



# Submersible Pumps AFP Series

## Models AFP 0831– AFP 2006 - 60HZ

Robust, reliable sewage pumps from 1.3 kW to 21 kW for pumping wastewater in municipal, commercial and industrial applications

## DN80 – DN200

- ☐ For wastewater, sewage, and sludge containing solid or fibrous particles
- ☐ Hydraulic design with CB (contra block)-Solids Handling System, vortex impellers or closed channel impellers (DN 200)
- ☐ Water jacket cooling system
- ☐ Automatic, continuous seal leakage and motor temperature monitoring
- ☐ Highly reliable, even under continuous operating conditions
- ☐ High performance and output
- ☐ Available in standard and explosion proof versions



## Innovative Engineering

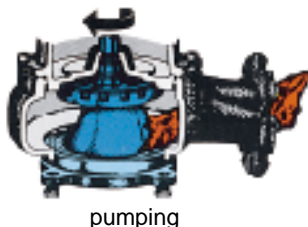
# Meeting the Needs of the Municipal and Industrial Wastewater Markets



CB-Impeller



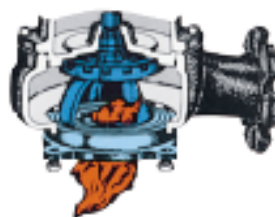
Vortex Impeller



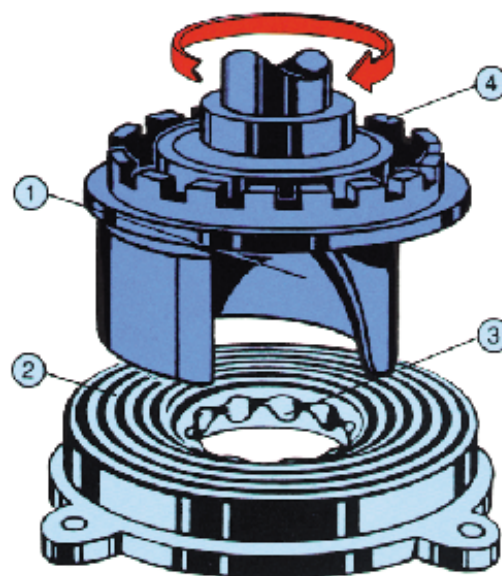
pumping



flow through



suction



## Superior Solids Handling

### Contra Block System (CB)

The Contra Block System was developed by ABS to pump typical wastewater solids without clogging. This system is used in the 3" through 6" AFP waste water pumps.

The CB System utilizes the combined effects of these various components:

1. Open single channel impeller with sloped deflector edge at the impeller blade.
2. Adjustable bottom plate with sharp spiral shearing edges.
3. Large suction inlet with wave-shaped tearing edges.
4. Coarsely toothed shearing ring on the upper side of the impeller.

### Vortex Impellers

Vortex impellers are offered for special applications, including:

- ☐ Liquids containing entrained air or gas.
- ☐ Gentle pumping of sensitive materials.
- ☐ Low flows with stringy solids content.

### Channel Type Impeller (Closed)

- ☐ for polluted liquids containing solids which do not tend to rope as well as for sludge type non-gaseous liquids.
- ☐ These impellers have a high operating efficiency and because of their large solids passage are particularly suitable for the pumping of sewage.



Two Channel CB-Impeller



Two Channel Closed

## Monitoring System

### Temperature Monitoring For Motor Shutdown

Bi-metallic in switch stator winding, each phase

### Electronic Moisture Leakage Check System

Di-electrode in oil chamber for warning or shutdown

### Leakage Detection (DI System)

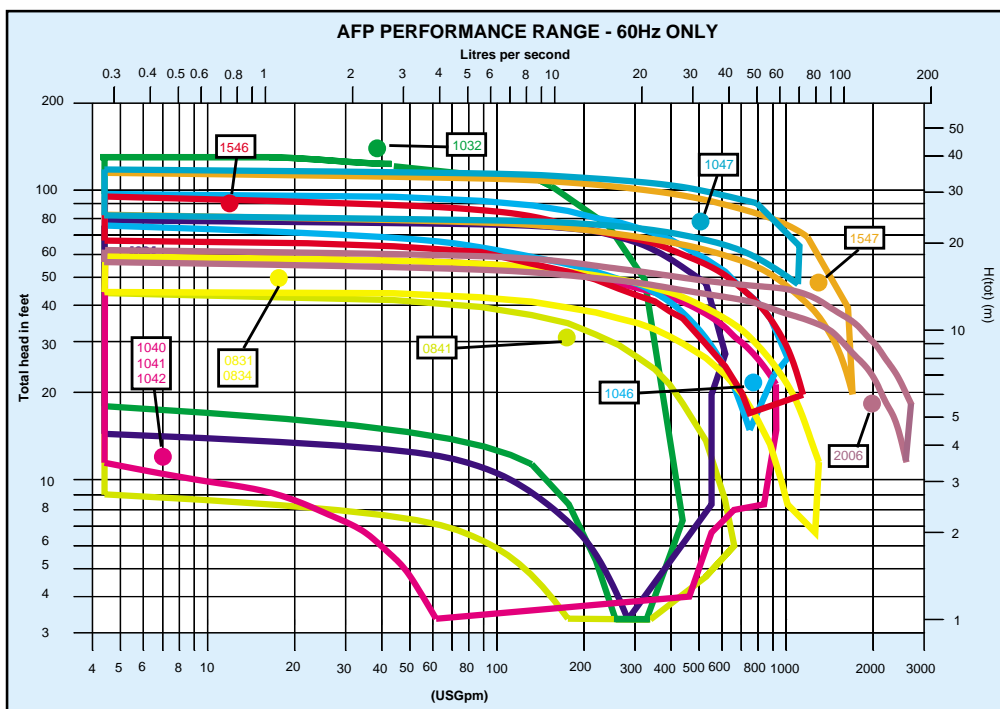
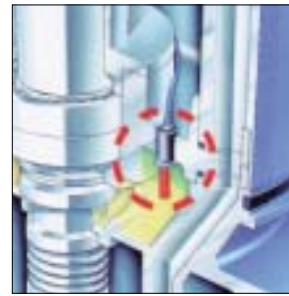
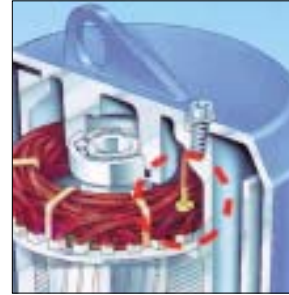
The ABS DI Seal minder leakage detection system is an electronic moisture detection system. If water should enter the pump motor or oil chamber, the probe activates a warning light, audible alarm or telemetering system. This warning allows ample time to repair the pump before water damages the motor. All AFP models contain a probe in the seal oil chamber.

### Thermal Control System (TCS)

All AFP series pumps are equipped with thermal protection sensors in each phase of the stator. If the motor is subjected to overheating, the sensors will signal the control panel to shut the motor down, preventing costly damage.

### Reliability

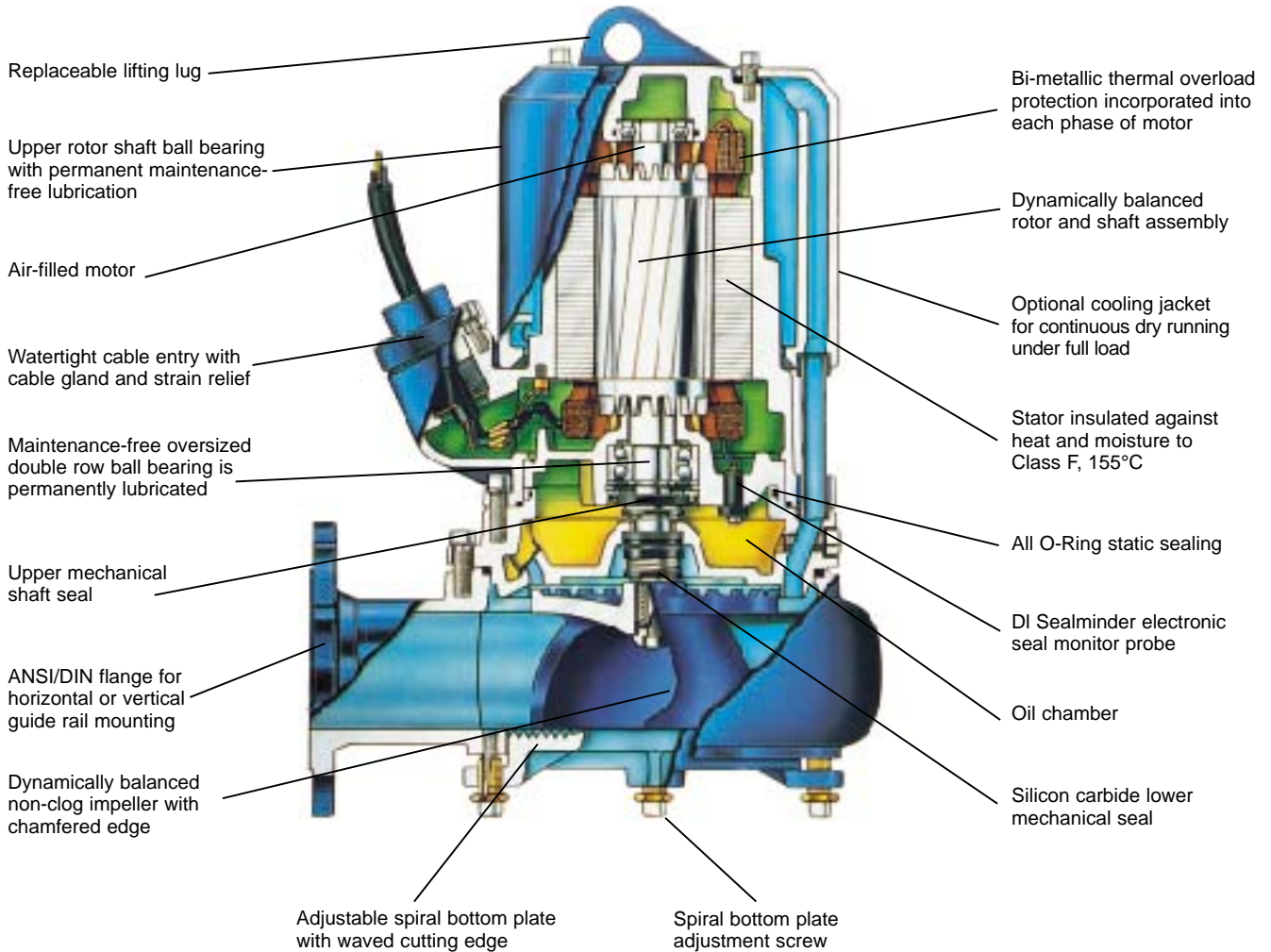
Regular inspections are minimized because the DI and TCS systems give a reliable indication that an inspection is needed regardless of the number of hours these units run. When activated, both of these systems can shut the motor down before costly damage can occur. ABS control panels monitor the sensors and provide maximum protection for the motor.



## AFP Features

All models available as explosion proof, FM & CSA approved for Class 1, Division 1, Groups C & D locations.

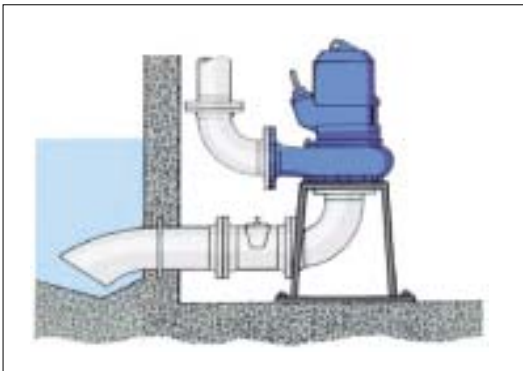
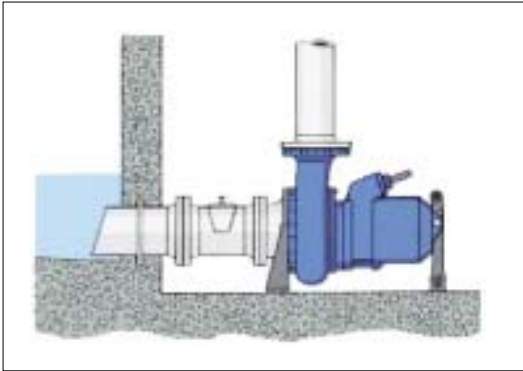
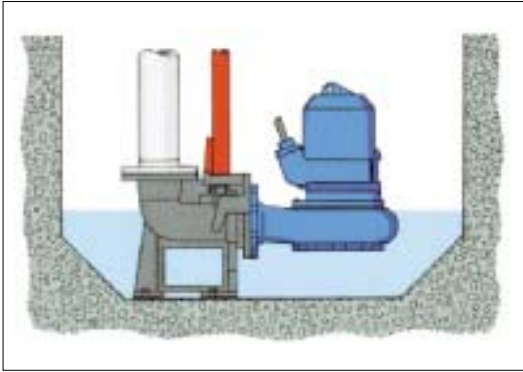
### AFP (CB Hydraulics)



Optional motor and materials of construction allow the user the ability to match the pump with the application. Whether it be continuous duty submersible or dry pit operation, ABS has a pump for every requirement.



# AFP Submersible Pumps for every application



AFP pumps are compact submersibles which may be installed in either wet or dry pits. AFP submersible pumps are ideal for use in dry pits because they continue to run even if the dry pit floods. When used in dry pits, the optional cooling jacket keeps the motor cool. AFP pumps are suitable for both fixed and transportable applications, and can be mounted either vertically or horizontally.

There are four basic types of installations of the AFP series pump. Custom designed mounting systems are also available.

- **Fixed Wet Installation:**

Using the patented ABS Guide Rail System, the pump is lowered into the liquid, guided by a single guide rail tube. As the pump nears the bottom, it is automatically brought into perfect alignment with the discharge connection sealed against the base.

- **Fixed Dry Installation, Horizontal:**

Using the motor and volute mounting brackets, the pump is bolted to a horizontal surface, and the suction and discharge connections are bolted to the pump flanges.

- **Fixed Dry Installation, Vertical:**

Pump is mounted on a vertical dry pit stand, with a suction elbow attached to the suction flange. Discharge piping is bolted to the pump discharge flange.

- **Transportable Configuration:**

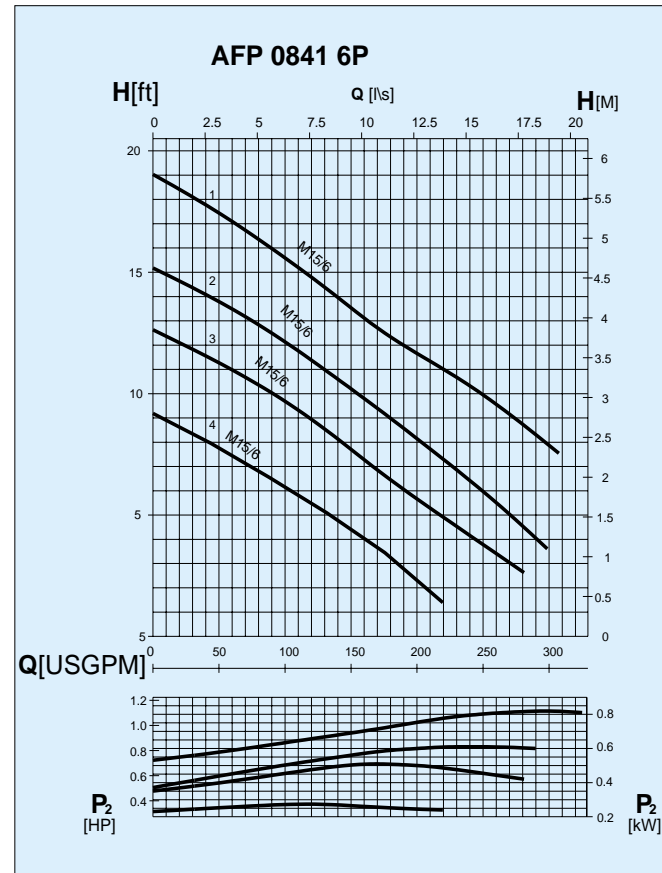
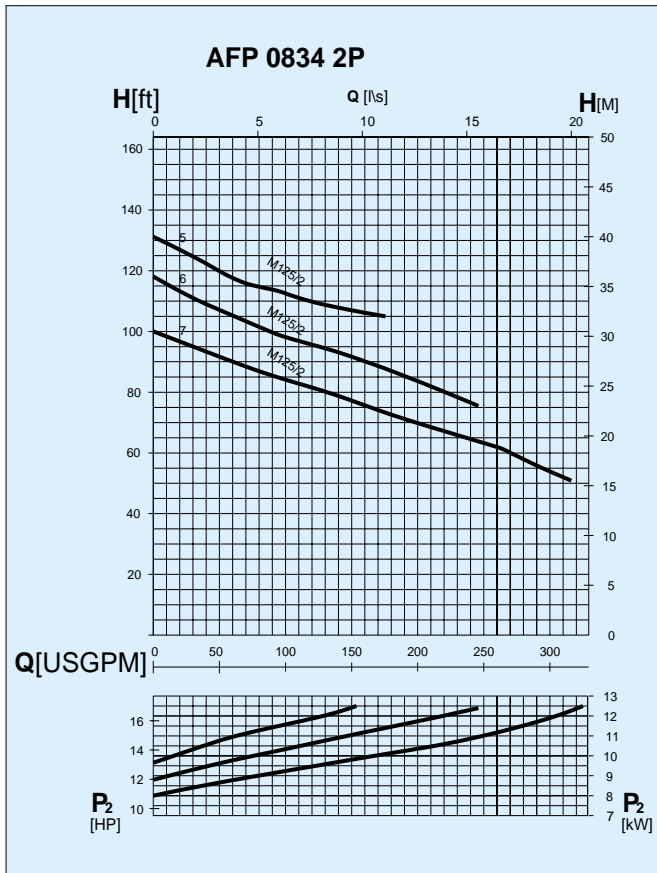
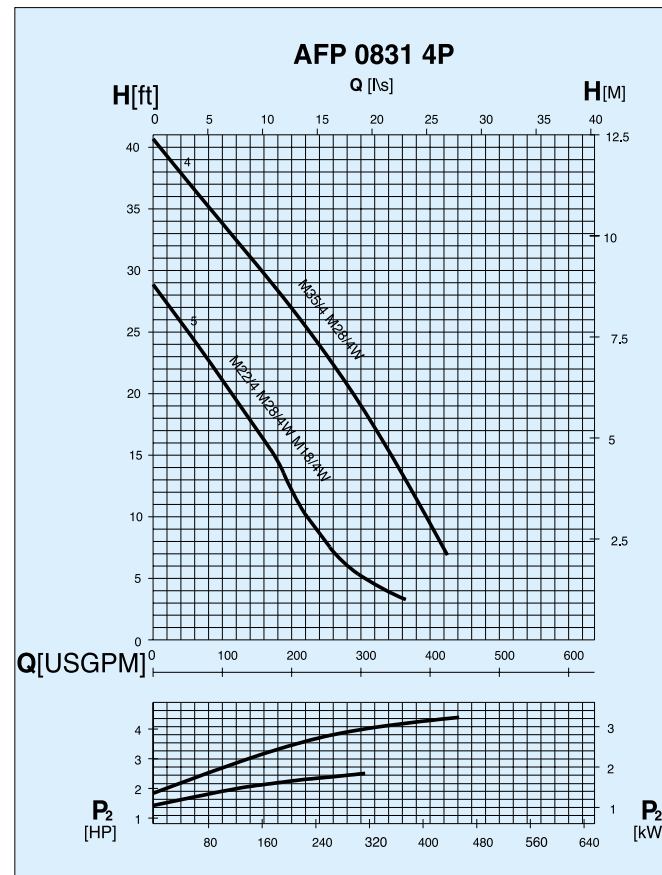
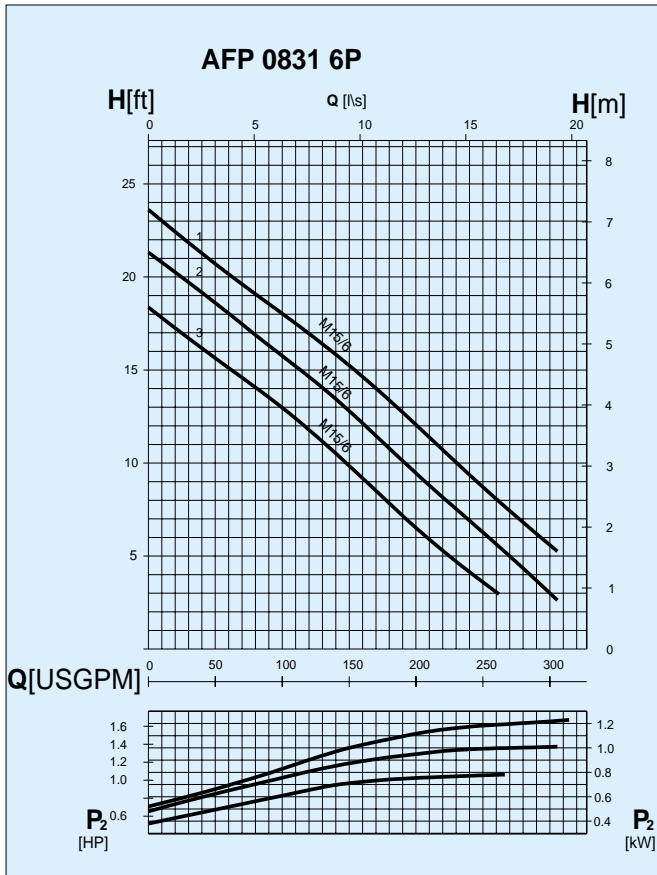
Pump is supplied with a stand and discharge elbow for connection to a discharge hose. When equipped with optional cooling jacket, pump motor need not be submerged for proper cooling. Transportable pumps are used for temporary bypass work, emergencies, flood control, etc.

## AFP 60 Hz Technical data

Type	Phase	Impeller	Discharge		P <sub>2</sub> HP	P <sub>1</sub> kW	P <sub>2</sub> kW	RPM	Amps				Weight without/with Cooling jkt (approx.)	
			ins	mm					230 V	380 V	460 V	575 V	lbs	Kg
AFP 0831 M15/6	3	.1.2.3	3"	80	2.0	2.1	1.5	1180	7.4	4.5	3.7	3.0	172/198	78/90
AFP 0831 M22/4	3	.5	3"	80	3.0	2.87	2.2	1780	9.8	5.9	4.8	3.9	172/198	78/90
AFP 0831 M35/4	3	.4	3"	80	4.7	4.4	3.5	1780	14.2	8.6	7.0	5.7	176/202	80/92
AFP 0834 M125/2	3	.5.6.7	3"	80	16.8	14.4	12.5	3480	42.4	25.7	21.2	1.7	210/227	95/103
AFP 0841 M15/6	3	.1.2.3.4	3"	80	2.0	2.0	1.5	1180	7.4	4.5	3.7	3.0	172/198	78/90
AFP 0841 M22/4	3	.2.3.4	3"	80	3.0	2.9	2.2	1780	9.8	5.93	4.8	3.9	172/198	78/90
AFP 0841 M25/4	3	.1	3"	80	3.4	3.3	2.5	1780	10.8	6.5	5.3	4.3	176/202	80/92
AFP 1031 M15/6	3	.1.2.3	4"	100	2.0	2.0	1.5	1180	7.4	4.48	3.7	3.0	172/198	78/90
AFP 1031 M22/4	3	.6	4"	100	3.0	2.9	2.2	1780	9.8	5.93	4.8	3.9	172/198	78/90
AFP 1031 M25/4	3	.5.6	4"	100	3.4	3.3	2.5	1780	10.8	6.5	5.3	4.3	176/202	80/92
AFP 1031 M35/4	3	.4	4"	100	4.7	4.4	3.5	1780	14.2	8.6	7.0	5.7	176/202	80/92
AFP 1032 M35/6	3	.1.2	4"	100	4.7	4.6	3.5	1180	14.8	9.0	7.6	5.9	176/202	80/92
AFP 1032 M46/4	3	.4	4"	100	6.3	5.6	4.6	1780	16.8	10.2	8.6	6.7	235/270	107/123
AFP 1032 M90/4	3	.3	4"	100	12.0	11.2	9	1780	24	14.5	16	9.6	242/277	110/126
AFP 1032 M105/4	3	.1.2	4"	100	14.0	12.6	10.5	1780	38.8	23.5	19.4	15.5	257/293	116/133
AFP 1040 M15/6	3	.1.2.3.4	4"	100	2.0	2.0	1.5	1180	7.4	4.5	3.7	3.0	172/198	78/90
AFP 1040 M25/4	3	.2.3.4	4"	100	3.4	3.3	2.5	1780	10.8	6.5	5.3	4.3	176/202	80/92
AFP 1040 M35/4	3	.1	4"	100	4.7	4.4	3.5	1780	14.2	8.6	7.0	5.7	180/206	81/93
AFP 1041 M15/6	3	.1.2.3.4	4"	100	2.0	2.0	1.5	1180	7.4	4.5	3.7	3.0	178/204	81/93
AFP 1041 M35/4	3	.3.4	4"	100	4.7	4.4	3.5	1780	14.2	8.6	7.0	5.1	180/206	81/93
AFP 1042 M35/6	3	.1.2.3	4"	100	4.7	4.6	3.5	1180	14.8	9.0	7.6	5.9	176/202	80/92
AFP 1042 M46/4	3	.6	4"	100	6.3	5.6	4.6	1780	16.8	10.2	8.6	6.7	235/270	107/123
AFP 1042 M90/4	3	.4.5	4"	100	12.0	11.2	9	1780	24	14.5	16	9.6	241/276	110/126
AFP 1046 M90/4	3	.1	4"	100	12.0	11.2	9	1780	33.2	20	16	13.3	242/277	110/126
AFP 1046 M105/4	3	.A	4"	100	14.0	12.6	10.5	1780	38.8	23.5	19.4	13.5	257/293	116/133
AFP 1047 M130/4	3	.3	4"	100	17.5	15.2	12.9	1780	46.6	28.2	23.3	18.6	489/551	222/250
AFP 1047 M185/4	3	.2	4"	100	25.0	21.2	18.4	1780	58.8	35.6	29.4	23.5	489/551	222/250
AFP 1047 M210/4	3	.1	4"	100	28.6	24	21	1780	67.4	40.8	33.7	30	489/551	222/250
AFP 1541 M46/4	3	.6	6"	150	6.3	5.6	4.6	1780	16.8	10.2	8.6	6.7	235/270	107/123
AFP 1541 M90/4	3	.4.5	6"	150	12.0	11.2	9	1780	24	14.5	16	9.6	242/277	110/126
AFP 1541 M105/4	3	.1.2	6"	150	14.0	12.6	10.5	1780	38.8	23.5	19.4	15.5	257/293	116/133
AFP 1547 M130/4	3	.3	6"	150	17.5	15.2	12.9	1780	46.6	28.2	23.3	18.6	500/562	227/255
AFP 1547 M185/4	3	.2	6"	150	25.0	21.2	18.4	1780	58.8	35.6	39.4	23.5	500/562	227/255
AFP 1547 M210/4	3	.1	6"	150	28.0	24.2	20.6	1780	67.4	40.8	33.7	30	500/562	227/255
AFP 2006 M130/4	3	.2	8"	200	17.5	16	12.9	1180	54.2	32.8	27.1	21.7	586/648	266/295
AFP 2006 M160/4	3	.1	8"	200	21.5	20.4	15.8	1180	73.8	44.7	36.9	29.5	586/648	266/295

Additional combinations available. Consult factory.

## Performance Ranges 60 Hz

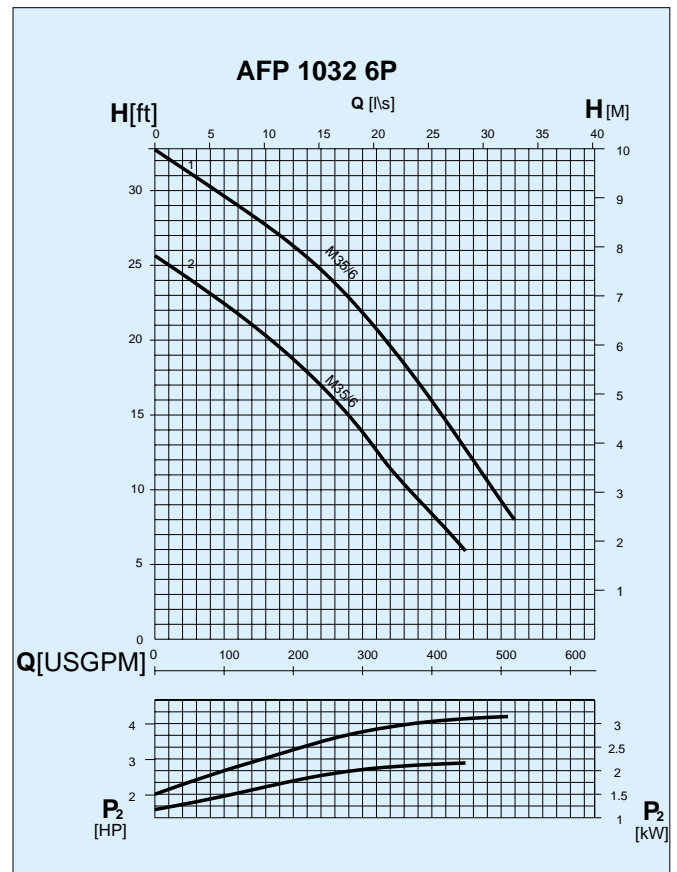
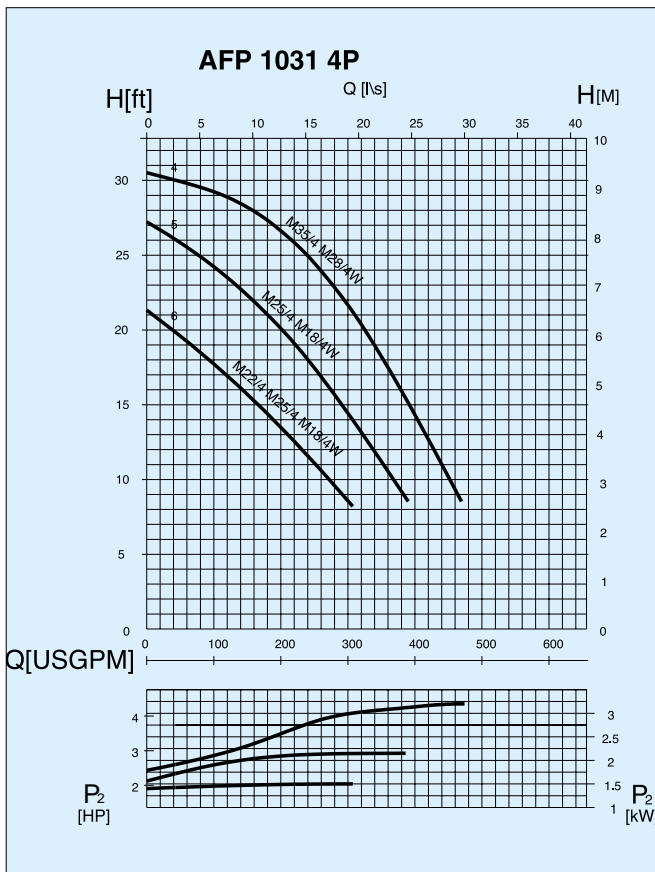
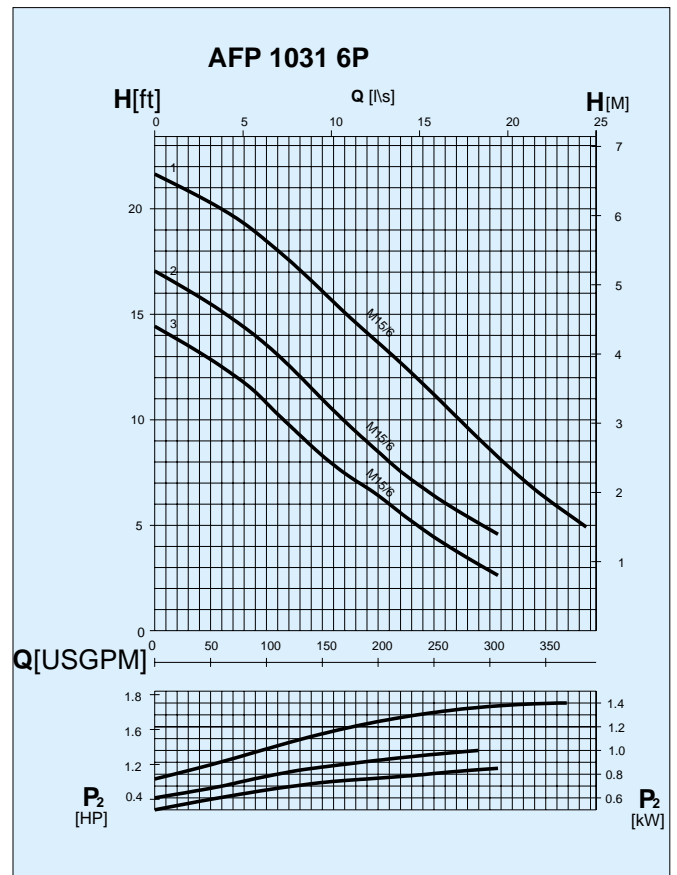
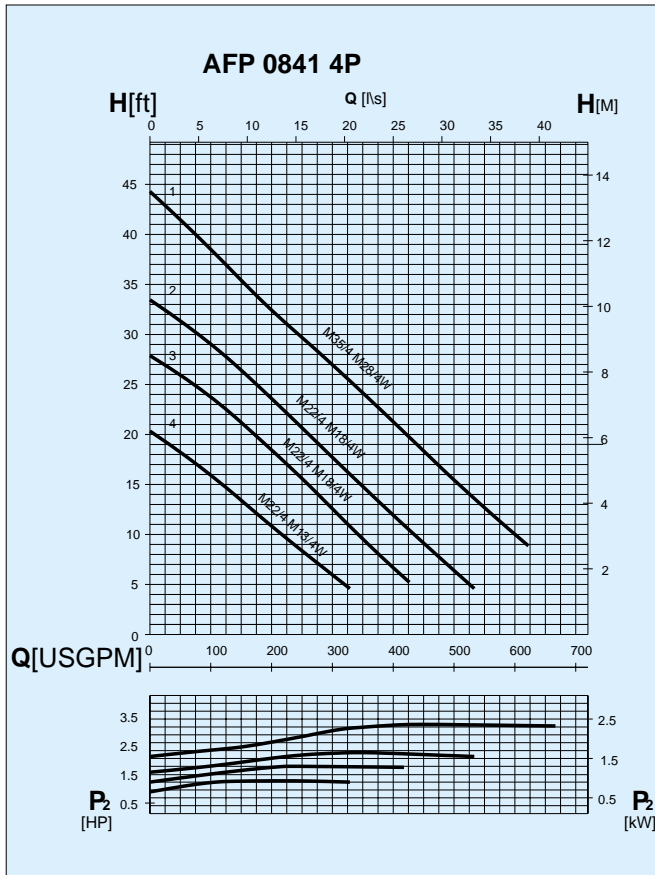


H = Total head Q = Discharge volume P<sub>2</sub> = Power at motor shaft.

Curves to hydraulic institute

Curves for 50 Hz. are available on request.

# Performance Ranges 60 Hz



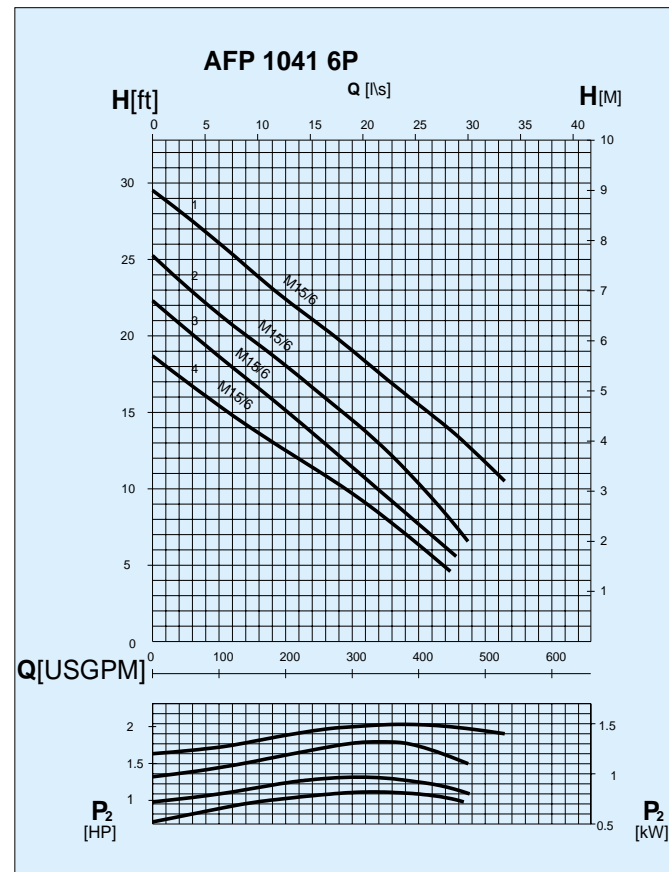
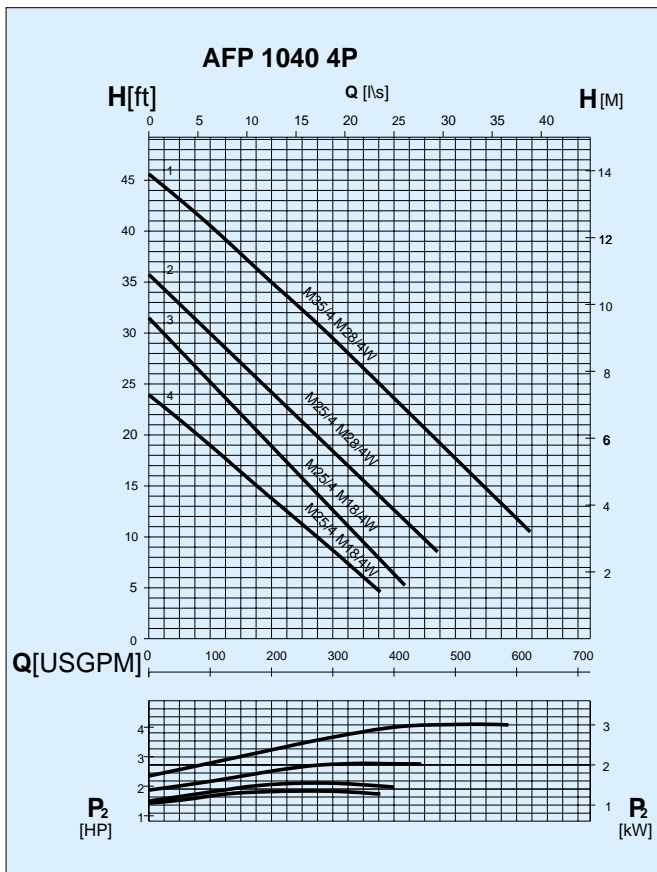
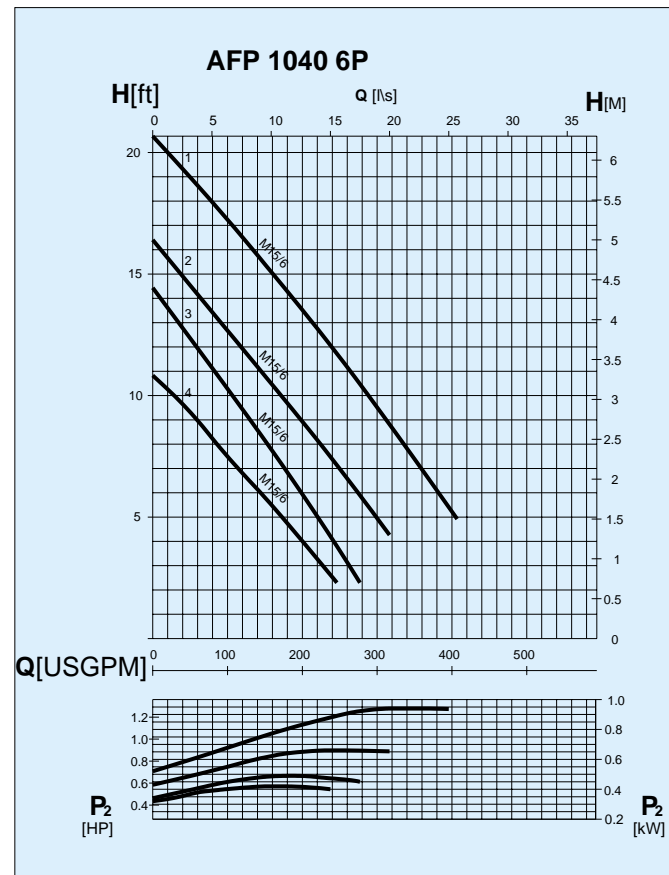
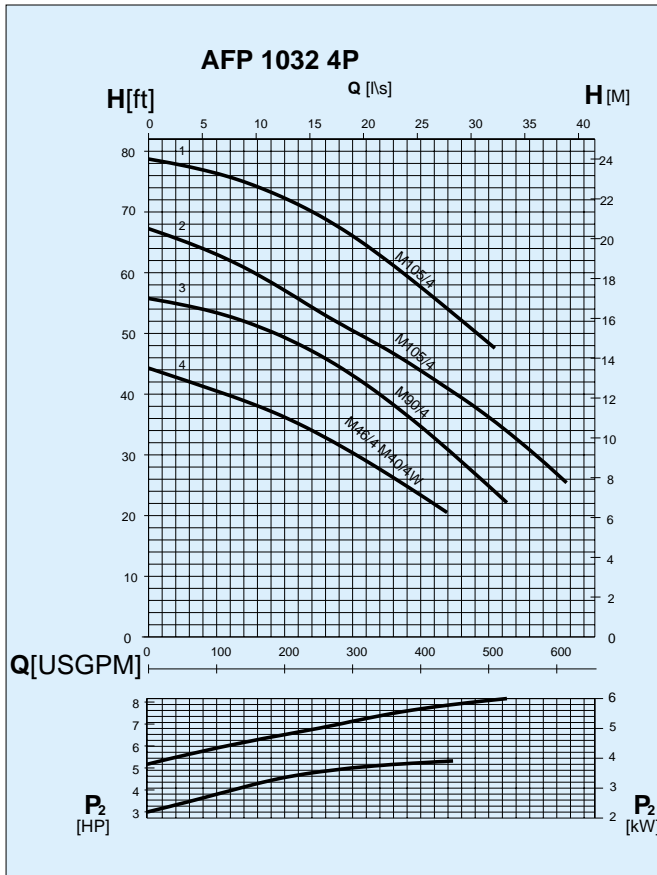
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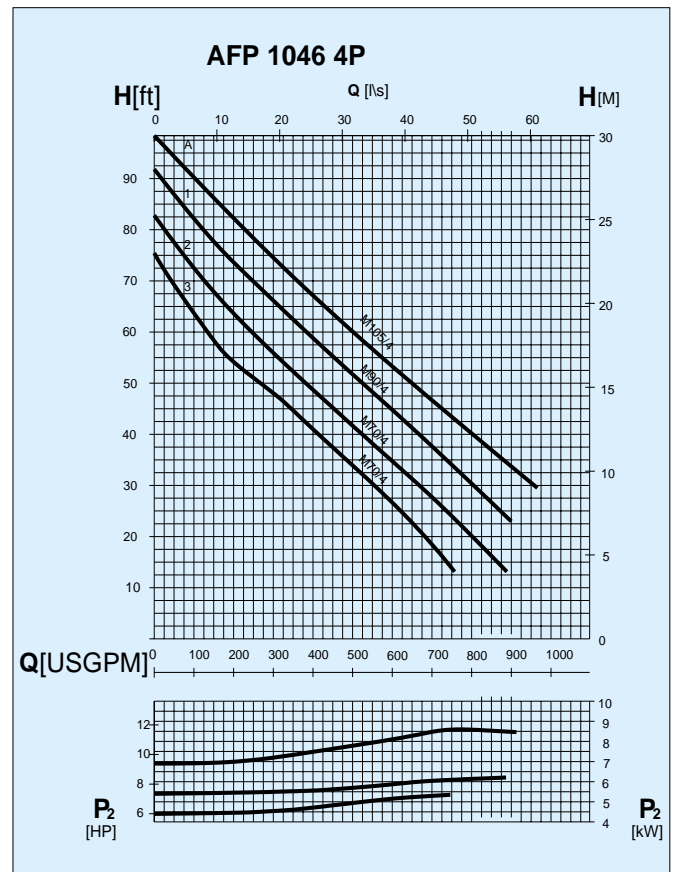
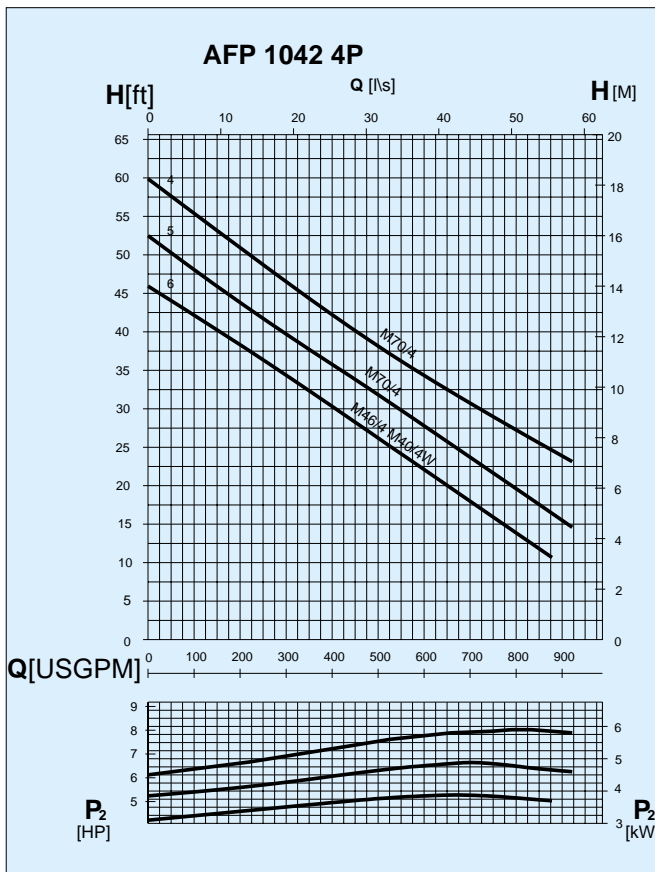
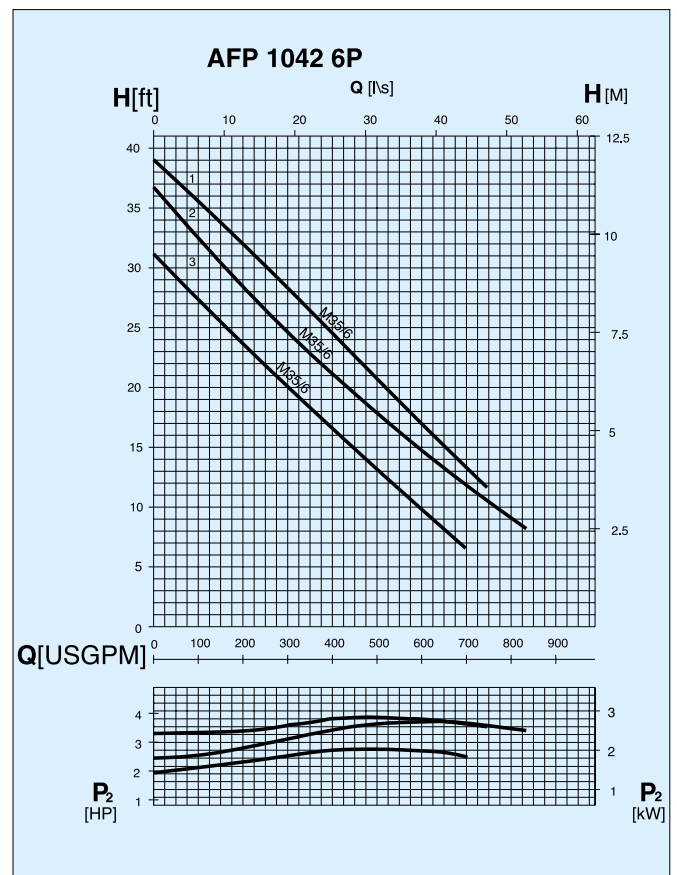
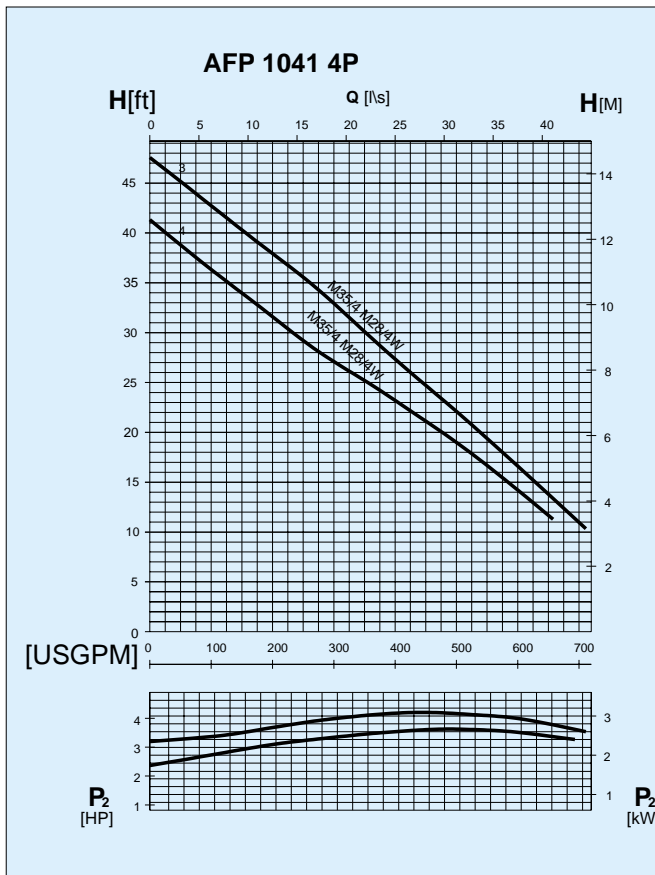


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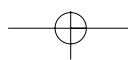
## Performance Ranges 60 Hz



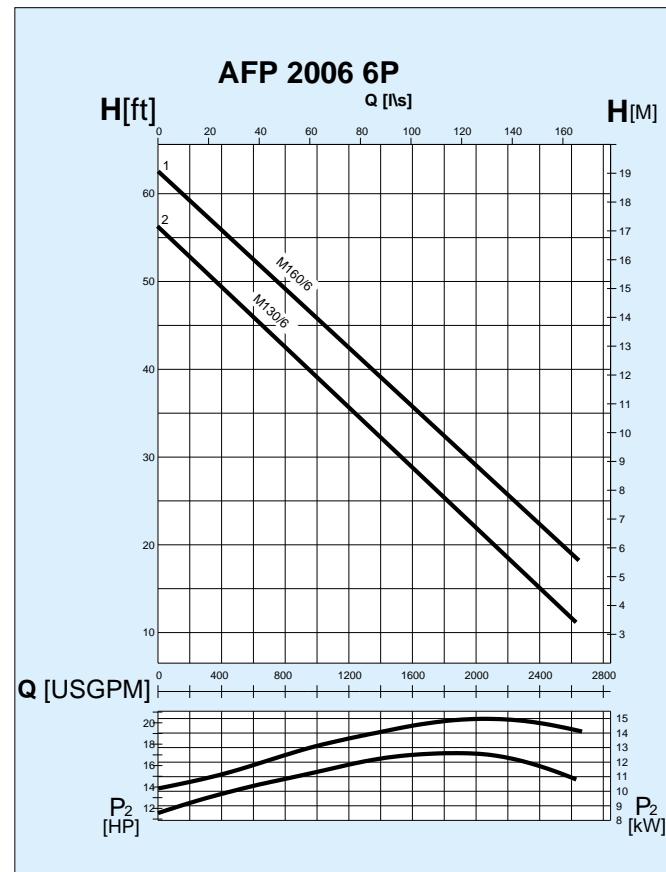
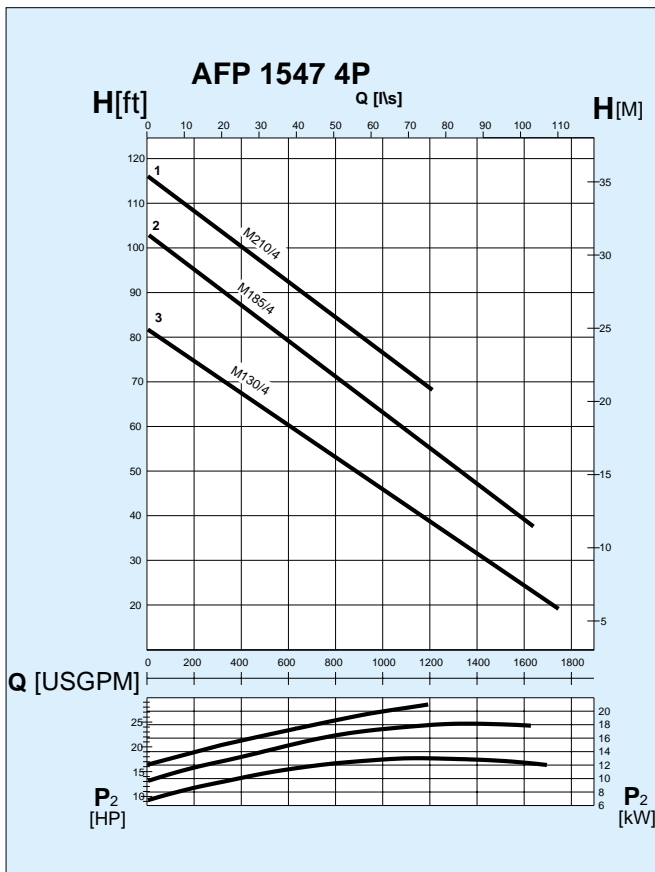
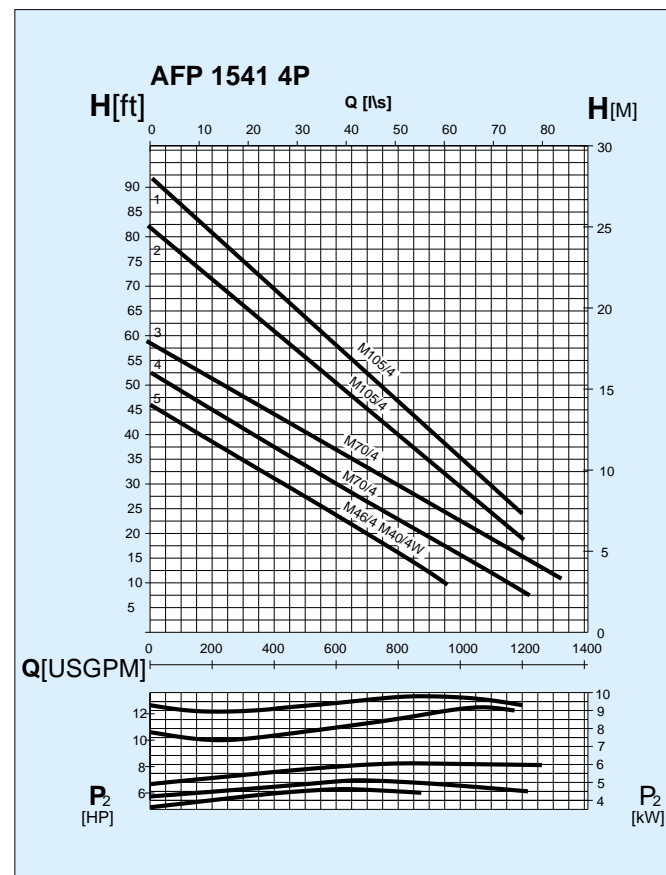
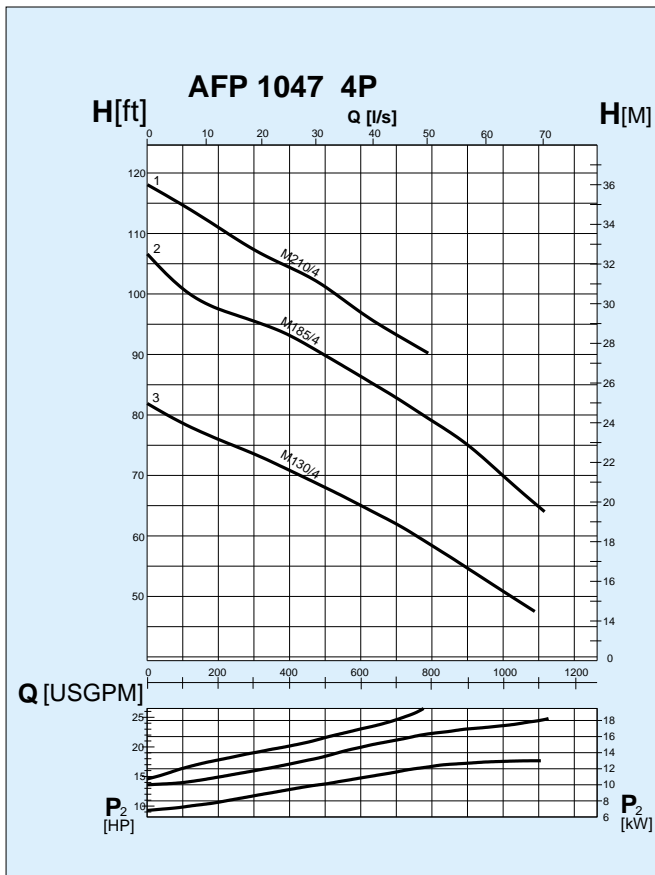
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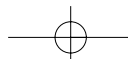
## Performance Ranges 60 Hz



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Curves to hydraulic institute

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# ABS offers a complete program

## Pumps up to 3000 kW

ABS produces both submersible and dry installed pumps for all private, industrial and communal water supply and waste water pumping requirements.

Power output range up to 650 kW (submersible pumps) and 3000 kW (dry installed pumps) with flows up to 18.000 m<sup>3</sup>/h.

The program is completed by provision of recirculation pumps as well as lifting stations and prebuilt sumps.

## Mixers

ABS also offer submersible mixers, top entry and side entry agitators for agitation, mixing, homogenization and for flow formation.

ABS pumps and mixers are subjected to strict quality checks and achieve their outputs with high operational reliability thanks to our world wide experience, extensive research and continuous product development programs.

## Control Panels and Control Systems

ABS can supply complete control panels and control systems for the operation of pump stations.

In addition we have well-proven standard units as well as special designs for particular applications.

The program of standardized basic units is extended by numerous special versions:

- ☐ computerized control systems
- ☐ electrode and electropneumatic level control systems
- ☐ monitoring and alarm systems
- ☐ printers for recording discharge quantities and running times
- ☐ connection of emergency generators

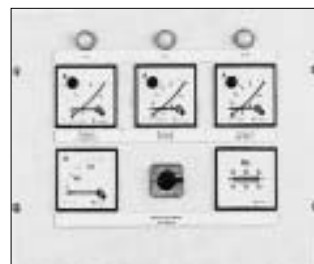
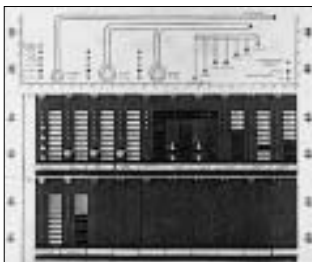
This allows optimum compliance with the requirements of the user and ensures a high degree of reliability in the installation.

ABS can advise its customers wherever they are by means of a dense network of advice offices and a large number of qualified authorized service stations.

Our package includes:

- ☐ Advice and Planning
- ☐ Delivery and Erection of complete Pump Stations
- ☐ Maintenance and Spare Parts Service
- ☐ Supply and fitting out of Service Stations and Service Vans
- ☐ Training of key personnel
- ☐ Rental Service

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## Advice and Service



A Company in the Cardo Group

The company reserves the right to make alterations in the interests of technical development.

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