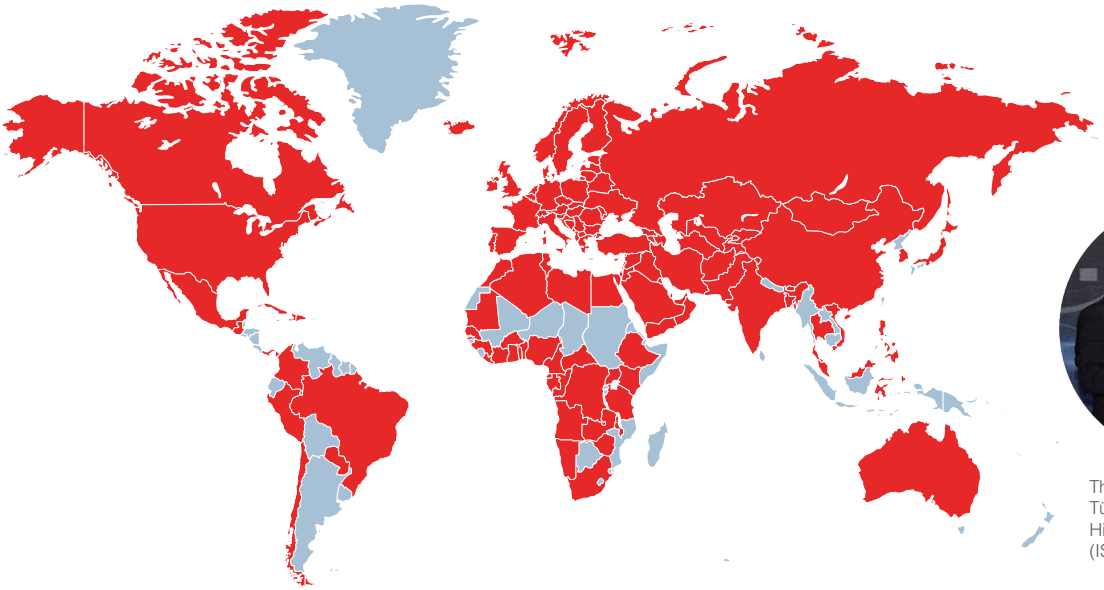
EKİN ENDÜSTRİYEL

FAN DRIVEN OIL COOLERS PRODUCT CATALOGUE

Your Satisfaction Is Our Priority; Globalization Is Our Goal!



The 2nd Company from Türkiye Exporting to the Highest Number of Countries (ISIB HVAC-R).

The first condition of innovation is to question. Sustainable innovation is to never stop questioning.

For us, the journey of innovation started with a question: "Why not produce value-added technology in Türkiye?". The first turning point in this long journey was the birth of the MIT (Made In Türkiye) brand. The founding vision of MIT, which enabled us to become Türkiye's first domestic manufacturer in the field of "Plate Heat Exchanger", was not to be a domestic "alternative", but to create a quality brand that could compete in the global market.

By working for this goal, we have been entitled to receive many international quality certificates such as ISO, TSE, CE, GOST... for our products and processes over many years. For us, questioning the current situation was a natural result of our desire to exceed ourselves.

New Generation Engineering

With our engineering approach that focuses on the process, not the problem, we do not only specialise in one product, but also consider the entire ecosystem of that product. Therefore, we provide an end-to-end application by producing all other components that will form a system as well as the plate heat exchanger. For this, we focus on the continuous development of the necessary engineer staff. With our business development, pre-sales, sales and after-sales services provided by our expert engineers, we produce not only products but also "solutions".

At the point we have reached; we offer complementary services with our internationally approved plate heat exchangers, components such as accumulation tanks, boilers, industrial pumps and installation materials that turn these heat exchangers into a system. With our team of more than 100 expert engineers, we continue to develop as a solution partner for projects requiring high technology in more than 60 countries.

PRODUCT RANGE

HEAT TRANSFER PRODUCTS

- Gasketed Plate Heat Exchangers
- Brazed Heat Exchangers
- Shell & Tube Heat Exchangers
- Evaporators and Condensers
- DC Fan Driven Oil Coolers
- Heating Coils
- Serpentines / Radiators / Economizers

PRESSURE VESSELS

- Water Heater Tanks
- Water Storage Tanks
- Buffer Tanks
- Expansion Tanks /Automatic Pump Controlled Expansion Systems
- Stainless Steel Tanks
- Hydraulic Balance Tanks / Air Separators / Sediment Separators
- Magnetic Sediment Separators / Magnetic Filters / Bag Filters
- Air Tubes
- Steam Separators
- Pressured Air Tanks
- Neutralization Units

INDUSTRIAL AND FOOD GRADE SYSTEMS

- Heat Stations
- Industrial Process Systems
- Dosing Systems
- Thermoregulators
- Pasteurizers
- CIP and Hygienic Process Systems
- Hygienic Storage and Process Tanks
- Custom-Made Stainless Steel Tanks
- Reactors
- Homogenizers

FLUID TRANSFER PRODUCTS

- Lobe Pumps
- Hygienic Centrifugal Pumps
- Twin Screw Pumps
- Gear Pumps
- Magnetic Drive Pumps / Thermoplastic Pumps
- Dosing Pumps
- Air Operated Double Diaphragm Pumps (AODD)
- Drum Pumps
- Monopumps
- Peristaltic (Hose) Pumps
- Centrifugal Blowers
- Roots Blowers

FLOW CONTROL UNITS

- Butterfly Valves
- Ball Valves
- Globe Valves
- Knife Gate Valves
- Actuators
- Check Valves and Strainers
- Pneumatic Piston Valves

ENERGY SYSTEMS

- Domestic and Industrial Boilers
- Steam Generators
- Chillers
- Cooling Towers

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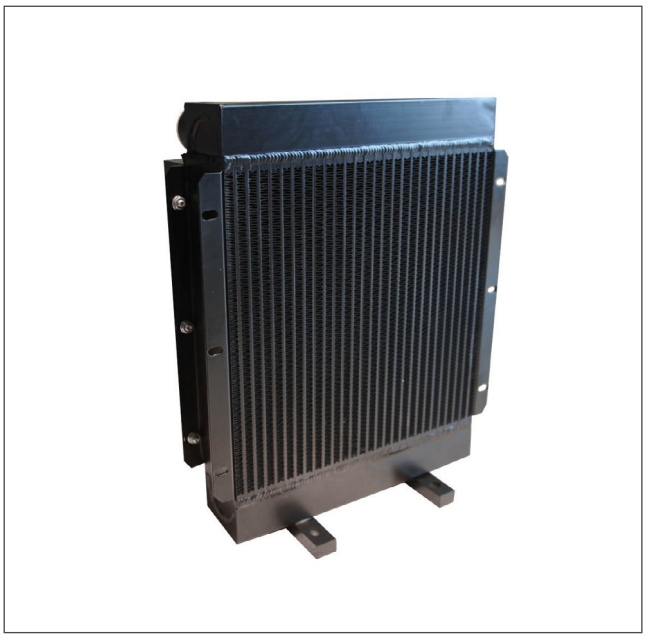
MIT mitrojen DORIS magneto AIROO TRUEVALVE myra GP GEARYMAX inoxen INNSUN

Contents

Hydraulic Oil Cooler



In industrial applications, during the conversion of mechanical energy into pressure energy and pressure energy into work, some of the energy is released as heat energy and this released energy causes an increase in the hydraulic oil temperature.

Keeping the temperature of the oil at a certain level in order not to lose its lubricating property is important, therefore cooling the heated oils is necessary for the systems and other equipment to operate smoothly.

Although this cooling need can usually be solved with water or gas type heat exchangers, hydraulic oil coolers with fans come into play when there is no cooling water or a cooling gas.

Since hydraulic oil coolers are independent and mobile elements that do not need any infrastructure, they find more usage areas than water or gas oil coolers. Hydraulic oil coolers consist of a radiator, an AC, a DC or a hydraulic motor, a fan and a hood.

Parts of an Hydraulic Oil Cooler

Radiator: Consists of curved aluminum pipes for liquid to flow within

Hood: It is the connecting component that holds the radiator and fan motor together.

Fan: Spinning wings that blow or pull air.

Fan guard: It is the system that protects the fan.

Motor: It is the equipment that provides the fan movement; available in 12V DC, 24V DC, 220V AC, 380V AC or hydro-motor according to the needs of the installation.

Thermostat: Equipment that measures the oils temperature.

In hydraulic oil coolers, it is usually the air that is pulled from the environment to pass over the hydraulic oil and the oil is cooled. Ambient temperature is a very important parameter in determining the suitable hydraulic oil cooler. For this reason, the capacity calculation made by considering the most difficult conditions will result in the desired efficiency regardless of seasonal temperature variations.

Hydraulic oil coolers take up less space in the facility as they are small in size. Unlike heat exchanger systems, the initial investment costs are low as there is no need for additional installation and use of additional fixtures.

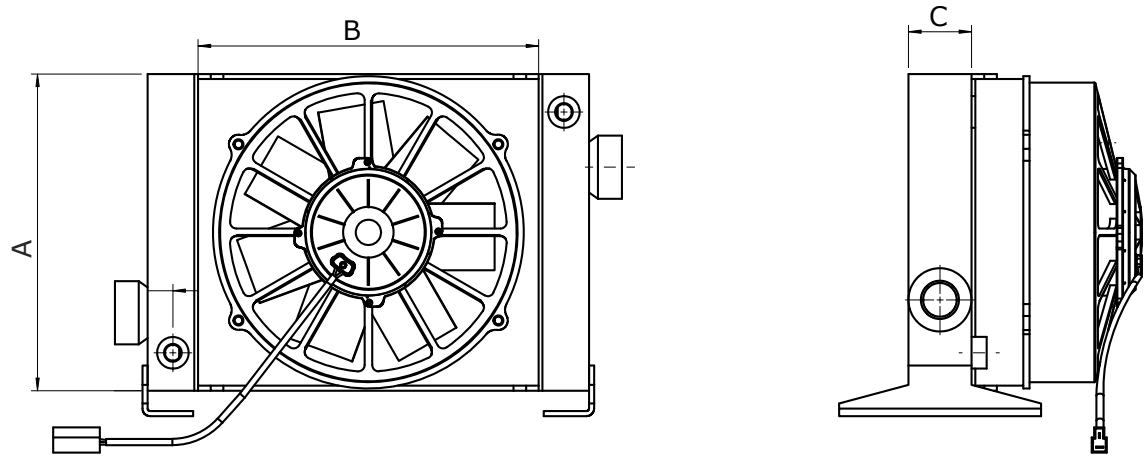
MIT engineers who are experts in their fields are ready for any support for appropriate product design using selection tables and special software. The engine also plays an important role in providing the required cooling.

Electric motors for hydraulic oil coolers are namely;
12 V or 24 V DC
230V AC monophase
230/400V AC 50/60 Hz three-phase and hydro-motor.

Industrial Applications

Hydraulic oil coolers are used in various different applications around the world:

- Agricultural Machinery
- Street Cleaning Machines
- Hydrostatic Drives
- Elevators
- Compressors
- Construction Machinery
- Engine Oil Cooling
- Off-road Vehicles

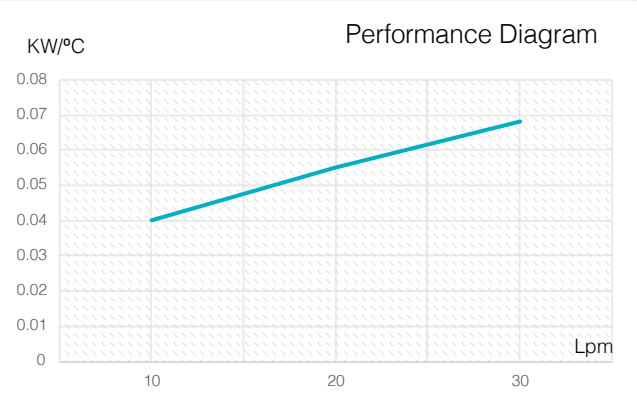


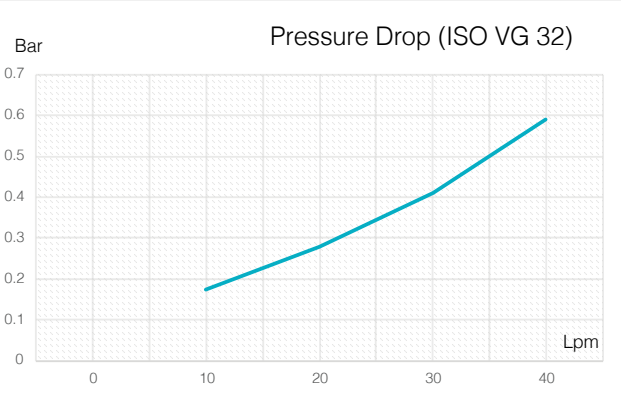
MIT FAN DRIVEN OIL COOLER DIMENSIONS			
Model	A (mm)	B (mm)	C (mm)
FYS 12 - 12/24	230	242	45
FYS 12 - 01	242	228	45
FYS 13 - 12/24	230	242	45
FYS 13 - 01	228	242	45
FYS 14 - 12/24	296,5	320	63
FYS 14 - 01	296,5	321	63
FYS 15 - 12/24	360,5	380	63
FYS 15 - 01/02	359	380	63
FYS 15 - 03 HYDROMOTOR	360,5	380	63
FYS 16 - 12/24	426	445	63
FYS 16 - 01/02	426	445	63
FYS 16 - 03 HYDROMOTOR	429	445	63
FYS 17 - 12/24	537,5	540	63
FYS 17 - 01/02	537,5	540	63
FYS 17 - 03 HYDROMOTOR	540,5	540	63
FYS 18 - 12/24	424,5	726	85
FYS 18 - 01/02	424,5	726	85
FYS 19 - 12/24	478,5	566	100
FYS 19 - 01/02	478,5	566	100
FYS 19 - 03 HYDROMOTOR	478,5	566	100
FYS 20 - 12/24	626,5	776	100
FYS 20 - 01/02	626,5	776	100
FYS 20 - 03 HYDROMOTOR	626,5	776	100
FYS 21 - 01/02	1000	710	94

MIT FAN DRIVEN OIL COOLER TECHNICAL SPECIFICATIONS										
Model	Oil Flow Rate min-max	Max Cooling Capacity	Volt	Power	Air	Ø Fan	Fan RPM	Electric Protection	Capacity	Weight
FYS 12 - 12/24	10 - 40	3	12/24 DC	130	560	ø167	4400	68	0.7	3.7
FYS 12 - 01	10 - 40	3	230 AC	25	450	ø160	1450	44	0.7	3.7
FYS 13 - 12/24	20 - 80	6,5	12/24 DC	130	1.060	ø225	3400	68	1.4	5.3
FYS 13 - 01	20 - 80	6,5	230 AC	63	680	ø200	2750	44	1.4	5.5
FYS 14 - 12/24	40 - 100	10	12/24 DC	130	1.060	ø225	3400	68	1.7	6.3
FYS 14 - 01	40 - 100	10	230 AC	63	680	ø200	2750	44	1.7	6.3
FYS 15 - 12/24	60 - 120	14	12/24 DC	130	1400	ø280	1400	68	2.3	8.1
FYS 15 - 01/02	60 - 120	14	230/400 AC	63	1.000	ø250	1000	54	2.3	10
FYS 15 - 03 HYDROMOTOR	60 - 120	14	-	-	1.480	ø250	1480	-	2.3	10
FYS 16 - 12/24	80 - 140	25	12/24 DC	130	1.710	ø305	2570	68	4	12.5
FYS 16 - 01/02	80 - 140	25	230/400 AC	72	1.700	ø300	1380	54	4	14
FYS 16 - 03 HYDROMOTOR	80 - 140	25	-	-	2.390	ø300	1500	-	4	14
FYS 17 - 12/24	100 - 160	30	12/24 DC	130	2.630	ø385	2900	68	5.7	18
FYS 17 - 01/02	100 - 160	30	230/400 AC	165	2.900	ø350	1380	54	5.7	20
FYS 17 - 03 HYDROMOTOR	100 - 160	30	-	-	4.080	ø350	1500	-	5.7	20
FYS 18 - 12/24	120 - 200	35	12/24 DC	260	2.800	ø280 x2	2680	68	7.5	23
FYS 18 - 01/02	120 - 200	35	230/400 AC	100	2.000	ø250 x2	1380	44	7.5	25
FYS 19 - 12/24	150 - 250	40	12/24 DC	130	2.630	ø385	2900	68	9	26
FYS 19 - 01/02	150 - 250	40	230/400 AC	165	2.900	ø350	1380	54	9	28
FYS 19 - 03 HYDROMOTOR	150 - 250	40	-	-	4.080	ø350	1500	-	9	28
FYS 20 - 12/24	180 - 300	50	12/24 DC	260	3.420	ø305 x2	2570	68	14	39
FYS 20 - 01/02	180 - 300	50	230/400 AC	450	6.900	ø500	1320	54	14	46
FYS 20 - 03 HYDROMOTOR	180 - 300	50	-	-	7.200	ø500	1500	-	14	46
FYS 21 - 01/02	250 - 500	75	230/400 AC	490	8.000	ø400 x2	1400	54	18	67

Performance Diagram

MIT FYS12





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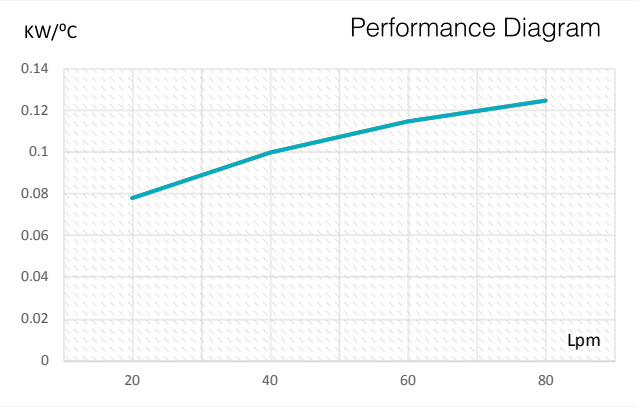

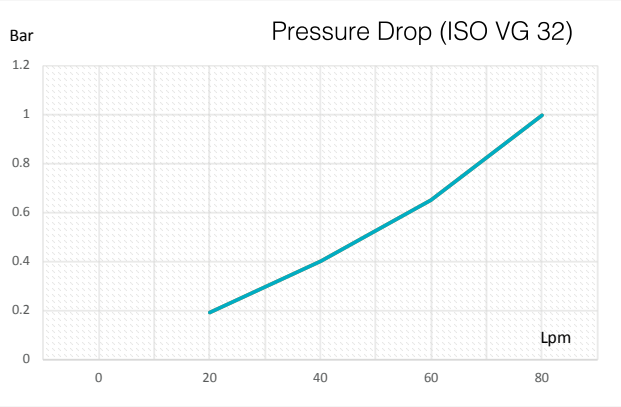

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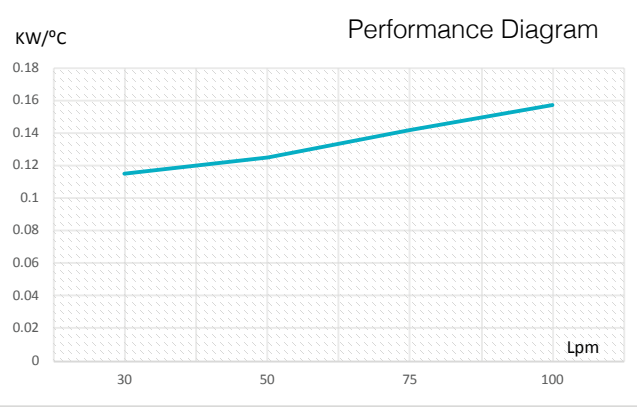

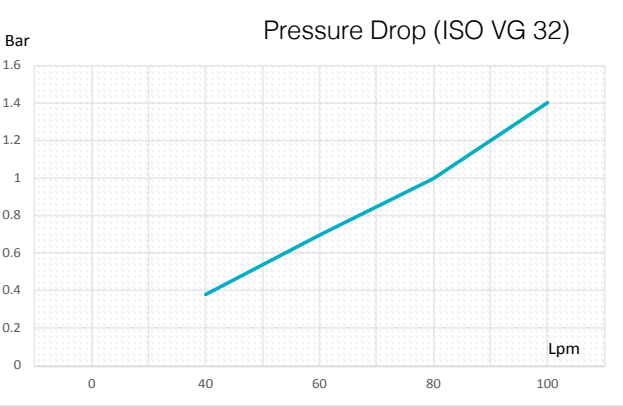

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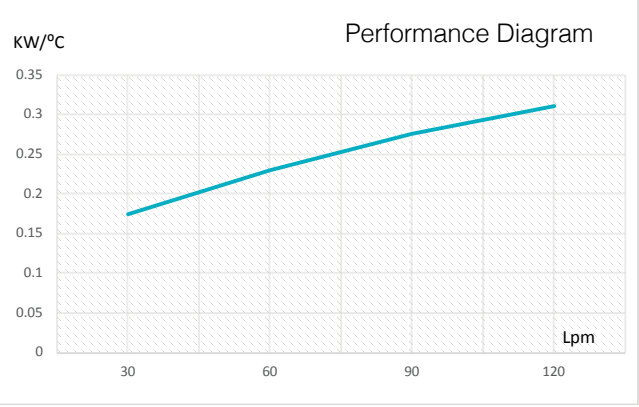

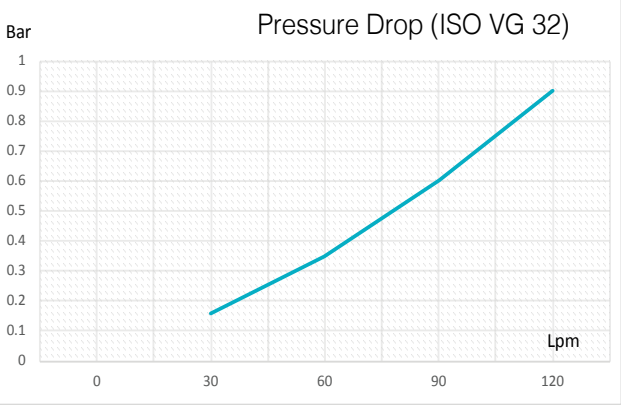

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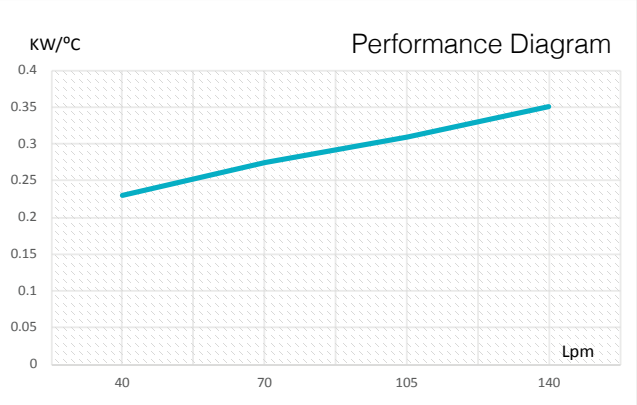
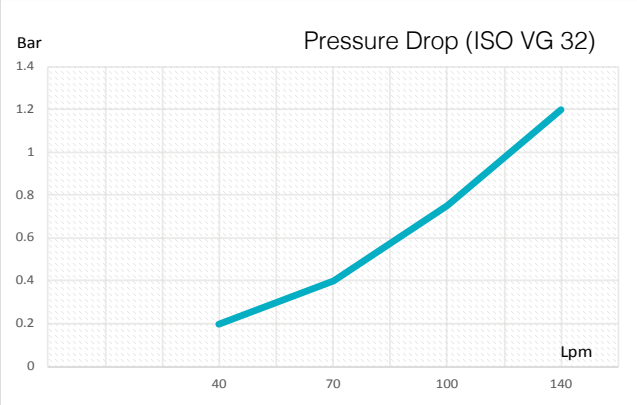
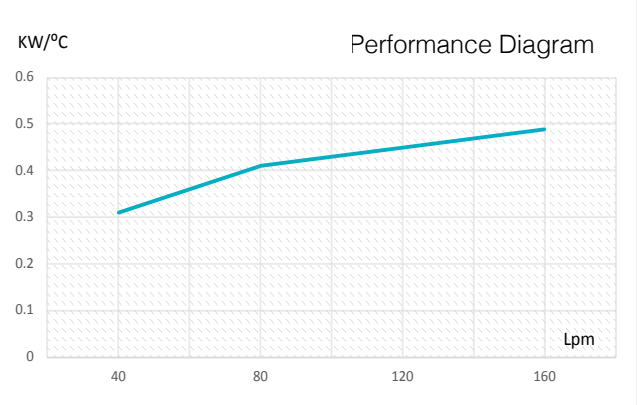
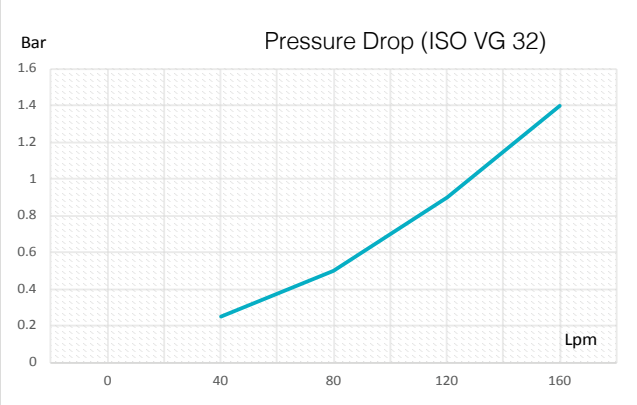




MIT FYS17





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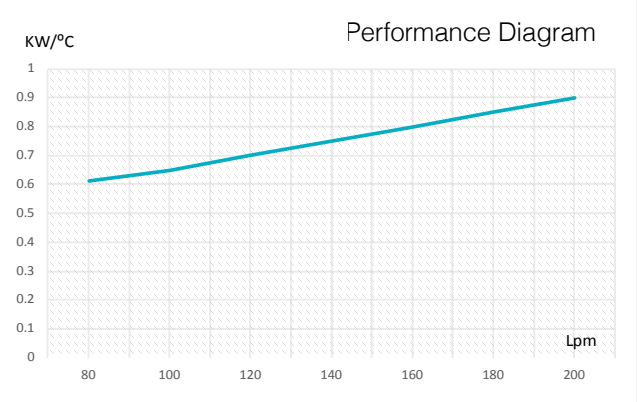

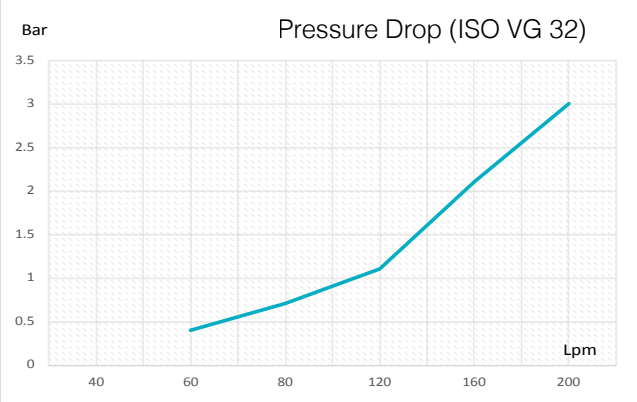

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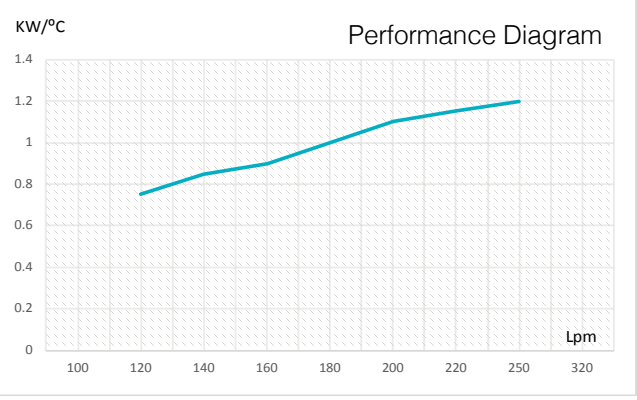

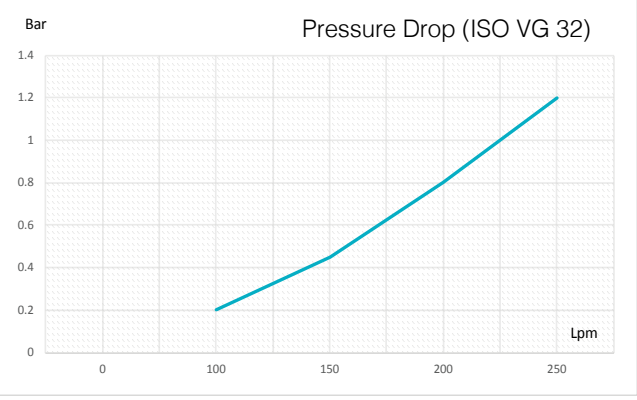

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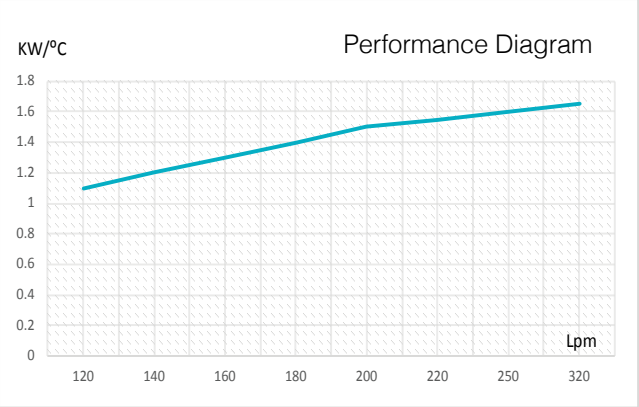

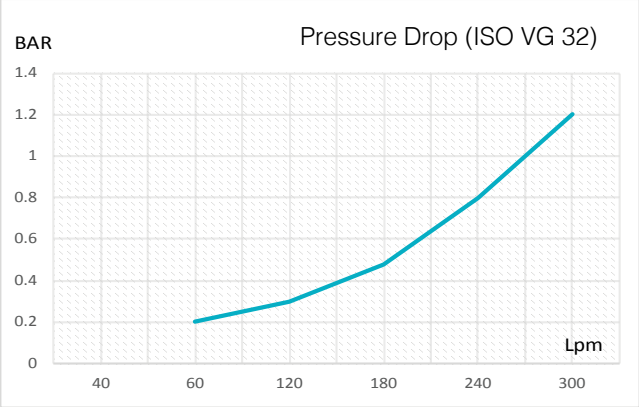

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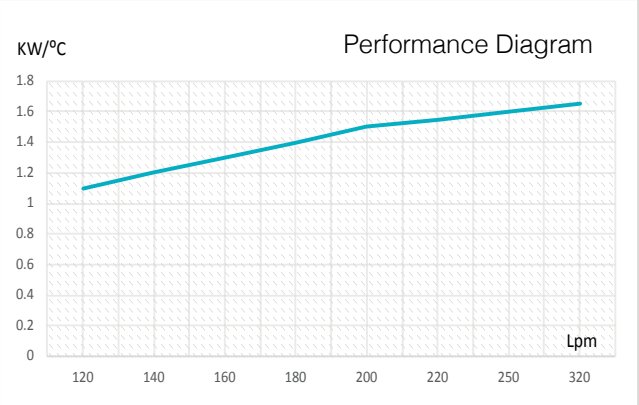
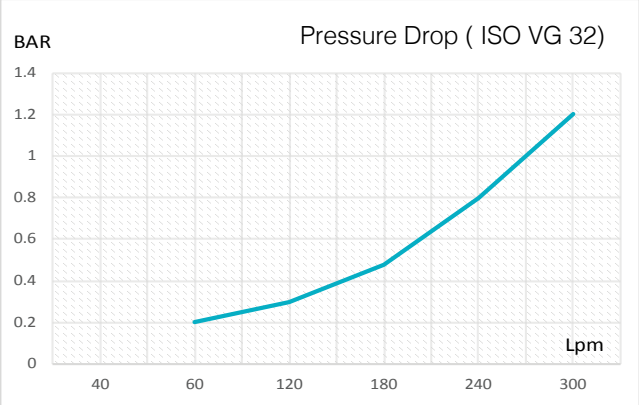


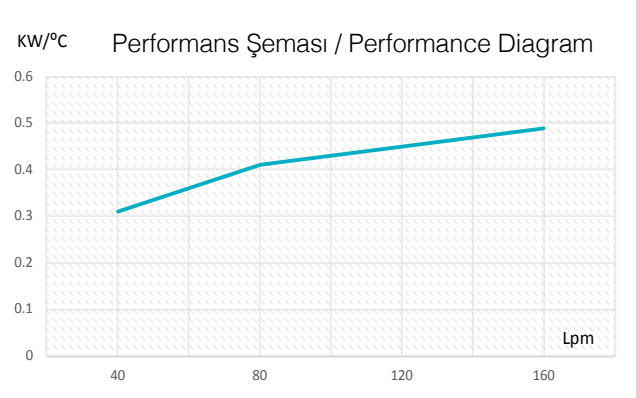


Verilenölçüleryaklaşıkdeğerlerdir,imalataşamasındadeğişiklikgösterebilmektedir.
Sipariş durumunda varsa hassas ölçülerinizi bildirmenizi rica ederiz.

Calculation for the Optimal Cooler

In order to choose the right cooler, the following information is required.

- Q (kW) Required Heat Dissipation
- V (lt/m) Oil Flow
- Toil (°C) Oil Temperature Entering the Radiator
- Tair (°C) Ambient Temperature around the Radiator



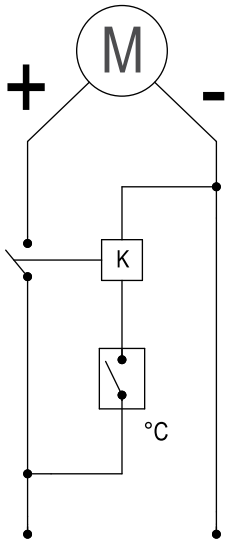
Example

Q : 15 kW
V : 165 lt/dk
Toil : 60 °C
Tair : 30 °C

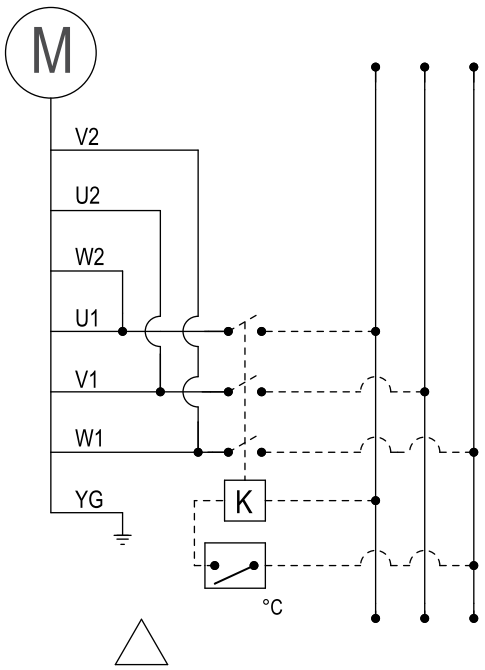
ΔT = 60 - 30 = 30 °C
K=15 kW/30 °C = 0,5 kW / °C

K ve V değerleri ile soğutma performans grafiği üzerinden en uygun soğutucu seçilir. Bu hesaplamaya göre MIT FYS 17 kodlu soğutucu seçilmektedir.

Electrical Circuit

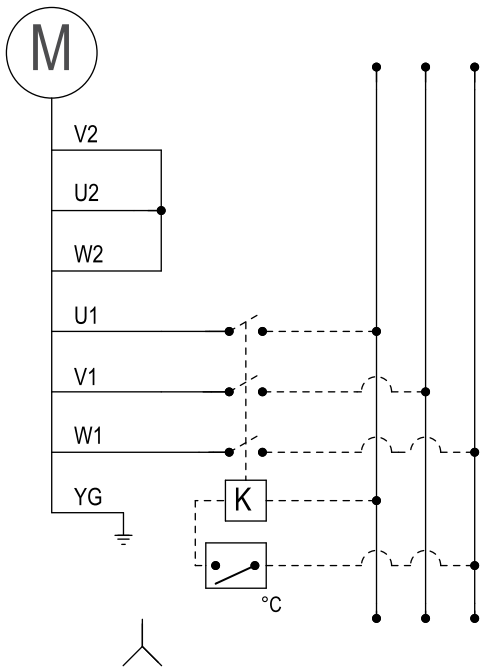


12-24V DC



230V-280V AC 3 FAZ

°C = Termostat
K: Röle



400V-480V AC 3 FAZ

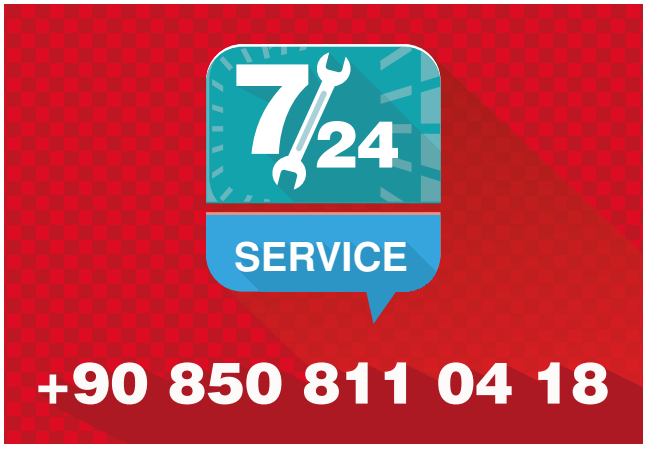
°C = Termostat
K: Röle

Professional System Solution Center

You can get answers to the problems you experience with your pumps, heat exchangers and system from our MIT professional system solution center. You can also benefit from our 7/24 uninterrupted service with our solution center consisting of our expert engineers.

- Domestic hot water installations.
- Central and district heating systems.
- Milk, yogurt, heating, cooling and pasteurization systems.
- Industrial cooling and heating systems.
- Oil cooling systems.
- Energy recovery systems.
- Pool heating systems.
- Steam installations.

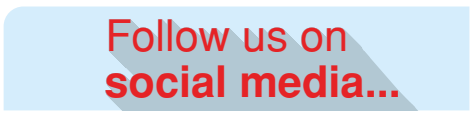
It is vital for your system to be designed and implemented correctly in the first installation in order to be able to operate at the desired capacity, smoothness and long life. For this reason, you can get first-hand the technical support you need during the installation phase of your system and the problems that may arise in the business; You can reach us **24 hours +90 (216) 232 24 12 in 7 days**.



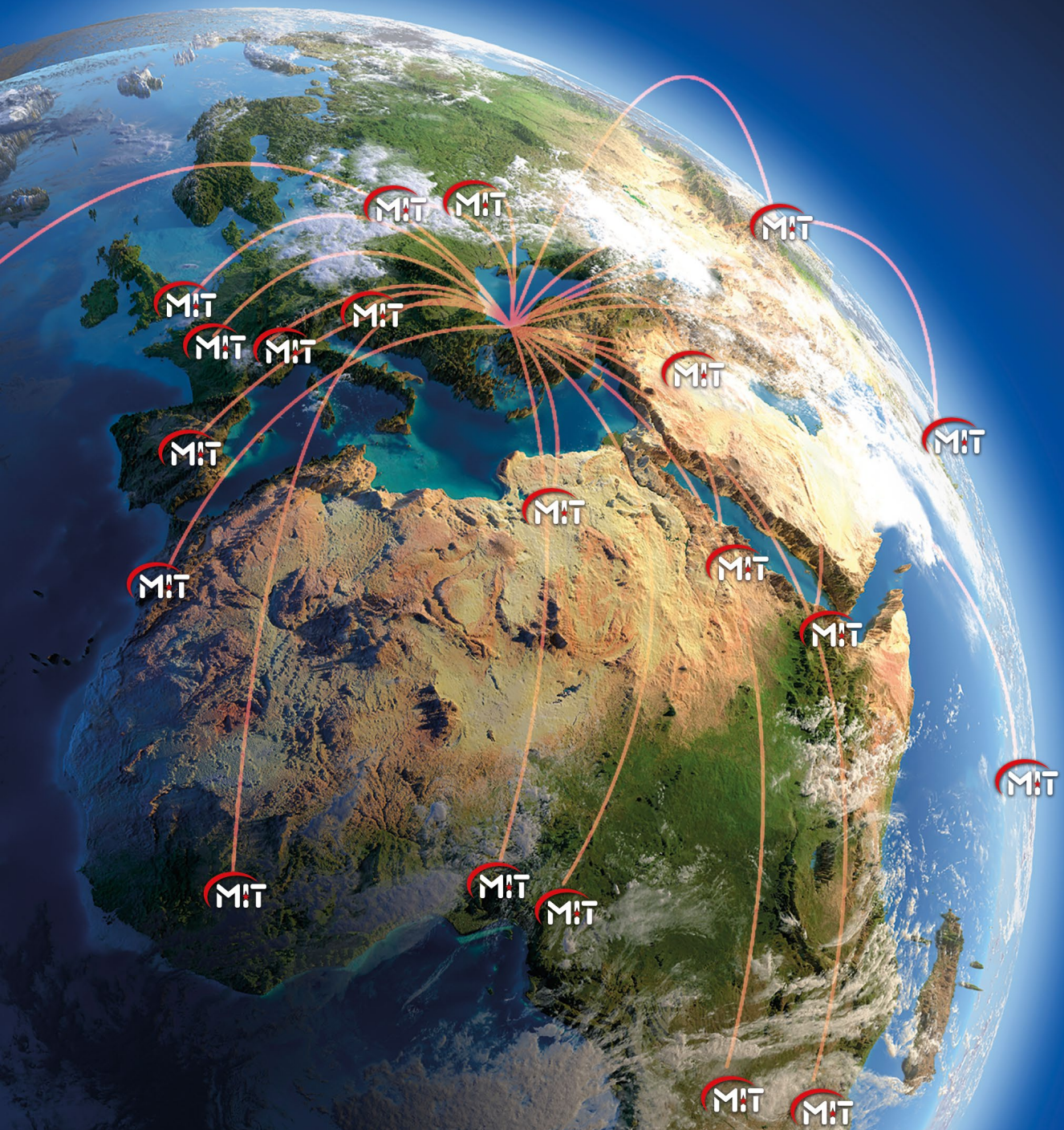
We would like to reiterate that we will be happy to share our knowledge accumulated over many years with our valued customers in order for your system to work correctly and performance.

Ekin will continue to be the best solution partner for you in all applications with all kinds of heating and cooling applications.

Producer; reserves the right to change the product features, technical dimensions and information and installation diagrams specified in this catalog without notice. No specified information can be copied and used without the permission of the manufacturer. In no way can the manufacturer be held responsible by giving examples of technical information and diagrams. In case of need, we request you to request a special technical drawing for your project for exact dimensions.



Today; **135 points** in the world.



+90 216
444 EKİN 3546

EKİN ENDÜSTRİYEL
Isıtma - Soğutma San. Tic. A.Ş.

Dudullu Organize Sanayi Bölgesi - Des Sanayi Sitesi
107. Sk. B14 Blok No: 2 Ümraniye / İstanbul / Türkiye
Phone: +90 216 232 24 12 **Faks:** +90 216 660 13 08
info@ekinendustriyel.com - **www.ekinendustriyel.com**