

High Pressure Triplex Plunger Pump

V- 57 Series



About Company



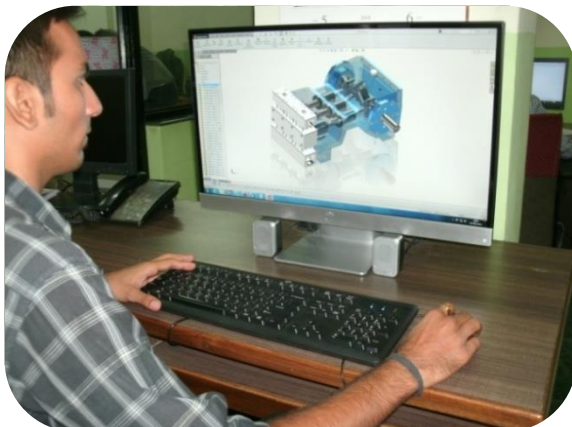
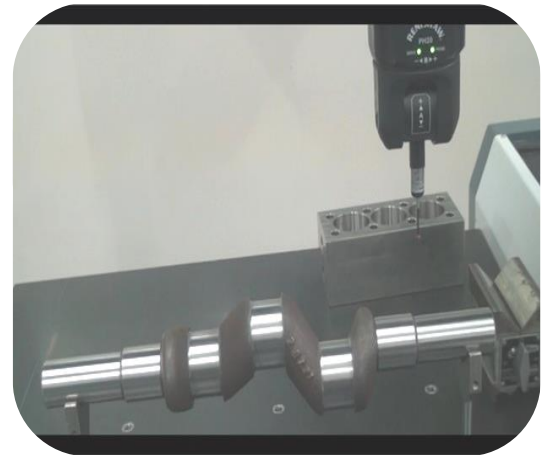
PressureJet Systems Pvt. Ltd. was established in 1996 in Ahmedabad, India. PressureJet (An ISO 9001:2008 certified company) is a leading manufacturer of high pressure, positive displacement, reciprocating triplex plunger pumps and relevant accessories. These pumps are most suitable for various applications like Water Jet Cleaning, Injection, Hydro test Hydro jetting, Hydro Blasting, Sewer jetting, Firefighting & many more.

Today, PressureJet has a work force of more than 85 dedicated people. We have 11000 Sq. ft. area in Asia's premier industrial estate in Ahmedabad. Out of which, 5000 Sq. ft. area has been allocated for manufacturing activities.

Our Quality



All components are quality checked in the controlled environment of the Q. C. laboratory. We have the most modern measurement equipment such as 3D CMM (Coordinate Measuring Machine), surface roughness measurement Instrument, hardness tester etc. All components are tracked by barcode system with oracle ERP.



3D modelling is an important aid in designing the technical aspects of engineer's product.

Simulation can really help in making the correct design decisions during the development stage.

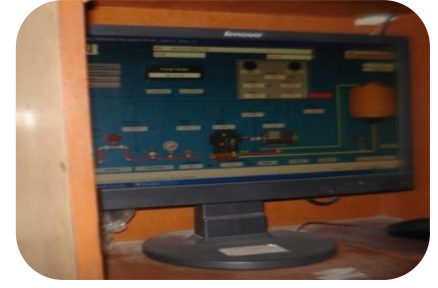
At PressureJet, we follow by using all necessary software.

Machine Shop



Our Ultra-modern machine shop enables us to manufacture an extremely wide range of components. We can be very flexible in our production planning, while maintaining a high standard of quality with fully automatic machining station. Computer controlled machining stations ensure constant dimensional accuracy.

Assembly & Testing



In this area, all components for the various pump units come together. Pumps and engine or motors are assembled on the skid frame, Accessories such as booster pump, Strainers, PRV, Safety Valve etc. are assembled.

PressureJet products are subject to stringent quality control. All pumps are tested at maximum load prior to dispatch for decided time period. All measurement taken during the testing are electronically stored in computer through fully Automatic Test Bench and then it can be printed. Test report is always provided with the pump.

Store / Service



A product is only as good as the service backing it. We have a dedicated team of technicians available for 24 X 7. We keep majority of spares Ex-stock to reduce down time.

V-57 Series bare Pump

➤ Salient Futures

- Field proven design.
- Casting Stainless steel Pump Head construction with high strength.
- Rigorously Subjected to full load testing.
- Manufactured on state of the art machinery.
- Light in weight & Heavy duty construction with Intermediate duty model.
- Splash lubrication.
- Easy Maintenance.
- Both side mounting available.
- Pump design is suitable for Inbuilt Gear, Belt drive & Hydraulic motor Driven System.



➤ Specification

- Plunger Stroke: 57 mm
- Max. plunger speed: 1.14 m/sec. @ 600 spm
- Plunger force: 23.5 KN (2400 kgf)
- Required Inlet Pressure min./max.: 2-3 bar (Booster Pump flow require min. 1.5 times of rated flow rate)
- Oil Type: SAE – 80 W 90
- Oil capacity: 8 ltr.
- Max. Liquid Temp.: 70 °C (160 °F)
- Discharge Connection: 1" BSPF
- Suction Connection: 2" BSPF

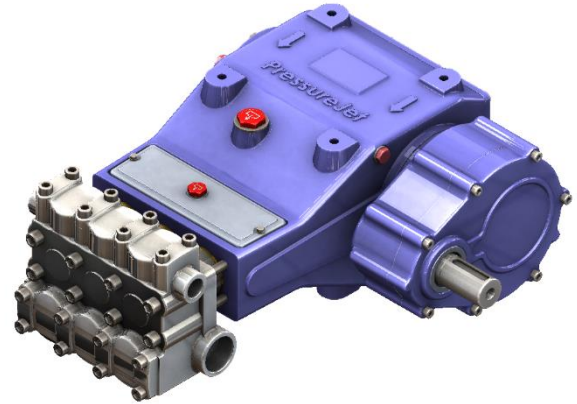
Bare Pump Selection Chart for Belt Drive

| Pulley Belt SPM Chart | | | | | | | | | | | |
|---|--------------------------|----------------------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| SPM | | | 403 | 483 | 500 | 537 | 600 | 645 | 725 | 806 | 900 |
| Model | Plunger Dia. (mm) | Capacity | For Intermediate Duty Applications | | | | | | | | |
| VA-50 | 50 | Flow Rate Pressure (HP) | 134 110 (40) | 162 115 (50) | 167 110 (50) | 180 115 (60) | 200 115 (60) | 216 105 (60) | - | - | - |
| VA-45 | 45 | Flow Rate Pressure (HP) | 108 135 (40) | 131 140 (50) | 136 140 (50) | 146 140 (60) | 163 140 (60) | 175 130 (60) | - | - | - |
| VA-40 | 40 | Flow Rate Pressure (HP) | 85 175 (40) | 103 180 (50) | 107 180 (50) | 115 180 (60) | 128 180 (60) | 138 165 (60) | - | - | - |
| VA-36 | 36 | Flow Rate Pressure (HP) | 69 200 (40) | 84 200 (50) | 87 200 (50) | 93 200 (50) | 104 185 (50) | 112 200 (60) | - | - | - |
| VA-32 | 32 | Flow Rate Pressure (HP) | 55 200 (30) | 66 200 (40) | 68 200 (40) | 73 200 (40) | 82 185 (40) | 88 200 (50) | - | - | - |
| Model | Plunger Dia. (mm) | Capacity | For Sewer Jetting, HDD Machine & Hydro Test Application Only (Duty :- 1 to 2 hour Continue) | | | | | | | | |
| VA-50 | 50 | Flow Rate Pressure (HP) | 134 140 (50) | 162 140 (60) | 167 135 (60) | 180 145 (75) | 200 145 (75) | 216 130 (75) | 243 115 (75) | 268 105 (75) | 302 95 (75) |
| VA-45 | 45 | Flow Rate Pressure (HP) | 108 175 (50) | 131 175 (60) | 136 165 (60) | 146 175 (75) | 163 175 (75) | 175 160 (75) | 197 145 (75) | 217 130 (75) | 244 115 (75) |
| VA-40 | 40 | Flow Rate Pressure (HP) | 81 185 (40) | 103 185 (50) | 107 180 (50) | 115 200 (60) | 128 180 (60) | 138 200 (75) | 155 185 (75) | 171 170 (75) | 193 150 (75) |
| VA-36 | 36 | Flow Rate Pressure (HP) | 66 200 (40) | 84 200 (50) | 87 200 (50) | 93 200 (50) | 104 185 (50) | 112 200 (60) | 126 180 (60) | 139 165 (60) | 156 145 (60) |
| VA-32 | 32 | Flow Rate Pressure (HP) | 52 200 (30) | 66 200 (40) | 68 200 (40) | 73 200 (40) | 82 190 (40) | 88 200 (50) | 99 190 (50) | 110 175 (50) | 123 180 (60) |
| Note :- Flow Rate is in LPM, Pressure is in Bar, Motor Power in H.P in above chart. Required Engine/PTO HP will be 20% higher than motor HP. | | | | | | | | | | | |
| Note :- All flow rates are based on 100% volumetric efficiency, Actual will be 90-95%. | | | | | | | | | | | |

V-57 Series bare Pump

➤ Salient Features

- Field proven design.
- Casting Stainless steel Pump Head construction with high strength.
- Rigorously Subjected to full load testing.
- Manufactured on state of the art machinery.
- Light in weight & Heavy duty construction with Intermediate duty model.
- Splash lubrication.
- Easy Maintenance.
- Both side mounting available.
- Pump design is suitable for Inbuilt Gear, Belt drive & Hydraulic motor Driven System.



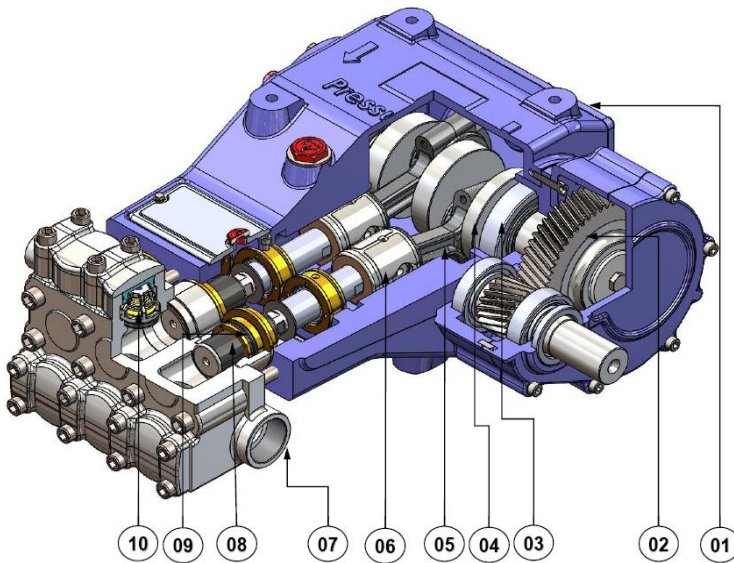
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- Max. plunger speed: 1.14 m/sec. @ 600 spm
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- Required Inlet Pressure min./max.: 2-3 bar (Booster Pump flow require min. 1.5 times of rated flow rate)
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- Oil capacity: 8 ltr.
- Max. Liquid Temp.: 70 °C (160 °F)
- Discharge Connection: 1" BSPF
- Suction Connection: 2" BSPF

Bare Pump Selection Chart for Gear Drive

| Gear Ratio Chart | | | | | | | | | | | |
|---|-------------------|----------------------------|---|-----------------|------------------|-----------------|------------------|-----------------|-----------------|------------------|-----------------|
| Input Speed | | | 1000 RPM (50 Hz) | | 1200 RPM (60 Hz) | | 1500 RPM (50 Hz) | | | 1800 RPM (60 Hz) | |
| Gear Ratio | | | 1.86 :1 | 2.48:1 | 1.86 :1 | 2.48 : 1 | 1.86 :1 | 2.48 : 1 | 3 : 1 | 2.48 : 1 | 3 : 1 |
| SPM | | | 537 | 403 | 645 | 483 | 806 | 604 | 500 | 725 | 600 |
| Model | Plunger Dia. (mm) | Capacity | For Intermediate Duty Applications | | | | | | | | |
| VA-50 | 50 | Flow Rate Pressure (HP) | 180 115 (60) | 134 110 (40) | 216 105 (60) | 162 115 (50) | - | 200 115 (60) | 167 110 (50) | - | 200 115 (60) |
| VA-45 | 45 | Flow Rate Pressure (HP) | 146 140 (60) | 108 135 (40) | 175 130 (60) | 131 140 (50) | - | 163 140 (60) | 136 140 (50) | - | 163 140 (60) |
| VA-40 | 40 | Flow Rate Pressure (HP) | 115 180 (60) | 85 175 (40) | 138 165 (60) | 103 180 (50) | - | 128 180 (60) | 107 180 (50) | - | 128 180 (60) |
| VA-36 | 36 | Flow Rate Pressure (HP) | 93 200 (50) | 69 200 (40) | 112 200 (60) | 84 200 (50) | - | 104 185 (50) | 87 200 (50) | - | 104 185 (50) |
| VA-32 | 32 | Flow Rate Pressure (HP) | 73 200 (40) | 55 200 (30) | 88 200 (50) | 66 200 (40) | - | 82 185 (40) | 68 200 (40) | - | 82 185 (40) |
| Model | Plunger Dia. (mm) | Capacity | For Sewer Jetting, HDD Machine & Hydro Test Application Only (Duty :- 1 to 2 hour Continue) | | | | | | | | |
| VA-50 | 50 | Flow Rate Pressure (HP) | 180 145 (75) | 134 140 (50) | 216 130 (75) | 162 140 (60) | 268 105 (75) | 200 145 (75) | 167 135 (60) | 243 115 (75) | 200 145 (75) |
| VA-45 | 45 | Flow Rate Pressure (HP) | 146 175 (75) | 108 175 (50) | 175 160 (75) | 131 175 (60) | 217 130 (75) | 163 175 (75) | 136 165 (60) | 197 145 (75) | 163 175 (75) |
| VA-40 | 40 | Flow Rate Pressure (HP) | 115 200 (60) | 81 185 (40) | 138 200 (75) | 103 185 (50) | 171 170 (75) | 128 180 (60) | 107 180 (50) | 155 185 (75) | 128 180 (60) |
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| Note: - Flow Rate is in LPM, Pressure is in Bar, Motor Power in H.P in above chart. Required Engine/PTO HP will be 20% higher than motor HP. | | | | | | | | | | | |
| Note: - All flow rates are based on 100% volumetric efficiency, Actual will be 90-95%. | | | | | | | | | | | |

Material of Construction of Major Internal Parts



1. Crank Case (Main Body)

Grey Iron: Main body in grey iron casting FG-260 with Honned surface finish bore.

2. External Helical Gear Box

Alloy steel: Helical gear is nitride hardened and precision ground for extremely long life and durability.

3. Bearing

Oversized for maximum life and load disbursement. Self-alignment roller bearing enables it to handle 26% more load than other pumps.

4. Crankshaft

Alloy steel: Crankshaft is made of nitrated, hardened and precision ground for extremely long life and durability.

5. Connecting Rod

Alloy Steel: Forged steel connecting rods with antifriction bearings. Heavy pin area construction, for added load strength.

6. Cross Head Assembly. (Piston & Piston Rod)

Grey Iron & Stainless Steel: Alloy steel casting piston & stainless steel piston rod are hardened & super finish surface.

7. Pump Head (Liquid End)

Pump head is made of high corrosion resistant. Material (SG Iron / SS304)

8. Plunger (Ceramic / Tungsten coated)

Primarily composed of ceramic coated or Tungsten coated on SS. Surface roughness is extremely good i.e. <0.2 Ra.

9. Plunger Seal

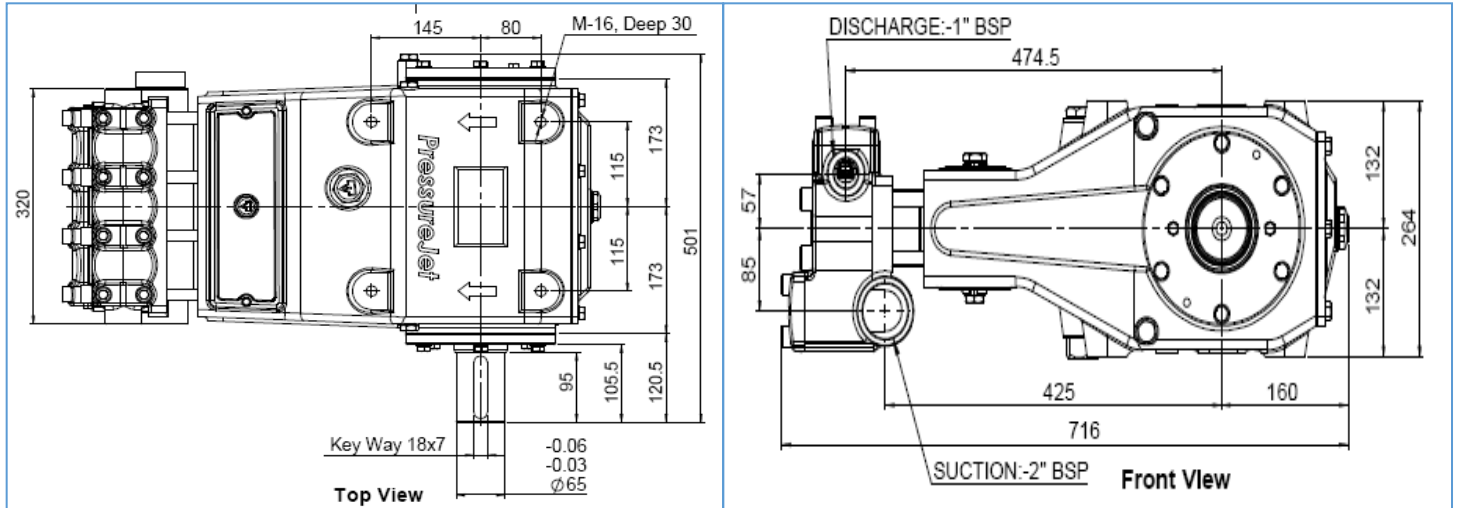
Chevron Seal: - "V" style strong and tightens under load packing for high compressive & tensile strength ensure effective sealing.

10. Complete Valve Internal (Valve Assembly)

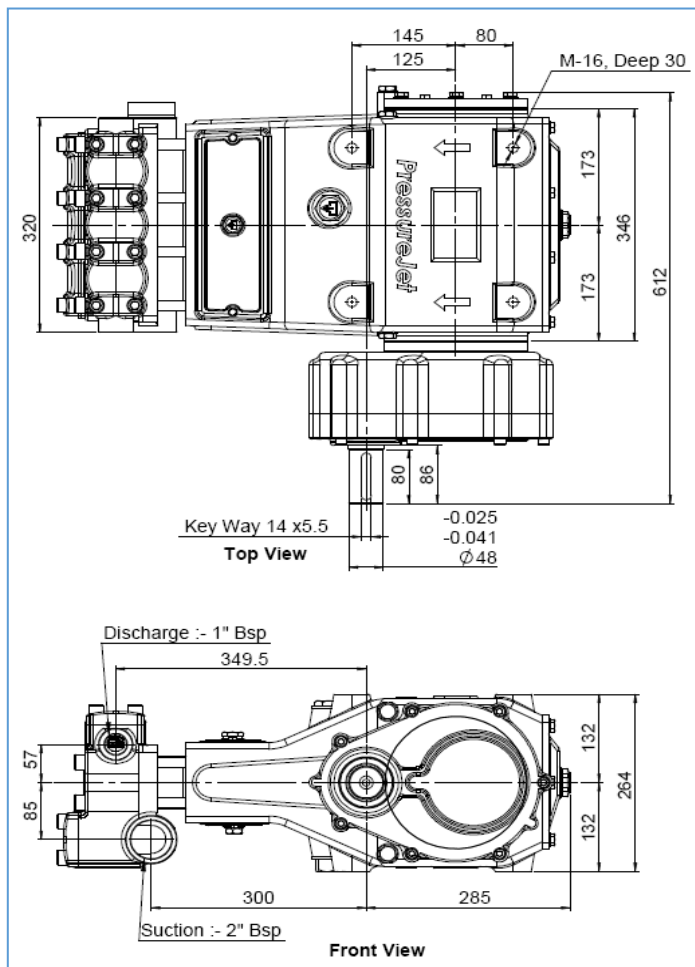
Stainless Steel: Valves made of stainless steel for hardened & anti corrosion hard surface coated for long life. High volumetric efficiency valves operate at 95% plus efficiency.

Bare Pump Dimension Drawing

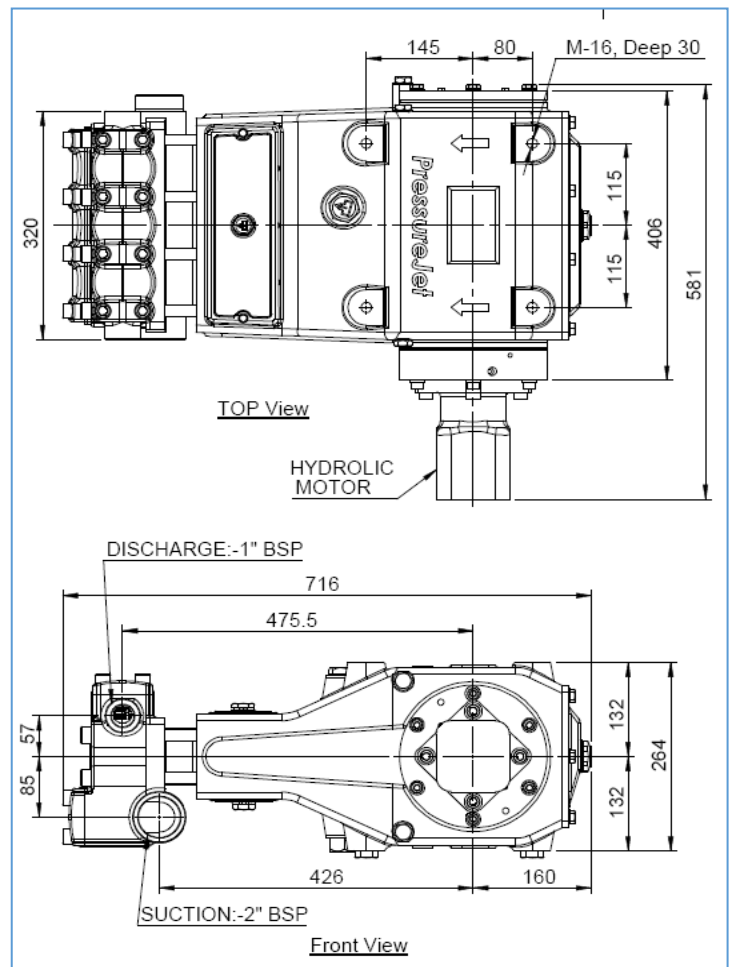
V-57 Bare Pump without Gear Box



V-57 Bare Pump with Gear Box



V-57 Bare Pump for Hydraulic Motor



All Dimension are in mm.
Approx. weight of bare pump: 195 Kg

Sewer Jetting Accessories



Sewer Jetting Rotating Nozzle

Hydro Test Accessories



High Pressure Ball Valve



External Non Return Valve



Pressure Transducer



Control Panel with Auto pressure Controller

Tank Cleaning Accessories



Automatic Tank Cleaning Rotating Nozzle

➤ Applications



Sewer Jetting














Horizontal Directional Drill (HDD) Machine



Hydro Test



Fire Fighting

| Partial List of Clients | |
|---|-------------------------------|
| Company Logo | Client Name |
|  | Apollo Techno Equipments Ltd. |
|  | BHEL |
|  | Larsen & Toubro |
|  | Grasim |
|  | Essar |
|  | ONGC |
|  | Thermax |
|  | Godrej |
|  | Tata |
|  | Reliance |
|  | Hindalco |
|  | Alstom |
|  | Dalmia |
|  | ISGEC |

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Our Website is fully informative, exhaustive and communicative. It is designed to provide maximum information in most precise form to help our valued customers to take a quick and right decision

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