rexroth
A Bosch Company

Standard power unit ABPAC

configurable
connectable
efficient

www.boschrexroth.com/abpac

The ABPAC is a smart standard power unit for all areas in which hydraulic solutions are used and a pressure supply unit is required – for example, in general mechanical engineering, metal-cutting machine tools, as well as in presses and material handling.

An individual hydraulic power unit efficiently produced as a serial product: tailored, cost-effective, intelligent

Hydraulic power units for mechanical engineering are subject to stricter requirements than ever before: they should be powerful, energy-efficient, and quickly available, yet also intelligent, flexible, and of course cost-effective at the same time. With the ABPAC standard power units, Bosch Rexroth has come up with a convincing answer. The online configurator enables you to find your individual solution in no time. Your entry into Industry 4.0?

SPECIAL PROPERTIES

- Browser-based configuration
- Rapid design and transparency
- Visualization via web app
- Open interfaces
- Integration of a variety of different data sources
- Interface to big data systems (e.g. ODiN)

Short delivery times, faster startup

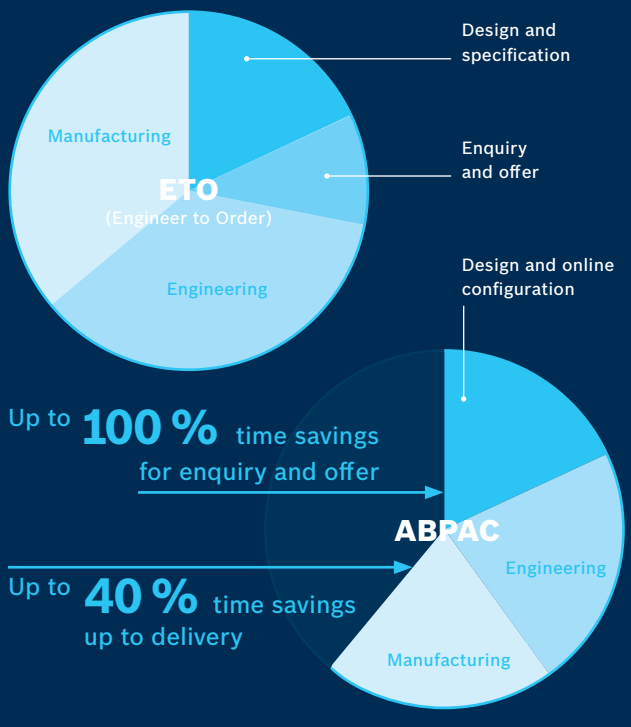
The portfolio of components defined in the modular system can reproduce a wide range of customer-specific power unit solutions via the convenient online configurator. The configurator immediately provides you with all the necessary information – from technical data through to prices. Everything is comprehensively documented. If you require individual solutions outside the modular system, your usual Rexroth contact will be happy to assist you at all times.

Delivery times are drastically reduced due to the use of standard components from Bosch Rexroth's GoTo program, standardized manufacturing processes, and a flexible steel construction concept without welding.

Ready for IoT

The IoT gateway software offers you transparency for your machine and process data. Real-time monitoring of process data, such as temperature, pressure and vibration, ensures consistently high quality in production. Rule-based evaluation of specific information simplifies predictive maintenance of your systems.

POWER UNITS IN A FLASH

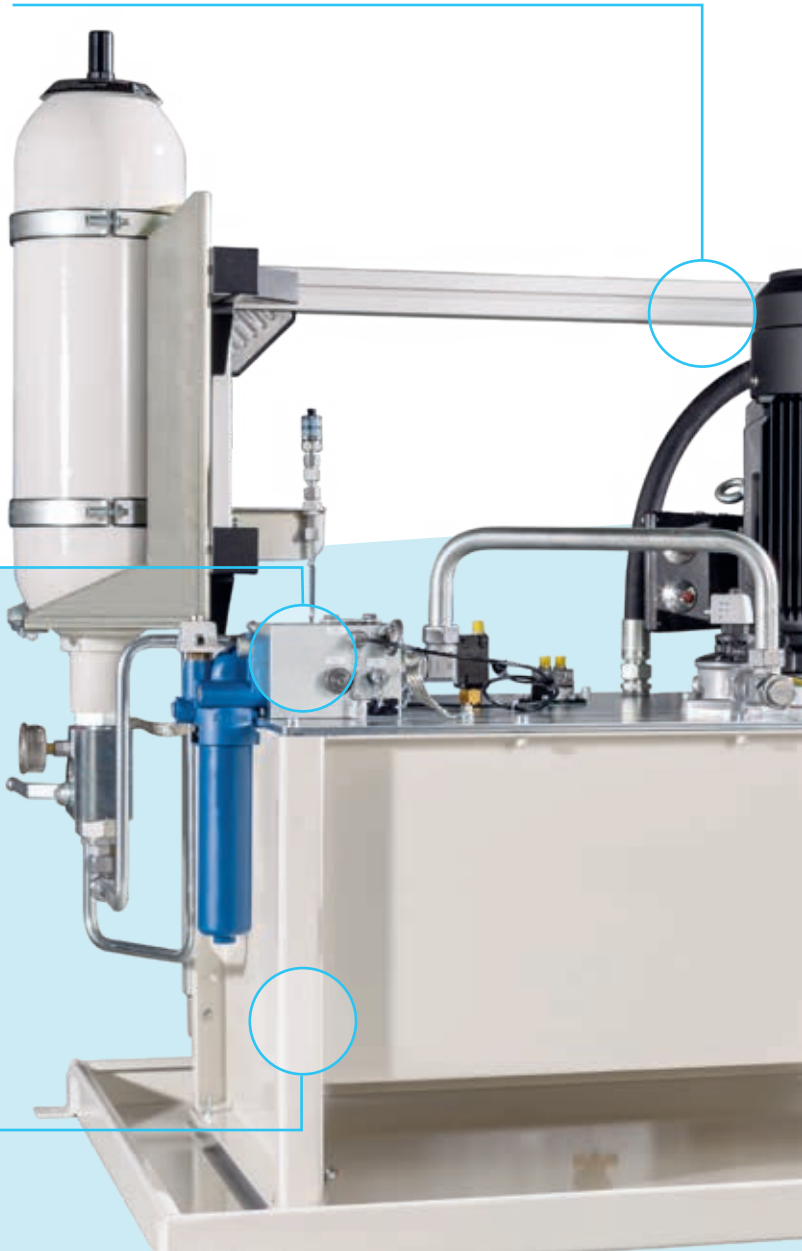


The online configurator delivers time savings of up to 100 % at the enquiry and offer stage; standard modules reduce engineering and production outlay by up to 40 %.

Consistently modular: never before was a standard power unit so easy to individualize and so efficient to produce.

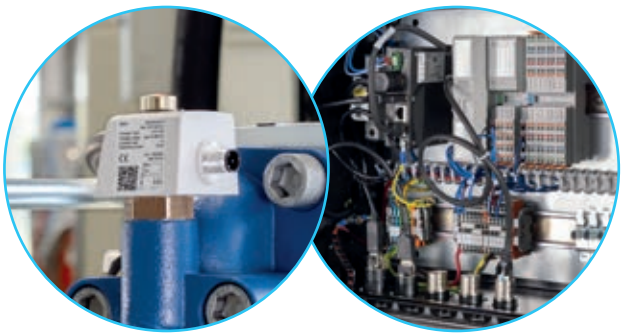
Multifunctional block:
with all basic functions and with variable interfaces
The extremely compact multifunctional block contains all the standard basic functions you need – from pressure filtration through to the bypass for FcP/SvP applications. It is the central interface to advanced hydraulic control systems. This saves space, reduces the piping work and gives you the option to integrate the hydraulic control either in the ABPAC or in the machine. There are four designs available in two sizes (with/without pressure filtration as well as with/without mounting option for the standard hydraulic control IH20).

Mechanical basic elements:
flexible set-ups, extensions, adjustments
The Rexroth mechanical basic elements fit anywhere on each side of the tank. The dimensions are variable in this respect, with the variance arising only in assembly. This offers a high degree of flexibility and allows customer-specific add-ons to realize easily.

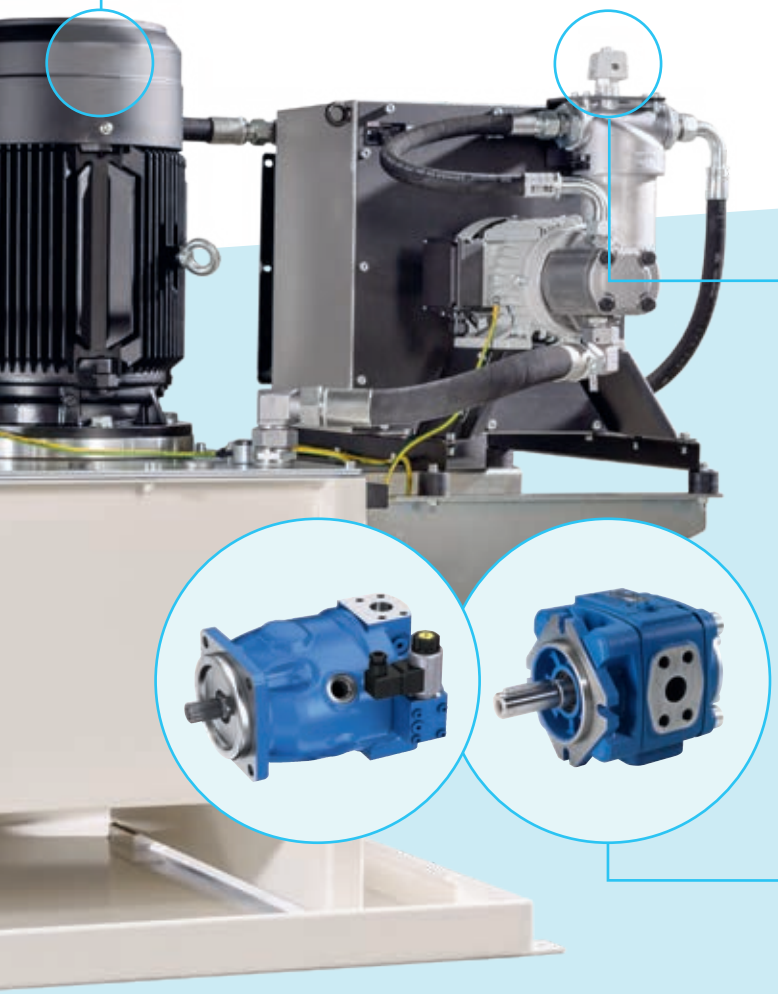


Clever design:
screws instead of welding
The steel construction and tank concept provide unprecedented flexibility. The standardized basic tanks require no welded-on elements and are available in tank capacities between 100 and 630 liters. The variance is in the assembly instead of the steel construction as is usual, which considerably reduces delivery and commissioning times. Individual adjustments can be made without any problems via the screwed cover. The ratio between hydraulic power and tank capacities can be easily optimized, depending on the application.

Save energy:
with variable-speed Sytronix drives
You can save a lot of energy and money when you optionally use drives from the Sytronix modular system. The FcP 5020 and SvP 7020 variable-speed drives are not only particularly powerful and quiet, more importantly, they save up to 80 % energy!



Connectable:
i4.0-ready thanks to comprehensive sensor package
A comprehensive and universal sensor package continuously records all relevant system states, such as oil quality, efficiency, pressures, filling levels and temperatures Pre-evaluation and forwarding via the IoT gateway enable predictive condition monitoring. The ABPAC can be connected vertically and horizontally. Visualization of power unit states can be performed simply by means of an intuitive web browser interface. The IoT gateway concept therefore requires minimal effort for commissioning and offers optimally convenient operation.



Individual:
the right drive for every application
With the different fixed and variable displacement pumps you can easily implement your individual drive concept. And in the smallest space – with the same performance range. The current motor standards (IE3 as standard) are thereby complied with at all times.

Available pumps:
- Internal gear pumps (PGH, PGF, fixed displacement pumps installed vertically)
- External gear pumps (AZPJ [Silence Plus])
- Axial piston pumps (A10VSO/31, variable displacement pumps installed horizontally)

ABPAC Marine – for applications on the high seas

THE ADVANTAGES AT A GLANCE

Efficient
- Price savings owing to standardization, for example as a result of predefined parts list with fewer variants
- Shorter development time thanks to simple configuration

Fast
- Reduced delivery times due to standardized components – for example from the GoTo program
- Binding offer within a matter of days

Simple
- Application-specific online configuration instead of the former engineer-to-order process

Certified
- Approved by Lloyd's Register for Marine & Offshore
- Further certifications on request

Environmentally friendly
- Use of environmentally acceptable hydraulic fluids possible

The ABPAC Marine power unit design has been optimized especially for applications on board of ships in order to ensure long-term pressure supply under deck.

Special technical features
- Choice of components for marine and offshore conditions: relative air humidity of 50% to 90%, temperature range of 0 °C to +45 °C
- High-efficiency marine motors of energy-efficiency class IE3
- Fluid tanks approved by Lloyd's Register with bolted tank covers
- Slosh-proof tank breathing, mounted on extension pipe
- High-quality corrosion protection of all surfaces (based on ISO 12944-2; C4 medium)
- Lifting eyes for all tank sizes
- Larger bending radii for pressure lines (3 x OD)

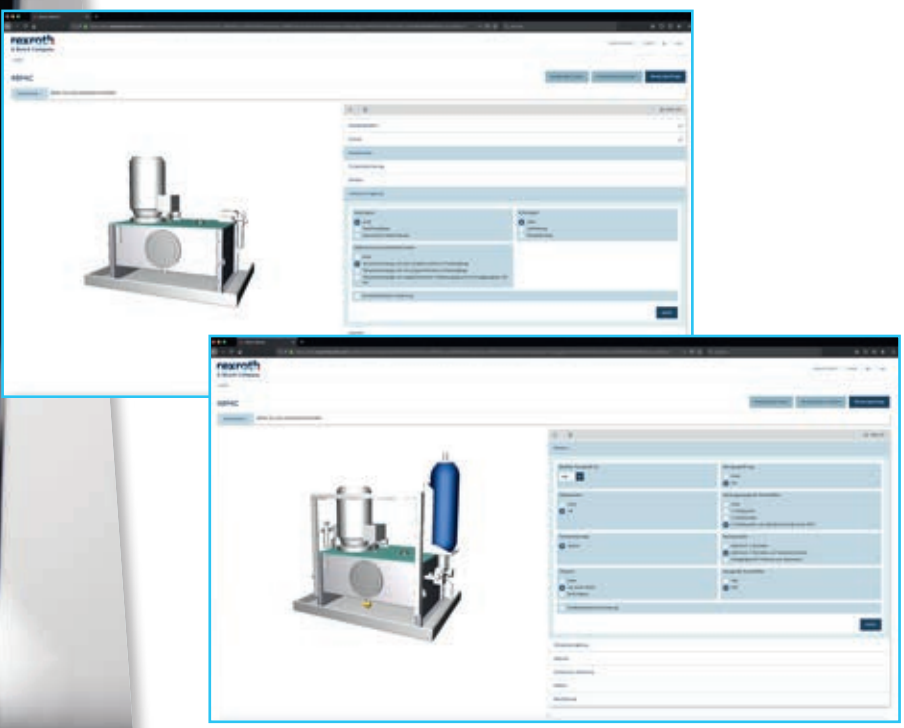
Options
- Certifications by other classification societies on request
- Customer-specific adaptations possible at any time – for example redundant motor-pump groups
- Operation with environmentally acceptable hydraulic fluids in accordance with ISO 15380
- Tank made of stainless chrome-nickel steel
- Water-absorbing tank breathing filter
- Fluid measuring rod
- Filter made of cast iron or steel
- Cleaning opening with steel cover
- Additional fluid drip tray
- Fluid/seawater heat exchanger
- Terminal box with marine-specific cabling

Further information:
- www.boschrexroth.com/marine
- Brochure "Product Solutions for Marine Applications" (R999001456)

ABPAC Marine Power Units are type approved from Lloyd's Register (LR). This saves time and costs during subsequent approval of the complete machine. Rexroth standard power units are used both in non-essential and in essential equipment.

Easy to configure online: get your own solution with just a few clicks

The ABPAC is consistently modular in design and can be configured in a few clicks with the online configurator based on the requirements and hydraulic assemblies required. The software tool guides you clearly through the process. It queries the hydraulic and technical key data, such as working pressure, flow, and the type of actuator, and proposes the appropriate assemblies.



As soon as the configuration is complete, the program produces a complete documentation package with initial information on installation dimensions, parts lists, price, and delivery time. You can quickly and easily jump to customer-specific adaptations at any time. Additional assemblies such as coolers or control systems can also be configured. You can therefore design a customized power unit more easily than ever before.

ADVANTAGES AT A GLANCE

- **Online configurator** for customized power units including documentation
- Intelligent **condition monitoring** via standardized bus interface and advanced sensor technology
- User-driven, platform-neutral **visualizations** on smart devices
- Sytronix FcP and SvP (optional) for increased **energy efficiency** and **noise reduction**
- Basic functions integrated in the **multifunctional block**
- **Interface** to additional hydraulic control concepts
- Wide **area of applications**: metal-cutting machine tools, wood processing, presses, plastics processing machines, etc.
- Products from the GoTo program for **optimized delivery times**

Configurations

TECHNICAL KEY DATA

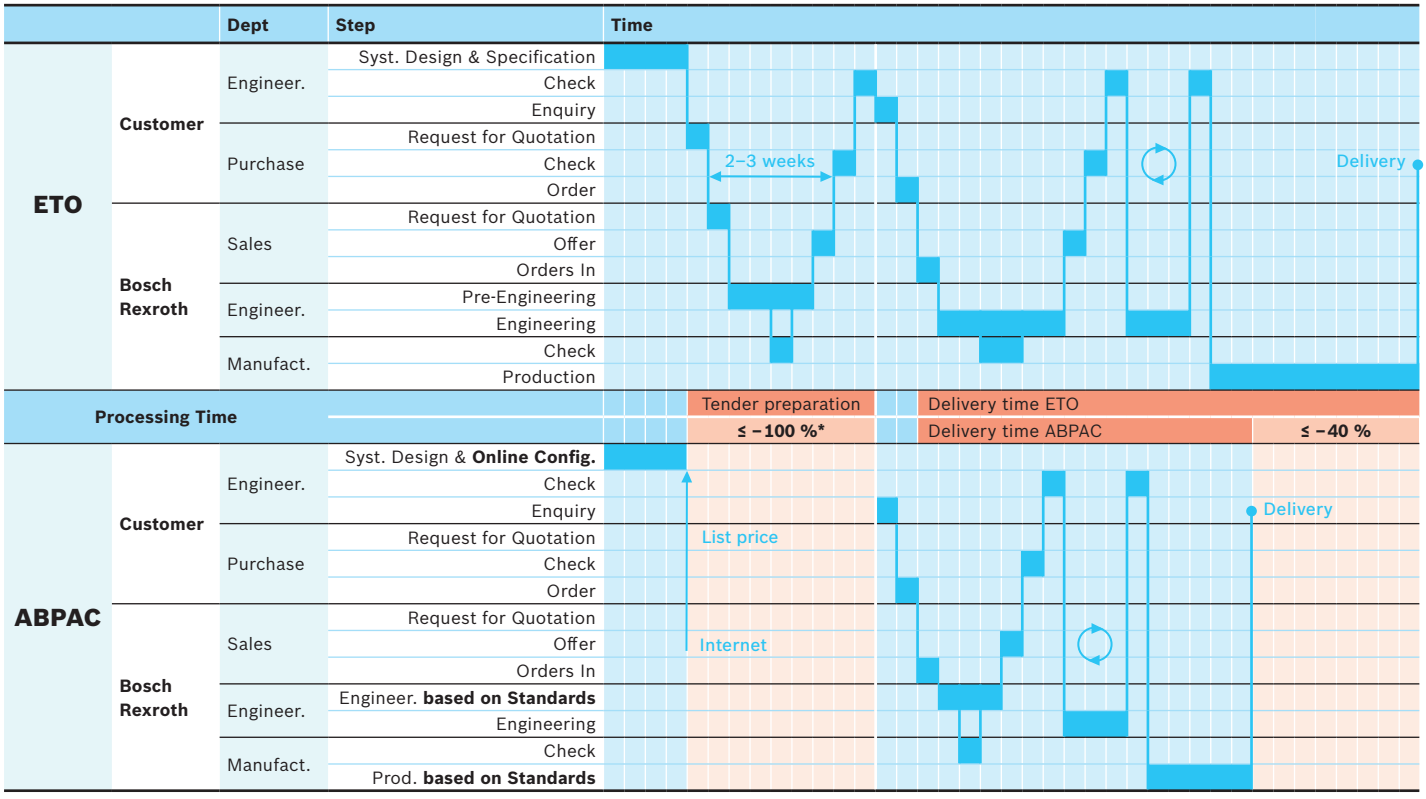
- Tank capacity: 100 to 630 liters
- Flow: max. 200 l/min
- Operating pressure: max. 315 bar
- Multifunctional block: in 4 designs
- Sytronix modular system: optionally FcP 5020
- Design: simplified, flexible steel construction

Power unit variants	Pump types	Q_{thmax} l/min 1,450 rpm	Pressure Tank	Nominal power electric motor [kW]												
				3	4	5,5	7,5	11	15	18,5	22	30	37	45	55	75
with fixed displacement pump	PGF2-2X/019	27	p [bar]		**82**	**112**	**153**	**210**								
			Size		100	100|160	100|160	160|250								
	PGF3-3X/020	29	p [bar]		**67**	**94**	**130**	**195**	**210**							
			Size		100	100|160	100|160	160|250	160|250							
	PGF3-3X/025	36	p [bar]		**53**	**76**	**105**	**156**	**210**							
			Size		160	160	160	160|250	160|250							
	PGF3-3X/032	47	p [bar]			**65**	**89**	**132**	**180**	**210**						
			Size			160	160	160|250	160|250	250|400						
	PGF3-3X/040	58	p [bar]				**63**	**97**	**135**	**169**	**180**					
			Size				250	250	250	250|400	250|400					
	PGH4-X/020	29	p [bar]					**203**	**280**	**315**						
			Size					160|250	160|250	250|400						
	PGH4-X/025	36	p [bar]					**161**	**221**	**274**	**315**					
			Size					160|250	160|250	250|400	250|400					
	PGH4-X/032	47	p [bar]						**173**	**212**	**252**	**315**				
			Size						160|250	250|400	250|400	250|400				
	PGH4-X/040	58	p [bar]							**174**	**207**	**281**	**315**			
			Size							250|400	250|400	250|400	400			
	PGH4-X/050	73	p [bar]							**142**	**170**	**233**	**250**	**250**		
			Size							250|400	250|400	250|400	400	400		
	PGH5-X/063	93	p [bar]								**127**	**175**	**216**	**265**		
			Size								400	400	400	400		
with external gear pump	AZPJ-22-016	22	p [bar]	**67**	**91**	**127**	**174**	**250**								
			Size	100	100	100|160	100|160	160|250								
	AZPJ-22-019	27	p [bar]	**57**	**77**	**107**	**147**	**215**	**250**							
			Size	100	100	100|160	100|160	160|250	160|250							
	AZPJ-22-022	31	p [bar]		**64**	**89**	**123**	**181**	**210**							
			Size		100|160	100|160	100|160	160|250	160|250							
	AZPJ-22-025	35	p [bar]			**81**	**111**	**165**	**185**							
			Size			160	160	160|250	160|250							
	AZPJ-22-028	39	p [bar]			**71**	**98**	**130**								
			Size			160	160	160|250								
with control pump and DFR1 controller	A10VSO 18	26	p [bar]		**90**	**110**	**138**	**228**	**280**							
			Size		100	100	100	160	160							
	A10VSO 28	40	p [bar]			**70**	**95**	**132**	**180**	**222**	**280**					
			Size			160	160	160|250	160|250	250	250					
	A10VSO 45	65	p [bar]				**60**	**81**	**111**	**137**	**162**	**222**	**280**			
			Size				250	250	250	250|400	250|400	400|630	400|630			
	A10VSO 71	102	p [bar]						**72**	**89**	**106**	**144**	**178**	**220**	**280**	
			Size						400	400	400	400|630	400|630	400|630	630	
	A10VSO 100	145	p [bar]							**61**	**73**	**99**	**136**	**170**	**205**	**280**
			Size							400	400	400|630	400|630	400|630	630	630
	A10VSO 140	203	p [bar]											**119**	**146**	**200**
			Size											630	630	630
with control pump and DFLR controller	A10VSO 45	65	p max [bar]				**280**									
			Size				250									
	A10VSO 71	102	p max [bar]					**280**	**280**	**280**						
			Size					400	400	400						
	A10VSO 100	145	p max [bar]							**280**	**280**					
			Size							400	400					

ABPAC hydraulic power unit configurations with Sytronix FCP 5020

Pumps						**Motors**					
	n_{max} = 3,000 (PGH); 3,600(PGF) rpm					**4**	**5,5**	**7,5**	**11**	**15**	**P_{nom}[kW]**
Typ	**Size**	**p_{cont} [bar]**	**p_{max} [bar]**	**Q_{peff} [l/min]**	**Q_{max} [l/min]**	**4,000**	**4,000**	**4,000**	**3,800**	**3,800**	**n_{max} [rpm]**
PGF2 Tank Size	8.0	210	250	19	29	**139** 100					**p_{eff} [bar] (without efficiency)**
PGF2 Tank Size	13.0	210	250	31	47		**119** 100|160				
PGF2 Tank Size	19.0	210	250	46	68		**84** 160	**114** 160|250			
PGH2 Tank Size	8.0	315	350	19	24	**143** 100	**198** 100	**269** 100			
PGH3 Tank Size	13.0	315	350	31	39	**88** 100|160	**122** 100|160	**166** 100|160	**244** 160		
PGH4 Tank Size	20.0	315	350	48	60		**79** 160	**108** 160|250	**158** 160|250	**216** 160|250	
PGH4 Tank Size	32.0	315	350	77	98				**99** 250	**135** 250|400	
PGH4 Tank Size	50.0	250	310	120	152					**86** 400	

Reduced delivery times due to online configuration and standard components



* In case of special requests, processing time extends accordingly

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