



INSTALLATION & MAINTENANCE INSTRUCTIONS
MODELS TM20 & TM40
AIR COOLED HEAT EXCHANGERS



INSTALLATION

PORTING.

MODEL	PORTS A&B	PORT C	PORT D & E
TM20J	1 1/16" JIC (Male)	1/2" BSPP	-
TM40J	1 1/16" JIC (Male)	1/2" BSPP	-
TM40X	1"BSPP	1"BSPP	1/2" BSPP

JIC ports are Male 37° flare UN type 1 1/16" 12 TPI
 BSPP ports are female & conform to standard ISO228/1g. Use BSPP O ring type fittings.

TM20J - Ports A & B are used as the inlet and outlet connections. Port C can be used as a drain or instrument port.

TM40J - Ports A & B are used as the inlet and outlet connections. Port C can be used as a drain or instrument port.

TM40X - Ports A and B are normally used as the inlet and outlet connections. However the third port C may be used as an alternative to port A for the inlet or outlet, or, as an instrument or drain port. Port D or E can also be used as instrument ports.

PLUMBING. Use flexible rubber hoses for connection to the ports. The hose size should be the same size or greater than the port thread size. Solid steel pipes are not recommended as they may place external forces on the core element resulting in breakage. If hoses are long, support them as close to the ports as possible. Thread connections to the ports must be fully sealed. Should oil be permitted to leak from the port connections it will cover the core fins and result in the collection of dust/sludge in the core which reduces performance.

POSITIONING IN THE CIRCUIT. The cooler should always be positioned to receive return oil from the circuit. Do not install the cooler in the pressure circuit. Care should be taken to select a return line which passes flow at no greater flow rate than that recommended for the cooler. See recommended flow rates below. A pressure relieving device such as a check valve piped around the cooler, should always be included in the circuit layout. Under no circumstances should the cooler core be subjected to pressures in excess of 20 Bar (300PSI) without written authorization from the factory

OPERATING CONDITIONS. Under starting conditions in winter with very cold oil, the published pressure drop ratings may increase by up to 10 times. Maximum recommended operating pressure is 20 Bar (300PSI). All circuits which have a pressure generating capacity in excess of the above must be provided with a suitable pressure bypass system around

the cooler core element. A check valve at least equal to the cooler port thread size is recommended. This valve should relieve directly to the main reservoir. On Hydraulic circuits which are subject to "PRESSURE SPIKES" such as may be found in cylinder type circuits, a separate oil circuit is recommended to service the oil cooler. *Warranty is void on cooling elements which have failed due to operation with oil pressures in excess of operating pressure ratings.*

SITE LOCATION. Determine the usual direction of air flow at the site and face the cooling element towards that direction. Avoid exposure to dusty or dirty atmospheres. Cooling air containing dust and oil mist at the same time can lead to deposits building up on the face of the cooler and a reduction in capacity. Do not position the units near sources of heat or any objects which will impede the air flow into the oil coolers. The unit should be bolted down through the holes provided.

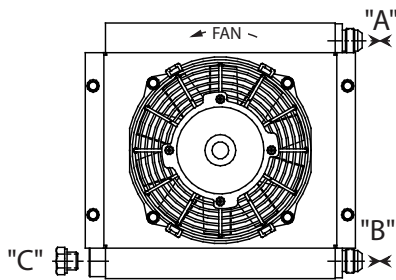
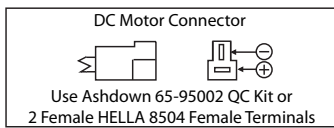
VIBRATION ISOLATION. When the cooler is to be mounted in a position where it may be subjected to vibration (eg. moving equipment) or where vibration induced noise needs to be reduced it is recommended that vibration isolation mounts be fitted. Part no. 039.8.05528 (set of 4 mounts with bolts) - suits all models.

DC ELECTRIC MOTOR CONNECTIONS. Ensure the voltage supply matches that of the cooler. Always include fuse protection for the fan motor and wiring. Wire the supply to the 2 pin connector with polarity as shown in the diagram. Start the motor and check the direction of fan rotation, a decal shows the correct direction. All fans should pull the cooling air through the cooling element and discharge it through the fan guard. Refer to instruction form included with accessories or wiring instructions if thermostatic control accessories are to be fitted.

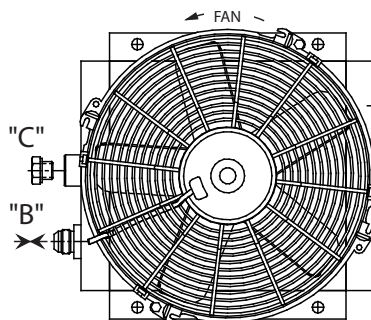
MAINTENANCE

Continued efficient operation of the oil cooler is dependent on the heat transfer surface being kept clean. In dirty conditions the core element should be cleaned frequently to remove dust and dirt. Under extreme conditions of dust it is recommended that a rotation reversing switch be provided in the electrical circuit so that the fan may be reversed frequently to assist in dust blowout from the fins. Should the fins be blocked with oil saturated dirt use a petroleum based cleaning fluid followed by water sprayed from a medium pressure hose.

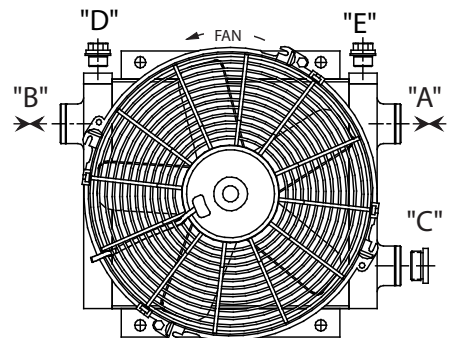
CAUTION. DO NOT USE CAUSTIC BASES FLUIDS FOR CLEANING, CORE ELEMENT IS ALUMINIUM.)



TM20J



TM40J



TM40X

ALL MODELS OPERATE WITH INDUCED DRAFT FANS

MAXIMUM OPERATING PRESSURE 20 Bar (300PSI)



DYNACOOOL PRODUCT MANUFACTURED IN AUSTRALIA
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 sales@oemdynamics.com.au

ABN 11 003 908 496
 FORM DC171 03/16
 PRINTED IN AUSTRALIA



OPTIONAL EXTRA

Heat Exchanger Accessories
Available On Request



TEMPERATURE SWITCH - SERIES BMT

APPLICATION

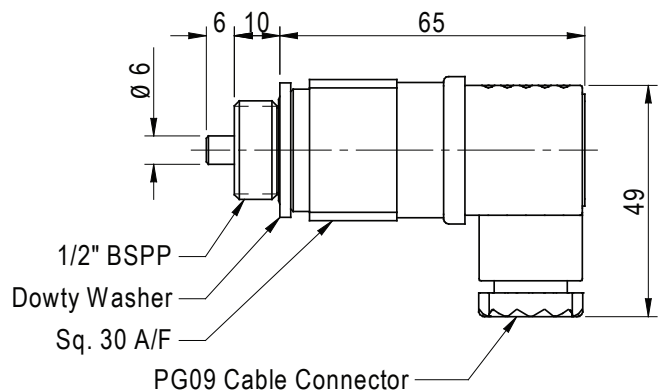
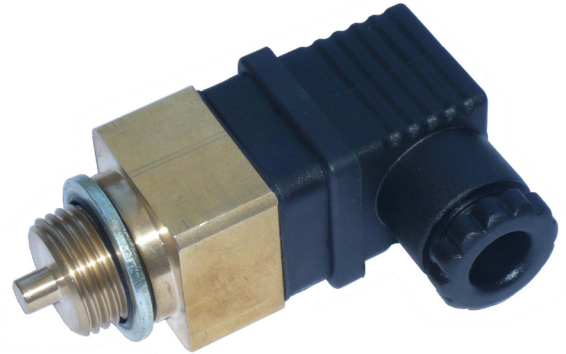
The BMT thermo switch is designed for controlling electric motors. The switch is suitable for use in either 240 Vac or 12/24 Vdc. The switch can be used in 415Vac 3 phase by connecting to the relay side of a three phase contactor.

The thermo switch uses a reliable "snap" action bimetallic disk type switch, which is sealed for life inside a brass bulb well. The switch contacts are Normally Open and silver plated for long life when operated in the range specified. The cable connector is to the PG09 Din 43650 std. The switch bulb has a threaded 1/2" BSP male connection and a Dowty seal.

Switches are fixed temperature (not adjustable).

Specifications

Switch rating	-10A/250 Vac	
	- 3A/ 12 or 24 Vdc (use relay	
for higher		current
draw)		
Max Pressure	- 20 bar	
Max Differential Temperature	- 16° C	
Max. temp.	- 120° C	
Protection	- IP65	
Plug Connector	- PG09, DIN 43650	
Material		
	Body - Brass	
	Contacts - Silver	
Thread	- 1/2" BSP	



BASIC SWITCH	
Order Code	Closing Temperature
17/BMT45WNO	45°C
17/BMT55WNO	55°C
17/BMT65WNO	65°C

LOW VOLTAGE WIRING KITS - 12V AND 24V DC

GENERAL DESCRIPTION

Wiring harness kits are available for all Versacool & Dynacool low voltage 12V/ 24V DC fan cooler models. Kits include a switch, fuse, fuse holder, port adaptor, relay, wiring and fitting instructions.

Wiring Harnesses to suit

Temp Setting	Part No.	Description
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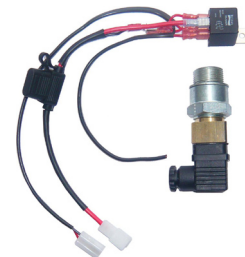
TM20 & 40, single fan coolers

12 Volt Kits

55°C	039.8.06172	VC2-6 12V Wiring Kit
65°C	039.8.06173	VC2-6 12V Wiring Kit

24 Volt Kits

55°C	039.8.06142	VC2-6 24V Wiring Kit
65°C	039.8.06143	VC2-6 24V Wiring Kit



Other temperature settings are available on request.



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