



RMI have had a long standing relationship with the world renown engineering giant, Sheffield Forgemasters International Limited. The company, now in its third century and one of the oldest steel businesses in the world, remains at the forefront of technology and production for castings and forgings for heavy engineering across the world.

It supplies high quality engineered products to key industries such as defence, nuclear, oil and gas exploration, power generation, marine and construction. RMI provided 4 x S250 pumps to supply a 2,500 tonne press some 20 years ago.

Having worked reliably during this time, when one of the vintage pumps on the yard services system reached the end of its serviceable life, Forgemasters approached RMI for a suitable replacement.

A new 5 plunger Quinmax S500 was supplied in 2011 to replace this pump. Since installation, the pump has never broken down or caused any delay to production. During the first year of operation the pump system was under continuous monitoring, ensuring internal oil temperatures and pressures, noise and vibration levels were all within tolerance. There were no significant issues raised during this period.

“This installation has been very successful and continues to operate with no significant issue. We look forward to working with RMI for any future installations we require.”

Ian Bickerton, Engineering Manager and Chief Engineer

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Quinmax S500 Series

Industrial Applications - 50Hz

RAMS

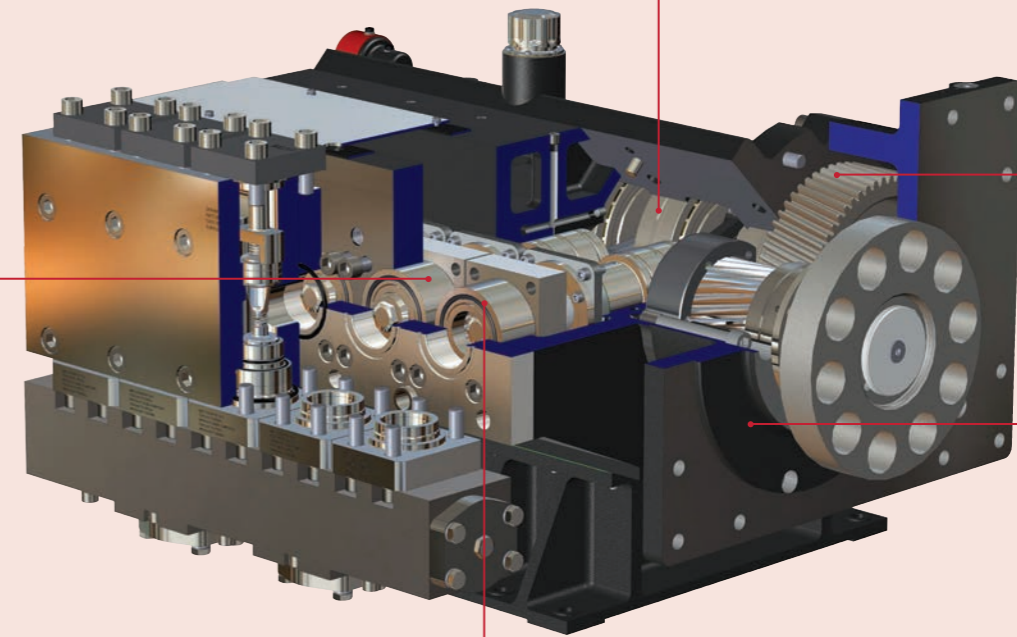
High purity alumina oxide ceramic or hardened stainless steel.

BEARINGS

Spherical roller main journals with lead bronze small and big ends.

GEARS

Precision ground steel to provide maximum life and optimum speeds.



VALVE LIFTERS (not shown)

Can be fitted as an optional extra for safe pressure control.

GLAND PACKING

Self-adjusting spring loaded packing, for maximum sealing.

MOTOR

Flange mounted, on self aligning pedestal for rapid installation.

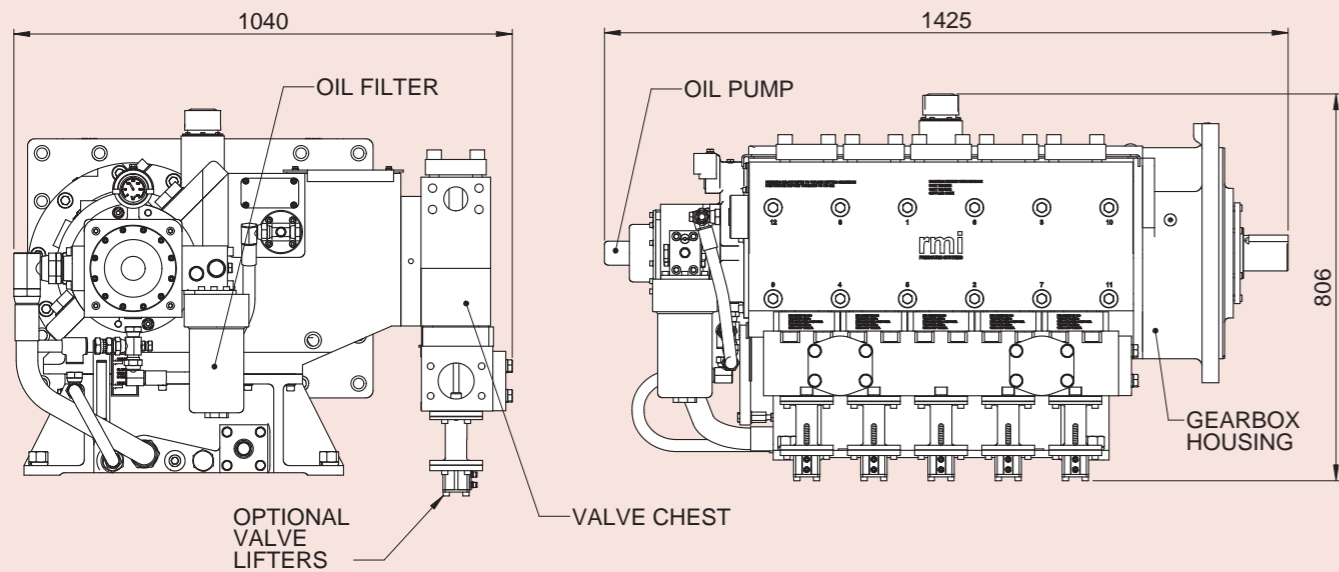
The Quinmax S500 series pump is specified to provide a safe and reliable supply of high pressure water or water based fluids in a variety of industries including mining, petrochemicals, power generation, metal processing and site services.

PUMP GENERAL PERFORMANCE DATA

Flow	76 - 839 l/min	20 - 222 USgpm
Pressure	2,070 - 193 Bar	30,023 - 2,799 psi
Motor Power	300 - 496 kW	400 - 540 HP

rmi
PRESSURE SYSTEMS

PUMP DIMENSIONS



Note: Improvements in general design and modifications in detail will be embodied for the benefit of clients as and when introduced; consequently this specification is subject to alteration, as and when necessary, without notice.

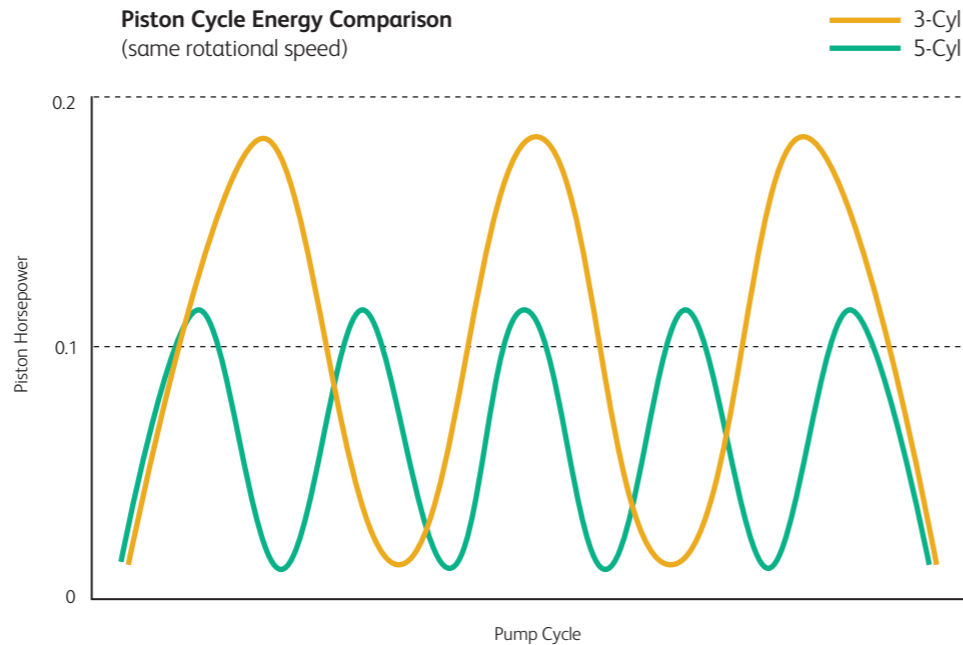
ADVANTAGE OF 5-CYLINDER DESIGN

The S500 pump uses a 5 plunger design which has several advantages over the more traditional 3 plunger design.

- Reduced Crankshaft and Bearing Loads leading to longer life and time between service intervals.
- A 40% reduction in the fluid velocity per plunger resulting in lower hydraulic noise.
- Slower Crank Speeds reducing mechanical wear and noise.
- Longer Stroke length leading to fewer reversals.
- Smoother pressure profile reducing the impact of surges on other critical items of equipment within the system.

All attributing to greater reliability and less down time of not only the pumps but other key system components such as hoses and valves. The combined design features have shown to reduce the decibel level significantly.

Piston Cycle Energy Comparison
(same rotational speed)



Motor Speed 1,475rpm Crank Speed 492rpm				
Max Power 300kw				
Stroke Length 70mm				
RamØ	Pump Flow		Pump Pressure	
mm	L/min	US gpm	BAR	PSI
24	76	20	2,070	30,023
28	103	27	1,379	20,001
30	119	31	1,379	20,001
40	211	56	700	10,153
45	268	71	575	8,340
50	331	87	420	6,092
55	400	105	418	6,063
60	476	126	347	5,033
62	509	134	325	4,714
65	559	148	296	4,293
70	643	170	255	3,698
75	737	195	220	3,191
80	839	222	193	2,799

Motor Speed 1,475rpm Crank Speed 523rpm				
Max Power 317kw				
Stroke Length 70mm				
RamØ	Pump Flow		Pump Pressure	
mm	L/min	US gpm	BAR	PSI
24	81	21	2,070	30,023
28	110	29	1,379	20,001
30	126	33	1,379	20,001
40	224	59	700	10,153
45	284	75	575	8,340
50	351	93	420	6,092
55	426	113	416	6,034
60	507	134	343	4,975
62	541	143	322	4,670
65	595	157	292	4,235
70	683	180	252	3,655
75	784	207	220	3,191

Motor Speed 1,475rpm Crank Speed 555rpm				
Max Power 337kw				
Stroke Length 70mm				
RamØ	Pump Flow		Pump Pressure	
mm	L/min	US gpm	BAR	PSI
24	86	23	2,070	30,023
28	117	31	1,379	20,001
30	134	35	1,379	20,001
40	239	63	700	10,153
45	302	80	575	8,340
50	373	99	420	6,092
55	451	119	416	6,034
60	537	142	343	4,975
62	574	152	322	4,670
65	631	167	292	4,235
70	724	191	252	3,655
75	832	220	220	3,191

Motor Speed 1,475rpm Crank Speed 605rpm				
Max Power 367kw				
Stroke Length 70mm				
RamØ	Pump Flow		Pump Pressure	
mm	L/min	US gpm	BAR	PSI
24	94	25	2,070	30,023
28	127	34	1,379	20,001
30	146	39	1,379	20,001
40	260	69	700	10,153
45	329	87	575	8,340
50	406	107	420	6,092
55	493	130	416	6,034
60	585	155	343	4,975
62	626	165	322	4,670
65	687	181	292	4,235
70	797	211	252	3,655

Motor Speed 1,475rpm Crank Speed 653rpm				
Max Power 391kw				
Stroke Length 70mm				
RamØ	Pump Flow		Pump Pressure	
mm	L/min	US gpm	BAR	PSI
24	101	27	2,070	30,023
28	137	36	1,379	20,001
30	158	42	1,379	20,001
40	280	74	700	10,153
45	355	94	575	8,340
50	439	116	420	6,092
55	531	140	419	6,063
60	633	167	343	4,975
62	675	178	322	4,670
65	742	196	292	4,235

Mechanical efficiency 95% Volumetric efficiency 98%