

# AMXi PUMP RANGE



HORIZONTAL END SUCTION, **MAGNETIC DRIVE**, CENTRIFUGAL PUMPS



- ∞ CAPACITY <800 L/Min
- ∞ HEAD <35Metres
- ∞ ETFE LINED
- ∞ PATENTED RUN DRY DESIGN
- ∞ CORROSION RESISTANT
- ∞ HIGH OPERATING EFFICIENCY
- ∞ PATENTED BUFFER SYSTEM

Part of the  
**MAGNETIC DRIVE**  
Pump Range



AM



AMX



AVF



AMA



AME

## ∞ AMXi OVERVIEW

Magnetically driven pumps are the industry standard when processing harsh and highly corrosive applications. The centrifugal force is driven by two rotating magnets rather than being directly coupled to a motor. Eliminating the need for a mechanical seal and therefore making magnetic drive pumps completely leak proof.

The AMXi range of magnetic drive pumps are designed to provide you with a long service life and minimal running costs. Operating at over 70% efficiency, AMXi pumps can be relied upon to work in the toughest of conditions including high corrosion, temperature and ATEX Zones 1 and 2.

## ∞ REDUCED LIFE CYCLE COST

The patented run dry technology built into the AMXi helps protect your pumps from a failure in the process. Most mechanically sealed pumps will fail when run dry, causing dangerous leakages and costly clean up bills as a result. However with the AMXi, the pump can run dry for a number of hours alleviating process problems and avoiding damage to the pump.

The second patented design feature of the AMXi range will increase the mean time between servicing, reducing overall maintenance costs of your process. Should the AMXi pump be subjected to adverse operating conditions, vibration would normally reduce the life of the internal parts. However, with the dynamic buffer system acting as a shock absorber between the impeller and the casing, the pump is protected as a result, thus minimising wear and prolonging the pumps service life.

## ∞ HIGH EFFICIENCY DESIGN

The geometry of the impeller and casing are generated through hydraulic design programmes. Whilst taking into account the fluid dynamics, hydraulic loss is minimised and pump efficiency maximised. The AMXi range operates at over 70% efficiency. Lower electricity costs also come from the use of high efficiency IE3 motors (where available). We also trim the impeller diameter to your required duty point, increasing process efficiency. Inverters are also available to achieve the ultimate efficiency in your system.



**2 YEAR  
WARRANTY**



**ATEX ZONE 1/2  
CERTIFIED**



**ETFE  
LINED**



**PATENTED RUN  
DRY DESIGN**



**CORROSION  
RESISTANCE**



**HIGH  
EFFICIENCY**



**FLEXIBLE TO  
DESIGN SPEC**



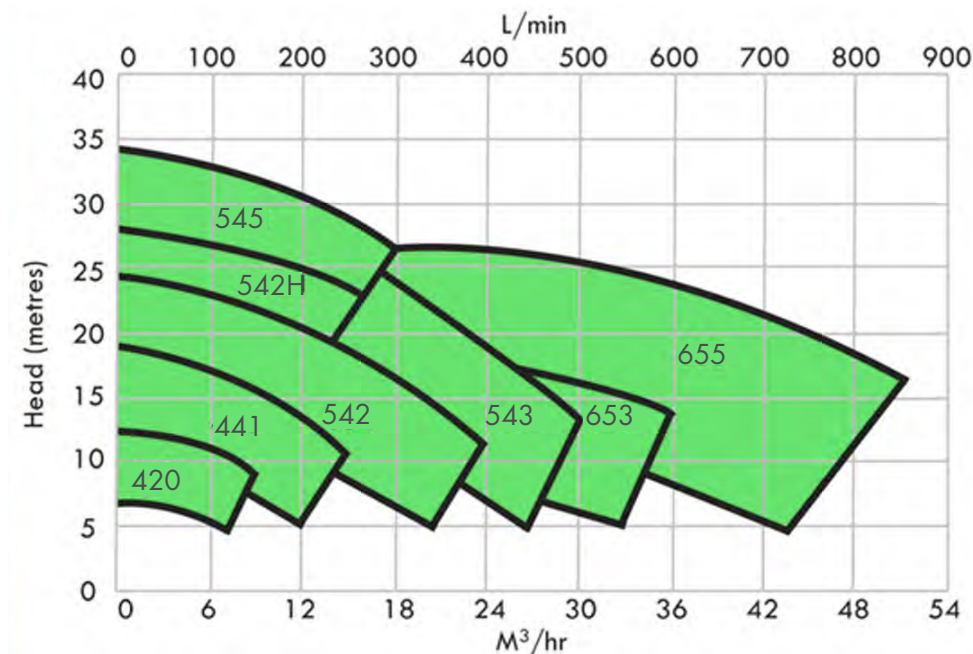
**LOW PUMP  
CYCLE COSTS**

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## PUMP RANGE CURVES

Pump curves for the magnetic drive AMXi pump ranges 420, 441, 542, 543, 545, 653, 655.



## TECHNICAL SPECIFICATION

MODEL	SUCTION (mm)	DIS-CHARGE (mm)	SPEED (rpm)	RATED CAPACITY (L/min)	RATED HEAD (m)	MAX CAPACITY (L/min)	MAX HEAD (m)	MOTOR OUTPUT (kW)	BEST EFF. (%)
AMX 420	40	25	2900	100	10.9	250	12.3	0.4	70
AMX 441	40	40	2900	150	15.6	350	19.0	0.75	70
AMX 542	50	40	2900	200	20.6	450	24.4	1.5	70
AMX 542H	50	40	2900	100	25.8	300	27.6	1.5	70
AMX 543	50	40	2900	250	25.8	500	30.6	2.2	70
AMX 543H	50	40	2900	150	31.8	350	34.2	2.2	70
AMX 545	50	40	2900	250	30.2	500	35.0	4.0	70
AMX 653	65	50	2900	450	17.0	700	20.0	2.2	70
AMX 655	65	50	2900	500	25.0	800	27.6	4.0	70

# AMXi PUMP RANGE

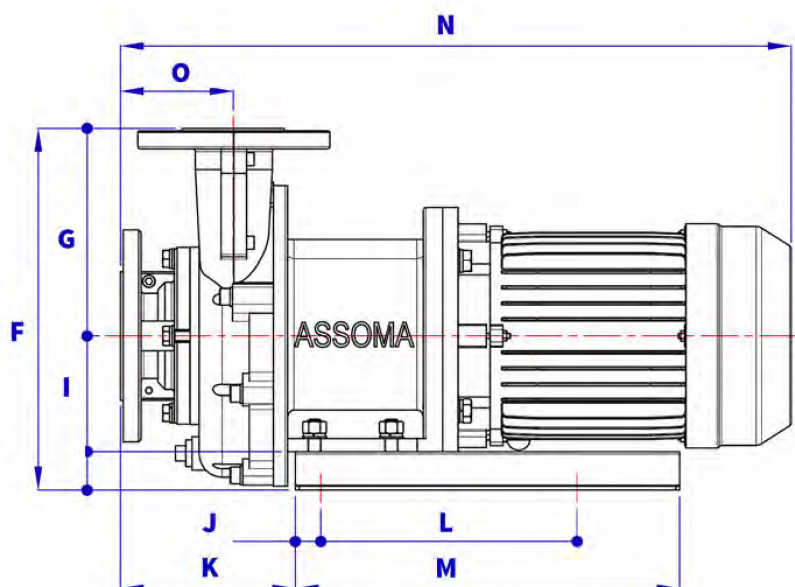
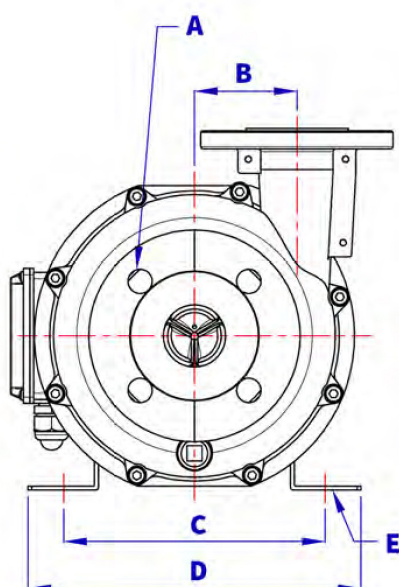
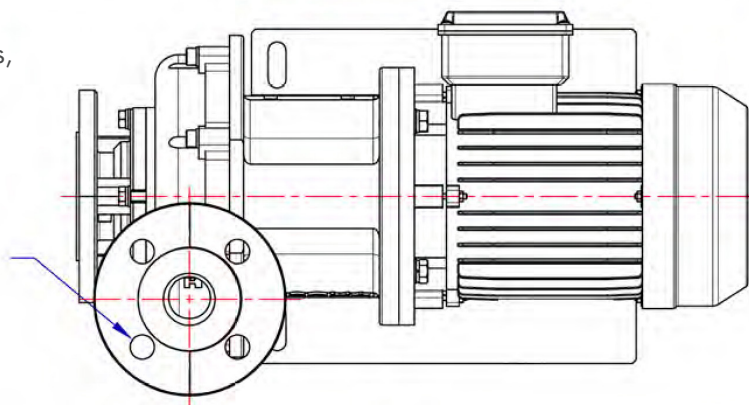
HORIZONTAL END SUCTION, **MAGNETIC DRIVE**, CENTRIFUGAL PUMPS

## ∞ RANGE DIMENSIONS

For specific 3D CAD drawings or specific pump dimensions, please contact us at [info@crestpumps.co.uk](mailto:info@crestpumps.co.uk) or telephone +44 (0)1425 627700.

### NOTE:

1. The total length and weight of the pump will differ depending on the brand of the motor.
2. All dimensions are in mm.
3. Assembly tolerances are +/- 3mm.



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
AMXi 420	16	55	110	140	12	225	130	75	20	20	129	98	200	441	87
AMXi 441	16	72	130	160	12	256.5	141.5	85	30	20	148	130	210	486	102
AMXi 542	19	80	204	260	14	281.5	161.5	90	30	20	137	200	300	498	88
AMXi 543	19	80	204	260	14	281.5	161.5	90	30	20	137	200	300	524	88
AMXi 655	19	80	220	250	14	333	171	132	30	30	125	300	360	601	94

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## EXPLODED VIEW



- 1 Reinforced armour** - The ductile casing armour is lined with carbon fibre reinforced ETFE for nearly universal corrosion resistance and structural strength.
- 2 Patented buffer system** - the AMXi range boasts a dynamic buffer system which absorbs vibration and shock caused by adverse operating conditions, increasing the mean time between servicing and reducing maintenance costs as a result.
- 3 High performance magnetic coupling** - using the latest magnetic analysis programmes to calculate magnetic torque and maximise utilisation, ensures sufficient torque margins to prevent de-coupling.
- 4 High efficiency flow design** - with over 70% operational efficiency, this helps reduce energy consumption and lowers energy costs.
- 5 Patented run dry design** - running a pump dry can halt any process. However the AMXi range features run-dry protection built in, allowing the pump to run dry for an extending period of time, saving your process from total failure.
- 6 Integrated CAD design** - the AMXi has been designed to fit the modern requirements of a high efficiency process system. Constant research and development has ensured that the AMXi range is the industry standard in its field.

**AMA RANGE**  
CAPACITY 108 M<sup>3</sup>/HR  
HEAD 80M  
HEAVY DUTY DESIGN



**AMX RANGE**  
CAPACITY 800 L/M  
HEAD 35M  
RUN DRY DESIGN



**AM RANGE**  
CAPACITY 150 L/M  
HEAD 10M  
EX STOCK AVAILABLE



## INFORMATION

For more specific model curves, general arrangement drawings or exploded views of individual models, please visit [www.crestpumps.co.uk](http://www.crestpumps.co.uk).

If you need 3D CAD models of the range, please contact one of our team and we will arrange for a copy to be sent to you by email.



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## CASE STUDY - VANADIS POWER VANADIS POWER

**"Vanadis power chose a pump that was able to provide a high operating efficiency whilst operating 24/7 with a hazardous yet highly valuable media."**

Engineers at Vanadis were looking for a reliable pump supplier to provide corrosion resistant pumps to be installed into the energy storage process. The pump is vital for the circulation of the electrolytes which create the kinetic energy.

Vanadis Power required 16 pumps that were able to pump from both the positive and negative electrolyte terminals into the membrane where the power is generated and stored into the back tank. A delicate process which requires a reliable and efficient pump for 24/7 recirculation.

Crest Pumps Group recommended and supplied the magnetic drive AMX555-GG pumps not only because they were the best fit for the duty required, but also for high efficiency and low running costs. The AMX-GG pumps were supplied in polypropylene components, including the baseplate and adaptor to enhance the corrosion resistant nature of the pump.

As a result of choosing Crest Pumps Group, Vanadis Power have ensured that their highly valuable media is in a safe and efficient process, with no risk of leakage or corrosion. Energy consumption is kept to the absolute minimum and the pumps have been running for over 5 years without issue.



## CREST MAGNETIC DRIVE PUMPS - UTILISED BY



## APPLICATIONS



### CHEMICAL

Chemical applications include chemical transfer, dosing, re-circulation, filtration, fume scrubbing and tanker off-loading.



### PETROCHEMICAL

Previous petrochemical installations include high temperature, high pressure, highly viscous applications as well as chemical injection, re-circulation and off-loading.



### WATER TREATMENT

Providing reliable process pumps to the UK's largest waste-water treatment providers, for chemical transfer, desalination, reverse osmosis, water treatment and tanker unloading.



### PHARMACEUTICAL

Pharmaceutical companies have relied on Crest Pumps to provide pumps for ATEX requirements, chemical injection, CIP pumping, high viscous medias and highly toxic applications.



### BIOFUELS

Fully ATEX certified process pumps for transfer of liquids in explosive atmospheres, tanker unloading, recirculation and transfer.



### ENERGY GENERATION

Pumps supplied for various energy generation applications, including wind turbine, solar, and Vanadium redox flow batteries.



### MARINE

Centrifugal pumps supplied for various below deck applications including ballast water treatment, electrolysis, desalination and sea water cooling systems.