

# HYDRO MULTI-B

## PRESSURE BOOSTING MADE SIMPLE



Drinking Water System Component

NSF / ANSI 61

NSF / ANSI 372



be  
think  
innovate

**GRUNDFOS** 

# 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.

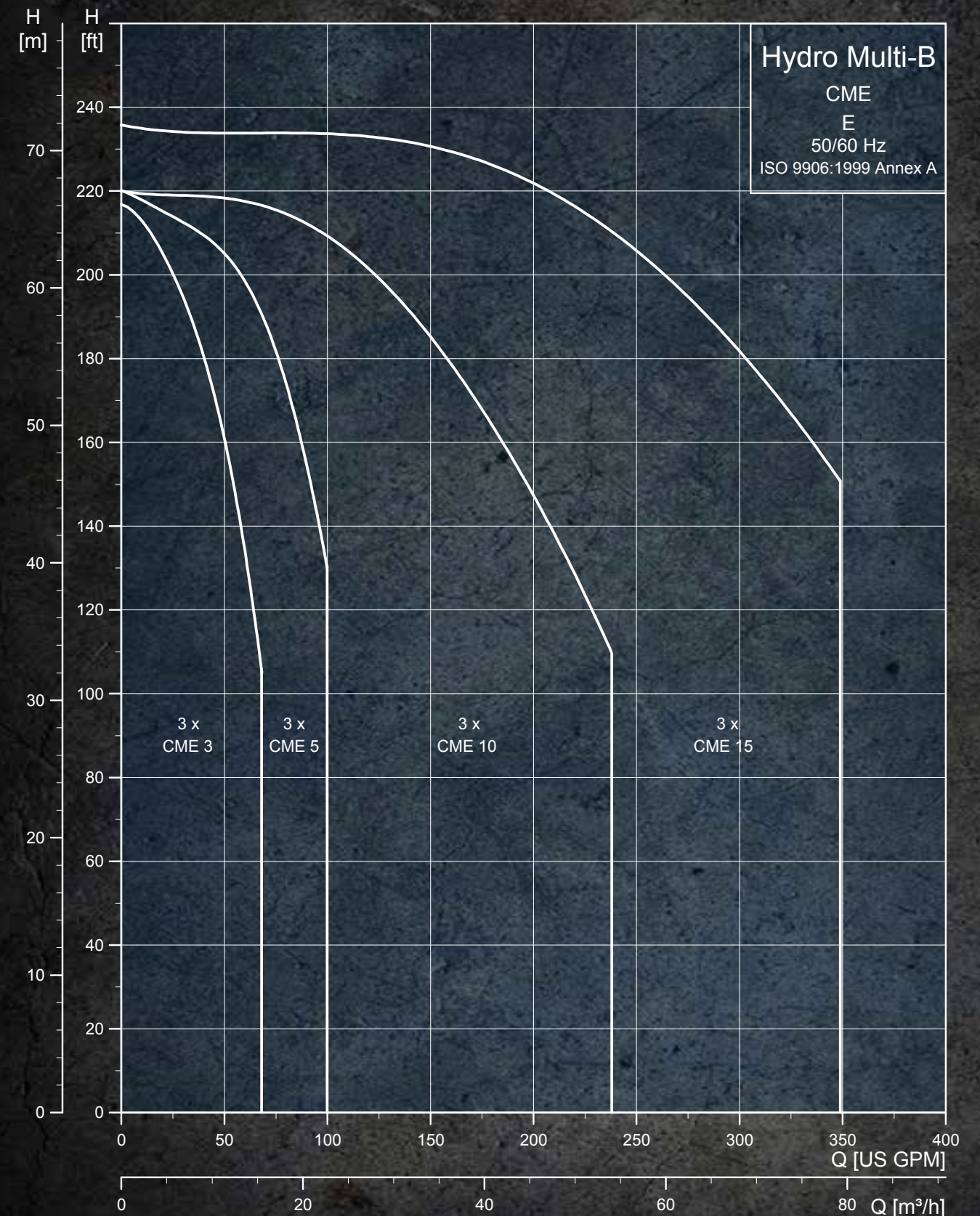
## Ready... Set... Pump!

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.

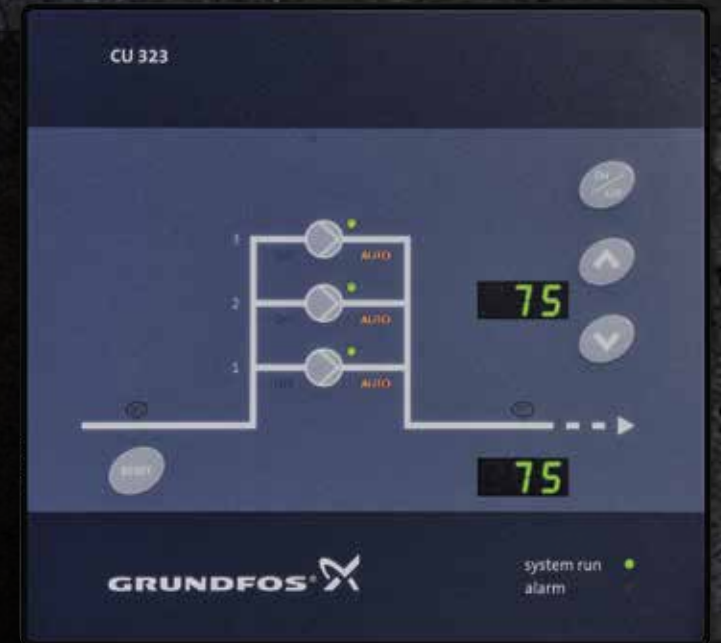
The E-motor in 3x208-230V and above 3HP in 3x460V utilize a squirrel cage induction motor and can be distinguished by the black/grey color.

## 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.

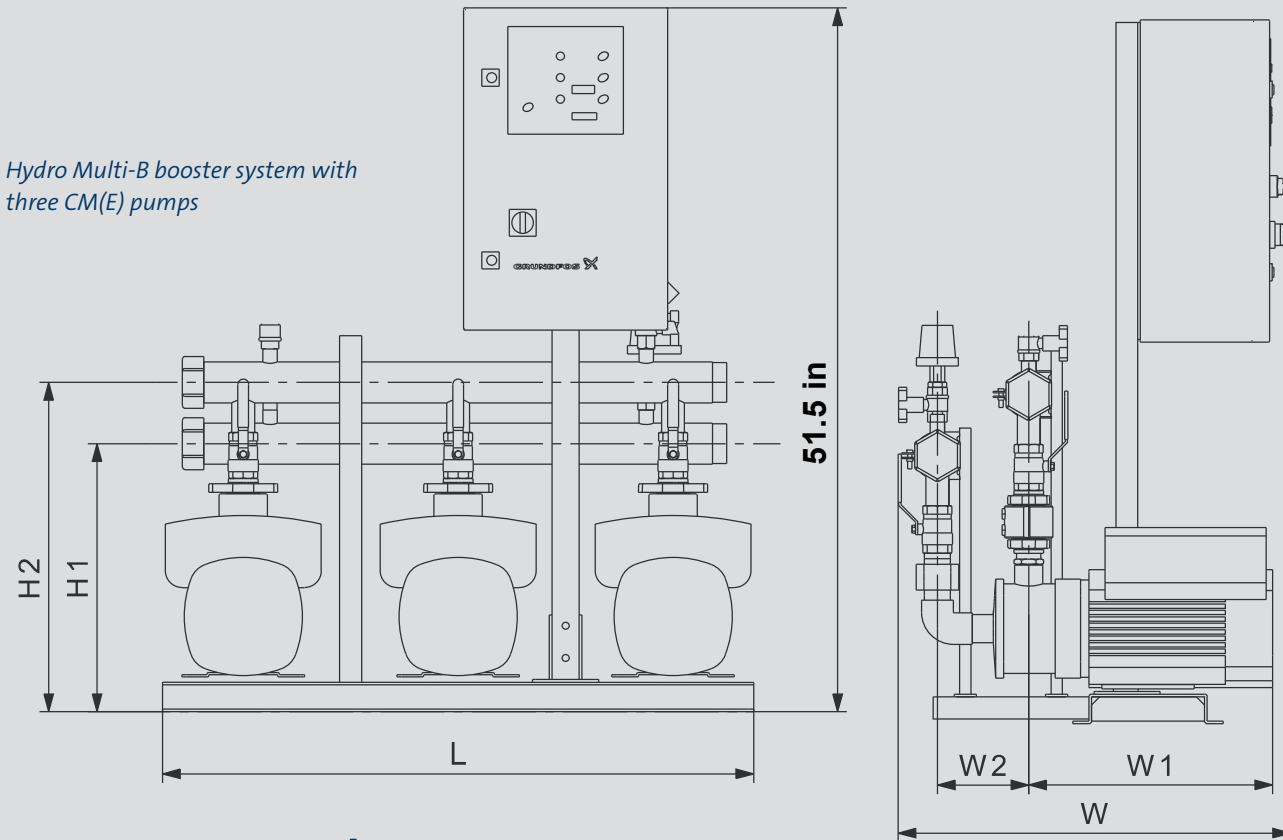
## Compactness

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" 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	2.5" 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	3" 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

Supply voltage U1: 1 x 208-230 V - 10 %/+ 10 %

Supply voltage U2: 3 x 208-230 V - 5 %/+ 5 %

Supply voltage U3: 3 x 460 V - 5 %/+ 5 %

Dimensions may vary by ± 1 in.

# 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	145 psi	
Manifolds	316SS	
CME pumps	A version / 304SS / Cast Iron	
		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 TECHNICAL INSTITUTE

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Visit [www.grundfos.us/training](http://www.grundfos.us/training), to choose from a number of education possibilities that suit your needs and schedule, including face-to-face classes, group webinars and self-directed online courses.

## 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. Thanks to the easy-to-operate controller, these boosters are simple to install and operate.

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