

Reliability is our target

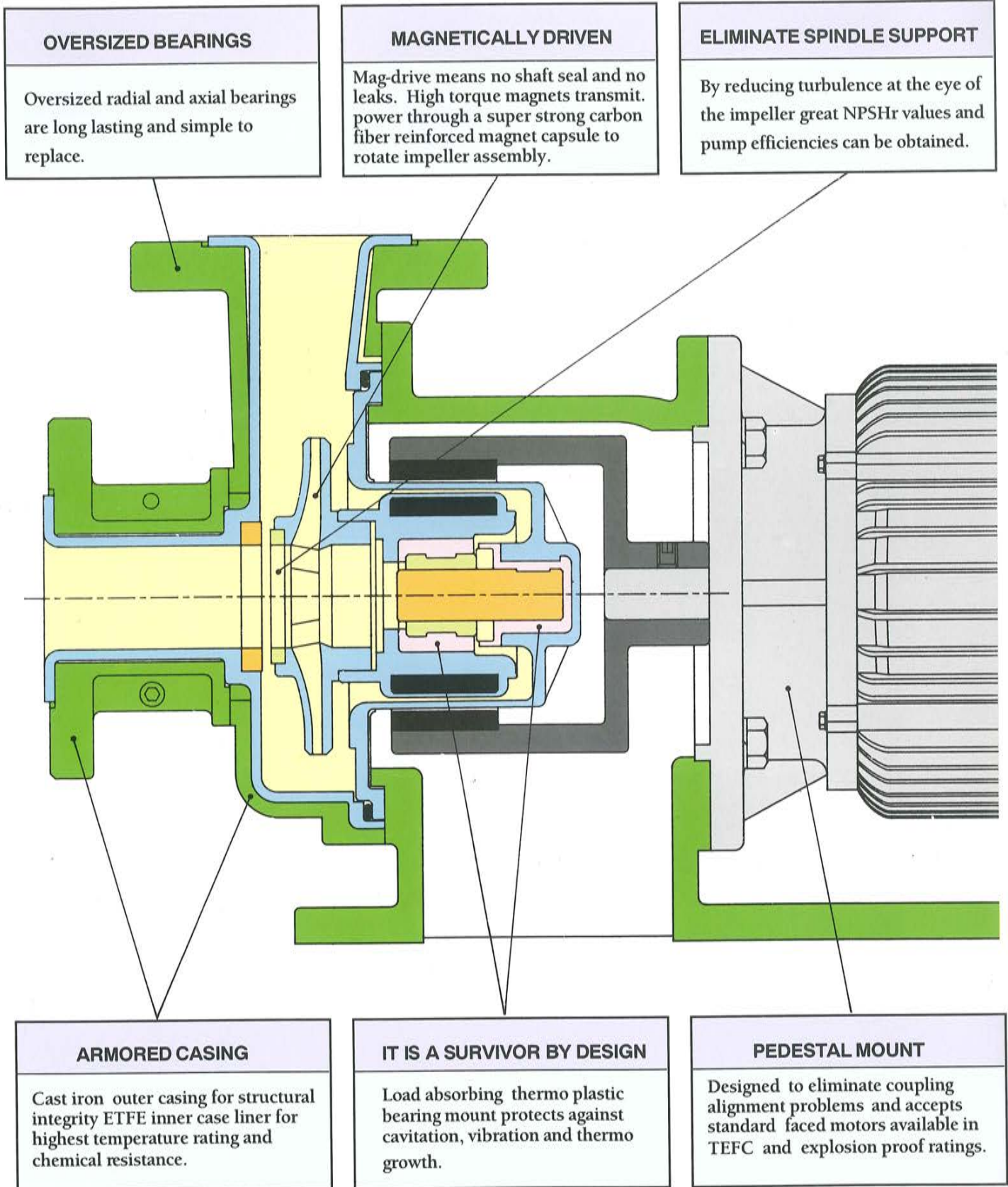
**PAN WORLD  
SEALLESS MAGNETIC  
DRIVEN PUMP**

**PW-C** series (Sealless)



**PAN WORLD CO., LTD.**

# ■ High performance zero leak pumps designed for the Chemical Industry



**METALIC REAR CASING COVER IS OPTIONAL PART.**

## ■ Features

- 20,000 Hours expected bearing life
- Zero leakage
- Long operational life
- Low maintenance
- Excellent chemical resistance
- Easy to repair
- Built-in safety

The pump is driven by a synchronous magnetic coupling. The fluid sealed by a static O-ring.

Proprietary materials are used for both bearings and shafts.

Parts are easily replaced without the use of special tools.

Plastic parts are reinforced with carbon fibers giving greater strength in the case of temperature increase.

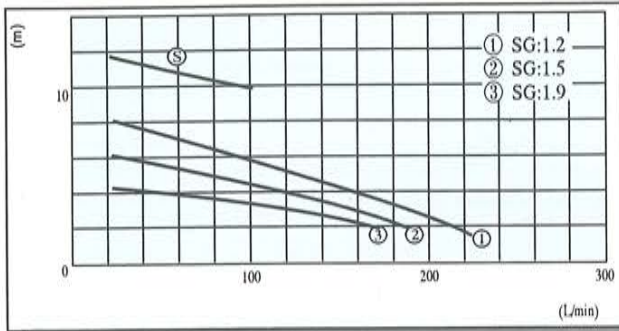
The bearing is united for one component by plastic. This means that if cavitation or dry running occurs, those vibrations or scress can be absorbed and protect from damage to the ceramic components. All ceramic parts, which are sensitive to wide temperature changes, are surrounded by plastic parts which render breakage impossible.

## ■ Performances list

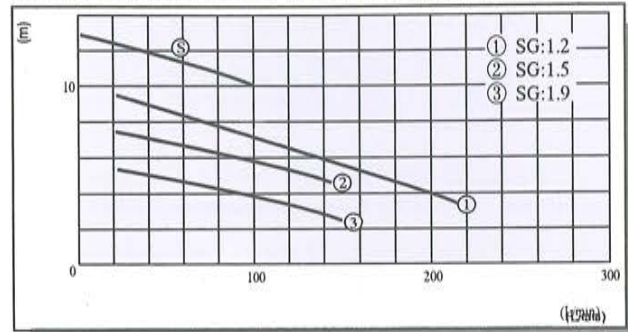
Type	Flange size		Performance at specified point (M at L/min)			Motor output (kW)	Net weight (Kg)
	Outlet (mm)	Inlet (mm)	Specific gravity	50Hz	60Hz		
NH-250 PW-C	25	25	①1.2 ②1.5 ③1.9	6-110 6.7-105 5-90	7-110 5.3-93 4.5-80	0.4	35
NH-401 PW-C	40	40	①1.2 ②1.5 ③1.9	11-120 9.8-115 7.7-100	12-120 11-120 7.5-90	0.75	40
NH-402 PW-C	40	50	①1.2 ②1.5 ③1.9	14-300 12-280 8-240	13.5-260 11.5-240 8-200	1.5	50
NH-403 PW-C	40	50	①1.2 ②1.5 ③1.9	15.5-360 14-340 10-290	15.5-340 14-320 10-290	2.2	54
NH-405 PW-C	40	50	①1.2 ②1.5 ③1.9	23-400 18-400 12-400	21-400 18-400 12-400	3.7	67
NH-505 PW-C	50	65	①1.2 ②1.5 ③1.9	13-580 9.5-580 5-580	13-580 9.5-580 5-580	3.7	80
NH-507 PW-C	50	65	①1.2 ②1.5 ③1.9	25-620 11-620 4.5-620	24.5-620 10.5-620 4.5-620	5.5	104
NH-657 PW-C	50	80	①1.2 ②1.5 ③1.9	18-800 12.5-800 8-800	17.5-800 12-800 8-800	5.5	130
NH-6510 PW-C	50	80	①1.2 ②1.5 ③1.9	26-800 20-800 15-800	25-800 18.5-800 14-800	7.5	138
NH-6515 PW-C	50	80	①1.2 ②1.5 ③1.9	30-1000 26-800 20-800	30-900 25-800 19-800	11	153
NH-6520 PW-C	50	80	①1.2 ②1.5 ③1.9	—	30-1050	15/60Hz	165

# ■ Performance curve (for reference)

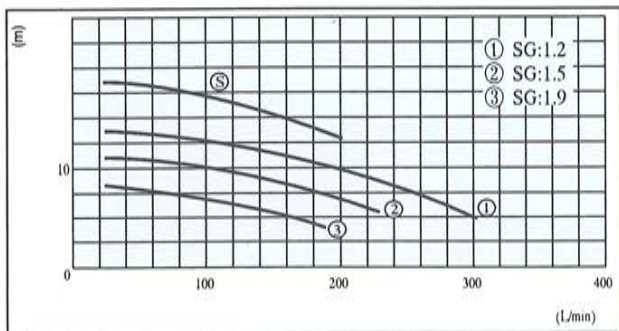
**NH-250PW-C 50Hz RATED REVOLUTION:2,820 r.p.m.**



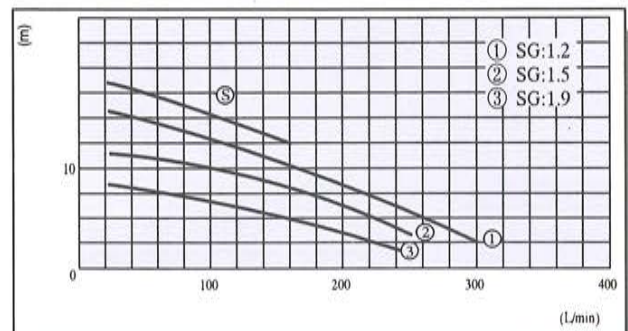
**NH-250PW-C 60Hz RATED REVOLUTION:3,440 r.p.m.**



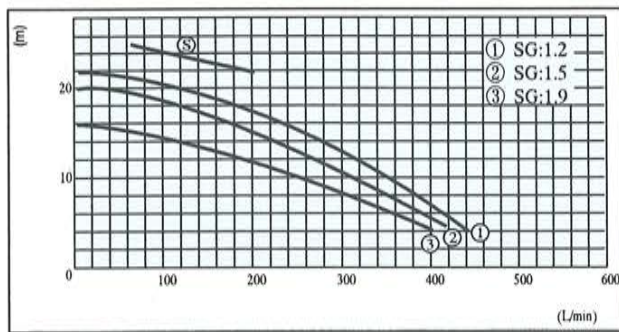
**NH-401PW-C 50Hz RATED REVOLUTION:2,860 r.p.m.**



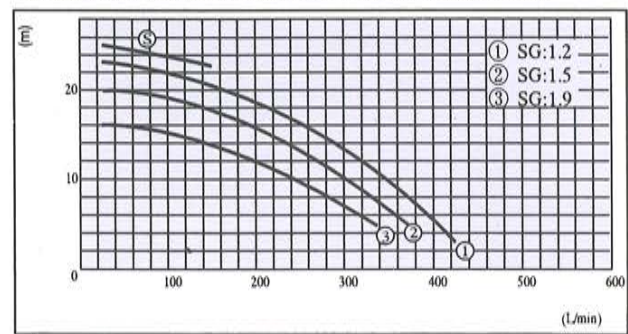
**NH-401PW-C 60Hz RATED REVOLUTION:3,440 r.p.m.**



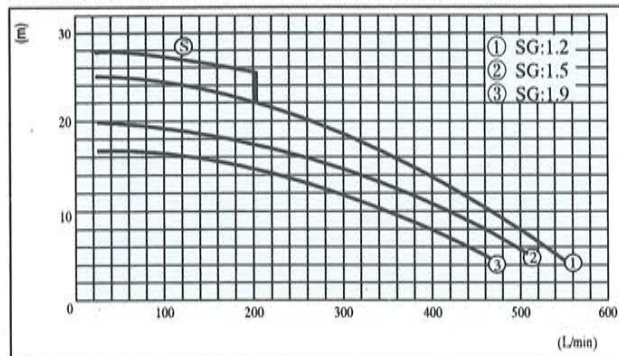
**NH-402PW-C 50Hz RATED REVOLUTION:2,860 r.p.m.**



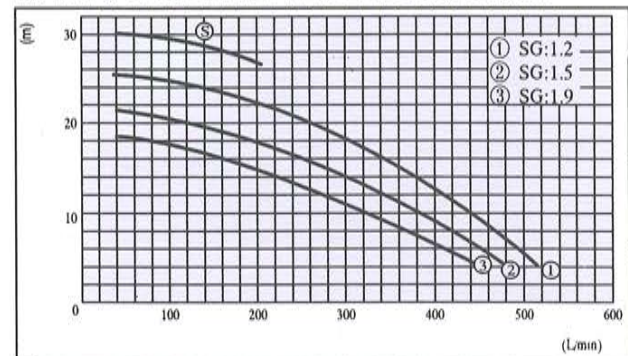
**NH-402PW-C 60Hz RATED REVOLUTION:3,440 r.p.m.**



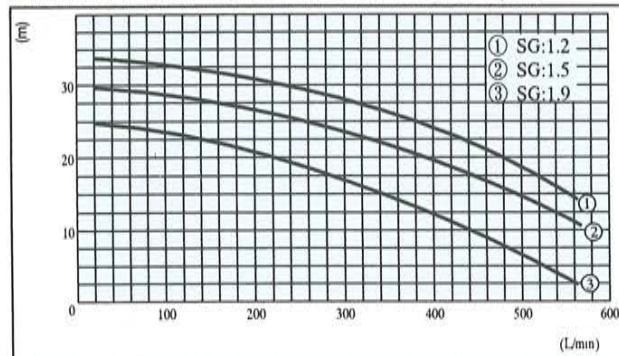
**NH-403PW-C 50Hz RATED REVOLUTION:2,860 r.p.m.**



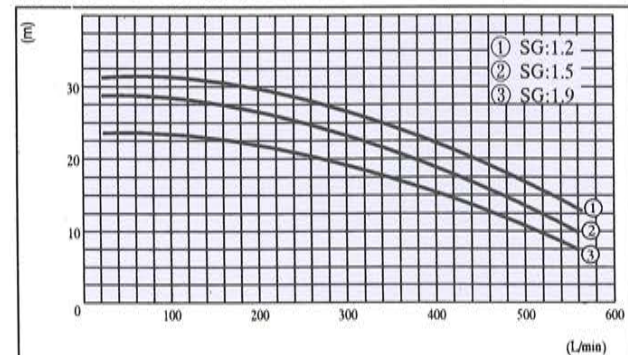
**NH-403PW-C 60Hz RATED REVOLUTION:3,440 r.p.m.**



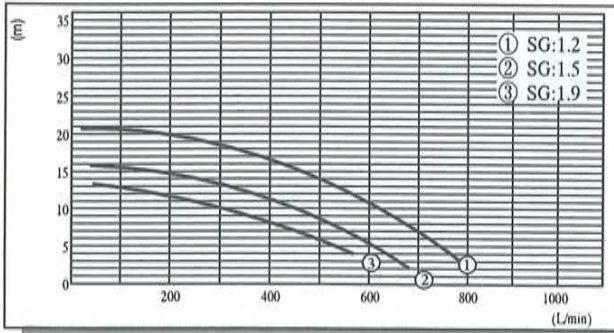
**NH-405PW-C 50Hz RATED REVOLUTION:2,860 r.p.m.**



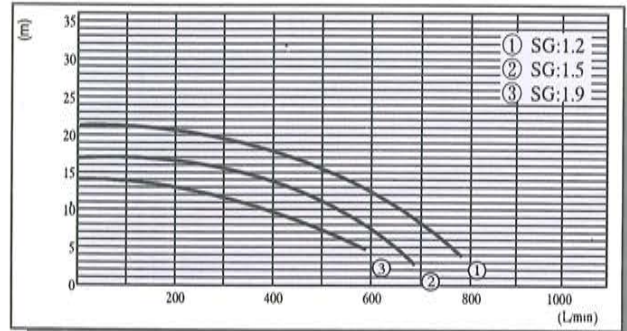
**NH-405PW-C 60Hz RATED REVOLUTION:3,440 r.p.m.**



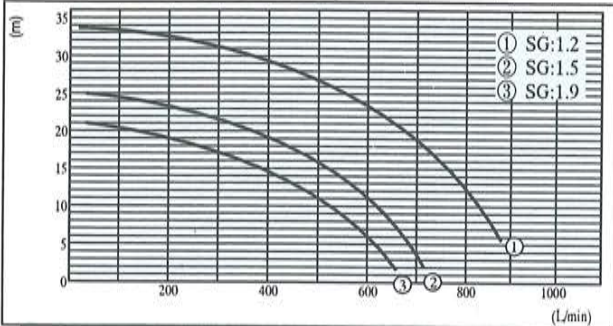
**NH-505PW-C 50Hz RATED REVOLUTION:2,860 r.p.m.**



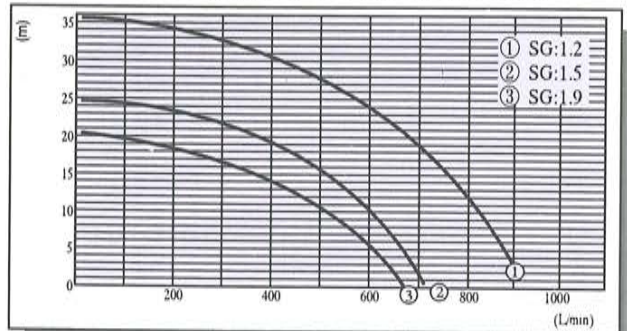
**NH-505PW-C 60Hz RATED REVOLUTION:3,440 r.p.m.**



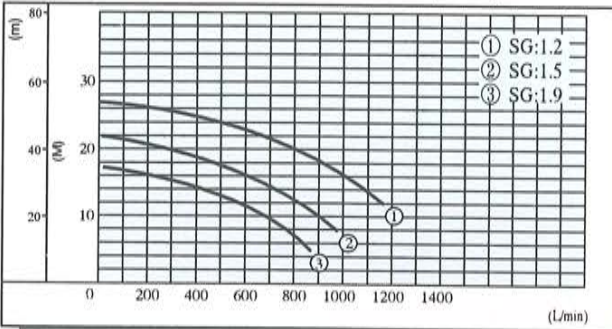
**NH-507PW-C 50Hz RATED REVOLUTION:2,900 r.p.m.**



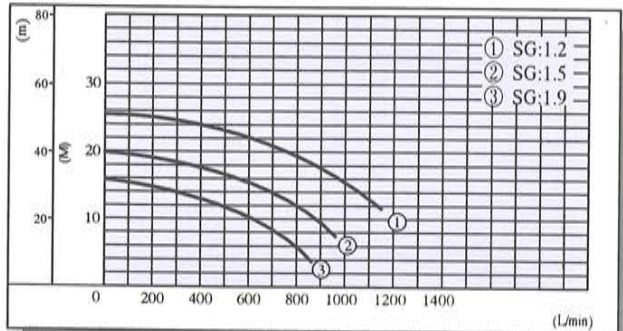
**NH-507PW-C 60Hz RATED REVOLUTION:3,480 r.p.m.**



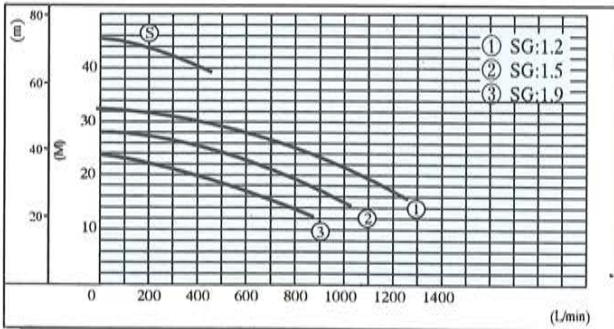
**NH-657PW-C 50Hz RATED REVOLUTION:2,900 r.p.m.**



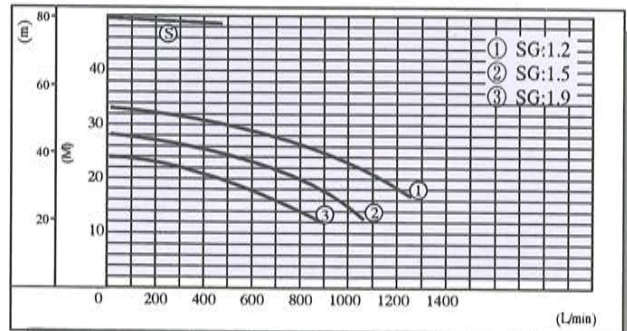
**NH-657PW-C 60Hz RATED REVOLUTION:3,480 r.p.m.**



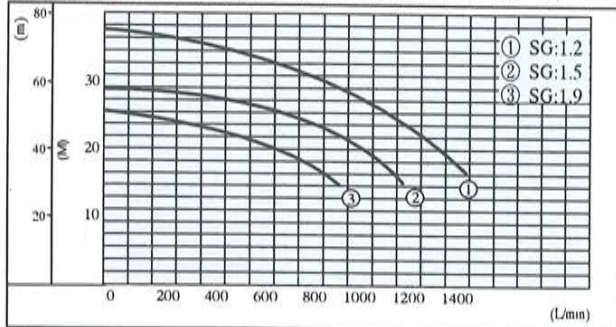
**NH-6510PW-C 50Hz RATED REVOLUTION:2,900 r.p.m.**



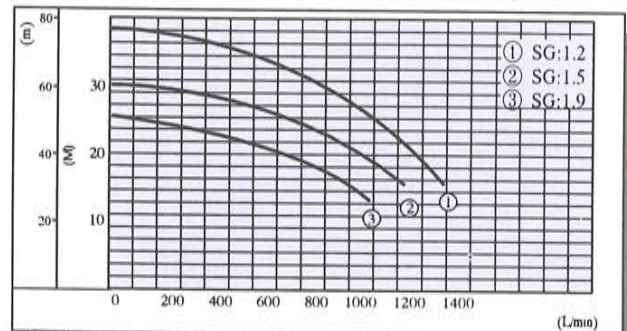
**NH-6510PW-C 60Hz RATED REVOLUTION:3,480 r.p.m.**



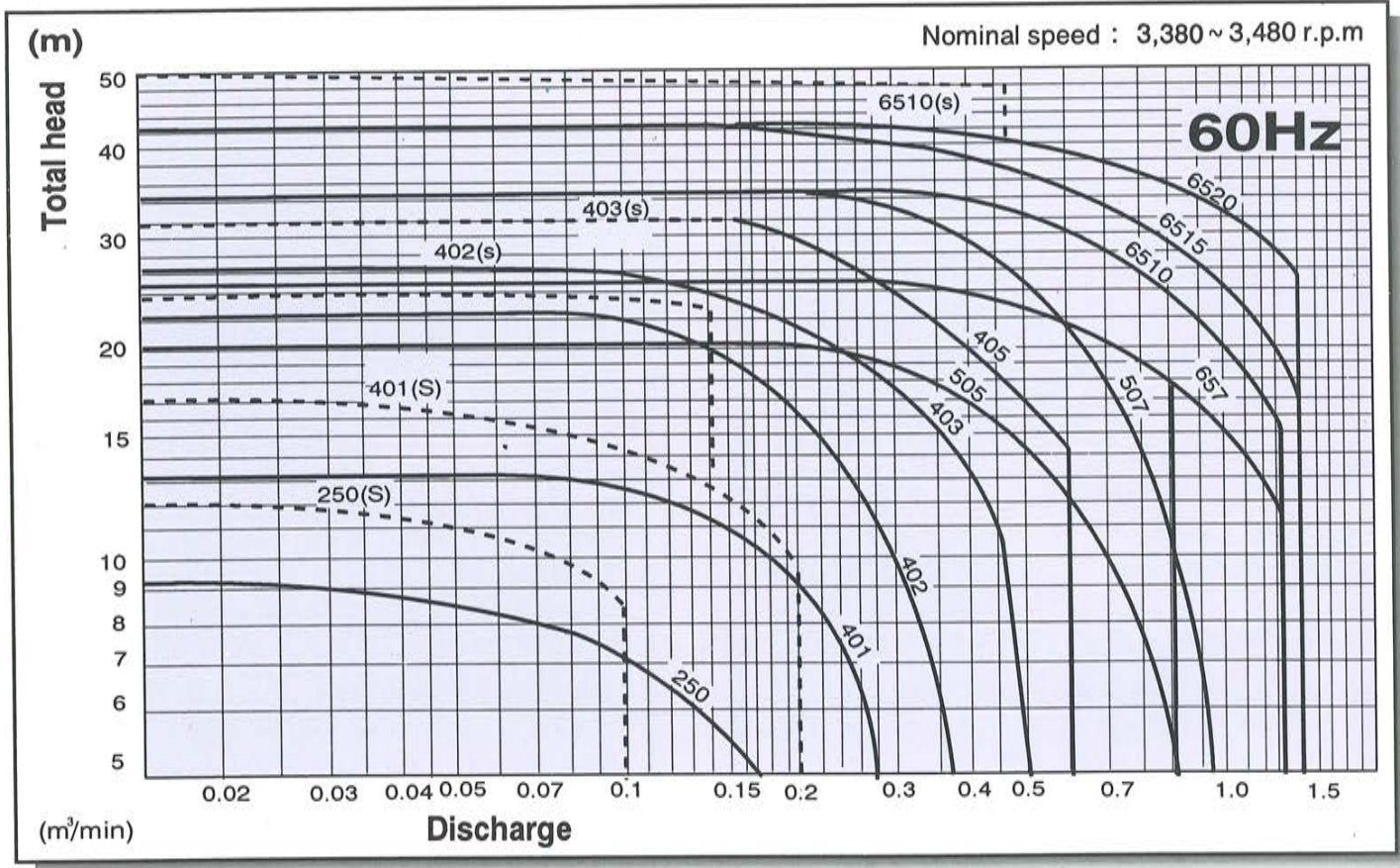
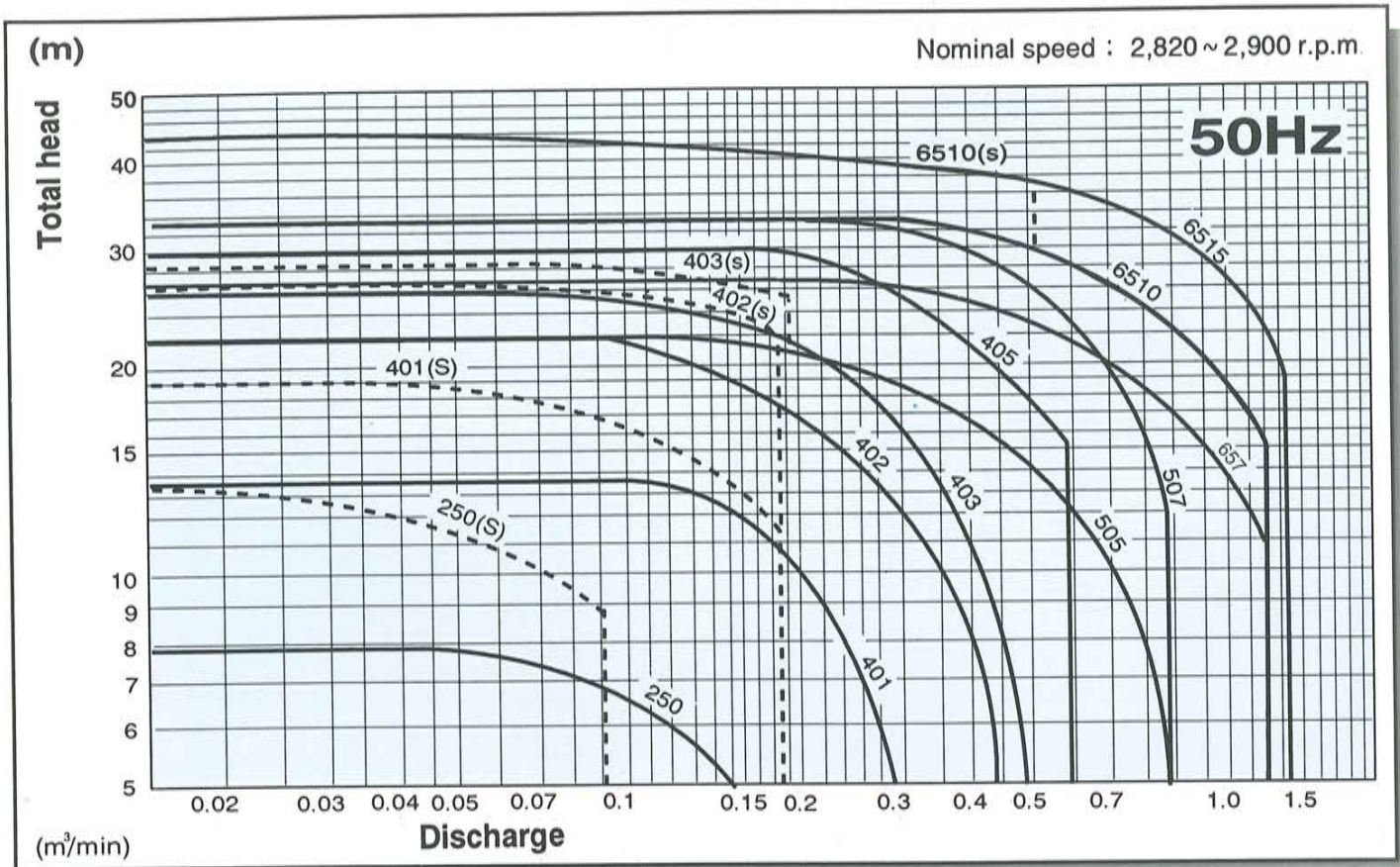
**NH-6515PW-C 50Hz RATED REVOLUTION:2,900 r.p.m.**



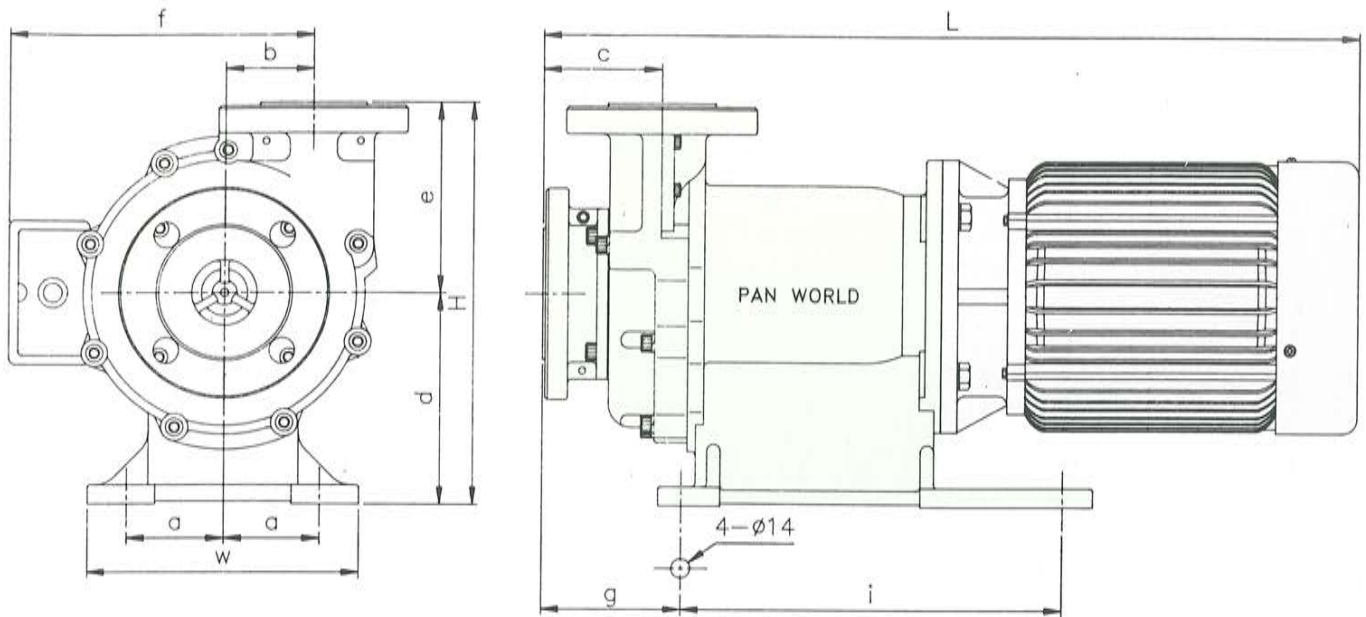
**NH-6515PW-C 60Hz RATED REVOLUTION:3,480 r.p.m.**



# PW-C series performance curve



## ■ Installation dimension



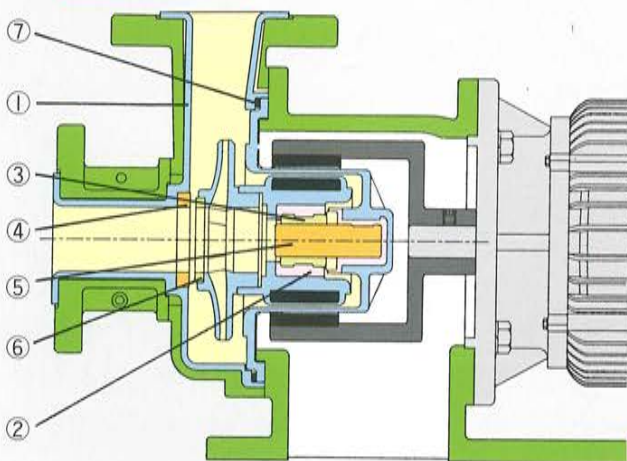
Type	W	H	L	a	b	c	d	e	f	g	i
NH-250PW-C	155	237	490	55	51	88	115	122	147	95	146
NH-401PW-C	195	275	528.5	65	57.5	104.5	135	140	152	111	250
NH-402PW-C	200	295	603	70	65	87	155	140	166	106	275
NH-403PW-C	200	295	603	70	65	87	155	140	166	106	275
NH-405PW-C	200	295	675.5	70	65	87	155	140	188	106	275
NH-505PW-C	260	325	720	105	62	110	175	150	188	130	305
NH-507PW-C	260	325	786	105	62	110	175	150	261	130	305
NH-657PW-C	280	360	797.5	110	0	118	175	185	261	195	320
NH-6510PW-C	280	360	797.5	110	0	118	175	185	261	195	320
NH-6515PW-C	350	385	983.5	110	0	118	200	185	281	195	320
NH-6520PW-C	350	385	983.5	110	0	118	200	185	281	195	320

Remarks: 1. JIS, ISO, NEMA or explosion motor is available.

2. Over all size & part construction will be changed without notice.

3. NH-657, 6510, 6515, 6520 are top centre discharge.

## ■ Parts list



Type	PW-C Series			
Material mark	FV	RV	AV	Si
1. Casing	Carbon fiber reinforced tetra fluorethylene			
2. Holder				
3. Bearing	High density carbon	PTFE based resin	Ceramic	Sic ceramic
4. Thrust ring	High purity ceramic			
5. Spindle	High purity ceramic			
6. Mouth ring	PTFE based resin			
7. O ring	Special compounded FKM			
8. Cover	Cast iron			

Remarks: Combination of Sic bearing, spindle & thrust ring is available to handle high concentrated HF and semi-conductor application. EPDM O ring is available.

## ■ Chemical resistance table

LIQUID NAME	PW-C			
	(%)	20°C	60°C	70/90°C
Hydrochloric acid	10	○	○	○
	20	○	○	○
	30	○	○	○
Chromic acid	10	○	○	○
	25	○	○	○
Acetic acid	50	○	○	○
	100	○	○	○
Oxalic acid	30	○	○	○
	50	○	○	○
Nitric acid	10	○	○	○
	30	○	○	○
Hydrogen fluoride acid	40	○	○	○
Phosphoric acid	25	○	○	○
	50	○	○	○
	85	○	○	○
Sulphuric acid	30	○	○	○
	70	○	○	○
	93	○	○	○
Ammonia water	30	○	○	○
Sodium hydroxide	10	○	○	○
	20	○	○	○
	40	○	○	○
	50	○	○	○
Potassium hydroxide	50	○	○	○

LIQUID NAME	PW-C			
	(%)	20°C	60°C	70/90°C
Sulphate		○	○	○
Aluminum chloride		○	○	○
Ammonium chloride		○	○	○
Calcium chloride		○	○	○
Cuprous chloride		○	○	○
Freeic chloride		○	○	○
Mercuric chloride	40	○	○	○
Sodium chloride		○	○	○
Potassium manganate	6	○	○	○
	20	○	○	○
Cupric cyanide		○	○	○
Sodium cyanide		○	○	○
Sodium nitride		○	○	○
Ammonium nitride		○	○	○
Common salt		○	○	○
Sec-chlorite	10	○	○	○
Potassium dichromate		○	○	○
Sodium carbonate		○	○	○
Ammonium carbonate		○	○	○
Nickle solution		○	○	○
Ammonium fluoride		○	○	○
Ferrous sulphate	--	○	○	○
Ethanol	100	○	○	○
Methanol	100	○	○	○
Trichloroethylene	100	○	○	○
Butanone	100	○	○	○

### \*Limitation of slurry to be handled

Concentration : 5 %

Particle size : 50 μ

Hardness : HS 80 degree

Note : Flush pump inside every 1-3 months

1. This list is only for reference to select pump model. The chemical resisting effect is shown under certain condition.
2. The low temp. allowed here is 0°C.



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