

R54 dual seal barrier fluid system

Designed to provide superior reliability and value, the R54 circulator from Flowserve is ideal to support dual pressurized mechanical seals in refinery applications. The R54 circulator is utilized in applications such as:

- High-temperature pumps or specialty equipment where extra barrier fluid cooling is needed compared to a Plan 53A system
- Low-speed mixer or specialty equipment requiring higher barrier fluid flow rates

The R54 circulator is the preferred solution for new or retrofit dual seal systems when Plan 53 reservoirs or accumulator systems do not provide adequate cooling or flow rates. Providing the correct cooling capability and barrier flow is an essential part of any upgrade package for mechanical seals or seal systems.

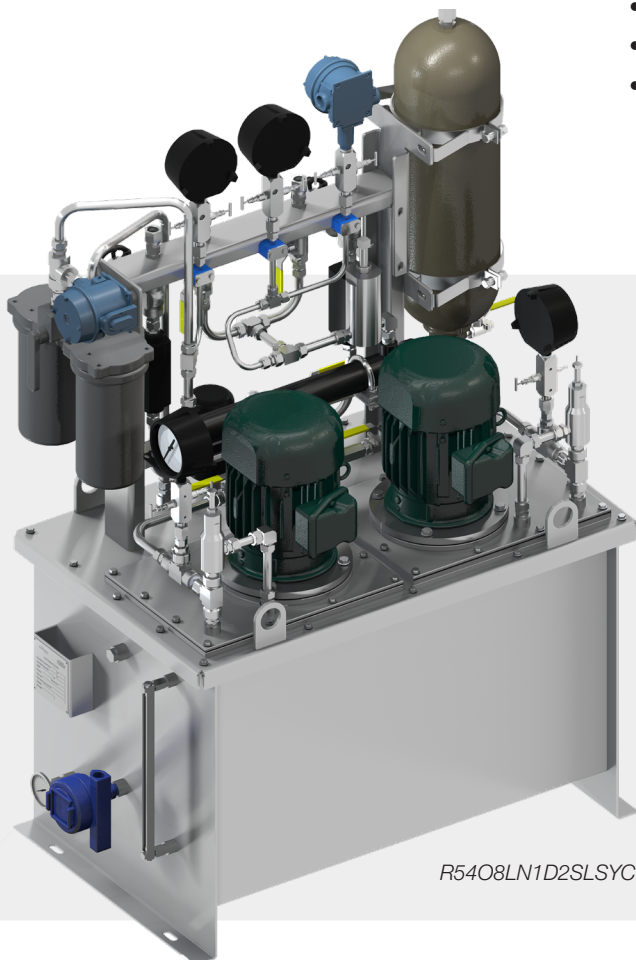
Standard pre-engineered options to reduce lead time

The R54 circulator is pre-engineered for nominal flow of 15 lpm (4 gpm) or 30 lpm (8 gpm) for up to two mechanical seals on one pump. Best practices recommend use of a second circulator dedicated to any standby pump. Standard options included in the R54 series are: redundant circulating pump; accumulator; temperature switch or transmitter; level switch or transmitter; pressure switch or transmitter; all-316 stainless steel heat exchanger; and flow indicator.

The R54 circulator's top cover is designed to separate from the base tank, allowing easy access for maintenance. Additionally, individual pump/motor units can be removed for maintenance without requiring internal access to the tank, while the top cover is in place and the alternate pump/motor is in operation.

Configurations and specifications

- 190 liter (50 gallon) stainless steel tank
- 15 lpm (4 gpm) or 30 lpm (8 gpm) flow rate
- Barrier fluid pressures up to 27 bar (400 psi)
- Oil viscosities from 5 to 32 cSt @ 40°C (104°F)
- Optional compliance to EU directives:
 - 2014/34/EC (ATEX)
 - 2006/42/EC (Machine Directive)
 - 2014/68/EU (PED)



R5408LN1D2SLSYCY

Model number

Example:

R54O4HN1S1TTTNCN
R54O8LN1D2SLSYCY

Model	Nominal Flow	Region	Pump	Seals Supported	Temperature	Level	Pressure	Accumulator	Heat Exchanger Material	Flow Indicator
R54O	4H	N1	S	1	T	T	T	N	C	N
R54O	8L	N1	D	2	S	L	S	Y	C	Y

Model:

R54O – Refinery duty circulator for oil

Nominal Flow:

4L – 15 lpm (4 gpm) with pressure 1.7 to 9.0 bar (25 to 130 psi)
4H – 15 lpm (4 gpm) with pressure 3.4 to 27 bar (50 to 400 psi)
8L – 30 lpm (8 gpm) with pressure 1.7 to 9.0 bar (25 to 130 psi)
8H – 30 lpm (8 gpm) with pressure 3.4 to 27 bar (50 to 400 psi)

Region:

E1 – Europe (ATEX/PED/Machinery Directive)
N1 – North America (NEC Class 1 div 2 motor/UL/CSA/CRN)

Pump:

S – Single pump
D – Dual pumps

Seals Supported:

1 – One seal
2 – Two seals on a BB-style pump

Temperature Instrumentation:

0 – None
S – Switch (high)
T – Transmitter

Level Instrumentation:

0 – None
L – Switch (low)
H – Switch (high)
B – Switch (both)
T – Transmitter

Pressure Instrumentation:

0 – None
S – Switch (low)
T – Transmitter

Accumulator:

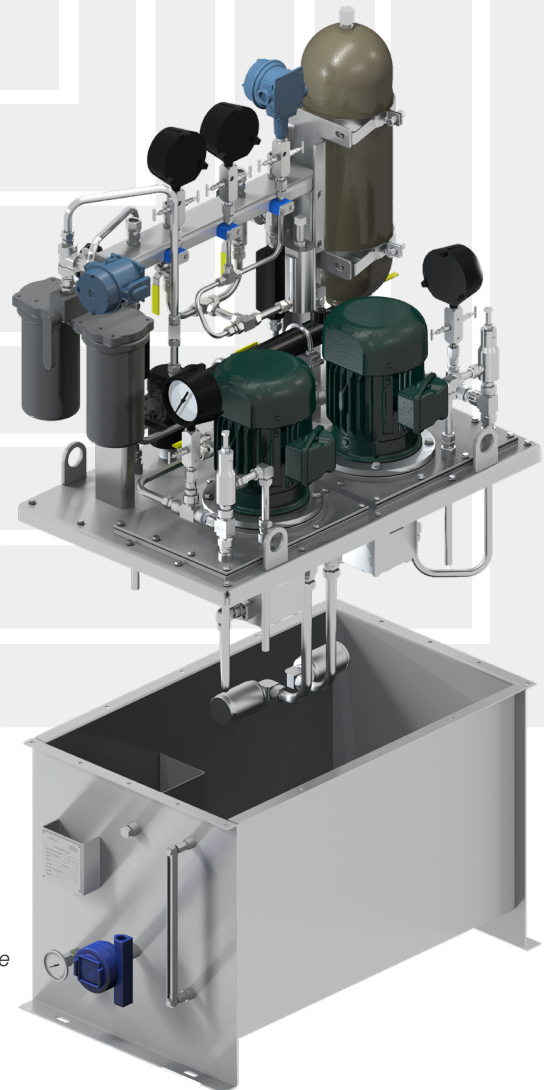
N – No
Y – Yes

Heat Exchanger Material:

C – Carbon steel housing/copper tube
S – All-stainless steel

Flow Indicator:

N – No
Y – Yes



Lift-off top for easy maintenance