CENTRIFUGAL PUMP B/A 9HHP-S3
MAGNETIC DRIVE CHEMICAL PUMP
PP / PVDF · Seamless Design · Zero Leakage

PRODUCT OVERVIEW

The B/A 9HHP-S3 is a magnetic drive centrifugal pump made of thermoplastic materials, specifically designed for transferring acids and corrosive liquids. The seamless design with magnetic coupling ensures zero leakage and safe handling of dangerous fluids.

TECHNICAL SPECIFICATIONS

Parameter	Value
Flow Range	0.5 to 45 m³/h (3-220 USGPM)
Maximum Head	33 mlc (150 feet)
Maximum Temperature (PP)	70°C
Maximum Temperature (PVDF)	90°C
Maximum Viscosity	200 cSt
Pressure Rating	NP 4 at 20°C
Magnetic Coupling	High-torque NeFeBo (standard)
Connections	British Gas threaded (standard)
Motor Type	Direct starting

MATERIALS OF CONSTRUCTION

Component	Material Options
Pump Head	PP or PVDF
Impeller	PP or PVDF
O-ring (PP pump)	EPDM (standard)
O-ring (PVDF pump)	VITON (standard)
Static Shaft	Al_2O_3 (Aluminum Oxide)
Bushing	PTFEC
Magnets	NeFeBo (Neodymium)
Rear Casing	Thermoplastic with metal insert

MAGNETIC DRIVE TECHNOLOGY

HOW MAGNETIC DRIVE PUMPS WORK

The B/A 9HHP-S3 features a sealless design where power is transmitted through magnetic coupling:

1. EXTERNAL MAGNET: Mounted on the motor drive shaft
2. REAR CASING: Creates hermetic containment of the liquid
3. INTERNAL MAGNET: Connected to the pump impeller
4. MAGNETIC ATTRACTION: Transmits full motor torque to impeller

BENEFITS:

✓ Zero leakage - no dynamic seals
✓ No fugitive emissions
✓ Safe for hazardous liquids
✓ Minimum maintenance
✓ Reduced spare parts costs
✓ No seal failure issues

KEY FEATURES & BENEFITS

- ✓ SEAMLESS DESIGN - Pump closed coupled to motor
- ✓ ZERO LEAKAGE - Magnetic coupling eliminates shaft seals
- ✓ HERMETIC CONTAINMENT - No fluid access to outside
- ✓ CORROSION RESISTANT - PP or PVDF materials
- ✓ HIGH-TORQUE MAGNETS - NeFeBo standard
- ✓ MINIMUM MAINTENANCE - Fewer wearing parts
- ✓ COST SAVINGS - Reduced repair and spare parts costs
- ✓ DIRECT STARTING MOTOR - Simple operation
- ✓ BRITISH GAS THREADS - Standard connections

CHEMICAL COMPATIBILITY

PP (POLYPROPYLENE) VERSION

- Maximum temperature: 70°C
- Excellent for:
  - Acids (hydrochloric, sulfuric, nitric)
  - Alkalis
  - Salt solutions
  - Plating chemicals
- Not suitable for: strong oxidizers, some solvents

PVDF (POLYVINYLIDENE FLUORIDE) VERSION

- Maximum temperature: 90°C
- Excellent for:
  - Strong acids

- Halogens
- Solvents
- High-purity applications
- Semiconductor chemicals
- Superior chemical resistance to PP

TYPICAL APPLICATIONS

CHEMICAL PROCESSING	INDUSTRIAL APPLICATIONS
• Acid transfer	• Metal finishing
• Alkali handling	• Electroplating
• Chemical dosing	• Printed circuit board manufacturing
• Pickling solutions	• Water treatment
• Etching chemicals	• Pharmaceutical processing
• Solvent transfer	• Laboratory services
• Corrosive liquid circulation	• Chemical manufacturing
• Reactor feed	• Waste treatment

PERFORMANCE CURVE

Head (m)	Flow (m³/h)
33	0.5
30	10
25	20
20	30
15	40
10	45

Note: Performance varies with material and specific gravity.
Contact factory for detailed curve.

DIMENSIONS (Approximate)

Dimension	Size
Overall Length	[Insert dimension]
Overall Width	[Insert dimension]
Overall Height	[Insert dimension]
Suction Connection	[Insert size] - British Gas thread
Discharge Connection	[Insert size] - British Gas thread
Weight	[Insert weight]

CONNECTION OPTIONS

STANDARD: British Gas threaded (BSP)
OPTIONAL CONNECTIONS AVAILABLE:
☐ NPT threads ☐ Flanges (ANSI / DIN)
☐ Union connections ☐ Hose barbs
☐ Socket fusion (for PP/PVDF piping) ☐ Custom connections

OPTIONAL CONFIGURATIONS

☐ Different motor powers and speeds
☐ Alternative O-ring materials
☐ Special voltage / phase requirements
☐ Explosion-proof motor (ATEX)

☐ Variable frequency drive ready
☐ Baseplate mounting
☐ Flush port for cleaning
☐ Temperature monitoring
☐ Leak detection sensor

ADVANTAGES OVER MECHANICAL SEAL PUMPS

FEATURE	MAGNETIC DRIVE	MECHANICAL SEAL
Leakage	ZERO	Potential seal wear
Maintenance	Minimal	Regular seal replacement
Fugitive Emissions	None	Possible
Hazardous Fluids	Ideal	Risk of leakage
Operating Cost	Lower	Higher
Seal Failure	No seals to fail	Common failure point

QUALITY ASSURANCE

Each B/A 9HHP-S3 pump undergoes:
• Hydrostatic pressure testing
• Magnetic coupling strength verification
• Run-in testing
• Leak testing (helium or pressure decay)
• Material certification traceability
• Dimensional inspection
• Motor performance verification

CERTIFICATIONS & STANDARDS

• ISO 9001:2015 certified manufacturing
• CE marked
• ATEX options available for hazardous areas

• FDA compliance for PP/PVDF materials (where applicable)
• Designed to ISO 15783 (sealless pumps)
• Pressure equipment directive compliant

ORDERING INFORMATION

When ordering, please specify:
1. Pump model: B/A 9HHP-S3
2. Material: PP or PVDF
3. Motor power and speed
4. Voltage / phase requirements
5. Connection type required
6. O-ring material preference
7. Any special options needed

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Zero Leakage · Corrosion Resistant · Maintenance Free
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