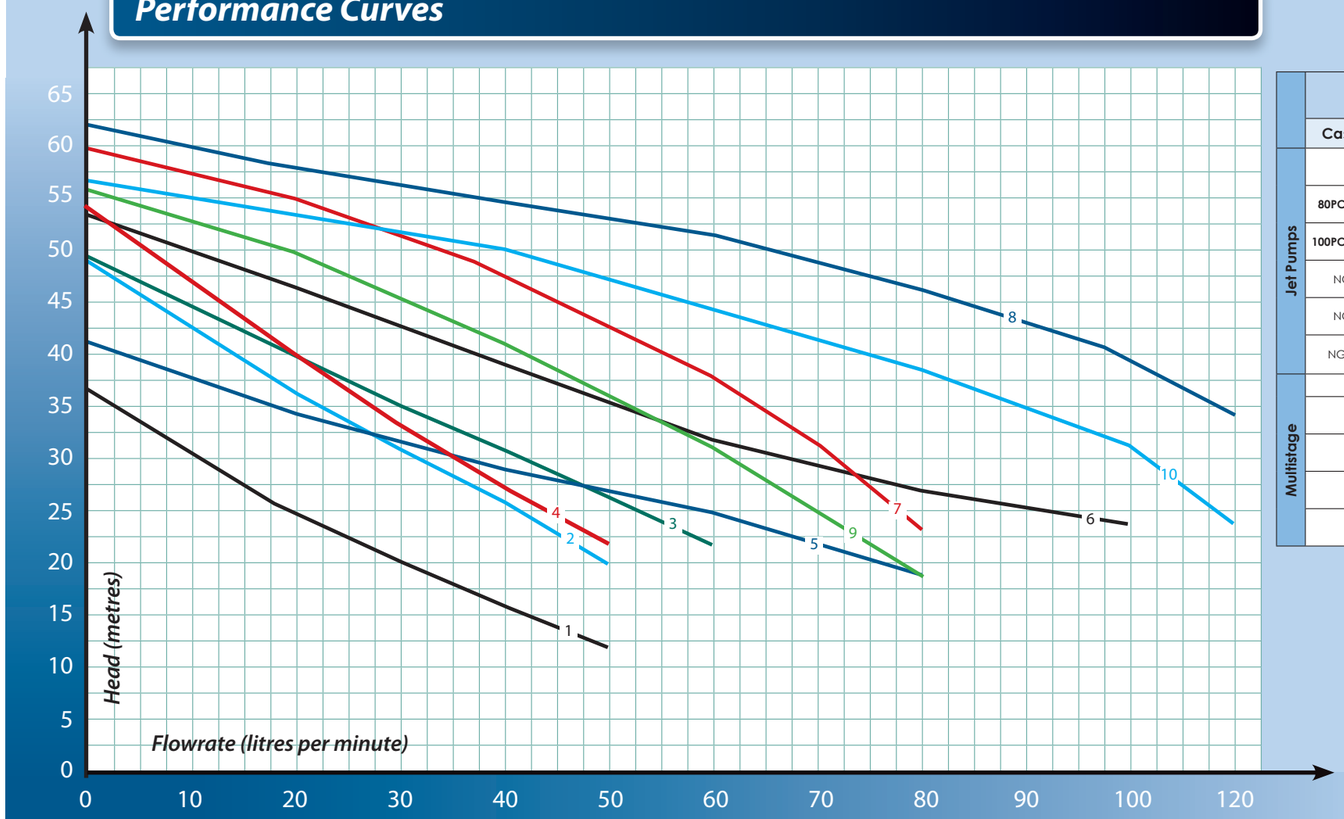
Performance Curves



	Model		Curve Number
	Cast Iron	Stainless Steel	
Jet Pumps	-	60PC INOX	1
	80PC & 80MP	80PC INOX & 80MP INOX	2
	100PC & 100MP	100PC INOX & 100MP INOX	3
	NGLM3	NGXM3	4
	NGLM4	NGXM4	5
	NGM5-18	NGXM5-18	6
Multistage	-	40/50PC & 40/50MP INOX (SM98-5)	7
		RSM50	8
	-	MXAM205	9
	-	MXAM405	10

Pump applications

- Domestic water
- Domestic fire sprinkler systems
- Boosting water pressure
- Water transfer
- Pressurisation of water into a home from tank water
- Farm water supply
- Commercial water supply
- Industrial water supply

Pressure tanks

- **Tip** - when setting up pressure tanks in a mechanical pressure switch system, the air charge needs to be set at 20kPa or 3psi below the pump switch-on pressure.

  In an electronic system, the air charge should be set at 70% of the maximum pressure. Contact us for directions.

Installation

- **Tip** - Before installing the pump, TAKE NOTE -
- The suction line must not be smaller in diameter than the suction connection to the pump (if smaller the warranty will be invalidated)
- The suction line should be as short as possible with a minimum of fittings
- The suction line should be as straight as possible, avoiding the use of bends and elbows
- All fittings must be completely air tight to avoid cavitation (the noise caused by air being drawn through the fittings on the suction line)

ORION

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Pump range

The Orion range includes jet and multistage pumps available in cast iron and stainless steel.

Self priming pumps are available, with suction lifts up to 8 metres.

Pumps can be operated either by electronic pressure control units or by mechanical or electronic pressure switches in conjunction with suitably sized pressure tanks. A pressure tank-based system becomes the preferred option for pump control when flowrates are over 60 litres per minute.

Jet pumps generate good pressures and flowrates. They are able to operate well even in difficult applications with aerated water.

Multistage pumps have multiple impellers able to develop high pressures and flowrates, with comparatively low power consumption and are quieter than jet pumps.

Pumps are minimum of IP44. IP is a standard that refers to the water and dust **I**ngress **P**rotection of electric motors.

Pressure tanks

You can save power and extend the life of your pump by adding a pressure tank to your pump.

You can save water in a hot water system by adding a pressure tank. The tank helps to stop drips from the pressure relief valve over flow by absorbing the expansion and contraction of the water as it heats up and cools down. This can save about 9 litres of water per day.

We recommend an 8 to 20 litre tank on the water side of your mains pressure hotwater cylinder whether or not you have a pump. **Save water - save power**.

Pressure tanks should be used on your pump if you have a low pressure hot water cylinder.

A fire sprinkler system should have a pressure tank attached to the pump.

In event of a power cut, a pressure tank still allows a limited supply of water to flow.

Jet pumps

- Suitable for use in almost all installations.
- Good with suction lifts and with flooded suction.
- Preferred choice over a multistage pump when the water source is below the pump.
- Able to cope with aerated water.

Multistage pumps

- Available in horizontal and vertical configurations.
- Best suited to flooded suction applications with a pressure switch and pressure tank as flow rate and performance increase.
- Quieter than a jet pump.
- More efficient than a jet pump.

Mechanical switch and pressure tank systems

- Reliable: time-proven system.
- Durable: fewer pump starts lengthens life of the pump.
- Economical: saves power through fewer pump starts.
- Versatile: water available if power shuts down.
- **Tip - pressure tanks are better for power saving and more effective running. The larger the pressure tank size, the better the pump system will perform.**

Electronic systems

- Run-dry protection.
- Constant running.
- Best suited to flooded suctions or limited suction lifts.
- Pressure tanks are often used in conjuction with electronic pump controls as small leaks can cause an electronic pump to switch on and off when no water is required in your home.
- **Tip - if the pump starts and runs without reason, look for a leak**

Run-dry protection options

- Electronic press controls – constant running.
- Loss of prime pressure switch.
- Armtrol R digital pressure switch.
- Floatswitch in water tank that interrupts power supply.
- Flow switch.
- **Tip - electronic press controls only recommended for flooded suction or suction lift maximum of 3 metres.**

High flowrates fire sprinkler systems

- Pumps being used to operate large homes and sprinkler systems should use an 80 litre pressure tank or bigger. This will minimise frictional pressure loss at high flowrates.
- Multistage pumps are often the preferred choice for high flowrates and pressure as they are more efficient.

	Model		Number of Taps*	Power kW (hp)	Discharge Pressure at flowrate (metres)	Flowrate (litres per minte)											Pressure Switch Settings kPa (psi)	Warranty Period Years
	Cast Iron	Stainless Steel				0	20	30	40	50	60	70	80	90	100	120		
Jet Pumps	-	60PC INOX	3	0.37(0.50)		37	24	20	16	12							150-370 (22-54)	2
	80PC & 80MP	80PC INOX & 80MP INOX	5	0.55(0.75)		48	36	31	26	20							290-410 (42-62)	2
	100PC & 100MP	100PC INOX & 100MP INOX	6	0.75(1.00)		49	40	35	30	26	22						300 -420 (43-63)	2
	NGLM3	NGXM3	5	0.55(0.75)		53	38	32	27	22							300-430 (45-65)	5
	NGLM4	NGXM4	7	0.75(1.00)		42	35	32	29	26	23	21	19				230-350 (34-51)	5
	NGM5-18	NGXM5-18	10	1.10(1.50)		53	47	41	38	35	32	30	27	25	24		300-450 (45-66)	5
Multistage																		
	-	40/50PC & 40/50MP INOX	8	1.00(1.30)		60	56	52	48	44	39	31	23				400-550 (60-81)	2
		RSM50	12	1.90(2.50)		62	57	56	55	53	52	49	46	44	42	34	420-570 (62-84)	2
	-	MXAM205	7	0.75(1.00)		56	50	46	40	36	31	25	18				350-500 (51-75)	5
	-	MXAM405	12	1.10(1.50)		56	53	52	50	47	45	42	38	35	32	23	350-500 (51-75)	5
	*Per Tap flowrate is 10 l/min above 200kPa																	