



BADER MOTOR TECHNOLOGY

BOOSTER PUMP CATALOG



TSEK CE



Since 1991, as Bader Motor Technologies, we have carried out numerous pump and motor productions contributing to our country's agriculture and industry in a 7000 m² closed and 20000 m² open area. As a subsidiary of Arçelik, we have been producing electric motors and exporting submersible motors to different countries, making a name for ourselves in the global market. With our corporate knowledge and experience, we closely follow technological developments to seek the performance and capacity of our products. As of 2020, we continue our activities in our new facility of 31,000 m², allocating 1,000m² of it to the R&D Center within a closed area of 13,000 m².

Our R&D center, established in 2017, takes pride in being the first in our region. Here, research and development studies are carried out with a critical perspective on different ideas, focusing on results. Our main goal is to broaden the vision of our staff and provide new perspectives by integrating them into the existing technological system.

Within the scope of university-industry collaboration, our KOSGEB and TÜBİTAK projects, which have been carried out and successfully completed, have significantly explored our company's innovation and research capacity. Thanks to these projects, we are developing innovative products and technologies by combining academic knowledge with industrial practice. This process plays a critical role in achieving our goals of contributing to the country's economy by reducing imports and promoting domestic production. We aim to strengthen our leading position in the sector and actively contribute to Turkey's technological advancement with the products we develop.

The strategic location of our factory is filled with advantages such as both railway and road infrastructure, surrounding treasure lands, favorable land values, abundance of underground water resources, and proximity to the city center. We aim to make the best use of this potential by following evolving technology and keeping up with innovations both globally and in Turkey.

Our trade and sales strategy aims to expand our services to the surrounding and regional provinces and to spread this success to the whole of Turkey. This strategic approach aims to expand our export capacity by carrying our products to the world markets after establishing a strong foundation in our national market. We continuously improve the quality of our services and products to be the first choice of our customers. Designing and developing energy and time-saving, safe, and high-quality products is a passion for us. With our business diversity, occupational safety, and business ethics principles, we focus on producing innovative solutions to problems and developing domestic products that will reduce imports.

OUR VISION

While transferring our accumulated knowledge and experiences in the electric motors and water pump technologies sector to future generations, we focus on continuously developing innovative and technological products through our R&D activities. With our competitive structure, we aim not only to add value to our stakeholders and the national economy but also to create a sensitive, sustainable dynamism towards society and the environment by developing products that are not yet produced in the domestic market and will reduce imports.

OUR MISSION

While advancing with the ambition of being a leading company in the sector, we aim to reflect the spirit of the Turkish Century; and to be the first choice of consumers with our service and product quality. It is important for us to strengthen our domestic production with high efficiency and innovative designs, and to become a reliable and preferred brand with our environmentally friendly and customer-beneficial products. Pursuing constant innovation through our R&D studies, increasing employment, contributing to economic development, and promoting sustainable development are our vision in constantly renewing our way of doing business.

OUR UNDERSTANDING OF QUALITY

Our company's understanding of quality is based on compliance with national and international standards and continuous improvement. In light of these standards, our company has increased product and service quality by being certified with TSEK and HYB certificates by the Turkish Standards Institute. Our company has adopted production in accordance with ISO 9001, ISO 14001, ISO 45001 standards and has been certified by independent organizations. Furthermore, aiming to maintain customer satisfaction at the highest level and rapidly adapt to innovations in the industry, our ISO 10002 certification has been documented and certified by independent organizations. In order to certify the quality of our products, we manufacture in compliance with the CE standard. Providing the best service to our valued customers even after sales is always one of the main goals of our company. By having the SSHYB certificate, we demonstrate the importance we place on after-sales service for our valued customers.

WATER BOOSTER PUMPS



BADER MOTOR TECHNOLOGY



TSEK CE



INTRODUCTION

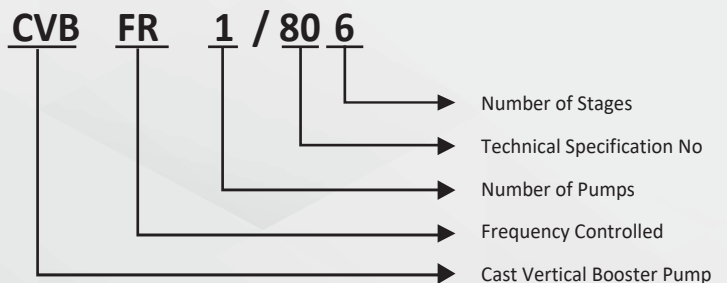
The frequency controlled Booster pumps is designed to maximize energy savings and provide constant pressure water supply in case of inadequate city network, high-rise buildings, settlements with reservoirs for possible interruptions. High efficiency and protection are provided in pumps with frequency converter.

USAGE AREAS

- Buildings
- Apartments
- Detached
- Houses
- Villas
- Schools
- Hospitals
- Business Centers
- Shopping Malls

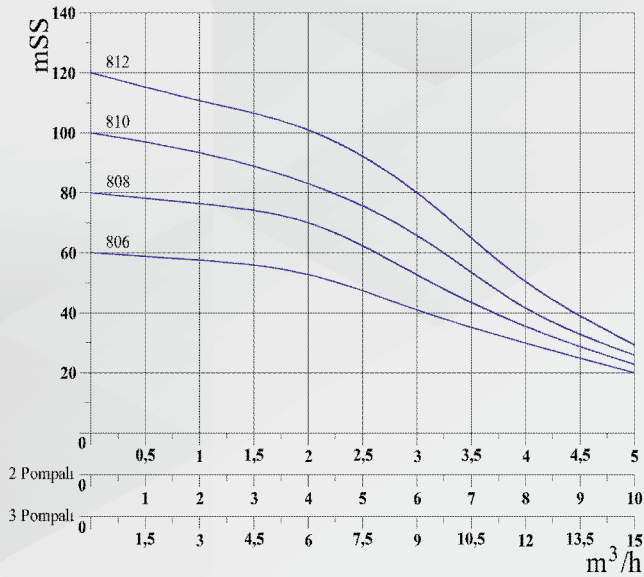
PUMP FEATURES

- ▶ More economical with high energy savings
- ▶ Lower starting current
- ▶ Unique protection with enhanced security systems
- ▶ Lower risk of water leakage with adjustable start and stop time
- ▶ Precise pressure measurement with pressure transmitter
- ▶ Motor transportation system
- ▶ Equal aging system with rotation
- ▶ Digital control panel 1.1 KW - 18.5 KW
- ▶ Multi-pump controlled
- ▶ CE Certified



CVB FR 800 SERIES

FREQUENCY CONTROLLED BOOSTER PUMPS



TECHNICAL INFORMATION

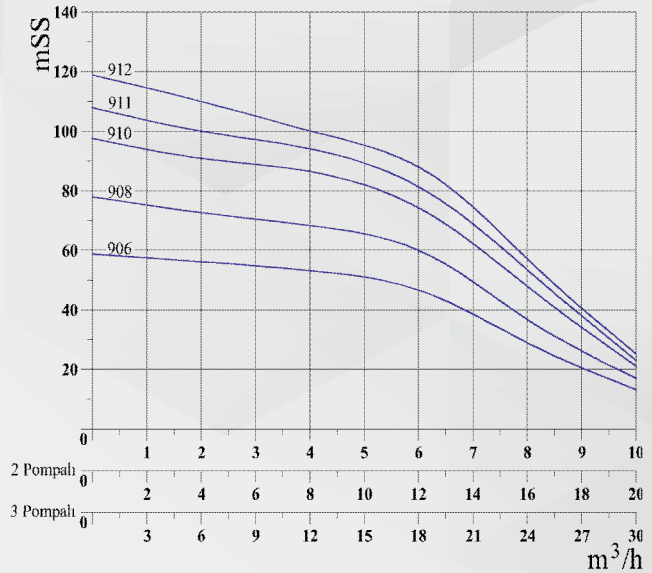
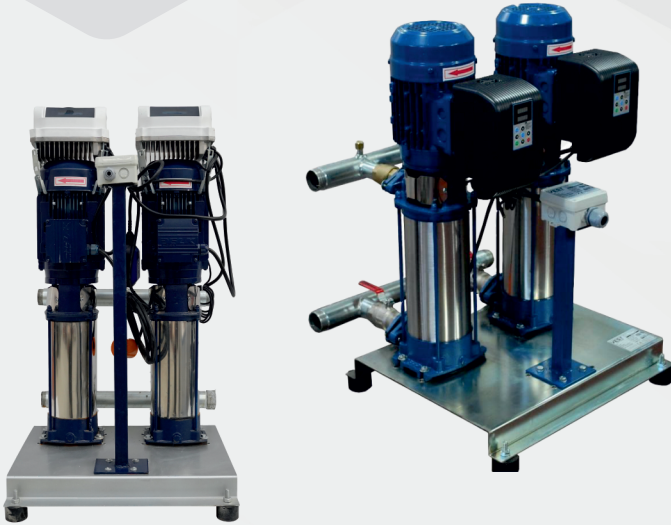
- *Mechanical Seal : Carbon/Ceramic
- *Pump Body : Stainless Steel
- *Suction/Discharge Body : GG25 Cast Iron
- *Impeller/Diffuser : Norly

- *Pump Shaft : AISI 304 Stainless Steel
- *Collectors : Galvanized Coated
- *Oring : NBR

Model	Power		Max. Flow Rate (m ³ /h)	Max. Pressure (mSS)	Number of Floors	Number of Stages	Inlet Outlet Diameters	Recommended Tank Volume (L/Bar)	
	Hp	Kw							
Single Pump	CVB FR 1/806	1x1.5	1x1.1	1x5	60	6	15	1¼"-1"	100/10
	CVB FR 1/808	1x1.5	1x1.1	1x5	80	10	15	1¼"-1"	100/10
	CVB FR 1/810	1x2.0	1x1.5	1x5	100	16	15	1¼"-1"	100/10
	CVB FR 1/812	1x2.0	1x1.5	1x5	120	18	15	1¼"-1"	100/16
Double Pump	CVB FR 2/806	2x1.5	2x1.1	2x5	60	6	30	1½"-1½"	200/10
	CVB FR 2/808	2x1.5	2x1.1	2x5	80	10	30	1½"-1½"	200/10
	CVB FR 2/810	2x2.0	2x1.5	2x5	100	16	30	1½"-1½"	200/10
	CVB FR 2/812	2x2.0	2x1.5	2x5	120	18	30	1½"-1½"	200/16
Triple Pump	CVB FR 3/806	3x1.5	3x1.1	3x5	60	6	45	2"-2"	300/10
	CVB FR 3/808	3x1.5	3x1.1	3x5	80	10	45	2"-2"	300/10
	CVB FR 3/810	3x2.0	3x1.5	3x5	100	16	45	2"-2"	300/10
	CVB FR 3/812	3x2.0	3x1.5	3x5	120	18	45	2"-2"	300/16

***Please contact our company for single-phase systems.
 ***The recommended Closed Expansion Tanks are the minimum capacities required.
 ***Frequency controlled panel is not used for hydrophore pump systems larger than 7.5 kW.





TECHNICAL INFORMATION

- *Mechanical Seal : Carbon/Ceramic
- *Pump Body : Stainless Steel
- *Suction/Discharge Body : GG25 Cast Iron
- *Impeller/Diffuser : Norly

- *Pump Shaft : AISI 304 Stainless Steel
- *Collectors : Galvanized Coated
- *Oring : NBR

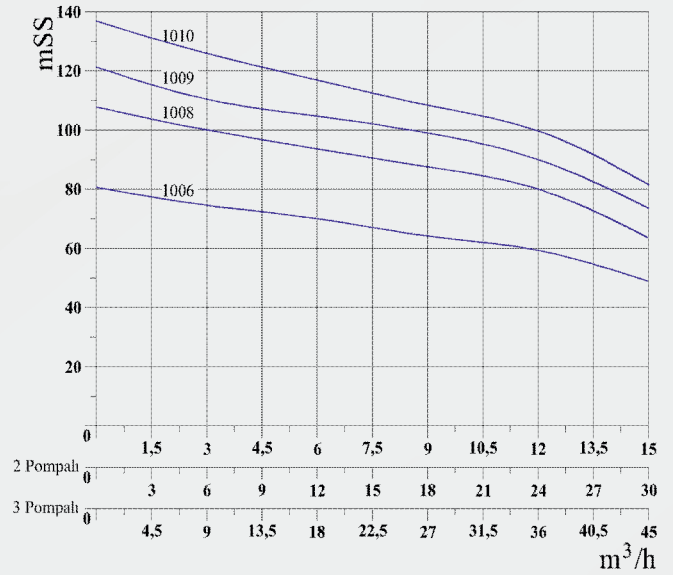
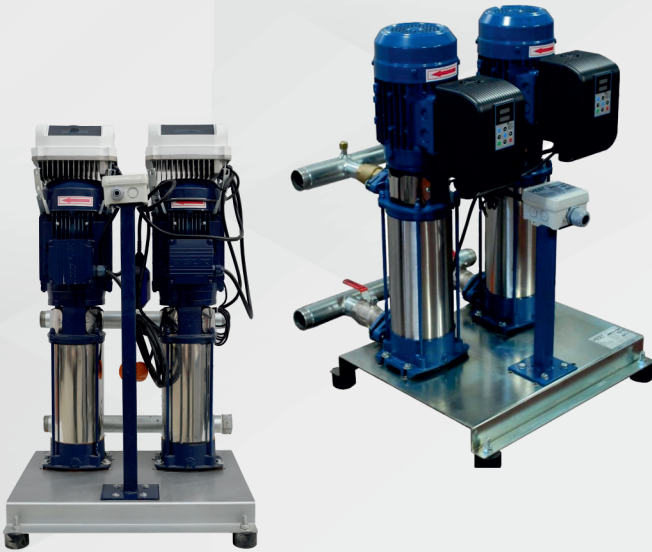
Model	Power		Max. Flow Rate (m³/h)	Max. Pressure (mSS)	Number of Floors	Number of Stages	Inlet Outlet Diameters	Recommended Tank Volume (L/Bar)	
	Hp	Kw							
Single Pump	CVB FR 1/906	1x1.5	1x1.1	1x10	58	6	25	1¼"-1"	100/10
	CVB FR 1/908	1x2.0	1x1.5	1x10	78	12	25	1¼"-1"	100/10
	CVB FR 1/910	1x3.0	1x2.2	1x10	98	18	25	1¼"-1"	100/10
	CVB FR 1/911	1x3.0	1x2.2	1x10	108	20	25	1¼"-1"	100/16
	CVB FR 1/912	1x4.0	1x3.0	1x10	118	24	25	1¼"-1"	100/16
Double Pump	CVB FR 2/906	2x1.5	2x1.1	2x10	58	6	50	1½"-1½"	200/10
	CVB FR 2/908	2x2.0	2x1.5	2x10	78	12	50	1½"-1½"	200/10
	CVB FR 2/910	2x3.0	2x2.2	2x10	98	18	50	1½"-1½"	200/10
	CVB FR 2/911	2x3.0	2x2.2	2x10	108	20	50	1½"-1½"	200/16
	CVB FR 2/912	2x4.0	2x3.0	2x10	118	24	50	1½"-1½"	200/16
Triple Pump	CVB FR 3/906	3x1.5	3x1.1	3x10	58	6	75	2"-2"	300/10
	CVB FR 3/908	3x2.0	3x1.5	3x10	78	12	75	2"-2"	300/10
	CVB FR 3/910	3x3.0	3x2.2	3x10	98	18	75	2"-2"	300/10
	CVB FR 3/911	3x3.0	3x2.2	3x10	108	20	75	2"-2"	300/16
	CVB FR 3/912	3x4.0	3x3.0	3x10	118	24	75	2"-2"	300/16

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 ***The recommended Closed Expansion Tanks are the minimum capacities required.
 ***Frequency controlled panel is not used for hydrophore pump systems larger than 7.5 kW.



CVB FR 1000 SERIES

FREQUENCY CONTROLLED BOOSTER PUMPS



TECHNICAL INFORMATION

*Mechanical Seal : Carbon/Ceramic

*Pump Body : Stainless Steel

*Suction/Discharge Body : GG25 Cast Iron

*Impeller/Diffuser : Norly

*Pump Shaft : AISI 304 Stainless Steel

*Collectors : Galvanized Coated

*Oring : NBR

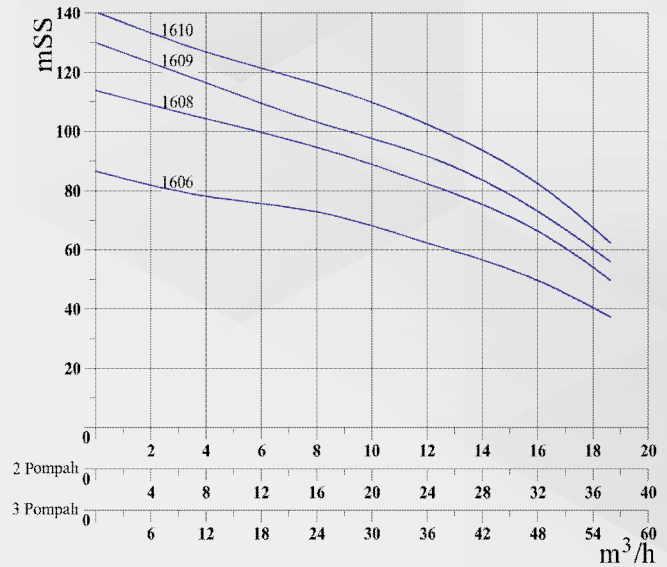
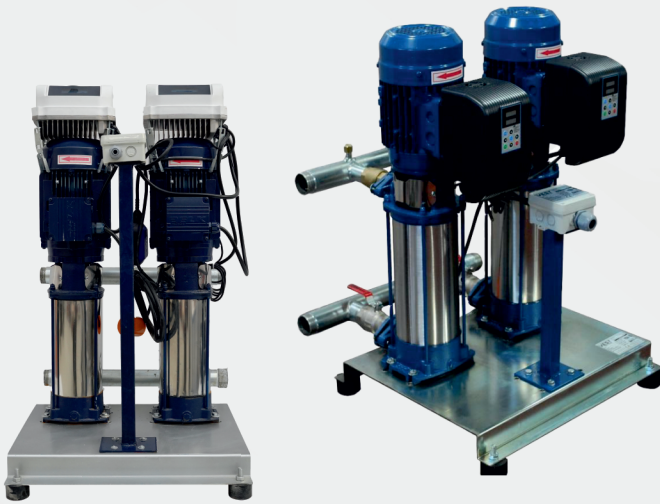
PRODUCT SERIES	Model	Power		Max. Flow Rate (m ³ /h)	Max. Pressure (mSS)	Number of Floors	Number of Stages	Inlet Çıkış Diameters	Recommended Tank Volume (L/Bar)
		Hp	Kw						
Single Pump	CVB FR 1/1006	1x4.0	1x3.0	1x15	82	12	50	1½"-1¼"	200/10
	CVB FR 1/1008	1x5.5	1x4.0	1x15	110	18	50	1½"-1¼"	200/16
	CVB FR 1/1009	1x7.5	1x5.5	1x15	122	21	50	1½"-1¼"	200/16
	CVB FR 1/1010	1x7.5	1x5.5	1x15	140	24	50	1½"-1¼"	200/16
Double Pump	CVB FR 2/1006	2x4.0	2x3.0	2x15	82	12	100	2"-2"	300/10
	CVB FR 2/1008	2x5.5	2x4.0	2x15	110	18	100	2"-2"	300/16
	CVB FR 2/1009	2x7.5	2x5.5	2x15	122	21	100	2"-2"	300/16
	CVB FR 2/1010	2x7.5	2x5.5	2x15	140	24	100	2"-2"	300/16
Triple Pump	CVB FR 3/1006	3x4.0	3x3.0	3x15	82	12	150	2½"-2½"	500/10
	CVB FR 3/1008	3x5.5	3x4.0	3x15	110	18	150	2½"-2½"	500/16
	CVB FR 3/1009	3x7.5	3x5.5	3x15	122	21	150	2½"-2½"	500/16
	CVB FR 3/1010	3x7.5	3x5.5	3x15	140	24	150	2½"-2½"	500/16

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*Mechanical Seal : Carbon/Ceramic
 *Pump Body : Stainless Steel
 *Suction/Discharge Body : GG25 Cast Iron
 *Impeller/Diffuser : Norly

*Pump Shaft : AISI 304 Stainless Steel
 *Collectors : Galvanized Coated
 *Oring : NBR

TECHNICAL INFORMATION

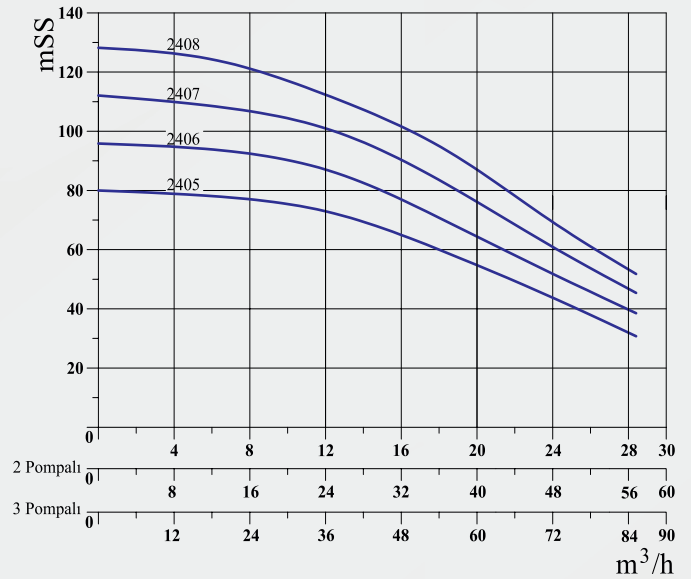
Model	Power		Max. Flow Rate (m³/h)	Max. Pressure (mSS)	Number of Floors	Number of Stages	Inlet Outlet Diameters	Recommended Tank Volume (L/Bar)	
	Hp	Kw							
Single Pump	CVB FR 1/1606	1x5.5	1x4.0	1x18	88	12	70	1½"-1¼"	200/10
	CVB FR 1/1608	1x7.5	1x5.5	1x18	115	16	70	1½"-1¼"	200/16
	CVB FR 1/1609	1x7.5	1x5.5	1x18	127	18	70	1½"-1¼"	200/16
	CVB FR 1/1610	1x10	1x7.5	1x18	138	20	70	1½"-1¼"	200/16
Double Pump	CVB FR 2/1606	2x5.5	2x4.0	2x18	88	12	140	2½"-2"	300/10
	CVB FR 2/1608	2x7.5	2x5.5	2x18	115	16	140	2½"-2"	300/16
	CVB FR 2/1609	2x7.5	2x5.5	2x18	127	18	140	2½"-2"	300/16
	CVB FR 2/1610	2x10	2x7.5	2x18	138	20	140	2½"-2"	300/16
Triple Pump	CVB FR 3/1606	3x5.5	3x4.0	3x18	88	12	210	2½"-2½"	500/10
	CVB FR3/1608	3x7.5	3x5.5	3x18	115	16	210	2½"-2½"	500/16
	CVB FR 3/1609	3x7.5	3x5.5	3x18	127	18	210	2½"-2½"	500/16
	CVB FR 3/1610	3x10	3x7.5	3x18	138	20	210	2½"-2½"	500/16

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CVB FR 2400 SERIES

FREQUENCY CONTROLLED BOOSTER PUMPS



- *Mechanical Seal : Carbon/Ceramic
- *Pump Body : Stainless Steel
- *Suction/Discharge Body : GG25 Cast Iron
- *Impeller/Diffuser : Norly

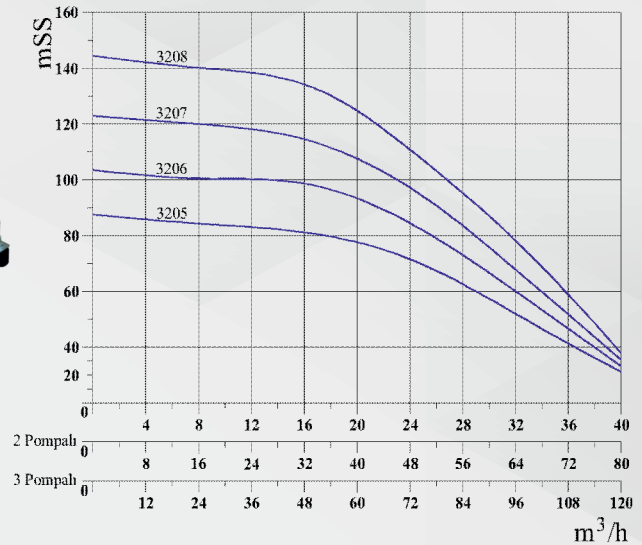
- *Pump Shaft : AISI 304 Stainless Steel
- *Collectors : Galvanized Coated
- *Oring : NBR

TECHNICAL INFORMATION

Model	Power		Max. Flow Rate (m ³ /h)	Max. Pressure (mSS)	Number of Floors	Number of Stages	Inlet Outlet Diameters	Recommended Tank Volume (L/Bar)	
	Hp	Kw							
Single Pump	CVB FR 1/2405	1x7.5	1x5.5	1x28	70	10	100	2½"-2"	300/10
	CVB FR 1/2406	1x10	1x7.5	1x28	80	14	100	2½"-2"	300/10
	CVB FR 1/2407	1x10	1x7.5	1x28	96	18	100	2½"-2"	300/16
	CVB FR 1/2408	1x15	1x11	1x28	112	20	100	2½"-2"	300/16
Double Pump	CVB FR 2/2405	2x7.5	2x5.5	2x28	70	10	200	3"-2½"	500/10
	CVB FR 2/2406	2x10	2x7.5	2x28	80	14	200	3"-2½"	500/10
	CVB FR 2/2407	2x10	2x7.5	2x28	96	18	200	3"-2½"	500/16
	CVB FR 2/2408	2x15	2x11	2x28	112	20	200	3"-2½"	500/16
Triple Pump	CVB FR 3/2405	3x7.5	3x5.5	3x28	70	10	300	DN100-DN80	750/10
	CVB FR 3/2406	3x10	3x7.5	3x28	80	14	300	DN100-DN80	750/10
	CVB FR 3/2407	3x10	3x7.5	3x28	96	18	300	DN100-DN80	750/16
	CVB FR 3/2408	3x15	3x11	3x28	112	20	300	DN100-DN80	750/16

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TECHNICAL INFORMATION

*Mechanical Seal : Carbon/Ceramic
 *Pump Body : Stainless Steel
 *Suction/Discharge Body : GG25 Cast Iron
 *Impeller/Diffuser : Norly

*Pump Shaft : AISI 304 Stainless Steel
 *Collectors : Galvanized Coated
 *Oring : NBR

PRODUCT SERIES

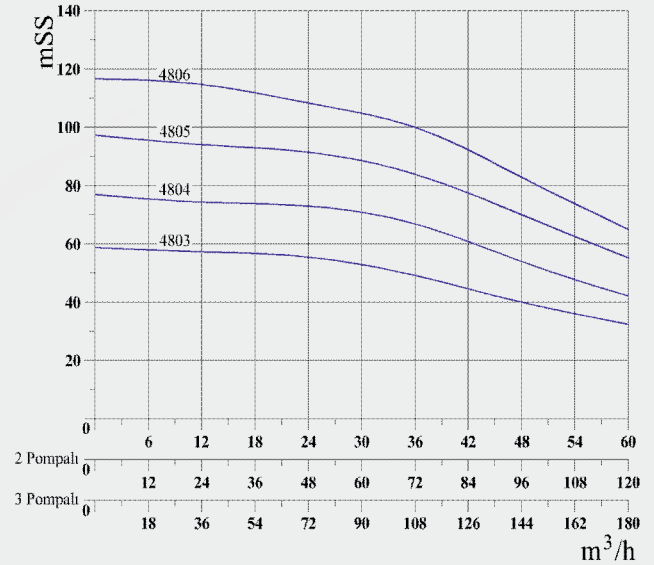
Model	Power		Max. Flow Rate (m ³ /h)	Max. Pressure (mSS)	Number of Floors	Number of Stages	Inlet Outlet Diameters	Recommended Tank Volume (L/Bar)	
	Hp	Kw							
Single Pump	CVB FR 1/3205	1x10	1x7.5	1x40	88	12	120	2½"-2"	500/10
	CVB FR 1/3206	1x15	1x11	1x40	104	16	120	2½"-2"	500/10
	CVB FR 1/3207	1x15	1x11	1x40	122	20	120	2½"-2"	500/16
	CVB FR 1/3208	1x20	1x15	1x40	142	22	120	2½"-2"	500/16
Double Pump	CVB FR 2/3205	2x10	2x7.5	2x40	88	12	240	DN100-DN80	750/10
	CVB FR 2/3206	2x15	2x11	2x40	104	16	240	DN100-DN80	750/10
	CVB FR 2/3207	2x15	2x11	2x40	122	20	240	DN100-DN80	750/16
	CVB FR 2/3208	2x20	2x15	2x40	142	22	240	DN100-DN80	750/16
Triple Pump	CVB FR 3/3205	3x10	3x7.5	3x40	88	12	360	DN125-DN100	1000/10
	CVB FR 3/3206	3x15	3x11	3x40	104	16	360	DN125-DN100	1000/10
	CVB FR 3/3207	3x15	3x11	3x40	122	20	360	DN125-DN100	1000/16
	CVB FR 3/3208	3x20	3x15	3x40	142	22	360	DN125-DN100	1000/16

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CVB FR 4800 SERIES

FREQUENCY CONTROLLED BOOSTER PUMPS



TECHNICAL INFORMATION

- *Mechanical Seal : Carbon/Ceramic
- *Pump Body : Stainless Steel
- *Suction/Discharge Body : GG25 Cast Iron
- *Impeller/Diffuser : Norly

- *Pump Shaft : AISI 304 Stainless Steel
- *Collectors : Galvanized Coated
- *Oring : NBR

PRODUCT SERIES	Model	Power		Max. Flow Rate (m³/h)	Max. Pressure (mSS)	Number of Floors	Number of Stages	Inlet Outlet Diameters	Recommended Tank Volume (L/Bar)
		Hp	Kw						
Single Pump	CVB FR 1/4803	1x15	1x11	1x60	58	8	230	3"-2½"	1000/10
	CVB FR 1/4804	1x20	1x15	1x60	78	10	230	3"-2½"	1000/10
	CVB FR 1/4805	1x20	1x15	1x60	98	15	230	3"-2½"	1000/10
	CVB FR 1/4806	1x25	1x18.5	1x60	118	20	230	3"-2½"	1000/16
Double Pump	CVB FR 2/4803	2x15	2x11	2x60	58	8	460	DN100-DN80	1000/10
	CVB FR 2/4804	2x20	2x15	2x60	78	10	460	DN100-DN80	1000/10
	CVB FR 2/4805	2x20	2x15	2x60	98	15	460	DN100-DN80	1000/10
	CVB FR 2/4806	2x25	2x18.5	2x60	118	20	460	DN100-DN80	1000/16
Triple Pump	CVB FR 3/4803	3x15	3x11	3x60	58	8	690	DN125-DN100	1500/10
	CVB FR 3/4804	3x20	3x15	3x60	78	10	690	DN125-DN100	1500/10
	CVB FR 3/4805	3x20	3x15	3x60	98	15	690	DN125-DN100	1500/10
	CVB FR 3/4806	3x25	3x18.5	3x60	118	20	690	DN125-DN100	1500/16

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GENERAL SALES TERMS

Prices do not include VAT.

Vest Pump&Motor may change the sales price and conditions without notice.

Our prices are ex-factory delivery prices.

The shipping cost of the ordered products is the responsibility of the buyer.

In case of damage to the sold product during shipping or in the warehouse, the customer is responsible.

Be sure to prepare a report for the compensation of the damage.

Vest branded products are guaranteed for 2 years against labor and production defects. The return of faulty or used products is strictly not accepted.

Cases excluded from the warranty coverage:

- ▶ Failure to commission by the authorized service,
 - ▶ Failure to perform maintenance and repair service by the authorized service,
 - ▶ Failures due to improper suction line,
 - ▶ Failures due to installation or incorrect assembly,
 - ▶ Failures caused by running pumps dry,
 - ▶ Failures due to electrical installation or not using the appropriate control panel or lack of sufficient protection equipment in the control panel,
 - ▶ Failures caused by voltage fluctuations or excessive current,
 - ▶ Failures due to use for purposes other than intended,
 - ▶ Failures caused by running pumps and control panels in extremely dirty, humid, or open-air environments, or above specified environmental or fluid temperatures,
 - ▶ Failures due to shocks, impacts, and drops during the shipment or transportation of the products.
- Commissioning is carried out free of charge by our authorized services. However, if there is a need for a second visit due to assembly/material shortage, incorrect assembly/plumbing, a service fee will be charged.
- ▶ If our (Electrical) protection panel is not installed and problems arise from deficiencies in the electrical installation, the burning of the electric motor is not covered by the warranty.



WARRANTY TERMS

Our products are under the guarantee of the manufacturer and importer companies for two (2) years against material, labor, and production defects.

The commissioning of our products should be carried out by authorized services.

The following points are not covered by the warranty.

- ▶ Maintenance and service of faulty products should only be performed by authorized services.
- ▶ Failures that may arise from the improper installation of the suction line in hydrophore systems and centrifugal pumps, and failures that may occur in products used for purposes other than their intended use, purchased from individuals or organizations outside the authorized dealers and sellers, and errors arising from the installation or incorrect assembly of products, errors arising from running the pumps dry, and errors arising from operating the pump and electrical panels in excessively dirty and humid environments or above the specified environmental temperatures.
- ▶ Failures that may arise from the lack of sufficient protection devices in the electrical installation or control panel.
- ▶ In all products, if the electrical panel recommended by the manufacturer and importer company for these devices and to be used with the product is not used, the product will not be covered by the warranty in case of failures in the pump part due to the electric motor, dry operation, and overheating, both in the electric motor and due to the absence of sufficient protection devices in the control panel.
- ▶ Failures caused by high voltage fluctuations and high phase differences, resulting in products being damaged by external conditions such as impact and vibration.
- ▶ According to the regulations of the Ministry of Trade and Industry, consumers are given a TWO (2) year warranty against manufacturing defects for the products they purchase. However, it should be noted that this warranty is given against manufacturing defects, and it should be known that failures occurring during use and all failures occurring after assembly errors are outside the warranty. These details are clearly stated on the back of the warranty cards as situations not covered by the warranty.
- ▶ Customers presenting the warranty card will have defective products replaced with new parts if there is a manufacturing defect, otherwise, they will be repaired by authorized services for a fee.

For more detailed information, please examine the warranty card.



WATER BOOSTER PUMPS FLOW RATE CALCULATION

In the calculation of the flow rate of the booster pump, the intended use of the location where the booster pump will be installed is determinative. For example, there will be differences in the flow rate calculation of a booster pump intended for domestic use and a booster pump catering to dormitories, schools, sports halls, or industrial consumption. The difference arising from the nature of the location in the flow rate calculation is called the simultaneous use factor (f). It is necessary to take into account the number of users; the number of independent sections (apartments) and the number of people in each independent section in residences, the number of beds in hospitals and hotels, and the number of employees in workplaces, etc.

$$Q = A \times B \times T \times f / 1000 \text{ (m}^3\text{/h)}$$

A : Number of apartments or independent sections in the building

B : Number of people per independent section

T : Average water consumption per person (liters/day)

f : Simultaneous use factor



AVERAGE WATER CONSUMPTION IN RESIDENCES

Apartment Buildings	100-200 lITERS/dAY/P ERSON
Luxury Apartments	150-200 lITERS/dAY/PERSON
Luxury Villas and Summer Houses	200-250 lITERS/dAY/PERSON

AVERAGE WATER CONSUMPTION IN RESIDENCES	
Guesthouses	100-120 Liters/day/person
Hotels	200-600 Liters/day/person
Hospitals	250-600 Liters/day/person
Offices, Workplaces	40-60 Liters/day/person
Schools	5-20 Liters/day/person
Boarding Schools	100-200 Liters/day/person

NUMBER OF RESIDENCES (FAMILIES)	SIMULTANEOUS USE FACTOR
Up to 4 apartments	0,66
5 - 10 apartments	0,45
11 - 20 apartments	0,40
21 - 50 apartments	0,35
51 - 100 apartments	0,30
More than 100 apartments	0,25



CALCULATION OF BOOSTER PUMP PRESSURE (mSS)

The Booster pump output pressure is the sum of the front pressure coming to the booster pump suction manifold and the pressure created by the booster pump. In booster pump systems in Turkey, a water tank at the same level as the booster pump feed line to the atmosphere is generally used, so the front pressure of the water can be neglected. In determining the booster pump output pressure, the distance between the location of the hydrophore and the farthest water consumption point in the building is called the critical line. The booster pump selection is made so that there is a flow pressure of 10-15 mSS at the end user on this critical line.

$$H_{bot} = h + \Sigma\Delta p + P_{min} + \Sigma\Delta s + \Sigma\Delta f - P_{in} \text{ (in mSS)}$$

$$H_m : h + \Sigma\Delta p + 15 \text{ (in mSS)}$$

$H_m = H_{down}$: Required minimum hydrophore pressure (in mSS)

h : Building static height - code difference (in mSS)

$\Sigma\Delta p$: Total transmission losses (in mSS)

15 (mSS) : Operating pressure (flow pressure)



EXPANSION TANK VOLUME CALCULATION

In determining the volume, the measure of limiting the number of motor starts (on-off cycles) is generally taken as a measure. A high number of starts shorten the service life of the electric motor, pump components, pressure switch, and other electromechanical equipment such as contactors in the panel, and cause an increase in electricity consumption due to high starting current. Therefore, it is recommended to use a tank with the largest possible volume for operating economy and service life.

The minimum nominal volume V_N of the tank to be selected;

$$V_N \geq 0,33 \times Q_{max} \times (H_{up} + 1) / ((H_{up} - H_{bot}) \times S)$$

Pressurized water, that is, useful water volume, that the selected expansion tank can store under operating conditions, v_f ,

$V_f = V_N \times (H_{up} - H_{bot}) / (H_{up} + 1)$ it can be calculated by the formula.

V_N : represents the minimum nominal volume of the tank in liters

Q_{max} : Flow rate of each pump at lower pressure (m³/h)

H_{up} : Upper pressure of the booster (bar)

H_{bot} : Bottom pressure of the booster

S : Intended number of switches of the booster (1/h)

V_f : Volume of useful water that can be stored (L)

N : Motor power





BADER MOTOR TECHNOLOGY

CERTIFICATES


T.C.
TÜRK PATENT VE MARKA KURUMU
MARKA TESCİL BELGESİ
Marka No : 2016 52957 - Ticaret - Hizmet



Marka Sahibi : VERA MOTOR SANAYİ VE DİŞ TİCARET ANONİM ŞİRKETİ
TÜRKİYE CUMHURİYETİ
Ferhatpaşa Mah.49.Sk. N:29 Ataşehir İstanbul
Emtiası : 07 , 35
İlişktedir.

İşbu Marka 15/06/2016 tarihinden itibaren ON YIL süreyle
16/02/2017 tarihinde tescil edilmiştir.


TURK PATENT
TÜRK PATENT VE MARKA KURUMU

Prof. Dr. Habib ASAN
Türk Patent ve Marka Kurumu Başkanı


TÜRK STANDARLARI ENSTİTÜSÜ
KRİTERE UYGUNLUK BELGESİ
TURKISH STANDARDS INSTITUTION
CERTIFICATE OF CONFORMANCE TO CRITERIA

Markanın Tamamı	Description of the Mark
TSEK 	
BELGE NUMARASI REFERENCE NUMBER OF LICENCE	0229730-TSEK-02/01
BELGENİN İLK VERİŞİŞ TARİHİ DATE OF FIRST ISSUE OF LICENCE	15.05.2023
BELGENİN SON GEÇERLİLİK TARİHİ LICENCE VALID UNTIL	15.05.2025
BELGE SAHİBİ KURULUŞUN ADI NAME OF THE LICENCE HOLDER	VERA MOTOR SANAYİ VE DİŞ TİCARET ANONİM ŞİRKETİ
BELGE SAHİBİ KURULUŞUN ADRESİ ADDRESS OF THE LICENCE HOLDER	ATATÜRK MAH. ATAŞEHİR BLV. GARDENYA RESIDANCE NO:7 /1 1133 ATAŞEHİR İSTANBUL
ÜRETİM YERİ ADI NAME OF THE MANUFACTURING PLACE	BADER MOTOR TEKNOLOJİLERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ
ÜRETİM YERİ ADRESİ ADDRESS OF THE MANUFACTURING PLACE	SANAYİ OSB MAH. ESOB 47 SK. NO: 15 İÇ KAPI NO: 1 YAZIKONAK KÖYÜ MERKEZ/ ELAZIĞ ELAZIĞ
TESCİL EDİLMİŞ TİCARİ MARKASI REGISTERED TRADE MARK	vest pump & motor
İLGİLİ BELGELENDİRME KRİTERİ RELATED TÜRKISH STANDARD	TSE K 582 / 26.06.2019
BELGE KAPSAMI SCOPE OF LICENCE	-HİDROFOR POMPALARI -RADYAL AKIŞLI -TEK FAZLI ÜÇ FAZLI -DİREKT YOL VERMELİ, YILDIZ/ÖÇGEN YOL VERMELİ, HIZ KONTROL İLE YOL VERMELİ -BİR POMPALI, İKİ POMPALI, ÜÇ POMPALI, DÖRT POMPALI HİDROFOR POMPALARI

e-mzalı/e-signed
02/05/2024
Belgelendirme Merkezi Başkanı Adına
AHMET SAVAŞ YONCA
TSE ELAZIĞ BELGELENDİRME MÜDÜRÜ

"Bu belge, belgelendirme süreci, ürünün yerinde test edilmesi ve belgelendirme şartları karşılığında verilmektedir.
"This certificate is issued based on the test results of the product and the compliance of the product with the relevant standards.
"Bu belge, belgelendirme süreci, ürünün yerinde test edilmesi ve belgelendirme şartları karşılığında verilmektedir.
"This certificate is issued based on the test results of the product and the compliance of the product with the relevant standards."
TSE Belgelendirme Merkezi Başkanlığı Adına
Sertifika Sorumlusu / Certificate Issuer: Ahmet Savaş Yonca / TSE Head Office / TSE Head Office
TSE Belgelendirme Merkezi Başkanlığı Adına
Sertifika Sorumlusu / Certificate Issuer: Ahmet Savaş Yonca / TSE Head Office / TSE Head Office

<http://www.tse.gov.tr>


SERTİFİKA / CERTIFICATE
Bu sertifika aşağıdaki kuruluşa verildi.
This certificate has been awarded to the company
BADER MOTOR TEKNOLOJİLERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ
SANAYİ OSB MAH. ESOB 5. KISIM 47. YOL NO: 15/1
YAZIKONAK/ELAZIĞ/TÜRKİYE

Kuruluşunun " ELEKTRİK MOTORU, İSLAK ROTORLU SİRKÜLASYON, DALGIÇ, DİK, YATAY DÖKÜM VE PASLANMAZ POMPALAR VE HİDROFORLAR, YANGIN İLE MÜCADELE HİDRAFORLARI, ENERJİTÖREK VE TRANSFORMATÖRLERİN MALATI " **Kapsamı İçin**

For scope " MANUFACTURING OF ELECTRIC MOTORS, WET ROTOR CIRCULATION, SUBMERSIBLE, VERTICAL, HORIZONTAL CASTING AND STAINLESS PUMPS AND BOOSTER PUMPS, FIRE FIGHTING HYDRATORS, GENERATORS AND TRANSFORMERS "

(ISO 10002:2018)
MÜŞTERİ MEMNUNİYETİ VE ŞİKAYETLERİ YÖNETİM SİSTEMİ
CUSTOMER SATISFACTION AND COMPLAINTS MANAGEMENT SYSTEM
Standardın şartlarına uygun bir sistem oluşturulmuş ve uygulanmış olup, bu sistemin gerektirdiği tüm şartların karşılandığı ve belgelendirme için uygun olduğu değerlendirilmiştir.
Standard is in accordance with the requirements of the standard and has been implemented and applied, and it is evaluated that all conditions required by the standard have been met and it is suitable for certification.

Sertifika Numarası / Certificate Number : VERTA-21118569
İlk Verim Tarihi / Certificate Issue Date : 26.04.2024
Sertifika Geçerlilik Tarihi / Certificate Validity Date : 26.04.2025
Sertifika Periyodu / Certificate Period : 1 Yıl / 1 Year


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CE DECLARATION OF CONFORMITY

BADER MOTOR TEKNOLOJİLERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ
SANAYİ OSB MAH. ESOB 5. KISIM 47. YOL NO: 15/1 YAZIKONAK/ELAZIĞ

Description Of the Product Ürünün Tanımı	: BOOSTER PUMPS HİDROFOR POMPALARI
Product Commercial Brand/Marka : BADER MOTOR	
Applicable EC Directives Geçerli AT Direktifleri	: MACHINERY SAFETY REGULATIONS (2006/42/EC) : MAKİNA EMNİYETİ YÖNETİMİ (2006/42/AT) : ELEKTROMANYETİK UYUMLUKLUK YÖNETİMİ (2014/30/AB) : ELECTROMAGNETIC COMPATIBILITY REGULATION (2014/30/EU) : ALÇAK GERİLİM YÖNETİMİ (2014/35/AB) : LOW VOLTAGE REGULATION (2014/35/EU)
Applicable Harmonised Standards Geçerli Uyumlaştırılmış Standartlar	: TS EN ISO 12100:2011, TS EN 60335-3-41:2010 TS EN 61000-3-2/A1:2021, TS EN 55014-1:2021

In our delivered version, we declare that the product described below complies with the essential safety and health requirements of the MACHINERY SAFETY REGULATIONS (2006/42/EC), ELECTROMAGNETIC COMPATIBILITY REGULATION (2014/30/EU), LOW VOLTAGE REGULATION (2014/35/EU) as put into circulation by us. This declaration will cease to be valid if the products specified above is replaced.
Tümün edilen versiyonumuzda, aşağıdaki ürünün, temel emniyet gereklilikleri ile uyumlu olduğunu, aşağıdaki yönetmeliklere (MACHINERY SAFETY REGULATIONS (2006/42/EC), ELECTROMAGNETIC COMPATIBILITY REGULATION (2014/30/EU), ALÇAK GERİLİM YÖNETİMİ (2014/35/AB)) yönetmeliklerinin temel emniyet ve sağlık gerekliliklerine uygun olduğunu beyan ederiz. Yukarıdaki bilgiler belirtilen ürünlerin değiştirilmesi halinde bu beyan geçerliliğini yitirir.

Sertifika Numarası / Certificate Number : VERTA-21118568
İlk Verim Tarihi / Certificate Issue Date : 26.04.2024
Sertifika Geçerlilik Tarihi / Certificate Validity Date : 26.04.2025
Sertifika Periyodu / Certificate Period : 1 Yıl / 1 Year


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BADER MOTOR TECHNOLOGY


CERTIFICATE
**BADER MOTOR TEKNOLOJİLERİ
SAN. VE TİC. A.Ş.**
SANAYİ OSB MAH. E0SB 47. SOK. NO:15/1
YAZIKONAK / MERKEZ / ELAZIĞ / TÜRKİYE
*Has been assessed and found to Comply with the Requirements of:
Denetlenmiş ve aşağıdaki standardın gerekliliklerine uygunluğu görülmüştür:*
ISO 9001:2015
*The Quality Management System is applicable to:
Kalite Yönetim Sistemi:*
MANUFACTURING OF ELECTRIC MOTORS, WET ROTOR CIRCULATION,
SUBMERSIBLE, VERTICAL, HORIZONTAL CASTING AND STAINLESS
PUMPS AND BOOSTER PUMPS, FIRE FIGHTING HYDRATORS,
GENERATORS AND TRANSFORMERS
ELEKTRİK MOTORU, ISLAK ROTORLU SİRKÜLASYON, DALGIÇ, DİK, YATAY
DÖKÜM VE PASLANMAZ POMPALAR VE HİDROFORLAR, YANGIN İLE MÜCADELE
HİDRAFORLARI, JENERATÖRLER VE TRANSFORMATÖRLERİN İMALATI
Certificate Number: QMS-0103678/01 Initial Certification Date: 08.03.2022
Belge Numarası: QMS-0103678/01 İlk Belgeleme Tarihi: 08.03.2022
Certification Period: 3 Years Certificate Validity Date: 07.03.2025
Belgeleme Periyodu: 3 Yıl Belge Geçerlilik Tarihi: 07.03.2025

IQR ULUSLARARASI BELGELENDİRME HİZMETLERİ LTD.ŞTİ.
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CERTIFICATE
**BADER MOTOR TEKNOLOJİLERİ
SAN. VE TİC. A.Ş.**
SANAYİ OSB MAH. E0SB 47. SOK. NO:15/1
YAZIKONAK / MERKEZ / ELAZIĞ / TÜRKİYE
*Has been assessed and found to Comply with the Requirements of:
Denetlenmiş ve aşağıdaki standardın gerekliliklerine uygunluğu görülmüştür:*
ISO 14001:2015
*The Environmental Management System is applicable to
Çevre Yönetim Sistemi:*
MANUFACTURING OF ELECTRIC MOTORS, WET ROTOR CIRCULATION,
SUBMERSIBLE, VERTICAL, HORIZONTAL CASTING AND STAINLESS
PUMPS AND BOOSTER PUMPS, FIRE FIGHTING HYDRATORS,
GENERATORS AND TRANSFORMERS
ELEKTRİK MOTORU, ISLAK ROTORLU SİRKÜLASYON, DALGIÇ, DİK, YATAY
DÖKÜM VE PASLANMAZ POMPALAR VE HİDROFORLAR, YANGIN İLE MÜCADELE
HİDRAFORLARI, JENERATÖRLER VE TRANSFORMATÖRLERİN İMALATI
Certificate Number: EMS-0103678/01 Initial Certification Date: 08.03.2022
Belge Numarası: EMS-0103678/01 İlk Belgeleme Tarihi: 08.03.2022
Certification Period: 3 Years Certificate Validity Date: 07.03.2025
Belgeleme Periyodu: 3 Yıl Belge Geçerlilik Tarihi: 07.03.2025

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CERTIFICATE
**BADER MOTOR TEKNOLOJİLERİ
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SANAYİ OSB MAH. E0SB 47. SOK. NO:15/1
YAZIKONAK / MERKEZ / ELAZIĞ / TÜRKİYE
*Has been assessed and found to Comply with the Requirements of:
Denetlenmiş ve aşağıdaki standardın gerekliliklerine uygunluğu görülmüştür:*
ISO 45001:2018
*The Occupational Health and Safety Management System is applicable to:
İş Sağlığı Ve Güvenliği Yönetim Sistemi:*
MANUFACTURING OF ELECTRIC MOTORS, WET ROTOR CIRCULATION,
SUBMERSIBLE, VERTICAL, HORIZONTAL CASTING AND STAINLESS
PUMPS AND BOOSTER PUMPS, FIRE FIGHTING HYDRATORS,
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HİDRAFORLARI, JENERATÖRLER VE TRANSFORMATÖRLERİN İMALATI
Certificate Number: 2022/OHSSMS/00110931/01 Initial Certification Date: 08.03.2022
Belge Numarası: 2022/OHSSMS/00110931/01 İlk Belgeleme Tarihi: 08.03.2022
Certification Period: 3 Years Certificate Validity Date: 07.03.2025
Belgeleme Periyodu: 3 Yıl Belge Geçerlilik Tarihi: 07.03.2025

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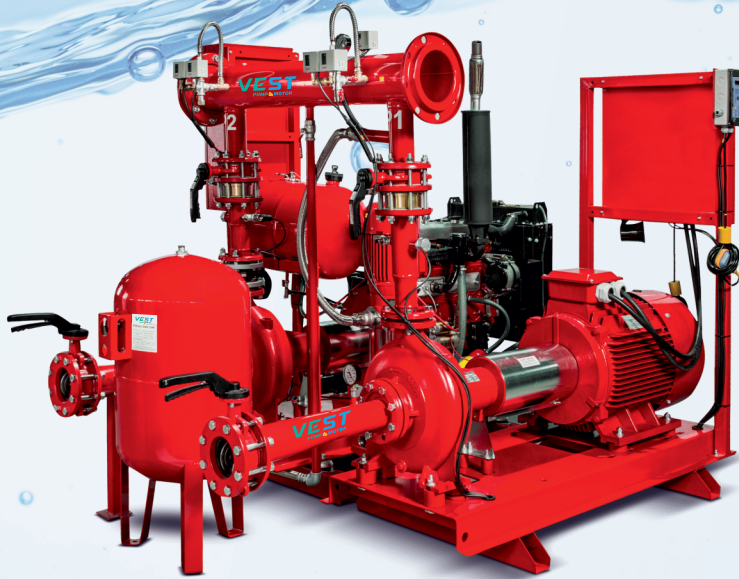
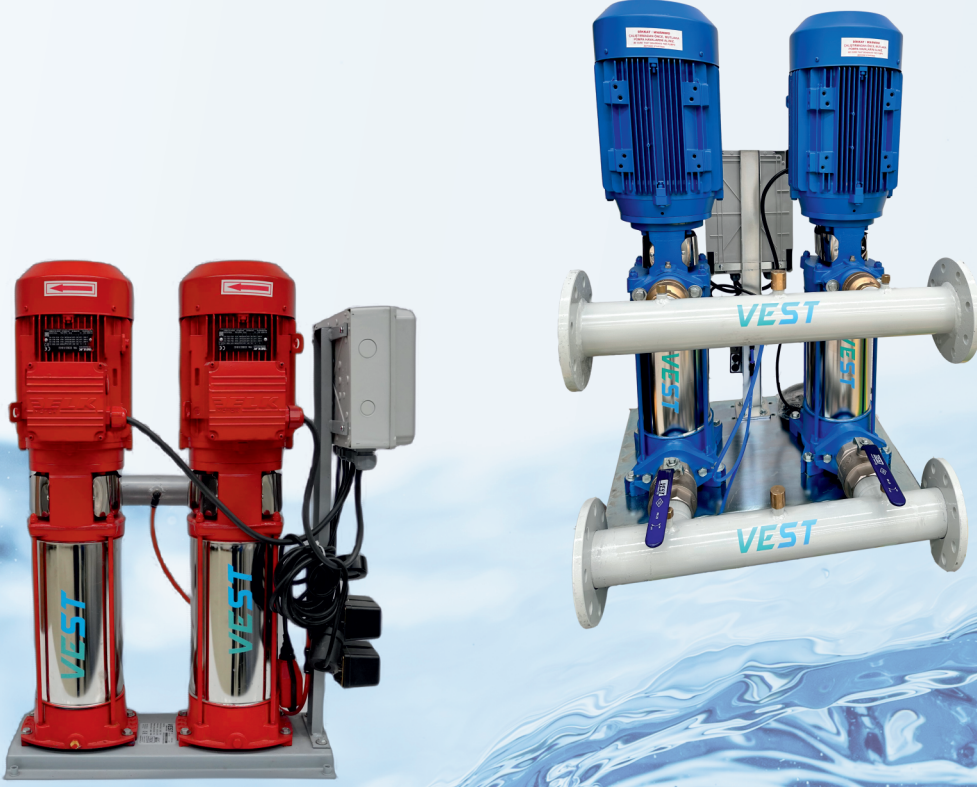


BADER MOTOR TECHNOLOGIES FACTORY VISUALIZATION



BM

BADER MOTOR TECHNOLOGY



Sanayi OSB Mah. E0SB 5. Kısım 47. Yol No: 15/1 Yazikonak / ELAZIĞ
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