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※Specifications may change without notice.

※Only a few of Naniwa's standard pumps are shown in this catalog. For pumps of other designs and capacities, please do not hesitate to contact us for whatever you require.

Catalog Screw Pump 10-04 Printed in Japan

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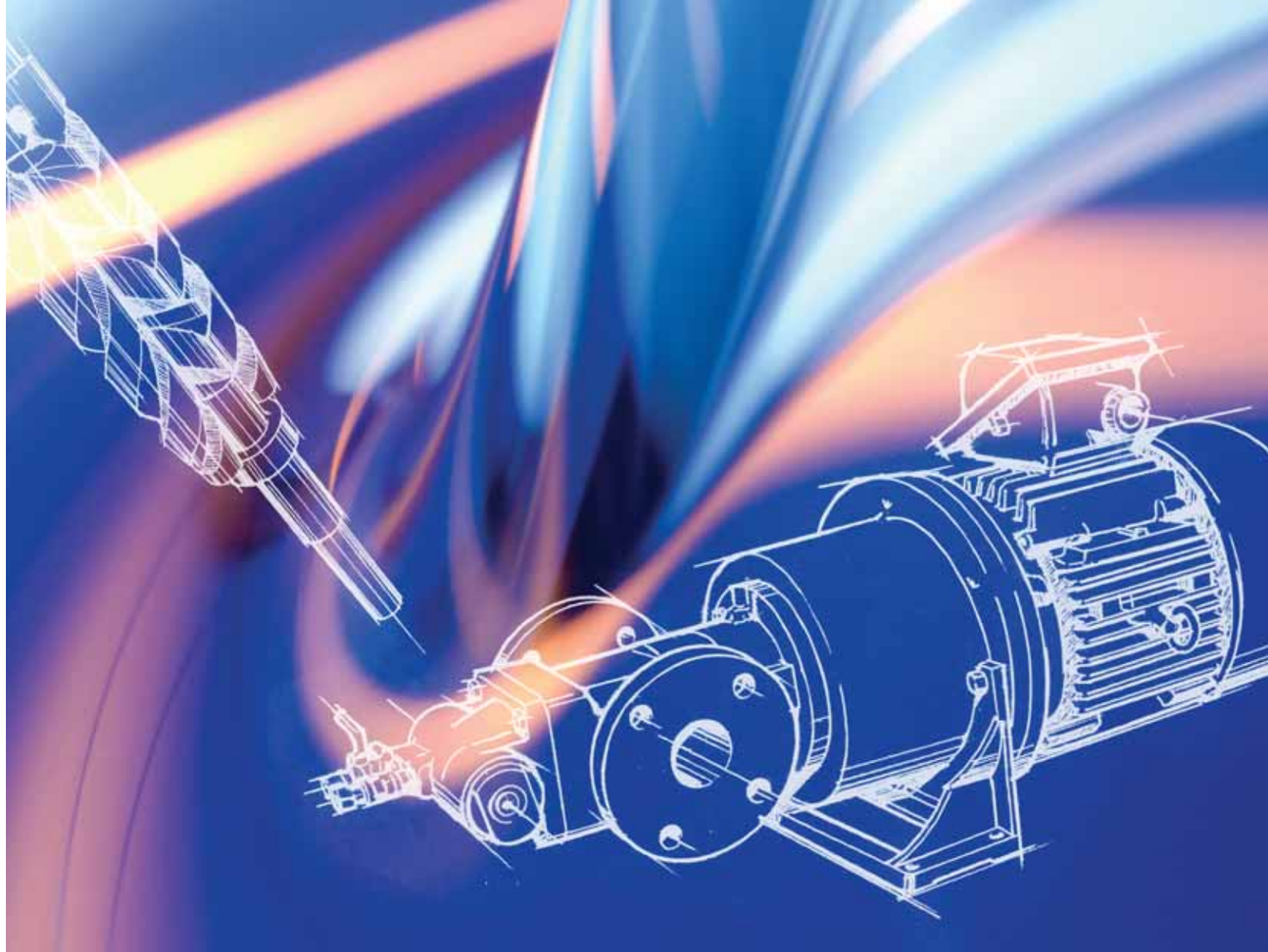
Manufacturing Co., Ltd.

NANIWA
MGO/HFO HANDLING PUMP



Naniwa Screw Pump series ALT (V)

MGO/HFO HANDLING PUMP

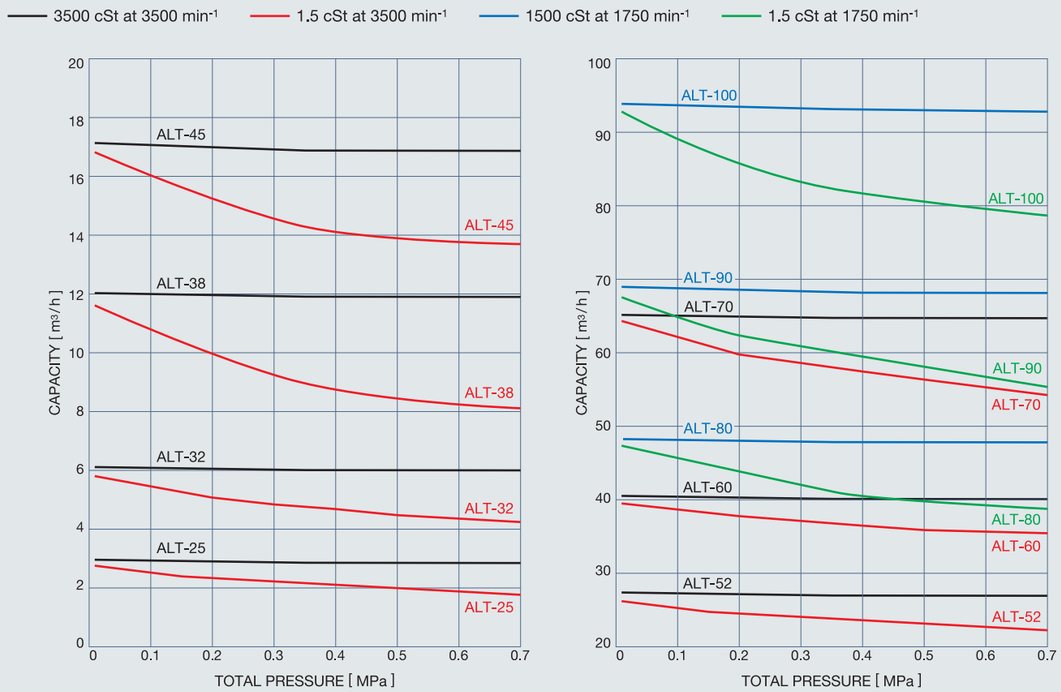
The ALT(V) series of 3 spindle screw pumps have been developed for safety operation of **low viscosity fuel oil (min.1.5 cSt).**

Typical Applications

- Supply and circulation in fuel oil system
- Fuel oil transfer
- Lubrication oil transfer

Model : ALT-45

Performance Chart



Discharge Pressure

- Maximum discharge pressure is 16 bar. Max. discharge pressure may be reduced depending on viscosity.

Inlet Pressure

- Maximum inlet pressure is 7 bar.

Capacity

- Maximum capacity is 170 m^3/h at 26 cSt.

Pressure Safety Valve

- The pump is equipped with an integral pressure relief valve for internal circulation to protect the pump from shut off of the discharge line. The valve is adjustable for different opening pressures.

Drive

- The pump is designed to be flexible coupled to an electric motor.

Rotation

- The pump is designed to operate in standard clockwise direction only (when facing the shaft end).

Speed

Maximum speed (min^{-1}) is as follows:

Size	25	32	38	45	52	60	70	80	90	100
Max. Speed	3600	3600	3600	3600	3600	3600	3600	1800	1800	1800

Max. operating speed may be reduced depending on inlet condition.

Fluid viscosity (cSt)

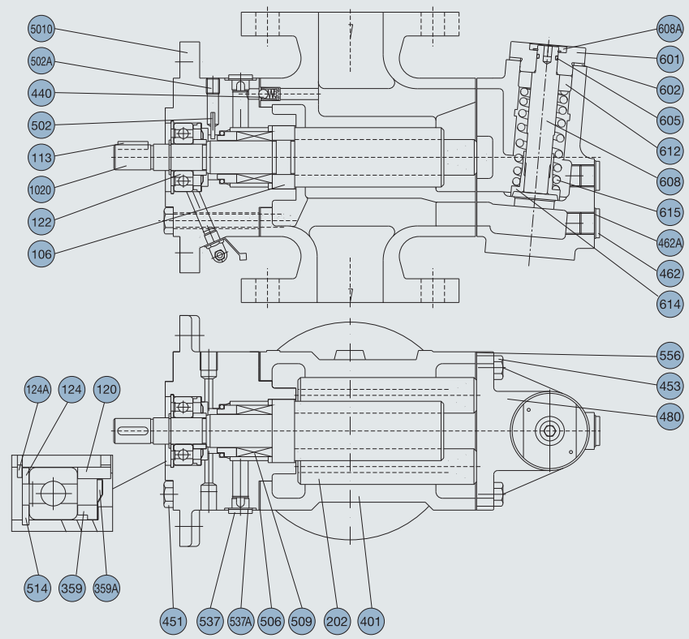
Size	25	32	38	45	52	60	70	80	90	100
Min. viscosity	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Max. viscosity	3500	3500	3500	3500	3500	3500	3500	1500	1500	1500

Fluid Temperature (Degrees C)

Size	25	32	38	45	52	60	70	80	90	100
Min. Temp.	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20
Max. Temp.	155	155	155	155	155	155	155	130	130	130

Sectional View

Model : ALT-45



NO.	NAME OF PART	MATERIAL	Q'TY
615	VALVE SPRING	CARBON STEEL	1
614	VALVE PISTON	CARBON STEEL	1
612	SET SCREW	MILD STEEL	1
608A	RETAINING RING	CARBON STEEL	1
608	VALVE SPINDLE	MILD STEEL	1
605	O RING	RUBBER	1
602	WASHER	ALUMINIUM	1
601	VALVE COVER	MILD STEEL	1
556	GASKET	KLINGER SIL	1
537A	WASHER	ALUMINIUM	2
537	DEAERATING PLUG	MILD STEEL	2
514	RETAINING RING	CARBON STEEL	1
509	MECHANICAL SEAL		1
506	GASKET	KLINGER SIL	1
502A	SCREW	CARBON STEEL	1
502	TENSION PIN	CARBON STEEL	1
5010	COMPL.FRONT COVER	DUCTILE CAST IRON	1
480	VALVE HOUSING	DUCTILE CAST IRON	1
462A	WASHER	ALUMINIUM	2
462	PLUG	MILD STEEL	2
453	SCREW	MILD STEEL	4
451	SCREW	MILD STEEL	6
440	RETURN VALVE	CARBON STEEL	1
401	PUMP BODY	DUCTILE CAST IRON	1
359A	NILOS RING	CARBON STEEL	1
359	DISTANCE WASHER	CARBON STEEL	1
202	IDLER ROTOR	CAST IRON	2
124A	SUPPORT RING	CARBON STEEL	1
124	RETAINING RING	CARBON STEEL	1
122	BALL BEARING	SUJ	1
120	DISTANCE SLEEVE	CARBON STEEL	1
113	KEY	CARBON STEEL	1
106	BALANCING PISTON	CARBON STEEL	1
1020	COMPL.POWER ROTOR	STRUCTURAL STEEL	1