

HYDRO MULTI-B

PRESSURE BOOSTING
MADE SIMPLE



THE BENEFITS OF HYDRO MULTI-B

Finding the right system

Not all booster system applications require highly advanced pressure boosting systems. However, most do not want to settle for a simple basic system.

Instead, they want a system that can adapt to changes in demand and is ready for future expansions – all without compromising high reliability and energy efficiency.



Simple yet very effective

The Hydro Multi-B is a unique combination of compact efficient variable speed multistage pumps and simple user interface. Due to the simplicity of the CU 323 controller unit, all daily operations can be handled in a safe and simple manner, which makes the system ideal for water supply in most applications that fits within the performance range of the Multi-B pump system. (see Hydro Multi-B performance range on next page).

These pressure boosting applications include:

- Large complexes such as schools and office buildings
- Multi-story buildings
- When redundant pumping is needed

Compact and designed to last

The high quality components and the design of the Hydro Multi-B booster system have been chosen with a focus on sturdiness and compactness. As a result, the user gets the benefits of a complete solution, with components optimized for domestic water pressure boosting.

Reliability

The CM pump has high reliability built-in. Clamping of the pumps impeller has been greatly improved by implementing a new stop ring to form a well-defined base. Combining this feature with a Nordlock® washer at the other end of the pump stack creates a robust and reliable design.

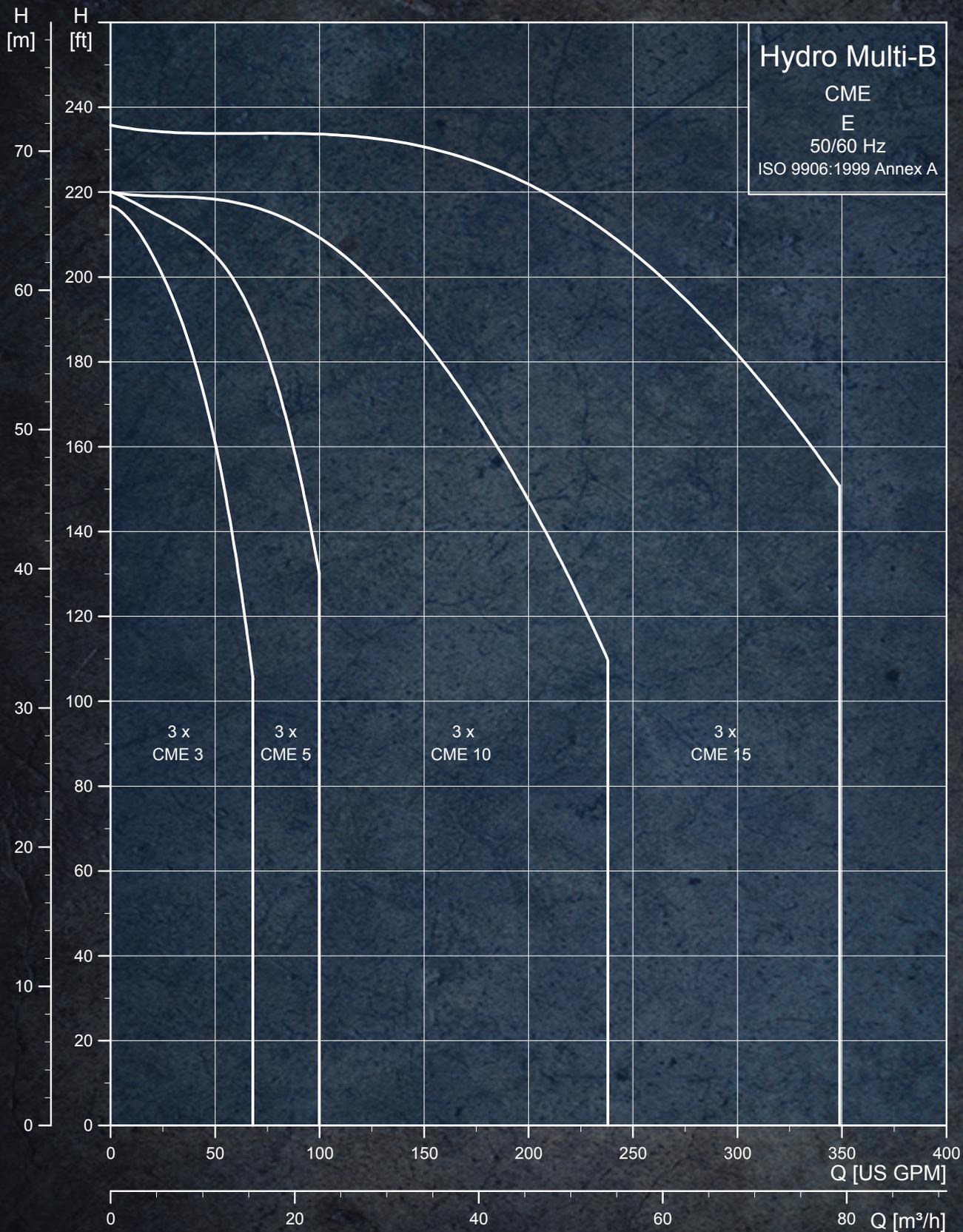
Ready... Set... Pump!

At Grundfos, Quality comes first. So before leaving the factory, every unit is completely assembled and thoroughly tested and inspected. This means that when customers receive their Multi-B booster system, it is only a matter of plugging it in and starting it up.

HYDRO MULTI-B SYSTEM

Baseplate shown powdered-coated mild steel, actual baseplate 304 stainless steel.

HYDRO MULTI-B PERFORMANCE RANGE





BENEFITS OF E-MOTOR

System integration made simple

A variable-speed solution with a separate variable frequency drive (VFD) placed in the control panel is common in many applications today.

However, Grundfos E-pumps take systems integration one step further by offering an integrated solution with a built-in variable frequency drive mounted directly on the motor.

Benefits of E-pumps with MLE motor over external variable frequency drives:

- Total systems integration – one unit
- Optimum interface between motor and drive
- Space-saving installation – no need for large control panel/ rooms or space on a wall
- Reduced logistics costs – one product, one supplier

Grundfos Integrated VFD/Motor (MLE)

The MLE motor (E-motor) fitted to the CME pumps incorporate an integrated variable frequency drive.

The E-motor up to and including 2HP in 1x230V power and up to and including 3HP in 3x460V power are permanent magnet motors. These motors have a total efficiency (VFD and motor) which exceeds NEMA premium efficiency levels of motor alone and can be distinguished by the red stripe on the terminal cover.

The E-motor in 3x208-230V and above 3HP in 3x460V utilize a squirrel cage induction motor and can be distinguished by the black/grey color.

CU 323 Controller

Brain of Multi-B pump system developed and manufactured by Grundfos pumps to control parallel connected pumps in pressure boosting applications.

Benefits include:

- Simple easy to use
- Energy efficient optimized cascade control of pumps
- Ensures equal run hours of all pumps
- Protects pumps against dry-run
- Protects pipe system against minimal pressure (pipe failure) and maximum pressure
- SCADA communication possible through expansion card installation in controller. Commonly used BUS protocols available



A small pump with gigantic potential

It was once said that great things come in small packages. When you see and experience the Grundfos CME pump in the Hydro Multi-B booster system you will know what this means.

The horizontal multistage pump has been created with compactness reliability and quiet operation as its primary features.

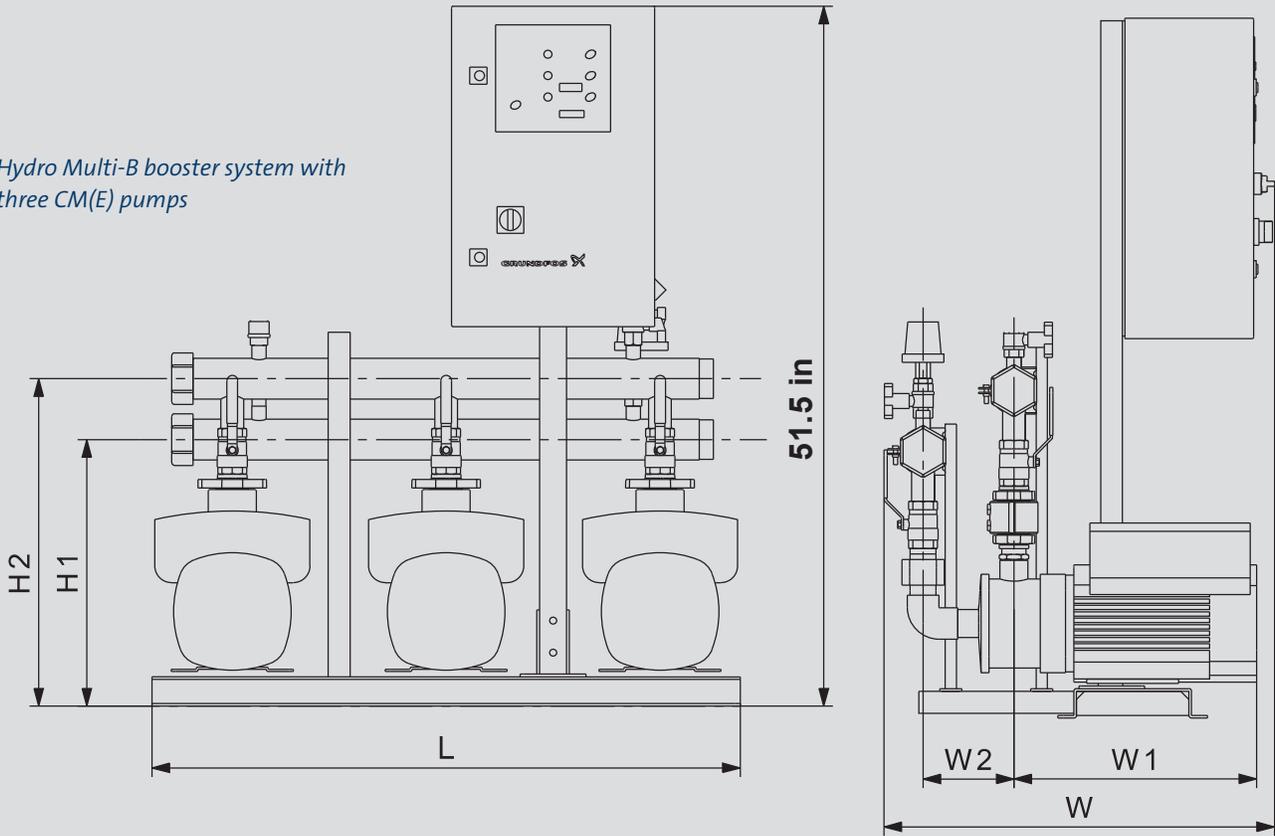
Compactness

The compactness of the Hydro Multi-B is only achievable due to the unique combination of size and performance that the Grundfos CME pump offers.

The CME pump is in certain dimensions 30% smaller than corresponding pumps that offer the same performance.



Hydro Multi-B booster system with three CM(E) pumps



Hydro Multi-B/E with CME, 60Hz

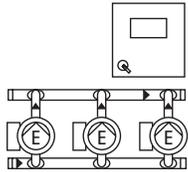
No. of pumps	Pump type	Motor [hp]	Voltage [V]	FLA [Amps] U1 / U2 / U3	Connection size [in.]	L [in]	W [in]	W1 [in]	W2 [in.]	H1 [in.]	H2 [in]	Tank [gal.]	Weight [lb]
2	CME 3-3	1.5	U1	13.1	2" NPT	27.6	26.0	10.8	7.1	17.6	22.1	4.4	214
	CME 3-5	1.5	U1	13.1		27.6	26.1	10.8	7.0	17.6	22.1	4.4	216
3	CME 3-3	1.5	U1	19.7	2" NPT	43.3	24.1	10.8	5.6	17.6	22.1	4.4	309
	CME 3-5	1.5	U1	19.7		43.3	24.9	10.8	7.0	17.6	22.1	4.4	313

No. of pumps	Pump type	Motor [hp]	Voltage [V]	FLA [Amps] U1 / U2 / U3	Connection size [in.]	L [in]	W [in]	W1 [in]	W2 [in.]	H1 [in.]	H2 [in]	Tank [gal.]	Weight [lb]
2	CME 5-3	1.5	U1	13.1	2" NPT	27.6	25.3	10.8	5.8	18.2	22.6	4.4	227
	CME 5-4	2	U1,U2,U3	17.8 / 11.2 / 5.8		27.6	26.1	12.7	6.0	19.1	23.6	4.4	280
	CME 5-5	2	U3	17.8 / 11.2 / 5.8		27.6	26.6	12.7	6.7	19.1	23.6	4.4	300
3	CME 5-3	1.5	U1	19.7	2.5" NPT	43.3	22.9	10.8	5.8	18.2	22.6	4.4	326
	CME 5-4	2	U1,U2,U3	26.7 / 16.8 / 8.7		43.3	24.3	12.7	6.0	19.1	23.6	4.4	408
	CME 5-5	2	U3	26.7 / 16.8 / 8.7		43.3	26.4	12.7	6.7	19.1	23.6	4.4	443

No. of pumps	Pump type	Motor [hp]	Voltage [V]	FLA [Amps] U1 / U2 / U3	Connection size [in.]	L [in]	W [in]	W1 [in]	W2 [in.]	H1 [in.]	H2 [in]	Tank [gal.]	Weight [lb]
2	CME 10-1	1.5	U1	13.1	2.5" NPT	27.6	25.9	11.6	4.5	21.4	26.5	10.3	331
	CME 10-2	3	U2,U3	16.6 / 8.5		27.6	25.9	15.2	5.7	21.7	26.8	10.3	342
	CME 10-3	5	U2,U3	26.8 / 12.2		27.6	27.4	17.9	6.9	22.2	27.3	10.3	434
3	CME 10-1	1.5	U1	19.7	3" NPT	43.3	25.9	11.6	4.5	21.4	26.5	10.3	487
	CME 10-2	3	U2,U3	24.9 / 12.75		43.3	25.9	15.2	5.7	21.7	26.8	10.3	498
	CME 10-3	5	U2,U3	40.2 / 18.3		43.3	27.4	17.9	6.9	22.2	27.3	10.3	639

No. of pumps	Pump type	Motor [hp]	Voltage [V]	FLA [Amps] U1 / U2 / U3	Connection size [in.]	L [in]	W [in]	W1 [in]	W2 [in.]	H1 [in.]	H2 [in]	Tank [gal.]	Weight [lb]
2	CME 15-1	3	U2,U3	16.6 / 8.5	4" ANSI	27.6	29.2	15.2	6.0	22.9	29.9	10.3	472
	CME 15-2	5	U2,U3	26.8 / 12.2		27.6	29.2	17.9	6.0	23.3	30.4	10.3	483
	CME 15-3	7.5	U2,U3	39.4 / 17.8		27.6	29.2	17.9	7.2	23.3	30.4	10.3	503
3	CME 15-1	3	U2,U3	24.9 / 12.75	4" ANSI	43.3	29.6	15.2	6.0	23.4	30.4	10.3	639
	CME 15-2	5	U2,U3	40.2 / 18.3		43.3	29.6	17.9	6.0	23.9	30.9	10.3	650
	CME 15-3	7.5	U2,U3	59.1 / 26.7		43.3	29.6	17.9	7.2	23.9	30.9	10.3	681

TECHNICAL DATA

Application		Pressure Boosting
Control variant		E
		
Range		
Flow, gpm		360
Head, feet		240
Pump size, Hp		1.5 - 7.5
Number of pumps		2 - 3
System characteristics		
Max. working pressure		232 psi
Manifolds		316SS
CME pumps		I version / 304SS
		Constant-pressure
		E
Functions via the CU 323 control panel		
Automatic cascade control		•
Automatic pump changeover		•
Standby pumps		○
Digital input for external start/stop relay		•
Water shortage protection		•
Alarm and operation outputs		•
Motor protection		•
Maximum pressure protection		•
Sensor fault protection		•
Button lock function		•
Communication		
CIM (Communication Interface Module)		○

- Standard
- Can be configured with PC tools / available as accessory

Grundfos boosters – in a class of their own

Grundfos is one of the world's leading manufacturers of pumps and pump systems and was the first company ever to develop a multistage in-line centrifugal pump.

With the new compact and efficient CME pumps, Grundfos has developed a solution that meets the needs of users, who require simplicity and compactness, without compromising reliability and efficiency.

The Grundfos Hydro Multi-B boosters are fully integrated systems made to the very highest standards and thanks to the easy-to-operate controller these boosters are simple to install and operate.

Combining advanced product features with simplicity and user-friendliness characterise the Grundfos range of Hydro boosters – and contribute to making Grundfos boosters the unrivalled market leaders, whether for commercial building projects or industrial applications.

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