

Pumps for Farm and Home



GPS

GLOBAL PUMP SOLUTIONS LTD

Domestic water supply pumps with 5 year warranty

GPS offer many options for domestic water pressure systems - they are selected to suit your home to give pressure and water volumes that you require.

Flowrates

A good guide and starting point to calculate flowrates required is

Calculate an estimate of the peak flowrate required

- (a) Number of bathrooms _____ x 12 litres/minute = _____ litres per minute
 (b) Number of bedrooms _____ x 5 litres/minute = _____ litres per minute
 Add (a) + (b) to give an estimate of the peak demand = _____ litres per minute

If you have a fire sprinkler system or outside irrigation this can change the sizing estimate.

Pressures

Mains pressure varies all over the country, but a couple of key points are maximum tapware pressure is 50m (500kPa) and often pressure limiting valves are used within the house to reduce pressures to 350kPa for some fixtures. Typically we consider the maximum flowrate at about 25-30m(250-300kPa) as the duty point for pump selection.

Pump types

Domestic pumps are usually either a Jet Pump (NGX series) or a Multistage pump (MXH series). Jet pumps are used when self priming is required or a suction lift is required. Multistage pumps are used on flooded suctions and are very efficient and quiet, but can be difficult to reprime. GPS has an exceptional pump which is a true self priming multistage giving the best of both Jet pump and multistage pump designs (MXA series).

Controller options

- Mechanical pressure switch with pressure tank (Tip, use with pumpguard for run dry protection)
- Prescontrol constant flow
- Pump Drive variable speed constant pressure



NGXM3 jet pump with mechanical switch and 18 litre pressure tank with axial diffuser for reduced noise



MXAM204 pump with prescontrol self-priming multistage



MXA405 pump with pumpdrive self-priming multistage



Pumpguard, plug in pump protection for

- run-dry
- over current, low voltage
- power surge
- pumps up to 8 amps (1.1kW)



NGXM5-16 jet pump with mechanical switch and 80 litre pressure tank with axial diffuser for reduced noise

Selected pump performances

Model	kW(hp)	Head (m)	Flowrate (litres per minute)												
			0	15	30	45	60	75	90	105	120	200			
GPS-NGXM2	0.45(0.6)		45	30	21	17									
GPS-NGXM3	0.55(0.75)		53	39	31	24									
GPS-NGXM4	0.75(1.0)		42	36	32	26	22	20							
GPS-NGXM5/16	1.1(1.5)		61	51	42	39	34	29							
GPS-NGXM6/18	1.5(2.0)		58	52	47	43	39	35	31	28					
GPS-MXAM204	0.55(0.75)		45	41	35	30	23	15							
GPS-MXAM205	0.75(1.0)		56	50	43	36	30	22							
GPS-MXAM405	1.1(1.5)		56	54	52	48	44	40	33	29	24				
GPS-MXHM206	1.1(1.5)		69	65	60	47	41	30							
GPS-MXHM406	1.5(2.0)		69	66	64	61	57	53	46	40	30				
GPS-MXHM804	1.5(2.0)		48	47	46	45	44	43	41	40	39	25			
GPS-MXH805	1.8(2.5)		60	59	58	57	56	54	52	51	49	30			

Pumps for the dairy shed



Washdown pumps

GPS Washdown pumps are available in sizes suitable for all dairy shed, truck and factory washdown requirements. Note a typical dairy washdown hose uses a good 200 litres per minute and backing gates can use 500+ litres per minute.

Model	kW(hp)	Head (m)	Flowrate (litres per minute)															
			0	100	200	300	400	500	600	700	800	900	1000					
GPS-C54	3.0 (4.0)	47	47	43	38													
GPS-C55	4.0 (5.5)		57	54	50	40												
GPS-CS32-200C	4.0 (5.5)		41	41	40	38	35	32	26									
GPS-CS32-200B	5.5 (7.5)		57	56	55	53	50	47	43									
GPS-CS40-200A	7.5(10.0)		58	57	56	55	53	51	49	47	44	41	37					

Washdown variable speed drives

Fitting a GPS Vasco variable speed drive to your washdown pump removes pressure spikes, making hoses easier to manage and increasing the pump, pipework and hose life expectancy. It will also save power; when demand for water is low, the Vasco reduces pump speed (Hz) so using less power. For example, a pump running at 40Hz instead of the nominal 50Hz reduces the power consumption by about half.

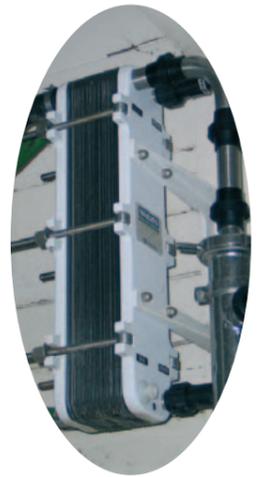
Pump specific drives are available for pumps up to 22kW (30hp).



Plate cooler pumps

Pumps for the plate cooler should be low-pressure, high-flow to obtain best pump life and maximum cooling of milk. As an aid to gauge sizing, every litre of milk per minute requires 2.5 litres of cooling water. Usual pressures required are between 10 and 13 metres.

Model	kW(hp)	Head (m)	Flowrate (litres per minute)						
			0	100	200	250	300	400	500
GPS-CB(M)100	0.75(1.0)	14	13	12	10	7			
GPS-CB(M)65	1.5(2.0)	17	16.5	16	15.5	15	13	10	



Vatwash pumps

GPS stainless steel vat wash pumps are available in single and three phase. The range is quite large but the most common models for vatwash applications are:

Model	kW(hp)	Head (m)	Flowrate (litres per minute)								
			0	50	100	150	200	250	300	350	400
BLC120/110	1.10(1.5)	35	33	31	26						
BLC200/185	1.85(2.5)	32	31	30	28	25	22	16			
MXH1603	1.85(2.5)	36	35	33	31	29	26	22	17	11	

Note, if you have another application for a CIP (clean in place) pump please ask - we can help.

Min temperature, BLC 0 °C MXH -10 °C
 Max temperature, BLC 90 °C MXH 110 °C
 Max body pressure, 8 bar



Farm stock water supply pumps

The pumps for stock water vary according to each situation. GPS can assist with pump sizing and selection but we need to know:

- is the water source, ground water, stream or spring water, tank water
- if pipes are already in place, then length and internal diameters. Otherwise let us suggest a size
- vertical ground rise
- stock type and numbers

As a guide

Animal Type	Drinking Water
Dairy Cows	70 lpd + 70 lpd for shed
Dry Stock (Beef)	55 lpd
Goats (milking)	10 lpd + 10 lpd for shed
Sheep	5 lpd
Pigs	18 lpd
Poultry	55 lpd/100 birds
Horses	70 lpd
Deer	12 lpd

Note: lpd = litres per day per head except for poultry, stock generally drink daily requirement over 5 hours



GPS Pressure tanks series feature:

- high strength steel HSS, 1000 kPa pressure rating
- Tuf Kote gloss paint finish
- Patented turbulator to agitate water and keep tank clean inside
- approx 30% of tank volume is drawn off prior to restart (varies with pressure settings)



GPS NG self priming jet pump series:

- flowrates up to 9.5m³/hr (160 lpm)
- pressures up to 89m (890kPa)
- better self-priming
- compact, easy to fit into the pump shed
- reliable performance from cast iron pump body, cast bronze impeller, cast iron diffuser, and over sized bearings
- robust cast iron construction for suction lifts
- safe IP54

GPS multistage pump series:

- all metal in contact with water is stainless steel
- flowrates up to 120m³/hr (2000 lpm)
- pressures up to 325m (3250kPa)
- VFD ready with transducer port
- cartridge mechanical seal
- safe IP55



GPS borehole pump series:

- sand handling up to 400 grams/m³
- pumps from 72mm up to 245mm diameter
- flowrates up to 390m³/hr (6500 lpm)
- pressures up to 729m (7290kPa)
- integrated variable speed for constant pressure

Chosen when performance and reliability matter.

GPS molasses pump:

- approx 30 lpm
- 2.2kw 6 pole motor providing lots of torque for viscous liquids



Electrical Safety

Get IP68 protected in 10 minutes!

**For all high/low voltage high/
low temperature & telecom /
data connections**

- insulating
- sealing
- antioxidant protection
- insect protection



IP68 protection for Energy/Power terminations



Magic Fluid 550

- one time use pack for fast solution to IP-rating issue
- same components as MagicGel



Magic Gel 1000

- Resealable 1 litre pack
- for all high/low voltage and high/low temperature applications

Effluent/Sewage/Drainage Pumps

GPS offers a range of pumps for waste water transfer and irrigation, all sized to match the application. Pumps are available up to 250 metres head and flowrates up to 270 m³/hr.

