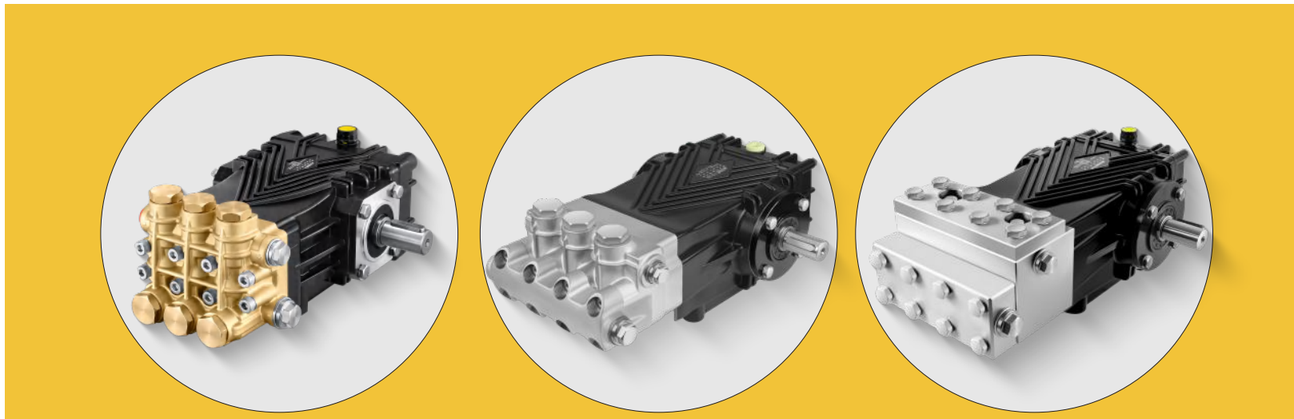
FUSSEN®

# HIGH PRESSURE PLUNGER PUMP

用水创造价值

Create Value with Water Power




## Guangdong Fussen Waterjet Technology Co., Ltd.

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# COMPANY PROFILE

## About Us

Founded in 2001, Fussen has been consistently dedicated to the research, development, and innovation of high-pressure water jet technology, with more than 20 years of technical expertise in high-pressure plunger pumps.

Through advanced manufacturing processes and strict quality control, Fussen delivers pumps that are high quality, durable, and reliable. Our equipment is widely applied in ship cleaning, industrial paint and rust removal, petrochemicals, and building maintenance, and has gained broad recognition in both domestic and international markets.

**Professional** **International** **Brand-Oriented**


**Professional**

### Professional High-Pressure Cleaning Technology

Fussen develops advanced high-pressure pump technology that ensures efficiency, durability, and stability across diverse industrial applications.

The high-pressure pump, as the core component of a high-pressure cleaner, directly determines the overall efficiency and stability of the system. With deep insights into industry requirements, Fussen has developed a comprehensive range of professional cleaning solutions designed to meet diverse needs across different pressure levels, flow rates, and working environments.

Fussen's high-pressure plunger pumps are engineered with strict material selection, high-precision machining, and advanced sealing technology to ensure reliability and performance.

Fussen pumps are equipped with ceramic and alloy steel plungers to ensure reliable performance and durability. The ceramic plungers offer excellent wear and corrosion resistance with a smooth, low-friction surface that extends seal life, while the alloy steel plungers provide exceptional strength and impact resistance for high-pressure applications. Together with high-quality water and oil seals, the system maintains stable operation and long service life. For particularly demanding environments, Fussen also provides customized corrosion-resistant and high-temperature-resistant seal solutions. As a result, the pumps deliver reliable stability, superior efficiency, and extended durability under diverse operating conditions.

**International**

### International Quality Standards and Worldwide Reach

Fussen is committed to delivering products that meet the highest international standards and are shipped to customers worldwide.

The company operates in full compliance with the ISO9001 quality management system, ensuring excellence throughout design, production, testing, and service. All products are CE certified and comply with international safety requirements. With outstanding quality and consistent reliability, Fussen's pumps are widely used across Europe, the Middle East, Southeast Asia, and South America. Through long-term partnerships and a proven record of performance, the company has earned the trust of customers around the globe.

**Brand-Oriented**

### Creating Value with Water

Fussen's brand philosophy is built on the belief that water is not only a resource but also a force for creating value.

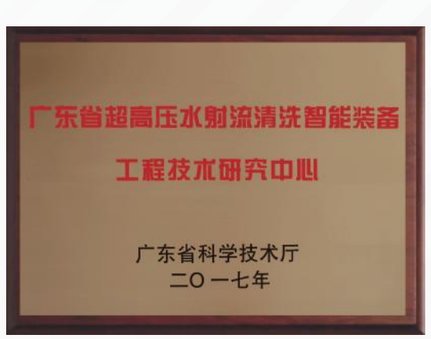
The company is committed to delivering high-quality pumps while advancing intelligent, efficient, and eco-friendly cleaning technology. Through continuous investment in research, development, and product optimization, Fussen leads the high-pressure water jet industry forward. Looking to the future, the company will continue to innovate and provide global customers with more professional, reliable, and sustainable cleaning solutions.

**25+**
Years of Experience

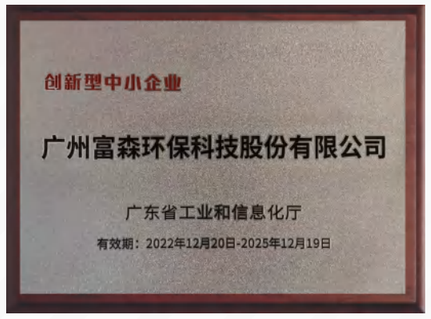
**200+**
Patents

**5000m²**
Factory


# HONORS






## Certifications









## Patents








## Road Cleaning

## Heavy Machinery Cleaning

## Property Cleaning

## Livestock Farm Cleaning

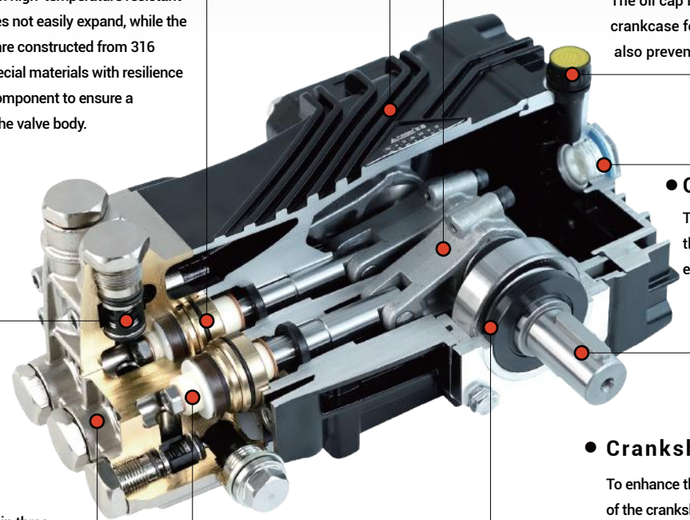
## Car Washing

## Rust Removal

## Ship Cleaning

## Railway Cleaning

# Cross Section View of High Pressure Plunger Pump



**● High and low-pressure water seals**

European imported water seal components are utilized, with both high and low-pressure seals being made of wear-resistant and temperature-resistant rubber-coated fabric material, capable of enduring long-term use and still performing excellently even in high-temperature environments of up to 65 degrees Celsius.

**● One Way Valve**

The valve cage is made from high-temperature resistant engineering plastic that does not easily expand, while the valve seat and valve cover are constructed from 316 stainless steel material. Special materials with resilience are chosen for the spring component to ensure a long-lasting service life of the valve body.

**● Pump Head**

The pump head is available in three different materials: brass, nickel-plated brass, and stainless steel. These materials exhibit excellent corrosion resistance. Additionally, the pump head channels are meticulously designed to ensure a high volumetric flow rate of water, reaching up to 99.8%.

**● Ceramic plungers**

Precision-machined robust ceramic plungers, suitable for high-load operations, exhibit outstanding wear resistance and strong corrosion resistance.

**● Crankcase**

The crankcase is subjected to precision casting and oxidation treatment, with its surface coated in high-strength black electrophoretic paint. In addition, the top of the crankcase is equipped with efficient heat dissipation fins, which not only effectively dissipate heat but also enhance its structural strength.

**● Plunger connecting rod**

Made of super alloy material, with exceptionally high load strength, it offers a longer lifespan, ensuring safe and stable operation.

**● Oil Cap**

The oil cap has been relocated to the rear of the crankcase for ease of adding lubricating oil while also preventing oil splashes and potential leaks.

**● Oil level window**

The oil level window located behind the pump makes checking the oil l evel more convenient.

**● Crankshaft**

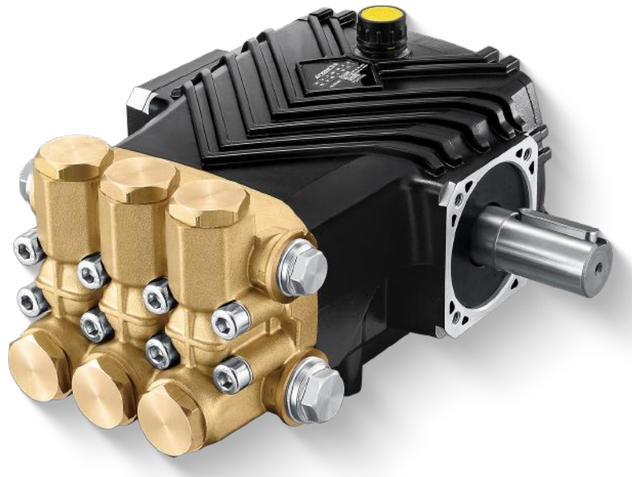
To enhance the strength, lifespan, and durability of the crankshaft, we have employed precision forging techniques along with hardening treatments in its manufacturing process.

**● Oil Seal**

The oil seal is made from natural rubber material and is equipped with stainless steel springs to ensure sufficient tension force.

# CONTENTS

# FAB

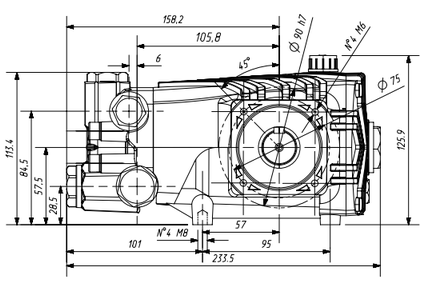


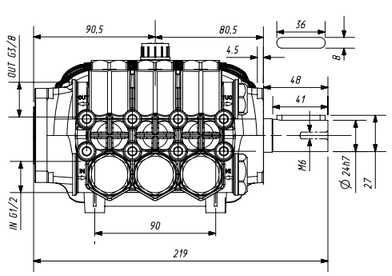
Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FAB 1017** | 1450 | 10.0 | 2.6 | 170 | 17 | 2465 | 3.4 | 4.6 | 7.2 | G 1/2 | G 3/8 |
| **FAB 1312** | 1450 | 13.0 | 3.4 | 120 | 12 | 1740 | 3.1 | 4.2 | 7.2 | G 1/2 | G 3/8 |
| **FAB 1520** | 1450 | 15.0 | 4.0 | 200 | 20 | 2901 | 6.0 | 8.0 | 7.2 | G 1/2 | G 3/8 |
| **FAB 1525** | 1450 | 15.0 | 4.0 | 250 | 25 | 3625 | 7.5 | 10.1 | 7.2 | G 1/2 | G 3/8 |
| **FAB 1820** | 1450 | 18.0 | 4.8 | 200 | 20 | 2900 | 7.2 | 9.6 | 7.2 | G 1/2 | G 3/8 |
| **FAB 1217** | 1750 | 12.1 | 3.2 | 170 | 17 | 2465 | 4.1 | 5.5 | 7.2 | G 1/2 | G 3/8 |
| **FAB 1512** | 1750 | 15.7 | 4.1 | 120 | 12 | 1740 | 3.8 | 5.0 | 7.2 | G 1/2 | G 3/8 |
| **FAB 1825** | 1750 | 18.1 | 4.8 | 250 | 25 | 3625 | 9.1 | 12.1 | 7.2 | G 1/2 | G 3/8 |
| **FAB 2120** | 1750 | 21.7 | 5.7 | 200 | 20 | 2900 | 8.7 | 11.6 | 7.2 | G 1/2 | G 3/8 |

## DIMENSION DIAGRAM (mm)







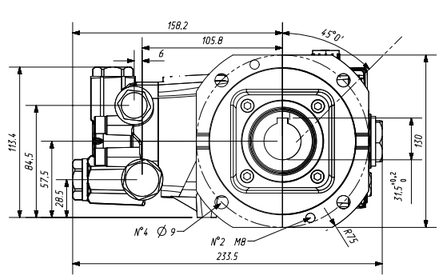

# FABH

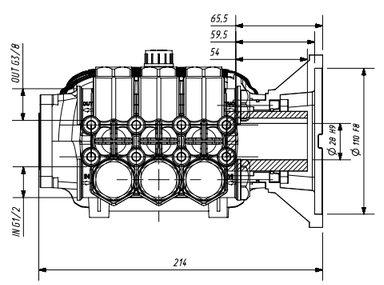
Hollow Shaft Ø28mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FABH 1017** | 1450 | 10.0 | 2.6 | 170 | 17 | 2465 | 3.4 | 4.6 | 8.0 | G 1/2 | G 3/8 |
| **FABH 1312** | 1450 | 13.0 | 3.4 | 120 | 12 | 1740 | 3.1 | 4.2 | 8.0 | G 1/2 | G 3/8 |
| **FABH 1520** | 1450 | 15.0 | 4.0 | 200 | 20 | 2900 | 6.0 | 8.0 | 8.0 | G 1/2 | G 3/8 |
| **FABH 1525** | 1450 | 15.0 | 4.0 | 250 | 25 | 3625 | 7.5 | 10.1 | 8.0 | G 1/2 | G 3/8 |
| **FABH 1820** | 1450 | 18.0 | 4.8 | 200 | 20 | 2900 | 7.2 | 9.6 | 8.0 | G 1/2 | G 3/8 |
| **FABH 1217** | 1750 | 12.1 | 3.2 | 170 | 17 | 2465 | 4.1 | 5.5 | 8.0 | G 1/2 | G 3/8 |
| **FABH 1512** | 1750 | 15.7 | 4.1 | 120 | 12 | 1740 | 3.8 | 5.0 | 8.0 | G 1/2 | G 3/8 |
| **FABH 1825** | 1750 | 18.1 | 4.8 | 250 | 25 | 3625 | 9.1 | 12.1 | 7.2 | G 1/2 | G 3/8 |
| **FABH 2120** | 1750 | 21.7 | 5.7 | 200 | 20 | 2900 | 8.7 | 11.6 | 7.2 | G 1/2 | G 3/8 |

## DIMENSION DIAGRAM (mm)



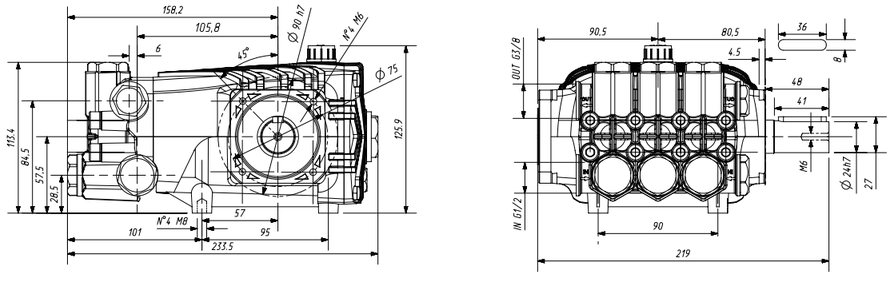
# FAN

Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | Power | | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | KW | HP | kg | Thread | Thread |
| **FAN 1017** | 1450 | 10.0 | 2.6 | 170 | 17 | 2465 | 3.4 | 4.6 | 7.2 | G 1/2 | G 3/8 |
| **FAN 1312** | 1450 | 13.0 | 3.4 | 120 | 12 | 1740 | 3.1 | 4.2 | 7.2 | G 1/2 | G 3/8 |
| **FAN 1520** | 1450 | 15.0 | 4.0 | 200 | 20 | 2900 | 6.0 | 8.0 | 7.2 | G 1/2 | G 3/8 |
| **FAN 1525** | 1450 | 15.0 | 4.0 | 250 | 25 | 3625 | 7.5 | 10.1 | 7.2 | G 1/2 | G 3/8 |
| **FAN 1820** | 1450 | 18.0 | 4.8 | 200 | 20 | 2900 | 7.2 | 9.6 | 7.2 | G 1/2 | G 3/8 |
| **FAN 1217** | 1750 | 12.1 | 3.2 | 170 | 17 | 2465 | 4.1 | 5.5 | 7.2 | G 1/2 | G 3/8 |
| **FAN 1512** | 1750 | 15.7 | 4.1 | 120 | 12 | 1740 | 3.8 | 5.0 | 7.2 | G 1/2 | G 3/8 |
| **FAN 1825** | 1750 | 18.1 | 4.8 | 250 | 25 | 3625 | 9.1 | 12.1 | 7.2 | G 1/2 | G 3/8 |
| **FAN 2120** | 1750 | 21.7 | 5.7 | 200 | 20 | 2900 | 8.7 | 11.6 | 7.2 | G 1/2 | G 3/8 |

## DIMENSION DIAGRAM (mm)







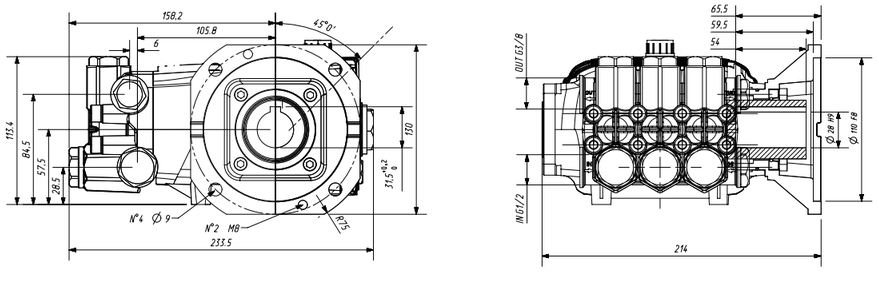

# FANH

Hollow Shaft Ø28mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | Power | | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FANH 1017** | 1450 | 10.0 | 2.6 | 170 | 17 | 2465 | 3.4 | 4.6 | 8.0 | G 1/2 | G 3/8 |
| **FANH 1312** | 1450 | 13.0 | 3.4 | 120 | 12 | 1740 | 3.1 | 4.2 | 8.0 | G 1/2 | G 3/8 |
| **FANH 1520** | 1450 | 15.0 | 4.0 | 200 | 20 | 2900 | 6.0 | 8.0 | 8.0 | G 1/2 | G 3/8 |
| **FANH 1525** | 1450 | 15.0 | 4.0 | 250 | 25 | 3625 | 7.5 | 10.1 | 8.0 | G 1/2 | G 3/8 |
| **FANH 1820** | 1450 | 18.0 | 4.8 | 200 | 20 | 2900 | 7.2 | 9.6 | 8.0 | G 1/2 | G 3/8 |
| **FANH 1217** | 1750 | 12.1 | 3.2 | 170 | 17 | 2465 | 4.1 | 5.5 | 8.0 | G 1/2 | G 3/8 |
| **FANH 1512** | 1750 | 15.7 | 4.1 | 120 | 12 | 1740 | 3.8 | 5.0 | 8.0 | G 1/2 | G 3/8 |
| **FANH 1825** | 1750 | 18.1 | 4.8 | 250 | 25 | 3625 | 9.1 | 12.1 | 7.2 | G 1/2 | G 3/8 |
| **FANH 2120** | 1750 | 21.7 | 5.7 | 200 | 20 | 2900 | 8.7 | 11.6 | 7.2 | G 1/2 | G 3/8 |

## DIMENSION DIAGRAM (mm)



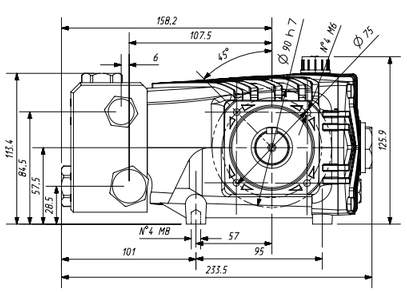
# FAS

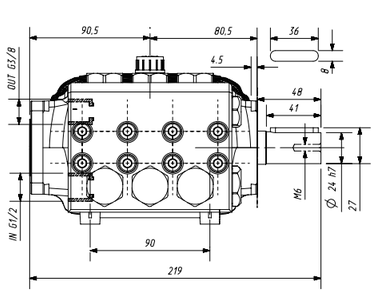
Soild Shaft Ø 24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FAS 1017** | 1450 | 10.0 | 2.6 | 170 | 17 | 2465 | 3.4 | 4.6 | 7.2 | G 1/2 | G 3/8 |
| **FAS 1312** | 1450 | 13.0 | 3.4 | 120 | 12 | 1740 | 3.1 | 4.2 | 7.2 | G 1/2 | G 3/8 |
| **FAS 1520** | 1450 | 15.0 | 4.0 | 200 | 20 | 2900 | 6.0 | 8.0 | 7.2 | G 1/2 | G 3/8 |
| **FAS 1525** | 1450 | 15.0 | 4.0 | 250 | 25 | 3625 | 7.5 | 10.1 | 7.2 | G 1/2 | G 3/8 |
| **FAS 1820** | 1450 | 18.0 | 4.8 | 200 | 20 | 2900 | 7.2 | 9.6 | 7.2 | G 1/2 | G 3/8 |
| **FAS 1217** | 1750 | 12.1 | 3.2 | 170 | 17 | 2465 | 4.1 | 5.5 | 7.2 | G 1/2 | G 3/8 |
| **FAS 1512** | 1750 | 15.7 | 4.1 | 120 | 12 | 1740 | 3.8 | 5.0 | 7.2 | G 1/2 | G 3/8 |
| **FAS 1825** | 1750 | 18.1 | 4.8 | 250 | 25 | 3625 | 9.1 | 12.1 | 7.2 | G 1/2 | G 3/8 |
| **FAS 2120** | 1750 | 21.7 | 5.7 | 200 | 20 | 2900 | 8.7 | 11.6 | 7.2 | G 1/2 | G 3/8 |

## DIMENSION DIAGRAM (mm)







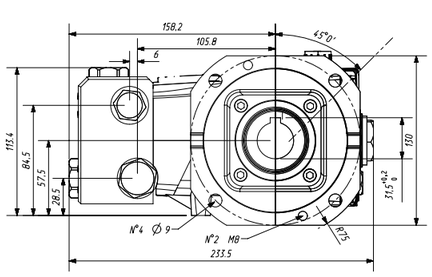

# FASH

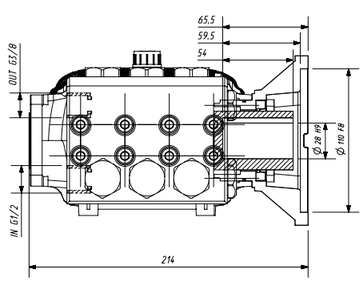
Hollow Shaft Ø 28mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FASH 1017** | 1450 | 10.0 | 2.6 | 170 | 17 | 2466 | 3.4 | 4.6 | 8.0 | G 1/2 | G 3/8 |
| **FASH 1312** | 1450 | 13.0 | 3.4 | 120 | 12 | 1740 | 3.1 | 4.2 | 8.0 | G 1/2 | G 3/8 |
| **FASH 1520** | 1450 | 15.0 | 4.0 | 200 | 20 | 2900 | 6.0 | 8.0 | 8.0 | G 1/2 | G 3/8 |
| **FASH 1525** | 1450 | 15.0 | 4.0 | 250 | 25 | 3625 | 7.5 | 10.1 | 8.0 | G 1/2 | G 3/8 |
| **FASH 1820** | 1450 | 18.0 | 4.8 | 200 | 20 | 2900 | 7.2 | 9.6 | 8.0 | G 1/2 | G 3/8 |
| **FASH 1217** | 1750 | 12.1 | 3.2 | 170 | 17 | 2465 | 4.1 | 5.5 | 8.0 | G 1/2 | G 3/8 |
| **FASH 1512** | 1750 | 15.7 | 4.1 | 120 | 12 | 1740 | 3.8 | 5.0 | 8.0 | G 1/2 | G 3/8 |
| **FASH 1825** | 1750 | 18.1 | 4.8 | 250 | 25 | 3625 | 9.1 | 12.1 | 7.2 | G 1/2 | G 3/8 |
| **FASH 2120** | 1750 | 21.7 | 5.7 | 200 | 20 | 2900 | 8.7 | 11.6 | 7.2 | G 1/2 | G 3/8 |

## DIMENSION DIAGRAM (mm)



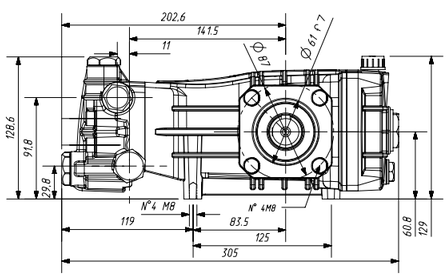
# FBB

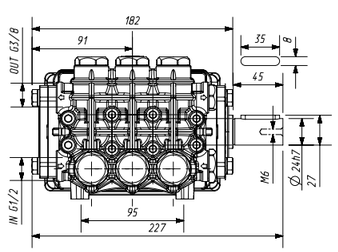
Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FBB 1035** | 1450 | 10.0 | 2.6 | 350 | 35 | 5075 | 7.0 | 9.4 | 10.7 | G 1/2 | G 3/8 |
| **FBB 1530** | 1450 | 15.0 | 4.0 | 300 | 30 | 4350 | 9.0 | 12.1 | 10.7 | G 1/2 | G 3/8 |
| **FBB 1535** | 1450 | 15.0 | 4.0 | 350 | 35 | 5075 | 10.5 | 14.1 | 10.7 | G 1/2 | G 3/8 |
| **FBB 1828** | 1450 | 18.0 | 4.8 | 280 | 28 | 4060 | 10.1 | 13.5 | 10.7 | G 1/2 | G 3/8 |
| **FBB 2125** | 1450 | 21.0 | 5.5 | 250 | 25 | 3625 | 10.5 | 14.1 | 10.7 | G 1/2 | G 3/8 |
| **FBB 1235** | 1750 | 12.1 | 3.2 | 350 | 35 | 5075 | 8.4 | 11.3 | 10.7 | G 1/2 | G 3/8 |
| **FBB 1825** | 1750 | 18.1 | 4.8 | 250 | 25 | 3625 | 9.1 | 12.1 | 10.7 | G 1/2 | G 3/8 |
| **FBB 1835** | 1750 | 18.1 | 4.8 | 350 | 35 | 5075 | 12.7 | 17.0 | 10.7 | G 1/2 | G 3/8 |
| **FBB 2128** | 1750 | 21.7 | 5.7 | 280 | 28 | 4060 | 12.2 | 16.3 | 10.7 | G 1/2 | G 3/8 |
| **FBB 2525** | 1750 | 25.3 | 6.7 | 250 | 25 | 3625 | 12.7 | 17.0 | 10.7 | G 1/2 | G 3/8 |

## DIMENSION DIAGRAM (mm)

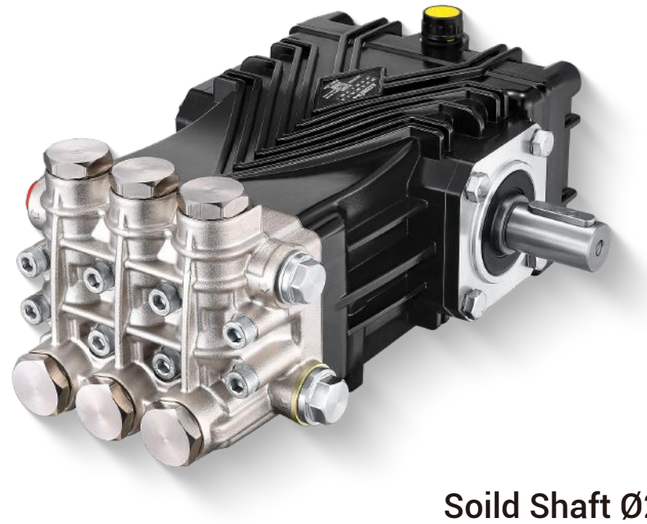







# FBN

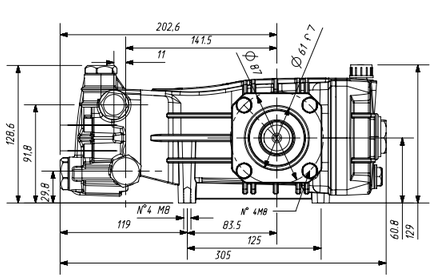


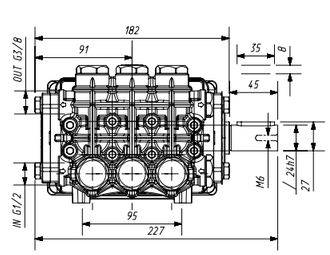
Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | KW | HP | kg | Thread | Thread |
| **FBN 1035** | 1450 | 10.0 | 2.6 | 350 | 35 | 5075 | 7.0 | 9.4 | 10.7 | G 1/2 | G 3/8 |
| **FBN 1530** | 1450 | 15.0 | 4.0 | 300 | 30 | 4350 | 9.0 | 12.1 | 10.7 | G 1/2 | G 3/8 |
| **FBN 1535** | 1450 | 15.0 | 4.0 | 350 | 35 | 5075 | 10.5 | 14.1 | 10.7 | G 1/2 | G 3/8 |
| **FBN 1828** | 1450 | 18.0 | 4.8 | 280 | 28 | 4060 | 10.1 | 13.5 | 10.7 | G 1/2 | G 3/8 |
| **FBN 2125** | 1450 | 21.0 | 5.5 | 250 | 25 | 3625 | 10.5 | 14.1 | 10.7 | G 1/2 | G 3/8 |
| **FBN 1235** | 1750 | 12.1 | 3.2 | 350 | 35 | 5075 | 8.4 | 11.3 | 10.7 | G 1/2 | G 3/8 |
| **FBN 1825** | 1750 | 18.1 | 4.8 | 250 | 25 | 3625 | 9.1 | 12.1 | 10.7 | G 1/2 | G 3/8 |
| **FBN 1835** | 1750 | 18.1 | 4.8 | 350 | 35 | 5075 | 12.7 | 17.0 | 10.7 | G 1/2 | G 3/8 |
| **FBN 2128** | 1750 | 21.7 | 5.7 | 280 | 28 | 4060 | 12.2 | 16.3 | 10.7 | G 1/2 | G 3/8 |
| **FBN 2525** | 1750 | 25.3 | 6.7 | 250 | 25 | 3625 | 12.7 | 17.0 | 10.7 | G 1/2 | G 3/8 |
| **FBN 3620** | 1750 | 36.2 | 9.6 | 200 | 20 | 2900 | 14.5 | 19.4 | 10.7 | G 1/2 | G 3/8 |

## DIMENSION DIAGRAM (mm)



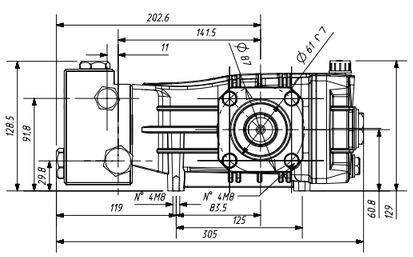
# FBS

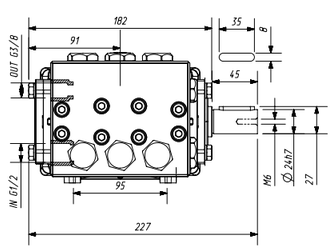
Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FBS 1035** | 1450 | 10.0 | 2.6 | 350 | 35 | 5075 | 7.0 | 9.4 | 13.5 | G 1/2 | G 3/8 |
| **FBS 1530** | 1450 | 15.0 | 4.0 | 300 | 30 | 4350 | 9.0 | 12.1 | 13.5 | G 1/2 | G 3/8 |
| **FBS 1535** | 1450 | 15.0 | 4.0 | 350 | 35 | 5075 | 10.5 | 14.1 | 13.5 | G 1/2 | G 3/8 |
| **FBS 1828** | 1450 | 18.0 | 4.8 | 280 | 28 | 4060 | 10.1 | 13.5 | 13.5 | G 1/2 | G 3/8 |
| **FBS 2125** | 1450 | 21.0 | 5.5 | 250 | 25 | 3625 | 10.5 | 14.1 | 13.5 | G 1/2 | G 3/8 |
| **FBS 3020** | 1450 | 30.0 | 7.9 | 200 | 20 | 2900 | 12.0 | 16.1 | 13.5 | G 1/2 | G 3/8 |
| **FBS 1235** | 1750 | 12.1 | 3.2 | 350 | 35 | 5075 | 8.4 | 11.3 | 13.5 | G 1/2 | G 3/8 |
| **FBS 1825** | 1750 | 18.1 | 4.8 | 250 | 25 | 3625 | 9.1 | 12.1 | 13.5 | G 1/2 | G 3/8 |
| **FBS 1835** | 1750 | 18.1 | 4.8 | 350 | 35 | 5075 | 12.7 | 17.0 | 13.5 | G 1/2 | G 3/8 |
| **FBS 2128** | 1750 | 21.7 | 5.7 | 280 | 28 | 4060 | 12.2 | 16.3 | 13.5 | G 1/2 | G 3/8 |
| **FBS 2525** | 1750 | 25.3 | 6.7 | 250 | 25 | 3625 | 12.7 | 17.0 | 13.5 | G 1/2 | G 3/8 |
| **FBS 3620** | 1750 | 36.2 | 9.6 | 200 | 20 | 2900 | 14.5 | 19.4 | 13.5 | G 1/2 | G 3/8 |

## DIMENSION DIAGRAM (mm)







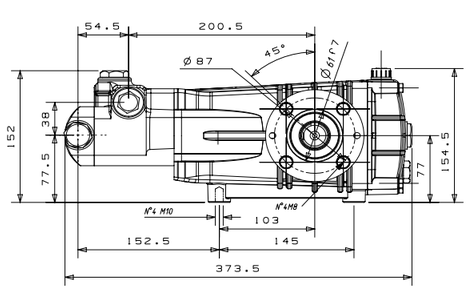

# FCB

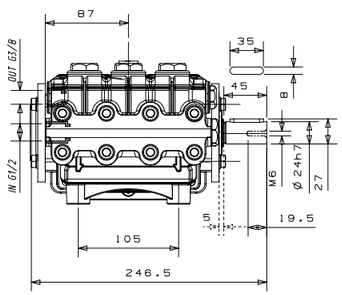
Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FCB 1550** | 1450 | 15.0 | 4.2 | 500 | 50 | 7250 | 15.0 | 21.5 | 20.5 | G 1/2 | G 3/8 |
| **FCB 1860** | 1450 | 18.0 | 4.8 | 600 | 60 | 8700 | 22.0 | 29.0 | 20.5 | G 1/2 | G 3/8 |
| **FCB 2250** | 1450 | 22.0 | 5.8 | 500 | 50 | 7250 | 22.0 | 29.5 | 20.5 | G 1/2 | G 3/8 |
| **FCB 1850** | 1750 | 18.0 | 5.1 | 500 | 50 | 7250 | 18.0 | 25.9 | 20.5 | G 1/2 | G 3/8 |
| **FCB 2260** | 1750 | 22.0 | 5.7 | 600 | 60 | 8700 | 26.4 | 35.0 | 20.5 | G 1/2 | G 3/8 |
| **FCB 2650** | 1750 | 26.0 | 7.0 | 500 | 50 | 7250 | 26.6 | 35.6 | 20.5 | G 1/2 | G 3/8 |

## DIMENSION DIAGRAM (mm)



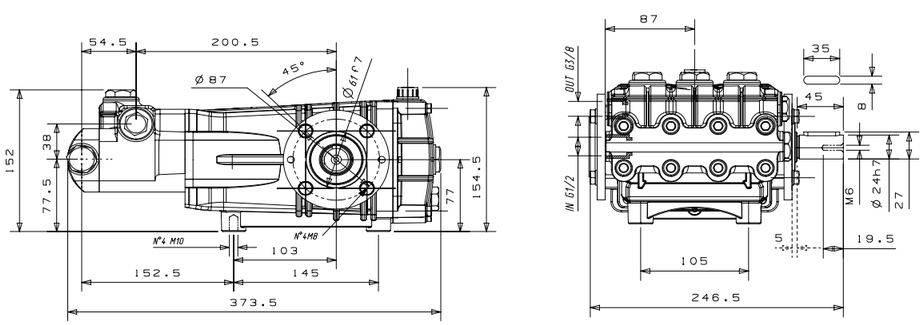
# FCN

Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| FCN 1550 | 1450 | 16.0 | 4.2 | 500 | 50 | 7250 | 15.0 | 21.5 | 20.5 | G 1/2 | G 3/8 |
| FCN 1860 | 1450 | 18.0 | 4.8 | 600 | 60 | 8700 | 22.0 | 29.0 | 20.5 | G 1/2 | G 3/8 |
| FCN 2250 | 1450 | 22.0 | 5.8 | 500 | 50 | 7250 | 22.0 | 29.5 | 20.5 | G 1/2 | G 3/8 |
| FCN 1850 | 1750 | 18.0 | 5.1 | 500 | 50 | 7250 | 19.3 | 25.9 | 20.5 | G 1/2 | G 3/8 |
| FCN 2260 | 1750 | 22.0 | 5.7 | 600 | 60 | 8700 | 26.1 | 35.0 | 20.5 | G 1/2 | G 3/8 |
| FCN 2650 | 1750 | 26.0 | 7.0 | 500 | 50 | 7250 | 26.6 | 35.6 | 20.5 | G 1/2 | G 3/8 |

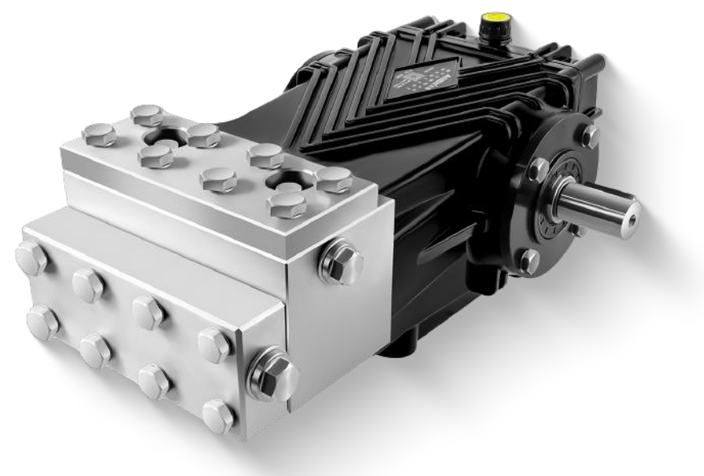
## DIMENSION DIAGRAM (mm)








# FCH

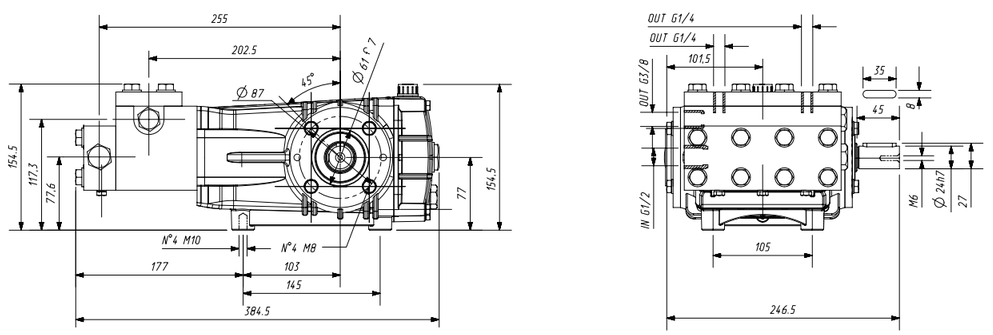


Soild Shaft Ø24mm

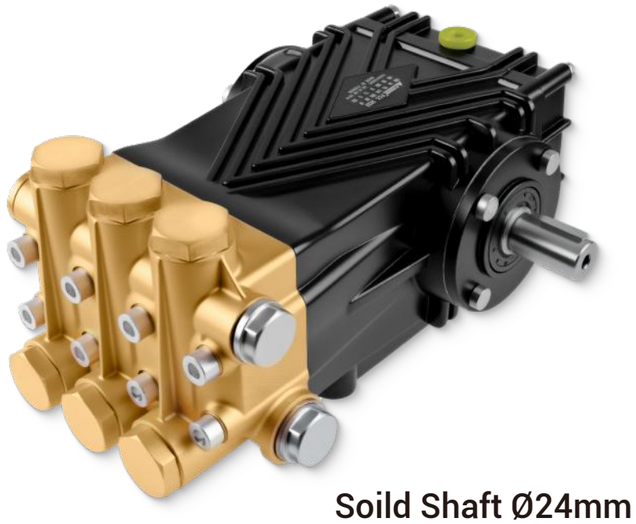
## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| FCH 1550 | 1450 | 15.0 | 4.2 | 500 | 50 | 7250 | 15.0 | 21.5 | 23.1 | G 1/2 | G 3/8 |
| FCH 1860 | 1450 | 18.0 | 4.8 | 600 | 60 | 8700 | 21.6 | 29.0 | 23.1 | G 1/2 | G 3/8 |
| FCH 2250 | 1450 | 22.0 | 5.8 | 500 | 50 | 7250 | 22.0 | 29.5 | 23.1 | G 1/2 | G 3/8 |
| FCH 1850 | 1750 | 18.0 | 5.1 | 500 | 50 | 7250 | 19.3 | 25.9 | 23.1 | G 1/2 | G 3/8 |
| FCH 2260 | 1750 | 22.6 | 5.7 | 600 | 60 | 8700 | 26.1 | 35.0 | 23.1 | G 1/2 | G 3/8 |
| FCH 2650 | 1750 | 26.0 | 7.0 | 500 | 50 | 7250 | 26.6 | 35.6 | 23.1 | G 1/2 | G 3/8 |

## DIMENSION DIAGRAM (mm)



# FCC

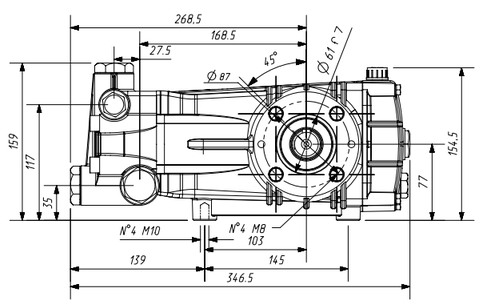


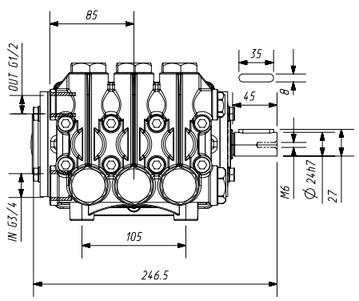
Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FCC 2135** | 1450 | 21.0 | 5.5 | 350 | 35 | 5075 | 15.0 | 19.7 | 17.5 | G 3/4 | G 1/2 |
| **FCC 3020** | 1450 | 30.0 | 7.9 | 200 | 20 | 2900 | 12.0 | 26.8 | 17.5 | G 3/4 | G 1/2 |
| **FCC 3030** | 1450 | 30.0 | 7.9 | 300 | 30 | 4350 | 18.0 | 24.1 | 17.5 | G 3/4 | G 1/2 |
| **FCC 4025** | 1450 | 40.0 | 10.5 | 250 | 25 | 3525 | 20.0 | 28.0 | 17.5 | G 3/4 | G 1/2 |
| **FCC 5020** | 1450 | 50.0 | 13.2 | 200 | 20 | 2900 | 20.0 | 29.0 | 17.5 | G 3/4 | G 1/2 |
| **FCC 3620** | 1750 | 36.0 | 9.5 | 200 | 20 | 2900 | 14.4 | 32.4 | 17.5 | G 3/4 | G 1/2 |
| **FCC 4819** | 1750 | 48.0 | 12.6 | 190 | 19 | 3625 | 24.0 | 33.8 | 17.5 | G 3/4 | G 1/2 |
| **FCC 6018** | 1750 | 60.0 | 15.8 | 180 | 18 | 2900 | 24.0 | 35.0 | 17.5 | G 3/4 | G 1/2 |

## DIMENSION DIAGRAM (mm)







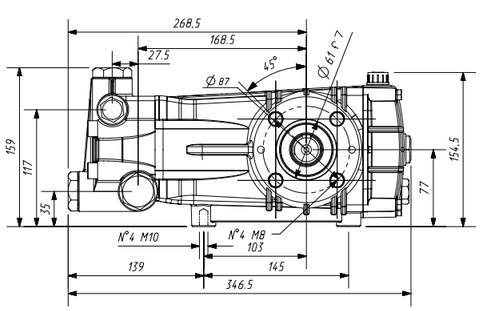

# FCK

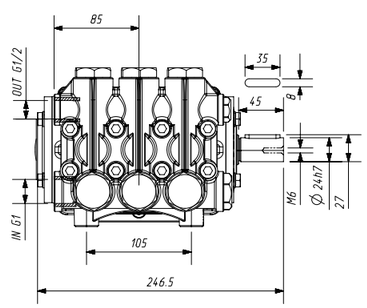
Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FCK 2135** | 1450 | 21.0 | 5.5 | 350 | 35 | 5075 | 15.0 | 19.7 | 17.5 | G 3/4 | G 1/2 |
| **FCK 3020** | 1450 | 30.0 | 7.9 | 200 | 20 | 2900 | 12.0 | 26.8 | 17.5 | G 3/4 | G 1/2 |
| **FCK 3030** | 1450 | 30.0 | 7.9 | 300 | 30 | 4350 | 18.0 | 24.1 | 17.5 | G 3/4 | G 1/2 |
| **FCK 4025** | 1450 | 40.0 | 10.5 | 250 | 25 | 3525 | 20.0 | 28.0 | 17.5 | G 3/4 | G 1/2 |
| **FCK 5020** | 1450 | 50.0 | 13.2 | 200 | 20 | 2900 | 20.0 | 29.0 | 17.5 | G 3/4 | G 1/2 |
| **FCK 3620** | 1750 | 36.0 | 9.5 | 200 | 20 | 2900 | 14.4 | 32.4 | 17.5 | G 3/4 | G 1/2 |
| **FCK 4819** | 1750 | 48.0 | 12.6 | 190 | 19 | 3625 | 24.0 | 33.8 | 17.5 | G 3/4 | G 1/2 |
| **FCK 6018** | 1750 | 60.0 | 15.8 | 180 | 18 | 2900 | 24.0 | 35.0 | 17.5 | G 3/4 | G 1/2 |

## DIMENSION DIAGRAM (mm)



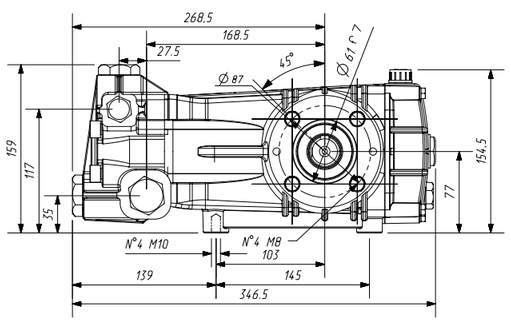
# FCR

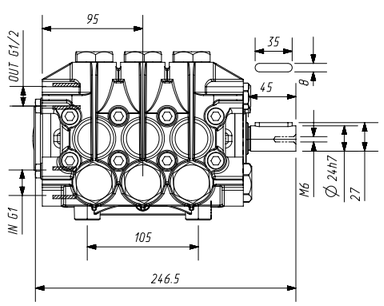
Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| FCR 6017 | 1450 | 60.0 | 15.8 | 170 | 17 | 2465 | 20.4 | 29.6 | 19.5 | G 1 | G 1/2 |
| FCR 7016 | 1450 | 70.0 | 18.5 | 160 | 16 | 2320 | 22.4 | 29.1 | 19.5 | G 1 | G 1/2 |
| FCR 7217 | 1750 | 72.0 | 19.0 | 170 | 17 | 2465 | 24.5 | 35.8 | 19.5 | G 1 | G 1/2 |
| FCR 8416 | 1750 | 84.0 | 22.2 | 160 | 16 | 2320 | 26.8 | 36.3 | 19.5 | G 1 | G 1/2 |

## DIMENSION DIAGRAM (mm)







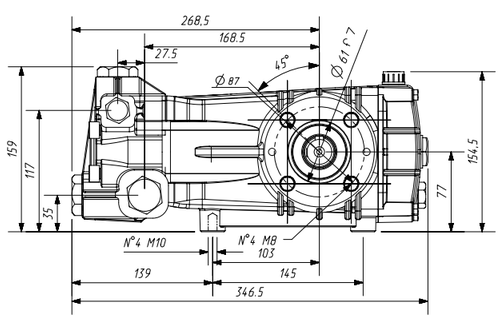

# FCM

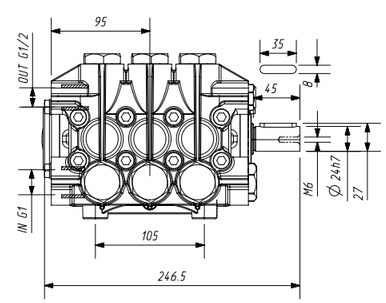
Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

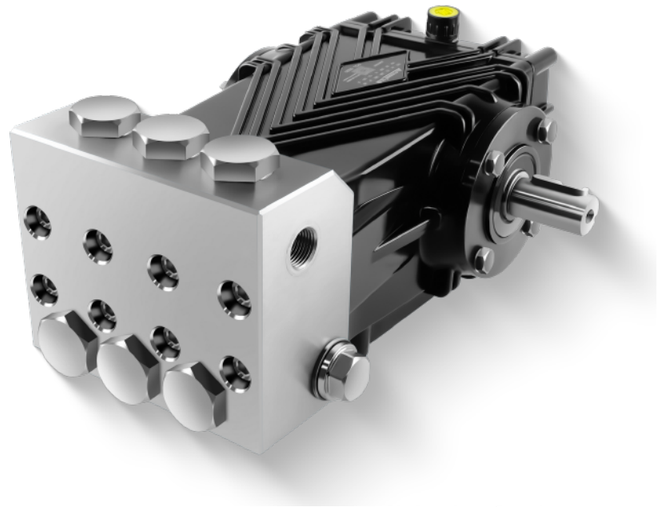
| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| FCM 6017 | 1450 | 60.0 | 15.8 | 170 | 17 | 2465 | 20.4 | 29.6 | 19.5 | G 1 | G 1/2 |
| FCM 7016 | 1450 | 70.0 | 18.5 | 160 | 16 | 2320 | 22.4 | 29.1 | 19.5 | G 1 | G 1/2 |
| FCM 7217 | 1750 | 72.0 | 19.0 | 170 | 17 | 2465 | 24.5 | 35.8 | 19.5 | G 1 | G 1/2 |
| FCM 8416 | 1750 | 84.0 | 22.2 | 160 | 16 | 2320 | 26.8 | 36.3 | 19.5 | G 1 | G 1/2 |

## DIMENSION DIAGRAM (mm)



# FCL

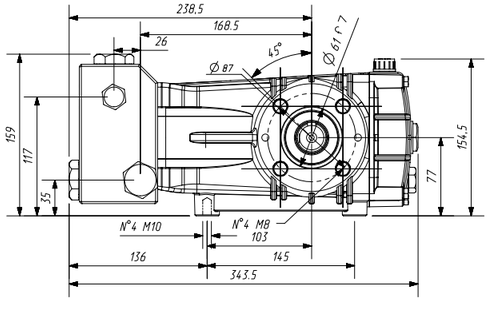


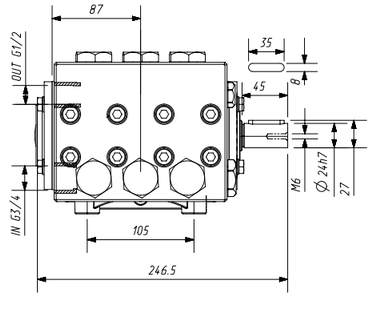
Soild Shaft Ø24mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FCL 3030** | 1450 | 30.0 | 7.9 | 300 | 30 | 4350 | 18.0 | 24.1 | 16.8 | G 3/4 | G 1/2 |
| **FCL 4025** | 1450 | 40.0 | 10.5 | 250 | 25 | 3625 | 20.0 | 26.8 | 16.8 | G 3/4 | G 1/2 |
| **FCL 5020** | 1450 | 50.0 | 13.2 | 200 | 20 | 2900 | 20.0 | 26.8 | 16.8 | G 3/4 | G 1/2 |
| **FCL 6018** | 1450 | 60.0 | 15.9 | 180 | 18 | 2610 | 21.6 | 29.0 | 16.8 | G 3/4 | G 1/2 |
| **FCL 3630** | 1750 | 36.2 | 9.6 | 300 | 30 | 4350 | 21.7 | 29.1 | 16.8 | G 3/4 | G 1/2 |
| **FCL 4825** | 1750 | 48.0 | 12.7 | 250 | 25 | 3625 | 24.0 | 32.1 | 16.8 | G 3/4 | G 1/2 |
| **FCL 6020** | 1750 | 60.3 | 15.9 | 200 | 19 | 2755 | 24.0 | 32.1 | 16.8 | G 3/4 | G 1/2 |
| **FCL 7218** | 1750 | 72.4 | 19.1 | 180 | 18 | 2610 | 26.1 | 35.0 | 16.8 | G 3/4 | G 1/2 |

## DIMENSION DIAGRAM (mm)

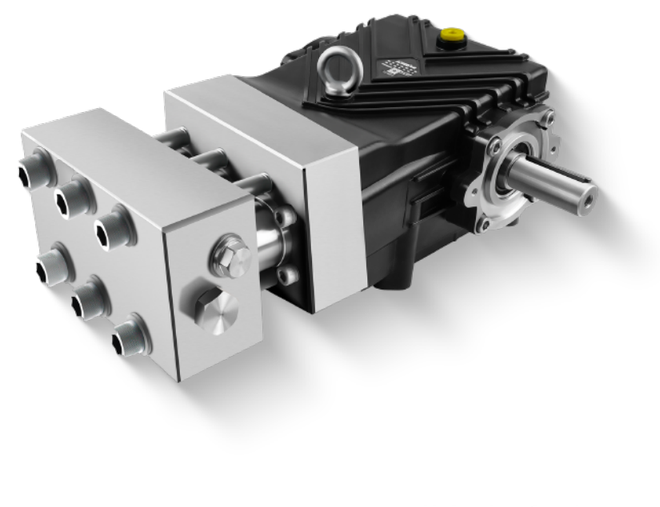







# FDH

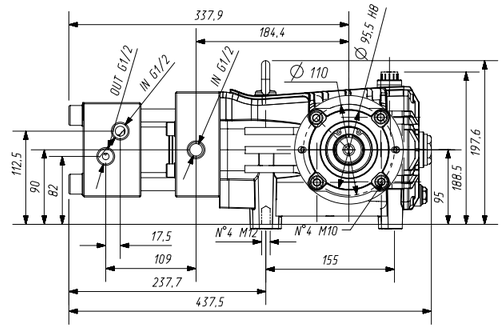


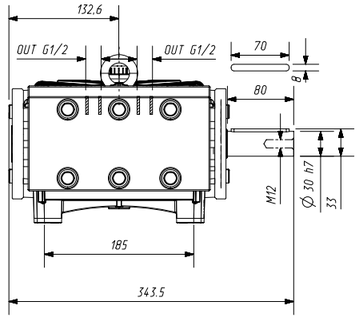
Soild Shaft Ø30mm

## TECHNICAL PARAMETERS

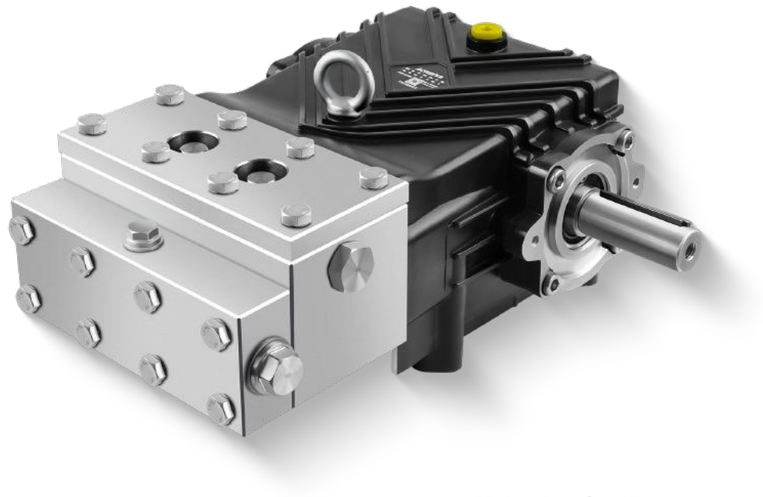
| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FDH 15100** | 1450 | 15.0 | 4.0 | 1000 | 100 | 14500 | 28.8 | 38.7 | 42.0 | G 1/2 | G 1/2 |
| **FDH 1880** | 1450 | 18.0 | 4.8 | 800 | 80 | 11600 | 27.7 | 37.1 | 42.0 | G 1/2 | G 1/2 |
| **FDH 18100** | 1750 | 18.0 | 4.2 | 1000 | 100 | 14500 | 30.8 | 41.3 | 42.0 | G 1/2 | G 1/2 |
| **FDH 2080** | 1750 | 20.0 | 5.3 | 800 | 80 | 11600 | 30.8 | 41.3 | 42.0 | G 1/2 | G 1/2 |

## DIMENSION DIAGRAM (mm)



# FDK

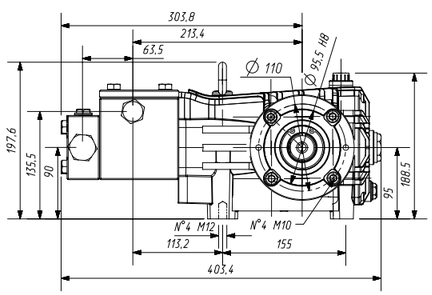


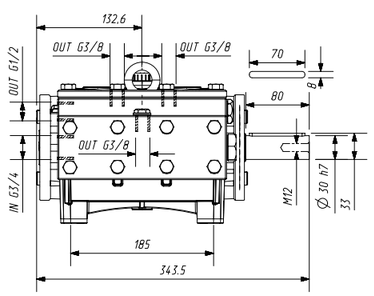
Soild Shaft Ø30mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FDK 3050** | 1450 | 30.0 | 7.9 | 500 | 50 | 7250 | 30.0 | 40.2 | 38.5 | G 3/4 | G 1/2 |
| **FDK 4035** | 1450 | 40.0 | 10.5 | 350 | 35 | 5075 | 28.0 | 37.5 | 38.5 | G 3/4 | G 1/2 |
| **FDK 5030** | 1450 | 50.0 | 13.2 | 300 | 30 | 4350 | 30.0 | 40.2 | 38.5 | G 3/4 | G 1/2 |
| **FDK 5525** | 1450 | 55.0 | 14.5 | 250 | 25 | 3625 | 27.5 | 36.8 | 38.5 | G 3/4 | G 1/2 |
| **FDK 3650** | 1750 | 36.0 | 9.5 | 500 | 50 | 7250 | 36.0 | 48.2 | 38.5 | G 3/4 | G 1/2 |
| **FDK 4835** | 1750 | 48.0 | 12.6 | 350 | 35 | 5075 | 33.5 | 45.0 | 38.5 | G 3/4 | G 1/2 |
| **FDK 6030** | 1750 | 60.0 | 15.8 | 300 | 30 | 4350 | 36.0 | 48.2 | 38.5 | G 3/4 | G 1/2 |
| **FDK 6625** | 1750 | 66.0 | 17.4 | 250 | 25 | 3625 | 33.0 | 44.2 | 38.5 | G 3/4 | G 1/2 |

## DIMENSION DIAGRAM (mm)

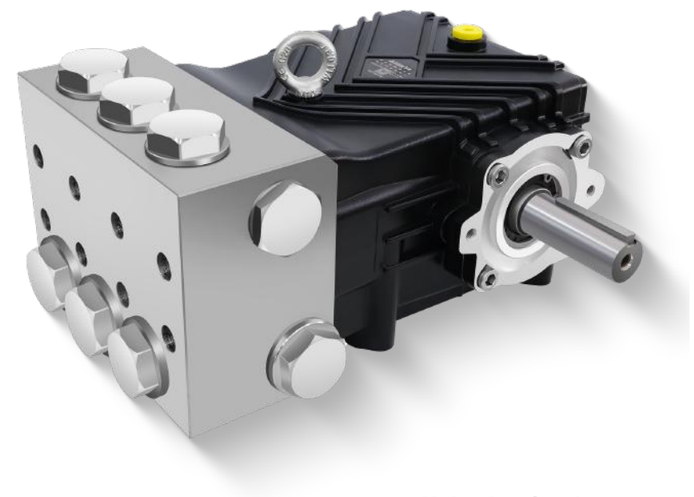







# FDL

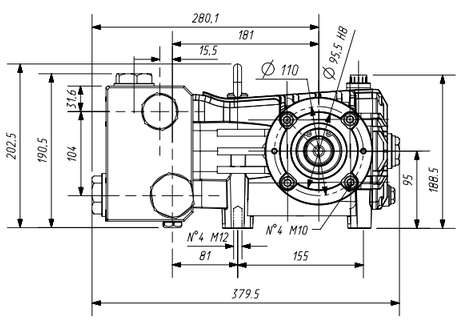


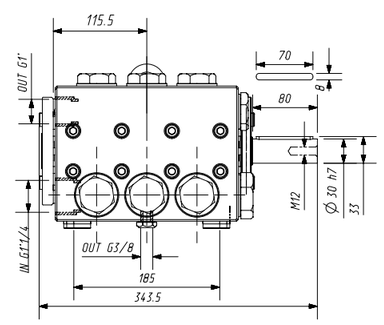
Soild Shaft Ø30mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FDL 10015** | 1450 | 100.0 | 26.4 | 150 | 15 | 2175 | 28.8 | 38.7 | 39.5 | G 1"1/4 | G 1" |
| **FDL 12013** | 1450 | 120.0 | 31.7 | 130 | 13 | 1885 | 30.0 | 40.2 | 39.5 | G 1"1/4 | G 1" |
| **FDL 15010** | 1450 | 150.0 | 39.6 | 100 | 10 | 1450 | 28.8 | 38.7 | 39.5 | G 1"1/4 | G 1" |
| **FDL 6915** | 1000 | 69.0 | 18.2 | 150 | 15 | 2175 | 19.9 | 26.7 | 39.5 | G 1"1/4 | G 1" |
| **FDL 8213** | 1000 | 82.8 | 21.9 | 130 | 13 | 1885 | 20.7 | 27.7 | 39.5 | G 1"1/4 | G 1" |
| **FDL 10310** | 1000 | 103.0 | 27.3 | 100 | 10 | 1411 | 19.9 | 26.7 | 39.5 | G 1"1/4 | G 1" |

## DIMENSION DIAGRAM (mm)



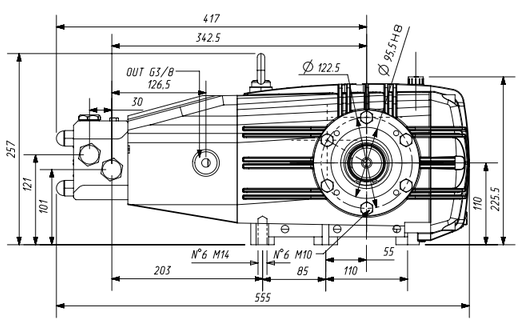
# FEH

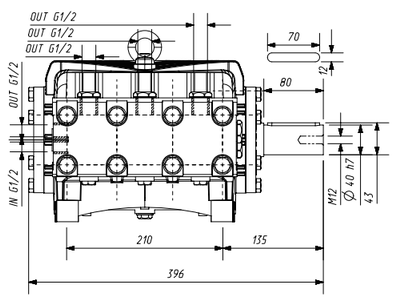
Soild Shaft Ø40mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FEH 20100** | 1000 | 20.0 | 5.3 | 1000 | 100 | 14500 | 38.5 | 51.6 | 65.5 | G 1/2 | G 1/2 |
| **FEH 20120** | 1000 | 20.0 | 5.3 | 1200 | 120 | 17400 | 46.2 | 61.9 | 65.5 | G 1/2 | G 1/2 |
| **FEH 25100** | 1000 | 25.0 | 6.6 | 1000 | 100 | 14500 | 48.1 | 64.5 | 65.5 | G 1/2 | G 1/2 |
| **FEH 2580** | 1000 | 25.0 | 6.6 | 800 | 80 | 11600 | 38.5 | 51.6 | 65.5 | G 1/2 | G 1/2 |

## DIMENSION DIAGRAM (mm)

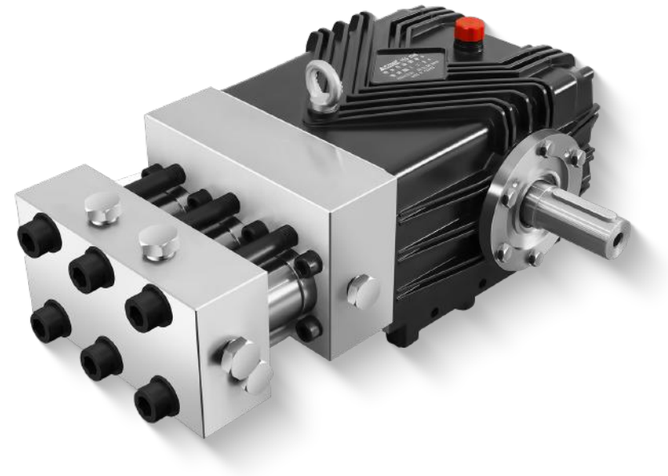







# FES

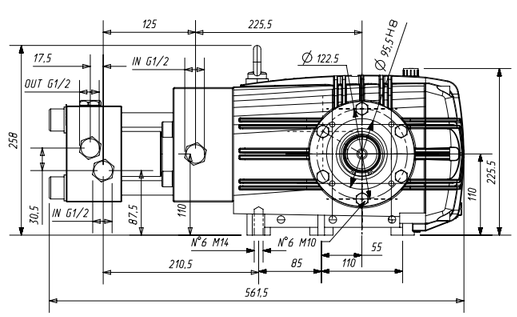


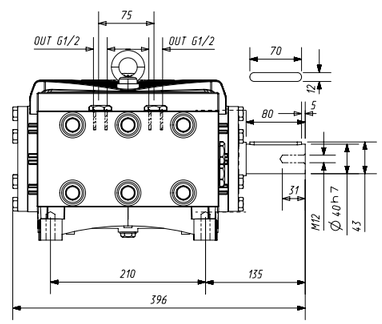
Soild Shaft Ø40mm

## TECHNICAL PARAMETERS

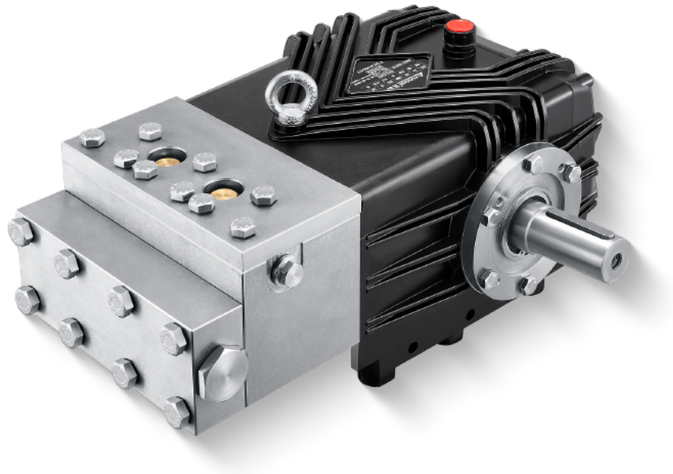
| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FES 15150** | 800 | 15 | 3.9 | 1500 | 150 | 21755 | 45.0 | 60.0 | 79.0 | G 1/2 | G 1/2 |
| **FES 10200** | 800 | 10 | 2.6 | 2000 | 200 | 29000 | 40.0 | 53.6 | 79.0 | G 1/2 | G 1/2 |

## DIMENSION DIAGRAM (mm)



# FEK

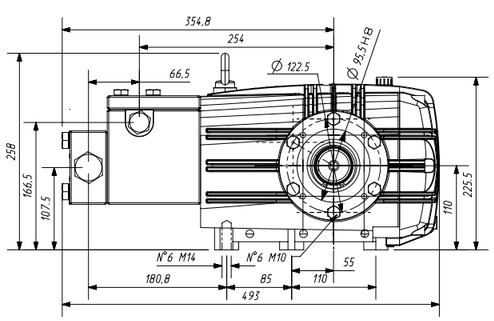


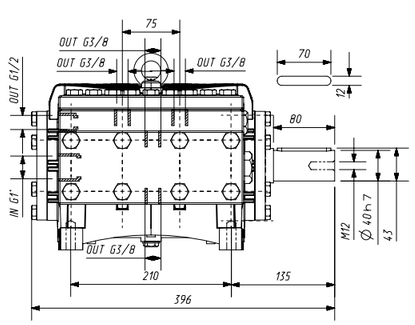
Soild Shaft Ø40mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FEK 3075** | 1000 | 30.0 | 7.9 | 750 | 75 | 10875 | 43.3 | 58.0 | 68.0 | G 1" | G 1/2 |
| **FEK 3665** | 1000 | 36.0 | 9.5 | 650 | 65 | 9425 | 45.0 | 60.3 | 68.0 | G 1" | G 1/2 |
| **FEK 4060** | 1000 | 40.0 | 10.6 | 600 | 60 | 8700 | 46.2 | 61.9 | 68.0 | G 1" | G 1/2 |
| **FEK 4850** | 1000 | 48.0 | 12.7 | 500 | 50 | 7250 | 46.2 | 61.9 | 68.0 | G 1" | G 1/2 |
| **FEK 5045** | 1000 | 50.0 | 13.2 | 450 | 45 | 6525 | 43.3 | 58.0 | 68.0 | G 1" | G 1/2 |

## DIMENSION DIAGRAM (mm)

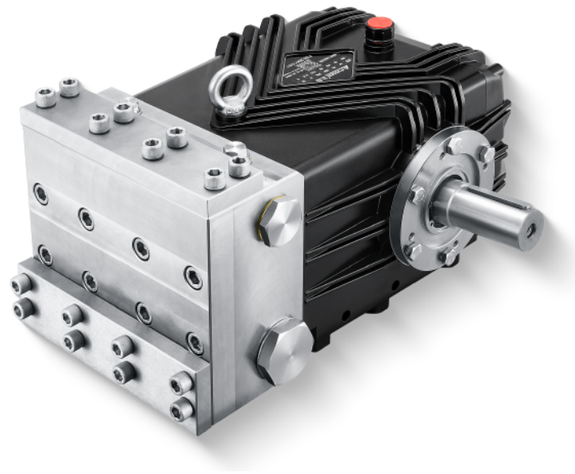







# FEL

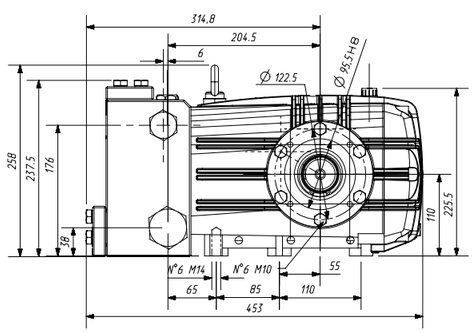


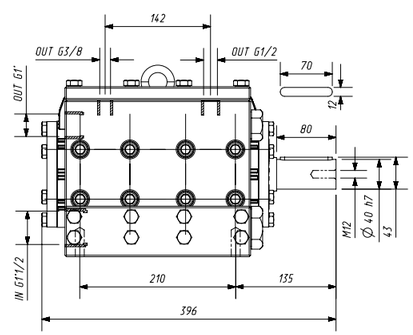
Soild Shaft Ø40mm

## TECHNICAL PARAMETERS

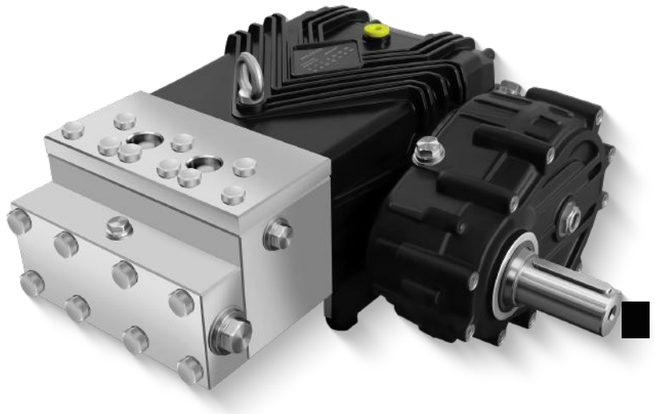
| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FEL 7535** | 1000 | 75.0 | 19.8 | 350 | 35 | 5075 | 50.5 | 67.7 | 70.5 | G 1"1/2 | G 1" |
| **FEL 10020** | 1000 | 100.0 | 26.4 | 200 | 20 | 2900 | 38.5 | 51.6 | 70.5 | G 1"1/2 | G 1" |
| **FEL 13022** | 1000 | 130.0 | 34.3 | 220 | 22 | 3190 | 55.0 | 73.8 | 70.5 | G 1"1/2 | G 1" |
| **FEL 16018** | 1000 | 160.0 | 42.3 | 180 | 18 | 2610 | 55.4 | 74.3 | 70.5 | G 1"1/2 | G 1" |
| **FEL 20010** | 1000 | 200.0 | 52.8 | 100 | 10 | 1450 | 38.5 | 51.6 | 70.5 | G 1"1/2 | G 1" |
| **FEL 21516** | 1000 | 215.0 | 56.8 | 160 | 16 | 2320 | 66.2 | 88.7 | 70.5 | G 1"1/2 | G 1" |

## DIMENSION DIAGRAM (mm)



# FEK-G

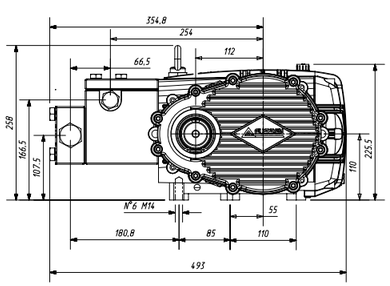


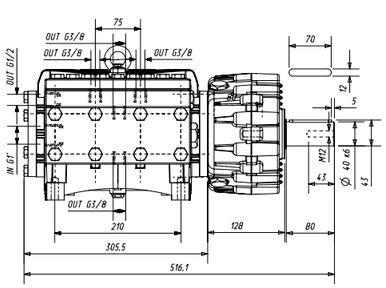
Soild Shaft Ø40mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FEK-G 3075** | 1000 | 30.0 | 7.9 | 750 | 75 | 10875 | 43.3 | 58.0 | 68.0 | G 1" | G 1/2 |
| **FEK-G 3665** | 1000 | 36.0 | 9.5 | 650 | 65 | 9425 | 45.0 | 60.3 | 68.0 | G 1" | G 1/2 |
| **FEK-G 4060** | 1000 | 40.0 | 10.6 | 600 | 60 | 8700 | 46.2 | 61.9 | 68.0 | G 1" | G 1/2 |
| **FEK-G 4850** | 1000 | 48.0 | 12.7 | 500 | 50 | 7250 | 46.2 | 61.9 | 68.0 | G 1" | G 1/2 |
| **FEK-G 5045** | 1000 | 50.0 | 13.2 | 450 | 45 | 6525 | 43.3 | 58.0 | 68.0 | G 1" | G 1/2 |
| **FEK-G 2275** | 750 | 22.5 | 5.9 | 750 | 75 | 10875 | 32.5 | 43.5 | 68.0 | G 1" | G 1/2 |
| **FEK-G 2765** | 750 | 27.0 | 7.1 | 650 | 65 | 9425 | 33.8 | 45.3 | 68.0 | G 1" | G 1/2 |
| **FEK-G 3060** | 750 | 30.0 | 7.9 | 600 | 60 | 8700 | 34.6 | 46.4 | 68.0 | G 1" | G 1/2 |
| **FEK-G 3650** | 750 | 36.0 | 9.5 | 500 | 50 | 7250 | 34.6 | 46.4 | 68.0 | G 1" | G 1/2 |
| **FEK-G 3745** | 750 | 37.5 | 9.9 | 450 | 45 | 6525 | 32.5 | 43.5 | 68.0 | G 1" | G 1/2 |

## DIMENSION DIAGRAM (mm)

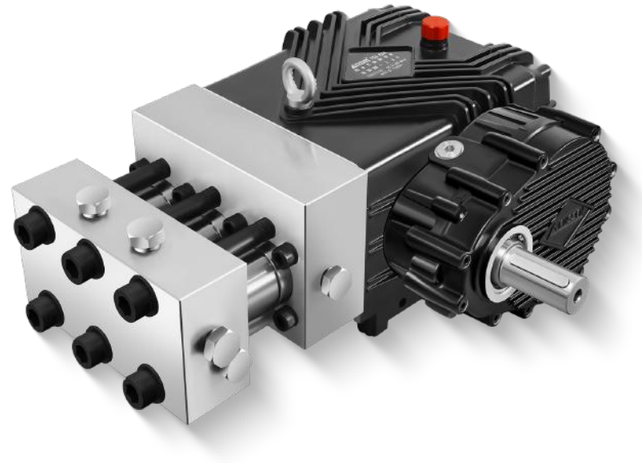







# FES-G

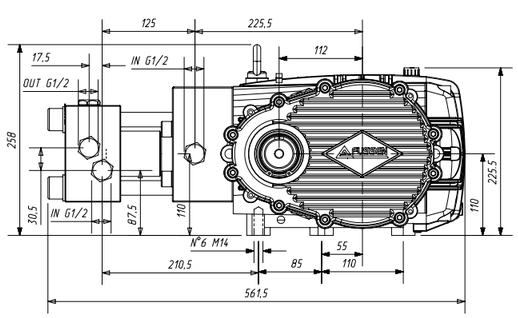


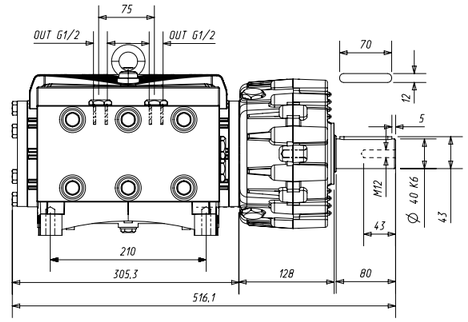
Soild Shaft Ø40mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FES-G15150** | 800 | 15 | 3.9 | 1500 | 150 | 21755 | 45.0 | 60.0 | 79.0 | G 1/2 | G 1/2 |
| **FES-G10200** | 800 | 10 | 2.6 | 2000 | 200 | 29000 | 40.0 | 53.6 | 79.0 | G 1/2 | G 1/2 |

## DIMENSION DIAGRAM (mm)



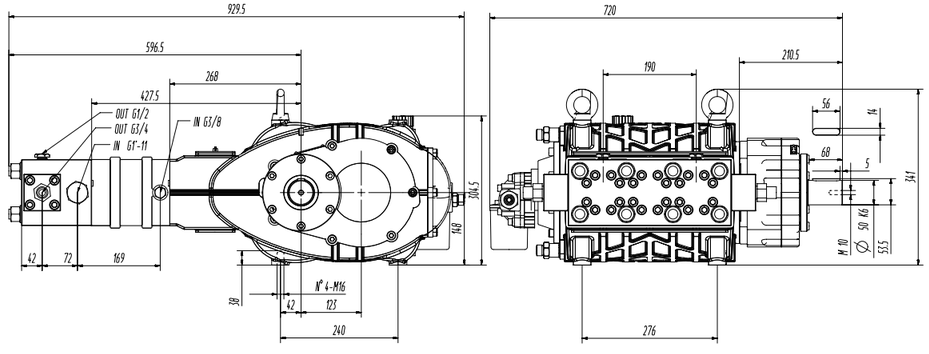
# FFS-G

Soild Shaft Ø60mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | Power | | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FFS-G 25150** | 600 | 27 | 7.1 | 1500 | 150 | 21750 | 67.5 | 58.0 | 310 | G 1" | G 3/4 |
| **FFS-G 30130** | 600 | 33.9 | 9.0 | 1300 | 130 | 18,850 | 73.5 | 61.9 | 310 | G 1" | G 3/4 |
| **FFS-G 45100** | 600 | 48 | 12.7 | 1000 | 100 | 14,500 | 80 | 61.9 | 310 | G 1" | G 3/4 |
| **FFS-G 6080** | 800 | 65 | 17.2 | 800 | 80 | 11,600 | 86.7 | 58.0 | 310 | G 1" | G 3/4 |

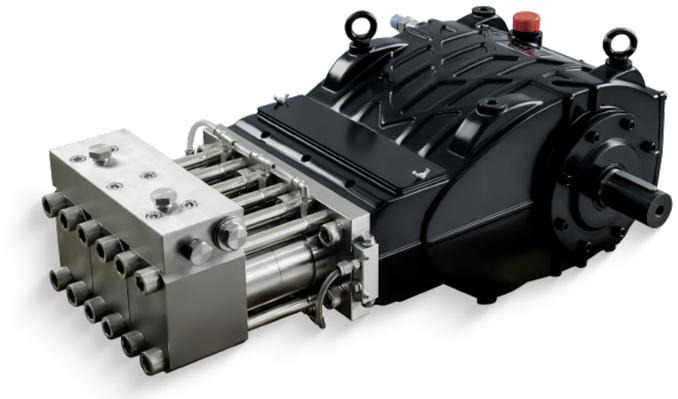
## DIMENSION DIAGRAM (mm)








# FFS

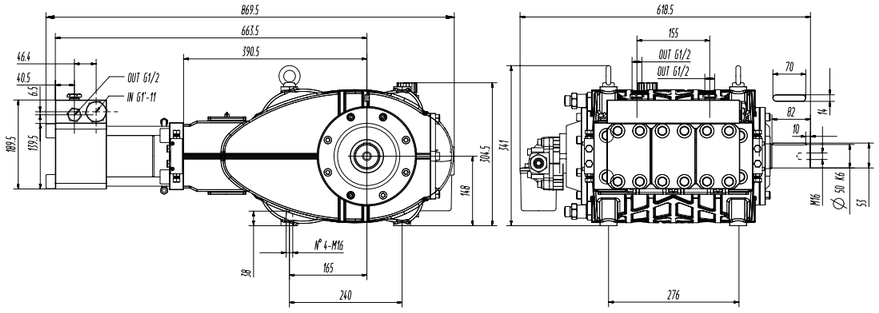


Soild Shaft Ø50mm

## TECHNICAL PARAMETERS

| Model | Speed | Flow Rate | | Pressure | | | Power | | Weight | Inlet | Outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | L/min | GPM | Bar | Mpa | PSI | kW | HP | kg | Thread | Thread |
| **FFS 17126** | 600 | 171 | 45.2 | 260 | 26 | 3770 | 88.5 | 118.7 | 249 | G1'1/2 | G1' |
| **FFS 13533** | 600 | 135 | 35.7 | 330 | 33 | 4790 | 89.1 | 119.5 | 249 | G1'1/2 | G1' |
| **FFS 11639** | 600 | 116 | 30.6 | 410 | 41 | 5950 | 95.1 | 127.6 | 249 | G1'1/2 | G1' |
| **FFS 30150** | 600 | 30 | 7.9 | 1500 | 150 | 21755 | 90 | 120.7 | 249 | G1' | G1'1/2 |
| **FFS 37120** | 600 | 37 | 9.8 | 1200 | 120 | 17400 | 88.8 | 119.1 | 249 | G1' | G1'1/2 |
| **FFS 5580** | 800 | 55 | 14.5 | 800 | 80 | 11600 | 88 | 118 | 249 | G1' | G1'1/2 |
| **FFS 44150** | 800 | 45 | 11.9 | 1000 | 100 | 14500 | 90 | 120.7 | 249 | G1' | G1'1/2 |

## DIMENSION DIAGRAM (mm)



| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FVK25-P | 30 | 7.9 | 250 | 3625 | 80 | G3/8 | G3/8 G1/2 | / |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FVE25-P | 30 | 7.9 | 250 | 3625 | 80 | G3/8 | G3/8 G1/2 | G1/4 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FVK25 | 30 | 7.9 | 250 | 3625 | 80 | G3/8 | G3/8 G1/2 | / |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FVE25 | 30 | 7.9 | 250 | 3625 | 80 | G3/8 | G3/8 G1/2 | G1/4 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FV30 | 40 | 22.5 | 300 | 4350 | 90 | G3/8 | G1/2 | G1/2 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FV35 | 40 | 10.6 | 350 | 5075 | 90 | G3/8 | G3/8 | G1/2 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FV50 | 80 | 21.1 | 500 | 8700 | 90 | G1/2 | G1/2 | G1/2 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FV90 | 60 | 15.8 | 900 | 13050 | 60 | G1/2 | G1/2 | G1/2 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FV150 | 30 | 10.6 | 1000 | 14500 | 60 | G3/8 | G3/8 | G3/8 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FVF32 | 80 | 21.1 | 320 | 4640 | 90 | G1/2 | G1/2 | G1/2 |





| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FV60 | 80 | 21.1 | 600 | 8700 | 90 | G1/2 | G1/2 | G1/2 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FV80 | 80 | 21.1 | 800 | 11600 | 90 | G1/2 | G1/2 | G1/2 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FV20 | 200 | 52.8 | 150 | 2175 | 90 | G1 | G1 | G1 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FV20S | 200 | 52.8 | 150 | 2175 | 90 | G1 | G1 | G1 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FS20 | 200 | 52.8 | 200 | 2900 | 80 | G3/4 | / | G1/2 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FS30 | 500 | 132 | 300 | 4350 | 80 | G1 | / | G1 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FS70 | 80 | 21.1 | 700 | 10150 | 80 | G3/8 G1/2 | / | / |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FS80 | 80 | 21.1 | 800 | 11600 | 80 | G3/8 | / | G1/2 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FS150 | 30 | 7.8 | 1500 | 21750 | 80 | G3/8 | / | G3/8 |

| Model | Flow Rate | | Pressure | | Temp | Inlet | Outlet | By-Pass |
|---|---|---|---|---|---|---|---|---|
| | L/min | gpm | bar | psi | ℃ | thread | thread | thread |
| FSF15 | 40 | 10.6 | 200 | 2900 | 80 | G3/8 | / | G3/8 |

# Nozzle Chart (20 - 200 bar)

FUSSEN®

| Nozzle Size | Bar | Pressure | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PSI | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 |
| | Ø mm | Flow Rate ( L/min ) | | | | | | | | | | | | | | | | | | |
| 015 | 0.80 | 1.5 | 1.9 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.7 | 3.9 | 4.0 | 4.2 | 4.3 | 4.4 | 4.6 | 4.7 | 4.8 |
| 02 | 0.91 | 2.1 | 2.5 | 2.9 | 3.3 | 3.6 | 3.8 | 4.1 | 4.4 | 4.6 | 4.8 | 5.0 | 5.2 | 5.4 | 5.6 | 5.8 | 6.0 | 6.2 | 6.3 | 6.5 |
| 025 | 1.00 | 2.5 | 3.1 | 3.5 | 4.0 | 4.3 | 4.7 | 5.0 | 5.3 | 5.6 | 5.9 | 6.1 | 6.4 | 6.6 | 6.9 | 7.1 | 7.3 | 7.5 | 7.7 | 7.9 |
| 03 | 1.09 | 3.0 | 3.7 | 4.3 | 4.8 | 5.3 | 5.7 | 6.1 | 6.5 | 6.8 | 7.1 | 7.4 | 7.8 | 8.0 | 8.3 | 8.6 | 8.9 | 9.1 | 9.4 | 9.6 |
| 035 | 1.15 | 3.6 | 4.4 | 5.1 | 5.7 | 6.2 | 6.7 | 7.2 | 7.6 | 8.0 | 8.4 | 8.8 | 9.1 | 9.5 | 9.8 | 10.1 | 10.4 | 10.7 | 11.0 | 11.3 |
| 04 | 1.19 | 4.1 | 5.0 | 5.8 | 6.4 | 7.0 | 7.6 | 8.1 | 8.6 | 9.1 | 9.5 | 10 | 10.4 | 10.8 | 11.1 | 11.5 | 11.9 | 12.2 | 12.5 | 12.9 |
| 045 | 1.27 | 4.6 | 5.6 | 6.5 | 7.3 | 8.0 | 8.6 | 9.2 | 9.8 | 10.3 | 10.8 | 11.3 | 11.7 | 12.2 | 12.6 | 13 | 13.4 | 13.8 | 14.2 | 14.6 |
| 05 | 1.35 | 5.1 | 6.2 | 7.2 | 8.1 | 8.8 | 9.5 | 10.2 | 10.8 | 11.4 | 12.0 | 12.5 | 13.0 | 13.5 | 14.0 | 14.4 | 14.9 | 15.3 | 15.7 | 16.1 |
| 055 | 1.40 | 5.6 | 6.8 | 7.9 | 8.8 | 9.7 | 10.5 | 11.2 | 11.9 | 12.5 | 13.1 | 13.7 | 14.3 | 14.8 | 15.3 | 15.8 | 16.3 | 16.8 | 17.2 | 17.7 |
| 06 | 1.47 | 6.1 | 7.5 | 8.7 | 9.7 | 10.6 | 11.5 | 12.3 | 13.0 | 13.7 | 14.4 | 15.0 | 15.6 | 16.2 | 16.8 | 17.3 | 17.9 | 18.4 | 18.9 | 19.4 |
| 065 | 1.52 | 6.6 | 8.1 | 9.4 | 10.5 | 11.5 | 12.4 | 13.2 | 14.0 | 14.8 | 15.5 | 16.2 | 16.9 | 17.5 | 18.1 | 18.7 | 19.3 | 19.9 | 20.4 | 20.9 |
| 07 | 1.60 | 7.2 | 8.8 | 10.1 | 11.3 | 12.4 | 13.4 | 14.3 | 15.2 | 16.0 | 16.8 | 17.5 | 18.2 | 18.9 | 19.6 | 20.2 | 20.9 | 21.5 | 22.1 | 22.6 |
| 075 | 1.65 | 7.6 | 9.4 | 10.8 | 12.1 | 13.2 | 14.3 | 15.3 | 16.2 | 17.1 | 17.9 | 18.7 | 19.5 | 20.2 | 20.9 | 21.6 | 22.3 | 22.9 | 23.6 | 24.2 |
| 08 | 1.70 | 8.1 | 10.0 | 11.5 | 12.9 | 14.1 | 15.2 | 16.3 | 17.3 | 18.2 | 19.1 | 19.9 | 20.8 | 21.5 | 22.3 | 23.0 | 23.7 | 24.4 | 25.1 | 25.7 |
| 085 | 1.75 | 8.7 | 10.6 | 12.3 | 13.7 | 15.0 | 16.2 | 17.4 | 18.4 | 19.4 | 20.3 | 21.3 | 22.1 | 23.0 | 23.8 | 24.5 | 25.3 | 26.0 | 26.7 | 27.4 |
| 09 | 1.80 | 9.4 | 11.5 | 13.3 | 14.8 | 16.3 | 17.6 | 18.8 | 19.9 | 21.0 | 22.0 | 23.0 | 23.9 | 24.8 | 25.7 | 26.6 | 27.4 | 28.2 | 28.9 | 29.7 |
| 095 | 1.85 | 9.8 | 12.0 | 13.9 | 15.6 | 17.0 | 18.4 | 19.7 | 20.9 | 22.0 | 23.1 | 24.1 | 25.1 | 26.0 | 26.9 | 27.8 | 28.7 | 29.5 | 30.3 | 31.1 |
| 10 | 1.90 | 10.3 | 12.6 | 14.5 | 16.3 | 17.8 | 19.2 | 20.6 | 21.8 | 23.0 | 24.1 | 25.2 | 26.2 | 27.2 | 28.2 | 29.1 | 30.0 | 30.9 | 31.7 | 32.5 |
| 105 | 1.94 | 10.7 | 13.2 | 16.6 | 18.2 | 18.6 | 19.9 | 20.1 | 22.8 | 23.5 | 25.2 | 25.7 | 27.4 | 28.4 | 28.8 | 30.4 | 30.6 | 32.2 | 33.1 | 33.2 |
| 11 | 1.98 | 11.2 | 13.7 | 15.8 | 17.7 | 19.4 | 20.9 | 22.4 | 23.7 | 25.0 | 26.2 | 27.4 | 28.5 | 29.6 | 30.6 | 31.6 | 32.6 | 33.5 | 34.5 | 35.4 |
| 115 | 2.03 | 11.6 | 14.2 | 16.4 | 18.4 | 20.1 | 21.8 | 23.3 | 24.7 | 26.0 | 27.3 | 28.5 | 29.6 | 30.8 | 31.8 | 32.9 | 33.9 | 34.9 | 35.8 | 36.8 |
| 12 | 2.08 | 12.1 | 14.8 | 17.1 | 19.1 | 20.9 | 22.6 | 24.1 | 25.6 | 27.0 | 28.3 | 29.6 | 30.8 | 31.9 | 33.1 | 34.2 | 35.2 | 36.2 | 37.2 | 38.2 |
| 125 | 2.13 | 12.5 | 15.3 | 17.7 | 19.8 | 21.7 | 23.4 | 25.0 | 26.6 | 28.0 | 29.4 | 30.7 | 31.9 | 33.1 | 34.3 | 35.4 | 36.5 | 37.6 | 38.6 | 39.6 |
| 13 | 2.16 | 13.4 | 16.4 | 19.0 | 21.2 | 23.2 | 25.1 | 26.8 | 28.5 | 30.0 | 31.5 | 32.9 | 34.2 | 35.5 | 36.7 | 37.9 | 39.1 | 40.2 | 41.4 | 42.4 |
| 14 | 2.26 | 14.3 | 17.5 | 20.2 | 22.6 | 24.8 | 26.8 | 28.6 | 30.4 | 32.0 | 33.6 | 35.1 | 36.5 | 37.9 | 39.2 | 40.5 | 41.7 | 42.9 | 44.1 | 45.3 |
| 15 | 2.34 | 15.2 | 18.6 | 21.5 | 24.0 | 26.3 | 28.4 | 30.4 | 32.3 | 34.0 | 35.7 | 37.2 | 38.8 | 40.2 | 41.6 | 43.0 | 44.3 | 45.6 | 46.9 | 48.1 |
| 16 | 2.41 | 16.1 | 19.7 | 22.8 | 25.5 | 27.9 | 30.1 | 32.2 | 34.2 | 36.0 | 37.8 | 39.4 | 41.0 | 42.6 | 44.1 | 45.5 | 46.9 | 48.3 | 49.6 | 50.9 |
| 18 | 2.54 | 18.3 | 22.5 | 25.9 | 29.0 | 31.8 | 34.3 | 36.7 | 38.9 | 41.0 | 43.0 | 44.9 | 46.7 | 48.5 | 50.2 | 51.9 | 53.5 | 55.0 | 56.5 | 58.0 |
| 20 | 2.69 | 20.6 | 25.2 | 29.1 | 32.5 | 35.6 | 38.5 | 41.1 | 43.6 | 46.0 | 48.2 | 50.4 | 52.4 | 54.4 | 56.3 | 58.2 | 60.0 | 61.7 | 63.4 | 65.1 |
| 25 | 3.00 | 25.5 | 31.2 | 36.0 | 40.3 | 44.2 | 47.7 | 51.0 | 54.1 | 57.0 | 59.8 | 62.4 | 65.0 | 67.4 | 69.8 | 72.1 | 74.3 | 76.5 | 78.6 | 80.6 |
| 30 | 3.30 | 30.4 | 37.2 | 43.0 | 48.1 | 52.7 | 56.9 | 60.8 | 64.5 | 68.0 | 71.3 | 74.5 | 77.5 | 80.5 | 83.3 | 86.0 | 88.7 | 91.2 | 93.7 | 96.2 |
| 40 | 3.80 | 40.7 | 49.8 | 57.6 | 64.3 | 70.5 | 76.1 | 81.4 | 86.3 | 91.0 | 95.4 | 99.7 | 103.8 | 107.7 | 111.5 | 115.1 | 118.6 | 122.1 | 125.4 | 128.7 |
| 50 | 4.20 | 51.0 | 62.4 | 72.1 | 80.6 | 88.3 | 95.4 | 102.0 | 108.1 | 114.0 | 119.6 | 124.9 | 130.0 | 134.9 | 139.6 | 144.2 | 148.6 | 152.9 | 157.1 | 161.2 |
| 60 | 4.70 | 61.3 | 75.0 | 86.6 | 96.9 | 106.1 | 114.6 | 122.5 | 130.0 | 137.0 | 143.7 | 150.1 | 156.2 | 162.1 | 167.8 | 173.3 | 178.6 | 183.8 | 188.8 | 193.7 |
| 70 | 5.10 | 71.6 | 87.6 | 101.2 | 113.1 | 123.9 | 133.9 | 143.1 | 151.8 | 160.0 | 167.8 | 175.3 | 182.4 | 189.3 | 196.0 | 202.4 | 208.6 | 214.7 | 220.5 | 226.3 |
| 80 | 5.50 | 81.4 | 99.7 | 115.1 | 128.7 | 141.0 | 152.3 | 162.8 | 172.7 | 182.0 | 190.9 | 199.4 | 207.5 | 215.3 | 222.9 | 230.2 | 237.3 | 244.2 | 250.9 | 257.4 |
| 90 | 5.90 | 91.7 | 112.3 | 129.7 | 145.0 | 158.8 | 171.5 | 183.4 | 194.5 | 205.0 | 215.0 | 224.6 | 233.7 | 242.6 | 251.1 | 259.3 | 267.3 | 275 | 282.6 | 289.9 |



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# Nozzle Chart (210 - 1250 bar)

| Nozzle Size | Bar | Pressure | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PSI | 210 | 220 | 230 | 240 | 250 | 280 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1250 |
| | Ø mm | Flow Rate ( L/min ) | | | | | | | | | | | | | | | | | | |
| 015 | 0.80 | 4.9 | 5.0 | 5.2 | 5.3 | 5.4 | 5.7 | 5.9 | 6.4 | 6.8 | 7.2 | 7.6 | 8.0 | 8.3 | 8.9 | 9.5 | 10.1 | 10.6 | 11.1 | 11.9 |
| 02 | 0.91 | 6.7 | 6.8 | 7.0 | 7.1 | 7.3 | 7.7 | 8.0 | 8.6 | 9.2 | 9.8 | 10.3 | 10.8 | 11.3 | 11.8 | 12.6 | 13.4 | 14.1 | 14.8 | 15.8 |
| 025 | 1.00 | 8.1 | 8.3 | 8.5 | 8.7 | 8.9 | 9.4 | 9.7 | 10.5 | 11.2 | 11.9 | 12.5 | 13.1 | 13.7 | 14.8 | 15.8 | 16.8 | 17.7 | 18.5 | 19.8 |
| 03 | 1.09 | 9.9 | 10.1 | 10.3 | 10.5 | 10.8 | 11.4 | 11.8 | 12.7 | 13.6 | 14.4 | 15.2 | 15.9 | 16.7 | 17.7 | 19.0 | 20.1 | 21.2 | 22.2 | 23.7 |
| 035 | 1.15 | 11.6 | 11.9 | 12.1 | 12.4 | 12.6 | 13.4 | 13.9 | 15.0 | 16.0 | 17.0 | 17.9 | 18.8 | 19.6 | 20.7 | 22.1 | 23.5 | 24.7 | 26.0 | 27.7 |
| 04 | 1.19 | 13.2 | 13.5 | 13.8 | 14.1 | 14.4 | 15.2 | 15.8 | 17.0 | 18.2 | 19.3 | 20.3 | 21.3 | 22.3 | 23.7 | 25.3 | 26.8 | 28.3 | 29.7 | 31.6 |
| 045 | 1.27 | 14.9 | 15.3 | 15.6 | 16.0 | 16.3 | 17.2 | 17.8 | 19.3 | 20.6 | 21.8 | 23.0 | 24.2 | 25.2 | 26.6 | 28.5 | 30.2 | 31.8 | 33.4 | 35.6 |
| 05 | 1.35 | 16.5 | 16.9 | 17.3 | 17.7 | 18.0 | 19.1 | 19.7 | 21.3 | 22.8 | 24.2 | 25.5 | 26.7 | 27.9 | 29.6 | 31.6 | 33.5 | 35.4 | 37.1 | 39.5 |
| 055 | 1.40 | 18.1 | 18.5 | 19.0 | 19.4 | 19.8 | 20.9 | 21.7 | 23.4 | 25.0 | 26.5 | 28.0 | 29.3 | 30.6 | 32.5 | 34.8 | 36.9 | 38.9 | 40.8 | 43.5 |
| 06 | 1.47 | 19.9 | 20.3 | 20.8 | 21.2 | 21.7 | 22.9 | 23.7 | 25.6 | 27.4 | 29.1 | 30.6 | 32.1 | 33.6 | 35.5 | 37.9 | 40.2 | 42.4 | 44.5 | 47.4 |
| 065 | 1.52 | 21.4 | 22.0 | 22.4 | 22.9 | 23.4 | 24.8 | 25.6 | 27.7 | 29.6 | 31.4 | 33.1 | 34.7 | 36.3 | 38.5 | 41.1 | 43.6 | 46.0 | 48.2 | 51.4 |
| 07 | 1.60 | 23.2 | 23.7 | 24.3 | 24.8 | 25.3 | 26.8 | 27.7 | 29.9 | 32.0 | 33.9 | 35.8 | 37.5 | 39.2 | 41.4 | 44.3 | 47.0 | 49.5 | 51.9 | 55.3 |
| 075 | 1.65 | 24.8 | 25.4 | 25.9 | 26.5 | 27.0 | 28.6 | 29.6 | 32.0 | 34.2 | 36.3 | 38.2 | 40.1 | 41.9 | 44.4 | 47.4 | 50.3 | 53.0 | 55.6 | 59.3 |
| 08 | 1.70 | 26.4 | 27.0 | 27.6 | 28.2 | 28.8 | 30.5 | 31.5 | 34.0 | 36.4 | 38.6 | 40.7 | 42.7 | 44.6 | 47.3 | 50.6 | 53.7 | 56.6 | 59.3 | 63.2 |
| 085 | 1.75 | 28.1 | 28.8 | 29.4 | 30.1 | 30.7 | 32.5 | 33.6 | 36.3 | 38.8 | 41.2 | 43.4 | 45.5 | 47.5 | 50.3 | 53.8 | 57.0 | 60.1 | 63.0 | 67.2 |
| 09 | 1.80 | 30.4 | 31.1 | 31.8 | 32.5 | 33.2 | 35.1 | 36.4 | 39.3 | 42.0 | 44.5 | 47.0 | 49.2 | 51.4 | 53.2 | 56.9 | 60.4 | 63.6 | 66.7 | 71.2 |
| 095 | 1.85 | 31.9 | 32.6 | 33.4 | 34.1 | 34.8 | 36.8 | 38.1 | 41.2 | 44.0 | 46.7 | 49.2 | 51.6 | 53.9 | 56.2 | 60.1 | 63.7 | 67.2 | 70.5 | 75.1 |
| 10 | 1.90 | 33.3 | 34.1 | 34.9 | 35.6 | 36.4 | 38.5 | 39.8 | 43.0 | 46.0 | 48.8 | 51.4 | 53.9 | 56.3 | 59.2 | 63.2 | 67.1 | 70.7 | 74.2 | 79.1 |
| 105 | 1.94 | 34.8 | 34.8 | 36.4 | 37.2 | 37.1 | 39.3 | 40.7 | 43.9 | 47.0 | 51.0 | 52.5 | 56.3 | 57.5 | 62.1 | 66.4 | 70.4 | 74.2 | 79.7 | 84.9 |
| 11 | 1.98 | 36.2 | 37.1 | 37.9 | 38.7 | 39.5 | 41.8 | 43.3 | 46.8 | 50.0 | 53.0 | 55.9 | 58.6 | 61.2 | 65.1 | 69.6 | 73.8 | 77.8 | 81.6 | 87.0 |
| 115 | 2.03 | 37.7 | 38.6 | 39.4 | 40.3 | 41.1 | 43.5 | 45.0 | 48.6 | 52.0 | 55.2 | 58.1 | 61.0 | 63.7 | 68.0 | 72.7 | 77.1 | 81.3 | 85.3 | 90.9 |
| 12 | 2.08 | 39.1 | 40.0 | 40.9 | 41.8 | 42.7 | 45.2 | 46.8 | 50.5 | 54.0 | 57.3 | 60.4 | 63.3 | 66.1 | 71.0 | 75.9 | 80.5 | 84.9 | 89.0 | 94.9 |
| 125 | 2.13 | 40.6 | 41.5 | 42.5 | 43.4 | 44.3 | 46.9 | 48.5 | 52.4 | 56.0 | 59.4 | 62.6 | 65.7 | 68.6 | 74.0 | 79.1 | 83.9 | 88.4 | 92.7 | 98.8 |
| 13 | 2.16 | 43.5 | 44.5 | 45.5 | 46.5 | 47.4 | 50.2 | 52 | 56.1 | 60.0 | 63.6 | 67.1 | 70.4 | 73.5 | 76.9 | 82.2 | 87.2 | 91.9 | 96.4 | 102.8 |
| 14 | 2.26 | 46.4 | 47.5 | 48.5 | 49.6 | 50.6 | 53.5 | 55.4 | 59.9 | 64.0 | 67.9 | 71.6 | 75.0 | 78.4 | 82.8 | 88.5 | 93.9 | 99.0 | 103.8 | 110.7 |
| 15 | 2.34 | 49.3 | 50.4 | 51.6 | 52.7 | 53.8 | 56.9 | 58.9 | 63.6 | 68.0 | 72.1 | 76.0 | 79.7 | 83.3 | 88.7 | 94.9 | 100.6 | 106.1 | 111.2 | 118.6 |
| 16 | 2.41 | 52.2 | 53.4 | 54.6 | 55.8 | 56.9 | 60.2 | 62.4 | 67.3 | 72.0 | 76.4 | 80.5 | 84.4 | 88.2 | 94.7 | 101.2 | 107.3 | 113.1 | 118.7 | 126.5 |
| 18 | 2.54 | 59.4 | 60.8 | 62.2 | 63.5 | 64.8 | 68.6 | 71.0 | 76.7 | 82.0 | 87.0 | 91.7 | 96.2 | 100.4 | 106.5 | 113.8 | 120.7 | 127.3 | 133.5 | 142.3 |
| 20 | 2.69 | 66.7 | 68.2 | 69.8 | 71.3 | 72.7 | 77.0 | 79.7 | 86.1 | 92.0 | 97.6 | 102.9 | 107.9 | 112.7 | 118.3 | 126.5 | 134.2 | 141.4 | 148.3 | 158.1 |
| 25 | 3.00 | 82.6 | 84.5 | 86.4 | 88.3 | 90.1 | 95.4 | 98.7 | 106.6 | 114.0 | 120.9 | 127.5 | 133.7 | 139.6 | 147.9 | 158.1 | 167.7 | 176.8 | 185.4 | 197.6 |
| 30 | 3.30 | 98.5 | 100.9 | 103.1 | 105.3 | 107.5 | 113.8 | 117.8 | 137.2 | 136.0 | 144.2 | 152.1 | 159.5 | 166.6 | 177.5 | 189.7 | 201.2 | 212.1 | 222.5 | 237.2 |
| 40 | 3.80 | 131.9 | 135.0 | 138.0 | 141.0 | 143.9 | 152.3 | 157.6 | 170.2 | 182.0 | 193.0 | 203.5 | 213.4 | 222.9 | 236.6 | 253.0 | 268.3 | 282.8 | 296.6 | 316.2 |
| 50 | 4.20 | 165.2 | 169.1 | 172.9 | 176.6 | 180.2 | 190.8 | 197.5 | 213.3 | 228.0 | 241.8 | 254.9 | 267.4 | 279.2 | 295.8 | 316.2 | 335.4 | 353.6 | 370.8 | 395.3 |
| 60 | 4.70 | 198.5 | 203.2 | 207.8 | 212.2 | 216.6 | 229.2 | 237.3 | 256.3 | 274.0 | 290.6 | 306.3 | 321.3 | 335.6 | 355.0 | 379.5 | 402.5 | 424.3 | 445.0 | 474.3 |
| 70 | 5.10 | 231.9 | 237.3 | 242.7 | 247.9 | 253.0 | 267.7 | 277.1 | 299.3 | 320.0 | 339.4 | 357.8 | 375.2 | 391.9 | 423.2 | 452.4 | 479.9 | 505.8 | 530.5 | 565.5 |
| 80 | 5.50 | 263.7 | 269.9 | 276.0 | 282.0 | 287.8 | 304.5 | 315.2 | 340.5 | 364.0 | 386.1 | 407.0 | 426.8 | 445.8 | 481.2 | 514.4 | 545.6 | 575.1 | 603.2 | 643.0 |
| 90 | 5.90 | 297.1 | 304.1 | 310.9 | 317.6 | 324.1 | 343.0 | 355.1 | 383.5 | 410.0 | 434.9 | 458.4 | 480.8 | 502.1 | 542.3 | 579.7 | 614.9 | 648.2 | 679.8 | 724.7 |