

TOT-Star Portable Recycling System

*Portable Centrifuge for
Removal of Emulsified
Tramp Oil*





TOT-Star Portable Recycling System

XYBEX® TOT-Star– the best choice for small to medium metalworking plants

G. The Portable Recycling System TOT-Star was developed by Master Fluid Solutions (the originators of coolant recycling) to meet the needs of the middle and small metalworking plant for a compact, portable, high-speed centrifuge, tramp oil separator.

The **TOT-Star** will process both water-miscible coolants and aqueous cleaners to remove free and emulsified tramp oils, providing clean and reusable coolants and cleaners. Removing tramp oils (hydraulic oils, way lubes or any undesirable oil) from coolants and cleaners removes a food source for bacteria, reduces undesirable residues, and reduces smoke and oil mist in the shop atmosphere.

Reach the comprehensive management goals of:

- > improving work efficiency
- > reducing cost
- > reducing emissions
- > protecting the environment

Features

- > Compact and portable for machine tool sumps and parts washers
- > High-speed, disc-bowl centrifuge
- > Stainless-steel hood and bowl
- > Easy to operate, clean, and maintain
- > Built-in clean fluid centripetal discharge pump
- > Strainer and 50-micron cleanable pre-filter
- > Automatic shut-off when tramp oil collection tank is full

Technical Data

Capacity

Flow rate:
1 to 2 gpm (3.8 to 7.6 lpm)
(depending on fluid type/condition)

Temperature range: up to 70°F

pH range: 5 to 14 pH

Portable Centrifuge for Removal of Emulsified Tramp Oil

Centrifuge Bowl

Speed: 10,000 rpm

G-force: 6,500 g's

Solids holding space:
0.19 gal (0.75 liters)

Motor

Power: 380 V, 3 phase AC, 1.3 kW, 5.0A

Air requirements: maximum 100 psi

Options

- > High temp pump for parts washer applications above 41°F (5°C)
- > Flow rate: 2-4 gpm (7.6-16 lpm)
- > Power: 440volt, 3 phase 60 Hz
- > Can be supplied with process tanks
- > Can be supplied with coolant transport vehicle

Portable Recycling System User Guide

The **TOT-Star** sucks dirty coolant from the machine Tool and after recycling discharges the coolant to another tank. The operators can return the clean coolant back into the machine tool after cleaning.

Master Fluid Solutions advises recycling the coolant every 25 days.

Suggested recycling times based on the machine tool tank capacity

Machine tool tank capacity (L)	Suggested recycling time (hours)
1500	4 to 5
1000	3 to 4
800	2 to 3
600	1 to 2
400	1

Regular Recycle Mode Advantages

- > Machine tool coolant recycling every 25 days
- > Clean coolant goes directly back to the machine tool and operation is not interrupted
- > Tramp oil level decreases as recycling continues
- > Easy to operate

Ration recycle mode

Master Fluid Solutions, the company that invited coolant recycling, is unique in the metalworking fluid industry. We are the only company that expertise and training to customers on machining fluid management solutions.

For example: Coolants need to run at a value of less than 0.5% tramp oil of the total sump volume in order to maintain long life through better emulsion stability. This will significantly impact the cost of the operation since the TOT-Star can easily remove the oil to this level. According to time tested principles, when the tramp oil is less than 0.5% after recycling, there is no waste of clean coolant and less coolant concentrate is needed due to the continued re-use of the product.

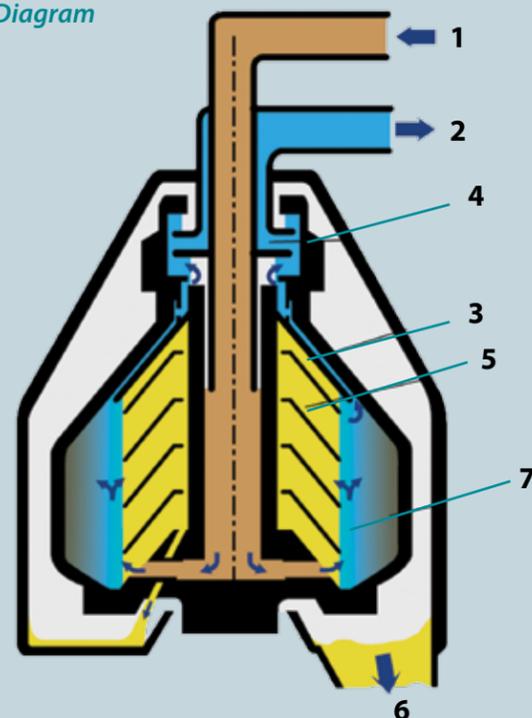
Ration Mode Advantages

- > Control the tramp oil
- > Decrease machine down time
- > Provide effective processing ability.

Centrifuge Operating Principles

1. The dirty coolant feed
2. enters the rotating bowl and is separated in the disc stack.
3. The separated and purified coolant (heavy phase) flows over the separating disc
4. and is pressure-discharged by the centripetal pump
5. from the clean coolant discharge.
6. The tramp oil (light phase) discharges freely from the bowl.
7. Separated solids collect in the holding space and must be removed manually.

Centrifuge Diagram





**Committed today
for a greener tomorrow**

Our corporation is committed to sustaining our natural resources, protecting our environment, and leaving a smaller footprint on the places we all call home.

As a manufacturer of fluids and fluid recycling equipment, we are committed to promoting conservation in manufacturing and helping customers maximize productivity while minimizing waste.

Just visit masterfluidsolutions.com and click on "Green Policy" to learn more about our commitment to environmental stewardship.



Performance-proven cutting and grinding fluids

Master Fluid Solutions has been recognized for more than 60 years for its TRIM® family of metalworking fluids for all types of cutting and grinding operations. Known worldwide for superior performance, TRIM meets the demands of specialized industries such as automotive, aerospace, and medical parts manufacturers.

For the full range of cutting and grinding applications for synthetics, semisynthetics, and soluble oils, TRIM solutions deliver longer tool and sump life, better finished parts, and a better bottom line.



Get more than just clean with Master STAGES™

As effective cleaning and metal protection is essential to attaining precision parts and exceptional surface finish, Master STAGES™ products include a full line of parts cleaners, corrosion inhibitors, and maintenance cleaners.

Designed for aerospace, medical, automotive, energy exploration, heavy equipment, and general manufacturing production, these products meet stringent requirements to keep customers environmentally compliant, running at peak performance, and more profitable.



Master Fluid Solutions™
—Cutting Edge Metalworking Solutions™—

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