

➤ **Step 1** Fixture count and assignment of fixture units*

Fixture Type	Quantity	Fixture Units	Total
Water closet, public w/ flush valve		10	
Water closet, public w/ flush tank		5	
Wall urinal, public, 3/4" flush valve		5	
Lavatory, public		2	
Shower Head, Public, Mixing Valve		4	
Service sink		3	
Kitchen sink, commercial		4	
Washing machine, 16#, commercial		2.8	
Water closet, private w/ flush valve		6	
Water closet, private w/ flush tank		2.2	
Lavatory, private		0.7	
Bathtub, private		1.4	
Shower head, private		1.2	
Kitchen sink, private		1.4	
Dishwasher, private, automatic		1.4	
Washing machine, 8#, private		1.4	
1/2" hose bib		4	
3/4" hose bib		6	
1" hose bib		10	
Other fixtures			
Other fixtures			
Other fixtures			
TOTAL FIXTURE UNITS			

* From ASPE table 3-5

Date
Customer
Job name
Type of building
Electrical supply

➤ **Step 2** Fixture unit to flow conversion

Total FU	Flow
125	50
250	75
300	85
400	100
500	125
750	175
1000	210
1500	265
2000	320
2500	375
3000	430
4000	570
5000	665
6000	780
7000	875
8000	960

➤ **Step 3** Pressure boost calculation

1	Static pressure <small>Elevation to highest fixture</small>	_____ ft / 2.31 =	_____ psi
2	System component & piping friction losses <small>Static pressure x 0.10</small>	_____ ft / 2.31 =	_____ psi
3	Pressure Required at Farthest Fixture <small>Typical 35 PSI</small>		_____ psi
4	Required system pressure <small>Add rows 1-3</small>		_____ psi
5	Minimum Suction Pressure <small>Subtract</small>	-	_____ psi
6	Required system boost		_____ psi

➤ **Step 4** Building flow requirement _____ gpm at _____ psi

➤ **Step 5** System split

Number of pumps _____; each pump to handle _____ % of load. Stand-by pump _____; pilot pump _____

➤ **Step 6** Individual pump requirement _____ gpm at _____ feet TDH; pump selection _____

➤ **Step 7** Diaphragm tank selection (recommended)

Pump type	-E / -ED / -ES / -EF / -EDF / -F	-S
CR(E) 3	4.4	20
CR(E) 5	4.4	34
CR(E) 10	10.2	62
CR(E) 15	34	211
CR(E) 20	34	211
CR(E) 32	44	317
CR(E) 45	86	528
CR(E) 64	132	1056
CR(E) 90	132*	1056

* Systems available are -EF / -EDF / -F

➤ **Step 8** System selection _____

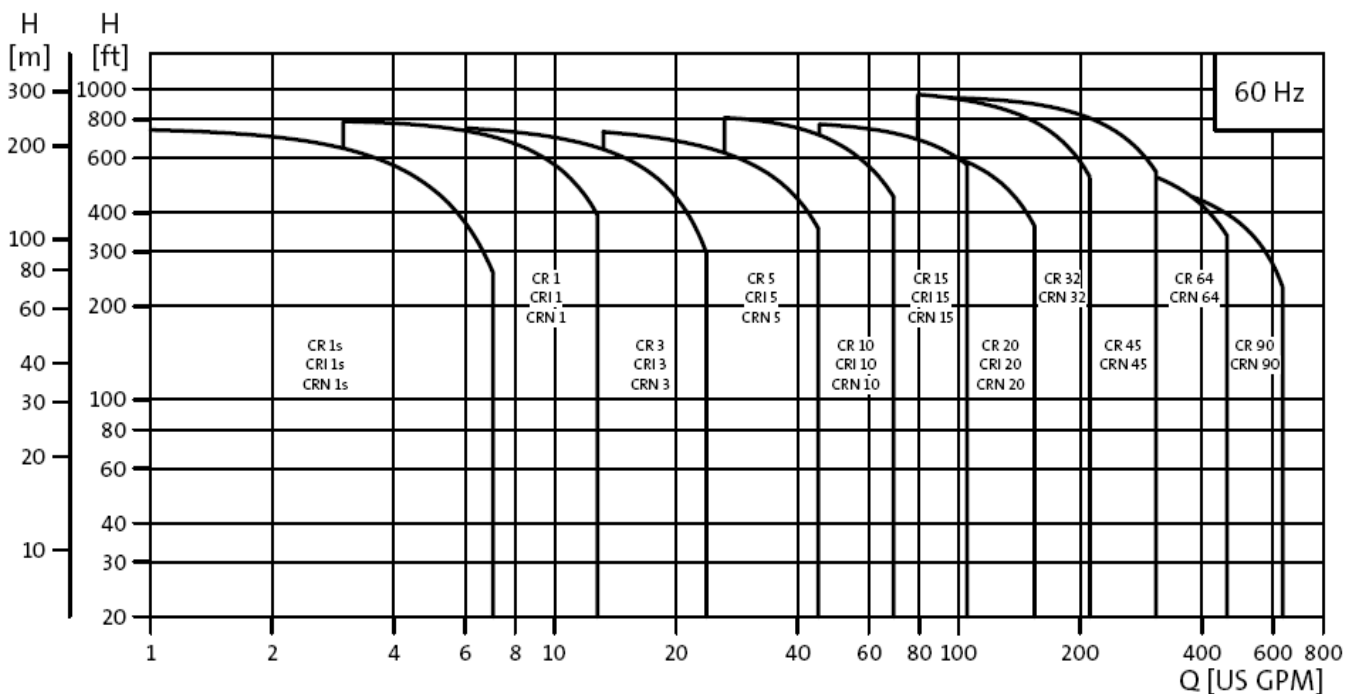
Overview of BoosterpaQ Hydro MPC system types

Performance Overview	Speed control by Grundfos E-pumps			Speed control by VFD in control panel			On/Off
	Hydro MPC-E	Hydro MPC-ED	Hydro MPC-ES	Hydro MPC-EF	Hydro MPC-EDF	Hydro MPC-F	Hydro MPC-S
Flow, gpm	1,800	1,800	1,800	3,800	3,800	3,800	3,800
Head, feet	520	520	520	520	520	520	520
Pump size, hp	1-10	1-10	1-10	1-50	1-50	1-50	1-50
Number of pumps	2-6	3-6	2-6	2-6	3-6	2-6	2-6

Type key for system model numbers

Example	Hydro MPC	-ED	2 CRE 5-10	1 CR 5-10	3 x 460 V, 60 Hz
Type range					
Subgroups:					
Pumps with integrated frequency converter:	-E, -ED, -ES				
Pumps with external frequency converter:	-EF, -EDF, -F				
Mains-operated pumps (start/stop):	-S				
Number of pumps with integrated frequency converter and pump type					
Number of mains-operated pumps and pump type					
Supply voltage, frequency					

Performance range



Common control panel options

Options	Type of system that can use	Number Required	Description	Application
Emergency/Normal Operating Switch	any	1 each pump	Enables emergency operation of individual pumps if a fault occurs in the CU351	Facilities that need more redundancy than multiple pumps; limited pump/motor protections available in Emergency mode w/out job site modifications
Service Disconnect Switch	MPC- EF, EDF, F	1 each pump	Individual pump isolation by means of a repair switch of w/out disabling system	Systems that are not using Grundfos E motors should include Service Disconnect Switch(s) for pump/motor service while system continues to run
Lightning Protections (surge arrestor)	any	1 total	Protection against lightning and power spikes	Recommended for all systems
Audible Alarms	any	variable	80dB; remote or local	Facilities w/ on-site personnel that would benefit from an audible alarm
Visual Indicators / Alarms	any	variable	Thru the door fault + run lights	Visual indicators that would duplicate information available on the graphical display
Redundant Transducer	any	1 total	Backup to the primary discharge sensor	Facilities that would need system to continue to operate in the event of a primary sensor failure; also add for additional 24V power supply
Additional Inputs / Outputs	any	variable	Digital + analog inputs/outputs	Increased communication + control