

# SHIN SHIN MARINE



 SHIN SHIN MACHINERY CO., LTD.



# VG GEAR PUMP

Vertical in-line gear pump



## ■ Applications

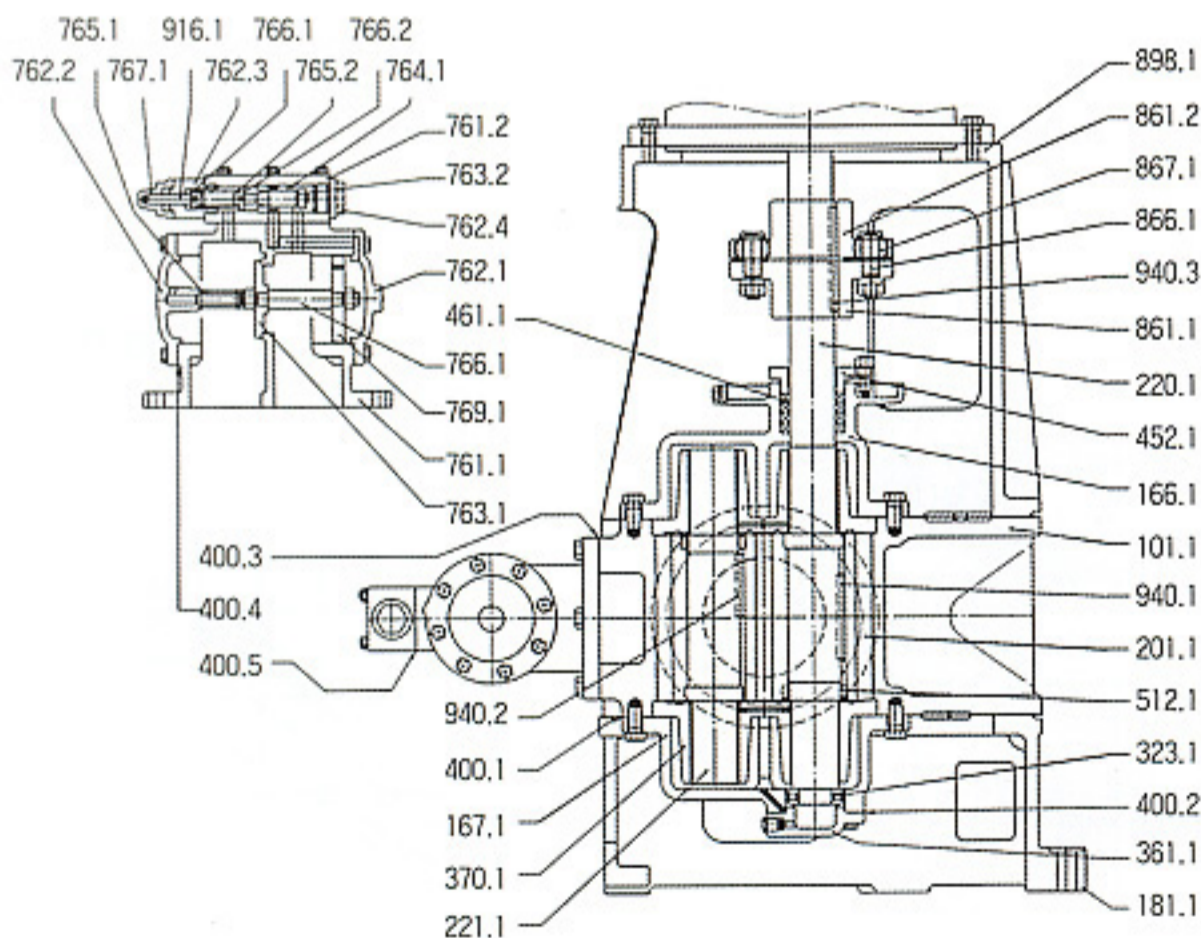
H.F.O Trans pump  
M/E Lub Oil pump  
Others

## ■ Principal Particulars

Item	Model	20	30	40	50	65	80	90	100	110	120	135	150	175	200	
Rotation		Clock viewed from driver end														
Suction & Discharge bore(mm)	S	φ 100	φ 125	φ 150				φ 200				φ 250				
	D	φ 80	φ 100	φ 125				φ 150				φ 200				
Standard Capacity(m <sup>3</sup> /hr)	60Hz	6P	20	30	40	50	-	-	-	-	-	-	-	-	-	
		8P	-	-	-	-	65	80	90	100	110	120	135	150	175	200
	50Hz	6P	16	25	33	40	-	-	-	-	-	-	-	-	-	-
		8P	-	-	-	-	55	65	75	85	90	100	110	125	145	165
Pressure(kg/cm)		Up To 7 kg/cm <sup>2</sup>														
Stuffing box seal		Gland Packing or Mechanical Seal														
Weight(kg)		Refer to the Outline Drawing														

## ■ Standard Materials

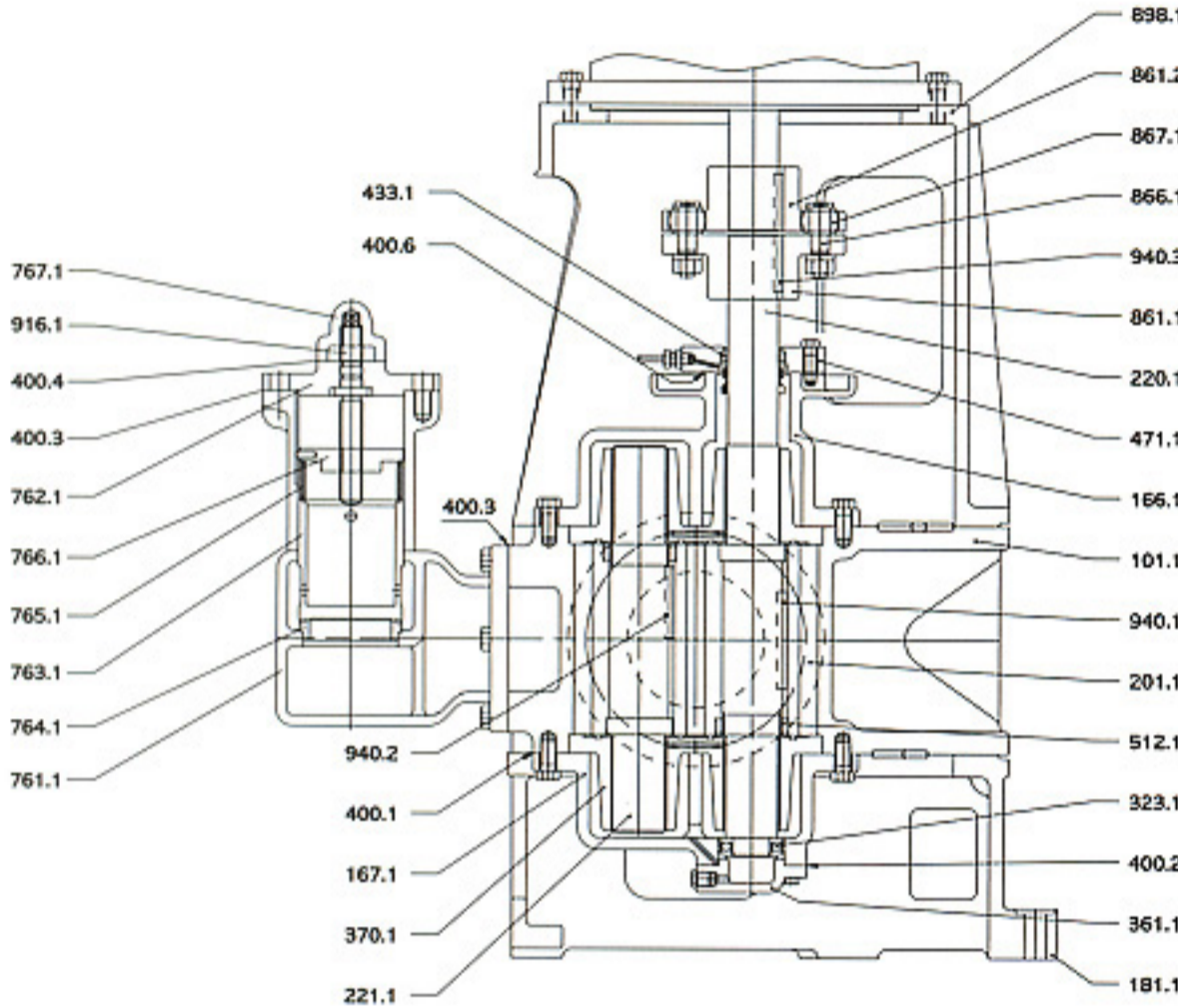
Part No.	Name Of Part	REQ. NO. FOR PUMP	MATERIAL	
			Name	KS
101.1	PUMP CASING	1	CAST IRON	GC200
166.1	SIDE COVER(INNER)	1	CAST IRON	GC200
167.1	SIDE COVER(OUTER)	1	CAST IRON	GC200
181.1	PUMP STOOL	1	CAST IRON	GC200
201.1	GEAR	2	CARBON STEEL	SM45C
220.1	DRIVE SHAFT	1	CARBON STEEL	SM45C
221.1	DRIVEN SHAFT	1	CARBON STEEL	SM45C
323.1	THRUST BALL BEARING	1	BEARING STEEL	STB2
361.1	BEARING END COVER	1	CAST IRON	GC200
370.1	SLIDING BEARING	4	CAST IRON + WHITE	GC200+WMI
400.1	GASKET	2	METAL	
400.2	GASKET	1	OIL PAPER	
400.3	GASKET	1	OIL PAPER	
400.4	GASKET	2	OIL PAPER	
400.5	GASKET	1	OIL PAPER	
452.1	PACKING GLAND	1	OIL PAPER	GC200
461.1	PACKING	4	CAST IRON	
512.1	GEAR SET RING	2	NON METALLIC	SM45C
761.1	VALVE BODY	1	CARBON STEEL	GC200
761.2	VALVE BODY	1	CAST IRON	GC200
762.1	VALVE COVER	1	CAST IRON	GC200
762.2	VALVE COVER	1	CAST IRON	GC200
762.3	VALVE COVER	1	CAST IRON	GC200
762.4	VALVE COVER	1	CAST IRON	GC200
763.1	SAFETY VALVE	1	CARBON STEEL	SM45C
763.2	SAFETY VALVE	1	STAINLESS STEEL	SM45C
764.1	VALVE SEAT	1	BRONZE	BC6
765.1	VALVE SPRING	1	SPRING STEEL	SPS6
765.2	VALVE SPRING	1	SPRING STEEL	SPS6
766.1	SPRING CARRIER	1	STEEL	SS41
766.2	SPRING CARRIER	1	STEEL	SS41
767.1	VALVE CAP	1	CAST IRON	GC200
768.1	PISTON ROD	1	CARBON STEEL	SM45C
769.1	PISTON VALVE	1	CARBON STEEL	SM45C
861.1	COUPLING HALF	1	CAST IRON	GC200
916.2	ADJUSTING HALF	1	CAST IRON	GC200
866.1	COUPLING BOLT, NUT&WASHER	1ST	STEEL	SS41
867.1	COUPLING RUBBER BUSH	1ST	NBR	
898.1	MOTOR FRAME	1	CAST IRON	GC200
916.1	ADJUSTING SCREW	1	STEEL	SS41
940.1	DRIVE SHAFT KEY	1	CARBON STEEL	SM45C
940.2	DRIVEN SHAFT KEY	1	CARBON STEEL	SM45C
940.3	COUPLING KEY	1	CARBON STEEL	SM45C



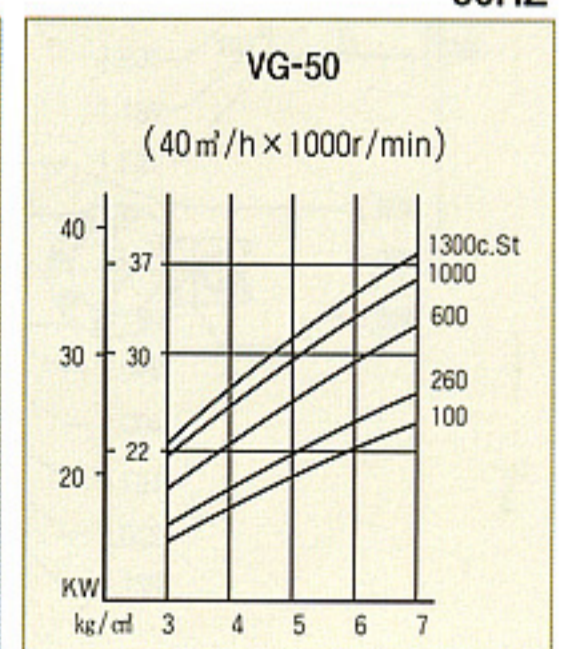
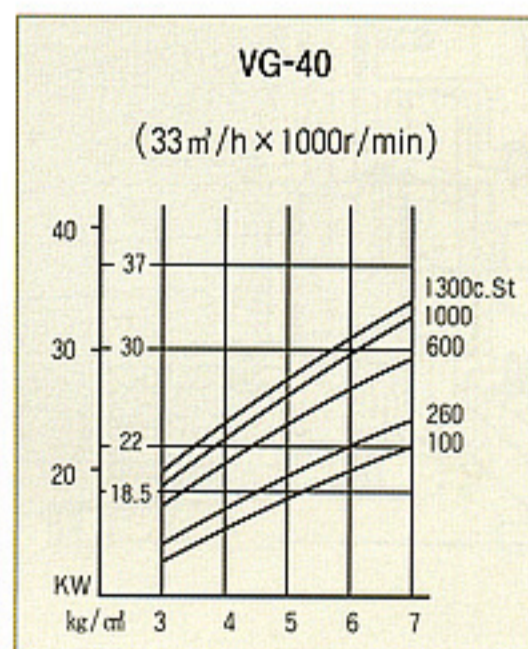
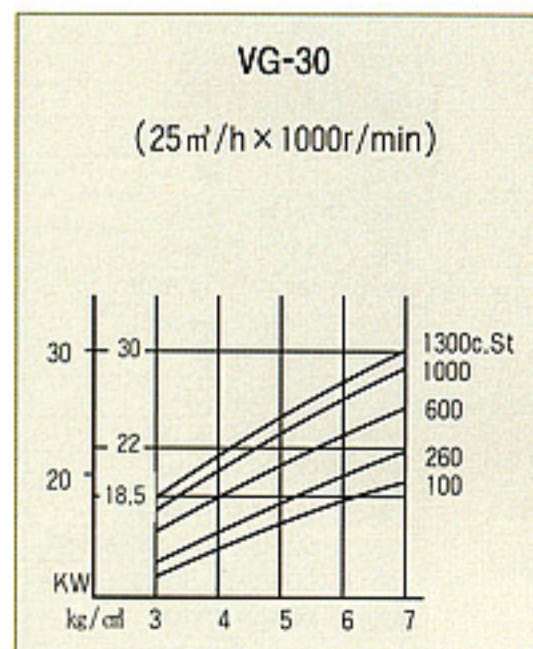
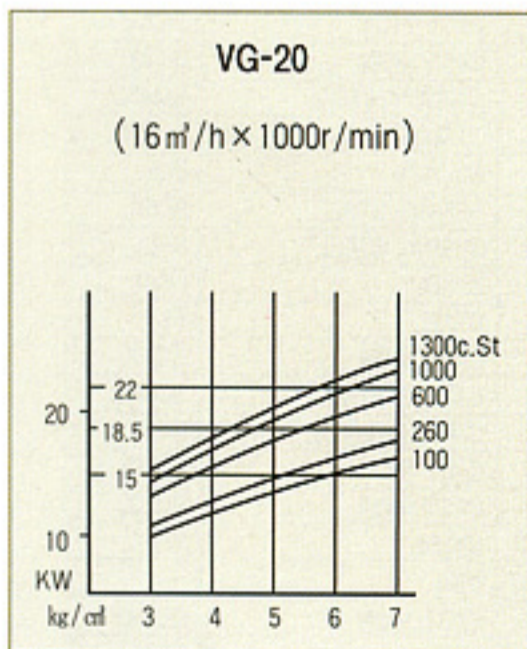


### Standard Materials

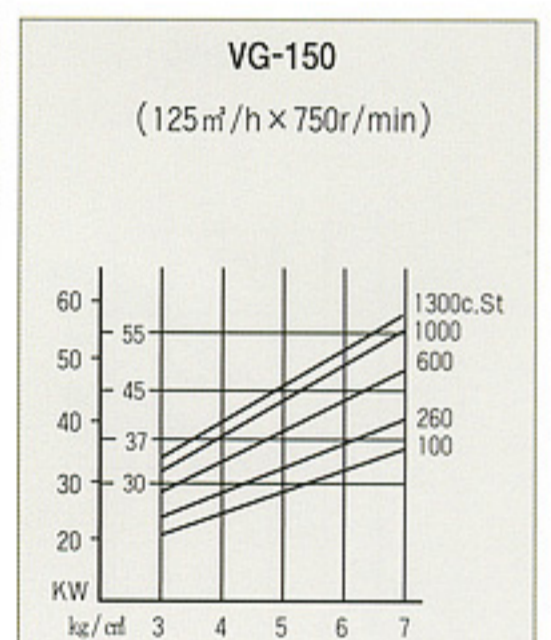
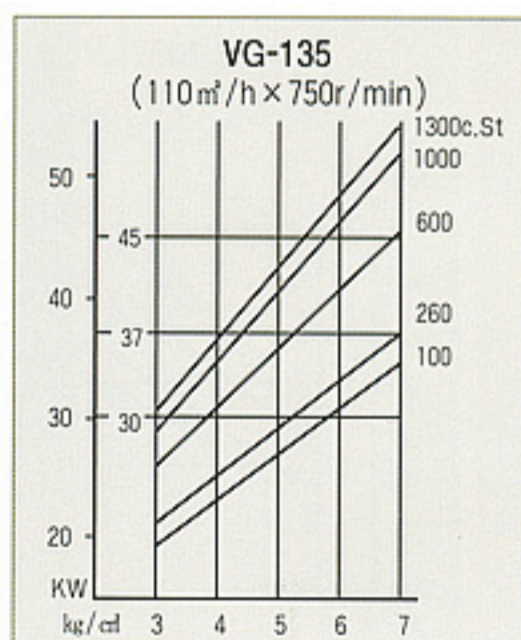
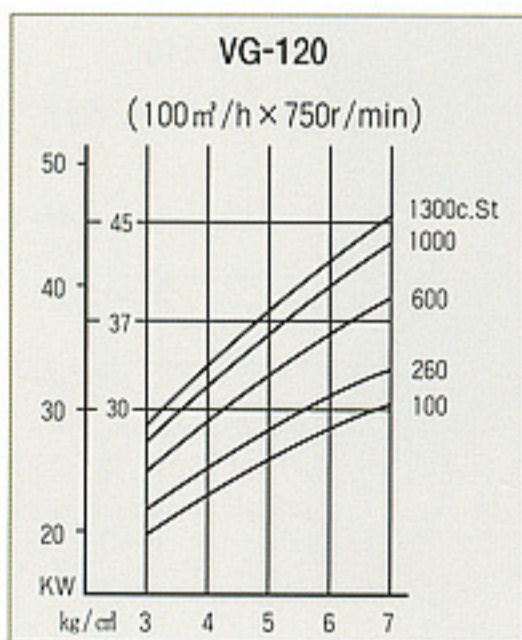
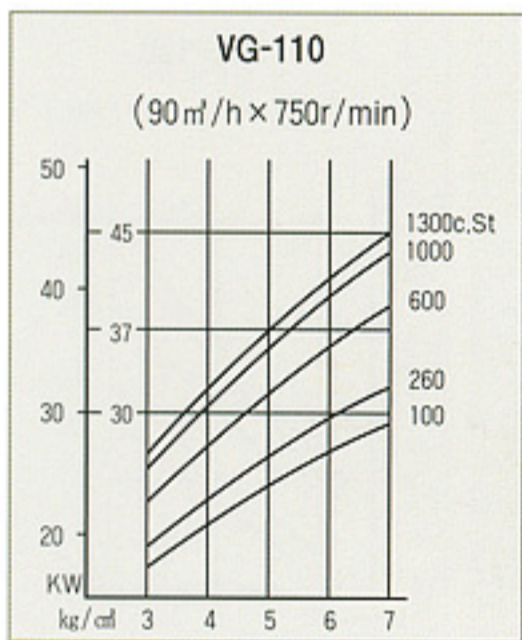
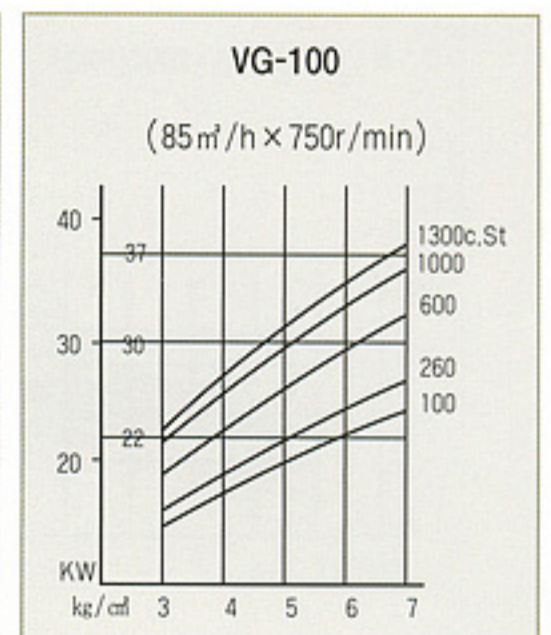
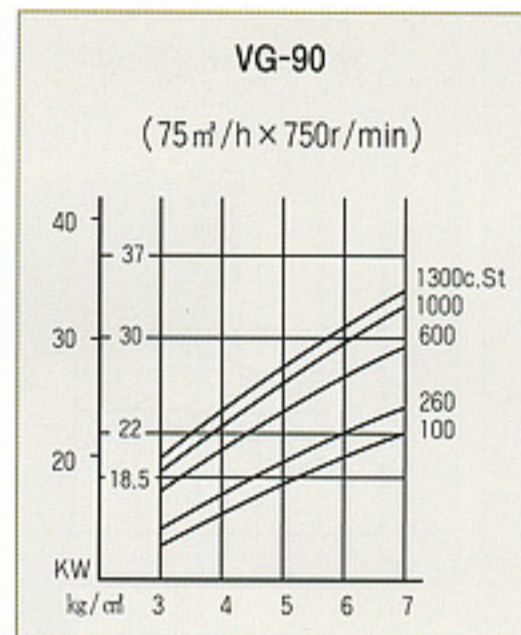
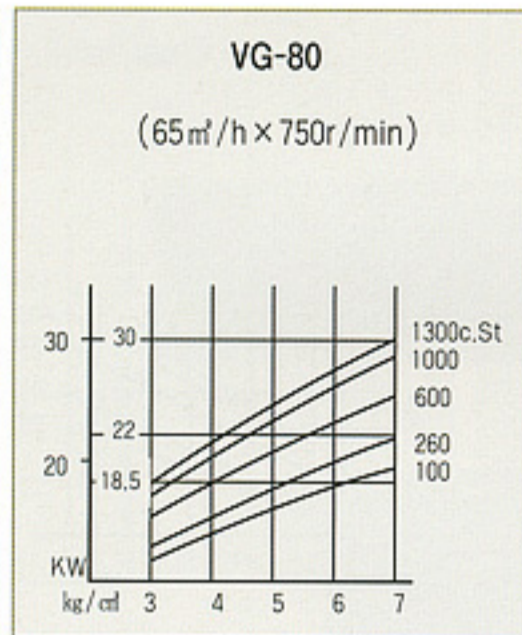
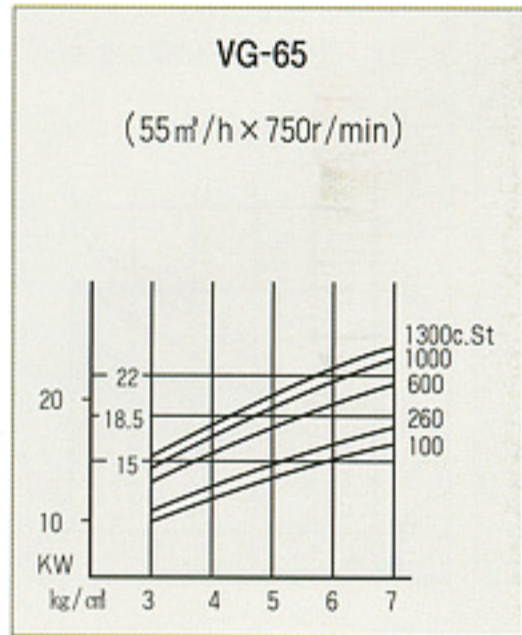
Part No.	Name Of Part	REQ. NO. FOR 1PUMP	MATERIAL	
			Name	KS
101.1	PUMP CASING	1	CAST IRON	GC200
166.1	SIDE COVER(INNER)	1	CAST IRON	GC200
167.1	SIDE COVER(OUTER)	1	CAST IRON	GC200
181.1	PUMP STOOL	1	CAST IRON	GC200
201.1	GEAR	2	CARBON STEEL	SM45C
220.1	DRIVE SHAFT	1	CARBON STEEL	SM45C
221.1	DRIVEN SHAFT	1	CARBON STEEL	SM45C
323.1	THRUST BALL BEARING	1	BEARING STEEL	STB2
361.1	BEARING END COVER	1	CAST IRON	GC200
370.1	SLIDING BEARING	4	CAST IRON + WHITE	GC200 + WM1
400.1	GASKET	2	METAL	
400.2	GASKET	1	OIL PAPER	
400.3	GASKET	1	OIL PAPER	
400.4	GASKET	2	OIL PAPER	
400.6	GASKET			
433.1	MECHANICAL SEAL	1		
471.1	SEAL COVER	1	STAINLESS STEEL	STS304
512.1	GEAR SET RING	2	CARBON STEEL	SM45C
761.1	VALVE BODY	1	CAST IRON	GC200
762.1	VALVE COVER	1	CAST IRON	GC200
950.1	DIL SEAL		NBR	
951.1	DILER		GLASS	
763.1	SAFETY VALVE	1	CARBON STEEL	SM45C
764.1	VALVE SEAT	1	BRONZE	BC6
765.1	VALVE SPRING	1	SPRING STEEL	SPS6
766.1	SPRING CARRIER	1	STEEL	SS41
767.1	VALVE CAP	1	CAST IRON	GC200
861.1	COUPLING HALF	1	CAST IRON	GC200
861.2	COUPLING HALF	1	CAST IRON	GC200
866.1	COUPLING BOLT, NUT&WASHER	1ST	STEEL	SS41
867.1	COUPLING RUBBER BUSH	1ST	NBR	
898.1	MOTOR FRAME	1	CAST IRON	GC200
916.1	ADJUSTING SCREW	1	STEEL	SS41
940.1	DRIVE SHAFT KEY	1	CARBON STEEL	SM45C
940.2	DRIVEN SHAFT KEY	1	CARBON STEEL	SM45C
940.3	COUPLING KEY	1	CARBON STEEL	SM45C



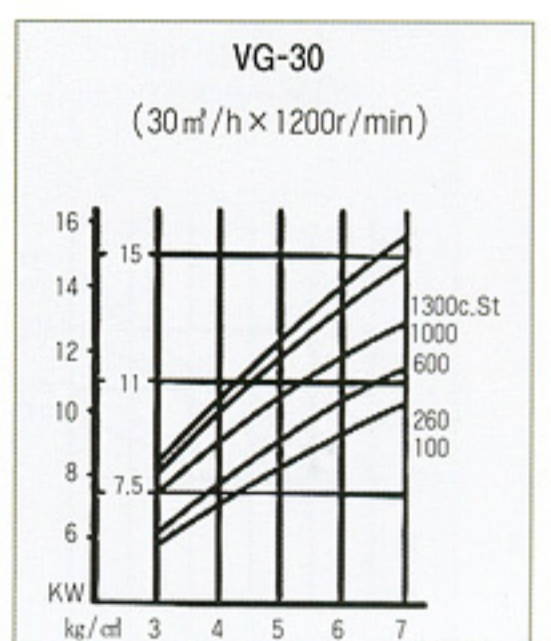
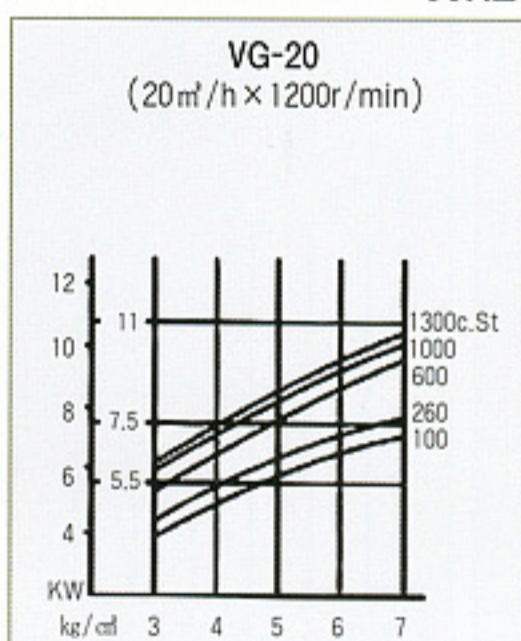
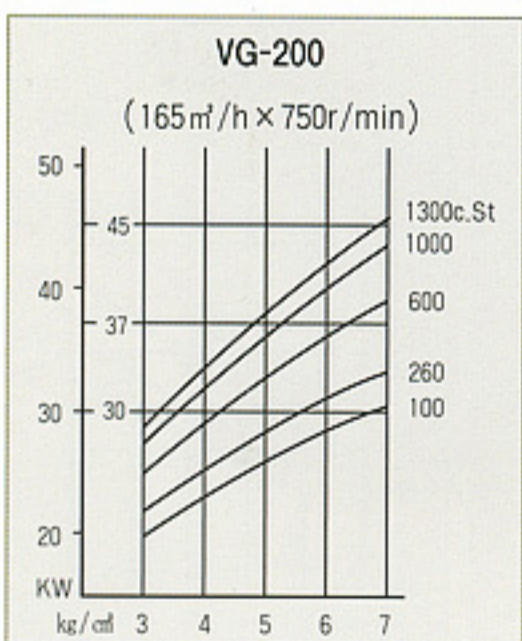
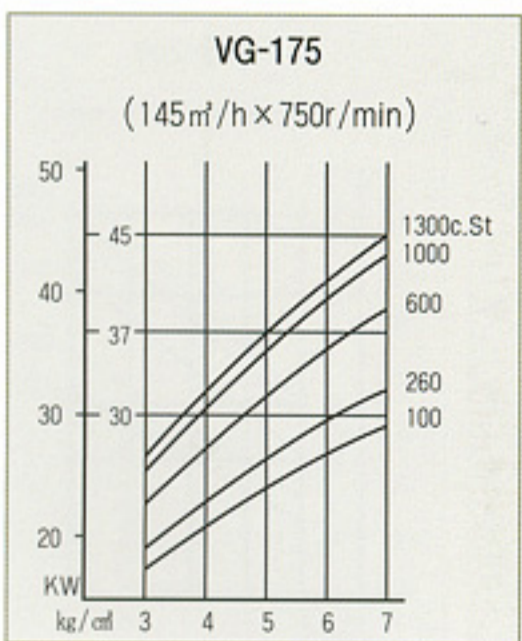
50HZ







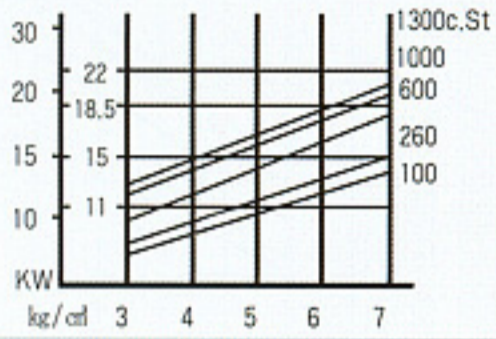
**60HZ**





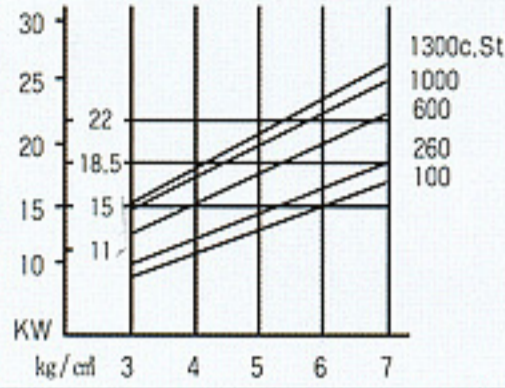
**VG-40**

(40 m<sup>3</sup>/h × 1200r/min)



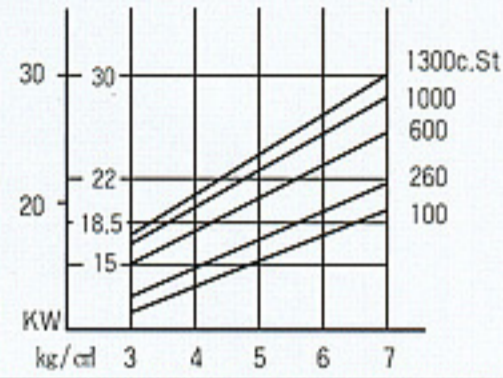
**VG-50**

(50 m<sup>3</sup>/h × 1200r/min)



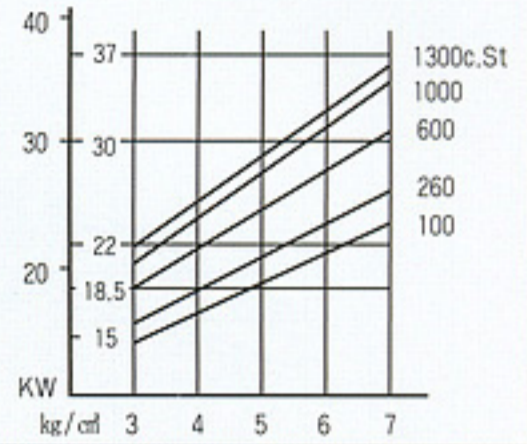
**VG-65**

(65 m<sup>3</sup>/h × 900r/min)



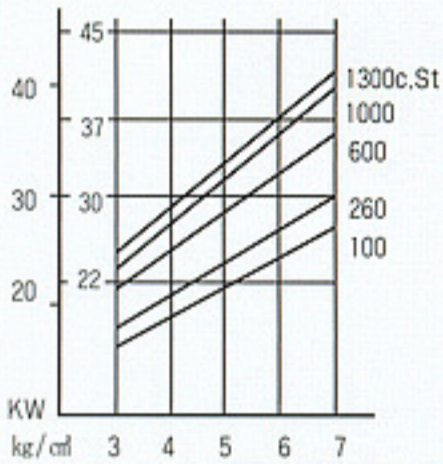
**VG-80**

(80 m<sup>3</sup>/h × 900r/min)



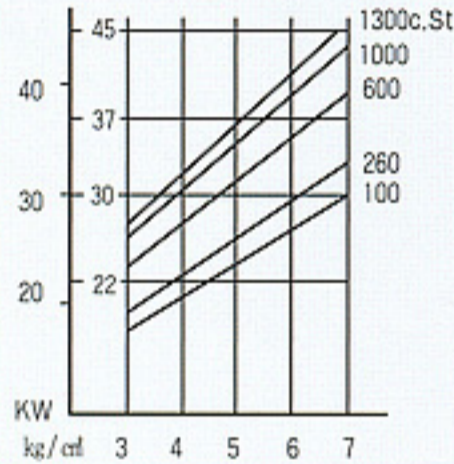
**VG-90**

(90 m<sup>3</sup>/h × 900r/min)



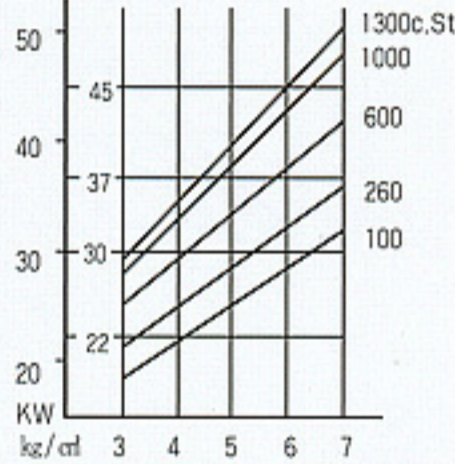
**VG-100**

(100 m<sup>3</sup>/h × 900r/min)



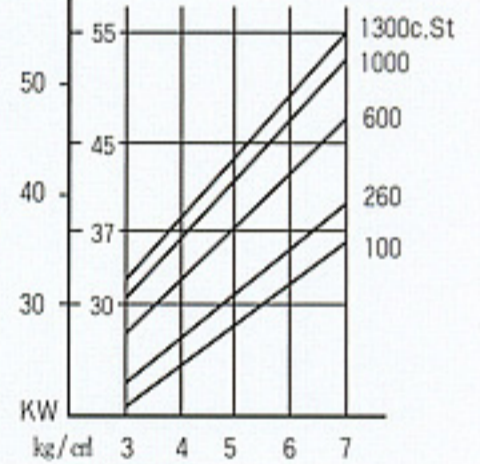
**VG-110**

(110 m<sup>3</sup>/h × 900r/min)



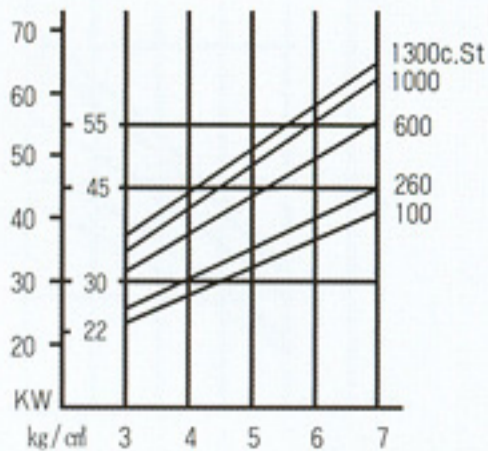
**VG-120**

(120 m<sup>3</sup>/h × 900r/min)



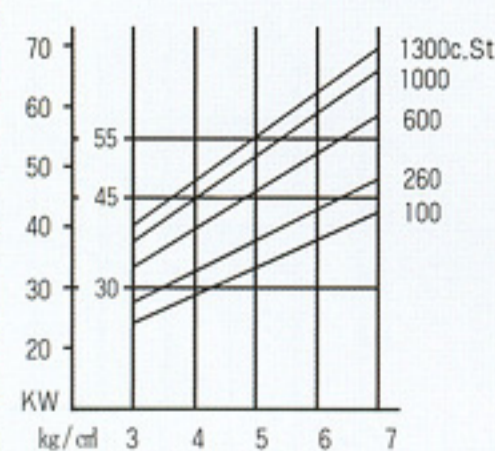
**VG-135**

(135 m<sup>3</sup>/h × 900r/min)



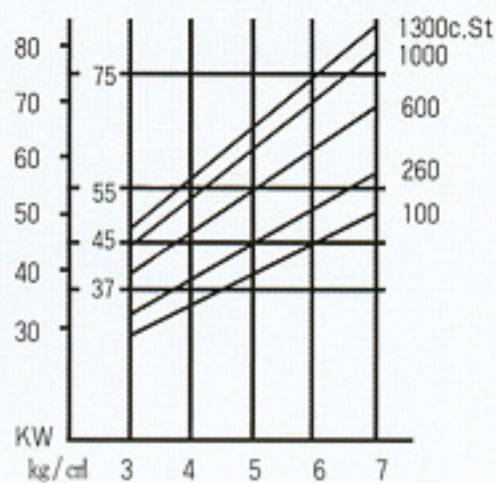
**VG-150**

(150 m<sup>3</sup>/h × 900r/min)



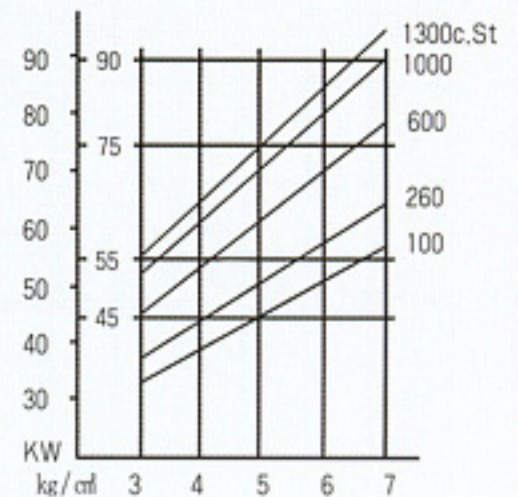
**VG-175**

(175 m<sup>3</sup>/h × 900r/min)



**VG-200**

(200 m<sup>3</sup>/h × 900r/min)



VG

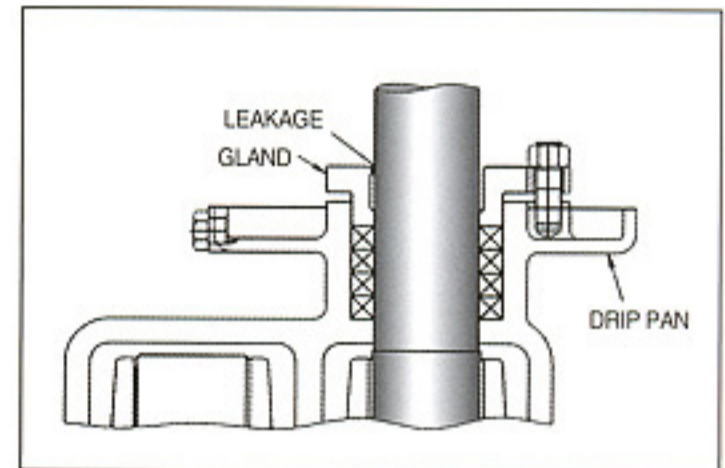


■ **Stuffing Box Seal**

As standard, gland packing are used, but by the order, a mechanical seal can be used only changing a gland case.

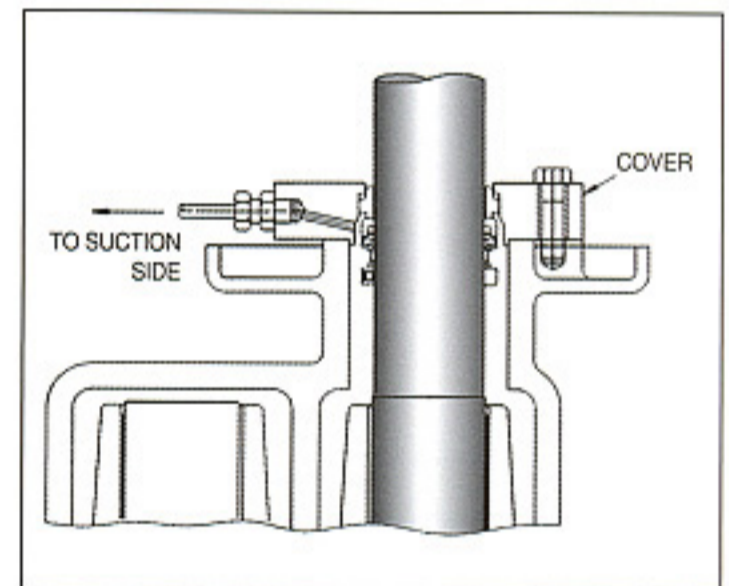
**Fitted with gland packing**

The leakage passing through the gland packing is drained to drip pan.



**Fitted with mechanical seal**

The reducing pipe is led to the suction side in casing from seal cover.



■ **Lubrication of Bearing**

The metal bearing is internally set in casing which is lubricated by the pumping liquid.

■ **Relief Valve**

1. Relief valve is set together with casing body.
2. Capacity of relief valve

Discharge pressure maximum arising value is designed to be less than 132% of designed total pressure, even if the discharge valve is full shutted.(But when designed total pressure is less than 5kgf/cm<sup>2</sup>, the pressure-arising value should be less than 1.6kgf/cm<sup>2</sup>.)

Pressure set for the relief valve

VG type    Designed total pressure + 0.2kgf/cm<sup>2</sup>  
 (Highest-7.2kgf/cm<sup>2</sup>    Lowest-2.2kgf/cm<sup>2</sup>)

■ **Standard Accessories**

- Flexible coupling.....1
- Safety cover.....1
- Suction gauge.....1
- Discharge gauge.....1
- Common base.....1

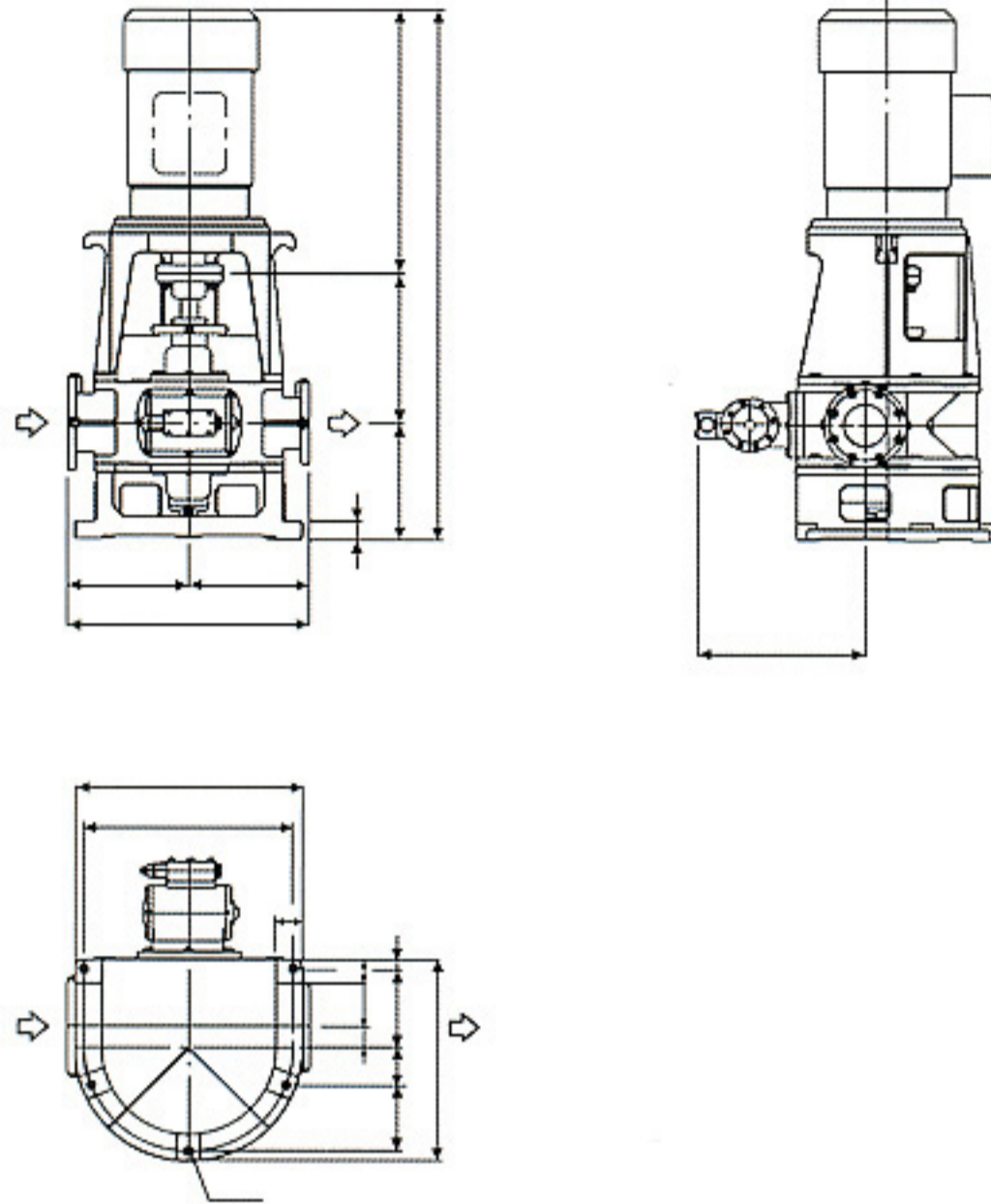
■ **Standard Spare Parts**

- Sliding bearing.....Each1
- Gland Packing /Mech Seal.....1
- Bolt, Nut & Washer for flexible coupling.....1 set

VG

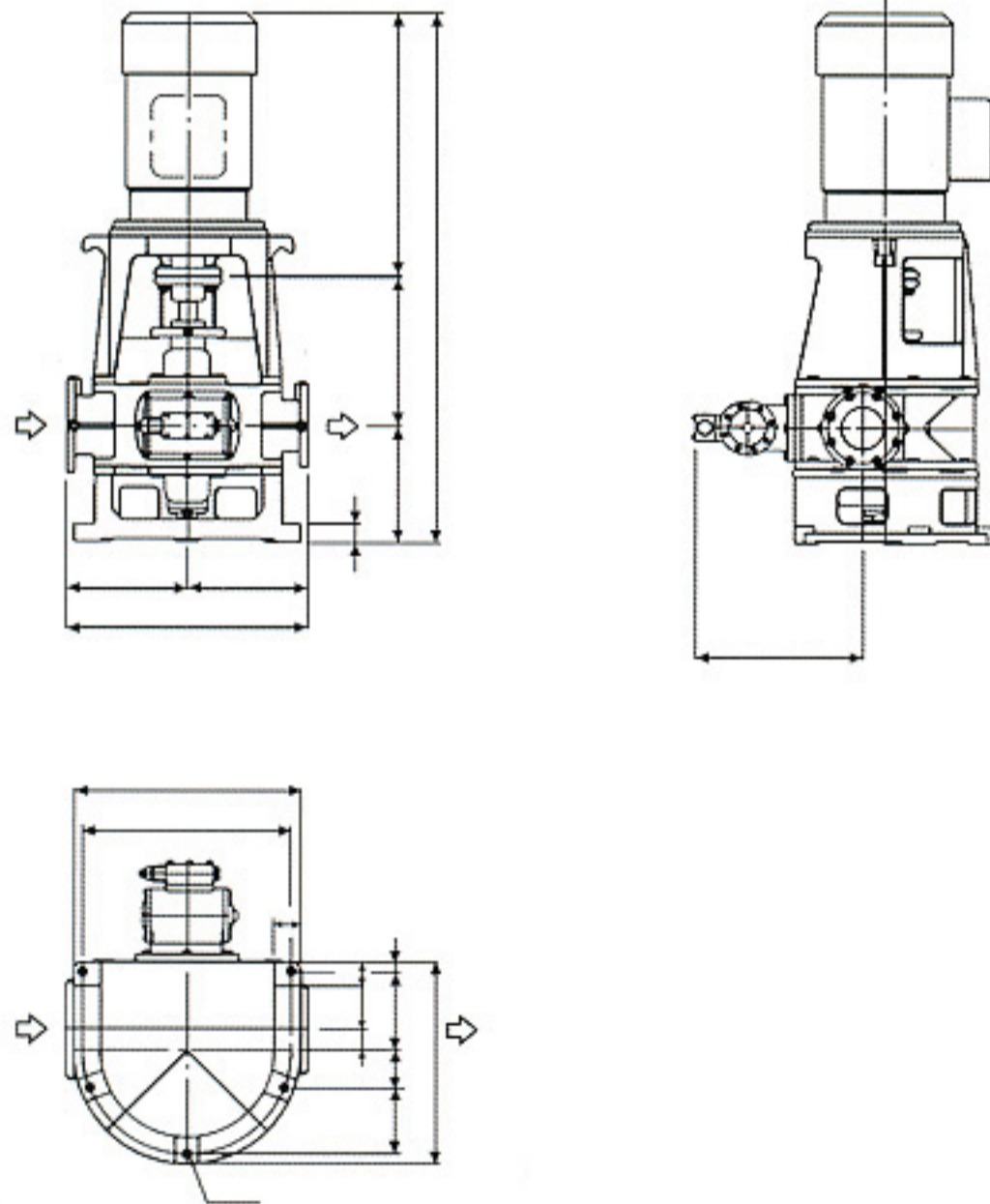


(Fig.A)



PLAN C.G. (SHOWN IN 1/4)

(Fig.B)

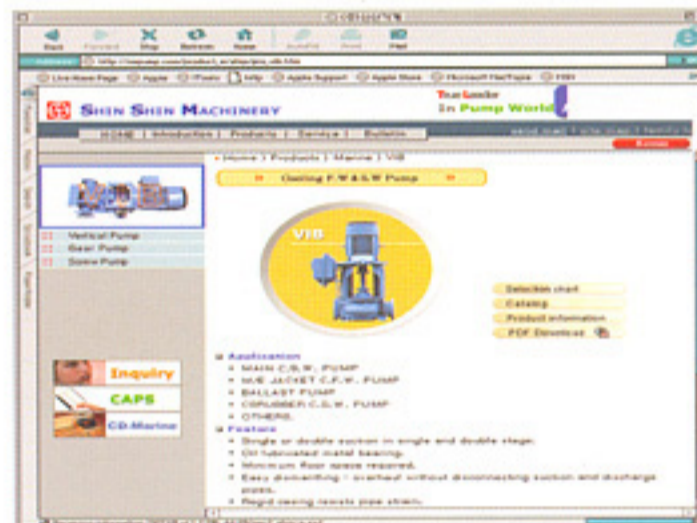


PLAN C.G. (SHOWN IN 1/4)



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