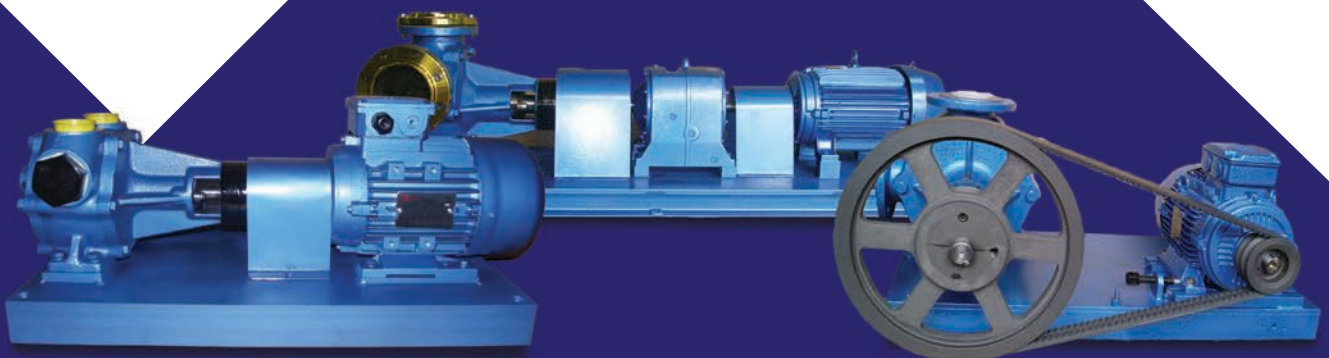




NORTH RIDGE PUMPS
ENGINEERED BEYOND YOUR NEEDS

ROTARY PISTON PUMPS





THE NORTH RIDGE DIFFERENCE

North Ridge Pumps are an independent manufacturer and distributor of pumps. We are closely associated with DMS who have operated within the building services, district heating, process and renewable industries for over 20 years, with a proven track record for product support and customer service throughout the whole of the UK and internationally. Being centrally located in Nottingham, we are able to easily service the entire UK.

It was a natural progression to diversify into the pumping industry having regularly received enquiries for pumps with associated flowmeters. North Ridge Pumps was established in 1998. We have a vast wealth of experience in pumping applications handling fluids from freshwater, seawater and glycols to heavy oil, grease, food and chemicals.

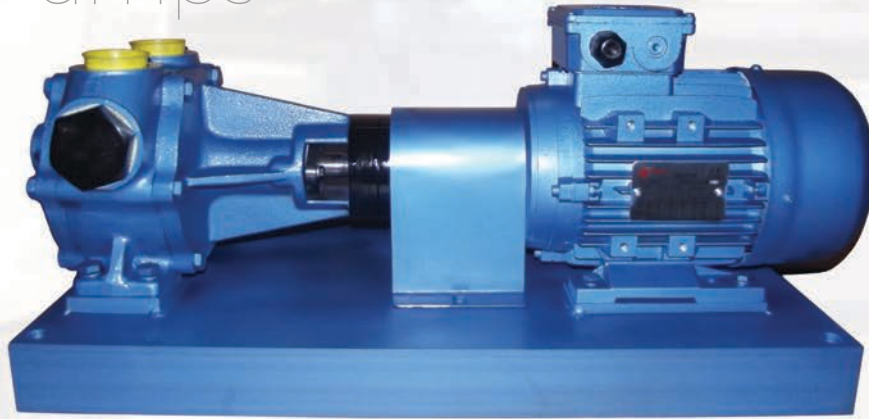
We work within a range of industries both in the UK and internationally. Our pump types range from standard centrifugal pumps, and multistage pumps, to immersed and process overhung solid handling pumps. We also supply a wide range of positive displacement pumps such as peristaltic, progressing cavity, screw and gear, allowing us to provide more than one solution for your process and accommodate almost any fluid.

We understand at times associated process equipment may be required alongside your pump, so we have become accustomed to supplying pumps complete with control panels, inverter drives, monitoring, couplings, hose, flowmeters and valves.

PUMPS ENGINEERED FOR ALL SECTORS

- | | | | |
|------------------------|-------------------------------|--------------------------|------------------------|
| + Agriculture | + Energy Storage Industry | + Oil & Gas | + Rubber & Plastics |
| + Aviation | + Foam Products | + Paint, Print & Varnish | + Surface Treatment |
| + Beverage | + Food | + Pharmaceutical | + Wastewater treatment |
| + Building Services | + Fuels, Biofuels & Petroleum | + Power Generation | |
| + Chemical Manufacture | + Marine | + Pulp & Paper | |
| + Decommissioning | + Mechanical | + Railway | |
| + Energy from Waste | + Mining | + Renewable Energy | |

Rotary Piston Pumps



A rotary piston pump is a self-priming reversible positive displacement pump which can deliver high volume oils, viscous fluids such as resins and fuel efficiently. Rotary piston pumps typically handle up to 20,000cSt and temperatures up to 300°C.

A rotary piston pump operates by a piston sliding back and forth along a rotors groove pulling liquid into the inlet of the pump. The rotor operates like a rotary valve enabling the pump to self prime. Two direct driven pistons operating in twin cylinders. The piston moves towards the centre of the pump when near the pump inlet and as it moves towards the outlet of the pump it moves along the rotor expelling the liquid via the outlet.

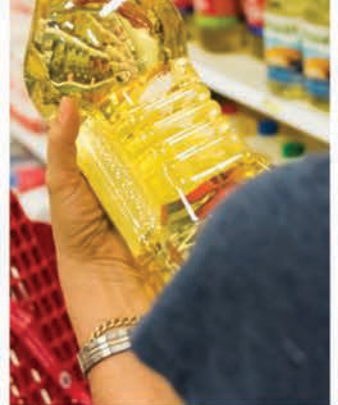
The North Ridge NR-RPP Rotary piston pumps are positive displacement volumetric self-priming pumps, with fantastic self-priming capabilities. They can also be used in reverse meaning the suction can become the discharge side if required. A feature extremely helpful for loading, offloading and mixing applications. These pumps are capable of handling a large variety of fluids from low (10 cSt) to high viscosities (200,000 cSt) and a max. temperature of 300°C.

These pumps can maintain a high volumetric efficiency even when pumping extremely viscous fluids. This along with their high suction capabilities make our rotary piston pump range the most suitable selection for most process, transfer, decanting and mixing applications.





Durable
Efficient
Pumps
For All
Industries



Rotary Piston

Working Principle

Rotary piston pumps consist of a rotor, piston and block. Its working principle is along the same lines as a piston pump. Two parts a piston and block operating within two cylinders, whilst a rotor acts as an alternating valve.

During operation, the piston slides back and forth within the rotor groove. With this motion, fluid is pulled in from the inlet of the pump, and simultaneously discharged.

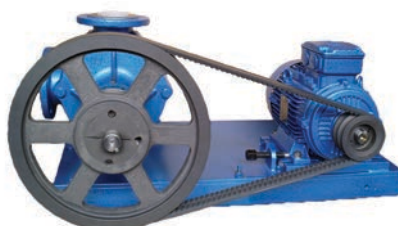
As pistons slide, the block slides along the piston groove, drawing in fluid through an opening within the rotor, and discharging fluid through another opening on the discharge side of the rotor. The rotor acts similar to a valve, segregating fluid from the pump's inlet & outlet.

Movement is created via a central bearing block rotated by the motor. Rotation movement is converted to reciprocal movement via an eccentric rod within the casing.

This produces an alternating action of a piston and block, with Four strokes of the piston and block occurring during each rotation of the rotor. This creates a uniform non pulsating fluid discharge with high volumetric efficiency.



**Long Coupled Motor And
Gearbox Drive**



**V-Belt Driven Baseplate
Mounted**



**Close And Long Coupled
Motor Driven**

Features/Benefits

- ✓ ATEX Certified.
- ✓ High Efficiency Even with Highly Viscous Fluids.
- ✓ Temperatures Up to 300 °C.
- ✓ High Self-priming Capabilities.
 - Gentle Pumping Motion as centrifugal forces and gear agitation is avoided.
- ✓ Capable of Handling Viscosities Up to 200,000 cSt.
- ✓ Reversible – Clockwise and Anticlockwise.
- ✓ Capacity achieved is directly proportional to their working speed.

Typical Applications/ Fluids

- ✓ Food - edible oils, chocolate, tomato paste, jams, honey, butter, mayonnaise, molasses, cake batter, dry food etc.
- ✓ Cosmetics and more - detergents, soaps, toothpaste, beauty creams, perfumes, acetone etc.
- ✓ Fuels and oils - thermal oils, mineral oils, kerosene, diesel, fuel-oil, gasoline, white spirits, toluene, gasoil etc.
- ✓ Industrial fluids - adhesives, emulsions, grease, resins, paraffin, asphalt, bitumen etc.



AX

Fixed Pump head for applications that do not require flow or pressure to be regulated.



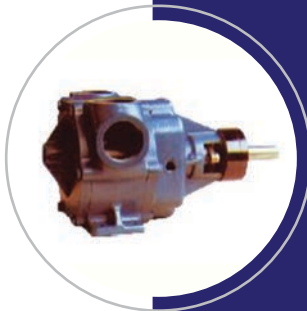
ACC

Supplied with Safety Relief Valve mounted on Pump head for relieving excess pressure and flow regulation.



ACP

Easy access Front mounted heating & cooling chamber for maintaining product temperature. Also ensures drive is not subject to unwanted heat.



AXP

Fixed Pump head with rear mounted Heating or Cooling chamber for maintaining product temperature.



ACCP

Supplied with Safety Relief Valve mounted on Pump head for relieving excess pressure and flow regulation, with rear mounted Heating or Cooling chamber for maintaining product temperature.

V-Belt Driven Baseplate Mounted

Series	Model	Flow Rate (L/Hr)	Height (M)	Power (HP)	RPM	Aperture
300	AX-1 ACC-1	2500	10	1.00	580	THREAD 1"
			20	1.50		
			30	2.00		
			40	2.00		
			50	2.00		
400	AX-11 ACC-11	6000	10	2.00	490	THREAD 1 1/2"
			20	2.00		
			30	3.00		
			40	3.00		
			50	3.00		
500	AX-81 ACC-81	15000	10	3.00	465	THREAD 2 1/2"
			20	4.00		
			30	5.50		
			40	5.50		
			50	7.50		
600	AX-101 ACC-101	25000	10	5.50	365	THREAD 3 1/2"
			20	5.50		
			30	7.50		
			40	10.00		
			50	15.00		
600-B	AX-101-8 ACC-101-8	25000	10	5.50	365	CLAMP 4" DIN-2573
			20	5.50		
			30	7.50		
			40	10.00		
			50	15.00		
700	AX-111 ACC-111	43000	5	5.50	345	CLAMP 5" DIN-2501
			10	7.50		
			120	10.00		
			30	15.00		
			40	15.00		
800	AX-121 ACC-121	64000	50	20.00	325	CLAMP 6" DIN-2501
			5	7.50		
			10	10.00		
			120	15.00		
			30	15.00		

*Performance table calculated at 375 Cst up to 300 °C.

Long Coupled Motor And Gearbox Drive

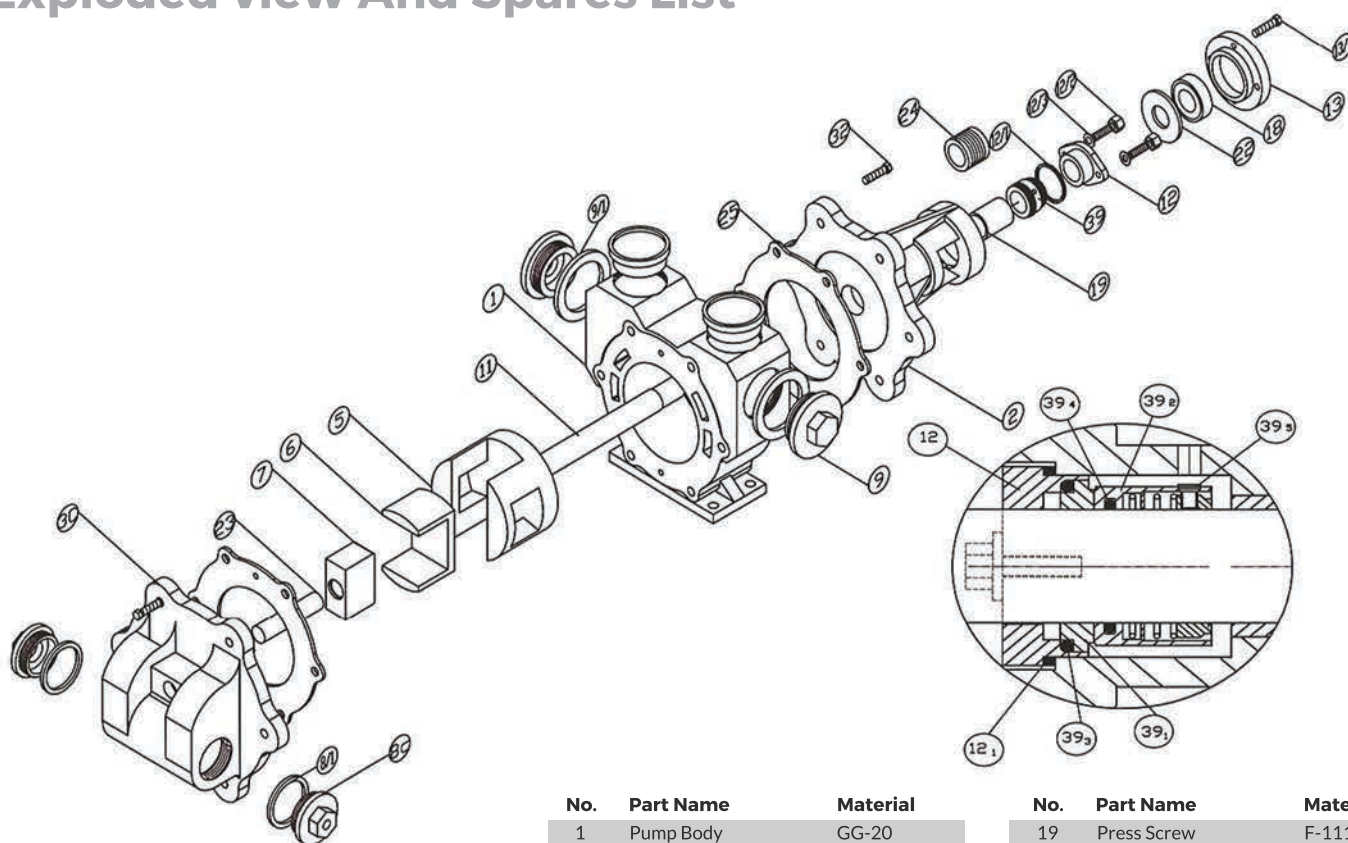
Series	Model	Flow Rate (L/Hr)	Height (M)	Power (HP)	RPM	Aperture
300	AX-4 ACC-4	2500	10	1.00	580	THREAD 1"
			20	1.50		
			30	2.00		
			40	2.00		
			50	2.00		
400	AX-14 ACC-14	6000	10	2.00	490	THREAD 1 1/2"
			20	2.00		
			30	3.00		
			40	3.00		
			50	3.00		
500	AX-84 ACC-84	15000	10	3.00	465	THREAD 2 1/2"
			20	4.00		
			30	5.50		
			40	5.50		
			50	7.50		
600	AX-104 ACC-104	25000	10	5.50	365	THREAD 3 1/2"
			20	5.50		
			30	7.50		
			40	10.00		
			50	15.00		
600-B	AX-104-8 ACC-104-8	25000	10	5.50	365	CLAMP 4" DIN-2573
			20	5.50		
			30	7.50		
			40	10.00		
			50	15.00		
700	AX-114 ACC-114	43000	5	5.50	345	CLAMP 5" DIN-2501
			10	7.50		
			120	10.00		
			30	15.00		
			40	15.00		
800	AX-124 ACC-124	64000	50	20.00	325	CLAMP 6" DIN-2501
			5	7.50		
			10	10.00		
			120	15.00		
			30	15.00		

*Performance table calculated at 375 Cst up to 300 °C.

Close And Long Coupled Motor Driven

Series	Model	Flow Rate (L/Hr)	Height (M)	Power (HP)	RPM	Aperture
100	AXM-001 ACCM-001	800	10	0.50	1450	THREAD 3/8"
			20	0.50		
			30	0.50		
			40	0.50		
			50	0.50		
200	AXM-01 ACCM-01	1500	10	0.50	1450	THREAD 1/4"
			20	0.50		
			30	0.75		
			40	0.75		
			50	0.75		
300-M	AXM-1 ACCM-1	2500	10	1.00	930	THREAD 1"
			20	1.50		
			30	2.00		
			40	2.00		
			50	2.00		
300	AX-3 ACC-3	3600	10	1.00	930	THREAD 1"
			20	1.50		
			30	2.00		
			40	2.00		
			50	2.00		
400	AX-13 ACC-13	8500	10	2.00	930	THREAD 1 1/2"
			20	2.00		
			30	3.00		
			40	3.00		
			50	3.00		

Exploded view And Spares List



No.	Part Name	Material	No.	Part Name	Material
1	Pump Body	GG-20	19	Press Screw	F-111
2	Rotor Cover	GG-20	20	Bearing Cover	GG-20
3	Chamber Rotor Cover	GG-20	21	Bearing Cover Screws	DIN 912-8.8
4	Chamber Cover	Steel	22	Body Valve	Bronze
5	Bypass Cover	GG-20	23	Body Valve Joint	Klinger
6	Chamber Cover	GG-20	24	Valve Seating	Bronze
7	Fixer Cover	GG-20	25	Spring	Steel
8	Rotor	GG-20	26	Tension Screw	F-111
9	Piston	GG-40	27	Nut	Brass
10	Block	Bronze	28	Locknut	Brass
11	Tension Plug	GG-20	29	Bearing	Balls
12	Tension Plug Washer	Klinger	30	Sleeve Cap	Bronze
13	Entrance Plug	GG-20	31	Bearing Cover Washer	F-111
14	Entrance Plug Washer	Klinger	32	Gasket Cover	Steel
15	Grill	GG-20	33	Packaging	AM.Graphite
16	Axle	F-114	34	Body Washer	Klinger
17	Press Topper	GG-20	35	Fastening Screws	DIN 933-8.8
18	Press Nut	F-111			



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