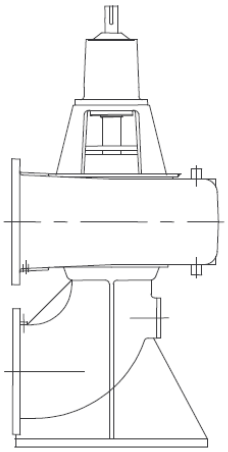
ROTAMAC

ROTAMAC MF
Mixed Flow Pumps

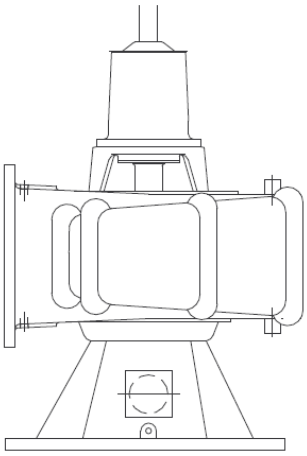
ROTAMAC

INTRODUCTION

This data booklet deals with MFV/MFZ model, mixed flow centrifugal pumps for water applications.



MFV Pump
with the suction elbow



MFZ Pump
with the suction nozzle

The ROTAMAC MFV / MFZ is a mixed-flow, centrifugal pump. It is specifically engineered for reliability, low cost and long life in demanding sewage handling services or where solids in suspension are of particular concern. The heavy-duty MFV / MFZ is designed, Manufactured and tested in conformance with the Standards of the Hydraulic Institute / ISO 9906.

DESIGN FEATURES

Flexibility
- Horizontal and vertical models
- Variety of mounting arrangements
- Variety of nozzle positions to suit most piping arrangements without special or costly modifications
- Direct or independent motor mounting

Reliability
- Minimal shaft deflection with oversized shaft and reduced overhang virtually eliminating shaft failure and increasing packing or seal life
- Conservative bearing design arranged to eliminate all radial and axial play
- Replaceable wear rings on impeller and suction head to extend pump life
- Supports to minimize vibration assure rigidity

Efficiency
- Maximum solids-handling capabilities
- Wide range of efficient operation and reduced power consumption

STANDARDISED

- Pump designed and manufactured in accordance with the Standards of the Hydraulic Institute.
- Balanced impeller according to ISO1940 grade G6.3, ensures smooth operation.
- Full compliance with ISO9908 / ISO5199 shaft run-out and ISO10816-7 vibration requirement.
- Performance test of pumps based on ISO9906 and ANSI/HI14.6 grade 2B

ADVANTAGES

- Improved efficiency and NPSHr by verified hydraulic design of impellers.
- Low vibration levels and excellent smooth running characteristics.
- Variety of materials and shaft seal to meet any corrosive fluids and difference applications.
- Easy to maintain without any special tool.
- A robust bearing bracket ensures only minor deflection on the shaft and a long working life for the bearings and the mechanical seal.

WORKING CONDITION

- Liquid pumping temperature up to 80 °C
- Maximum permissible pressure: 10 barg
- Flow rate: up to 13,500 m3/h
- TDH: up to 70 m
- Speed: up to 970 rpm for frequency 50 Hz

MATERIAL AND CONSTRUCTION

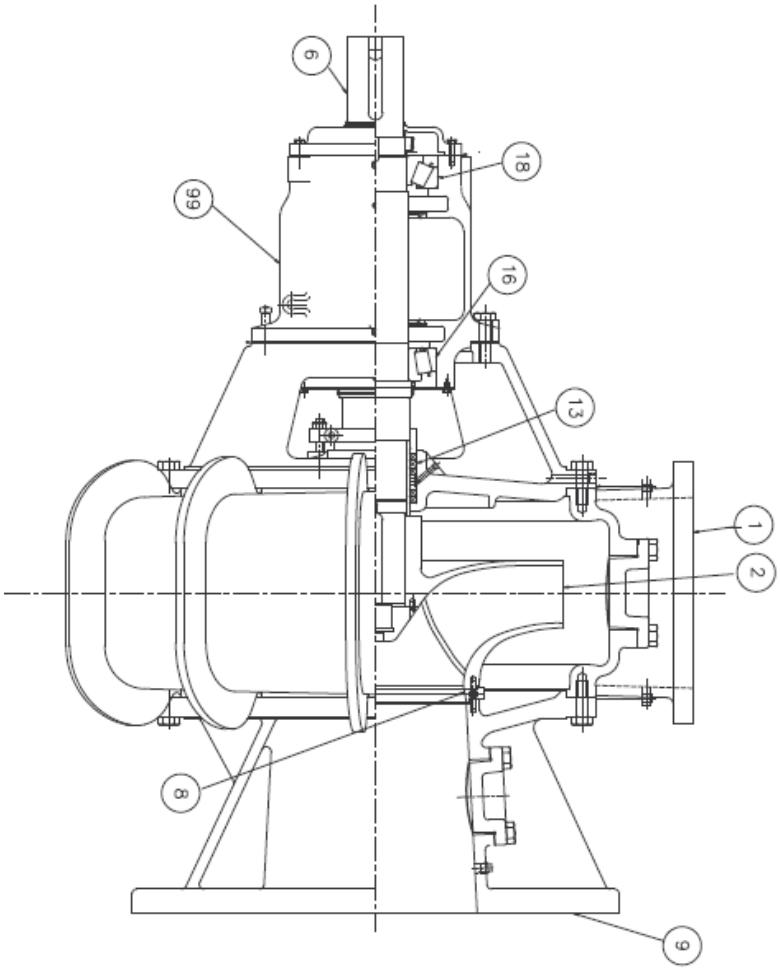
- Pump casing: cast iron
- Impeller: cast iron, bronze
- Shaft: carbon steel, low alloy steel
- Sleeve: chrome steel
- Shaft seal: packing seal, single mechanical seal
- Nozzles: DIN or drilled to ASME B16.5
- Configuration: horizontal end-suction, vertical with bottom-suction, vertical with supportive base elbow

TYPICAL APPLICATION

- Water transportation
- Sewage
- Storm water
- Industrial waste
- Drainage

PUMP SECTIONAL DRAWING AND PARTS LIST - MF SERIES

Pump construction is a little different depending on size



No.	Part name
1	Casing
2	Impeller
6	Shaft
8	Wearing
9	Suction Head
13	Shaft Seal
16	Line Bearing
18	Thrust Bearing
99	Bearing Frame

EXAMPLES OF USES

Installation and Running at

Metropolitan Waterworks Authority - MWA , Bangkok

Vertical Mixed Flow Pumps
1,800 m3/h – 15 m – 110 kW

ROTAMAC

- Standardized End Suction Pumps
  EN733/DIN24255, ISO2858/ISO5199
  ASME B73.1, API610
- Split Casing Double Suction Pumps
- Solid Handling Pumps
  Slurry/Vortex/Semi-open/Open/Non clog
- High Pressure Multi-Stage Pumps
- Self-Priming Pumps
- Submersible Pumps
- Close Coupled Pumps
- Vertical Multi-Stage / Immersible Pumps
- Vertical Sump Pumps
- Vertical Turbine Pumps
- Mixed / Axial Flow Pumps
- Liquid Ring Vacuum Pumps
- Chemical Process Plastic Pumps
- Fire Fighting Pump Packages (NFPA20)
- Booster Pump Packages
- Trailer Mounted Pumps

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ROTAMAC can help relieve the stresses and reduce the life cycle costs associated with the most important aspects of plant operation.

Dedicated to delivering the highest quality support, ROTAMAC services and solutions integrates hydraulic, mechanical and materials engineering knowledge with creative solutions to improve equipment reliability and system performance, reduce energy consumption and improve the safety and environmental impact of operations.

Pump Services and Repair

Installation

Commissioning

Laser alignment

Inspection

Overhaul

Testing

Capabilities Overview

Design
- Equipment Selection and Optimization
- Material Selection
- System Design
- System Optimization

Start-up
- Equipment Installation
- Laser Alignment
- Commissioning and Running test
- Operator Training
- On-site Project Supervision
- On-site Troubleshooting

Operation and Maintenance
- Equipment Inspection
- Repair & Overhaul
- Advanced Diagnostics
- Service Maintenance Contracts

Product information is subject to change; consult factory for details.