Young Touchstone
A Wabtec company

OCS

AIR COOLED OIL COOLERS WITH OSHA GUARDS

Catalog 10
Supersedes Catalog 10 2004

2006 EP

OCS applications / piping diagrams

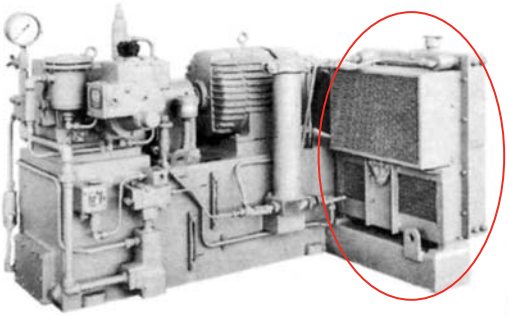
Young Touchstone Cooled Oil Coolers provide efficient cooling for a wide variety of mobile and stationary power equipment. They are designed for a broad range of applications including hydraulic circuits, lube oil cooling, reduction gearing, marine transmissions, process cooling, and torque converters. These units offer Young Touchstone engineered high pressure round tube and plate fin cores, mechanically bonded tube and fin construction with die formed reinforcing fin collars.

A superior tube to manifold bond provides maximum service life. They have the advantage of providing ample cooling in areas where water is costly or unavailable or where water circuit piping is undesirable and inconvenient. Air cooling also eliminates the consideration of freezing water coolants during the winter.

There are eight standard OCS Oil Coolers with a top thermal capacity of 630 hp 470 kw.

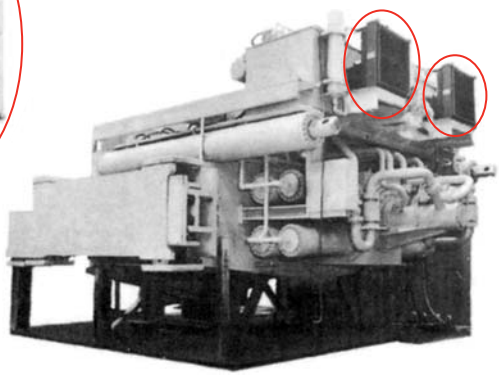
APPLICATIONS

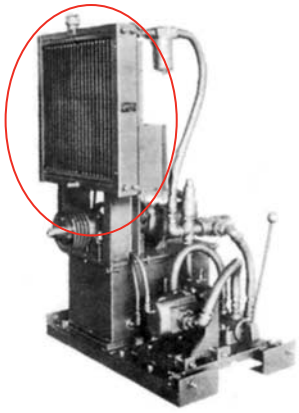
- **hydraulic circuits**
- **marine transmissions**
- **lube oil cooling**
- **process cooling**
- **reduction gearing**
- **torque converters**



Hydraulic power unit incorporating an OCS-175E Oil Cooler to cool the hydraulic fluid. Typical applications for these units include milling machines, tube mills and pipe forming presses.

Highway tunnel excavating machine used in Swiss Alps with hydraulic fluid, cooled by two Young Touchstone OCS-600D Oil Coolers.





Young Touchstone Model OCS-175E Oil Cooler cooling the oil in the hydraulic power unit which operates the carriage on a saw in a lumber mill application.

PIPING DIAGRAMS

ONE PASS OIL FLOW

TWO PASS OIL FLOW

OCS-175 through OCS-600

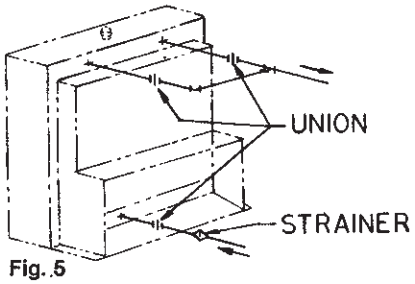


Fig. 5

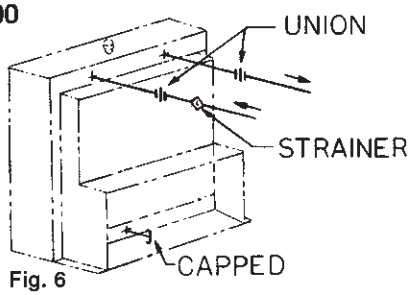


Fig. 6

OCS-1000 through OCS-3100

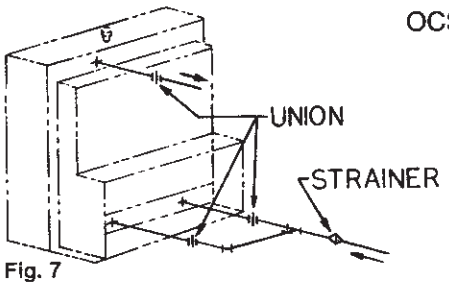


Fig. 7

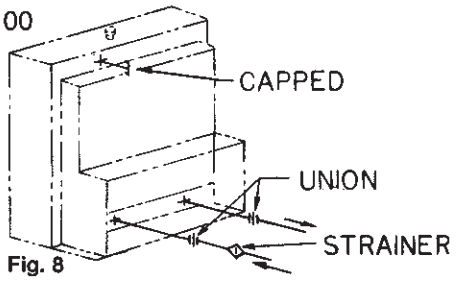


Fig. 8

OCS construction features

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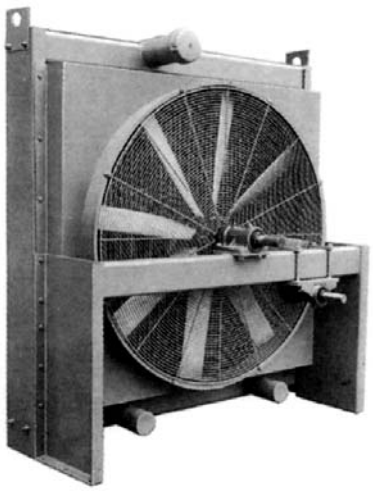
TYPE E EXTERNAL DRIVE



Manifold — Tubular steel, automatic induction high temperature, brazed tubes to provide leak-proof performance. Inlet and outlet tank connections are designed to insure the lowest possible pressure drop.

Fiberglass Reinforced — Nylon blade fan with cast aluminum hub designed for –50°F to +250°F operation.

Aerodynamically Designed Fan — Heavy duty, aerodynamically designed fans with aluminum blades and steel hubs are statically balanced for vibration-free performance.

Adjustable Drive (External Drive) — Simple belt tension adjustment. Lifetime-sealed ball bearings provide permanent lubrication.

High Pressure Round Tube and Plate Fin Core — Standard units are built with aluminum fins and round steel tubes which provide the great strength consistent with a maximum rate of heat transfer.

Fan Guard Screen and Core Guard — Provide necessary protection for vulnerable parts of the unit and for workmen inclose proximity to cooler.

Motors — Totally Enclosed Fan Cooled type standard. (Explosion proof optional).

Finish — Medium gray paint.

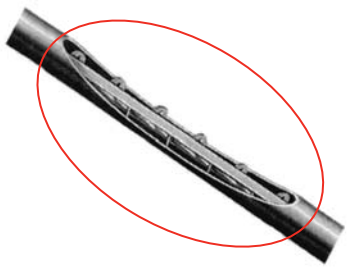
TYPE D DIRECT DRIVE

OPERATING PRESSURE	**200 psi**	1400 kPa
TEST PRESSURE	**300 psi**	2100 kPa
MAXIMUM OPERATING TEMPERATURE	**400F**	205C

CORES

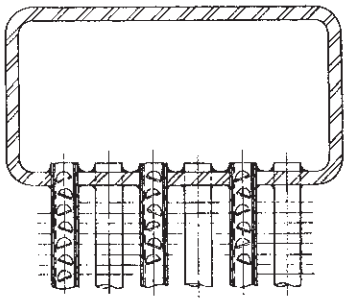
Steel tubes are mechanically expansion bonded to aluminum fins. Die-formed fin collars provide precision tube to fin contact for maximum heat transfer.

PATENTED TURBULATORS



Exclusive patented Young Touchstone Turbulators inserted in each tube improve heat transfer more than 100% by eliminating laminar oil flow.

TANKS



Unique Young Touchstone-pioneered, automatic induction, high temperature, brazing method ensures permanent bond and positive contact of tube to manifold, eliminating leaks and providing maximum service life.