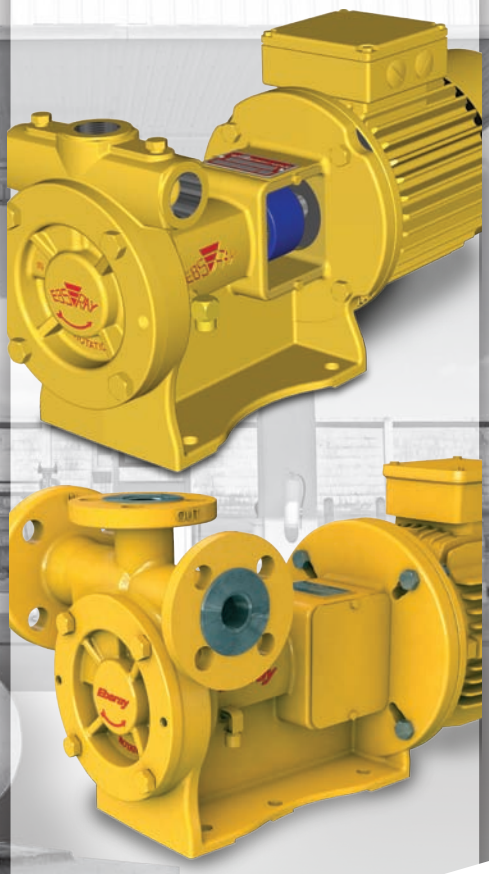
Ebsray®

Expert Solutions for Industrial LPG & Autogas Applications

R SERIES
RC20, RC25 & RC40
REGENERATIVE TURBINE PUMPS



Where Innovation Flows

EBSRAY TURBINE TECHNOLOGY™
REGENERATIVE TURBINE PUMPS

PSG® a DOVER company

ebsraypumps.com.au

Product-Transfer Solutions for LPG APPLICATIONS

Ebsray® is a Global Leader in the design and manufacturing of Regenerative Turbine Pumps and part of PSG®, a Dover Company. Ebsray's primary focus is on the manufacturing of pumps and pumping equipment – predominantly for LPG, process and industrial niche markets.

Extensive research and development is a continuing process, to ensure that the products are not only innovative in meeting current and future market needs, but that they also meet or exceed the relevant Statutory Codes and Standards requirements. Safety receives the highest priority in product development, resulting in the quality, reliability and efficiency that will satisfy even the toughest customer expectations and demands in the LPG industry.

All LPG, including Autogas, applications and installations have unique challenges. There are several pump technologies that can be utilized, but some technologies – and brands – have performance and efficiency advantages that should be considered when evaluating total cost of ownership. Ebsray Regenerative Turbine pumps, incorporating proven Ebsray Turbine Technology™, are the high performing and reliable solution for liquefied gas Applications.

Ebsray Model RC Series Regenerative Turbine Pumps are designed and precision-built for high-pressure transfer of LPG, Autogas, Propane, and Butane and a wide variety of other liquefied gases, including DME, Aerosols, CO_2, Industrial refrigerants and Anhydrous ammonia.

Common applications of Ebsray RC20, RC25 & RC40 pumps include:

- Autogas dispensing
- Transfer and industrial dispensing
- Cylinder filling
- Direct burner and vaporizer feed

Services available from Ebsray include:

- Complete built-up LPG pumpsets with electric motors, diesel engines, hydraulic drives, etc.
- Technical advice for autogas service station system design and LPG pump installation
- Repair/service facilities
- After-sales technical support network worldwide

Currently, Ebsray is successfully expanding its distributor network worldwide into areas including Europe, Southeast Asia, Middle East, South America, Africa and the Pacific region – in addition to its established domestic Australian market. They continue to supply their quality LPG pumps and equipment to most major LPG suppliers, retailers, carriers and end-users.

Ebsray is committed worldwide to the LPG Industry in the supply of well-engineered, innovative and reliable Australian-manufactured LPG pumps and related LPG pumping equipment.

Ebsray®
The Specialist for Your AUTOGAS Needs

The Autogas market is growing and Ebsray is meeting the challenge by providing precision-built, efficient, high-pressure pumping solutions.

The versatility of Ebsray pumps means they can be used in similar applications of cylinder filling, vaporizer feeding and bulk transfer. Ebsray offers a cost effective solution for all autogas applications. We offer customization to your specifications.

Ebsray RC20, RC25 & RC40 Pumps:

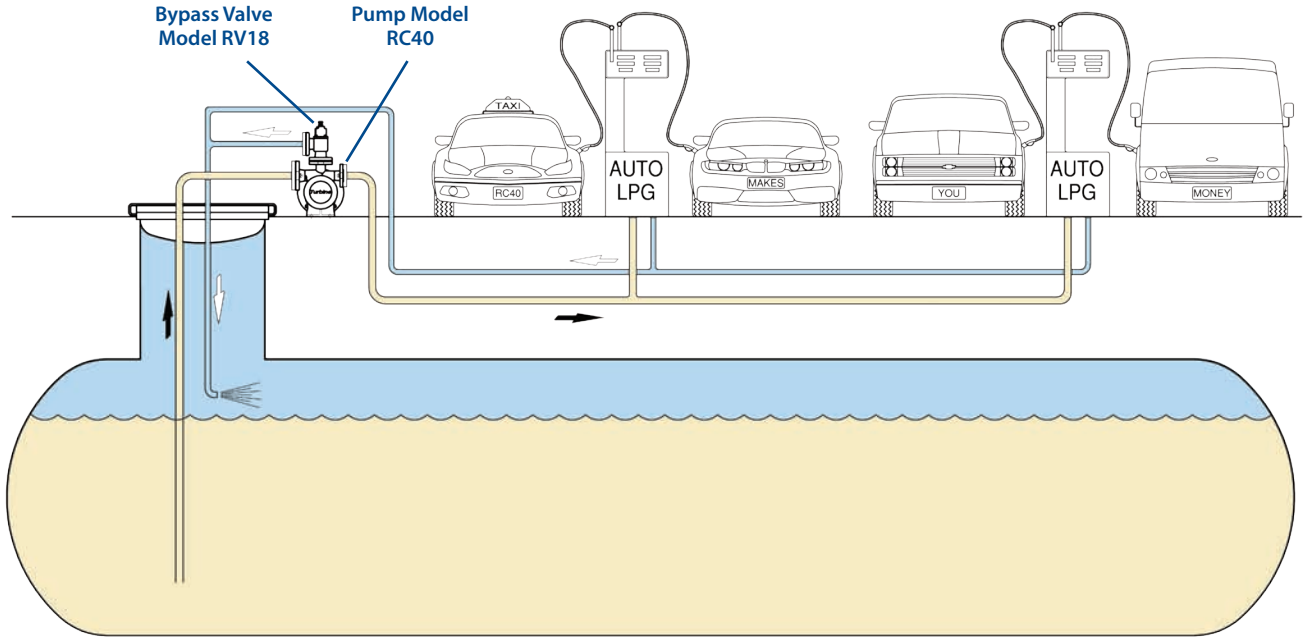
- Designed for underground and above ground tank applications
- Ideal for dual hose dispensers and multiple dispensers
- Simple installation, rigid mounting
- Technical advice for autogas service station system design and LPG pump installation
- Repair/service facilities
- After-sales technical support network worldwide

Long Life and Ease of Maintenance

Our autogas pumps and accessories are designed with a rugged ductile iron construction for long-lasting life. The pumps feature:

- Quiet, smooth, pulse-free operation
- Throttle bush for increased safety
- High differential-pressure capability
- Porting options for simple installation and safe operation
- Balanced mechanical seal and precision lapped faces for excellent service life

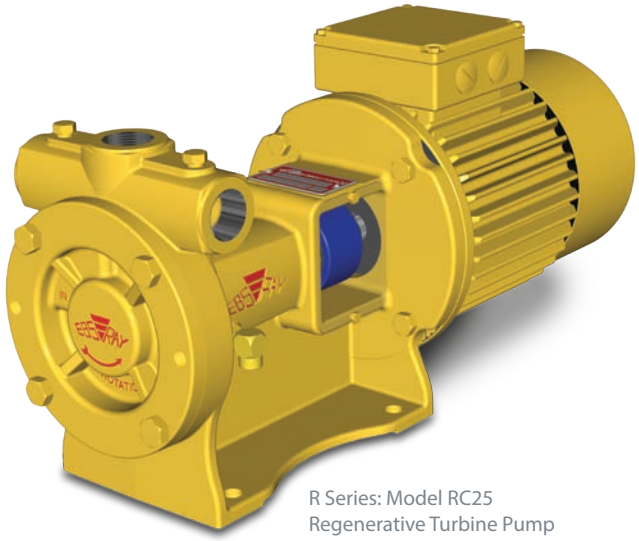
Typical Installation



R Series: Model RC20 & RC25

Regenerative Turbine Pumps

The Ebsray Model RC Series Regenerative Turbine Pumps are designed and precision-built for high-pressure transfer of LPG, autogas, propane, and butane.



R Series: Model RC25
Regenerative Turbine Pump

Applications:

- LPG Autogas dispensers, single or two hoses (RC25)
- Industrial dispensing
- Autogas refueling
- Marine dispensing
- Portable tanks
- Cylinder filling
- Forklift refueling
- Direct burner or vaporizer feed

Features & Benefits:

- Quiet, vibration-free operation
- Low maintenance, single-stage impeller
- Close coupled to standard NEMA C-face motors. IEC C-face adapters available.
- Simple installation with C-face close coupled mounting
- Versatile 3-port arrangement, self-venting design
- Bypass valve connection port direct on pump
- Balanced mechanical seal, unique cartridge design for simplicity of assembly/maintenance
- Throttle bushing for secondary sealing

Assured Quality & Performance:

- ISO 9001 Quality System assures compliance with the high safety and quality standards demanded by the LPG industry
- Pumps are listed by Underwriters Laboratories for LP-gas service.

Technical Data:

Materials:

- Pressure casings - Ductile iron to ASTM A536
- Impeller - Bronze, ductile iron optional

Porting:

- Inlet: DN 25/1 in. NPT(F)
- Discharge: DN 25/1 in. NPT(F)

Performance Data:

- Max. flows: RC20: 60 L/min (15.85 gpm)
  RC25: 105 L/min (27.74 gpm)
- Max. differential pressure:
  RC20: 12 bar (175 psi)
  RC25: 14 bar (200 psi)
- Hydrostatic test pressure: 70 bar (1,016 psi)

Certifications & Associations:

ATEX

Certified System
Quality
ISO 9001
SAI GLOBAL

R Series: Model RC40

Regenerative Turbine Pumps

The RC40 model enhances performance by increasing flow rates and versatility while reducing overall pumpset costs. The RC40 is suitable for the transfer of a wide variety of liquefied gases, including LPG, Autogas, DME, Aerosols, CO_2, Industrial refrigerants and Anhydrous ammonia.

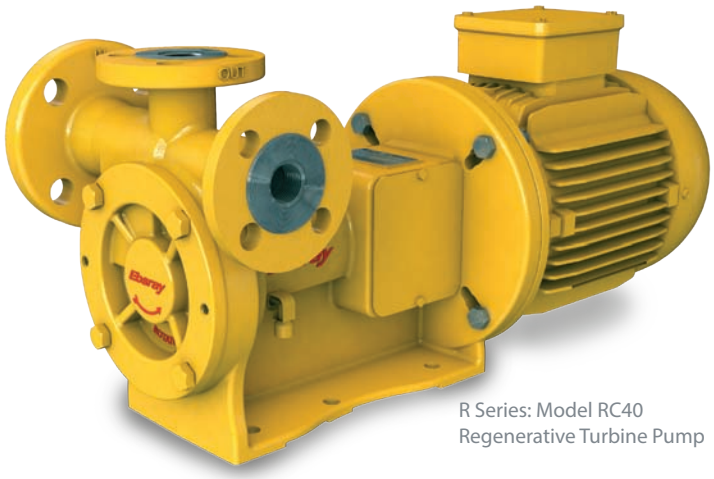
R Series: Model RC40
with Bypass Valve

Applications:

- Transfer and industrial dispensing
- Cylinder filling
- Driveway/vehicle filling
- Forklift refueling
- Direct burner and vaporizer feed
- Above ground and underground tanks

Features & Benefits:

- One flange fits NEMA and IEC B5 and B14 Motors
- Close-coupled design can also be long-coupled
- Three-ported design (two discharge ports)
- Simple single-stage design
- Ductile iron pressure retaining parts (Body/cover)
- Shaft: High tensile alloy steel
- Unique cartridge design mechanical seal
- Complies with ATEX, UL51, and AS1596 codes
- Versatile flange options: NPT, ANSI or DIN
- Motor speeds up to 3,500 rpm
- Flow rates to 200 L/min (52.8 US gpm)
- Maximum differential pressure to 14 bar (200 psi)
- Hydrostatic test pressure 70 bar (1,016 psi)



R Series: Model RC40
Regenerative Turbine Pump

Construction:

The RC40 features a single-stage impeller providing high performance with low maintenance requirements. The close-coupled flange design mounts to both 50Hz and 60Hz (NEMA and IEC) electric motors. The unique 3-ported design (two discharge ports) allows flexibility with lowered installation costs. Featuring next-generation hydraulic design, the RC40 optimizes it's class-leading performance and efficiency by using the same sized motor for better performance than it's leading competitors. Cartridge design mechanical seals and bearings are interchangeable with RC20 and RC25. Flanged (ANSI #300 & DIN PN40) and Screwed (NPT) ports all in one body design.

Technical Data:

Materials:

- Pressure casings - Ductile iron to ASTM A536
- Impeller - Bronze, ductile iron optional

Porting:

- Inlet: 1-1/2" NPT, Flanged to suit 1-1/2" ANSI Class 300 and DN40 DIN PN40
- Discharge: 1" NPT, Flanged to suit 1" ANSI Class 300 and DN25 DIN PN40
- Gauge: 1/4" NPT

Performance Data:

- Motor speeds up to 3,500 rpm
- Flow rates to 200 L/min (52.8 US gpm)
- Maximum differential pressure to 14 bar (200 psi)
- Hydrostatic test pressure 70 bar (1,016 psi)

Operating Limits

Pump Model	Maximum Differential Pressure (at 3,500 rpm)		Maximum Working Pressure (at 3,500 rpm)		Hydrostatic Test Pressure		Minimum Temperature		Maximum Speed
	bar	psi	bar	psi	bar	psi	°C	°F	rpm
RC20	12	175	30	425	70	1,015	-40	-40	3,500
RC25	14	203	30	425	70	1,015	-40	-40	3,500
RC40	14	203	30	425	70	1,015	-40	-40	3,500

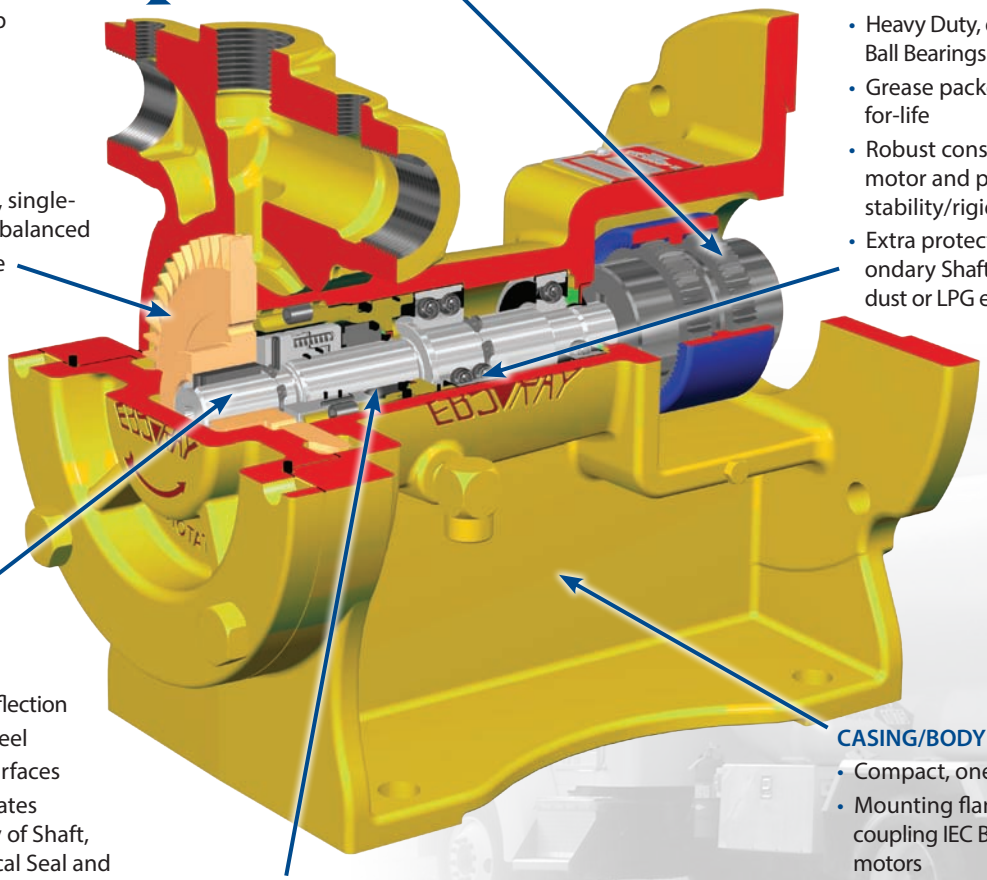
Typical RC Series Regenerative Turbine Pump

PORTS
- Versatile 3-port arrangement, self-venting design
- Bypass valve connection port direct on pump

SHAFT COUPLING
- Flexible Coupling – non-sparking "Polygear" as standard option
- CE/ATEX compliant
- Other types of flexible coupling available
- Non-sparking Coupling Guard standard supply

BEARINGS
- Heavy Duty, deep groove Ball Bearings
- Grease packed, sealed-for-life
- Robust construction for motor and pipeline stability/rigidity
- Extra protection by secondary Shaft Seals against dust or LPG entry

IMPELLER
- Axially self-aligning, single-stage, hydraulically balanced
- Quiet, vibration-free operation



SHAFT
- Rigid design, low deflection
- High tensile alloy steel
- Precision ground surfaces
- Quill concept facilitates one-piece assembly of Shaft, Cartridge, Mechanical Seal and Bearings independently of pump, or stocked as a "spare part"

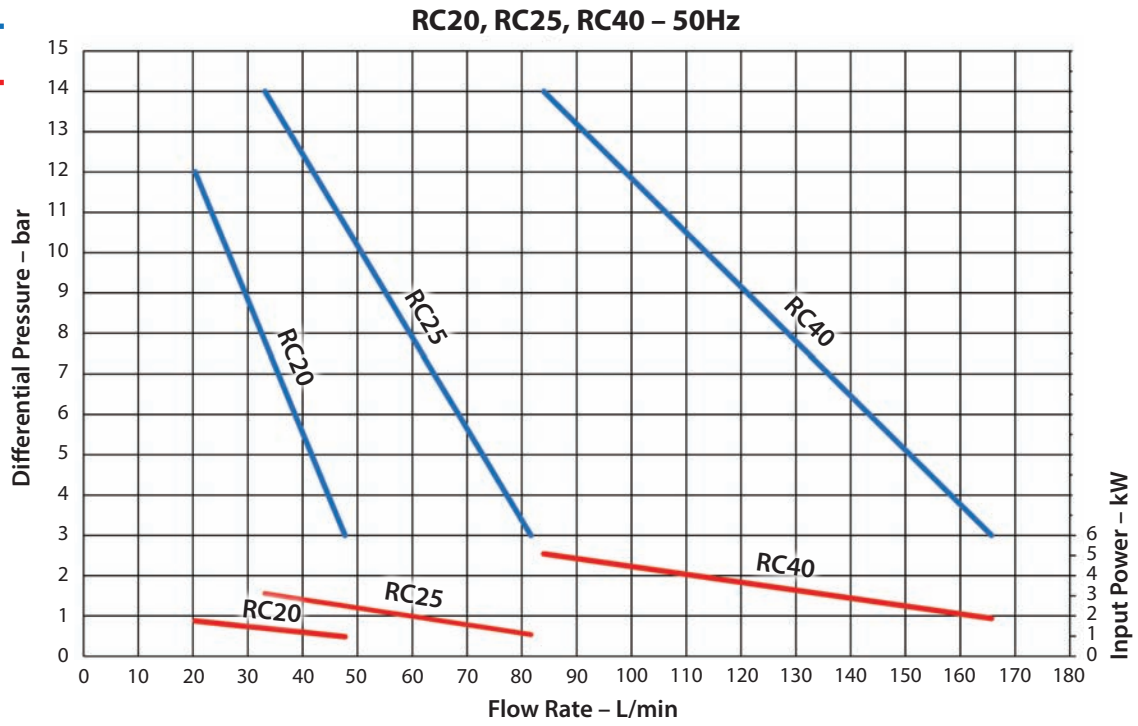
SHAFT SEAL
- Balanced mechanical seal, unique cartridge design for simplicity of assembly/maintenance
- Throttle bushing for secondary sealing

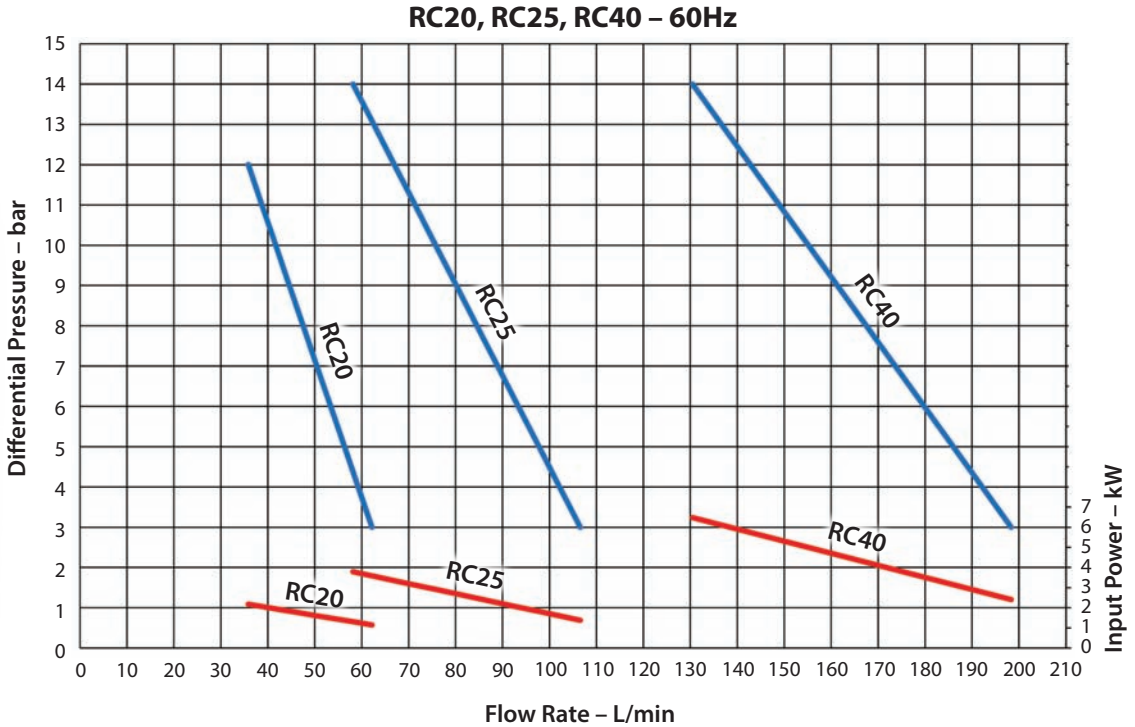
CASING/BODY
- Compact, one-piece design
- Mounting flange for close-coupling IEC B5 frame motors
- Robust construction for motor and pipeline stability/rigidity
- "O-ring" sealed, simple to service

Performance

Flow

Power





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a DOVER company

Authorized PSG Partner:

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