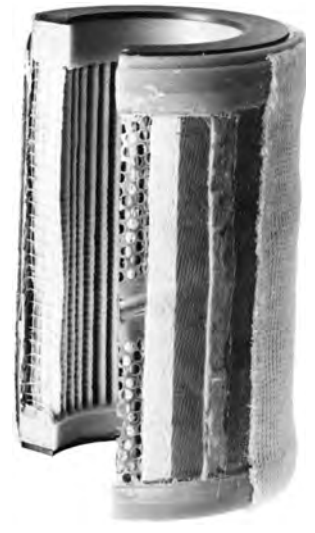


Industry's Broadest Selection of Coalescer Cartridges Used for Separating Immiscible Liquids with Different Densities

- **Proven field performance** – billions of gallons of hydrocarbons processed to exacting requirements.
- **Wide selection** – interchanges available for most other manufacturers' models.
- **Optimum use of filter area** – gives high flow capacity and long life.
- **Rugged construction** – assures performance in the toughest environment.
- **Choice of various media** – allows best selection for individual applications.
- **Custom design available** – provides special cartridges for unique water removal problems.



All fiberglass
coalescer



Pleated/fiberglass
coalescer

GENERAL DESCRIPTION

Standard Velcon construction features include aluminum tubes to prevent corrosion, aluminum or glass filled nylon endcaps with epoxy adhesive to assure a thorough bond to the media, and Buna-N gaskets to give positive sealing. For special applications, different materials can be used for the tubes, endcaps and gaskets. A knitted sock is also put on each cartridge to enhance the drop size.

Media come in two basic types – all fiberglass and pleated media/fiberglass. By combining various grades of media materials, the optimum balance can be achieved for each application.

In addition to removing liquids, the coalescer cartridge acts as a high efficiency filter. This gives both a dry and dirt-free effluent

APPLICATIONS

- Diesel Fuel
- Biodiesel
- Turbine Lube Oil
- Gasoline
- Insulating Oil

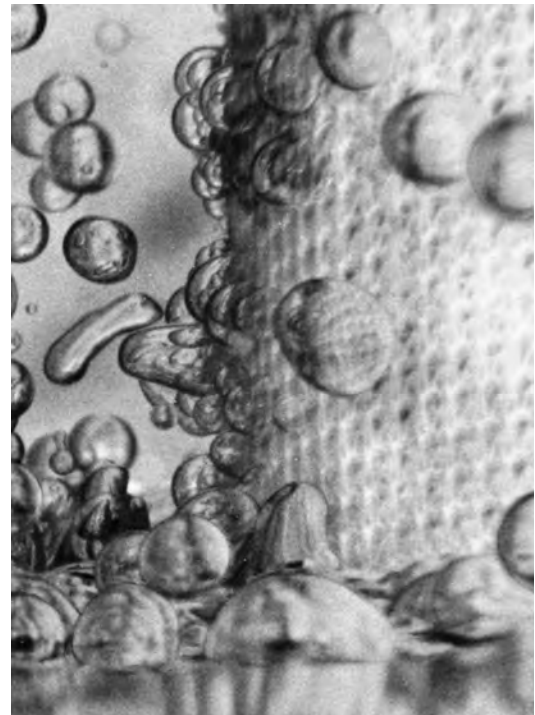
SPECIFICATIONS

- 75 psi burst strength
- 5 - 9 pH range
- 160° maximum operating temperature

The table below lists some of the coalescers commonly used in industrial applications. Your local Velcon representative can provide complete information on other sizes and types.

Model Number	Diameter (inches)	Length (inches)	Media	End	Use/Interchange
CA-62202	6	22.25	Fiberglass	Open	Petroclar (10 micron)
CA-62206	6	22.25	Fiberglass	Open	Petroclar (2 micron)
CA-64485	6	44	Pleated/ Fiberglass	Open	Keene K2000
CC-62283	6	22.25	Pleated/ Fiberglass	Threaded	TO-30 Insulating Oil System
CC-62285	6	22	Pleated/ Fiberglass	Threaded	TOC-10 Turbine Oil System
CC-63385	6	33	Pleated/ Fiberglass	Threaded	TOC-30 Turbine Oil System
I-4126	3.56	12	Fiberglass	Open	Keene A-840, A-840A, CI-3512-F2-1
I-4152	3.5	15.75	Fiberglass	Open	Keene A-1525, CI-3416-F2-0
I-4184	3.5	17.63	Fiberglass	Open	Keene A-870, A-870A, CI-3518-F2-1
I-4204	3.63	20	Fiberglass	O-Ring	Keene CI-3520-02-2
I-4310	3.5	30.81	Fiberglass	O-Ring	Keene A-3057, CI-3431-02-0
I-6086A	6	8.64	Fiberglass	Open	Interdyne Solvent System

AT RIGHT: A Velcon coalescer cartridge removing water from kerosene. Large (coalesced) waterdrops break away from the cartridge surface and sink into the sump area. Visible at the bottom is the interface between the kerosene and the settled water.



Velcon
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COMPANY HEADQUARTERS:
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 1210 Garden of the Gods Road
 Colorado Springs, CO 80907-3410
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 e-mail: vfsales@velcon.com
 www.velcon.com

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 Henryetta, Oklahoma

OFFICES AND AFFILIATES IN:
 Canada, Germany, Singapore, & Spain



**Liquid Filtration
 and Separation
 Specialists**

TOC Series Turbine Oil Coalescing Systems

SPECIFICATIONS

Electrical

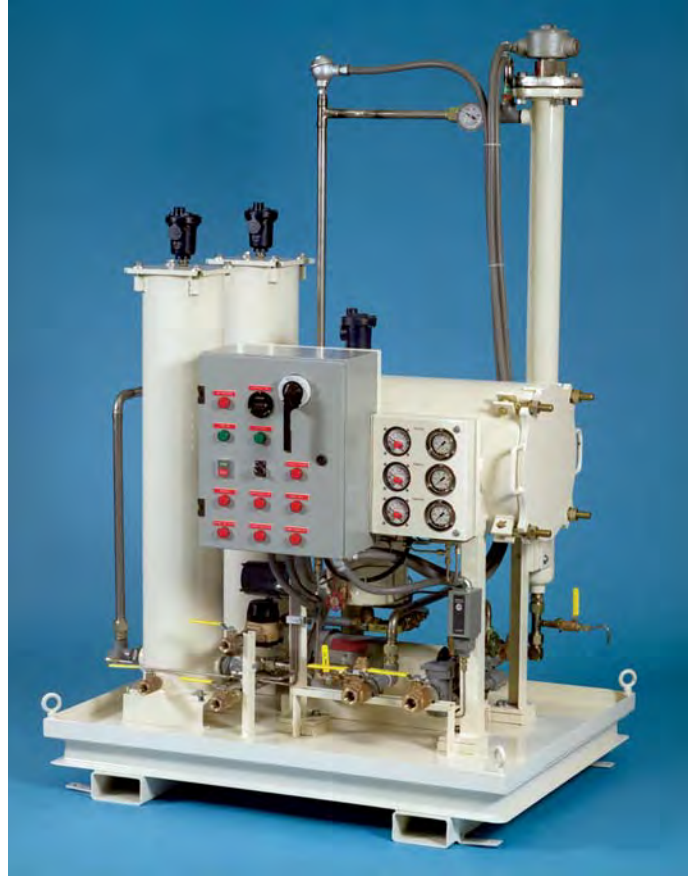
- 1750 RPM TEFC motor
- NEMA 4 motor control enclosure with “motor running” light
- Magnetic motor starter with manual reset and over-load protection
- Liquid-tight flexible conduit complete from panel to motor in accordance with IEEE standards. User to supply power cord and plug.
- Adjustable high pressure shut-off switch
- All electrical components UL listed/CSA approved

Mechanical

- Positive displacement gear pump with factory set internal bypass and external adjustable flow bypass, maximum output pressure 100 psi
- 304 stainless steel tubing with JIC plated steel fittings. External hoses not supplied.
- 1/4 turn ball valves installed on drains, inlet and outlet, and at each stage for isolation. All flow valves are full port design.
- Inlet/outlet connections with cam and groove fitting quick-disconnect male coupling with dust caps
- Pressure vessels built in accordance with ASME Sec. VIII for maximum operating pressure of 150 psi. Carbon steel construction.
- Self-venting automatic air eliminators on each stage
- 60 mesh in-line strainer, no tools needed for inspection

General

- Effluent sampling port for quick check on system performance
- Static and differential pressure gauges, with stainless steel tubing, for monitoring each stage
- Oven-cured, high corrosion resistant, powder coat white paint (polyester polyurethane)
- All controls and connections accessible from one side of system
- Filters tested to ANSI B93.31 (ISO 4572), multi-pass method for evaluating filtration performance of fine hydraulic fluid power filter elements. Beta ratio data available upon request.



TOC10 shown with optional inlet oil heater, polishing filter, and automatic water drain. Three stages of filtration are Pre-Filter A, Filter/Separator B, and Polishing Filter C (optional on TOC10). See HOW IT WORKS on next page.

HOW IT WORKS

The TOC Series Turbine Oil Coalescing Systems remove water and dirt from turbine lube oil. Contaminants are removed in stages (see photo) A, B, and C:

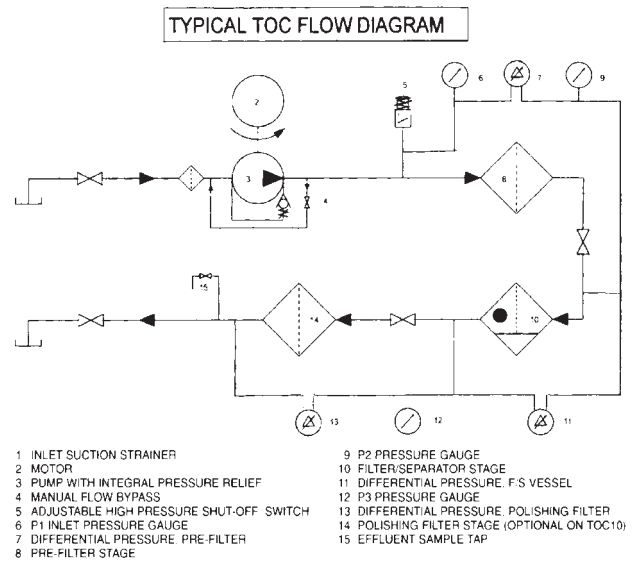
- A.** Particulate solid contaminants are removed in the Pre-Filter stage (#8 in diagram below) by cost effective, high surface area pleated synthetic media cartridges. This extends the life of the specialized filters downstream.

- B.** Free and emulsified water are removed in the Filter/ Separator stage (#10 below). Finely dispersed water passes through the coalescer element and grows into larger drops. These drops collect in the vessel sump where they are drained. A Teflon® coated screen separator prevents any small water drops from entering the effluent oil stream. Fine particulate solid contaminants are also removed by the coalescer elements.

- C.** The final Polishing stage (#14 below, optional on TOC10) uses synthetic media elements to remove fine particles.

TOC Series Flow Diagram

- 1 Inlet Suction Strainer
- 2 Motor
- 3 Pump with Integral Pressure Relief
- 4 Manual Flow Bypass
- 5 Adjustable High Pressure Shut-Off Switch
- 6 P1 Inlet Pressure Gauge
- 7 Differential Pressure, Pre-Filter
- 8 Pre-Filter Stage
- 9 P2 Pressure Gauge
- 10 Filter/Separator Stage
- 11 Differential Pressure, F/S Vessel
- 12 P3 Pressure Gauge
- 13 Differential Pressure, Polishing Filter
- 14 Polishing Filter Stage (Optional on TOC10)
- 15 Effluent Sample Tap



CARTRIDGES AND GASKETS

STAGE	TOC10	TOC30
PRE-FILTER	VF82SYS150	VF82SYS150
FILTER CARTRIDGE	FOS-618PLP8	FOS-618PLP8
QTY REQUIRED	2	2
RECOMM SPARES	4	4
LID GASKET	G-1045	G-1045
RECOMM SPARES	1	1
FILTER/SEPARATOR	HV1622TO30	HV2233SYS150
COALESCER CARTRIDGE	CC-62285	CC-63385
QTY REQUIRED	3	4
RECOMM SPARES	3	4
SEPARATOR CARTRIDGE	SO-424V	SO-430C
QTY REQUIRED	1	2
RECOMM SPARES	-	-
LID GASKET	G-2033	G-2036
RECOMM SPARES	1	1
POLISHING FILTER	VF82SYS150 (OPT)	VF82SYS150
FILTER CARTRIDGE	FOS-618PL1/2	FOS-618PL1/2
QTY REQUIRED	2	2
RECOMM SPARES	2	2
LID GASKET	G-1045	G-1045
RECOMM SPARES	1	1



5 GPM Turbine Oil Coalescing System

TOC5-1

HEAVY DUTY PORTABLE SYSTEM

- Remove free water and dirt from turbine lube oil
- Two-stage filter/coalescer system
- Rugged welded steel construction
- Large pneumatic wheels for easy mobility

PERFORMANCE

- Restore oil to an ISO cleanliness of 14/11 or better
- Continuously remove free water down to 150 ppm or better
- Prevent system sludging and premature degradation

SIMPLICITY

- Complete, self-contained unit
- Compact, one-switch operation

RELIABILITY

- ASME designed housing assures safe, leak-free service
- Heavy duty gear pump offers years of maintenance free operation
- Uses latest high efficiency filter/coalescer and separator technology
- System is factory hydro-tested and operated before shipping

SPECIFICATIONS

- 1/2 hp, 120 vac, 1-ph, 60 Hz, 1750 rpm totally enclosed fan-cooled motor
- 5 gpm positive displacement gear pump with built-in pressure relief bypass
- Pressure housing built in accordance with ASME Sec. VIII for maximum operating pressure of 100 psi
- 12" pneumatic tires



TOC5 with optional air eliminator and differential pressure gauge (hoses not shown)

- 10 ft. long suction and discharge hoses, 3/4" diameter
- 1/4-turn ball valve at housing drain
- Inlet pressure gauge indicates when cartridge must be changed
- 10 ft. 3-wire power cord with on-off switch
- Valved sight glass
- Polyester polyurethane powder coat paint
- Shipping weight: 425 pounds
- Height: 48", Width: 24", Depth: 32"

ORDERING INFORMATION

Specify model number as shown below. Units are shipped with one set of cartridges installed.

TOC5-1 120 v, 1-ph, 60 Hz

Contact factory for alternate power options.

OPTIONS AND ACCESSORIES

552Y030 Filter Bypass
722Y006 Digital Flowmeter/Totalizer
703Y004 Direct Reading Differential Pressure Gauge
440Y404 Automatic Air Eliminator

RECOMMENDED SPARES

CC-63385 Replacement Filter/Coalescer Cartridge
SI-818 Replacement Separator Cartridge
G-1110 Spare Lid Gasket



TOC5 shown with filter/coalescer cartridge and separator cartridge



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