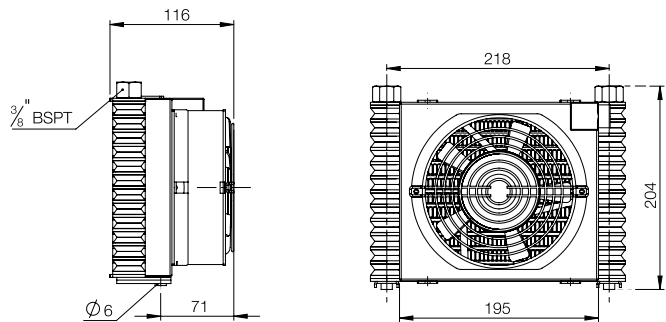


Drain Line Oil Coolers

Varalka is now the most preferred brand of drain line oil cooler in the Indian market with dominant market share. All leading manufacturers of machine tools and machine tools power packs use these coolers.

| Flow | Heat Dissipation |
|--------|--------------------------|
| 1 lpm | 0.58 kW / 500 kcal/hour |
| 3 lpm | 0.93 kW / 800 kcal/hour |
| 5 lpm | 1.20 kW / 1000 kcal/hour |
| 7 lpm | 1.30 kW / 1100 kcal/hour |
| 15 lpm | 1.50 kW / 1300 kcal/hour |

- All aluminium oil cooler
- Max Working Pressure: 10 bar
- Fan: 32W / 0.2 Amp / 230V / 1-Phase / 50 Hz
- Noise Level < 60 dBA
- Suitable for drain line oil cooling in variable vane pumps with working pressure of 70 bar or lower.
- Common Applications: Machine Tools, Offline Oil Cooling without pressure peaks.



Why Choose Varalka?

- Competitive Pricing
- Quick Deliveries
- Prompt Pre and After Sales Support
- ISO 9001:2015 Quality Management System
- Varalka Facility Audited by Leading Hydraulic/Lube Oil Systems Manufacturers
- CE, PED Compliant Air Oil Coolers & Plate Heat Exchangers
- Third Party Inspections Accepted



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