



ABS SUBMERSIBLE SEWAGE PUMPS AFP-ME. WELCOME TO BLOCKAGE-FREE PUMPING.



**WELCOME TO
THE WORLD OF
BLOCKAGE-FREE
PUMPING.**

ABS is launching a new range of submersible sewage pumps, the AFP-ME series, maintaining its leadership in blockage-free pumping.

The new ABS submersible sewage pumps AFP-ME is the core product range for sewage and wastewater applications, offering reliable sewage pumps from 9 to 160 kW (50 Hz) and 185 kW (60 Hz).

The AFP-ME supplies blockage-free pumping and superior reliability, along with the highest motor efficiency in the submersible pump industry.

Hands on know-how

The new pump range provides further evidence of the ABS commitment to cost-effective pumping, as it provides:

- Low operating costs, thanks to blockage-free operations with the well-proven CONTRABLOCK system.
- Low power consumption, thanks to the high efficiency motors.
- Excellent serviceability and minimized maintenance costs, thanks to modular design, modern motors and a new unique cooling system.

Blockage-free pumping

Blockage-free sewage pumping is critical for trouble-free and cost-effective operation of pumping stations and treatment works. Frequent unexpected call-outs to clear pump blockage are not free and soon erode your initial investment. Not to mention the possibility of a major environmental hazard caused by overflowing pumping stations.

The AFP-ME with CONTRABLOCK hydraulics and large free solids passage offers unique abilities in blockage-free sewage pumping. The ABS solution minimizes unscheduled stops, expensive call-outs, pump downtime and pump efficiency losses. All the things that have a truly positive effect on the Life Cycle Cost (LCC) of your pumping stations.

It's the bottom line that counts

Making investments without considering the operating and maintenance costs can be expensive. To achieve the minimum cost over the whole 25 to 40 years lifetime of a pumping station, all elements of the LCC equation have to be considered.

Whether submersible or dry-pit installed pumps, economical operation is only possible if the LCC have

been properly estimated, based on real life experience and not just on theoretical standard calculations.

To achieve any benefit from LCC modelling, all major costs including operator support costs, blockage and efficiency fall off must be incorporated. In fact, almost 45 % of the total LCC in sewage applications are directly influenced by such factors and how the equipment is being maintained and operated.

The ABS advantage

Traditional thinking often selects the pump with the best efficiency. But focusing primarily on efficiency often leads to significant on site support costs to attend blockages. This is because improved efficiency often is achieved by reducing the free passage or by an increased number of impeller vanes, both of which greatly reduce the solids handling capabilities and increase the risk for blockage. High initial efficiency also usually means high efficiency losses as a result of wear.

ABS takes this into account. The new AFP-ME offers unique solids handling capabilities combined with durable efficiency over time. The proven solids handling through CONTRABLOCK means less call-outs and on site support costs. Durable efficiency is achieved through special adjustment features, which allow initial efficiencies to be restored on site, without replacing parts. This results in lower energy costs throughout the entire life of the pump.

Contact us today to find out more about how the AFP-ME will be your best choice for reliable sewage and wastewater pumping.

Key benefits

The AFP-ME series comes with built-in hands-on know-how:

- The AFP-ME series reduces operating costs through blockage-free pumping
- The AFP-ME series reduces power consumption with industry leading motor efficiency
- The AFP-ME series reduces maintenance costs with excellent serviceability

PEACE OF MIND.

Years of experience combined with intensive research at the ABS hydraulics laboratory gives us a unique position in blockage-free pumping. The AFP-ME features the innovative ABS blockage-free hydraulics CONTRABLOCK. Patented as early as 1969, ABS has finetuned and continuously improved this anti-blockage system, proven in more than one million installations the world over.

With CONTRABLOCK you have the benefit of blockage-free pumping combined with high hydraulic efficiency. The need to lift blocked pumps to free them is effectively minimized. This reduces the labour cost for maintenance to achieve the lowest life cycle cost. In addition, the environment is protected when the possibility of sewage overflows from blocked pumping stations is greatly reduced.

Meeting new requirements

The market requirements for solids handling have increased in recent years. Authorities issue new environmental regulations and put pressure on lower water consumption, which change the consistency of sewage and place even higher demands on the pump's blockage-free features.



The CONTRABLOCK acts as an anti-blockage device with an open single or multiblade impeller revolving on a spiralled groove, ensuring that solids or fibres are transported through the pump without being blocked.

Field test under toughest conditions

To satisfy market needs, ABS has carried out extensive in-house and field tests in selected locations across Europe, USA and Asia, in order to improve the CONTRABLOCK hydraulics even further.

Sometimes sewage collection systems are misused to get rid of fabrics, plastic articles, etc. ABS has selected the most difficult applications, such as department stores, airports and hospitals for our field tests. The results show again and again, that the CONTRABLOCK continued pumping when other impellers were blocked.

Reliable and efficient blockage-free pumping

The conclusions have all been incorporated into the new AFP-ME design. The clog-free behaviour and the hydraulic performance of the CONTRABLOCK system have been even further developed to make the AFP-ME the most reliable and efficient blockage-free pump in the market for sewage and wastewater applications.

Other features

The AFP-ME is a reliable pump with bearings designed for 50,000 hours - which, with a lot of other features - gives you the peace of mind you aim for:

- Long lasting, high motor efficiency with high insulation class and low temperature rise
- Uncloggable cooling system (for pumps with cooling jacket)
- Coupling system with rubber seal that seals 100 %
- Optimized safety system with the seal monitoring system and thermal control devices



Peace of mind

Nobody wants to be called out to clear a blocked sewage pump. Once you have installed an ABS pump with CONTRABLOCK, you can take some time to relax.

HANDS-ON KNOW-HOW

As with all ABS products, the new AFP-ME series comes with built-in hands-on know-how for long lasting and cost-effective pumping. This means translating over 140 years of real life field experience into the design of individual components and complete solutions.

You instantly recognize this hands-on know-how advantage in the new AFP-ME. Here are some examples:



Sealed-for-life maintenance-free bearings for the lower and upper bearings designed for 50,000 hours.

Bearing temperature monitoring is available as an option on certain models.



Solid stainless steel shaft designed to ensure increased seal and bearing life, low vibration and quiet operation.

ABS Modular System for fast and easy maintenance and spare parts handling. Smooth surfaces make it easy to clean.



Highly efficient closed loop cooling system with internal recirculation impeller and optimized heat exchanger.

Key features of the AFP-ME

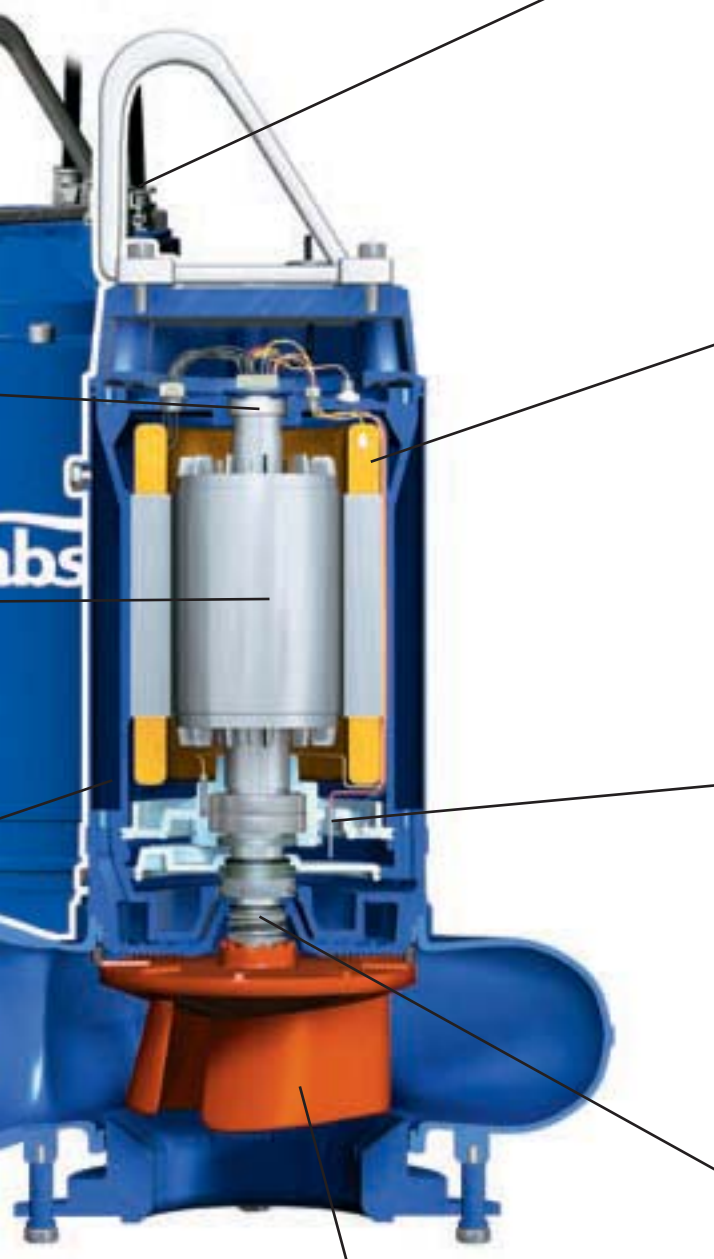
- Well-proven solids handling with CONTRABLOCK up to DN 300 - now even more efficient
 - Highest motor efficiency in the submersible industry
 - Unique closed loop cooling system for reliable operation
- Also available in stainless steel.



The submersible pumps of the AFP-ME are modular units, with CONTRABLOCK, closed, or vortex impellers.

A suitable hydraulic unit is combined with the appropriate motor according to the required duty.

THE ABS ADVANTAGE.



Separate, sealed connection chamber. In addition cable gland with strain relief and anti-kink protection.

Cable certified for permanent use in sewage.



Highest motor efficiency in the submersible industry

Watertight high efficiency squirrel cage motor, designed for continuous operation with Class B temperature rise (80° C) and stator windings impregnated to Class H (= 180° C) for longer motor life. Dry stator without any oil filling. With thermal sensors in each phase of the stator winding.

All motors also available with protection for use in hazardous areas according to international standards, e.g. EExdII BT4 and FM. Designed for use with variable frequency drives.

ABS seal-minder for detection of moisture. Standard feature with ABS since we pioneered conductive moisture measurement in submersible pumps in 1965.



Main mechanical seals with rings of solid silicon carbide. 20 years of proven superior reliability and durability over conventional mechanical seals in contractor and sewage pump applications. (Double mechanical seals on closed loop cooling system, for ME4 and ME5 always standard).

Shaft and mechanical seals are protected by a spiral and shredding system which prevents fibers etc. from reaching the mechanical seal.



Hardening of the impeller vanes and wearplate (option).



*Viikinmäki central wastewater treatment plant
in Helsinki/Finland with 8 dry installed inlet
pumps type AFP 6002 M3500/8 Ex.*

THE RIGHT APPLICATION FOR EVERY SITUATION.

The AFP-ME series provides a large variety of opportunities in municipal and industrial applications, including transport of:

- raw sewage containing fibrous materials
- return activated sludge
- effluent
- raw water
- process water
- cooling water

in:

- sewage and stormwater pumping stations
- municipal sewage treatment plants, for inlet, outfall and sludge recirculation pumping
- irrigation
- food and beverage industry such as canning, breweries, dairies, etc.
- pulp and paper mills
- plus other similar applications

With the hardened version the pumps are also used as grit pumps or jet aeration drives.

For industrial waste with corrosive liquids the pump can be supplied in acid resistant duplex stainless steel materials including the automatic coupling system.

More impeller options

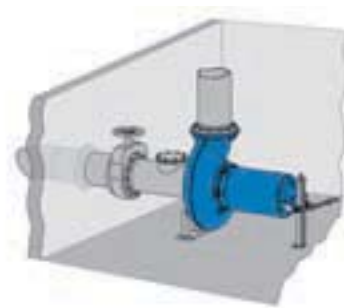
ABS has impeller options in using vortex for heavy polluted and gaseous sewage and high efficient closed impeller on large pump sizes.

ABS wide coverage of flow and head makes it easy to meet most duty points needed in the water and wastewater market.

Various installation possibilities

The AFP-ME is of a compact unit design, and may be installed either wet or dry thanks to the new, efficient, closed loop cooling system.

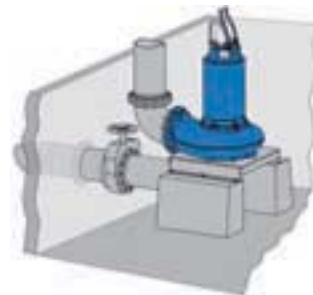
The pumps are suitable for every type of installation whether fixed or portable, for horizontal or vertical installation.



Horizontal dry installation



Portable applications



Vertical dry installation



Wet sump installation

Safe installation

The ABS single guide rail coupling system ensures a quick, reliable installation and facilitates economical maintenance of the pump:

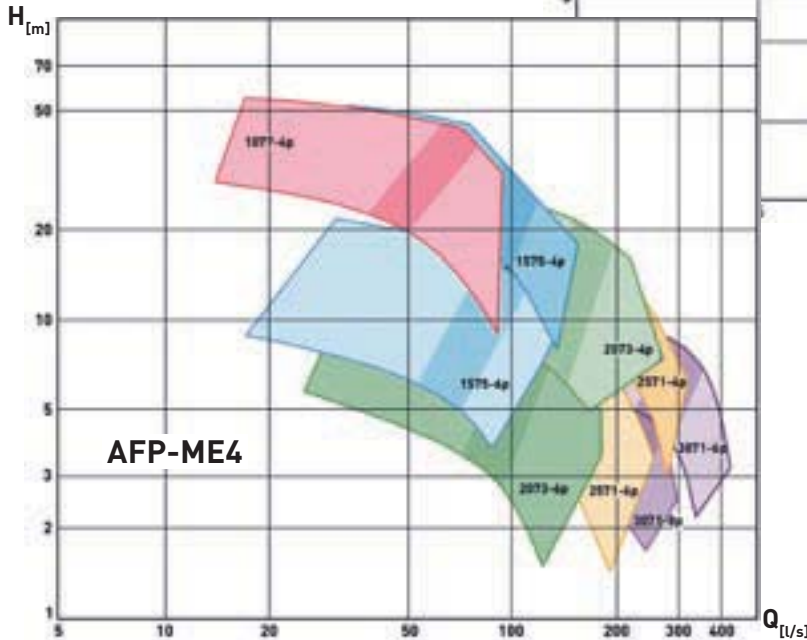
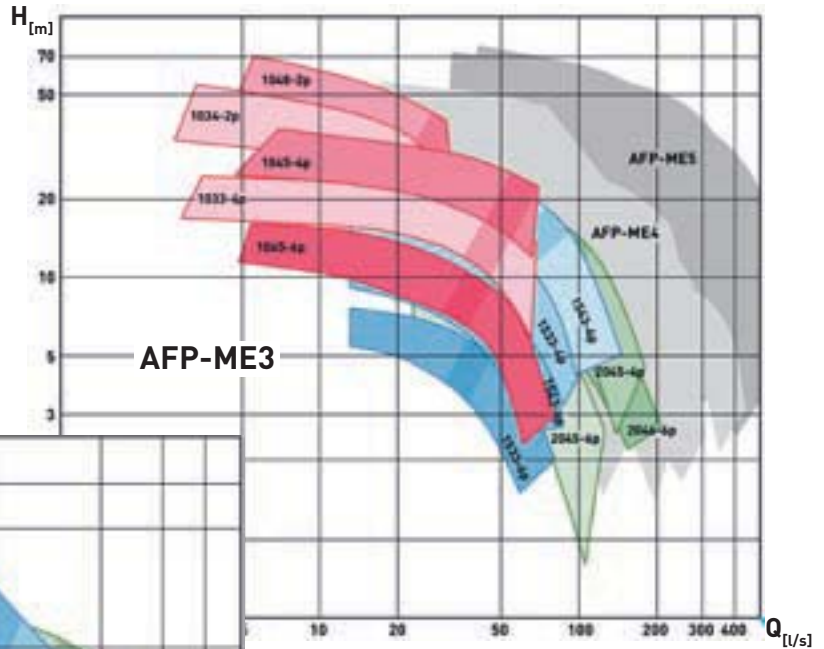
Locate – Lower – Couple – Start pumping

- Elastomer seal ensures non-leakage connection.
- A sliding bracket that is fully secured around a single guide-rail, guides the pump while lowering or rising.
- Low outer anchor points for the sliding bracket on pedestal for non-leakage coupling even with high discharge heads.

PERFORMANCE CURVES 50 HZ

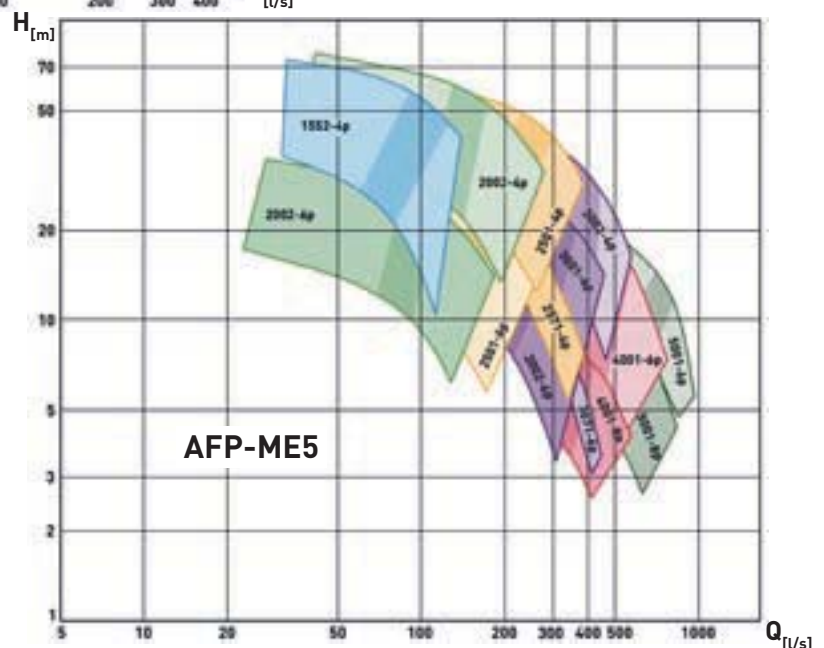
Technical data AFP-ME3

Hydraulic	Power range	No. of poles
1033 Vortex	11 - 18.5 kW	4 - pole
1034 Vortex	20 kW	2 - pole
1045 CONTRABLOCK	11 - 22 kW	4 - pole
1045 CONTRABLOCK	9 kW	6 - pole
1048 CONTRABLOCK	15 - 20 kW	2 - pole
1533 Vortex	11 - 18.5 kW	4 - pole
1533 Vortex	9 kW	6 - pole
1543 CONTRABLOCK	11 - 22 kW	4 - pole
1543 CONTRABLOCK	9 kW	6 - pole
2045 CONTRABLOCK	11 - 22 kW	4 - pole
2045 CONTRABLOCK	9 kW	6 - pole
2046 CONTRABLOCK	9 - 14 kW	6 - pole



Technical data AFP-ME4

Hydraulic	Power range	No. of poles
1077 CONTRABLOCK	22 - 45 kW	4 - pole
1575 CONTRABLOCK	22 - 45 kW	4 - pole
1575 CONTRABLOCK	18.5 - 37 kW	6 - pole
2073 CONTRABLOCK	22 - 45 kW	4 - pole
2073 CONTRABLOCK	18.5 - 37 kW	6 - pole
2571 CONTRABLOCK	22 - 45 kW	4 - pole
2571 CONTRABLOCK	18.5 - 37 kW	6 - pole
3071 CONTRABLOCK	18.5 - 37 kW	6 - pole
3071 CONTRABLOCK	15 - 30 kW	8 - pole



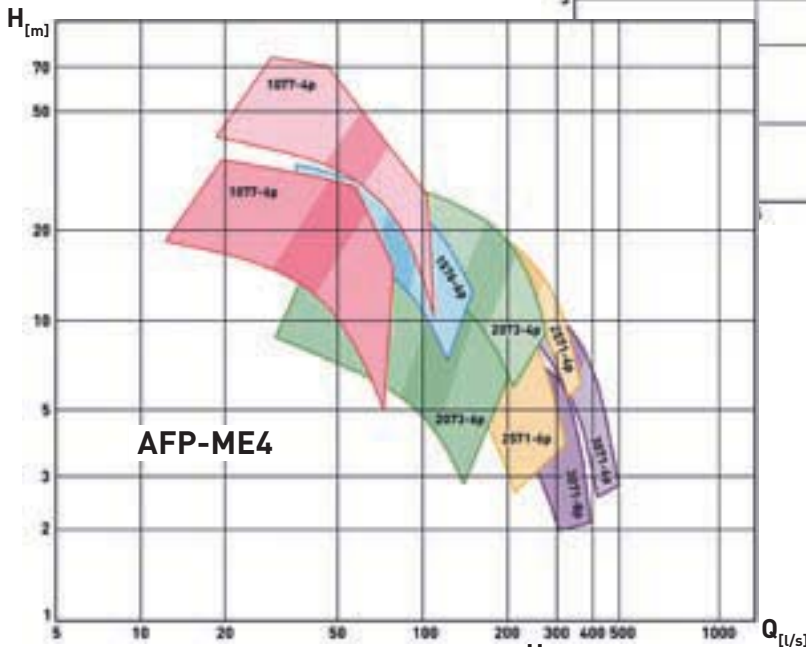
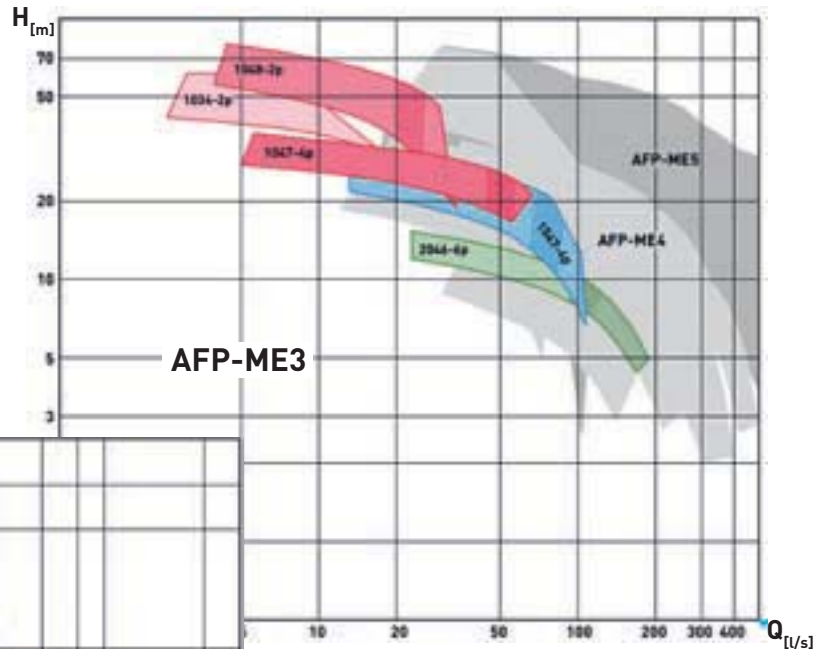
Technical data AFP-ME5

Hydraulic	Power range	No. of poles
1552 CONTRABLOCK	55 - 110 kW	4 - pole
2002 2 Channel	55 - 110 kW	4 - pole
2002 2 Channel	45 - 75 kW	6 - pole
2501 2 Channel	55 - 110 kW	4 - pole
2501 2 Channel	45 - 90 kW	6 - pole
2571 CONTRABLOCK	55 - 90 kW	4 - pole
3001 2 Channel	45 - 90 kW	6 - pole
3002 2 Channel	55 - 110 kW	4 - pole
3002 2 Channel	45 - 90 kW	6 - pole
3071 CONTRABLOCK	45 - 55 kW	6 - pole
4001 2 Channel	45 - 90 kW	6 - pole
4001 2 Channel	37 - 75 kW	8 - pole
5001 3 Channel	90 - 132 kW	6 - pole
5001 3 Channel	37 - 90 kW	8 - pole

PERFORMANCE CURVES 60 HZ

Technical data AFP-ME3

Hydraulic	Power range	No. of poles
1034 Vortex	23 kW	2 - pole
1047 CONTRABLOCK	13 - 21 kW	4 - pole
1048 CONTRABLOCK	18.5 - 23 kW	2 - pole
1547 CONTRABLOCK	13 - 21 kW	4 - pole
2046 CONTRABLOCK	13 - 16 kW	6 - pole



Technical data AFP-ME4

Hydraulic	Power range	No. of poles
1077 CONTRABLOCK	25 - 52 kW	4 - pole
1077 CONTRABLOCK	21 - 43 kW	6 - pole
1576 CONTRABLOCK	21 - 43 kW	6 - pole
2073 CONTRABLOCK	25 - 52 kW	4 - pole
2073 CONTRABLOCK	21 - 43 kW	6 - pole
2571 CONTRABLOCK	25 - 52 kW	4 - pole
2571 CONTRABLOCK	21 - 43 kW	6 - pole
3071 CONTRABLOCK	35 - 43 kW	6 - pole
3071 CONTRABLOCK	17 - 35 kW	8 - pole

Technical data AFP-ME5

Hydraulic	Power range	No. of poles
1552 CONTRABLOCK	63 - 125 kW	4 - pole
1552 CONTRABLOCK	52 - 63 kW	6 - pole
2002 2 Channel	86 - 125 kW	4 - pole
2002 2 Channel	52 - 86 kW	6 - pole
2073 CONTRABLOCK	63 - 104 kW	4 - pole
2501 2 Channel	86 - 125 kW	4 - pole
2501 2 Channel	52 - 104 kW	6 - pole
2571 CONTRABLOCK	63 - 125 kW	4 - pole
3001 2 Channel	52 - 104 kW	6 - pole
3002 2 Channel	150 - 185 kW	4 - pole
3002 2 Channel	52 - 104 kW	6 - pole
3002 2 Channel	43 - 63 kW	8 - pole
4001 2 Channel	52 - 104 kW	6 - pole
4001 2 Channel	43 - 63 kW	8 - pole
5001 3 Channel	63 - 104 kW	8 - pole
5001 3 Channel	43 - 86 kW	10 - pole

