

HAYASHI CHEMICAL PUMP



**Wet /dry
pit pump**



**Vertical
pump**

**Magnetic
pump**



TOP MESSAGE

We, Hayashi Kakohki, celebrates 50th Anniversary in 2016. Pump itself is the industrial machine which has been already established several decades ago. But with the change of the times, the needs of customers continue to diversify, and to meet them honestly we accomplished development during the past. Recently, The Industrial devices have been exported overseas with our pump, and the technical support and the inquiry of improvement is gradually increasing with it. we will face and work on these problem honestly from now on too.

Our piled-up technology still goes on progressing !!

Takeharu Motohashi
President

COMPANY PROFILE



Head office (Since 2015)

Company name	: Hayashi Kakohki MFG.Co.,Ltd.
Founded	: 1965
Established	: 1967
Representative	: Takeharu Motohashi
Head office	: 3-34-3, Mukojima, Sumida-ku, Tokyo 131-0033 JAPAN
Branch/factory	: Osaka branch, Omiya factory
Main product	: Vertical chemical pump Leakless magnetic pump Stainless steel pump Metering pump
Major Banks	: MUFG Bank, Ltd. Saitama Resona Bank, Ltd. Tokyo Higashi Shinkin Bank. Mizuho Bank, Ltd.
Oversea distributor	: Taiwan, Korea, Thailand, Vietnam

COMPANY HISTORY

- 1965 : HAYASHI KAKOHKI's founder, Kunio Hayashi, developed pump made by PVC, started manufacturing and selling.
- 1967 : HAYASHI KAKOHKI was established (capital 2 million yen)
- 1971 : Reorganized
Hayashi Kakohki MFG.Co.,Ltd.
- 1987 : Osaka branch was established.
- 1988 : Capital increased to 12 million yen
- 1991 : Capital increased to 20 million yen
- 2000 : Started selling Leakless pump (HDG series)
- 2008 : Factory relocated (at Saitama pref.)
- 2015 : Head office moved to the old factory's place (Sumida,Tokyo Est.)
- 2016 : the 50th anniversary



Omiya factory (Since 2008)

HKS SEAL EQUIPMENT

HKS seal is seal method by using centrifugal force. and unique seal which release air in operation and seal air on standby.

• Standby

When the pump stops, centrifugal seal parts is **fall** and become "Close" mode (Standby).

then **the seal ring** of centrifugal seal parts is **pressed to contact with seal packing** by lost of centrifugal force and its return motion.

Some air is closed in the air seal chamber and liquid goes into it until the pressure or the sealed air equal to the suction pressure.

Therefore, **It can be sealed so that liquid does not touch its seal parts without leaking air in the air seal chamber.**

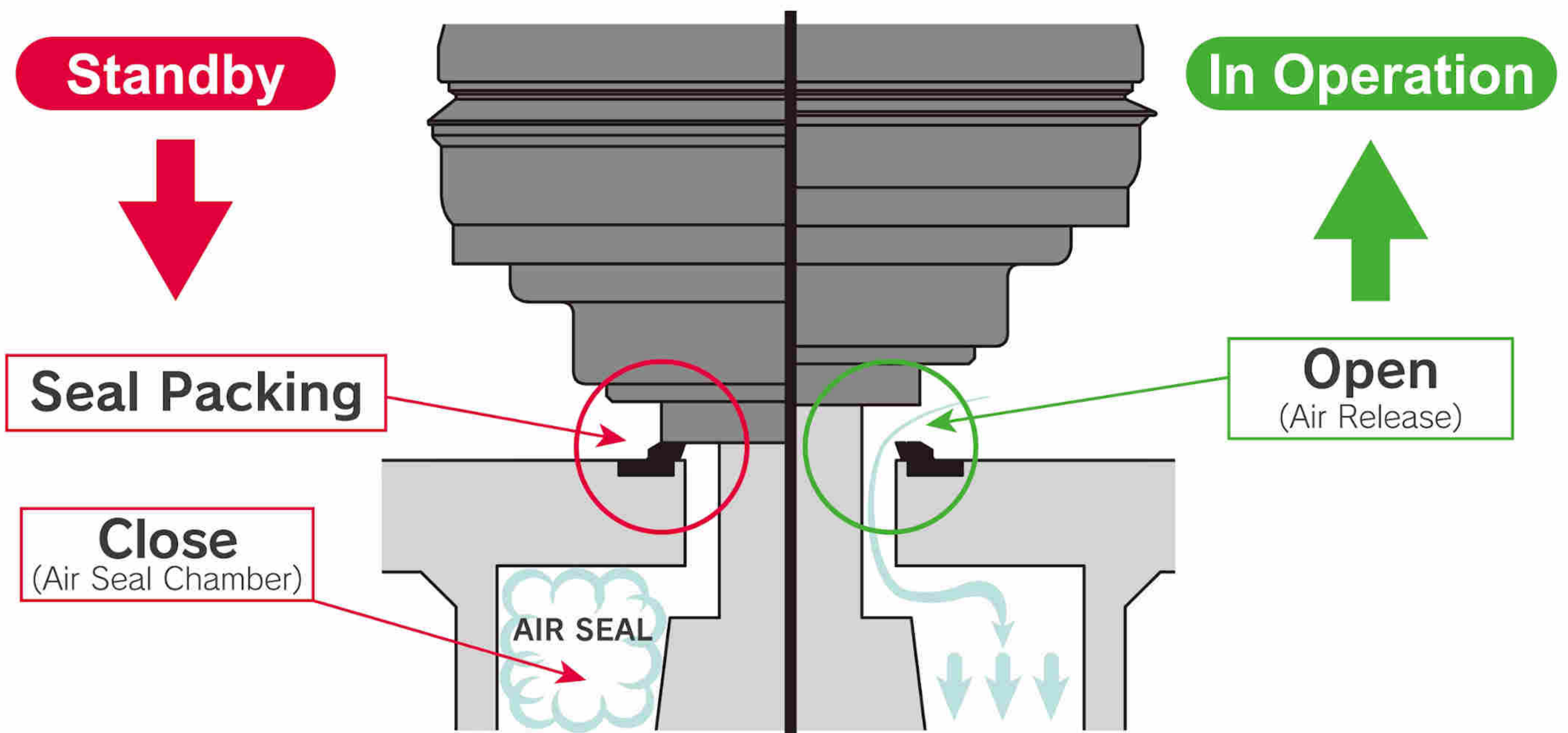
• In operation

When the pump starts, centrifugal seal parts is **rise** and become "Open" mode (In Operation).

then **the seal ring** of centrifugal seal parts and **seal packing are separated** by the centrifugal force.

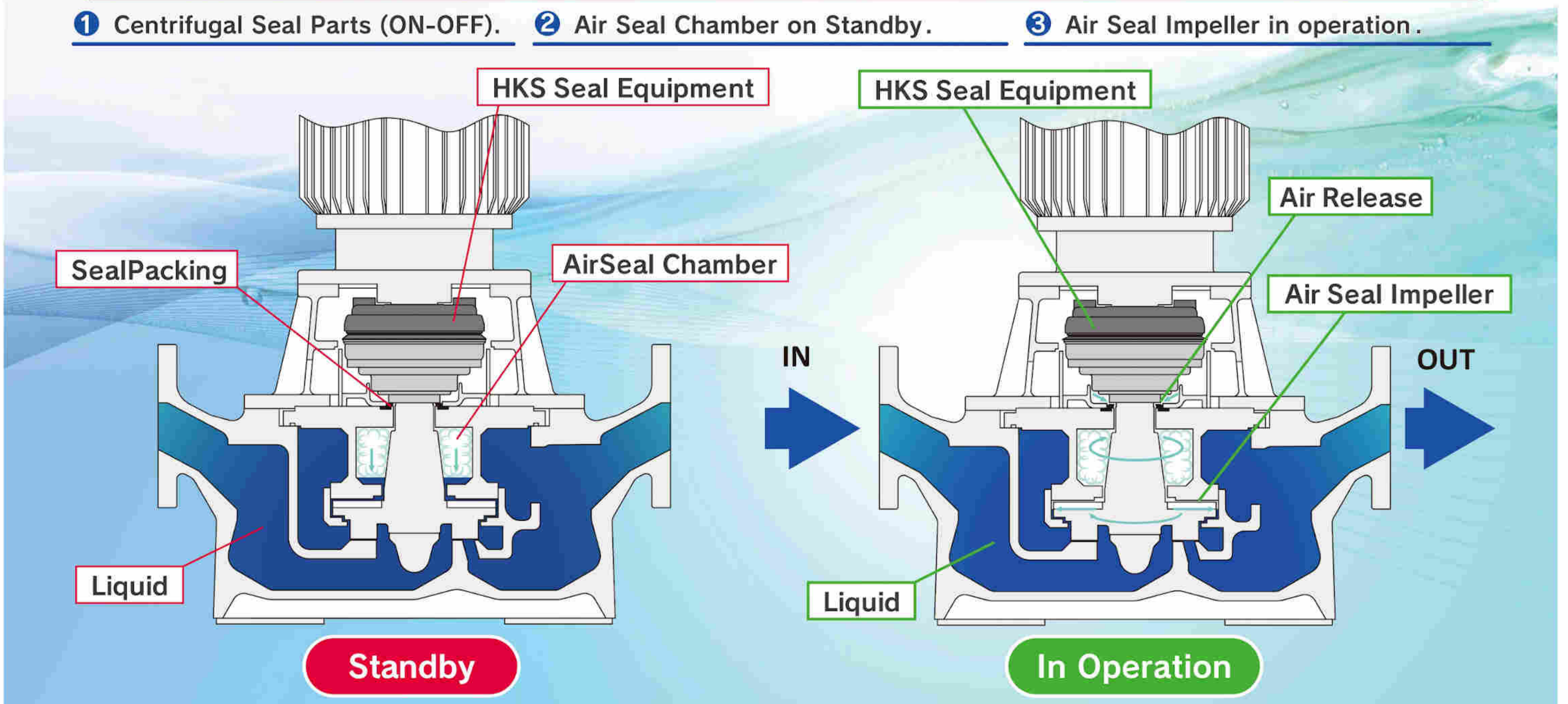
Some air in air seal chamber is released and the liquid in the air seal chamber is driven to involute chamber by the back side of rotating impeller and become a liquid cylinder works as a seal.

Therefore, **It can be sealed so that liquid does not touch its seal parts.**



■ Combination Seal Equipment Composed of three elements.

- ① Centrifugal Seal Parts (ON-OFF).
- ② Air Seal Chamber on Standby.
- ③ Air Seal Impeller in operation.



01 HD-SFV

Vertical chemical pump
Self priming type



Product lineup

Model	Main material	Max temp.
HD-SFV	FRP+HT-PVC	80°C
HD-SFV-P	PVC+HT-PVC	55°C
HD-SFV-H (High pump head type)	FRP+HT-PVC	80°C
HD-SFV-PH (High pump head type)	PVC+HT-PVC	55°C
HD-SFV-PP	PP	75°C

Features

HKS seal equipment

Pump can show high seal performance in operation and standby.
(What's HKS seal equipment?→Page3)

Chemical resistance

Various kinds of material (PVC/FRP/U-PE/PP) to fit for different chemical liquid.

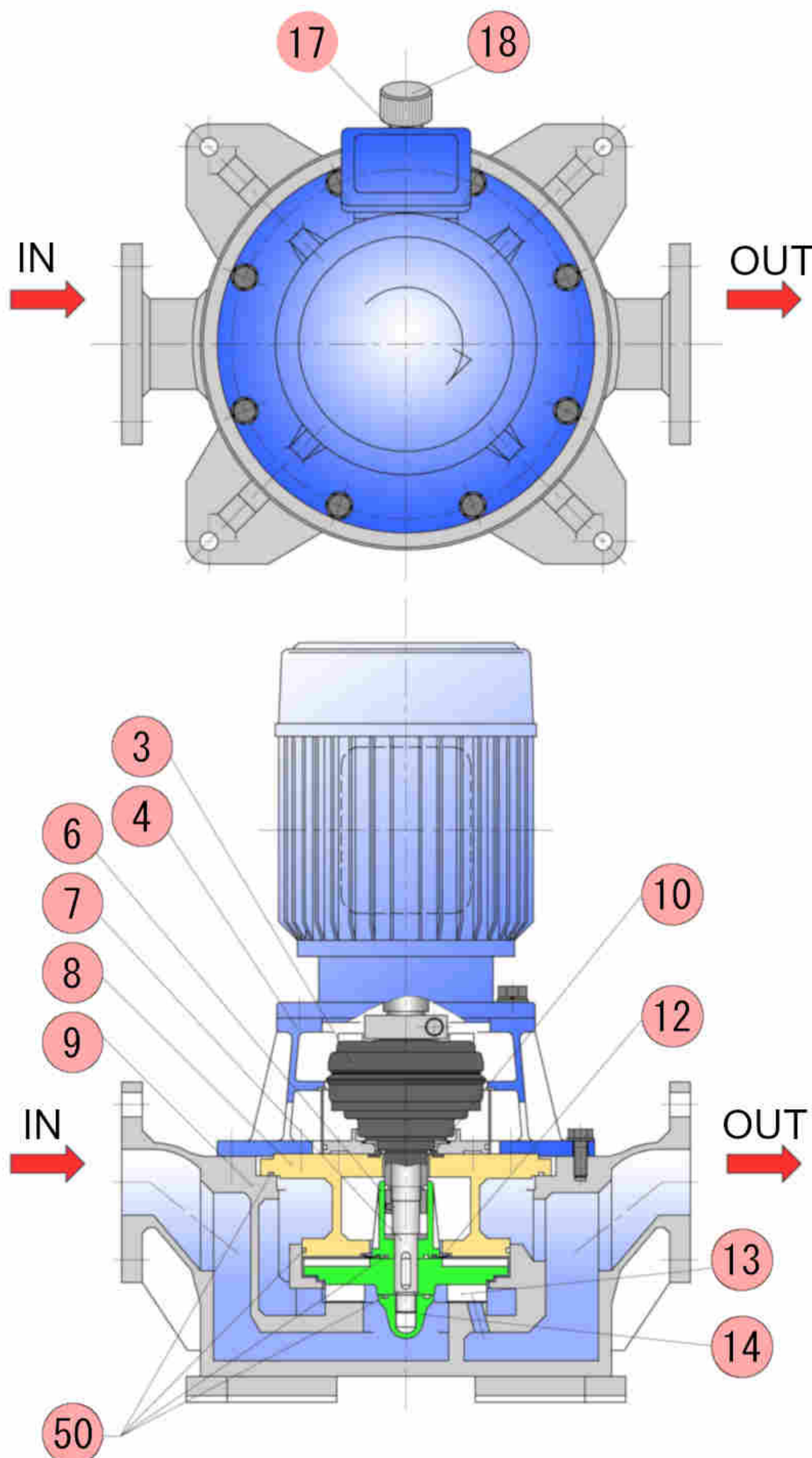
Application

HD-SFV(-H)	Waste water treatment (Acid & Alkali mixture) Transfer chemical liquid
HD-SFV-P(-PH)	Waste water treatment (Acid/Alkali) Transfer chemical liquid
HD-SFV-PP	Electroless Au/Cu plating

Easy maintenance

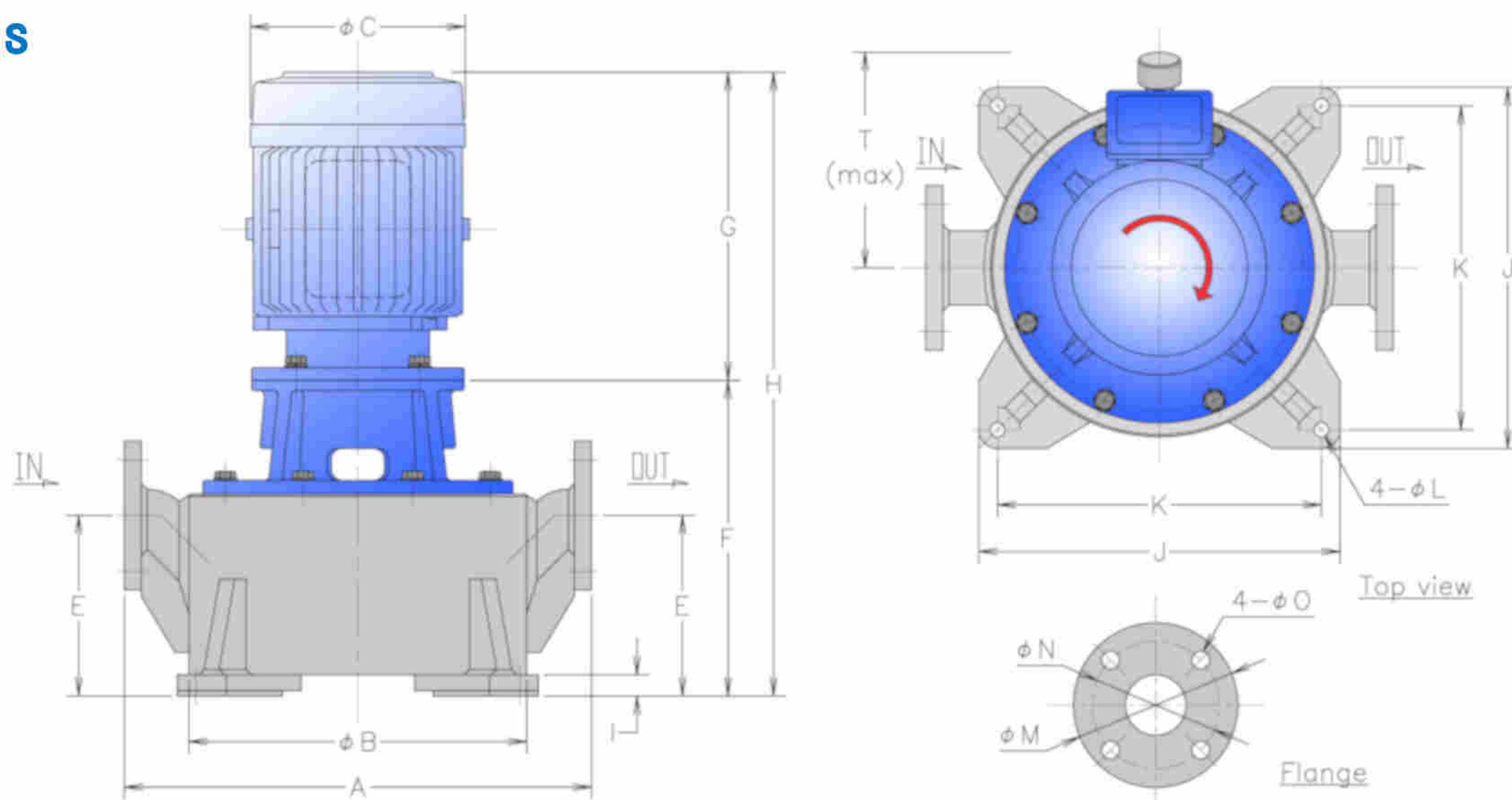
Possible to inspect pump easily without removing pipes.

Parts list



NO.	Parts name	HD-SFV(-H)	HD-SFV-P(-PH)	HD-SFV-PP
3	HKS seal equipment	Ceramics · PPS · etc.		
4	Motor stand	FC		
6	Shaft sleeve	HT-PVC		PP
7	Pump shaft	SUS304		
8	Back casing	HT-PVC		PP
9	Casing	FRP	PVC	PP
10	Seal packing	FKM		
12	Check packing	FEPM		
13	Impeller	HT-PVC		PP
14	Impeller nut	HT-PVC		PP
17	Drain [Plug/Cap]	[Plug]HT-PVC	[Cap]PVC	[Cap]PP
18	Priming [Plug/Cap]	[Plug]HT-PVC	[Cap]PVC	[Cap]PP
50	O-ring	FKM (EPDM)		

Dimensions



*HD-SFV (-P)

Pump model	Bore (mm)	Motor power (kW)	A	ΦB	ΦC	E	F	G	H	I	J	K	ΦL	ΦM	ΦN	ΦO	T	Weight (kg) FRP / PVC
HD-25SFV HD-25SFV-P	25	0.4	350	255	142	140	264	230	494	18	280	245	14	125	90	4-φ19	180	24/26
		0.75			174		256	523	200								35/37	
		1.5			202		290	557	200								42/44	
HD-40SFV HD-40SFV-P	40	0.75	440	345	174	170	292	256	548	19	340	305	14	140	105	4-φ19	220	41/43
		1.5		318	202		297	290	582								230	49/50
		2.2		202	290		587	230	51/52									
HD-50SFV HD-50SFV-P	50	1.5	440	345	202	170	292	290	582	19	340	305	14	155	120	4-φ19	220	49/50
		2.2		318	202		297	290	587								230	51/52
HD-65SFV HD-65SFV-P	65	2.2	505	390	202	220	352	290	642	19	375	340	14	175	140	4-φ19	245	57/64
		3.7			235		359	365	724								300	80/87
		5.5			272		339	375	714								245	98/106
HD-80SFV HD-80SFV-P	80	3.7	525	390	235	220	359	365	724	19	375	340	14	185	150	8-φ19	245	80/87
		5.5			339		375	714	245								97/105	
		7.5			272		344	375	719								300	104/112
HD-100SFV HD-100SFV-P	100	5.5	660	470	272	330	454	375	829	25	470	420	15	210	175	8-φ19	290	118/137
		7.5					465	375	840								30	485
HD-125SFV HD-125SFV-P	125	7.5	680	470	272	330	454	375	829	25	470	420	15	250	210	8-φ23	290	125/142
							465	375	840	30	485	440	15	250	210	8-φ23	330	

*HD-SFV-H (-PH)

Pump model	Bore (mm)	Motor power (kW)	A	ΦB	ΦC	E	F	G	H	I	J	K	ΦL	ΦM	ΦN	ΦO	T	Weight (kg) FRP / PVC	
HD-40SFV-H HD-40SFV-PH	40	2.2	440	345	202	170	292	290	582	19	340	305	14	140	105	4-φ19	220	52/52	
				318			297		290								587	20	230
HD-50SFV-H HD-50SFV-PH	50	3.7	490	390	235	220	359	365	724	19	360	325	14	155	120	4-φ19	245	79/83	
					235		364		365								729	260	
					272		339		375								714	245	97/101
				370	272		344	375	719	25	365						260		
HD-65SFV-H HD-65SFV-PH	65	7.5	505	390	272	220	339	375	714	19	375	340	14	175	140	4-φ19	245	108/120	
							354		375								729	25	400

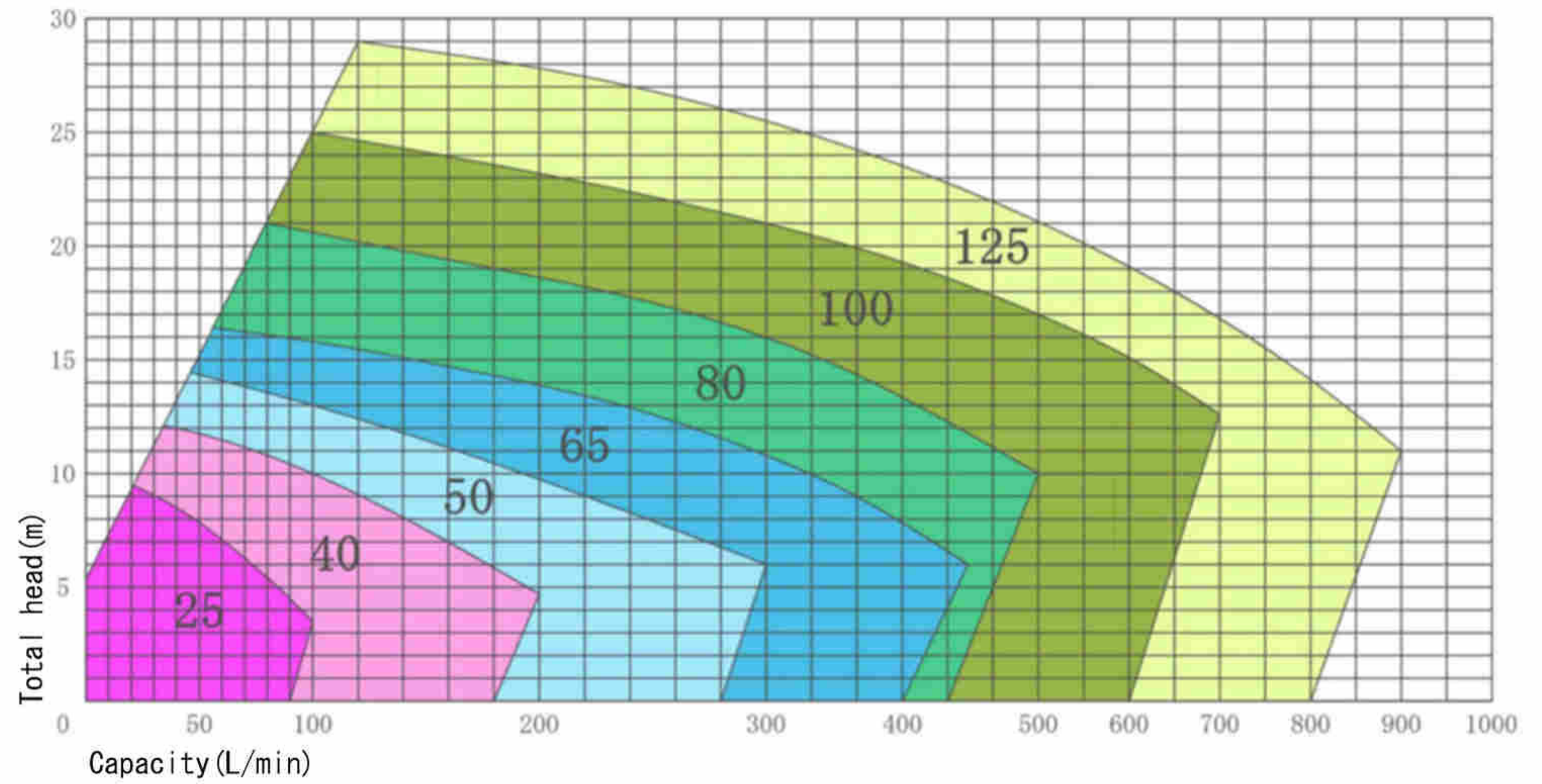
*HD-SFV-PP

Pump model	Bore (mm)	Motor power (kW)	A	ΦB	ΦC	E	F	G	H	I	J	K	ΦL	ΦM	ΦN	ΦO	T	Weight (kg)
HD-25SFV-PP	25	0.4	350	318	142	140	275	230	505	32	325	245	15	125	90	4-M16	230	32
		0.75			174		278	256	534								41	
HD-40SFV-PP	40	0.75	440	385	174	170	299	256	555	38	390	305	15	140	105	4-M16	270	46
		1.5			202			290	589								57	
HD-50SFV-PP	50	1.5	440	385	202	170	299	290	589	38	390	305	15	155	120	4-M16	270	57
		2.2															270	59
HD-65SFV-PP	65	2.2	560	445	202	220	347	290	637	50	460	360	15	175	140	4-φ19	370	67
		3.7			235		354	365	719								87	
HD-80SFV-PP	80	3.7	560	445	235	220	354	365	719	50	460	360	15	185	150	8-φ19	370	88
		5.5			272		334	375	709								102	

Standard specifications / Performance curves

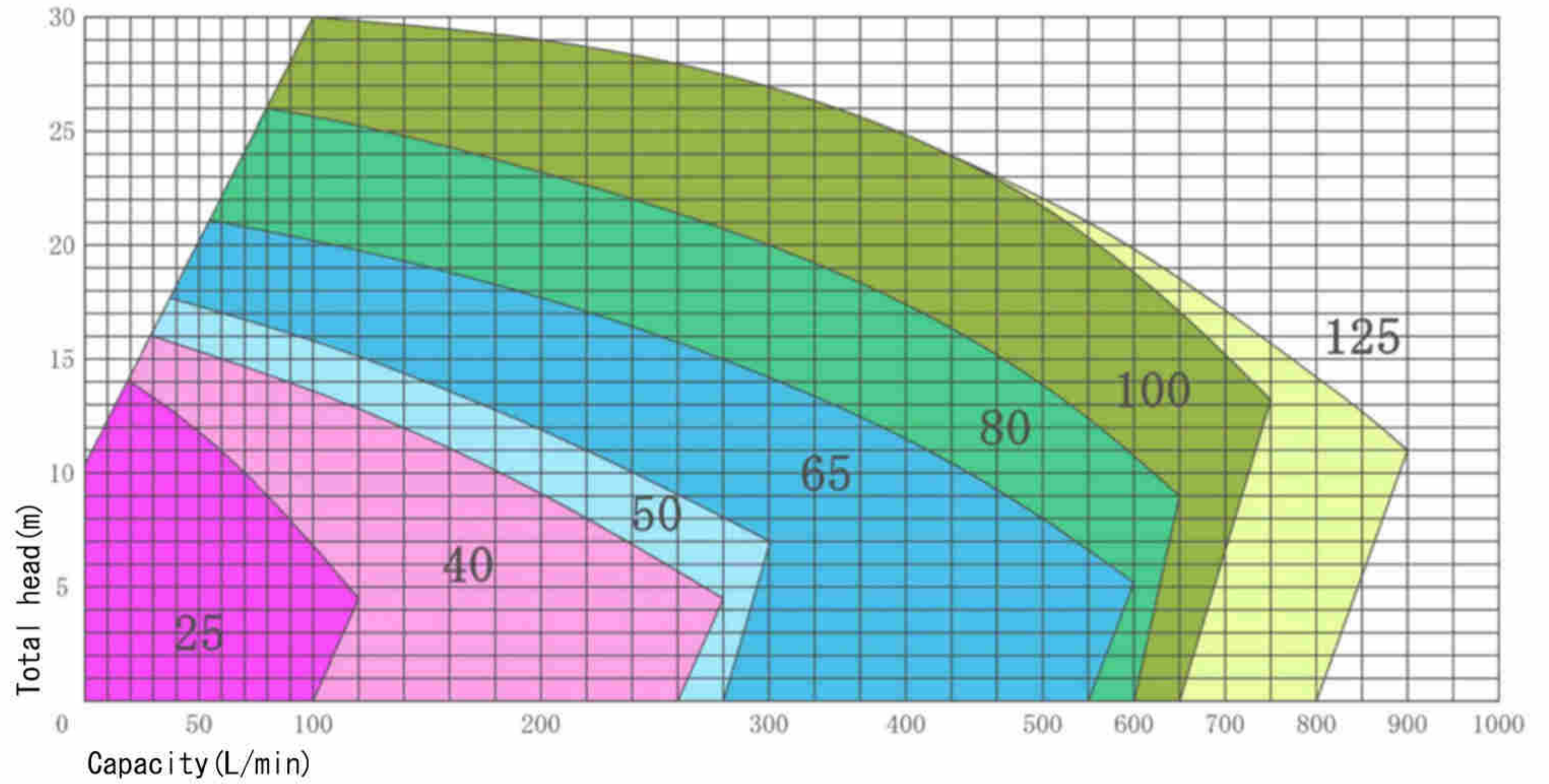
• HD-SFV (-P) (50Hz)

Pump model	Bore (mm)	Power (kW)	Total head (m)	Capacity (L/min)
HD-25SFV (-P)	25	0.4 0.75/1.5	5	80
HD-40SFV (-P)	40	0.75 1.5/2.2	6	130 170
HD-50SFV (-P)	50	1.5 2.2	8	210 250
HD-65SFV (-P)	65	2.2 3.7/5.5	10	300 320
HD-80SFV (-P)	80	3.7 5.5/7.5	12	400 420
HD-100SFV (-P)	100	5.5 7.5	15	540 600
HD-125SFV (-P)	125	7.5	18	670



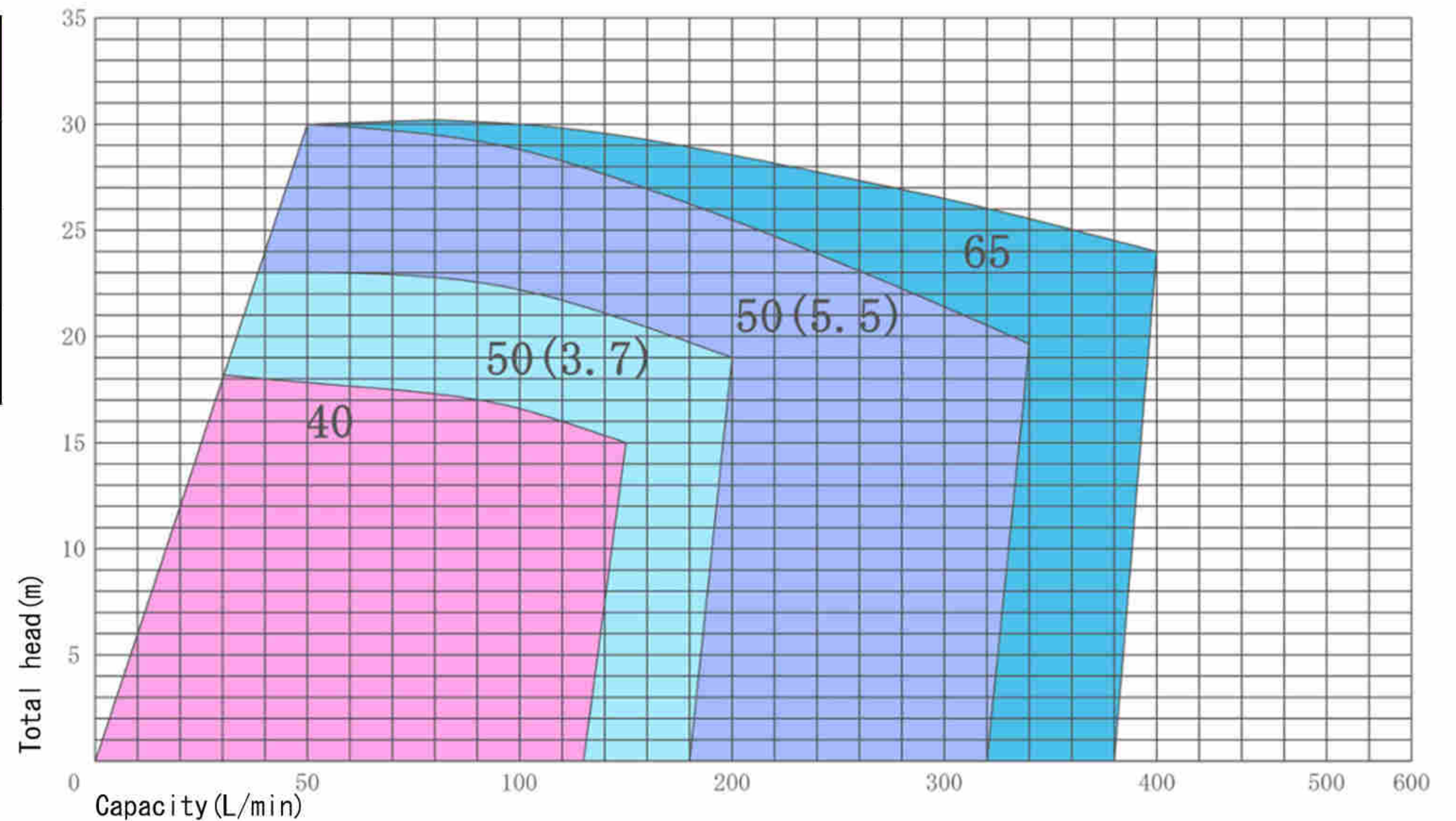
• HD-SFV (-P) (60Hz)

Pump model	Bore (mm)	Power (kW)	Total head (m)	Capacity (L/min)
HD-25SFV (-P)	25	0.75 1.5	5	90 110
HD-40SFV (-P)	40	1.5 2.2	6	230 250
HD-50SFV (-P)	50	2.2	8	280
HD-65SFV (-P)	65	3.7/5.5	10	440
HD-80SFV (-P)	80	5.5/7.5	12	560
HD-100SFV (-P)	100	7.5	15	700
HD-125SFV (-P)	125	7.5	18	670



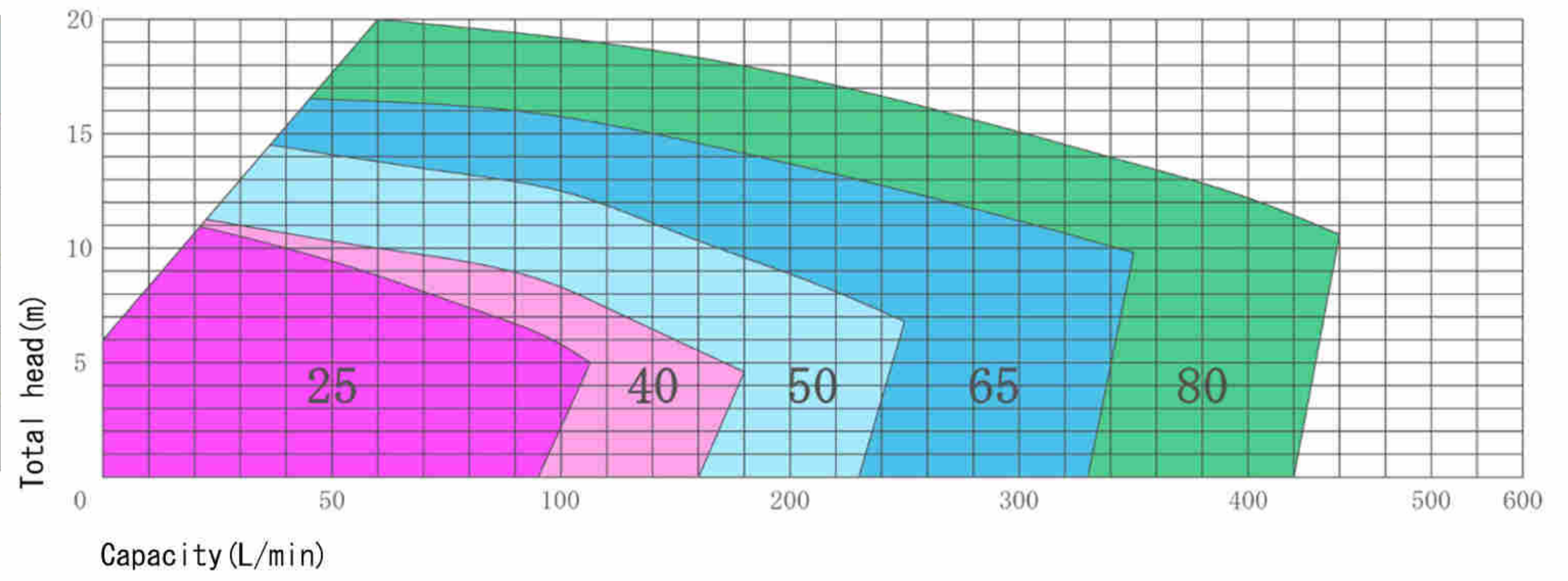
• HD-SFV-H (PH)

Pump model	Bore (mm)	Power (kW)	Total head (m)	Capacity (L/min)
HD-40SFV-H HD-40SFV-PH	40	2.2	16	120
HD-50SFV-H HD-50SFV-PH	50	3.7 5.5	20 25	170 200
HD-65SFV-H HD-65SFV-PH	65	7.5	26	300



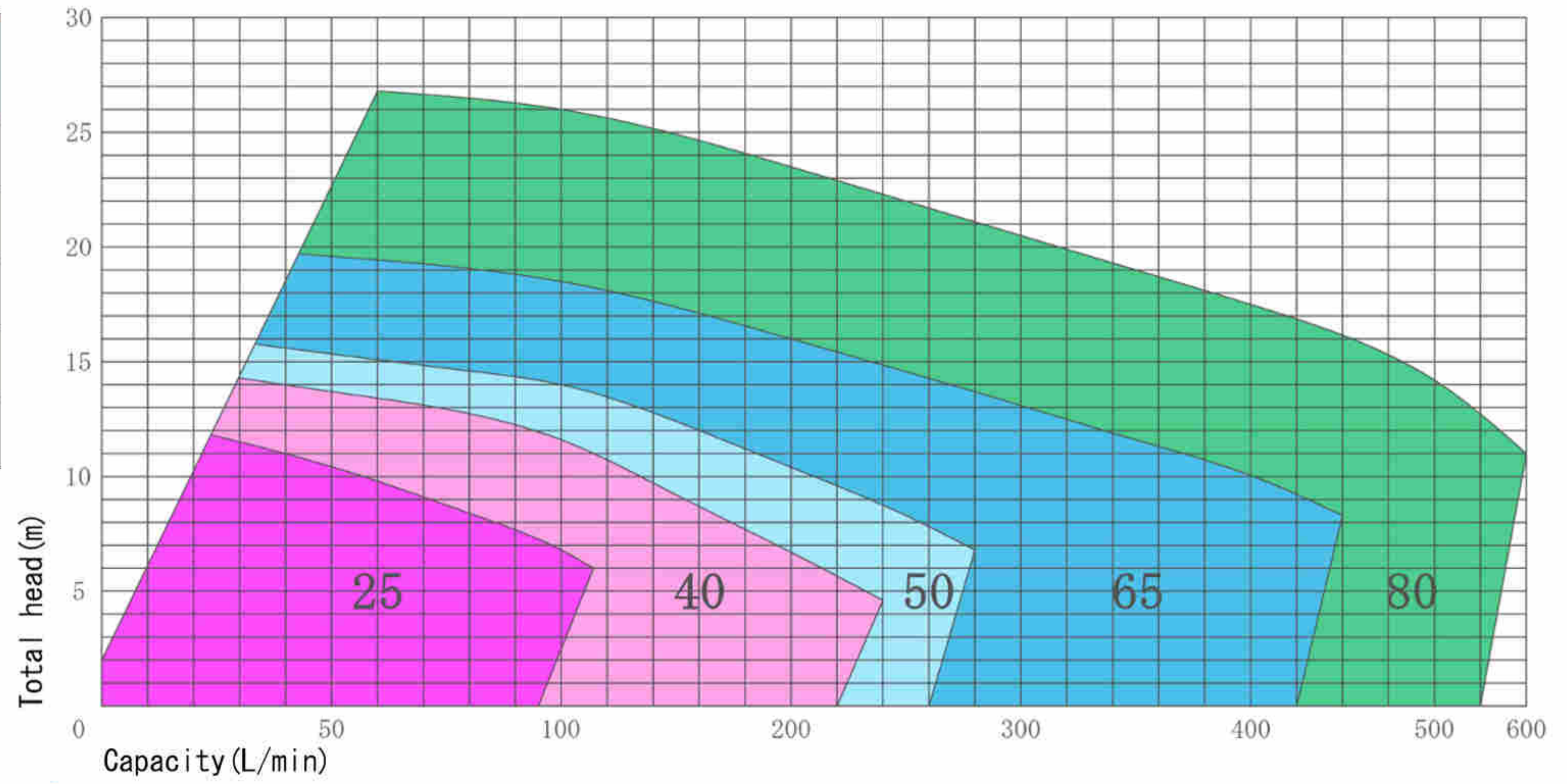
• HD-SFV-PP (50Hz)

Pump model	Bore (mm)	Power (kW)	Total head (m)	Capacity (L/min)
HD-25SFV-PP	25	0.4 0.75/1.5	5	75 80/100
HD-40SFV-PP	40	0.75 1.5/2.2	6	120 150
HD-50SFV-PP	50	1.5 2.2	8	180 220
HD-65SFV-PP	65	2.2 3.7	10	300 320
HD-80SFV-PP	80	3.7	12	400

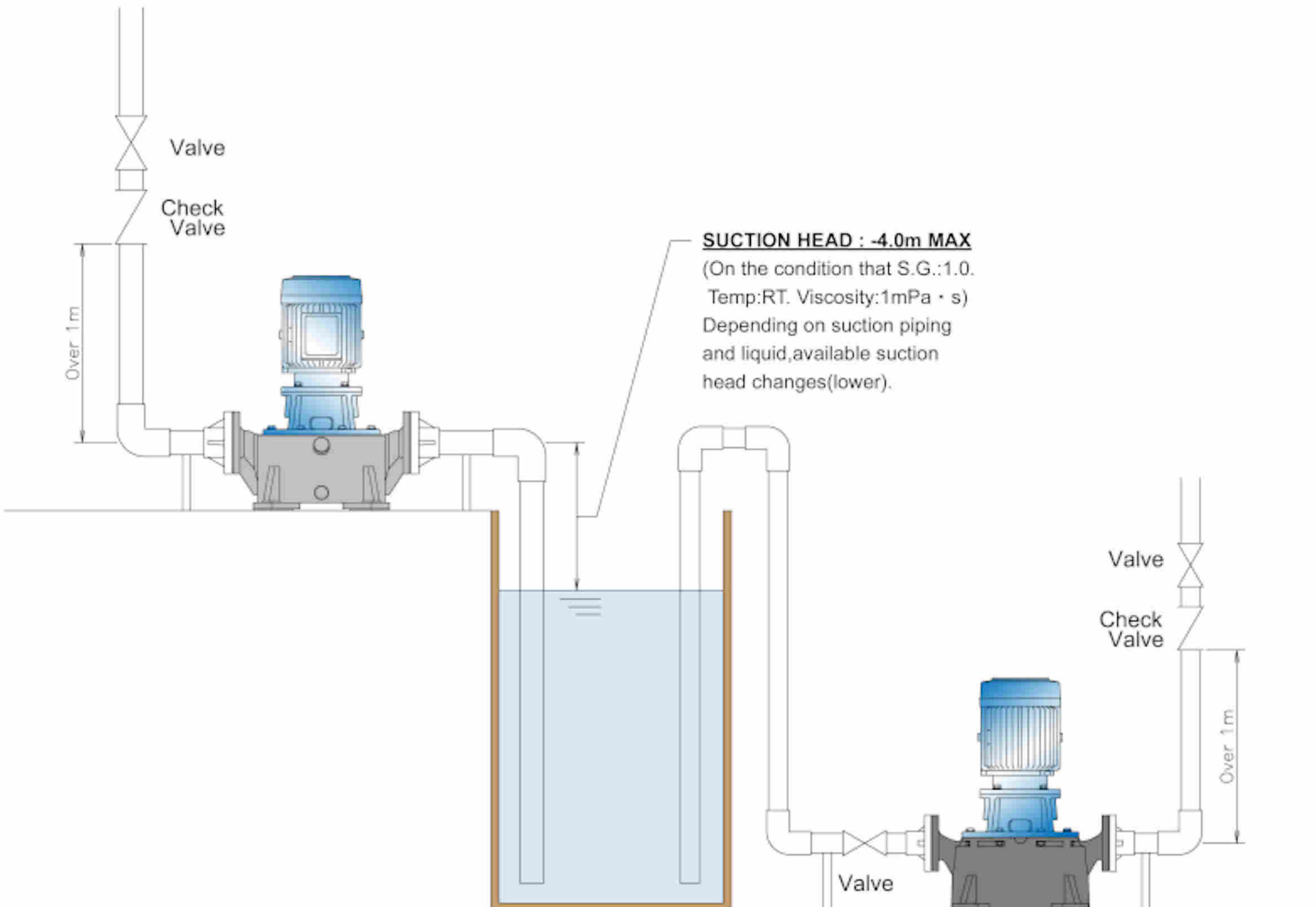


• HD-SFV-PP (60Hz)

Pump model	Bore (mm)	Power (kW)	Total head (m)	Capacity (L/min)
HD-25SFV-PP	25	0.75 1.5	5 6	90 100
HD-40SFV-PP	40	1.5 2.2	6	180 200
HD-50SFV-PP	50	2.2	8	250
HD-65SFV-PP	65	3.7	10	400
HD-80SFV-PP	80	5.5	12	400 540



■ Pump installation example



Product lineup

Model	Main material	Max temp.
HD-TFV	FRP+HT-PVC	80°C
HD-TFV-P	PVC+HT-PVC	55°C
HD-TFV-PH (High pump headtype)	PVC+HT-PVC	55°C
HD-TFV-W	UPE+PVC	55°C
HD-TFV-32	SCS14	80°C

Features

HKS seal equipment

Pump can show high seal performance in operation and standby.
(What's HKS seal equipment?→Page3)

Chemical resistance

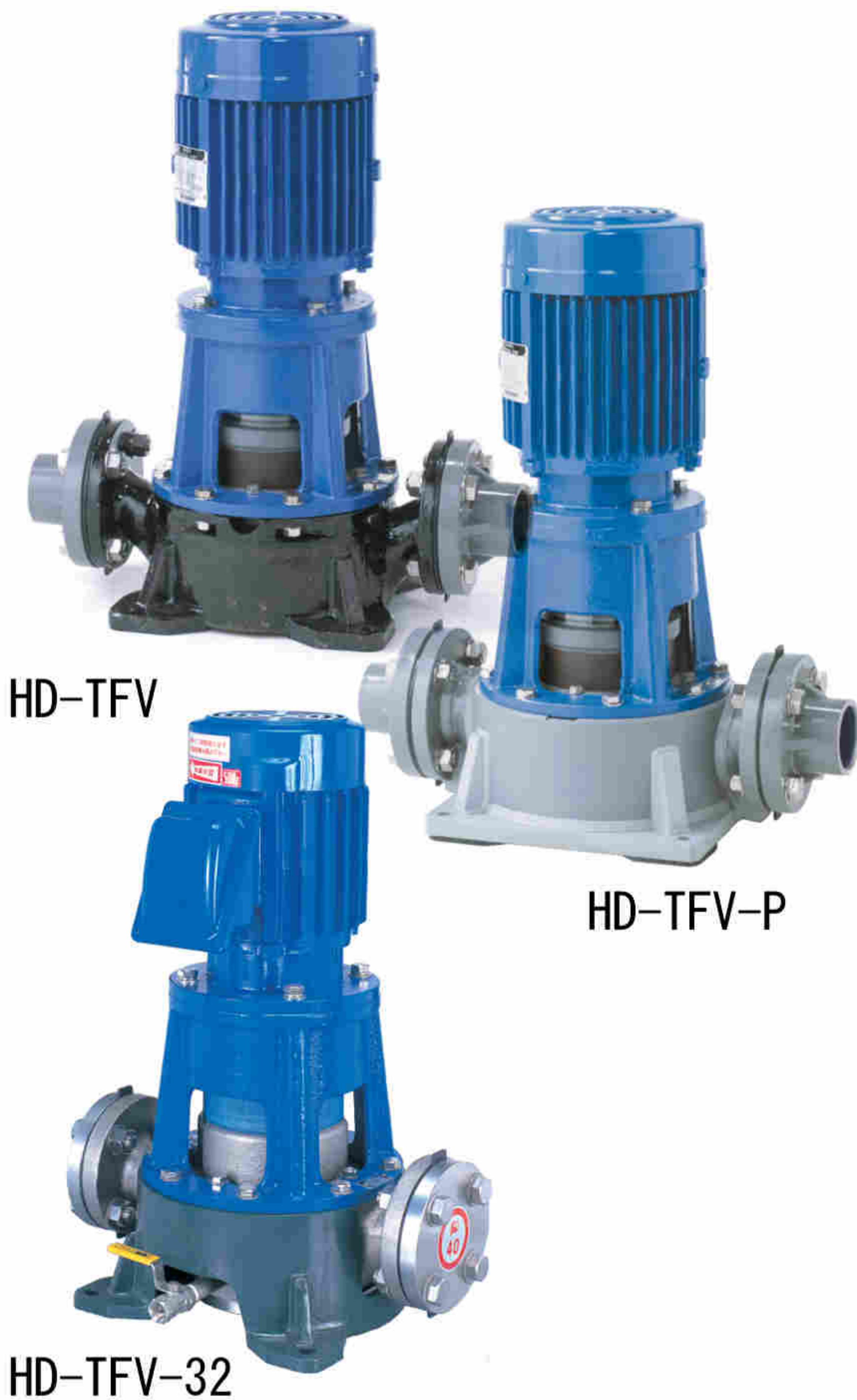
Various kinds of material (PVC/FRP/U-PE/PP/SCS14) to fit for different chemical liquid.

Application

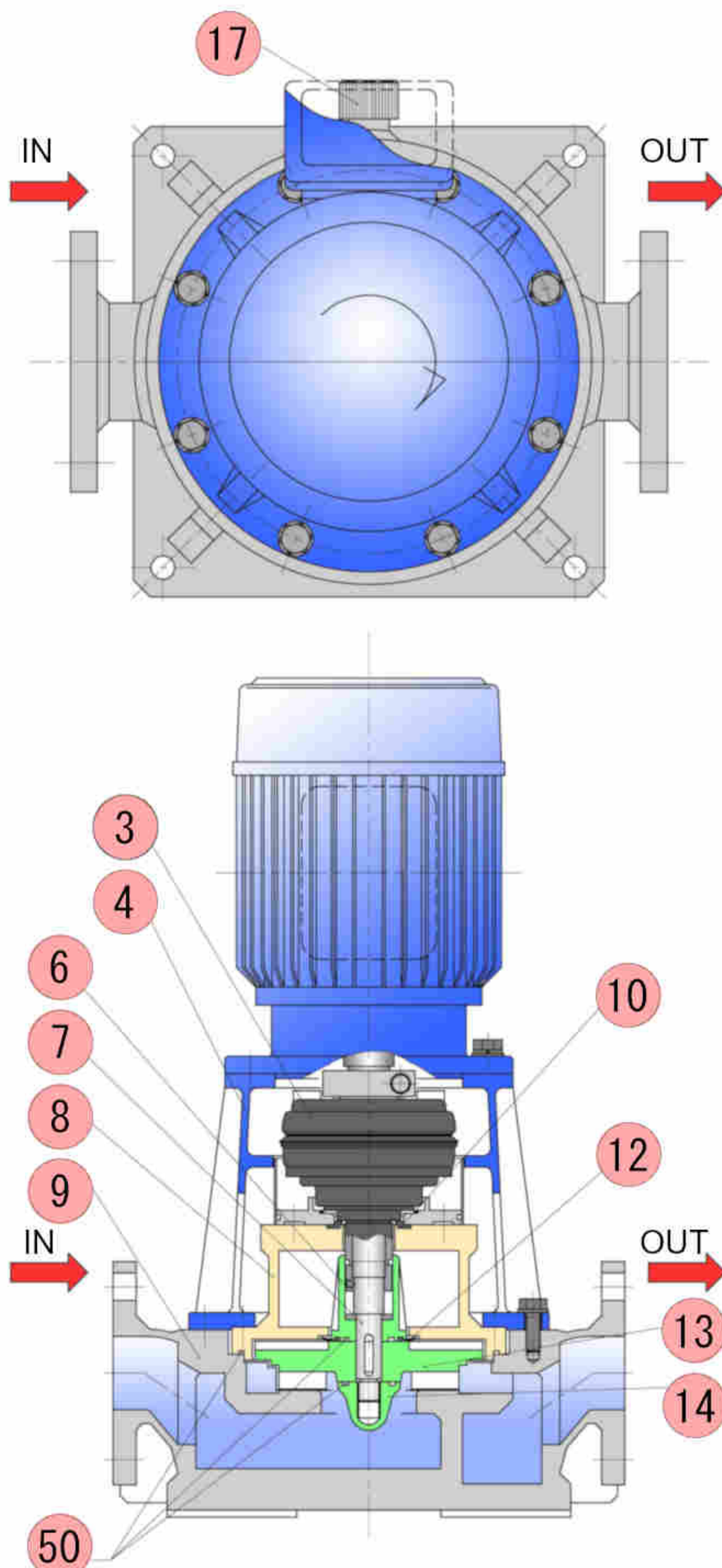
HD-TFV	Waste water treatment (Acid & Alkali mix.) Transfer chemical liquid
HD-TFV-P (-PH)	Waste water treatment (Acid/Alkali) Transfer chemical liquid
HD-TFV-W	Chemical liquid including slurry (e.g. CMP slurry)
HD-TFV-32	Electroless Ni plating

Easy maintenance

Possible to inspect pump easily without removing pipes.

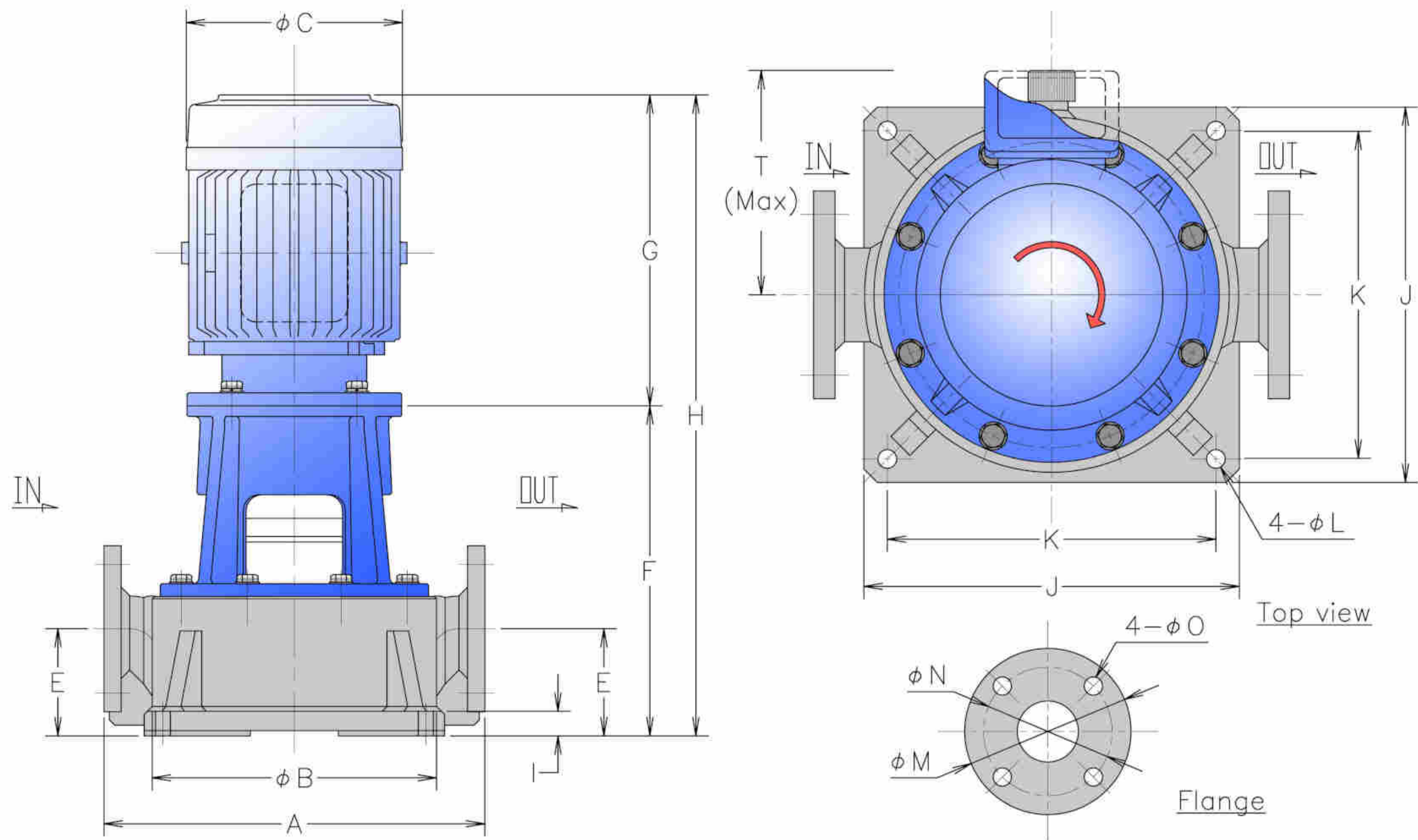


Parts list



NO.	Parts name	HD-TFV	HD-TFV-P (-PH)	HD-TFV-32	HD-TFV-W
3	HKS seal equipment	Ceramics · PPS · etc.			
4	Motor stand	FC			-----
6	Shaft sleeve	HT-PVC	-----	-----	HT-PVC
	Distance collar	-----	-----	SUS316	-----
7	Pump shaft	SUS304		SUS316	SUS304
8	Back casing	HT-PVC		SCS14	-----
9	Casing	FRP	PVC	SCS14	UPE
10	Seal packing	FKM			
12	Check packing	FEPM		PTFE	FEPM
13	Impeller	HT-PVC		PTFE	UPE
14	Impeller nut	HT-PVC		SUS316	UPE
17	Drain Plug/Cap	[Plug]HT-PVC	[Cap]PVC	-----	-----
	Drain pipe · valve	-----		SUS316 · SCS14	-----
50	O-ring	FKM (EPDM)		PTFE	FKM (EPDM)
-	Pump stand	-----		-----	SS400
	Pump body	-----		-----	PVC
	Back flange	-----		-----	UPE

■ Dimensions



*HD-TFV (-P)

Pump model	Bore (mm)	Motor power (kW)	A	ΦB	ΦC	E	F	G	H	I	J	K	ΦL	ΦM	ΦN	ΦO	T	Weight (kg) FRP / PVC			
HD-40TFV	40	0.75	355	255	174	100	300	256	556	19	280	245	14	140	105	4-φ19	175	31/33			
HD-40TFV-P		1.5		265	202			290	590	23							175		42/44		
		2.2															190			44/46	
HD-50TFV	50	1.5	355	255	202	100	300	290	590	19	280	245	14	155	120	4-φ19	175	42/44			
HD-50TFV-P		2.2		265				308	598	23							190		44/46		
HD-65TFV	65	2.2	420	305	202	120	345	290	635	19	315	280	14	175	140	4-φ19	200	46/50			
HD-65TFV-P		3.7		315	235				716.5								28		320	200	72/76
		5.5			130				332											365	
HD-80TFV	80	3.7	440	305	235	120	352	365	716.5	19	315	280	14	185	150	8-φ19	200	72/76			
HD-80TFV-P		5.5		315	272				706.5								28		320	245	91/95
		7.5			130				332											375	
HD-100TFV	100	5.5	570	392	272	190	477	375	852	25	415	365	15	210	175	8-φ19	245	106/113			
HD-100TFV-P		7.5		420	492				867								33		435	390	275
HD-125TFV	125	7.5	590	392	272	190	477	399	852	25	415	365	15	250	210	8-φ23	245	113			

*HD-TFV-PH

Pump model	Bore (mm)	Motor power (kW)	A	ΦB	ΦC	E	F	G	H	I	J	K	ΦL	ΦM	ΦN	ΦO	T	Weight (kg)
HD-40TFV-PH	40	2.2	355	265	202	100	300	290	590	28	280	245	14	140	105	4-φ19	190	48
HD-50TFV-PH	50	3.7	405	315	235	100	347	365	712	28	330	280	14	155	120	4-φ19	220	76
		5.5			272												327	
HD-65TFV-PH	65	7.5	440	315	272	120	347	375	722	35	330	280	14	175	140	4-φ19	245	104

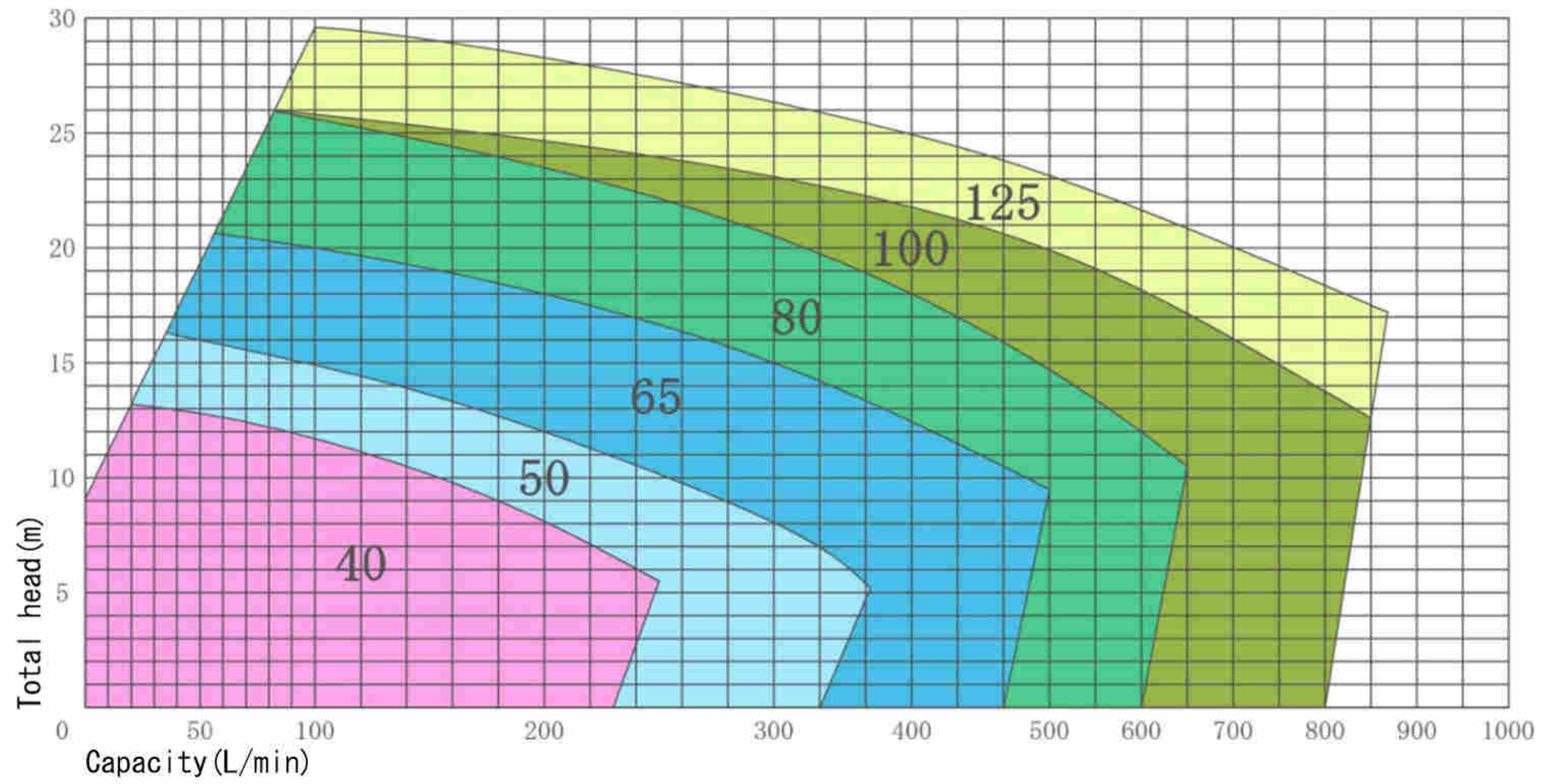
*HD-TFV-32

Pump model	Bore (mm)	Motor power (kW)	A	ΦB	ΦC	E	F	G	H	I	J	K	ΦL	ΦM	ΦN	ΦO	T	Weight (kg)			
HD-25TFV-32	25	0.4	355	265	142	95	300	230	530	12	280	245	15	125	90	4-φ19	235	36			
		0.75			174													303	256	559	50
		1.5			202													290	593	62	
HD-40TFV-32	40	0.75	355	265	174	100	303	256	559	12	280	245	15	140	105	4-φ19	245	51			
		1.5			202													290	593	60	
		2.2																		62	
HD-50TFV-32	50	2.2	405	315	202	115	340	290	630	12	315	280	15	155	120	4-φ19	255	72			
		3.7			235													347	365	712	93
		5.5			272													327	375	702	107

Standard specifications / Performance curves

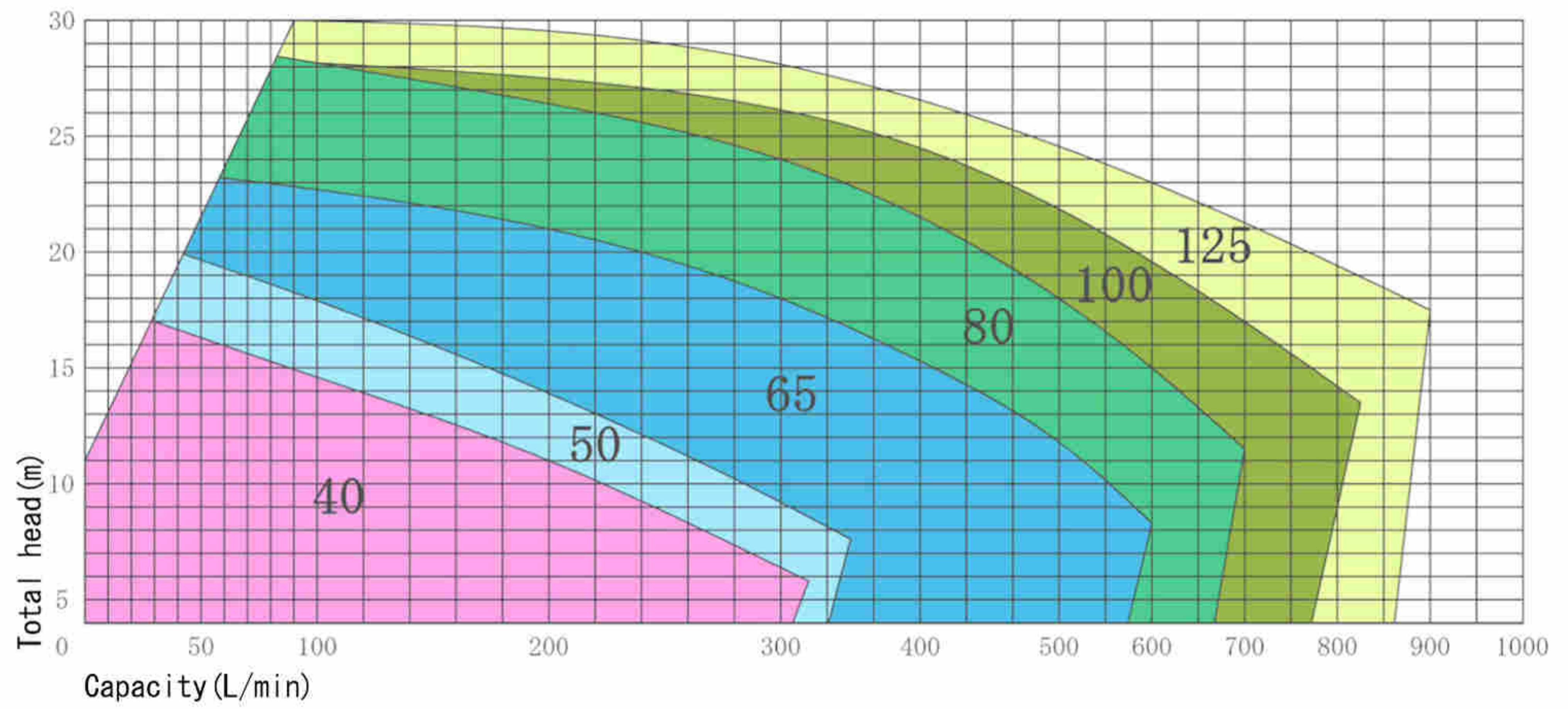
• HD-TFV (-P) (50Hz)

Pump model	Bore (mm)	Power (kW)	Total head (m)	Capacity (L/min)
HD-40TFV (-P)	40	0.75 1.5/2.2	6	180 230
HD-50TFV (-P)	50	1.5 2.2	8	270 300
HD-65TFV (-P)	65	2.2 3.7/5.5	10	350 460
HD-80TFV (-P)	80	3.7 5.5/7.5	12	460 500/600
HD-100TFV (-P)	100	5.5 7.5	15	650 720
HD-125TFV	125	7.5	18	780



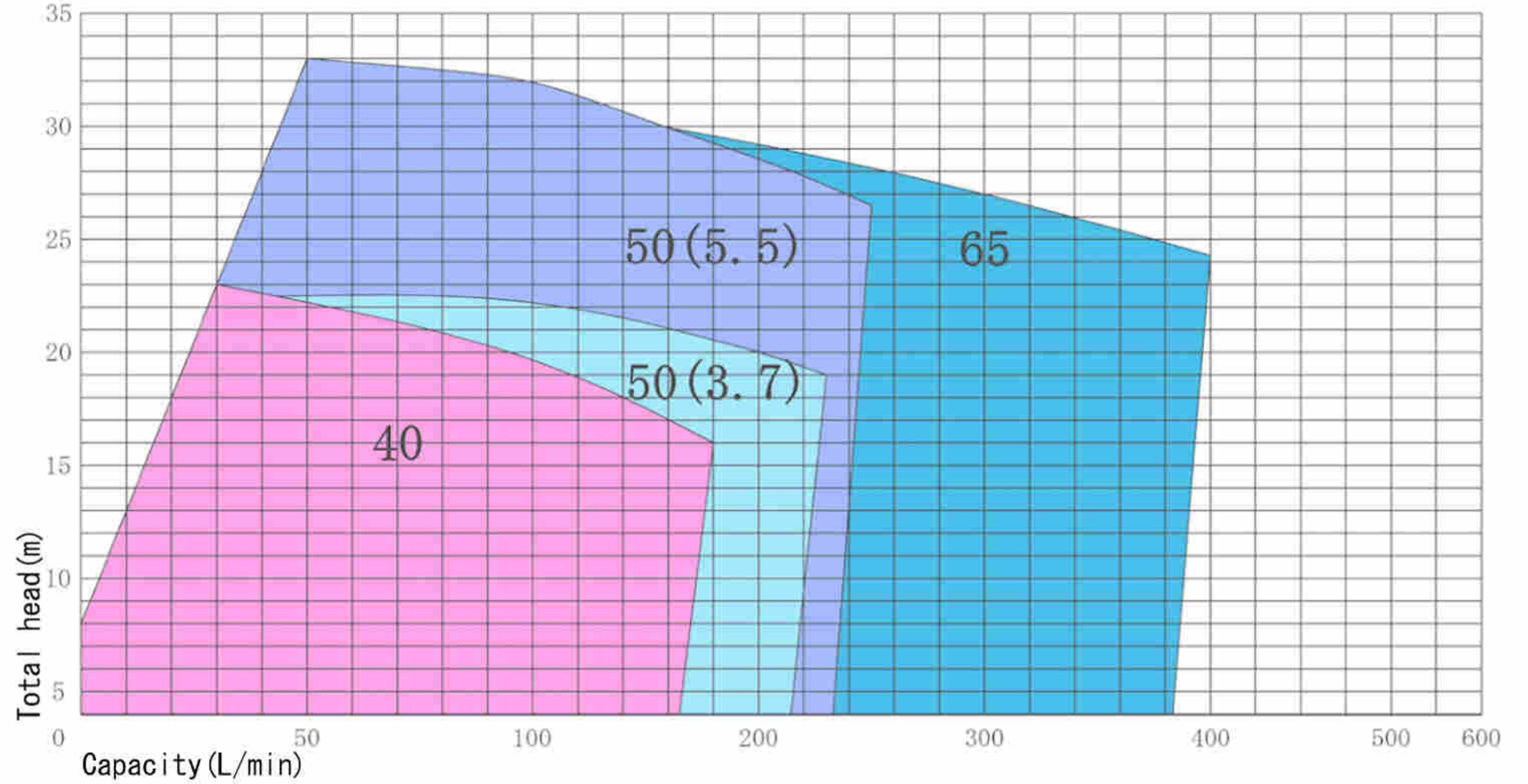
• HD-TFV (-P) (60Hz)

Pump model	Bore (mm)	Power (kW)	Total head (m)	Capacity (L/min)
HD-40TFV (-P)	40	1.5 2.2	6	270 300
HD-50TFV (-P)	50	2.2	8	330
HD-65TFV (-P)	65	3.7 5.5	10	500 540
HD-80TFV (-P)	80	5.5 7.5	12	600 660
HD-100TFV (-P)	100	7.5	15	750
HD-125TFV	125	7.5	18	850



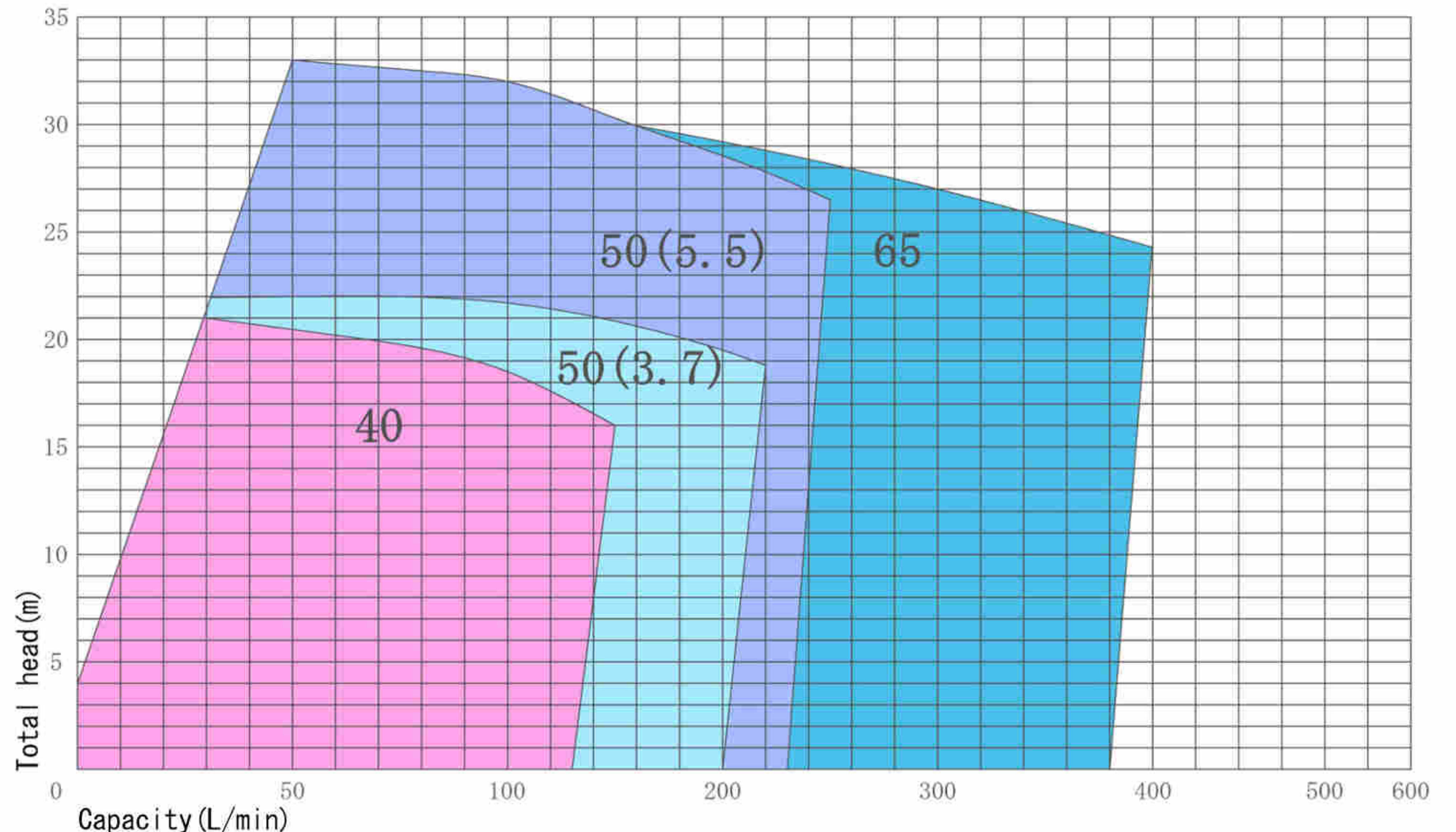
• HD-TFV-PH (50Hz)

Pump model	Bore (mm)	Power (kW)	Total head (m)	Capacity (L/min)
HD-40TFV-PH	40	2.2	18	130
HD-50TFV-PH	50	3.7 5.5	20 27	200 220
HD-65TFV-PH	65	7.5	28	250



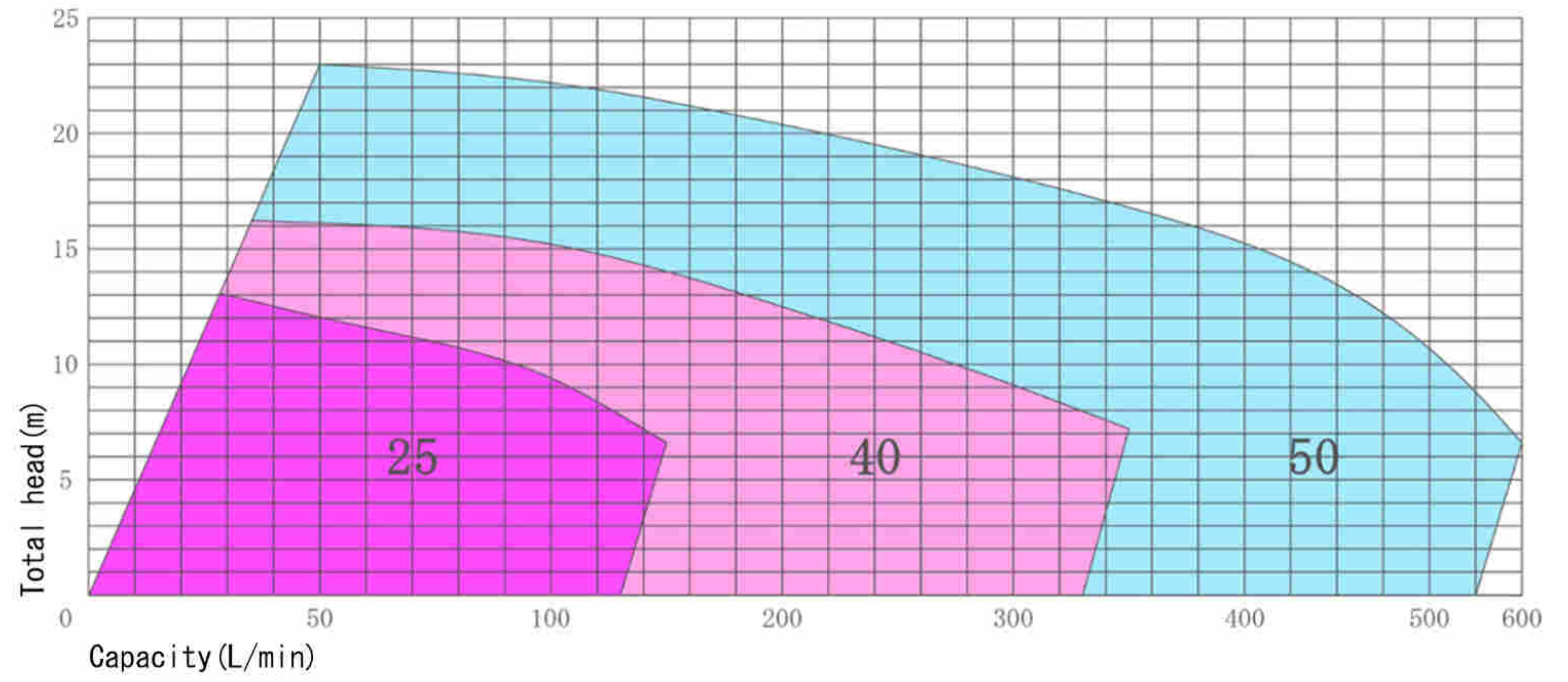
• HD-TFV-PH (60Hz)

Pump model	Bore (mm)	Power (kW)	Total head (m)	Capacity (L/min)
HD-40TFV-PH	40	2.2	18	100
HD-50TFV-PH	50	3.7 5.5	20 27	180 200
HD-65TFV-PH	65	7.5	28	250



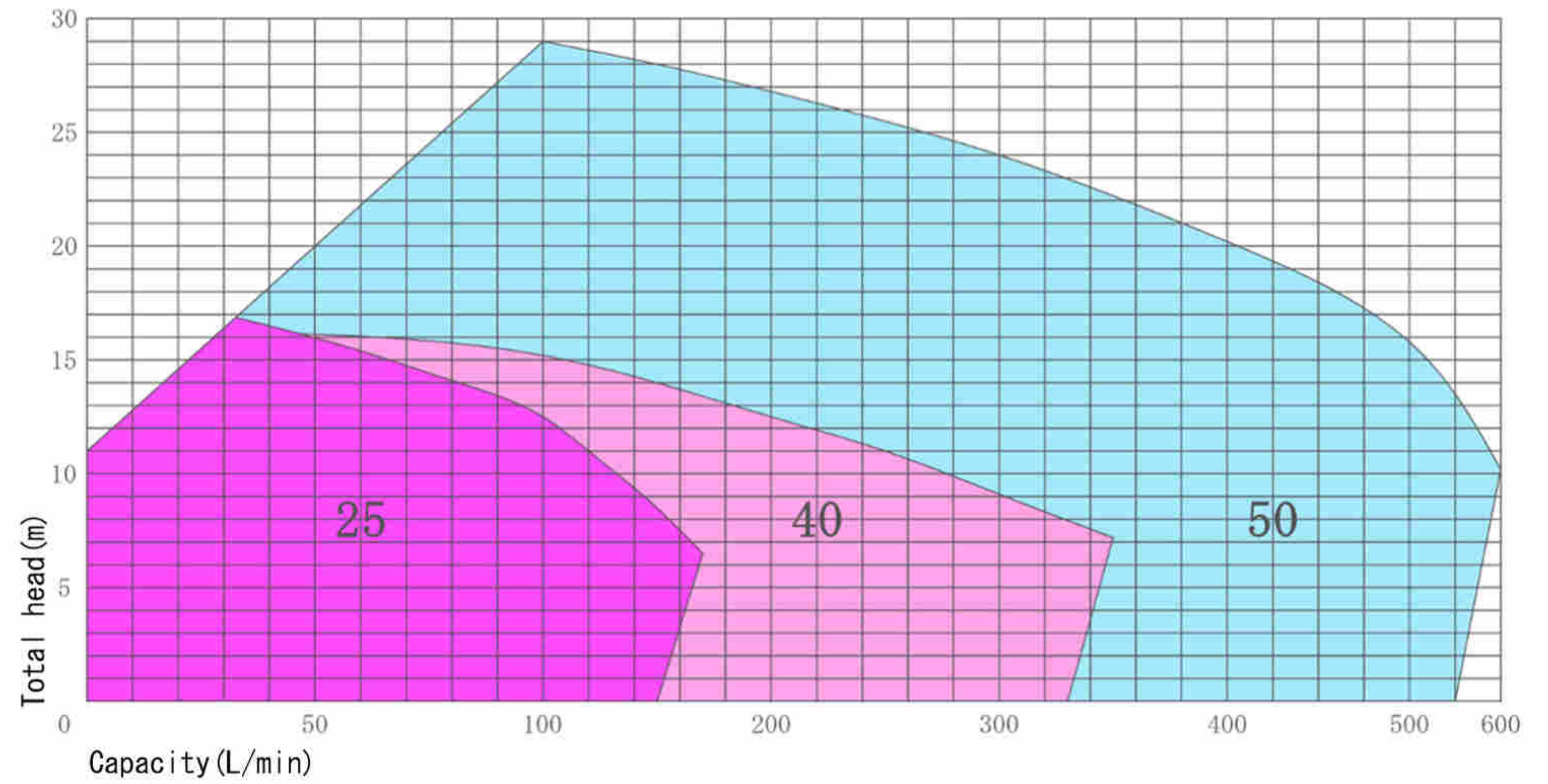
• HD-TFV-32 (50Hz)

Pump model	Bore (mm)	Power (kW)	Total head (m)	Capacity (L/min)
HD-25TFV-32	25	0.4 0.75/1.5	5 5/7	90 140
HD-40TFV-32	40	0.75 1.5/2.2	6 8	150 260/320
HD-50TFV-32	50	2.2 3.7	10 12	300 480

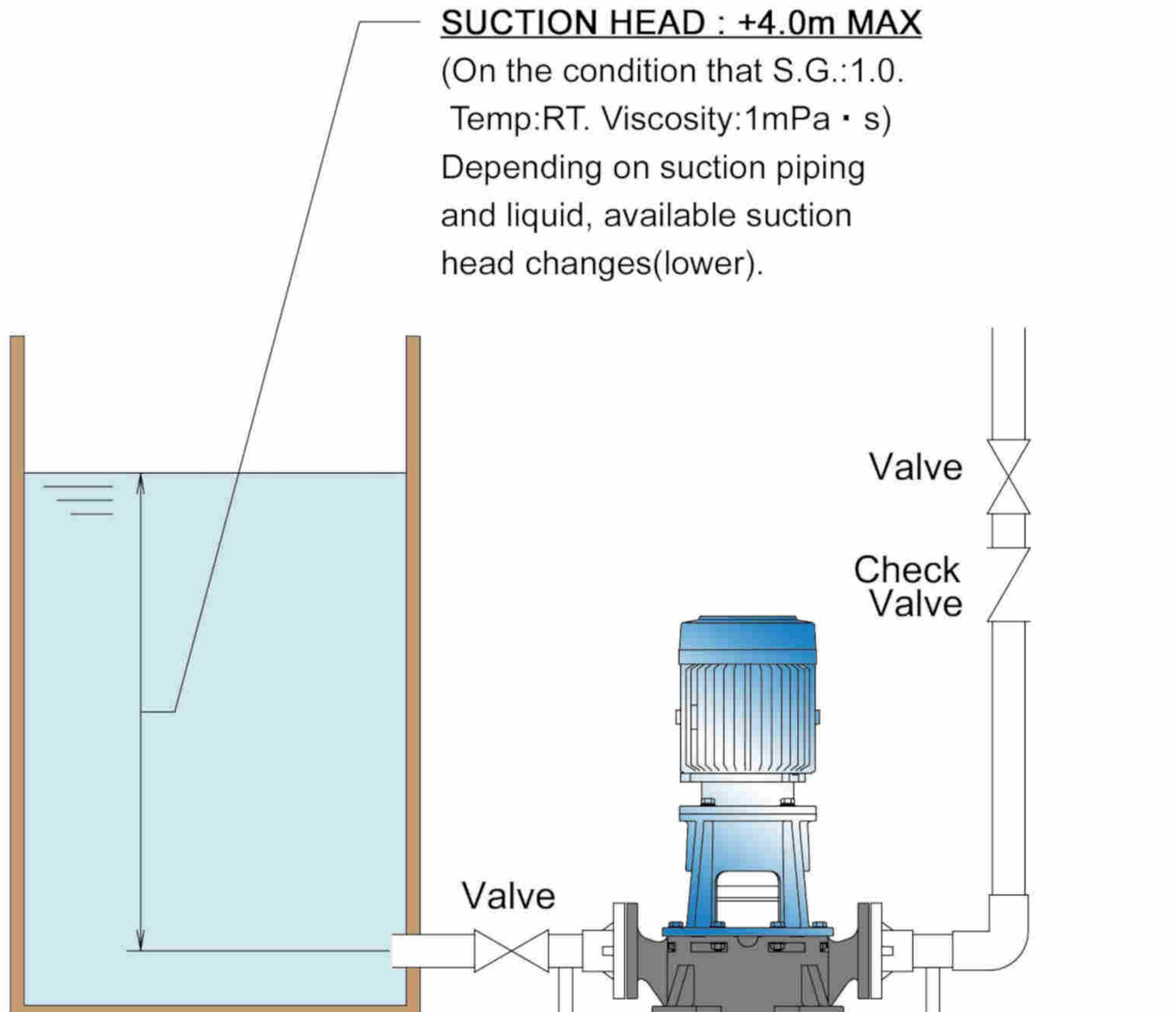


• HD-TFV-32 (60Hz)

Pump model	Bore (A)	Power (kW)	Total head (m)	Capacity (L/min)
HD-25TFV-32	25	0.75 1.5	6 8	110 150
HD-40TFV-32	40	1.5 2.2	8	240 320
HD-50TFV-32	50	3.7 5.5	12 15	380 520



■ Pump installation example



Product lineup

Model	Main material	Max temp.
HD-RE-P [Non: Dry pit]	PVC+HT-PVC	55°C
HD-RET-P [T : Wet pit]	PVC+HT-PVC	55°C
HD-RE-W	UPE+PVC	55°C
HD-RE-32	SCS14	80°C
HD-RE-PP	PP	75°C
HD-RE-4F	PTFE	90°C



Features

• Non-metal non-seal

• Chemical resistance

Various kinds of material (PVC/U-PE/PP/SCS14) to fit for different chemical liquid.

• Application

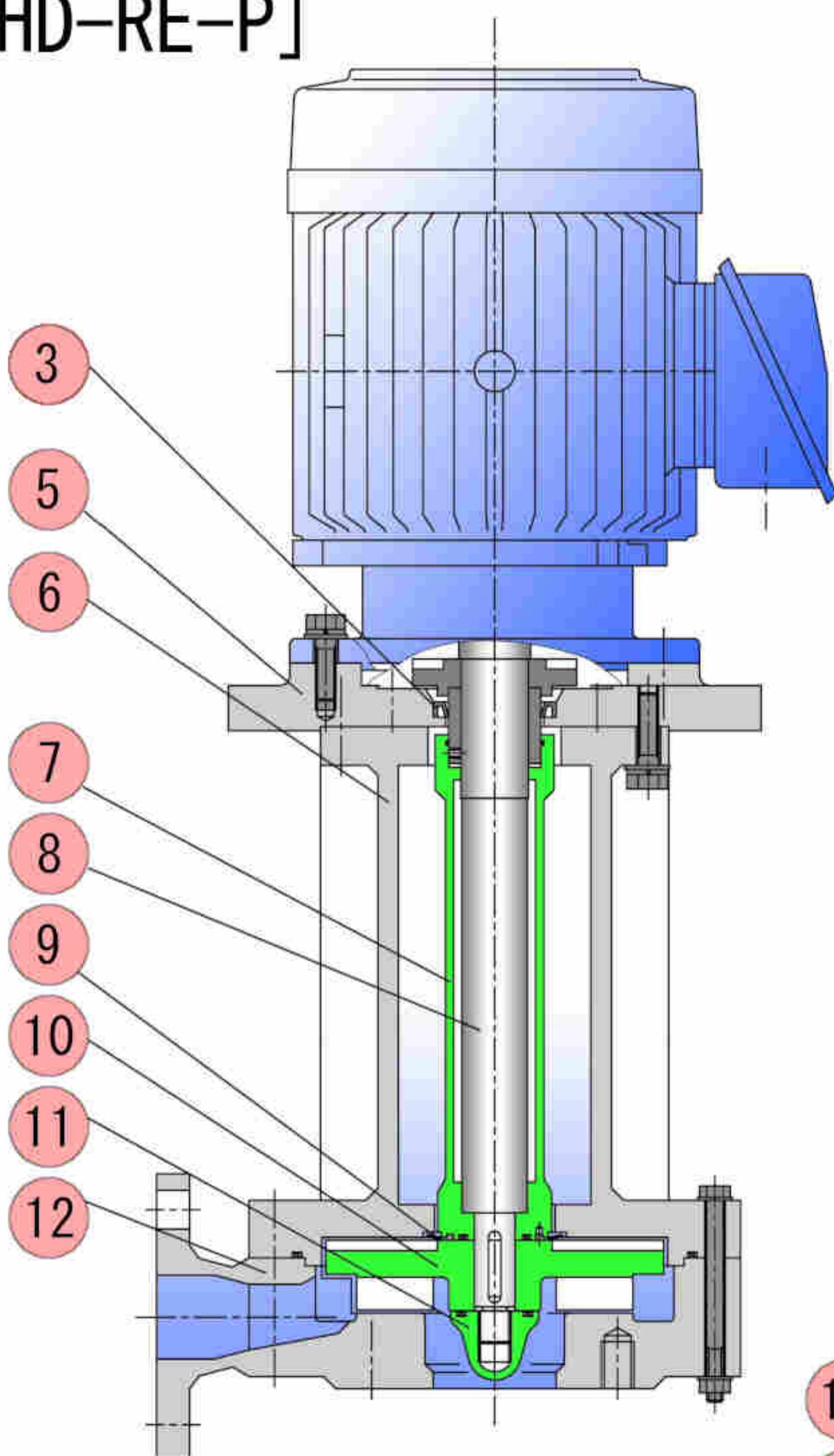
HD-RE-P	Scrubber device PCB device (developing, etching, stripping)
HD-RE-W	PCB: jet scrubber, transfer slurry
HD-RE-32	PCB: desmear

• Easy maintenance

Possible to inspect pump easily without removing pipes.

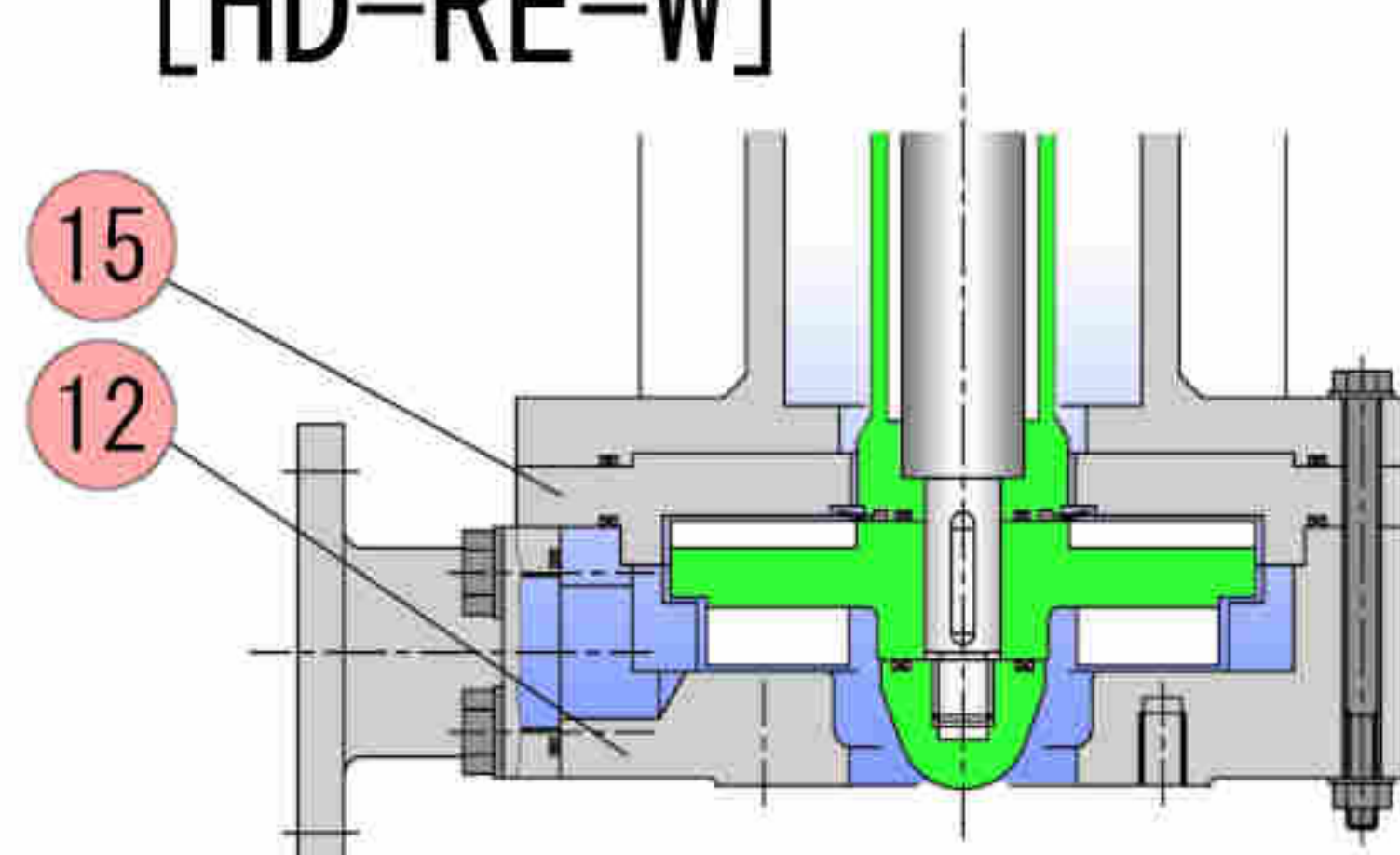
Parts list

[HD-RE-P]

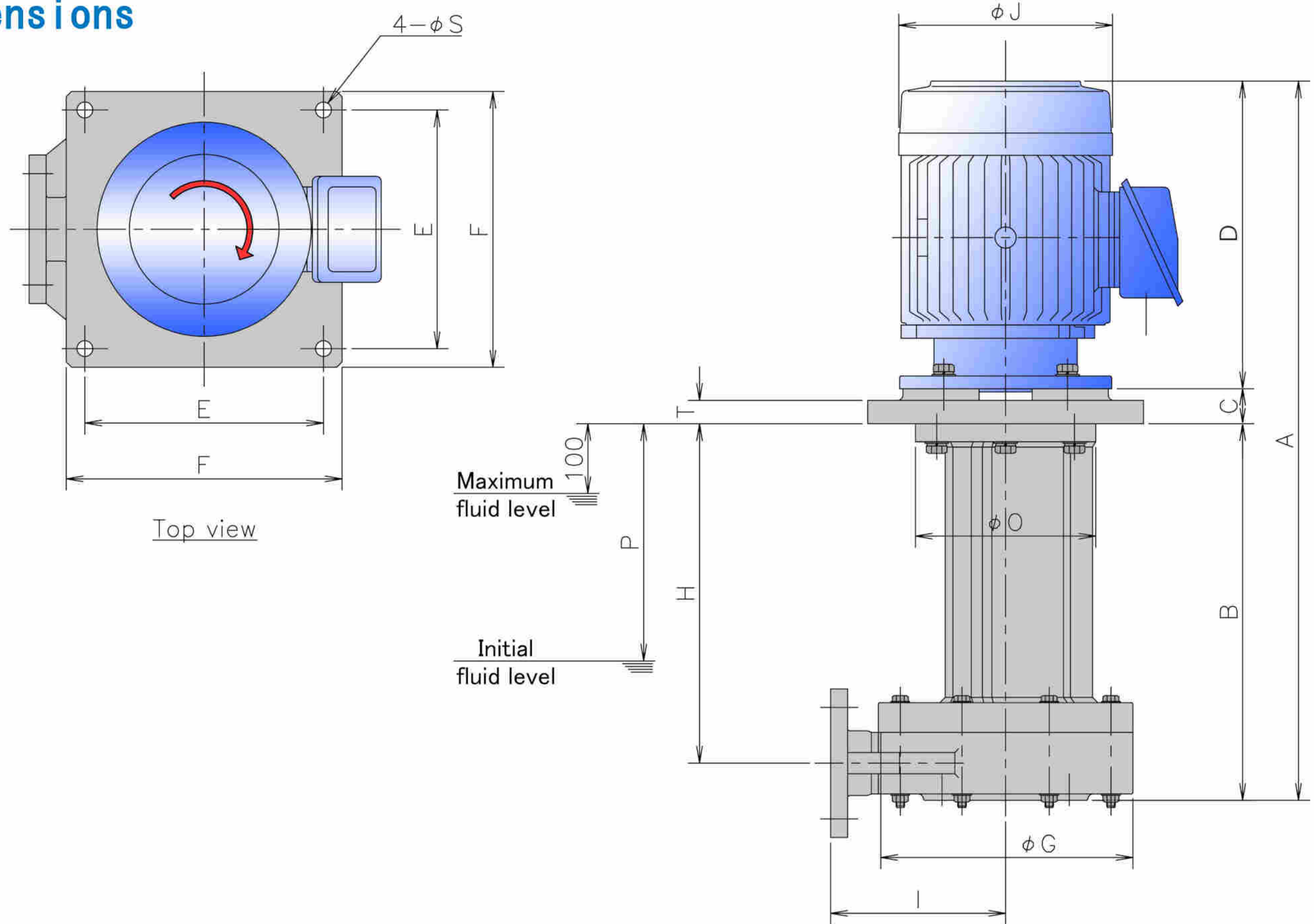


NO.	Parts name	HD-RE-P	HD-RE-W	HD-RE-PP	HD-RE-32
3	Gas seal packing	UPE			-----
	Oil seal	-----			NBR
5	Pump base	HT-PVC (PVC)		HT-PVC	SS400
6	Pump body	PVC		PP	SUS316 (SCS14)
7	Shaft sleeve	HT-PVC		PP	SUS316
8	Pump shaft	SUS304			
9	Check packing	FEPM			FEPM (PTFE Coating)
10	Impeller	HT-PVC	UPE	PP	PTFE
11	Impeller nut	HT-PVC	UPE	PP	SUS316
12	Pump casing	PVC	UPE	PP	SUS316 (SCS14)
15	Back flange	-----	UPE	-----	-----

[HD-RE-W]



■ Dimensions



*HD-RE-P (-HT)

Pump model	Bore (mm)	Power (kW)	A	B	C	D	E	F	φG	H	I	φJ	φO	P	φS	T	Weight (kg)
HD- 20RE-P (HT)	25 × 20	0.2	488	250	23	215	160	190	160	225	125	130	110	175	12	23	9
HD-25RES-P (HT)	25 × 25	0.4	559	305	24	230	180	210	180	278	130	142	140	225	15	24	13
HD- 25RE-P (HT)	40 × 25	0.75	591	311	24	256	205	240	190	270	135	174	140	220	15	24	23
HD-40RES-P (HT)	50 × 40	1.5	678	355	33	290	225	260	240	320	165	202	170	250	15	22	38
HD- 40RE-P (HT)	50 × 40	2.2	678	355	33	290	225	260	240	320	165	202	170	250	15	22	42
HD- 50RE-P (HT)	65 × 50	3.7	758	360	33	365	225	260	240	320	165	235	170	250	15	22	60
HD- 65RE-P (HT)	80 × 65	5.5	833	420	38	375	270	310	267	380	185	272	210	300	15	26	83
HD- 80RE-P (HT)	100 × 80	7.5	948	550	23	375	325	360	295	507	220	272	250	410	15	14	96
HD-100RE-P (HT)	100 × 100	7.5	948	550	23	375	325	360	295	507	220	272	250	410	15	14	97

*HD-RE-W

Pump model	Bore (mm)	Power (kW)	A	B	C	D	E	F	φG	H	I	φJ	φO	P	φS	T	Weight (kg)
HD- 20RE-W	25 × 20	0.2	488	250	23	215	160	190	170	225	145	130	110	160	12	23	9
HD-25RES-W	25 × 25	0.4	559	305	24	230	180	210	180	280	150	142	140	210	15	24	13
HD- 25RE-W	40 × 25	0.75	589	309	24	256	205	240	195	280	155	174	140	205	15	24	23
HD-40RES-W	40 × 40	1.5	668	345	33	290	225	260	215	316	165	202	170	240	15	22	36
HD- 40RE-W	50 × 40	2.2	673	350	33	290	225	260	235	315	175	202	170	240	15	22	38
HD- 50RE-W	65 × 50	3.7	758	360	33	365	225	260	250	320	190	235	170	240	15	22	56
HD- 65RE-W	80 × 65	5.5	843	430	38	375	270	310	300	380	225	272	210	275	15	26	79

*HD-RE-32

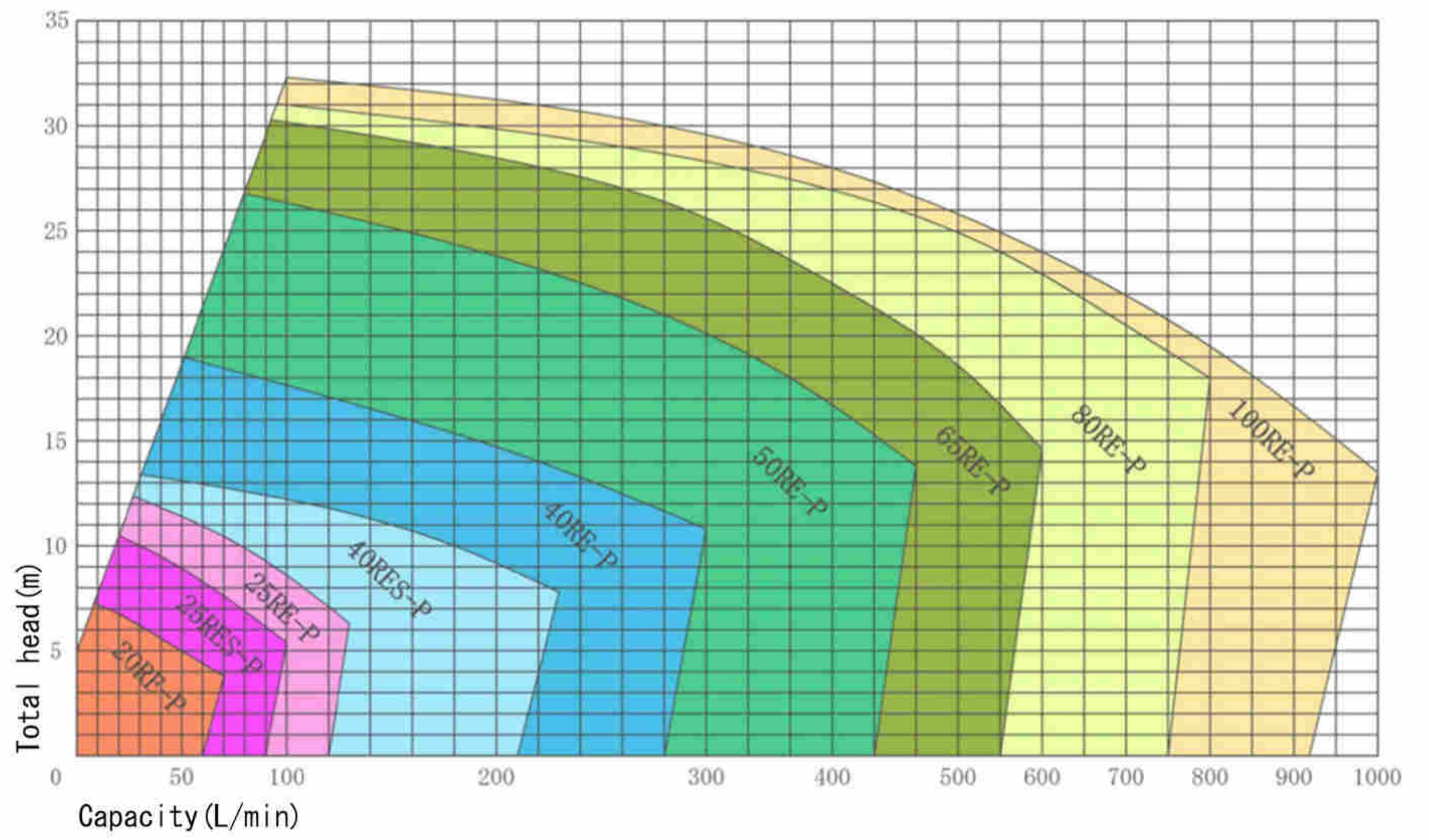
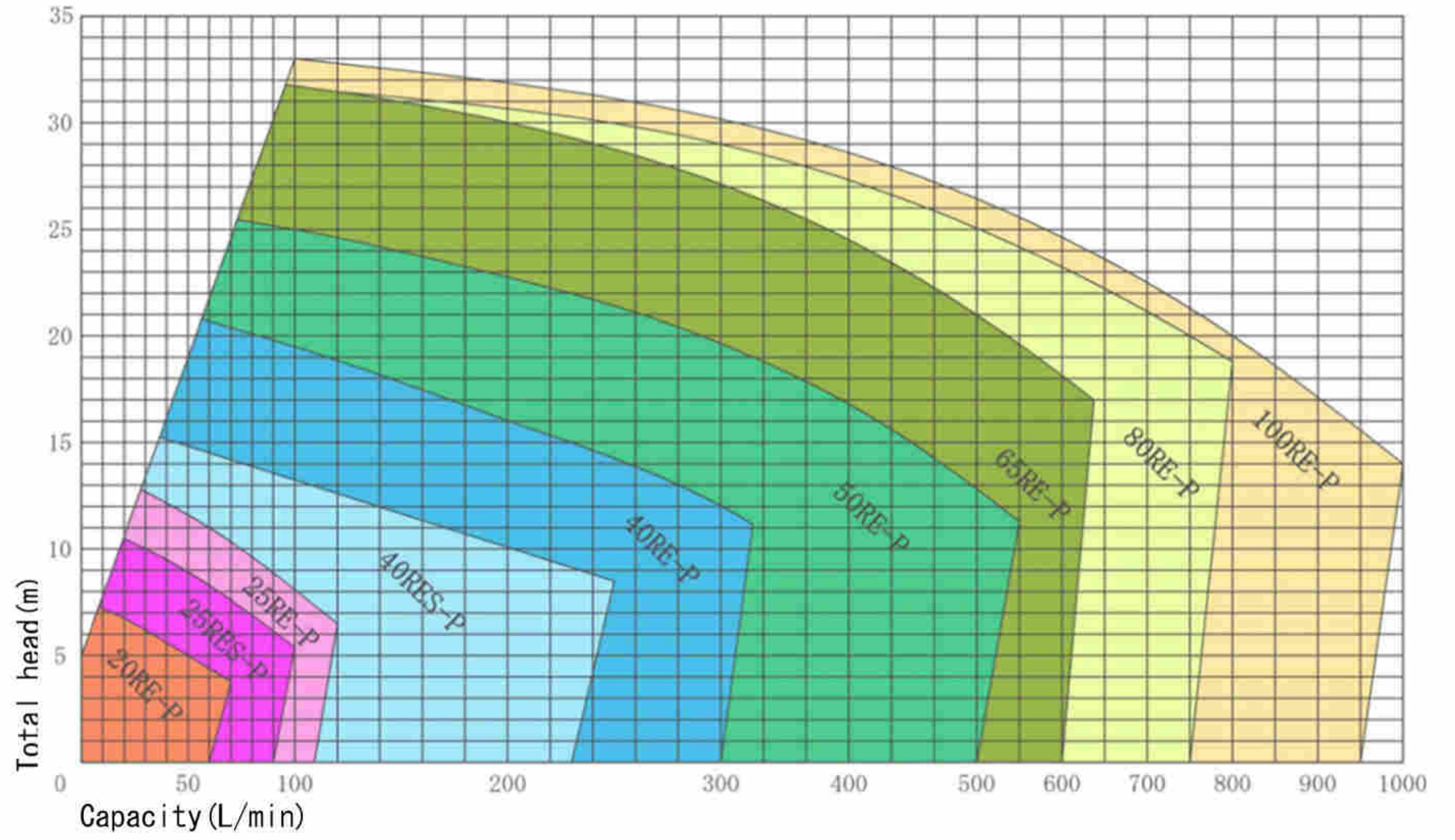
Pump model	Bore (mm)	Power (kW)	A	B	C	D	E	F	φG	H	I	φJ	φO	P	φS	T	Weight (kg)
HD- 25RE-32	40 × 25	0.75	587	311	20	256	205	240	179	270	135	174	140	220	15	12	42
HD-40RES-32	50 × 40	1.5	670	360	20	290	225	260	199	322	150	202	170	265	15	12	57
HD- 40RE-32	50 × 40	2.2	670	360	20	290	225	260	209 (199)	322	150	202	170	265	15	12	58
HD- 50RE-32	65 × 50	3.7	747	360	22	365	225	260	219	320	160	235	170	255	15	14	82
HD- 65RE-32	80 × 65	5.5	817	420	22	375	270	310	239	375	170	272	195	305	15	14	109

※the number in a parenthesis is dimension in 60Hz.

Standard specifications / Performance curves

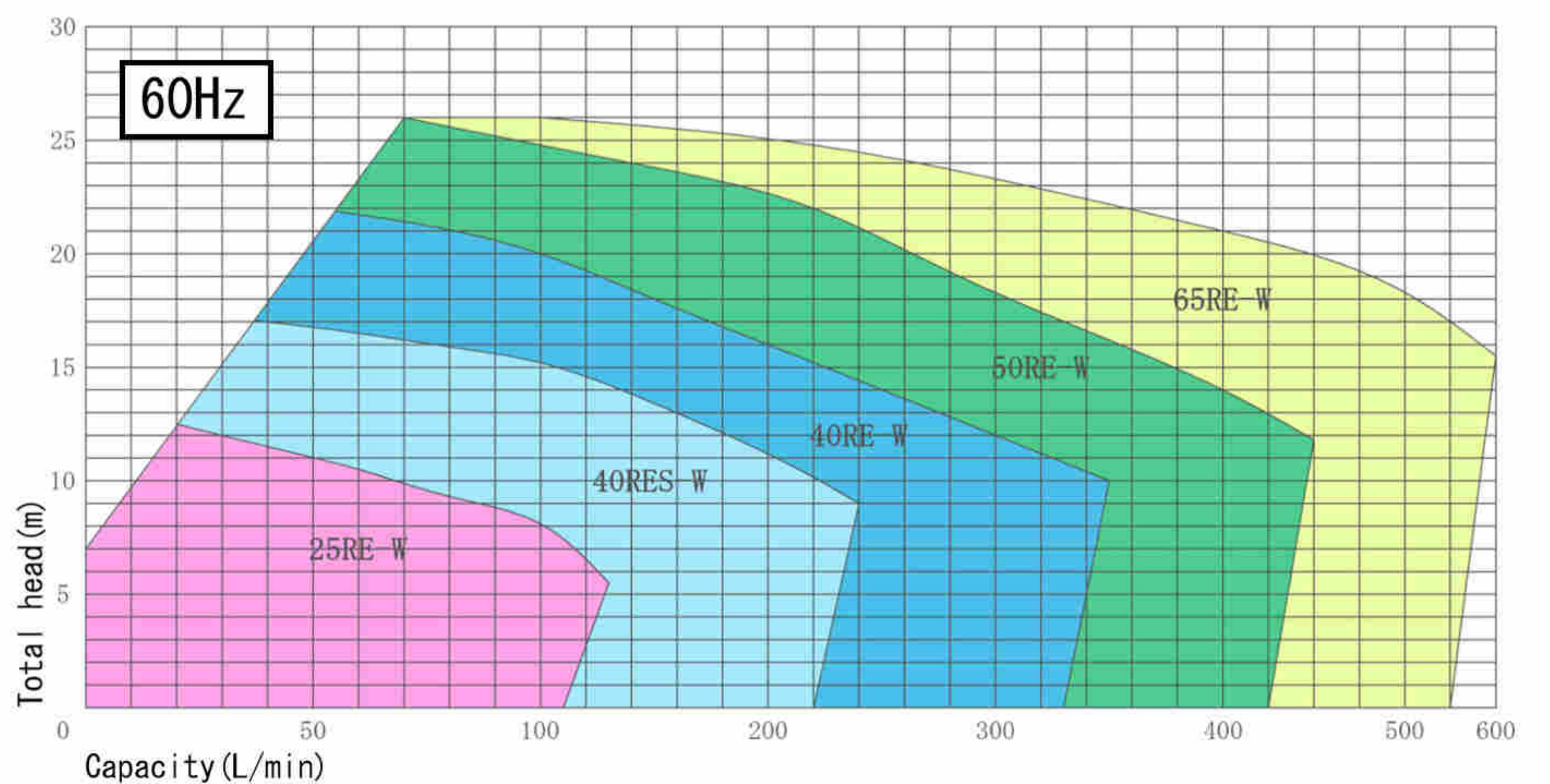
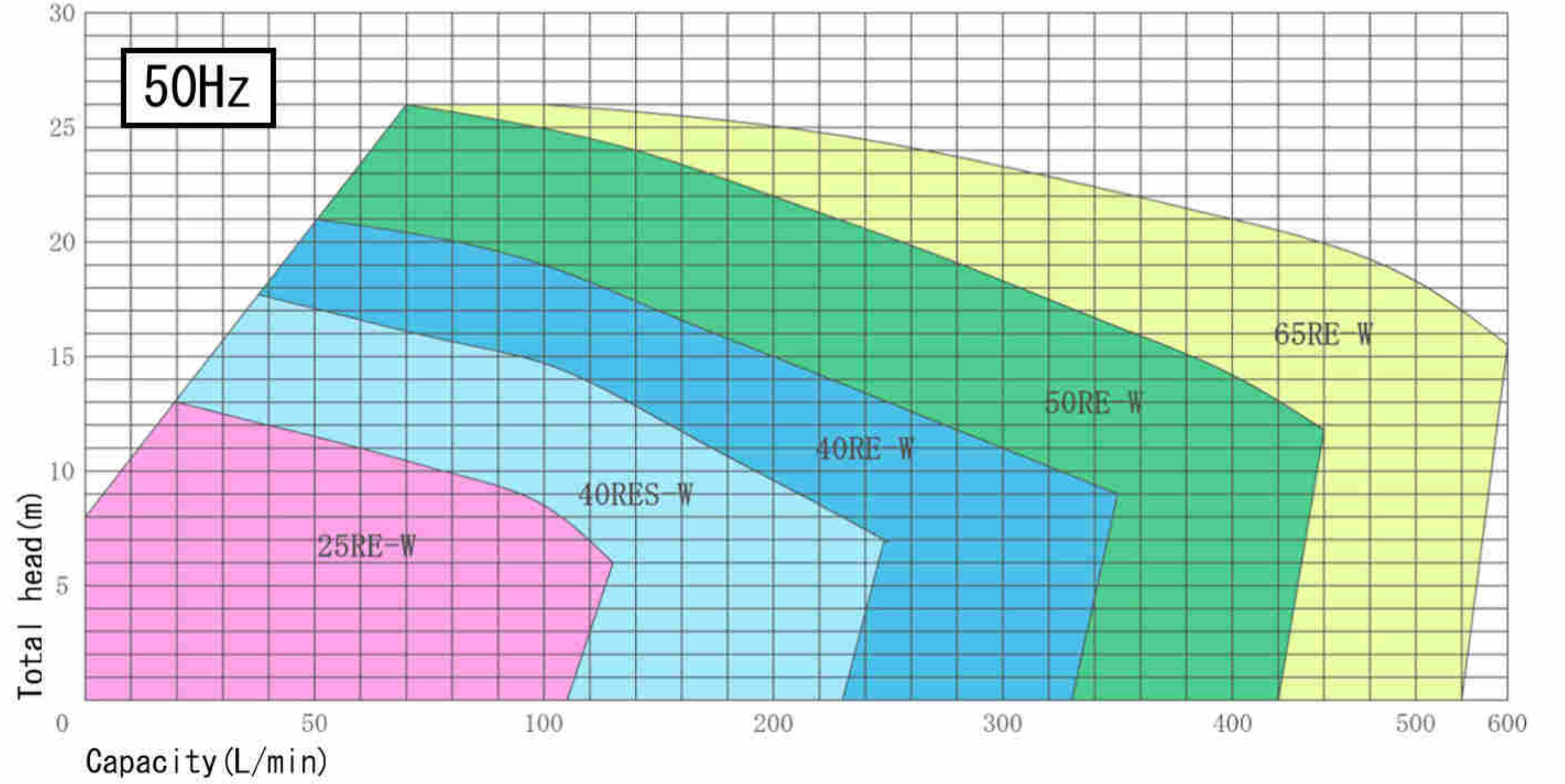
• HD-RE-P

Pump model	Bore In/out (mm)	Power (kW)	Total head (m)	Capacity 50Hz/60Hz (L/min)
HD-20RE-P	25/20	0.2	5	50
HD-25RES-P	25/25	0.4	6	90
HD-25RE-P	40/25	0.75	8	100
HD-40RES-P	50/40	1.5	10	200/180
HD-40RE-P	50/40	2.2	12	300/260
HD-50RE-P	65/50	3.7	15	440/420
HD-65RE-P	80/65	5.5	18	560/500
HD-80RE-P	100/80	7.5	20	750/700
HD-100RE-P	100/100	7.5	22	700/660



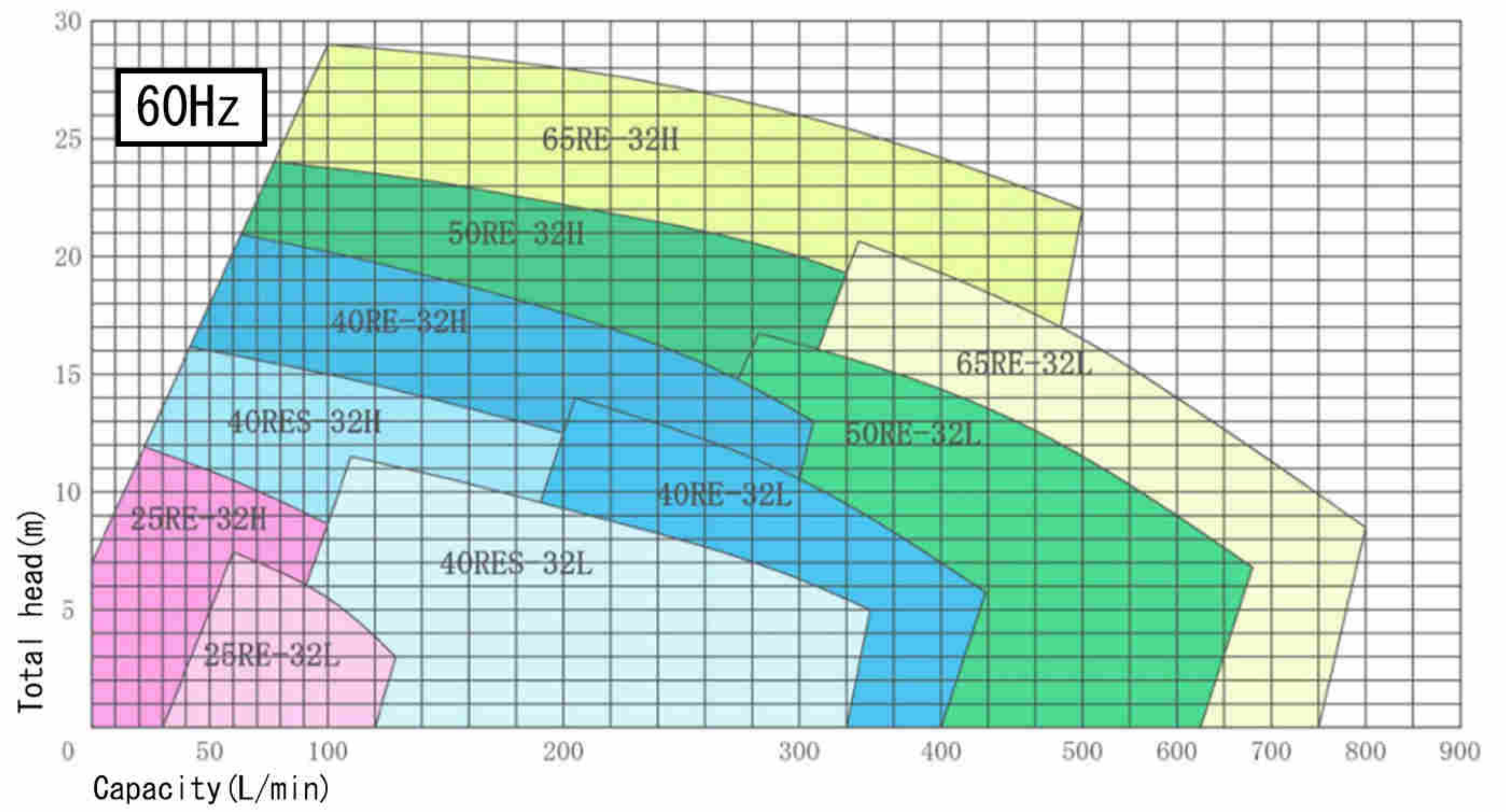
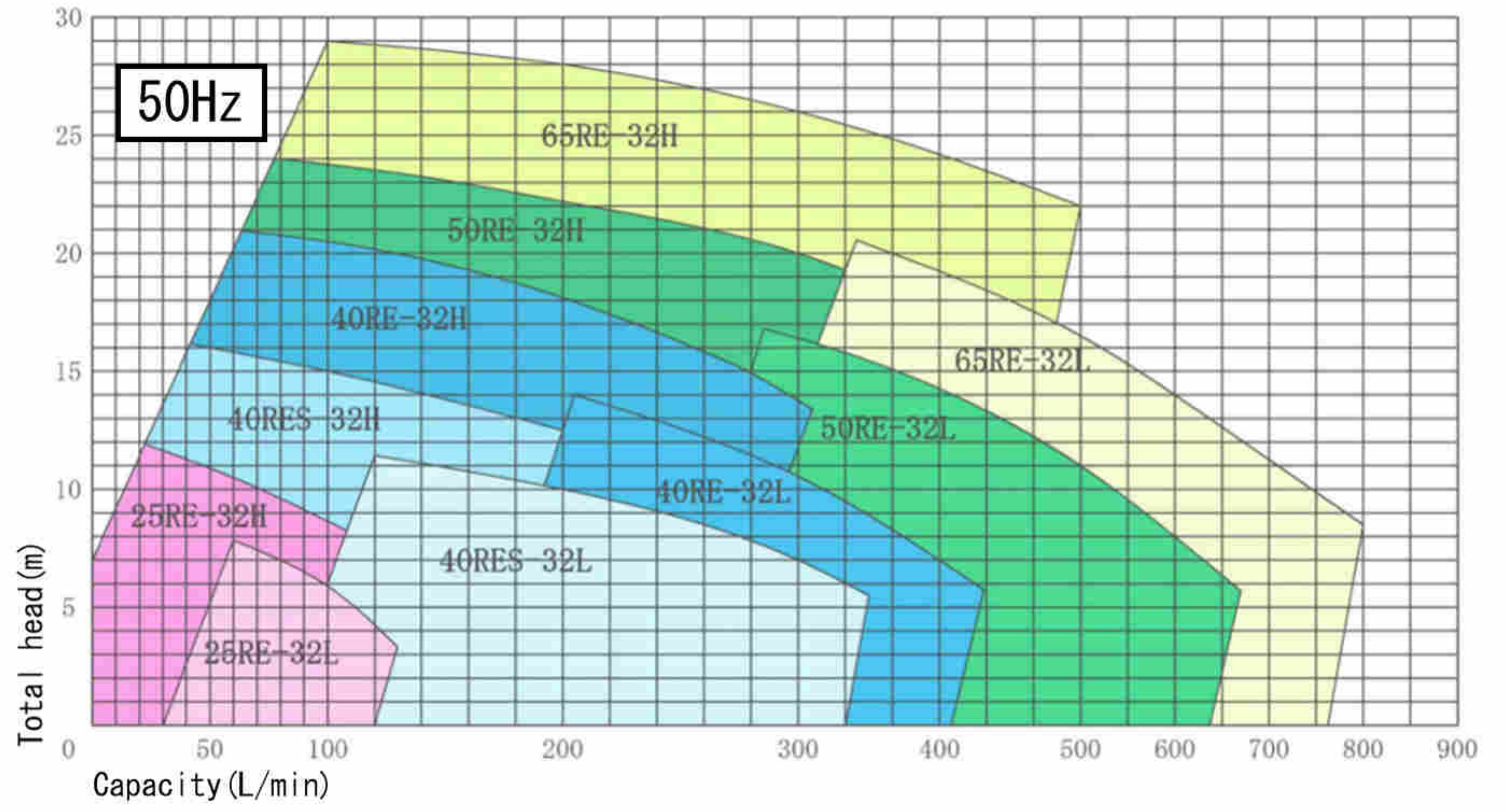
• HD-RE-W

Pump model	Bore In/out (mm)	Power (kW)	Total head (m)	Capacity 50Hz/60Hz (L/min)
HD-20RE-W	25/20	0.2	5	50
HD-25RES-W	25/25	0.4	6	90
HD-25RE-W	40/25	0.75	8	100
HD-40RES-W	40/40	1.5	10	180/220
HD-40RE-W	50/40	2.2	12	270/300
HD-50RE-W	65/50	3.7	15	380
HD-65RE-W	80/65	5.5	18	500

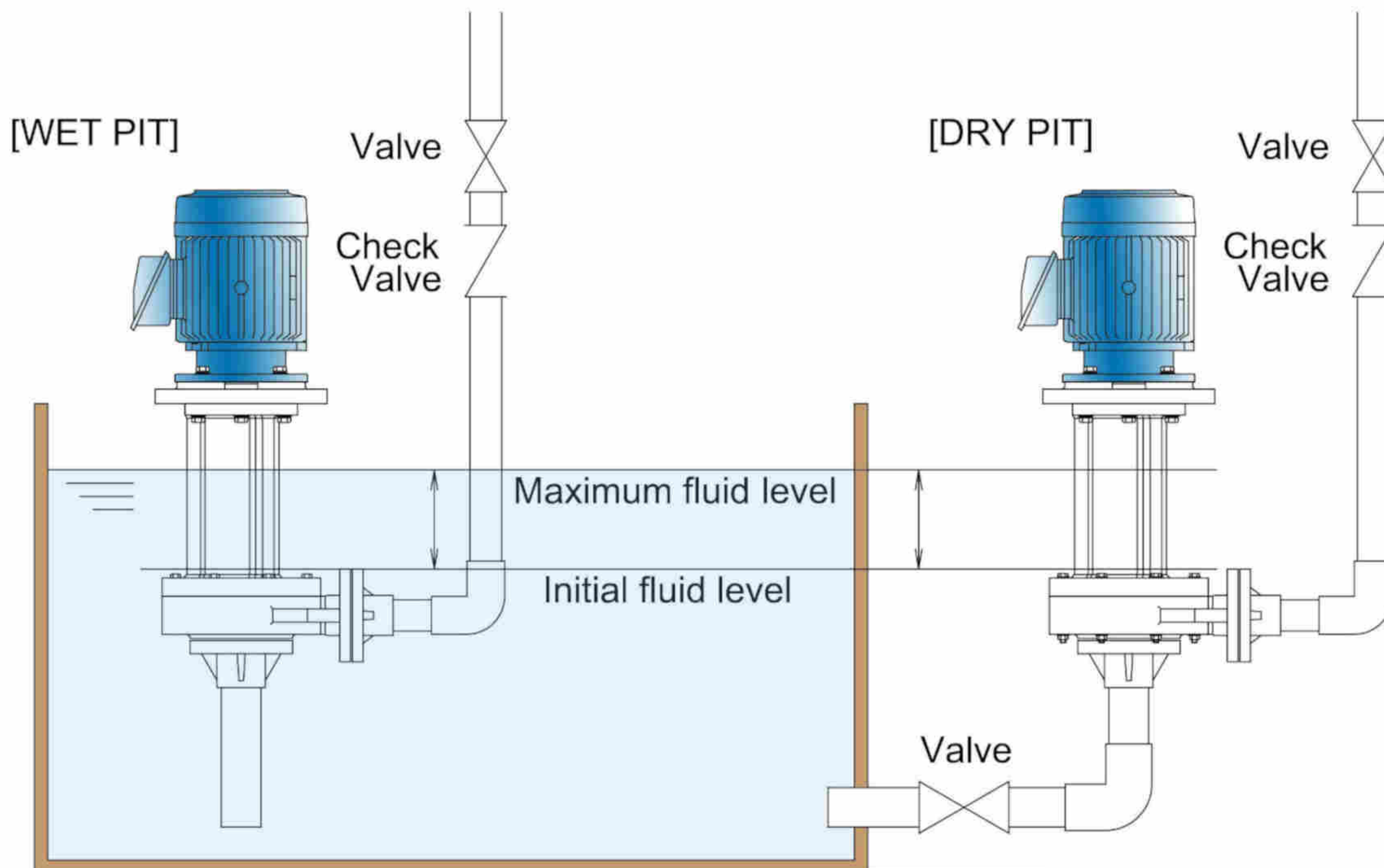


• HD-RE-32

Pump model	Bore In/out (mm)	Power (kW)	Total head (m)	Capacity 50Hz/60Hz (L/min)
HD-25RE-32 $\frac{H}{L}$	40/25	0.75	10	70
			5	110/100
HD-40RES-32 $\frac{H}{L}$	50/40	1.5	15	100
			6	320/300
HD-40RE-32 $\frac{H}{L}$	50/40	2.2	18	200/180
			6	420
HD-50RE-32 $\frac{H}{L}$	65/50	3.7	20	300
			6/7	650
HD-65RE-32 $\frac{H}{L}$	80/65	5.5	22	500
			8	800



■ Pump Installation example





Hose



Flange



Thread with union

Product lineup

Model	Main material	Max temp.
HDG-PX	GFR-PP	60°C
HDG-PF	CFR-ETFE	90°C

Features

Leakless

There is no need to worry about leak due to magnetic drive construction.

Chemical resistance

Suitable for transferring a liquid without the slurry.

Can't use a liquid including slurry.

Easy structure and easy maintenance

The Wetted parts are simple structure comprised of Front casing, Rear casing, Impeller and O-ring, so maintenance is easy.

Standard specification

Pump model	Hose [mm]	Thread [Inch]	Union [A]	Flange [A]	Motor [W]	Standard Spec (m ³ × L/min)		Weight	
						50Hz	60Hz	PX	PF
HDG- 2PX	14	G 1/2	13	---	1 φ 2.5	0.7 × 2.6	0.8 × 4.5	1.0	--
HDG- 5PX	14	G 1/2	13	---	1 φ 5	1.0 × 4.8	1.0 × 7.5	1.0	--
HDG- 5PXZ						1.5 × 3	1.5 × 4.3	1.0	--
HDG- 10PX /PF	14	G 3/4	16	---	1 φ 10	1.5 × 7	1.5 × 13	1.7	1.8
HDG- 20PX /PF	18	G 3/4	16	---	1 φ 20	2.0 × 15	2.0 × 20	1.9	2.0
HDG- 20PXZ/PFZ						4.0 × 3.5	4.0 × 8	2.3	2.4
HDG- 45PXX/PFX	26	G 1	20	---	1 φ 45	2.0 × 30	2.0 × 40	3.1	3.2
HDG- 45PX /PF	20	G 3/4	16			2.5 × 15	2.5 × 24	3.0	3.1
HDG- 45PXZ/PFZ	18					6.0 × 9	6.0 × 13	2.9	3.1
HDG- 65PXX/PFX	26	G 1	20	---	1 φ 65	2.0 × 47	2.0 × 65	4.1	4.1
HDG- 65PX /PF	20	G 3/4	16			4.0 × 20	4.0 × 31	3.6	3.7
HDG- 65PXZ/PFZ						9.5 × 10	6.0 × 20	3.5	3.5
HDG- 90PX /PF	26	G 1	20	25	1 φ 90 3 φ	4.0 × 30	4.0 × 45	5.5	5.5
HDG- 90PX /PF-3J									
HDG- 150PX /PF	26	G 1	20	25	1 φ 150 3 φ	6.5 × 50	7.5 × 70	8.5	9.0
HDG- 150PX /PF-3J									
HDG- 150PXZ/PFZ	26	G 1	20	25	1 φ 150 3 φ	11 × 20	12 × 30	9.5	9.5
HDG- 150PXZ/PFZ-3J									
HDG- 250PX /PF	26	G 1	20	25	1 φ 250 3 φ	9.0 × 65	9.0 × 80	9.5	10
HDG- 250PX /PF-3J									

Pump identification

HDG - 90 PX □ - 3J - T - 2
 ① ② ③ ④ ⑤ ⑥ ⑦

① Series symbol (HDG)

② Motor power (W)

③ Pump model : main material

PX : GFR-PP
PF : CFR-ETFE

④ Pump performance

(NON) : Standard type
Z : High pump head type
X : Low pump head type

⑥ Connection

H : Hose (mm)
T : Thread (Inch)
F : Flange (A)

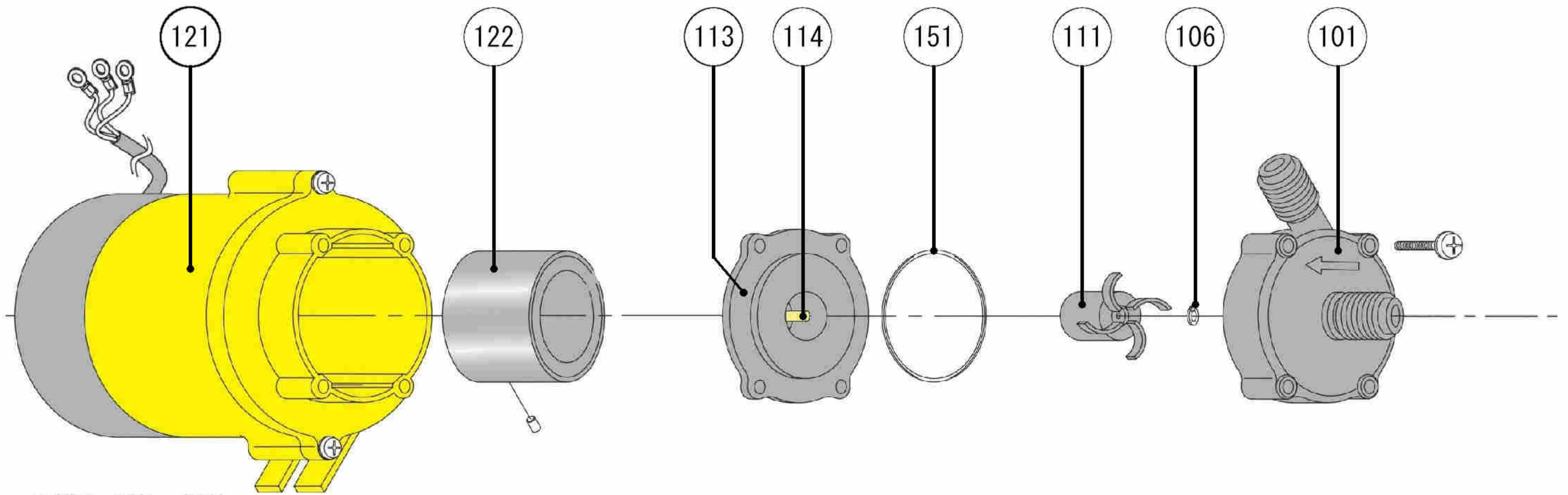
⑤ Motor phase

(NON) : Single phase (1 φ)
3J : Three phase (3 φ)

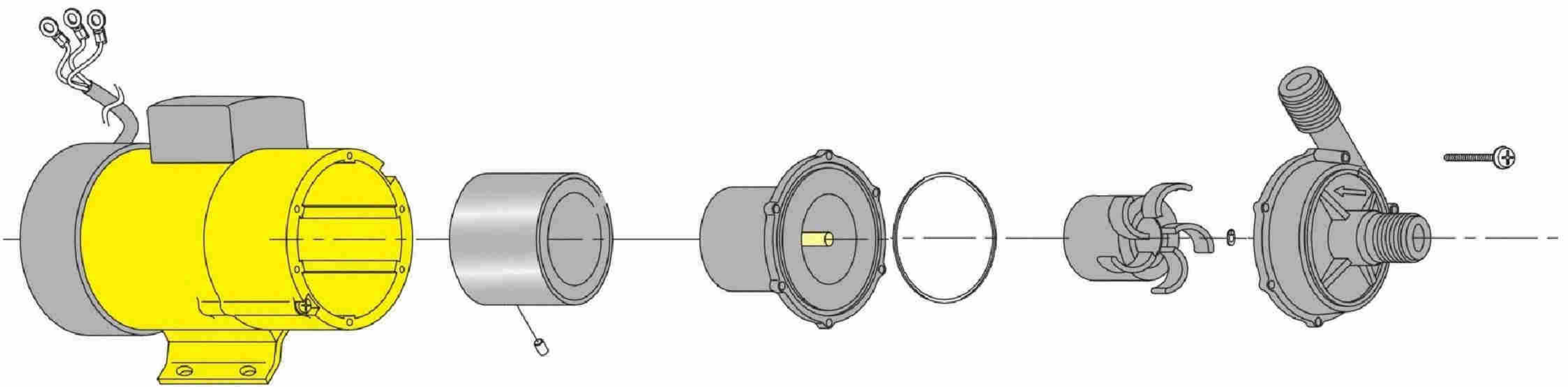
⑦ Voltage

1 : 100V 3 : 380V
2 : 200V 4 : 400V

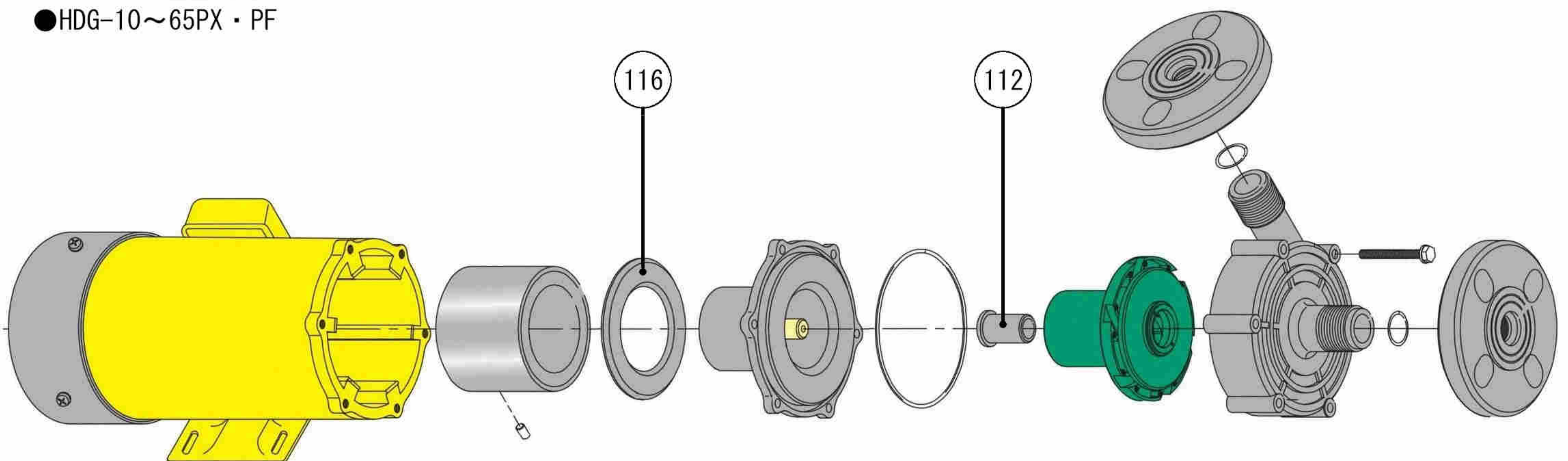
Parts list



●HDG-2PX・5PX



●HDG-10~65PX・PF

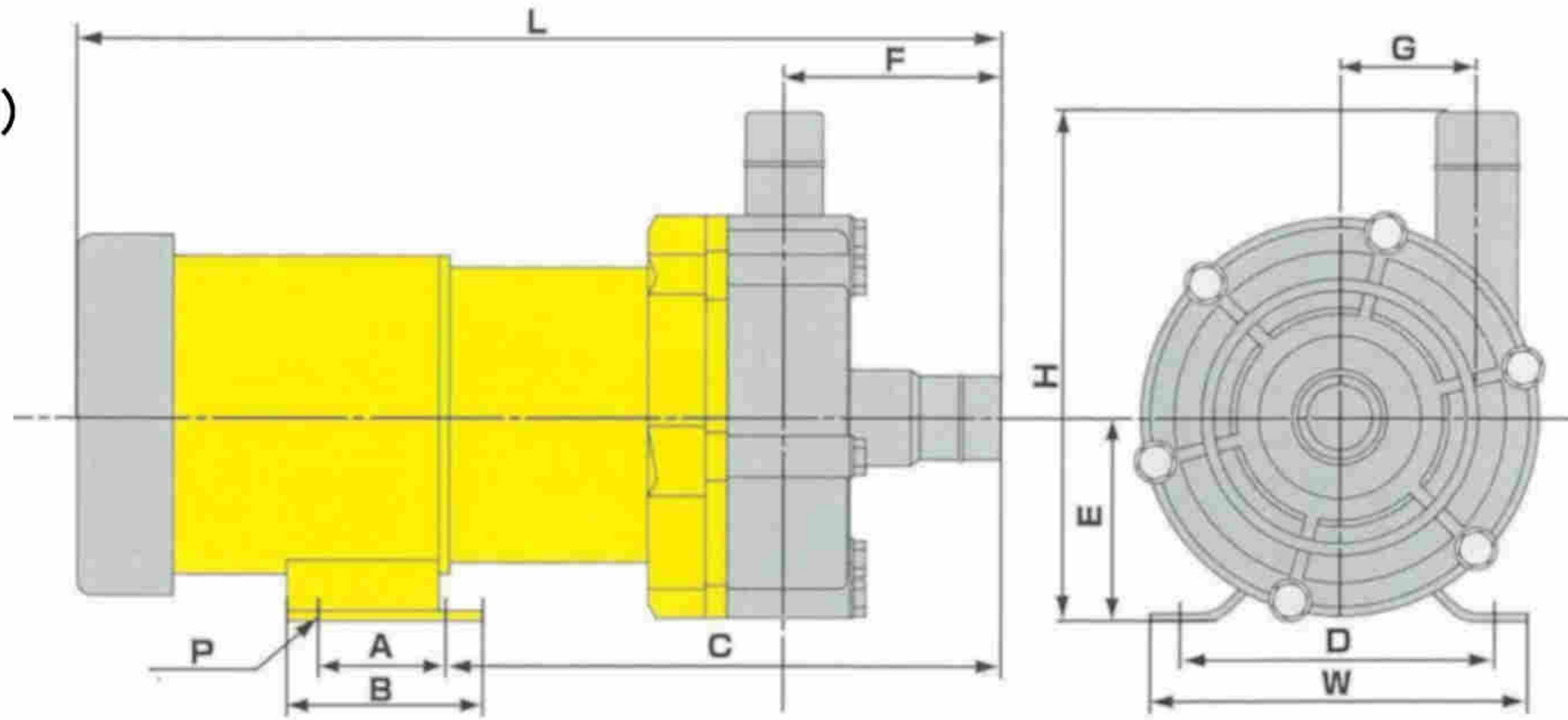


●HDG-90~250PX・PF

Parts No. / Parts name		Material			
		HDG-2PX~65PX	HDG-90PX~250PX	HDG-10PF~65PX	HDG-90PF~250PF
101	Front casing	GFR-PP		CFR-ETFE	
106	Front thrust pad	Reinforced PTFE	Ceramics	Reinforced PTFE	Ceramics
111	Impeller ASSY	GFR-PP		CFR-ETFE	
112	Bearing	Ceramics	Reinforced PTFE	Ceramics	Reinforced PTFE
113	Rear casing	GFR-PP		CFR-ETFE	
114	Spindle	Ceramics		Ceramics	
116	Back up ring	—	SUS304	—	SUS304
121	Motor	—			
122	Drive magnet	Ferrite			
151	O-ring	FKM / EPDM			

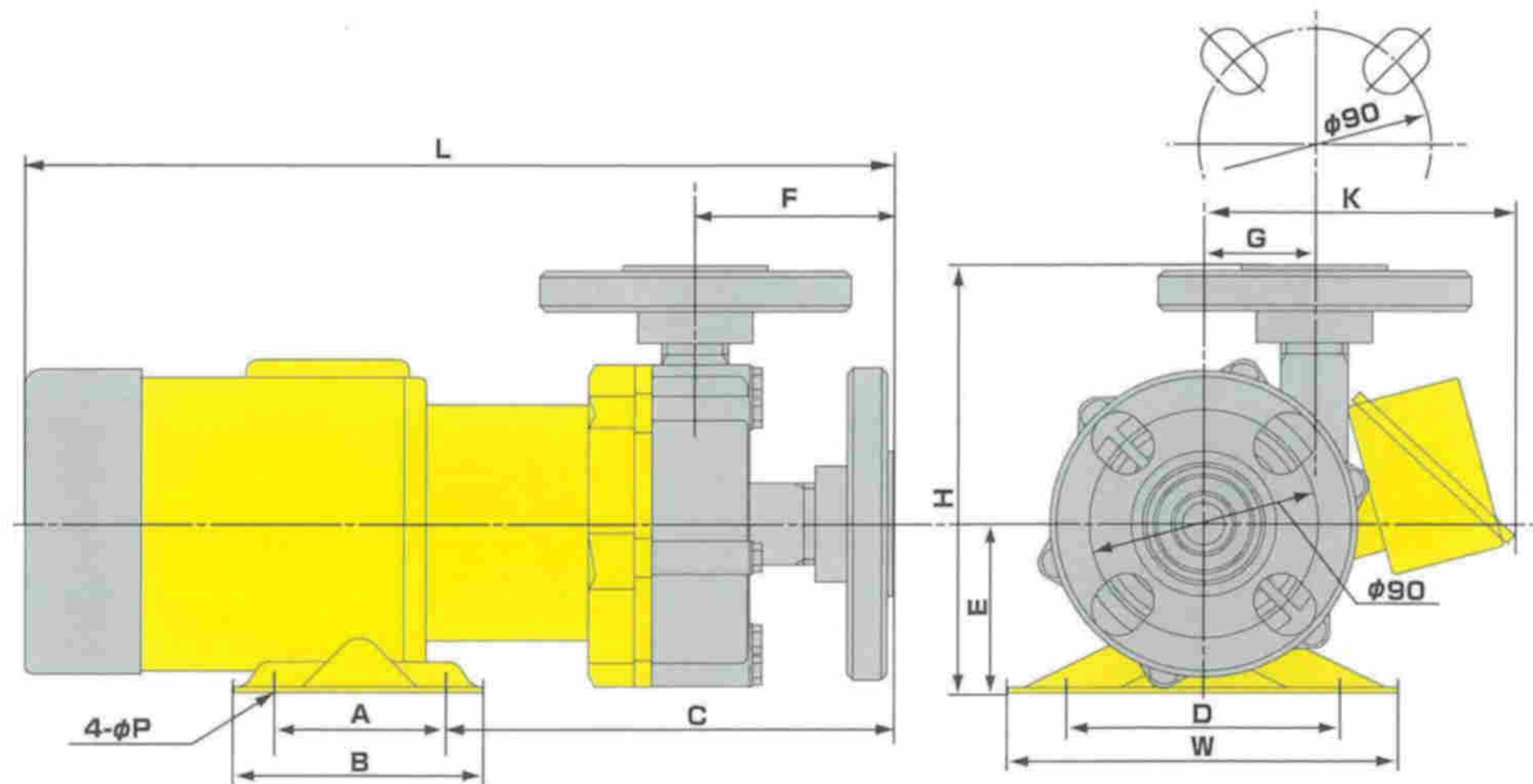
Dimensions

● Connection : Hose (Thread)



Pump model	Power (W)	Connection		W	H	L	A	B	C	D	E	F	G	P
		Hose (mm)	Thread (Inch)											
HDG- 2 PX	2.5	14	G1/2	77	93	145	...	30	73	60	47	31	17	2-6
HDG- 5 PX	5	14	G1/2	77	93	145	...	30	73	60	47	31	17	2-6
HDG- 5 PXZ														
HDG- 10 PX / PF	10	14	G3/4	95	115	197.5	30	50	102	68	55	39	21.5	4-6
HDG- 20 PX / PF	20	18	G3/4	95	115	210 (205)	30	50	118 (112)	68	55	38.5 (33)	28.5	4-6
HDG- 20 PXZ / PFZ					125	226			118			39.5	38.5	
HDG- 45 PXX / PFX	45	26	G1	120	136	254.5	40	64	154.5	100	60	50	26	4-9
HDG- 45 PX / PF		20	G3/4		132	247			149			48	31	
HDG- 45 PXZ / PFZ		18			236	132			39.5			38.5		
HDG- 65 PXX / PFX	65	26	G1	120	132	245	43	62	152	100	60	50	26	4-7
HDG- 65 PX / PF		20	G3/4		150	262			151			48	31	
HDG- 65 PXZ / PFZ		20			243.5	140			38.5			44.5		
HDG- 90 PX / PF	90	26	G1	120	164	300	40	64	179	100	66	70	43.5	4-9
HDG- 90 PX-3J / PF-3J	3φ90													
HDG- 150 PX / PF	150	26	G1	156	165	350	70	100	170	110	66	70	43.5	4-9
HDG- 150 PX-3J / PF-3J	3φ150					340								
HDG- 150 PXZ / PFZ	150	26	G1	156	165	350	70	100	168	110	66	70	43.5	4-9
HDG- 150 PXZ-3J / PFZ-3J	3φ150					340			170					
HDG- 250 PX / PF	250	26	G1	156	165	360	70	100	160	110	66	70	43.5	4-9
HDG- 250 PX-3J / PF-3J	3φ250					350								

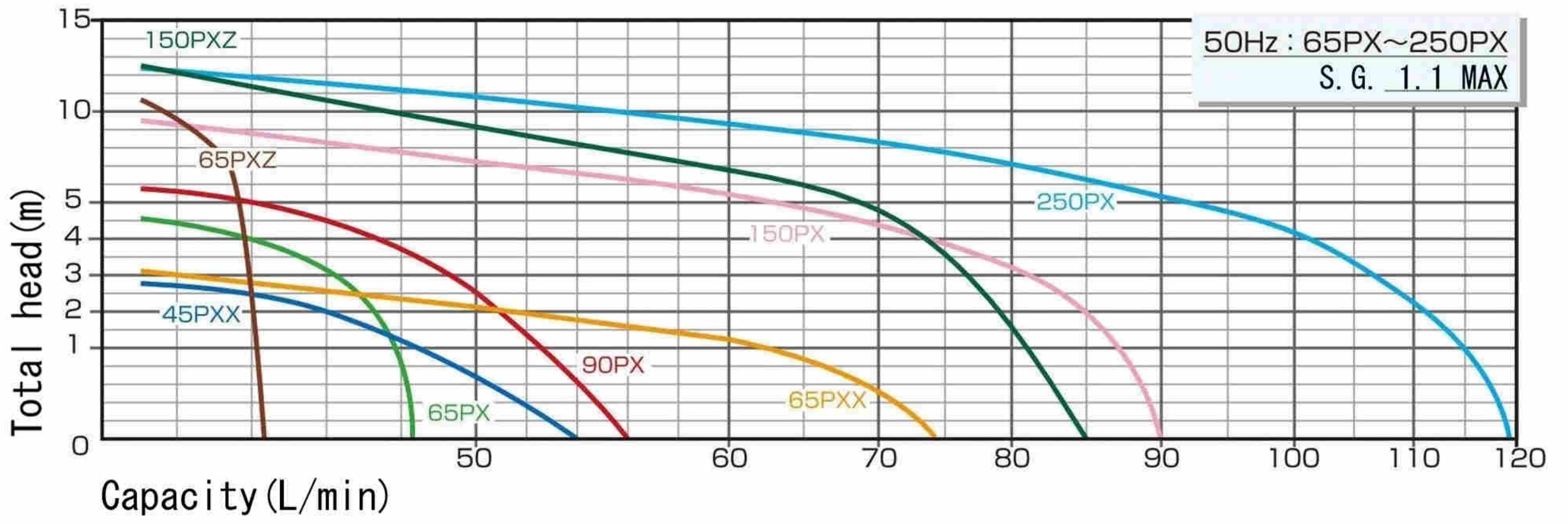
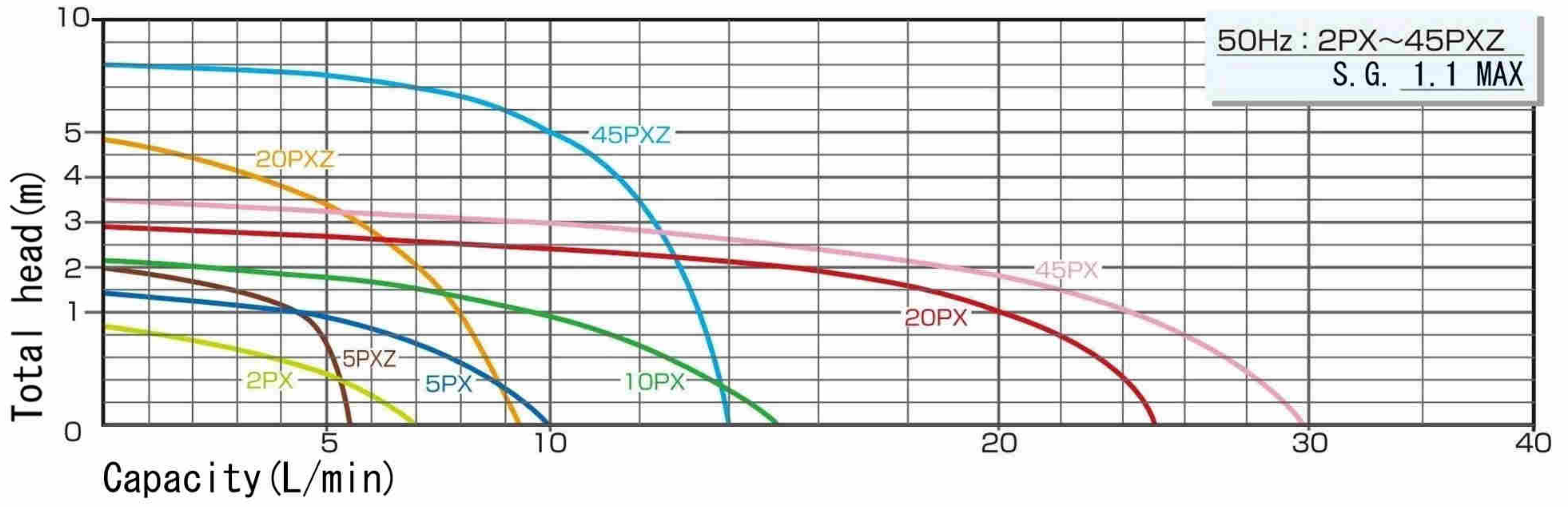
● Connection : Flange



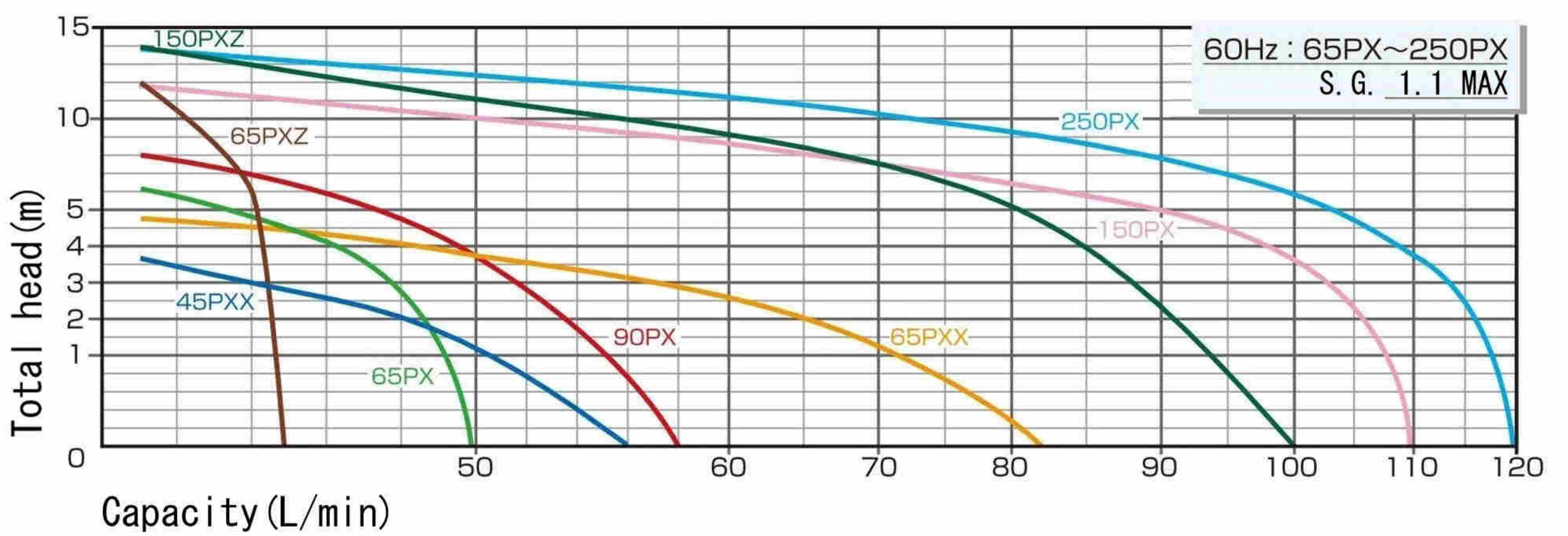
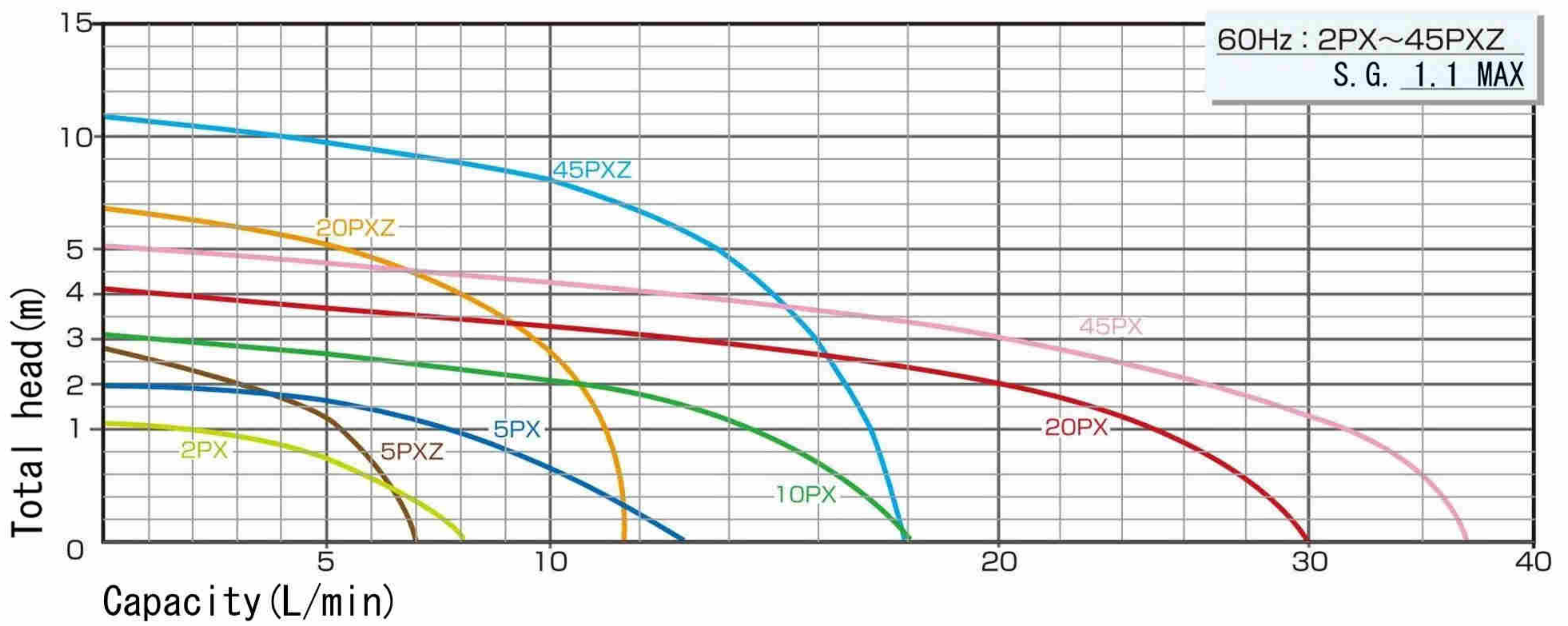
Pump model	Power (W)	Connection Flange (mm)	W	H	L	A	B	C	D	E	F	G	K	P
HDG- 90 PX-3J / PF-3J	3φ90	66												
HDG- 150PX / PF	150	25	156	175	360	70	100	180	110	66	80	43.5	...	4-9
HDG- 150PX-3J / PF-3J	3φ150				350								123	
HDG- 150PXZ / PFZ	150	25	156	175	360	70	100	178	110	66	80	43.5	...	4-9
HDG- 150PXZ-3J / PFZ-3J	3φ150				350			180					123	
HDG- 250 PX / PF	250	25	156	175	370	70	100	170	110	66	80	43.5	...	4-9
HDG- 250PX-3J / PF-3J	3φ250				360			123						

Performance curves

50Hz



60Hz



HDG-PG/TF/TC NS

Non self priming type Leakless magnetic pump
Self priming type [Middle~Large model]

Product lineup



[Non self-priming type]		
Model	Main material	Max temp.
HDG-PG	GFR-PP	70°C
HDG-TF	CFR-ETFE	90°C
HDG-TC	CFR-ETFE+FC cover	90°C



[Self priming type]		
Model	Main material	Max temp.
HDG-NS	GFR-PP	70°C

Features



Leakless

There is no need to worry about leak due to magnetic drive construction.

Chemical resistance

Suitable for transferring a liquid without the slurry.
Can't use a liquid incl slurry.

Easy structure and easy maintenance

The Wetted parts are simple structure comprised of Front casing, Rear casing, Impeller and O-ring, so maintenance is easy.

Pump identification

HDG-25PG/TF/NS

HDG - 25 PG - R A V X A
 ① ③ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

HDG-250TC · 400~405PG/TF/TC/NS

HDG - 40 1 PG - C A V W A
 ① ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

HDG-8507~8520TC

HDG - 8 50 7 TC - A S V X A
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Series symbol (HDG)

② Bore (Inlet)

8 : 80A (85**TC only)

③ Bore (Outlet)

25 : 25A

40 : 40A

50 : 50A

5 : 50A (85**TC only)

④ Motor power (kW)

0 : 0.4kW 7 : 5.5kW

1 : 0.75kW 10 : 7.5kW

2 : 1.5kW 15 : 11kW

3 : 2.2kW 20 : 15kW

5 : 3.7kW

⑤ Pump model: main material

PG : GFR-PP

TF : CFR-ETFE

TC : CFR-ETFE (+FC cover)

NS : GFR-PP

⑥ Bearing material

C : Carbon

R : Reinforced PTFE

A : Ceramics

S : SiC

⑦ Spindle material

A : Ceramics

S : SiC

⑧ O-ring material

V : FKM

E : EPDM

S : Special

⑨ Frequency code

X : 50Hz

W : 60Hz

⑩ Impeller size code

A : S.G. 1.1 MAX

S.G. 1.0 MAX (NS only)

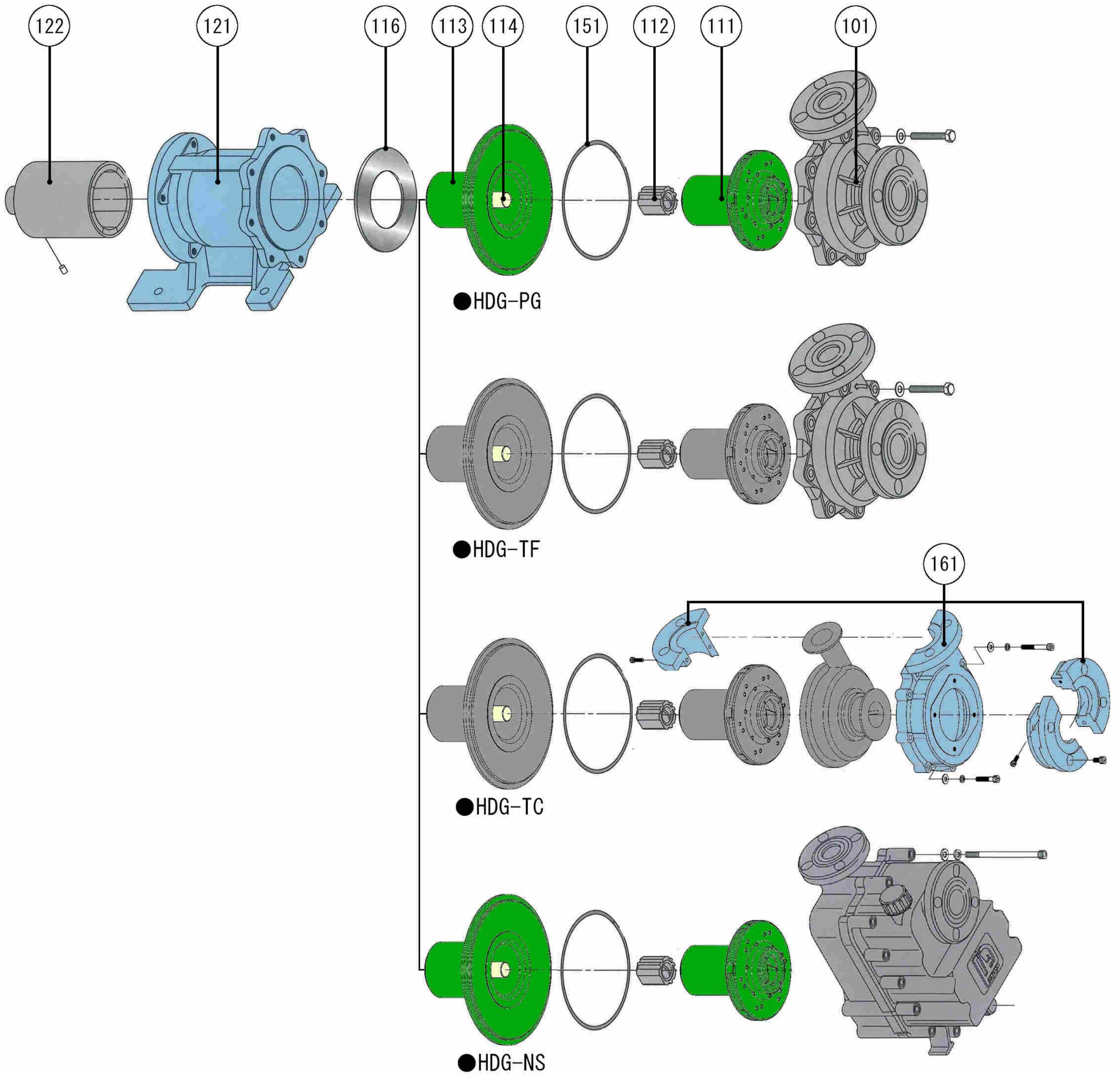
B : S.G. 1.3 MAX

C : S.G. 1.5 MAX

D : S.G. 1.9 MAX

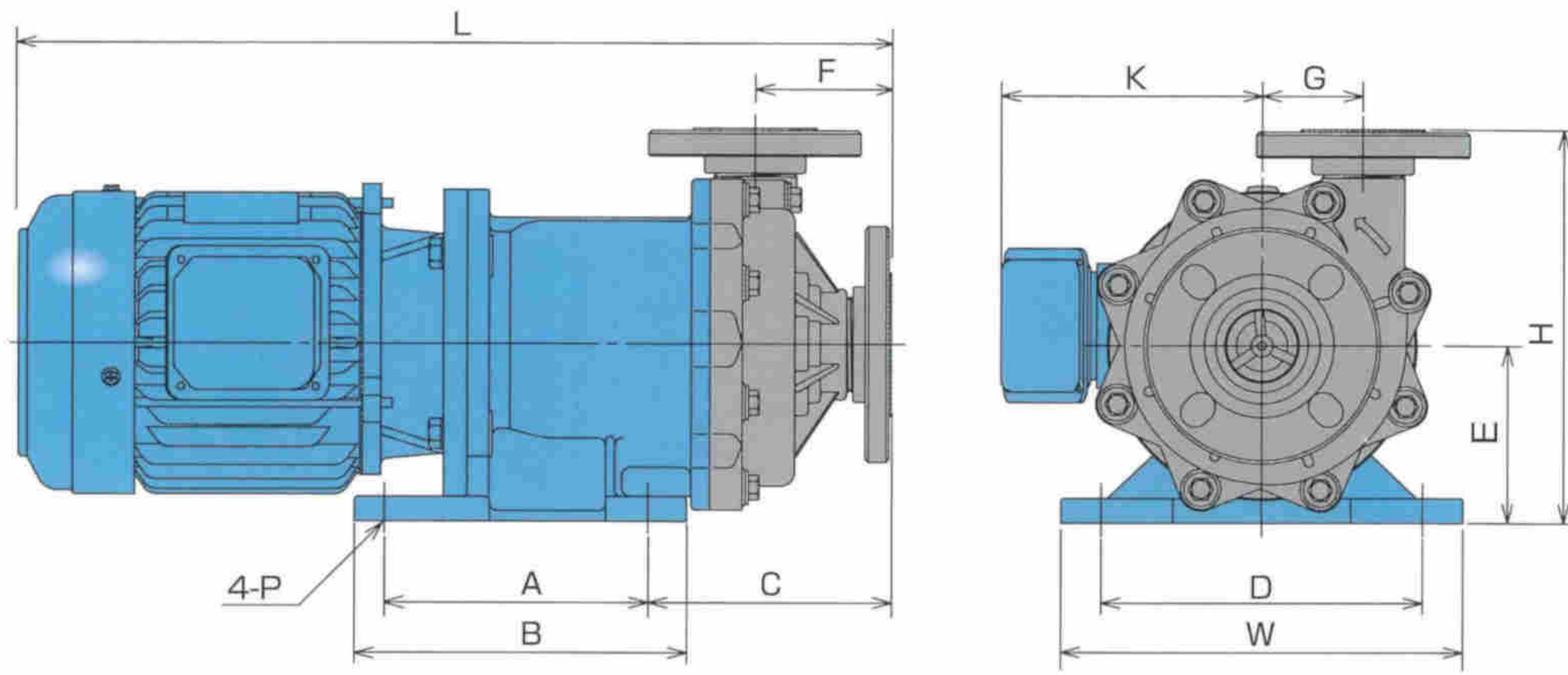
S : Special

Parts list



Parts No. / Parts name		Material			
		HDG-PG	HDG-TF	HDG-TC	HDG-NS
101	Front casing	GFR-PP	CFR-ETFE	CFR-ETFE	GFR-PP
111	Impeller ASSY	GFR-PP	CFR-ETFE	CFR-ETFE	GFR-PP
112	Bearing	※ [C]: Carbon [R]: Reinforced PTFE [A]: Ceramics [S]: SiC			
113	Rear casing	※ [A]: Ceramics [S]: SiC			
114	Spindle	GFR-PP	CFR-ETFE	CFR-ETFE	GFR-PP
116	Backup ring	SUS304			
121	Bracket	FG200			
122	Drive magnet	Ferrite / Rare earth			
151	O-ring	※ [V]: FKM		[E]: EPDM	[S]: Special
161	Front cover	—	—	FG200	—

■ [HDG-PG/TF] Dimensions

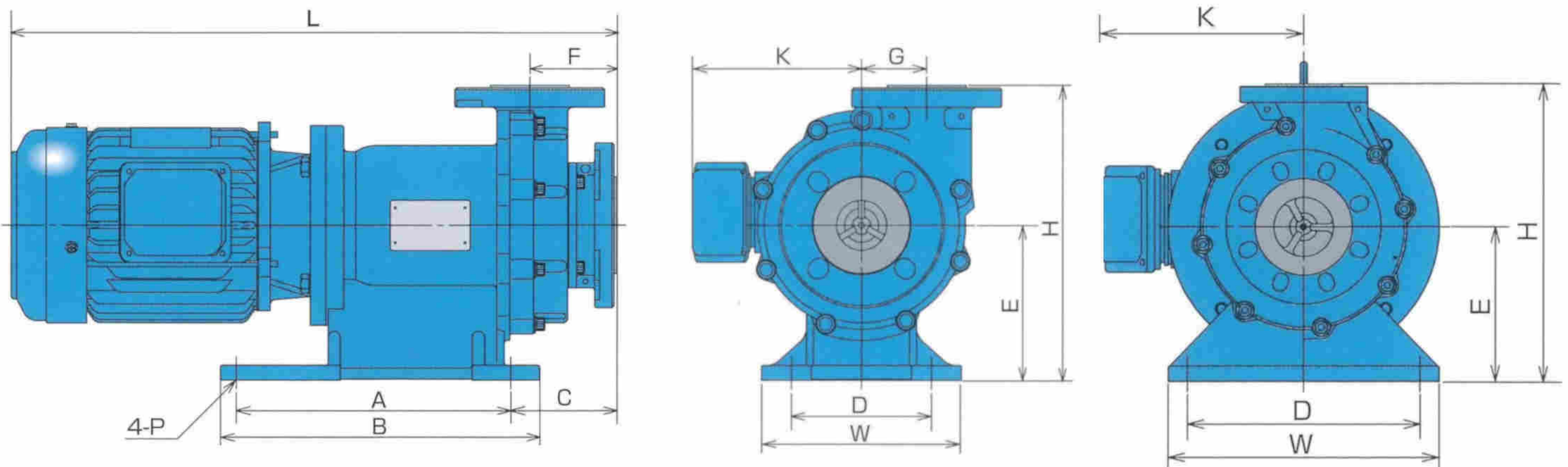


Pump model	Power (kW)	Bore In/Out	W	H	L	A	B	C	D	E	F	G	K	P	N/W (kg)	G/W (kg)
HDG-25 PG/TF	0.25	25/25	164	195	422	95	140	125	134	87	80	43.5	132	10	15.5 16	17.5 18
HDG-400 PG/TF	0.4	40/40	140	216	474	98	140	150	110	95	88	51	139	12	21 22	24 25
HDG-401 PG/TF	0.75	40/40	160	255	491	130	175	185	130	115	102.5	57.5	150	12	29.5 30.5	32.5 34
HDG-402 PG/TF	1.5	50/40	260	255	620	200	245	158	208	115	89	65	168	14	43.5 44.5	47 48
HDG-403 PG/TF	2.2	50/40	260	255	620	200	245	158	208	115	89	65	168	14	47 48.5	50.5 52
HDG-405 PG/TF	3.7	50/40	260	270	689	200	245	158	208	130	89	65	181	14	68 70	80 82
HDG-505 PG/TF	3.7	65/50	260	319	651	300	360	123	220	162	89	60	181	14	73 74	83 84

■ [HDG-TC] Dimensions

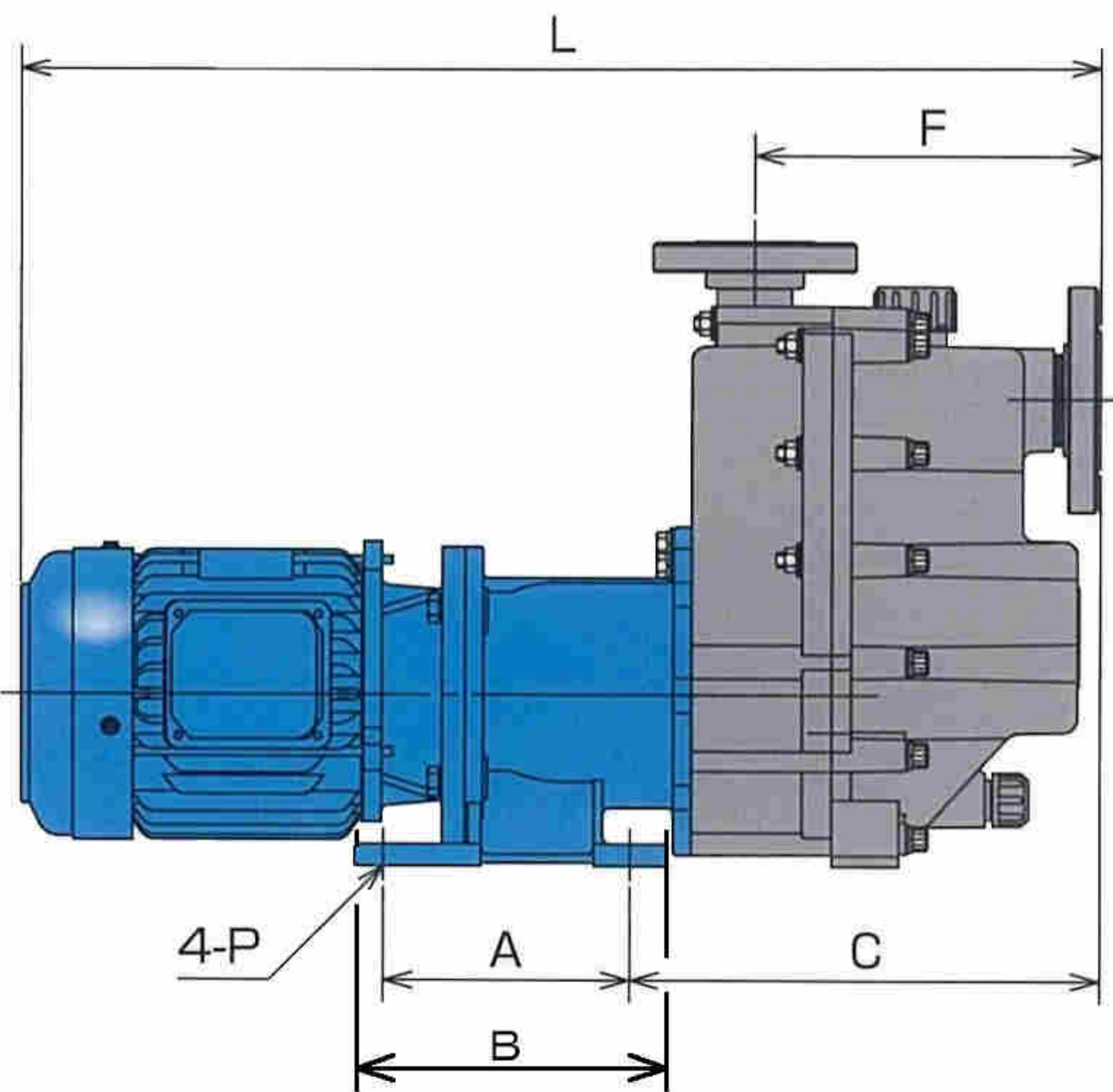
● HDG-250~HDG-507TC

● HDG-8507~HDG-8520TC

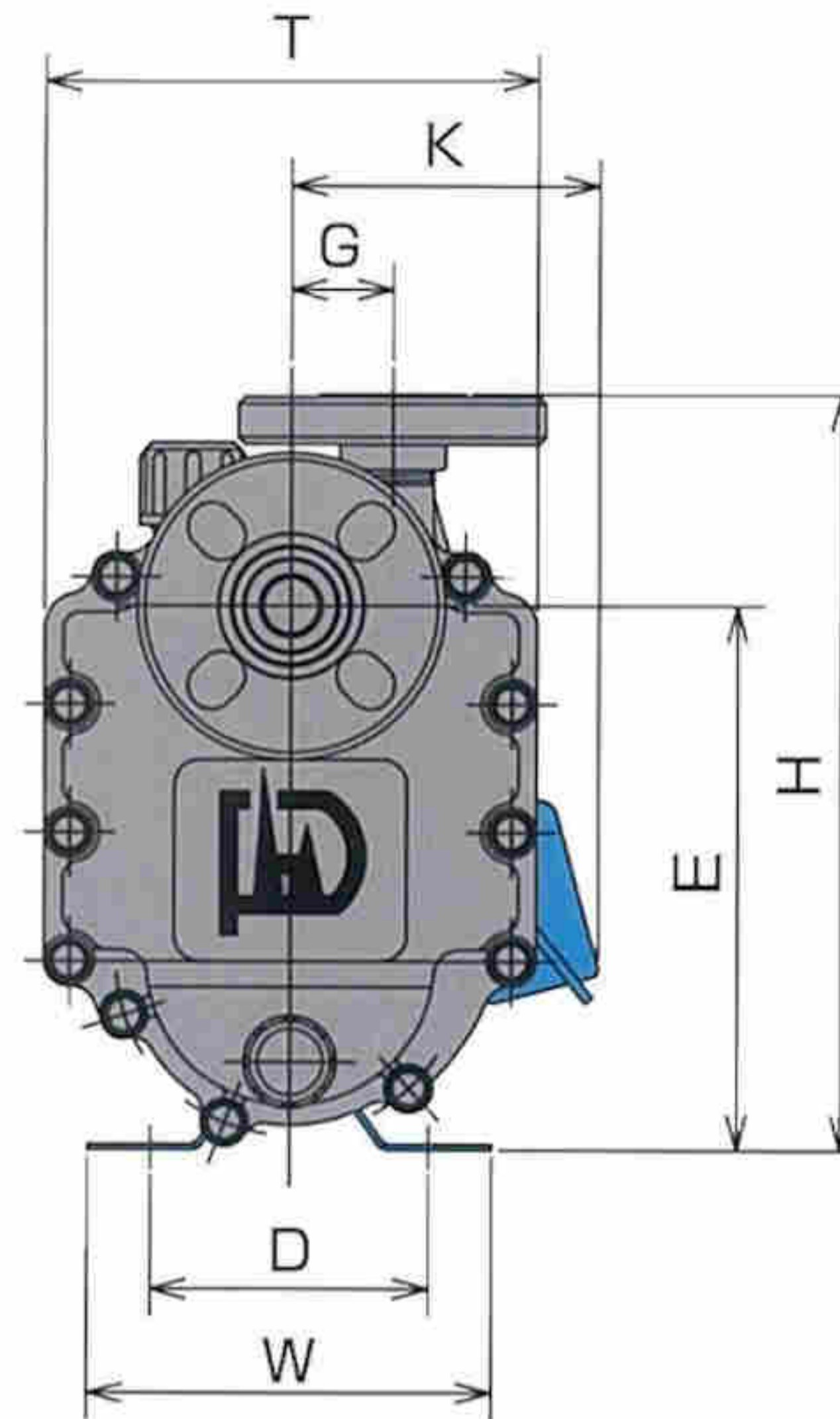


Pump model	Power (kW)	Bore In/Out	W	H	L	A	B	C	D	E	F	G	K	P	N/W (kg)	G/W (kg)
HDG-250TC	0.4	25/25	155	237	474	146	240	95	110	115	88	51	139	14	30	32.5
HDG-401TC	0.75	40/40	195	275	492	250	285	111	130	135	104.5	57.5	150	14	40.5	43.5
HDG-402TC	1.5	50/40	200	295	606	275	320	106	140	155	87	65	168	14	54.5	58
HDG-403TC	2.2	50/40	200	295	606	275	320	106	140	155	87	65	168	14	58	61.5
HDG-405TC	3.7	50/40	200	295	676	275	320	106	140	155	87	65	181	14	79	91
HDG-505TC	3.7	65/50	260	325	712	305	350	130	210	175	110	62	181	14	89	101
HDG-507TC	5.5	65/50	260	325	734	305	350	130	210	175	110	62	235	14	117	130
HDG-8507TC	5.5	80/50	280	360	743	320	385	193	220	175	118	...	235	14	126	142
HDG-8510TC	7.5	80/50	280	360	743	320	385	193	220	175	118	...	235	14	132	147
HDG-8515TC	11	80/50	350	385	918	320	385	193	300	200	118	...	264	14	209	227
HDG-8520TC	15	80/50	350	385	918	320	385	193	300	200	118	...	264	14	225	243

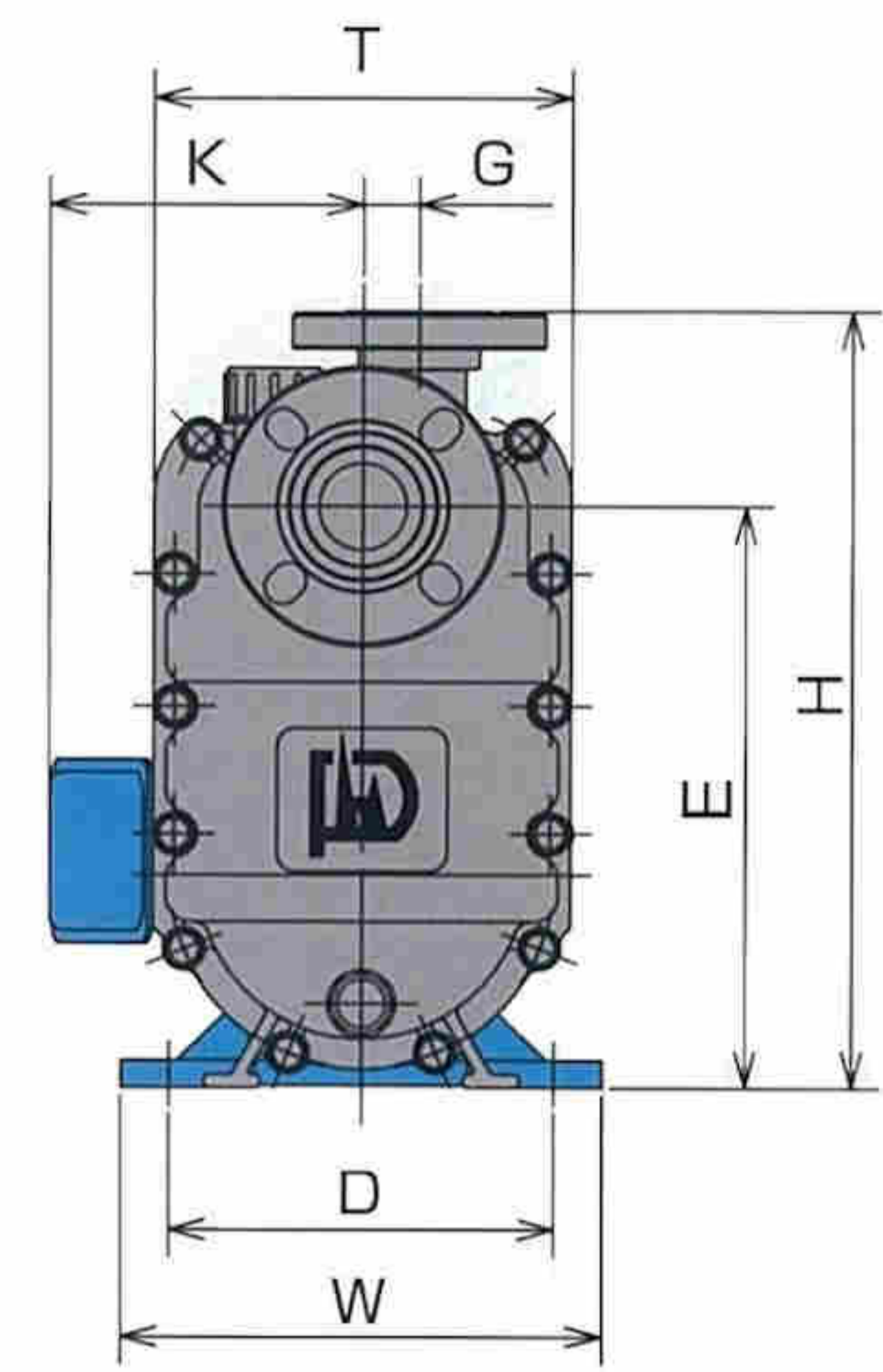
■ [HDG-NS] Dimensions



● HDG-25NS

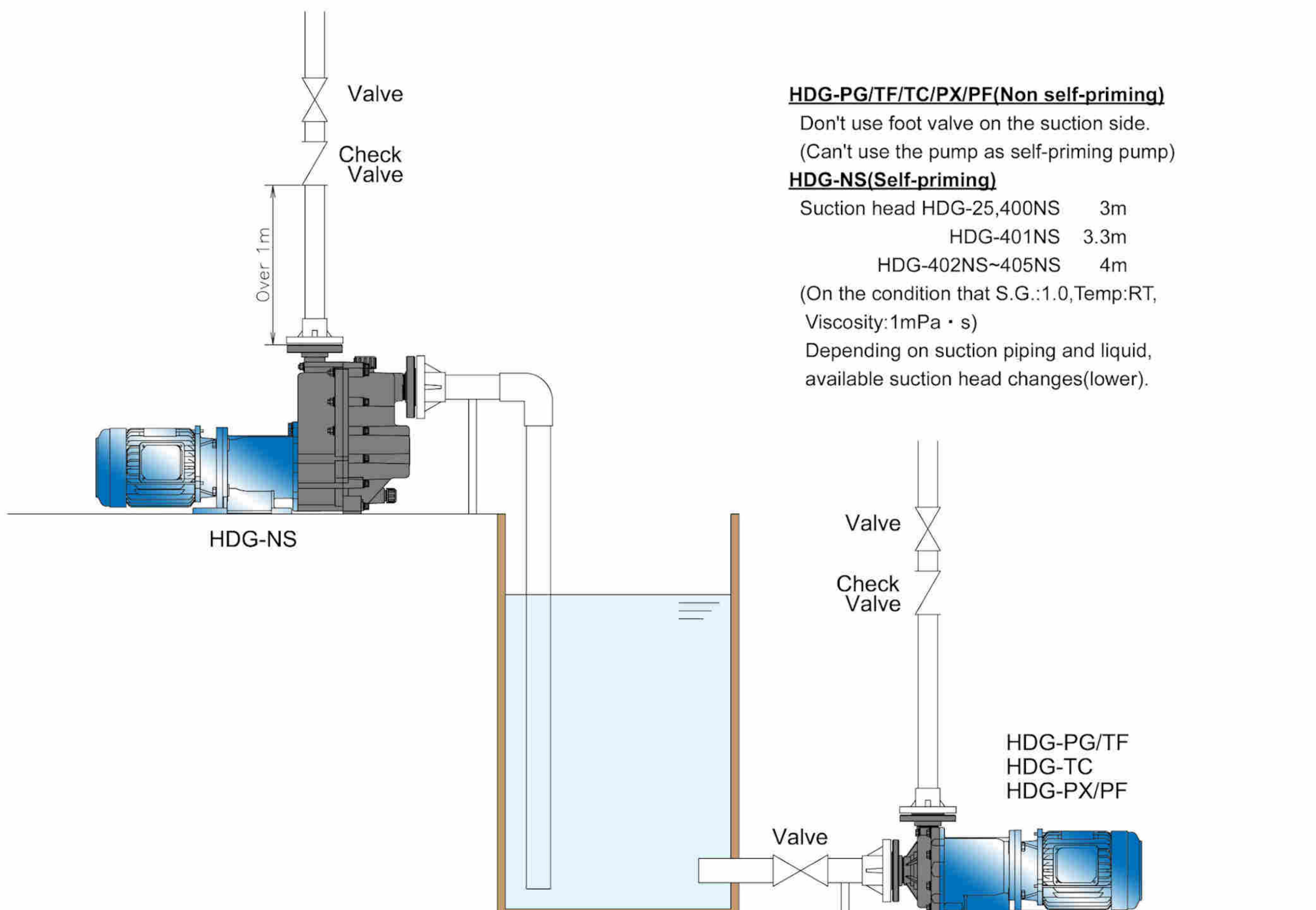


● HDG-400~405NS



Pump model	Power (kW)	Bore In/Out	W	H	L	A	B	C	D	E	F	G	K	P	T	N/W (kg)	G/W (kg)
HDG- 25NS	0.25	25/25	160	300	445	50	110	265	140	216	160	40	122	7	195	13.5	16
HDG-400NS	0.4	40/40	160	390.5	612.5	130	175	308.5	130	285	212.5	20	138	10	226	28.5	33
HDG-401NS	0.75	40/40	160	390.5	614.5	130	175	308.5	130	285	212.5	20	151	10	226	36.5	40
HDG-402NS	1.5	50/40	260	420.5	793.5	200	245	333	208	315	250	30	169	14	226	51.5	57
HDG-403NS	2.2	50/40	260	420.5	793.5	200	245	333	208	315	250	30	169	14	226	55.5	61
HDG-405NS	3.7	50/40	260	435.5	863	200	245	333	208	330	250	30	183	15	226	77	90

■ Installation example



HDG-PG/TF/TC/PX/PF(Non self-priming)

Don't use foot valve on the suction side.
(Can't use the pump as self-priming pump)

HDG-NS(Self-priming)

Suction head HDG-25,400NS 3m

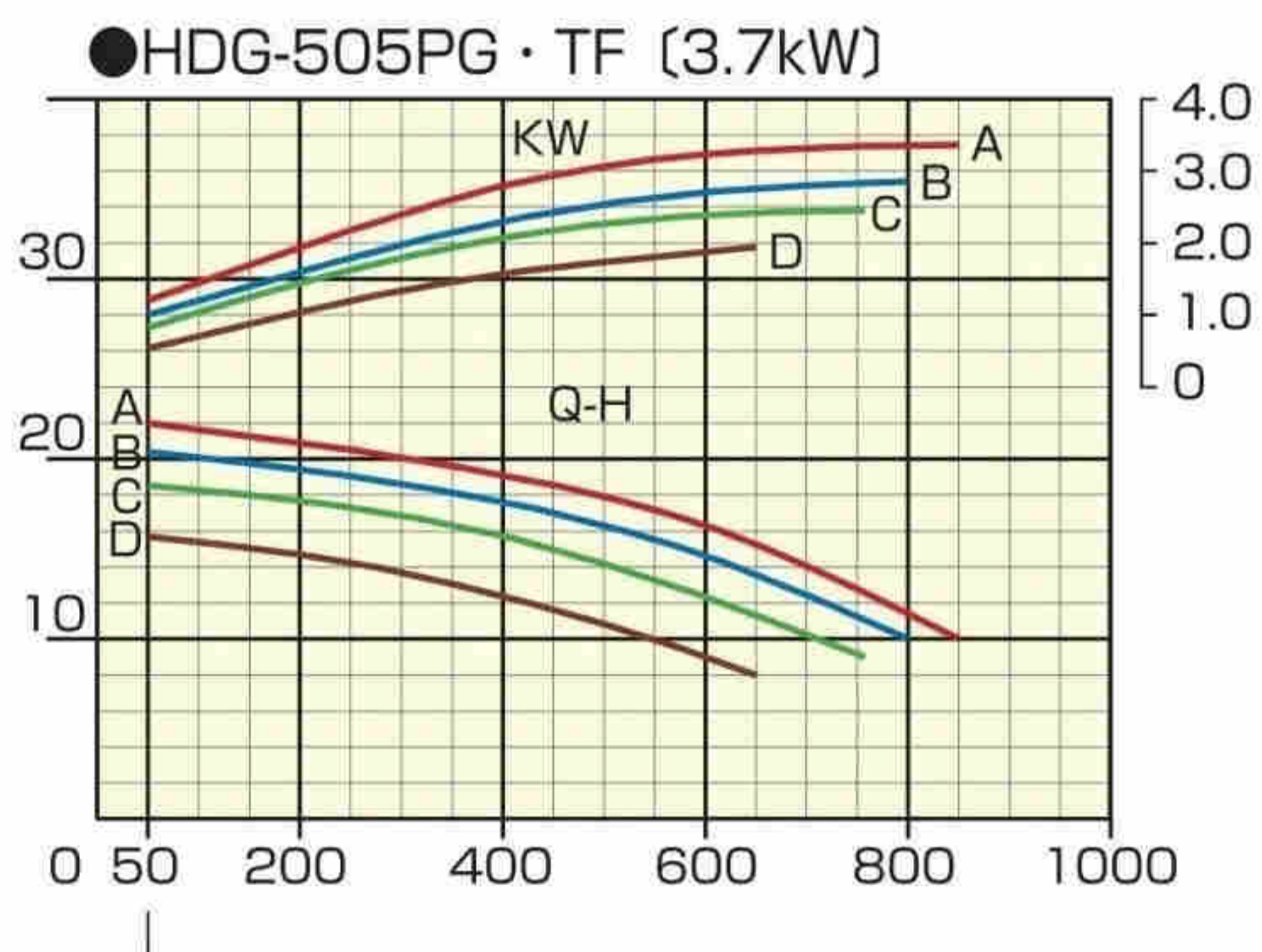
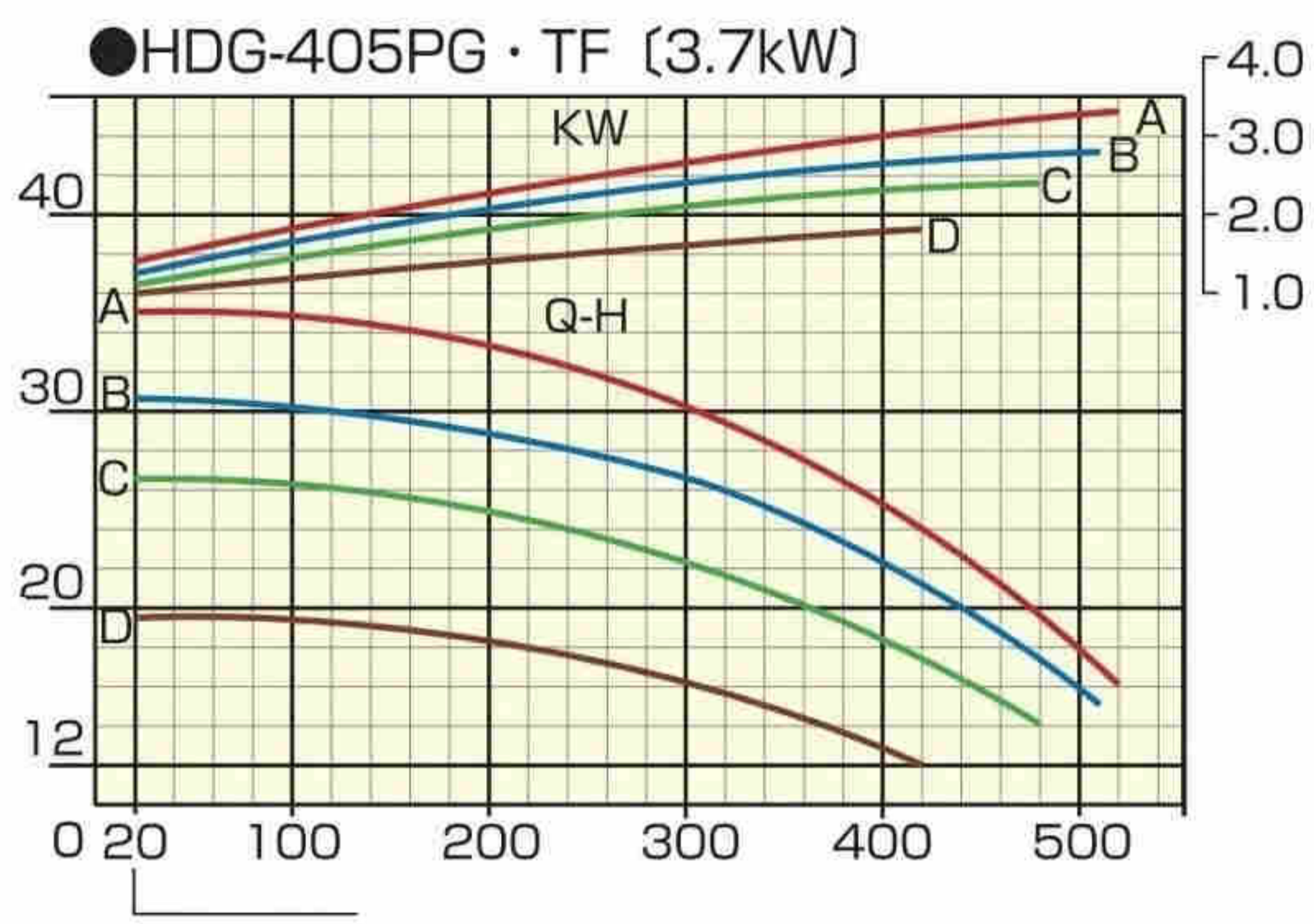
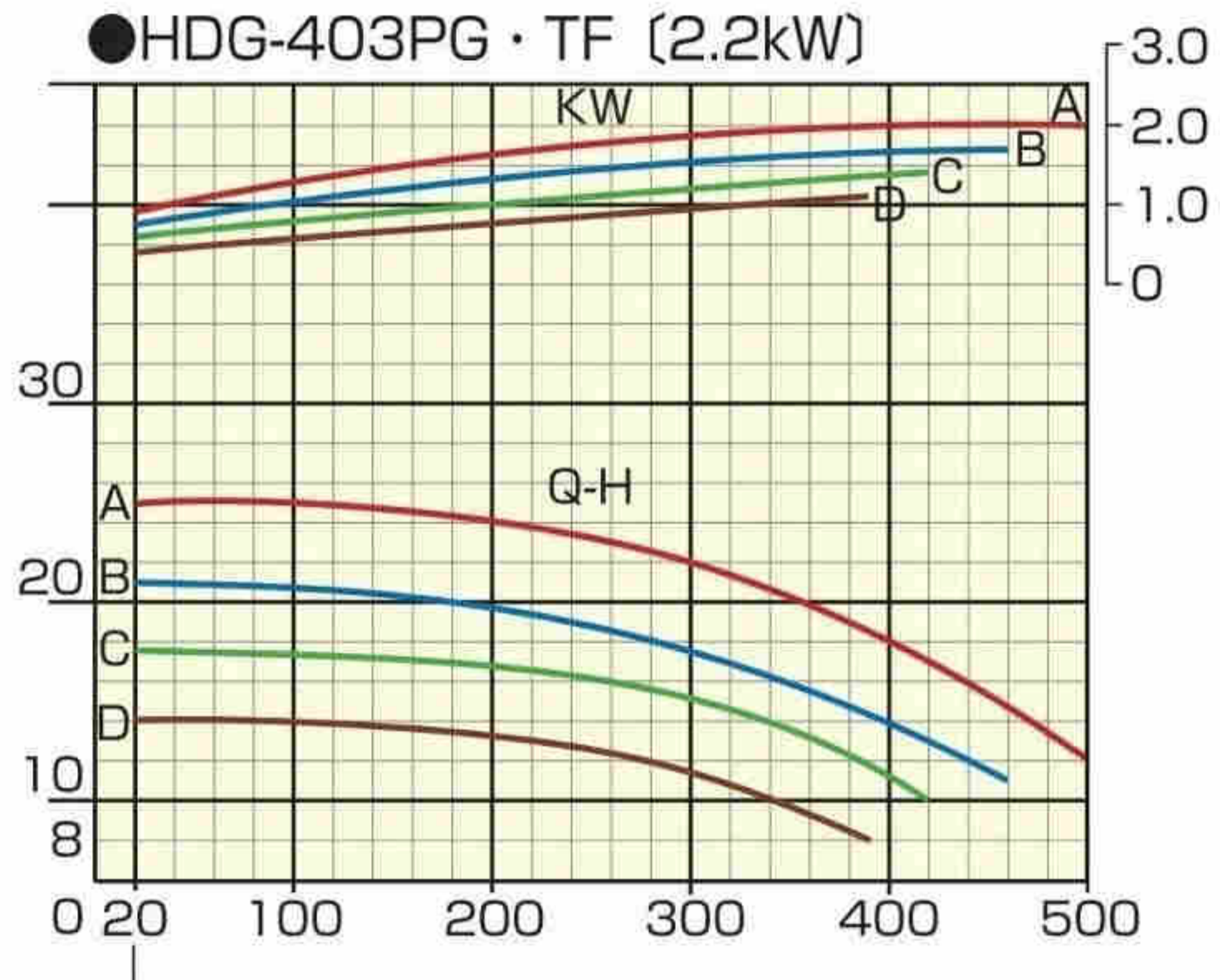
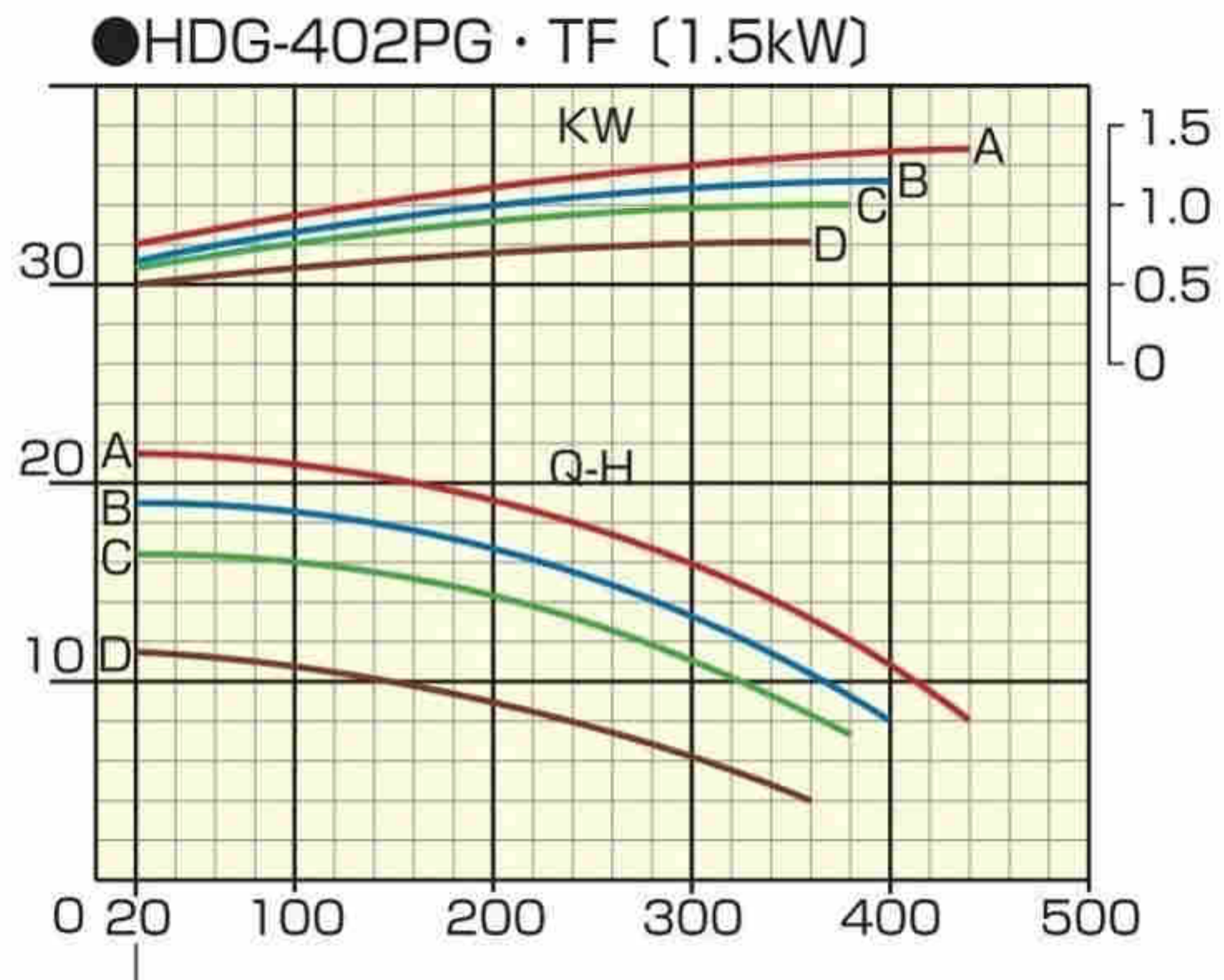
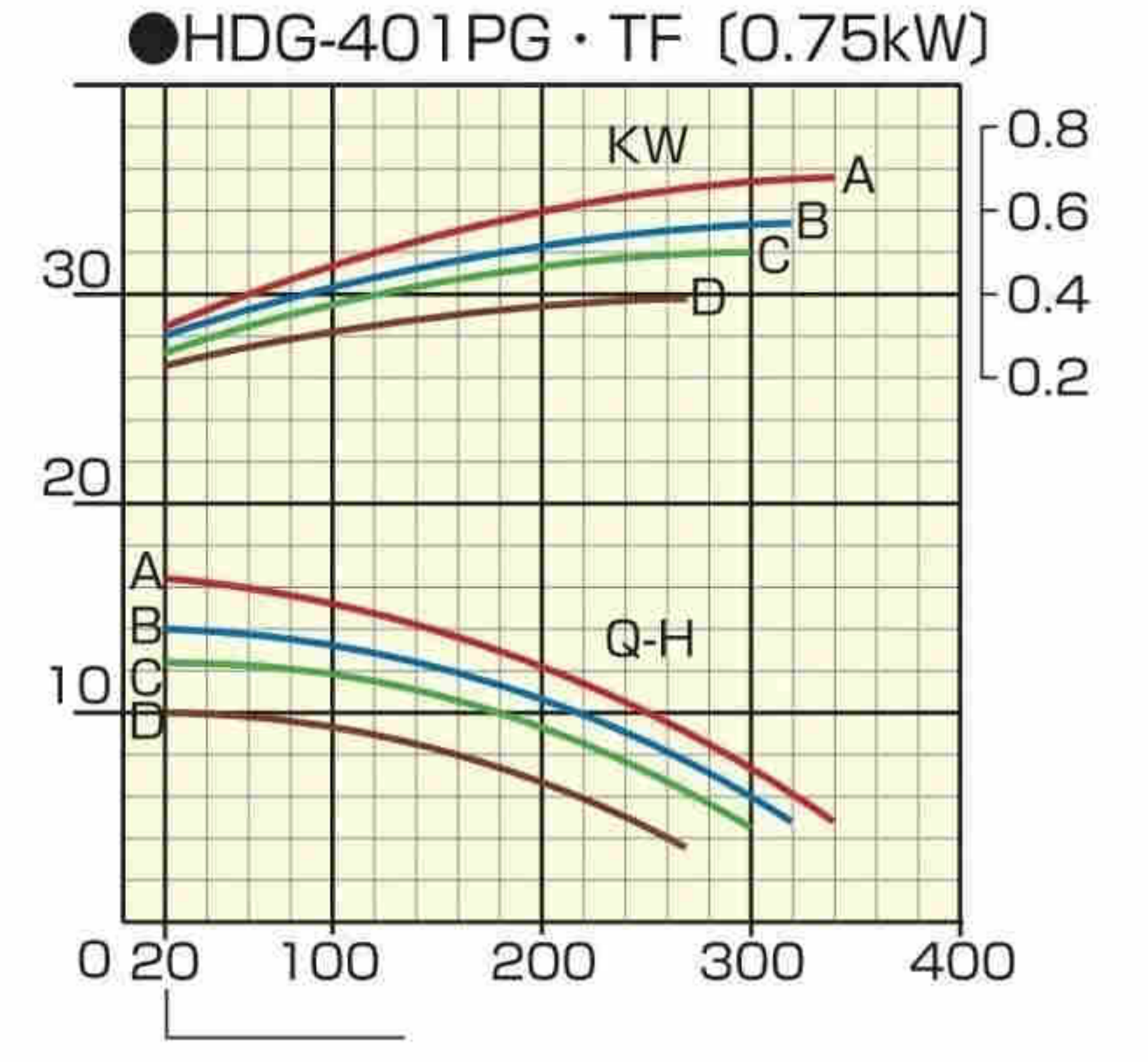
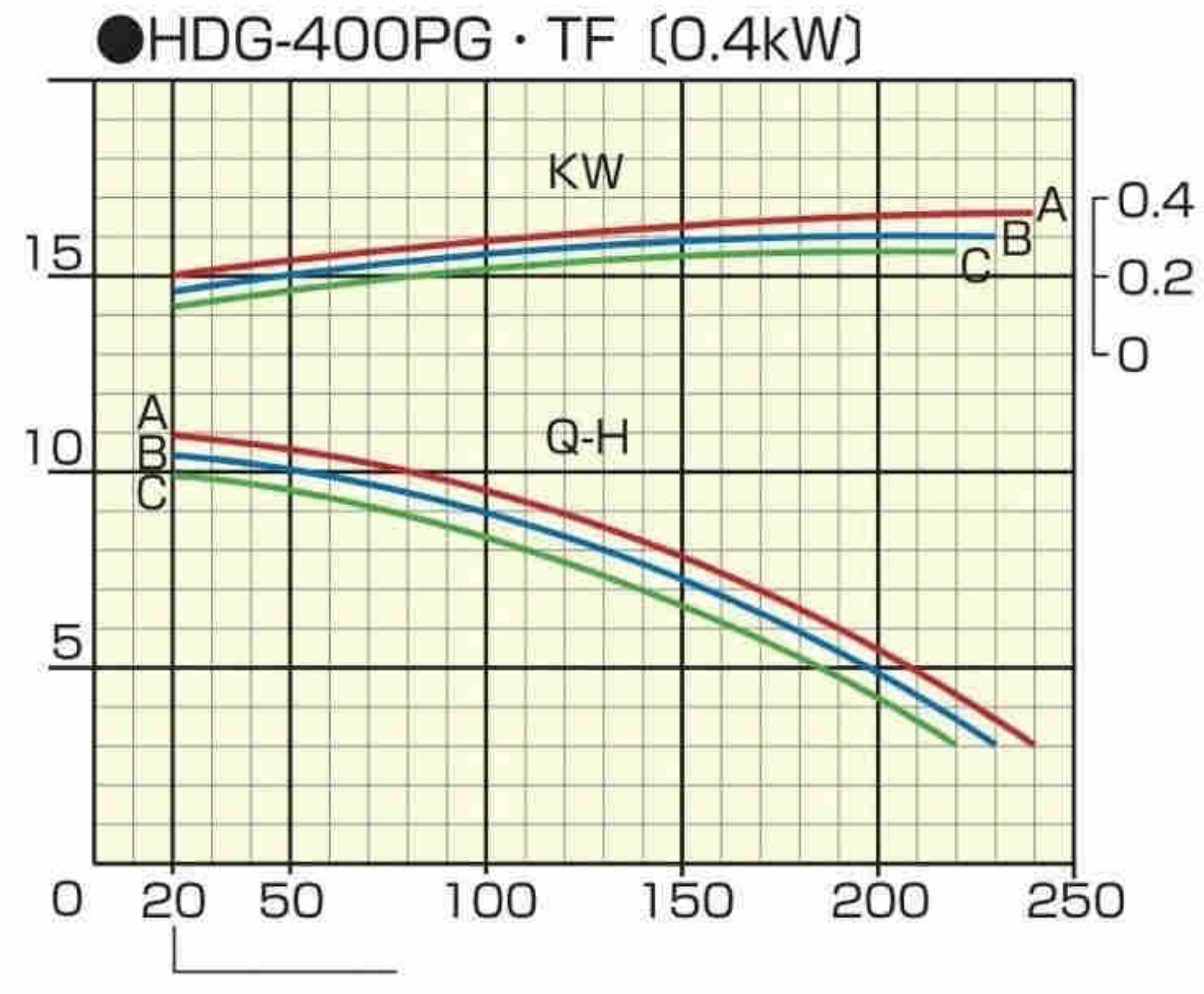
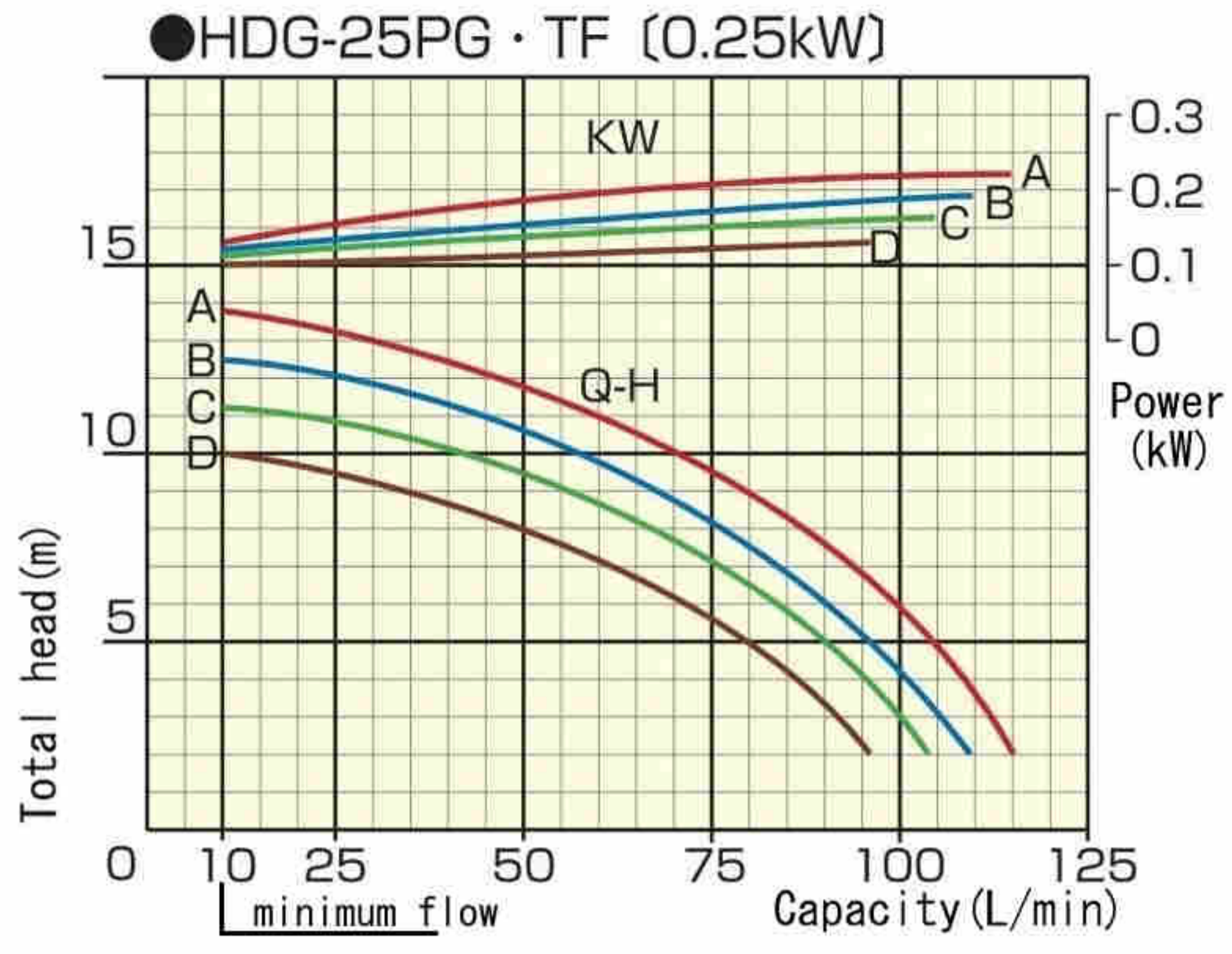
HDG-401NS 3.3m

HDG-402NS~405NS 4m

(On the condition that S.G.:1.0,Temp:RT,
Viscosity:1mPa · s)

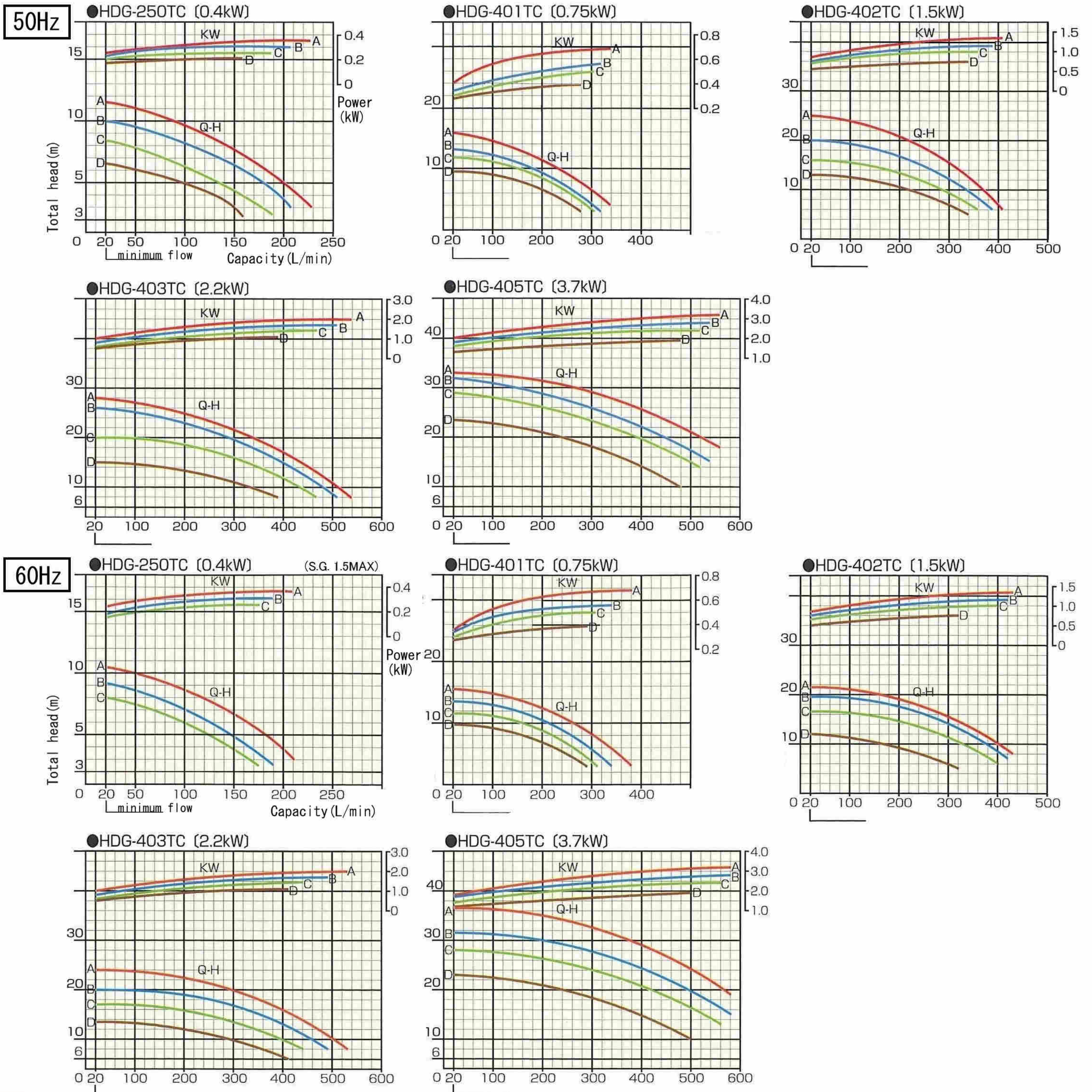
Depending on suction piping and liquid,
available suction head changes(lower).

60Hz



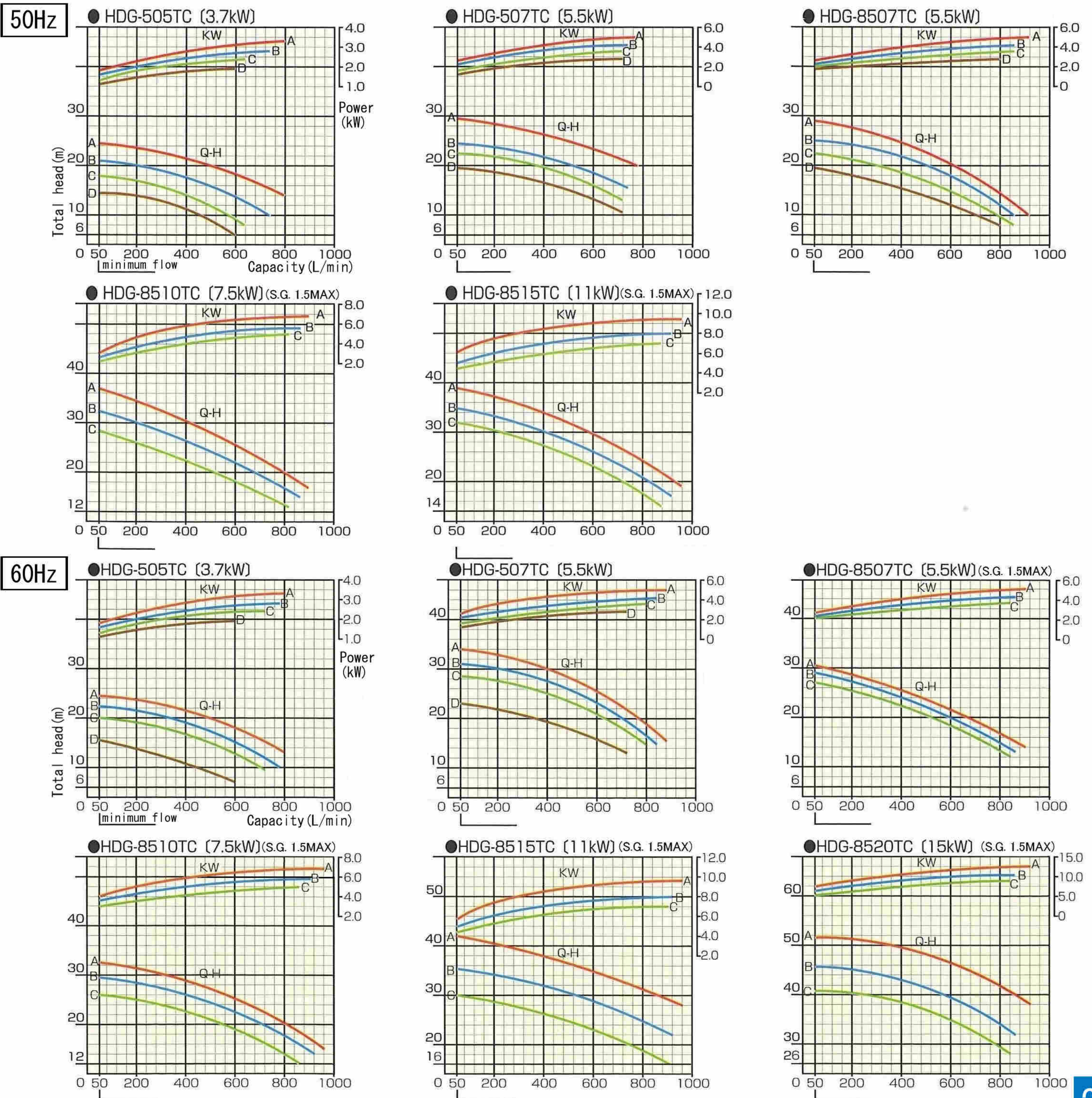
[HDG-TC] Standard specifications / Performance curves

Pump model	Bore		Power (kW)	Standard Spec. (50Hz)			Standard Spec. (60Hz)			Weight (kg)
	In	Out		Impeller Code	Total head (m)	Capacity (L/min)	Impeller Code	Total head (m)	Capacity (L/min)	
HDG-250TC	25	25	0.4	A	7	160	A	7	140	30
				B	6		B	5		
				C	4	130	C	4		
				D	4		(S.G. 1.5 MAX)			
HDG-401TC	40	40	0.75	A	11	210	A	12	220	40.5
				B	9		B	9.5		
				C	8		C	8		
				D	6		D	6		
HDG-402TC	50	40	1.5	A	17	280	A	17	260	54.5
				B	13		B	15.5		
				C	10		C	12.5		
				D	8		D	7		
HDG-403TC	50	40	2.2	A	21.5	300	A	20	300	58
				B	19.5		B	17		
				C	16		C	13		
				D	11		D	9.5		
HDG-405TC	50	40	3.7	A	27	360	A	29	400	79
				B	23.5		B	24		
				C	21		C	20.5		
				D	16		D	14.5		



[HDG-TC] Standard specifications / Performance curves

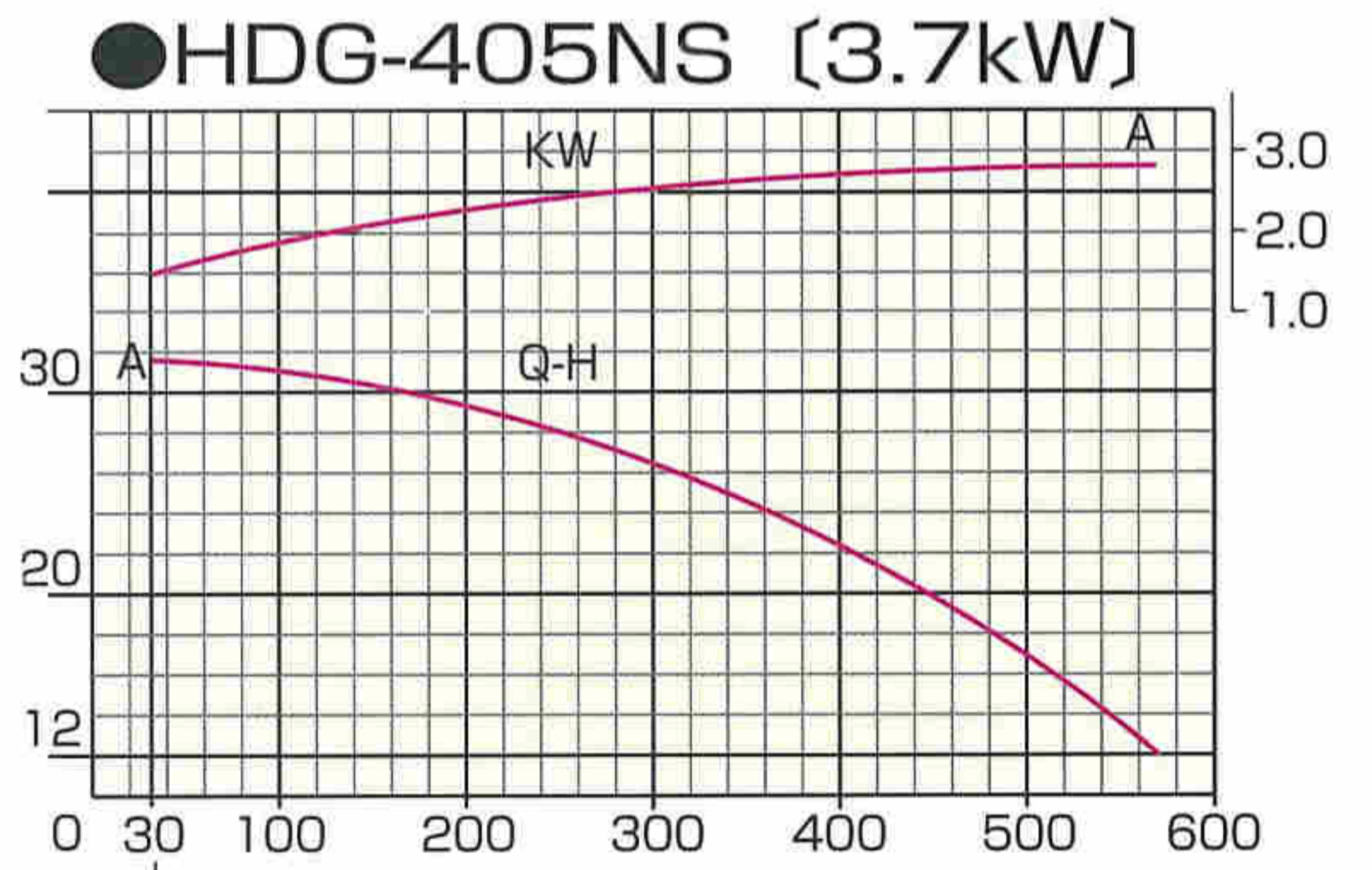
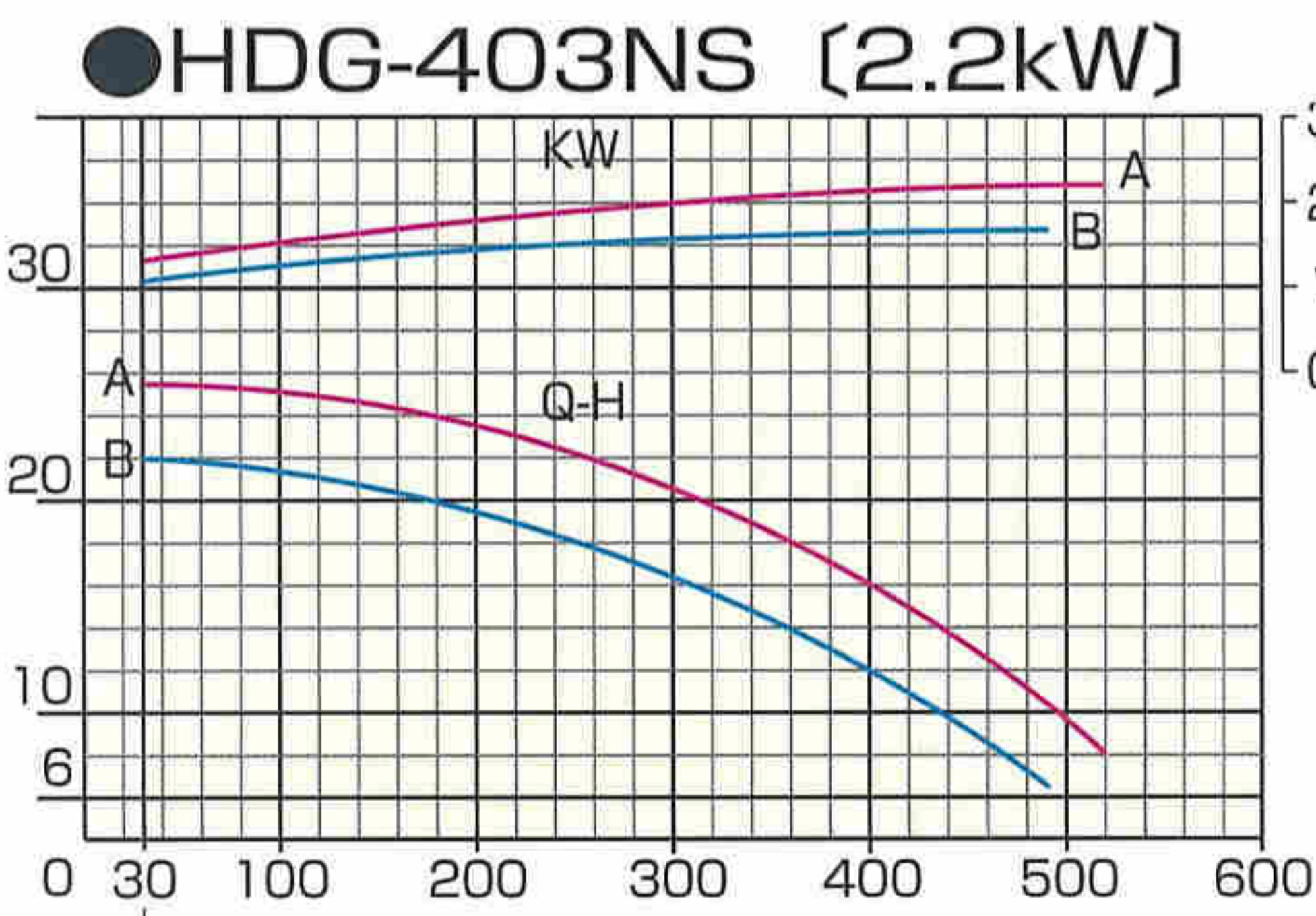
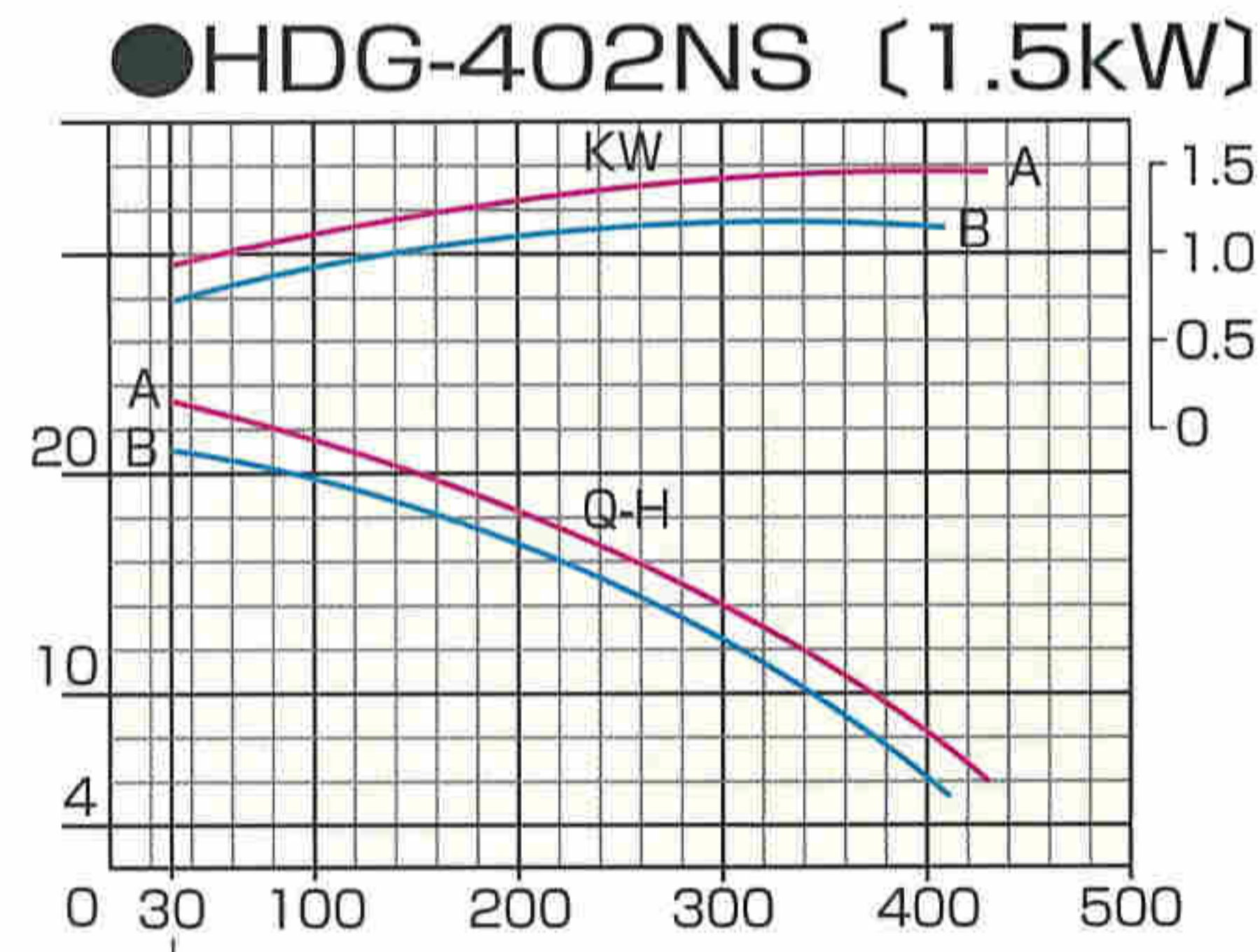
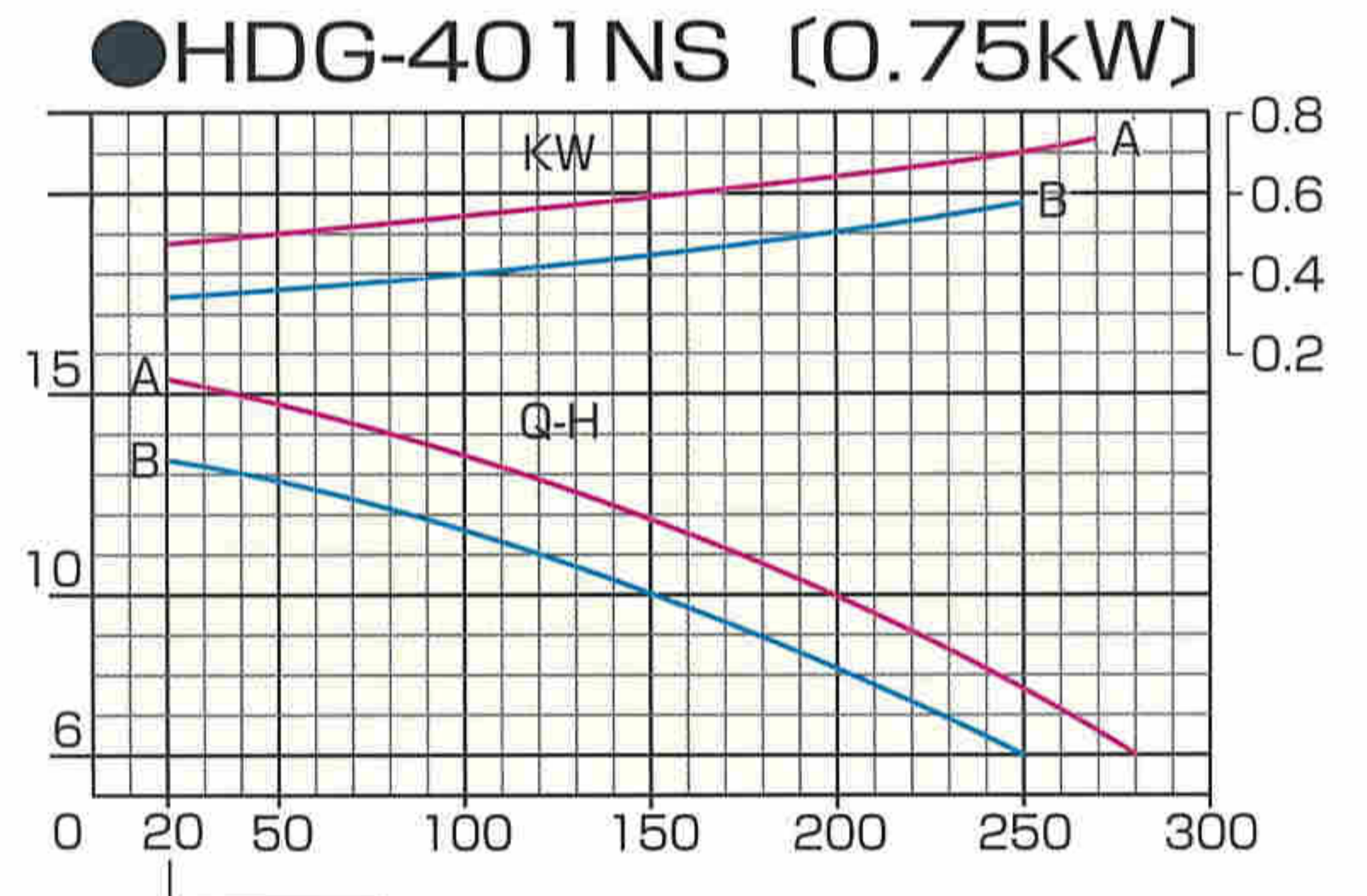
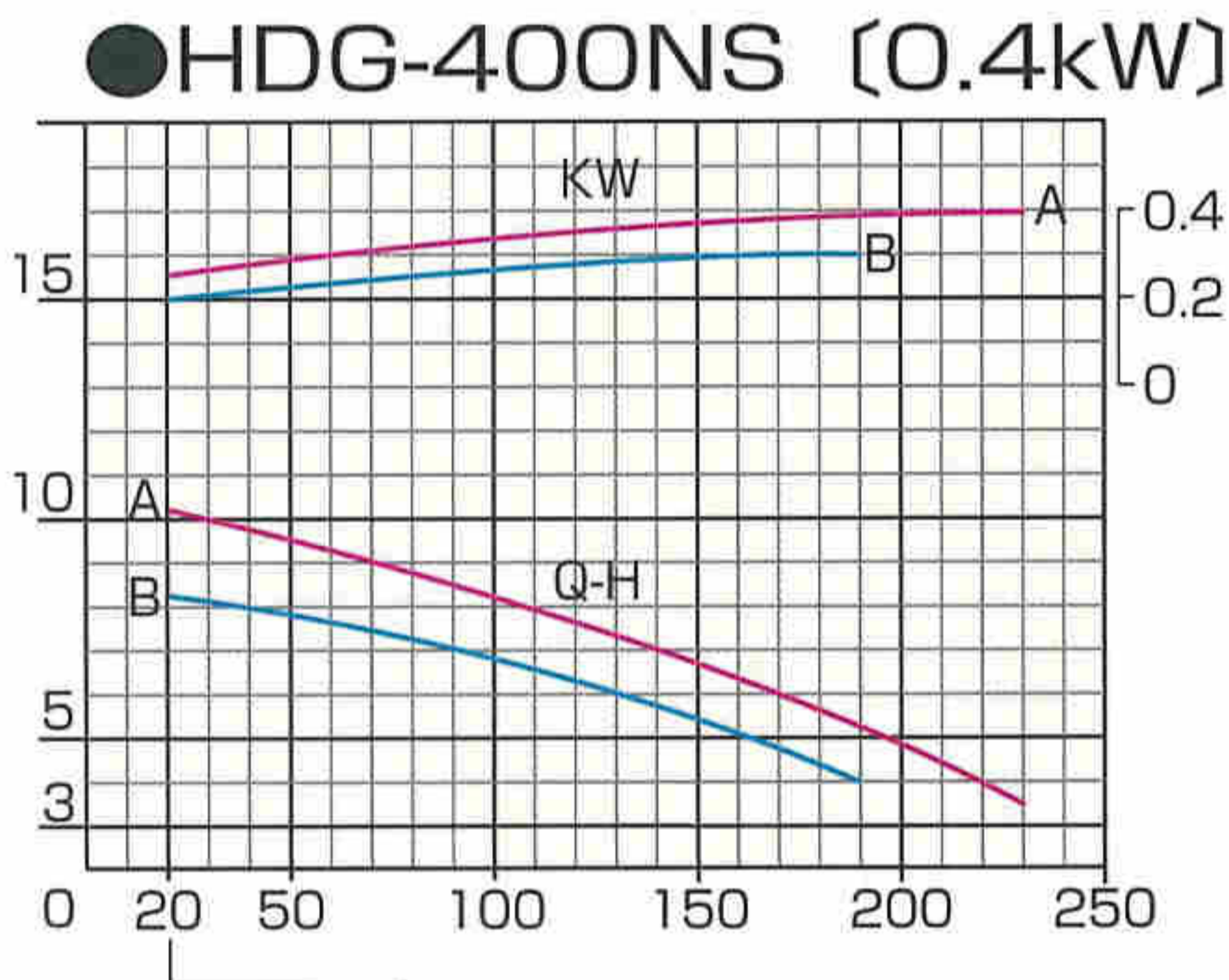
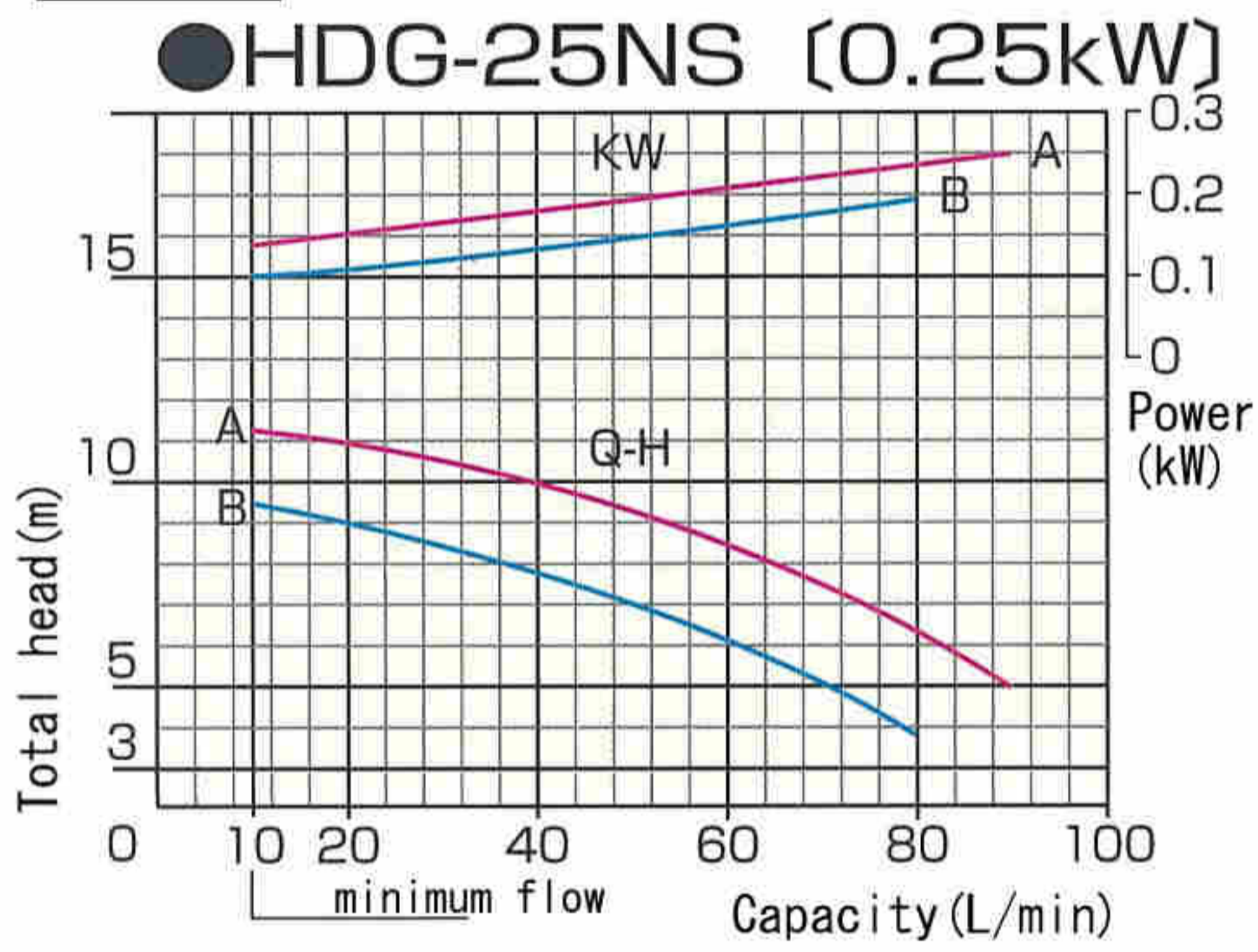
Pump model	Bore		Power (kW)	Standard Spec. (50Hz)			Standard Spec. (60Hz)			Weight (kg)
	In	Out		Impeller Code	Total head (m)	Capacity (L/min)	Impeller Code	Total head (m)	Capacity (L/min)	
HDG-505TC	65	50	3.7	A	2.0	500	A	2.0	500	89
			B	1.6			B	1.7		
			C	1.2			C	1.5		
			D	0.9			D	0.9		
HDG-507TC	65	50	5.5	A	2.4	560	A	2.6	580	117
			B	1.9			B	2.3		
			C	1.7			C	2.1		
			D	1.4			D	1.6		
HDG-8507TC	80	50	5.5	A	17.5	700	A	19	700	126
			B	15			B	17		
			C	12.5			C	16		
			D	10			(S.G. 1.5 MAX)			
HDG-8510TC	80	50	7.5	A	23	700	A	23	700	132
			B	19.5			B	20		
			C	16			C	16.5		
HDG-8515TC	80	50	11	A	26	750	A	32	740	209
			B	22			B	26		
			C	19			C	20		
HDG-8520TC	80	50	15				A	43	740	225
							B	36		
							C	31		



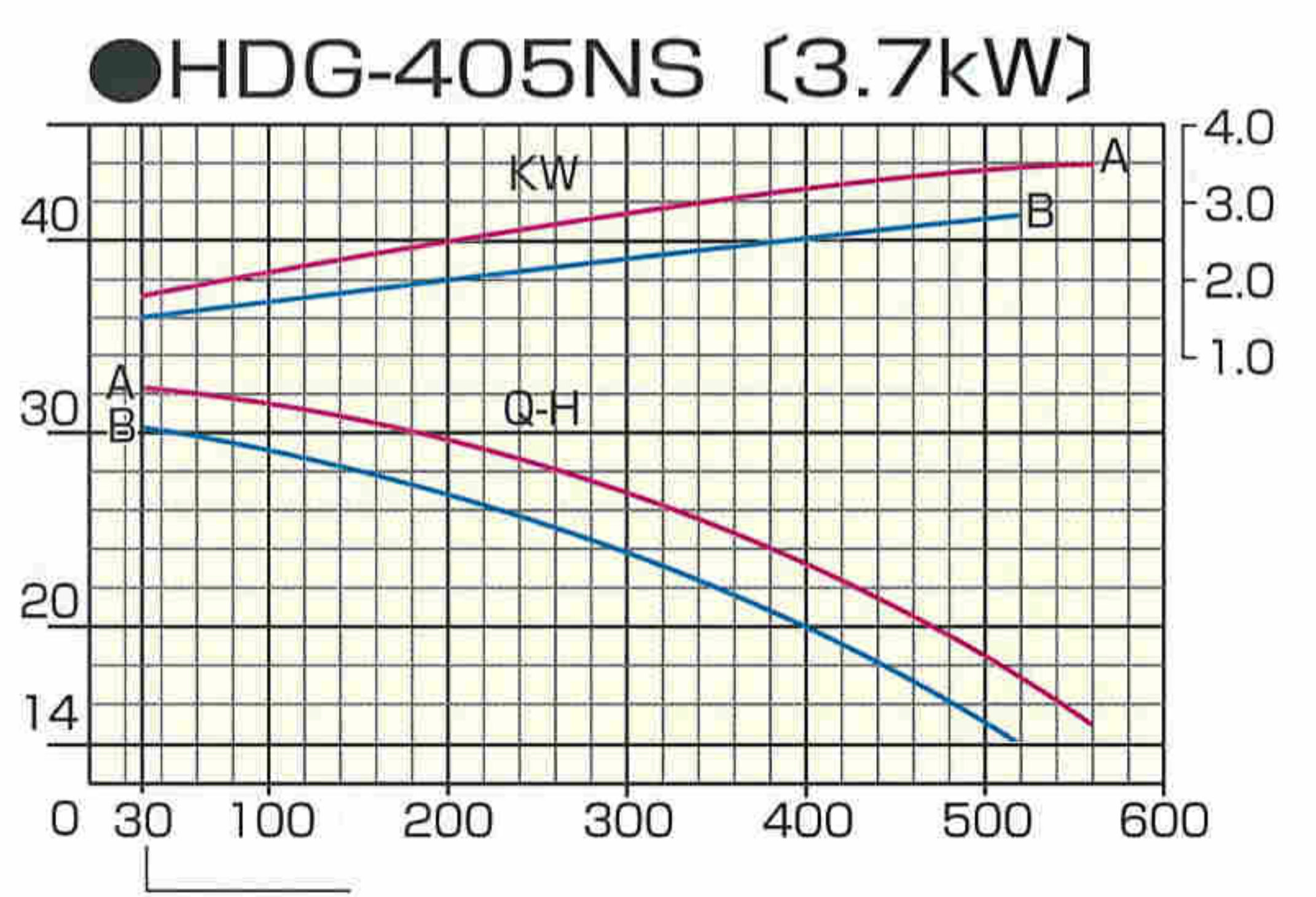
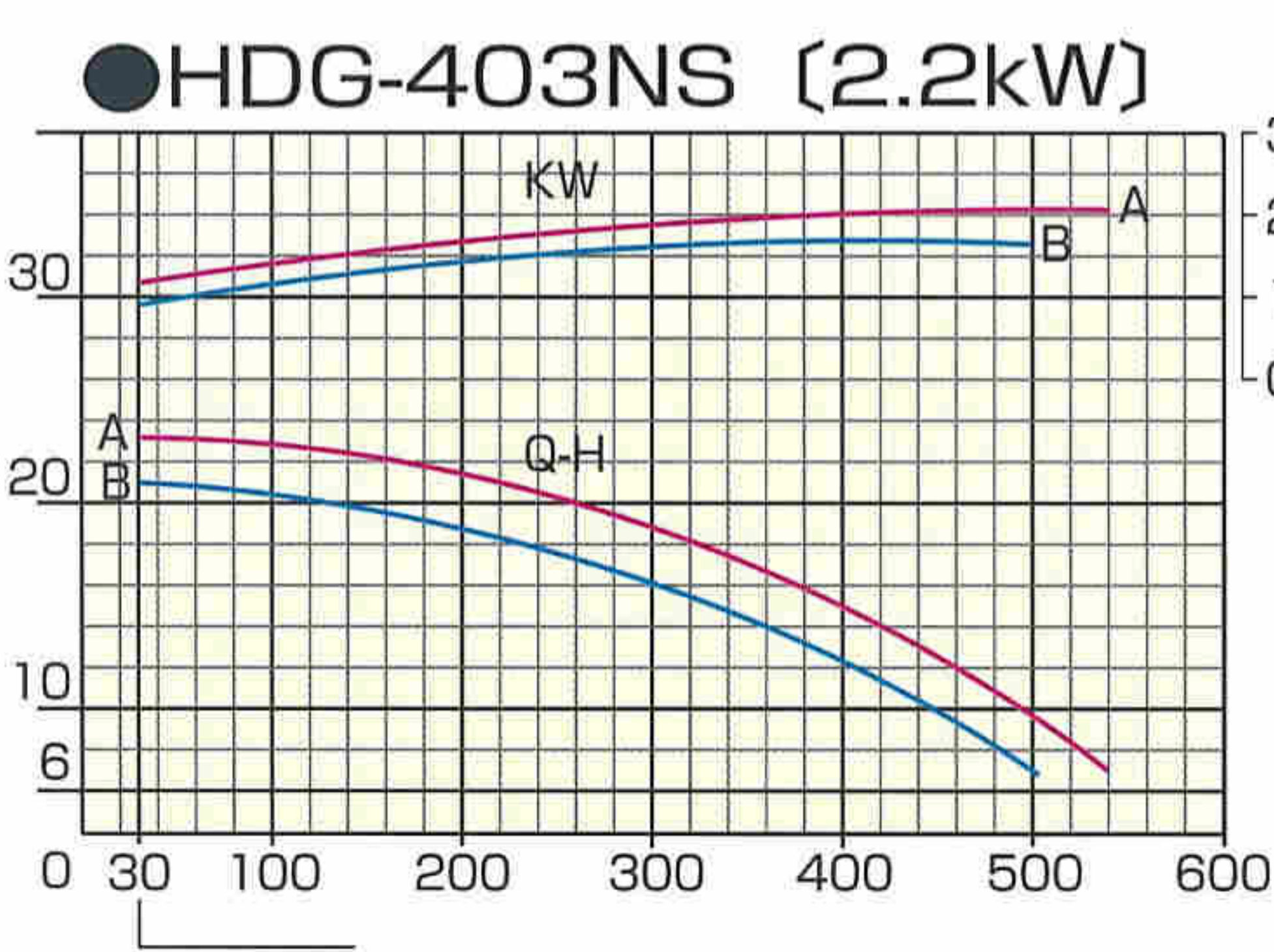
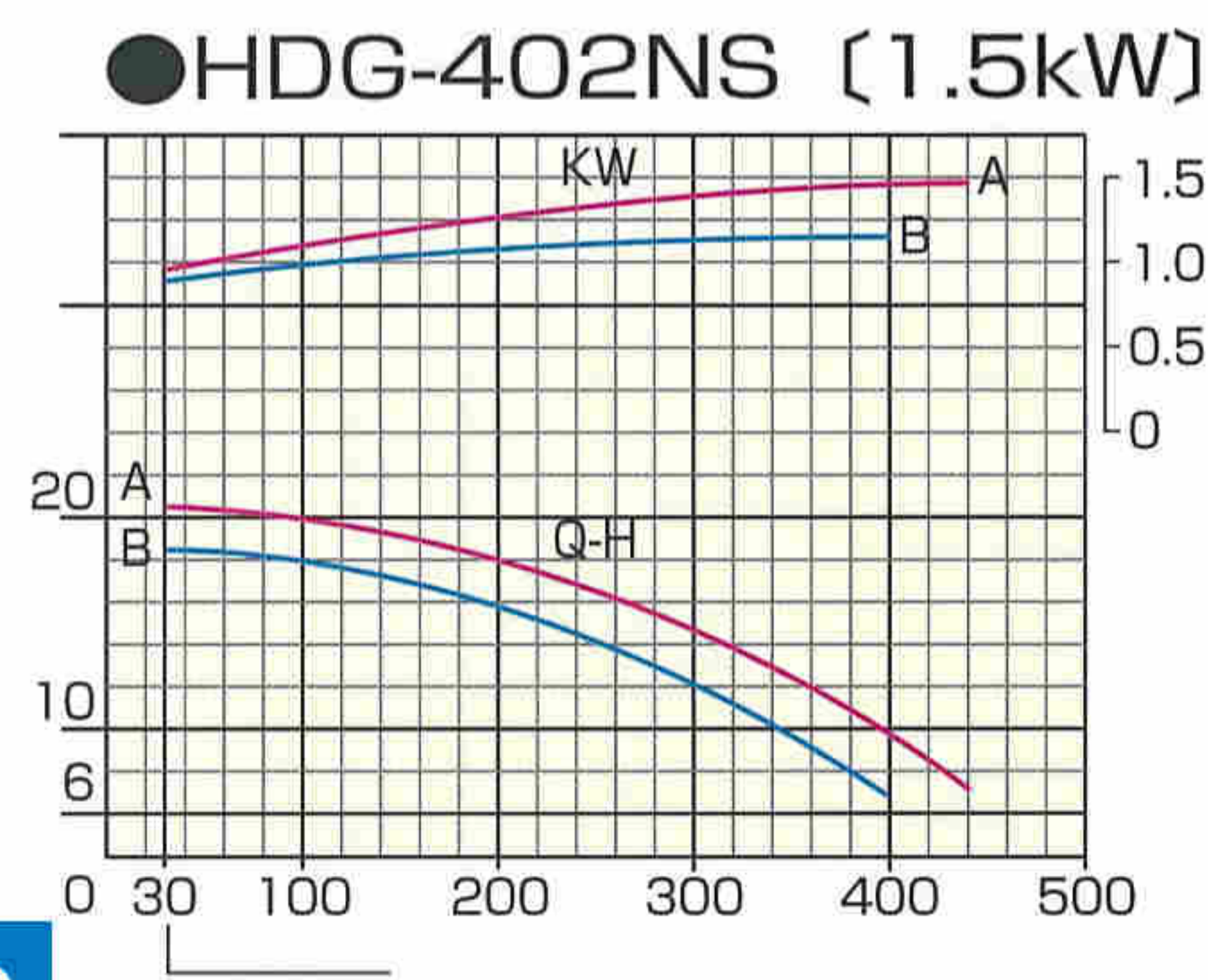
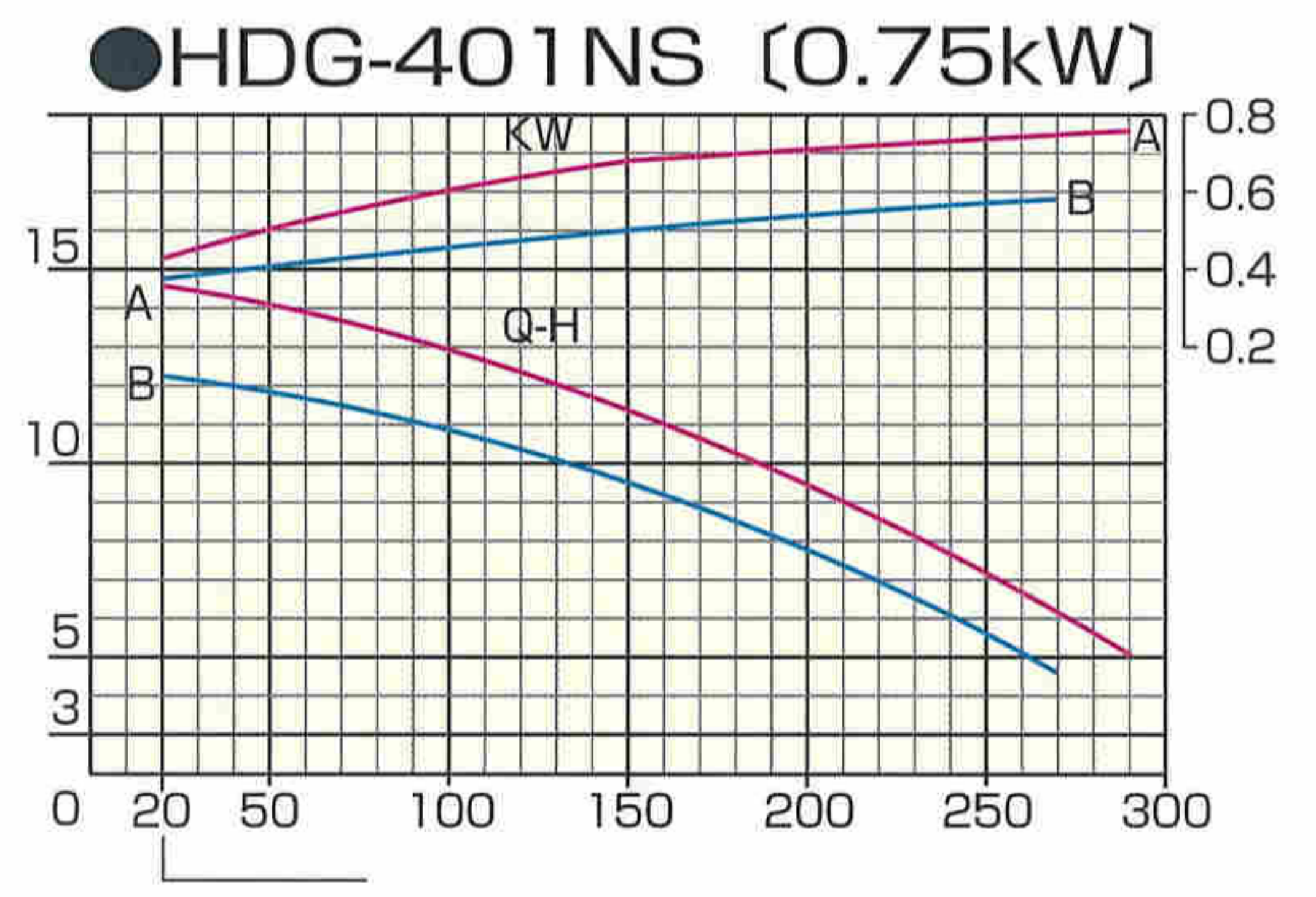
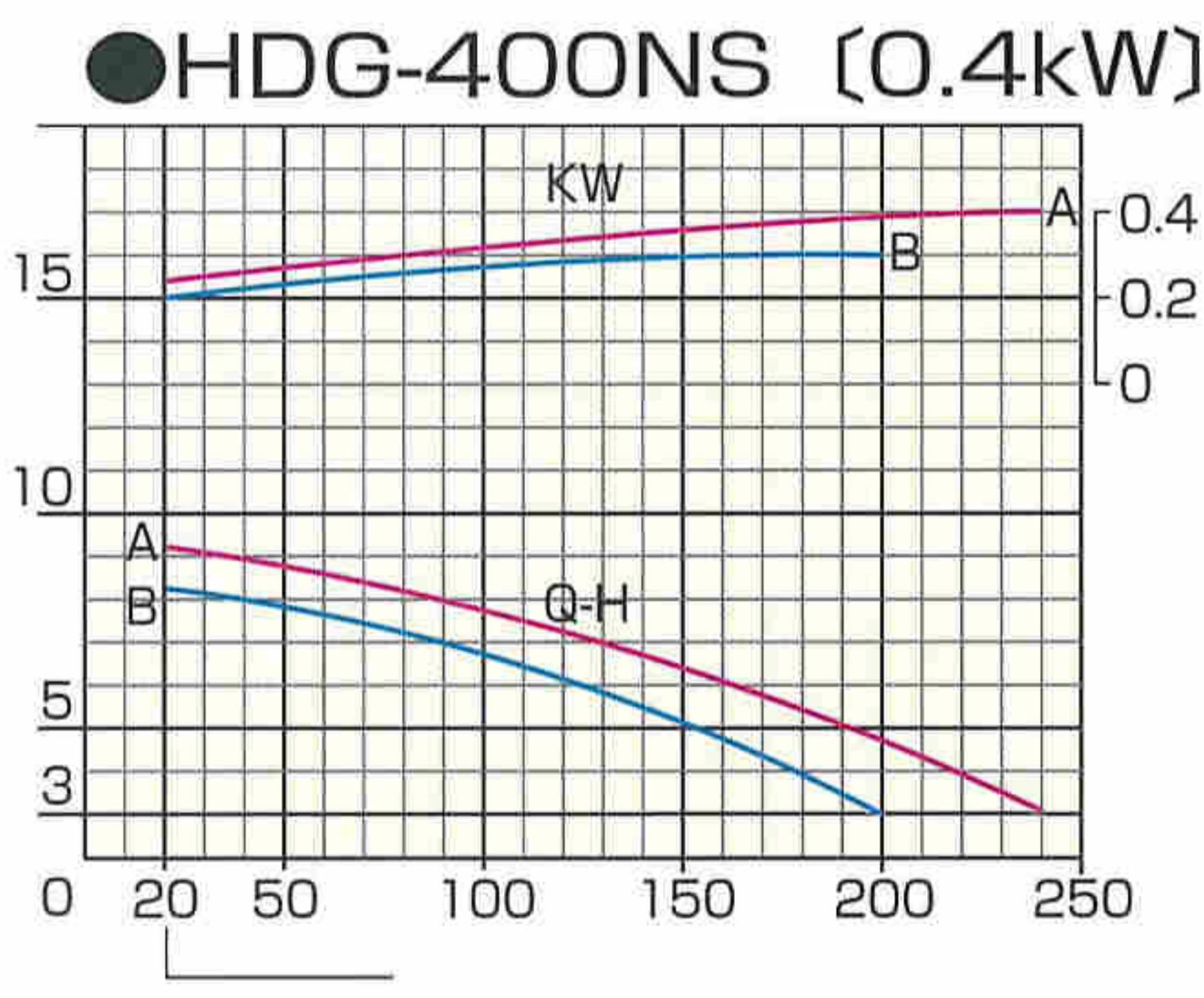
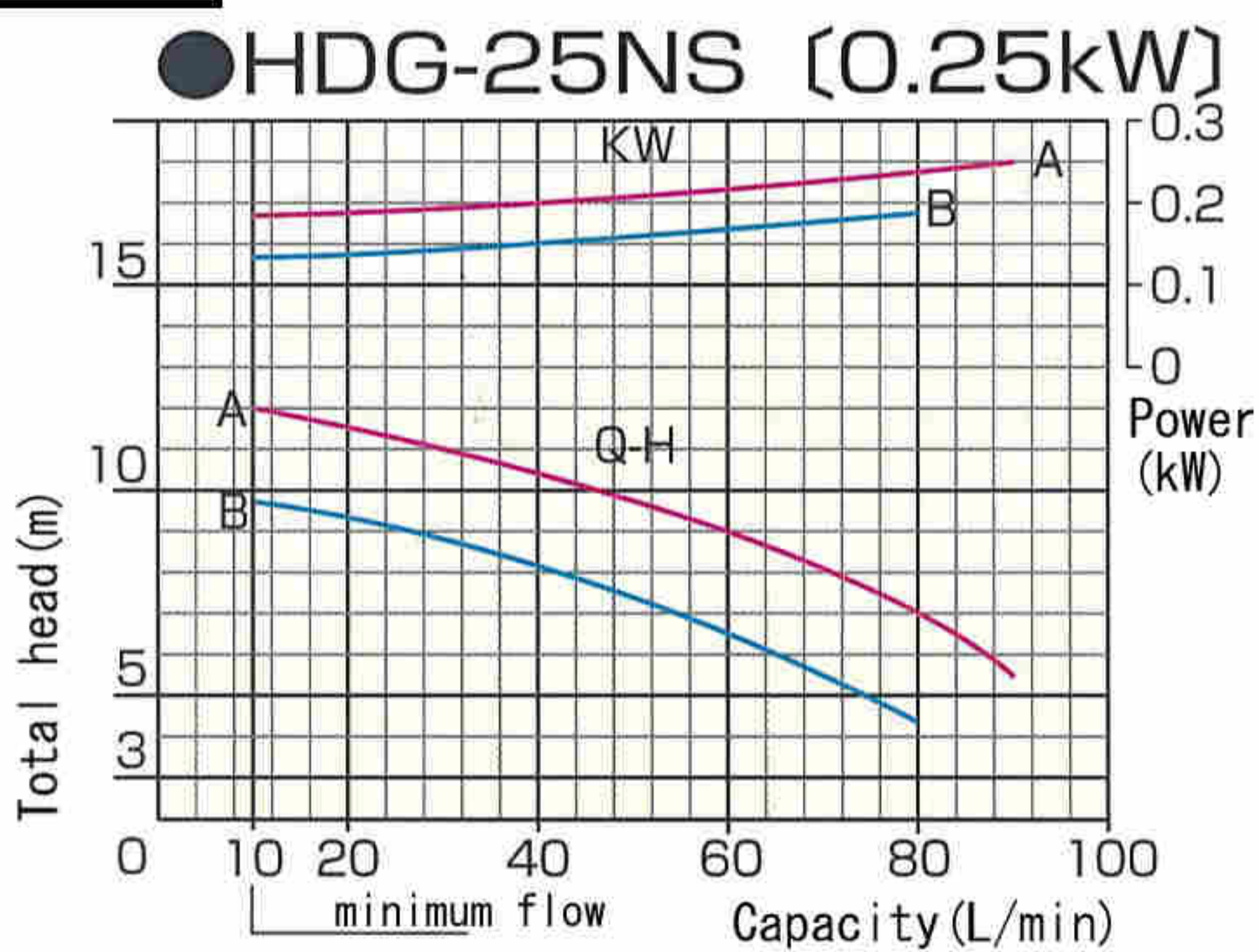
■ [HDG-NS] Standard specifications / Performance curves

Pump model	Bore		Power (kW)	Standard Spec. (50Hz)			Standard Spec. (60Hz)			Weight (kg)
	In	Out		Impeller Code	Total head (m)	Capacity (L/min)	Impeller Code	Total head (m)	Capacity (L/min)	
HDG-25NS	25	25	0.25	A	8.5	60	A	9	60	13
				B	6		B	6.5		
HDG-400NS	40	40	0.4	A	7	140	A	6	140	31
				B	5	160	B		120	
HDG-401NS	40	40	0.75	A	9	210	A	9	210	37
				B	10	150	B		160	
HDG-402NS	50	40	1.5	A	16	250	A	16	250	52
				B	14	260	B		13	
HDG-403NS	50	40	2.2	A	20	300	A	18	300	56
				B	18	240	B		240	
HDG-405NS	50	40	3.7	A	24	350	A	25	350	78
				B	24	350	B	23	320	

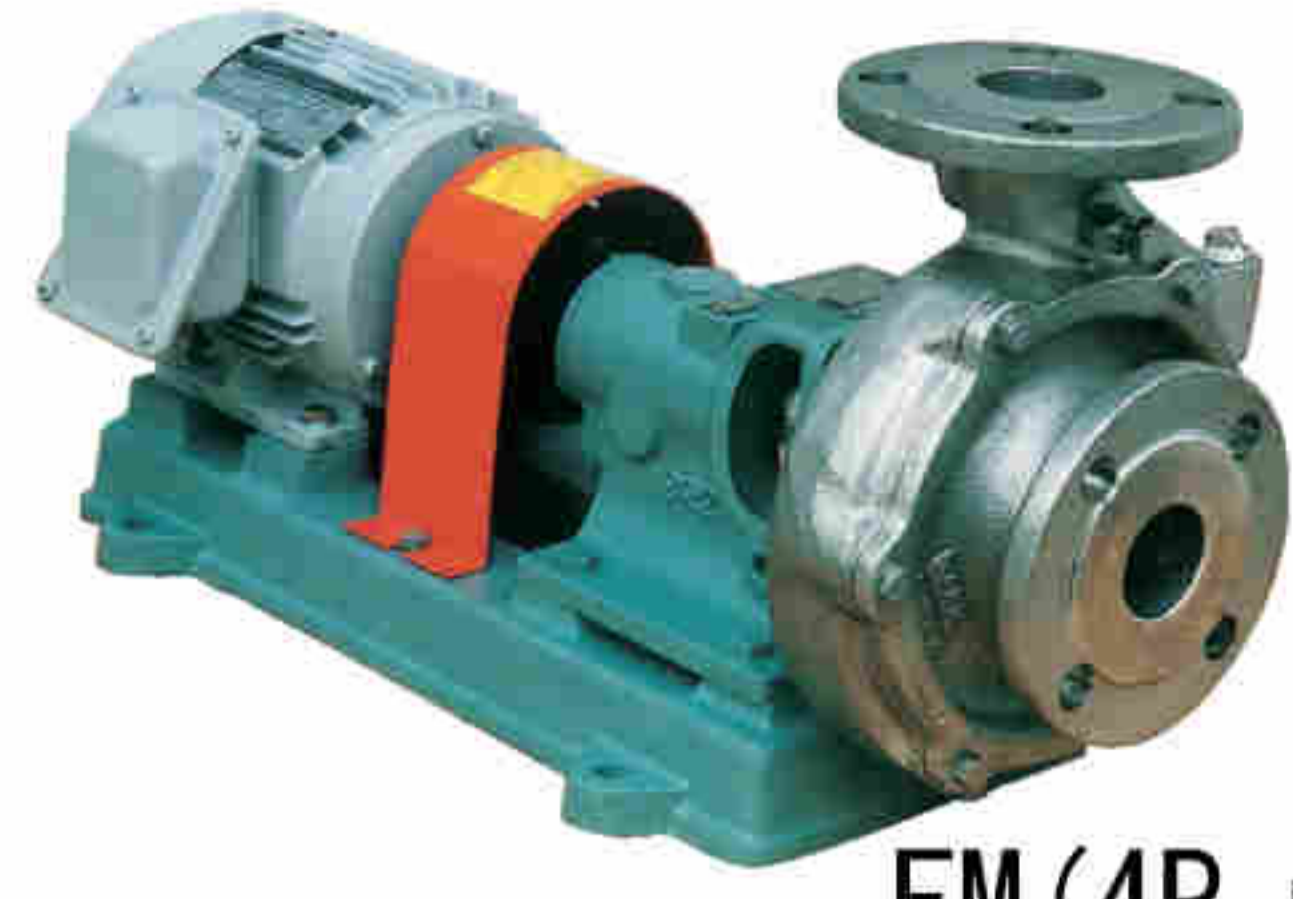
50Hz



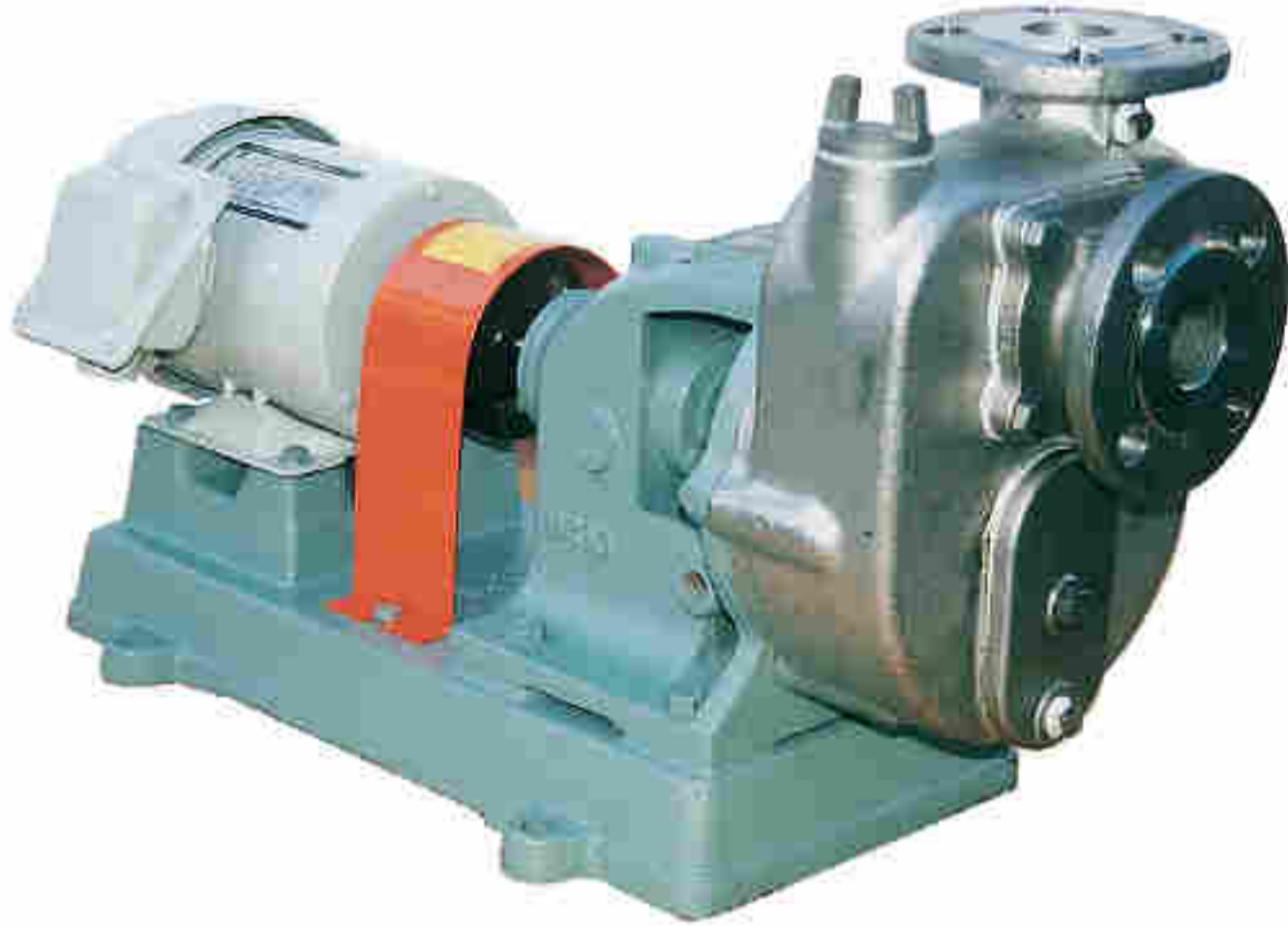
60Hz



Stainless steel pump



FM (4P motor)



FMS (4P motor)



[JIMS 16bar standard pump]

■ Features

▪ Product lineup

Non self-priming

Self-priming

JIMS 16bar standard pump

Motor pump (Non self-priming)

Mini pump (Non self-priming)
(Self-priming)

FM · FX · 2FH · 2FX (H) ...P30

FMS · 2FGS · 2FHS · 2FIS...P31

FIC · 2FIC · 2FICH · FIE...P32

2FFH *contact us

MM2-D/F *contact us

MSM2-DR/FR *contact us

▪ Chemical resistance

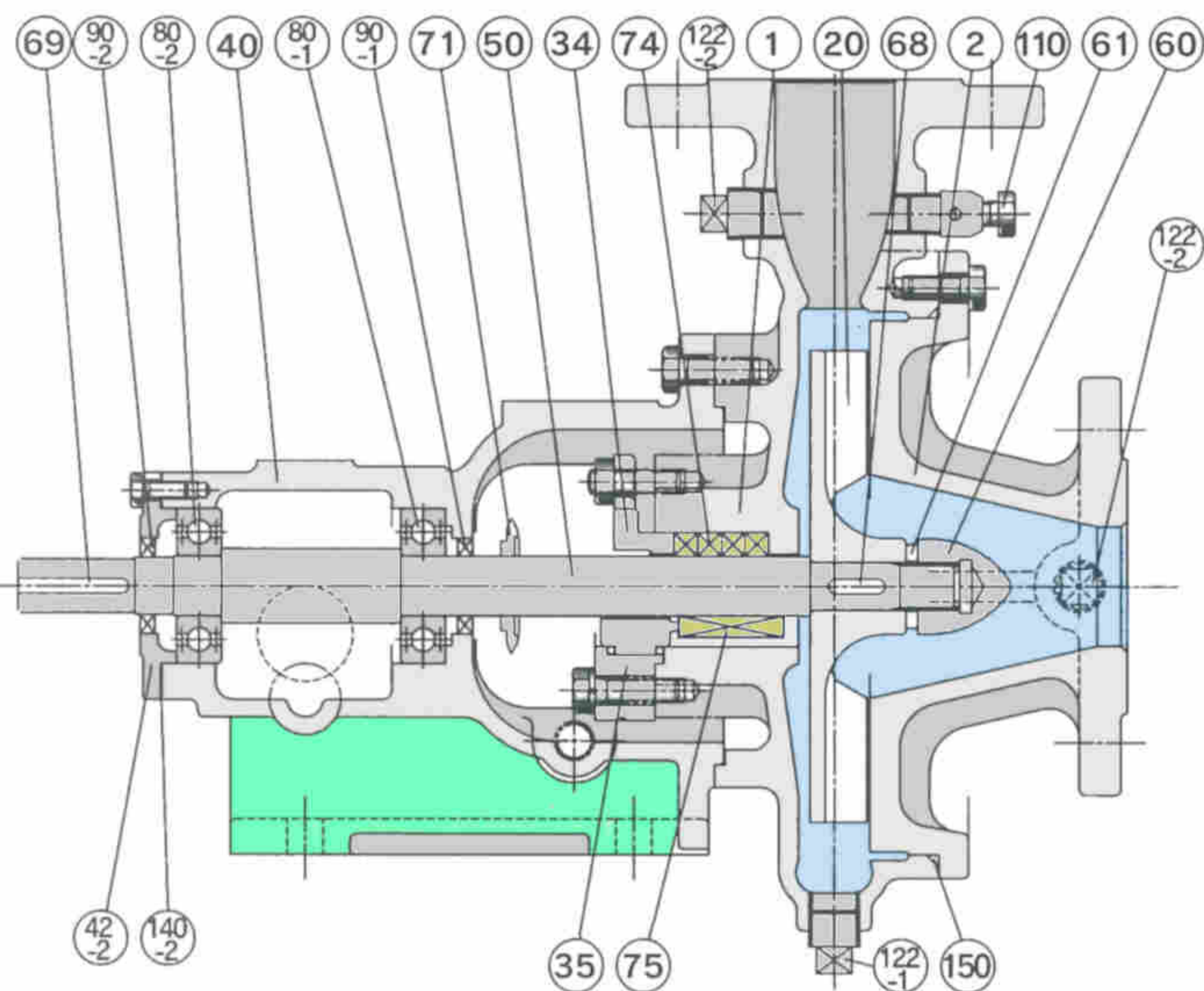
There are many kinds of pump head materials (SUS304, SUS316, SUS316L, carpenter, or hastelloy) and mechanical seal and you can choose the suitable one depending on using liquid.

▪ Application

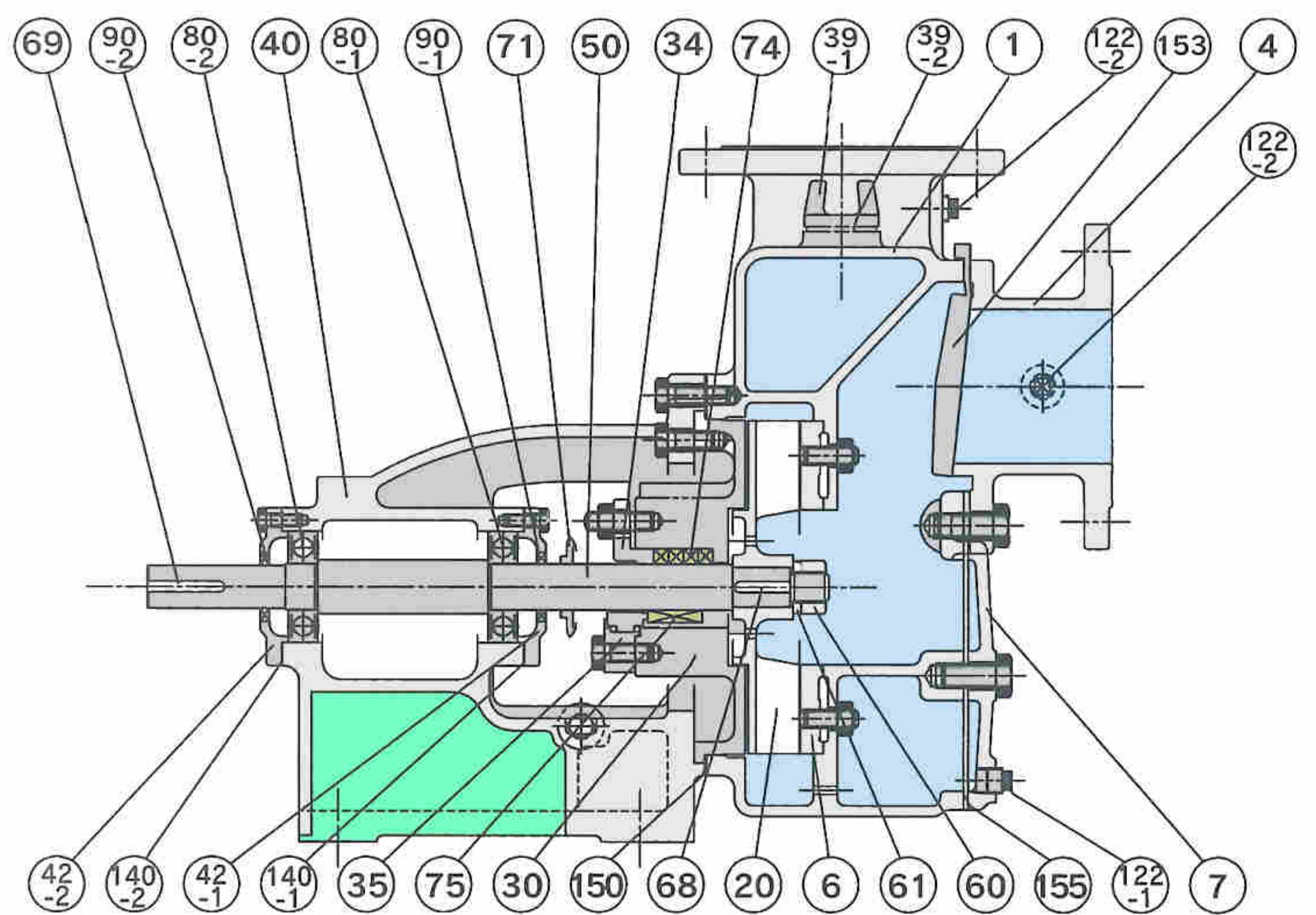
Various plant/device and transfer special liquid (Chemical, Petrochemical, Painting, Pharmaceutical, Plating, Semiconductor, PCB, Waste water treatment)

■ Parts list

● FM (Non self-priming type)

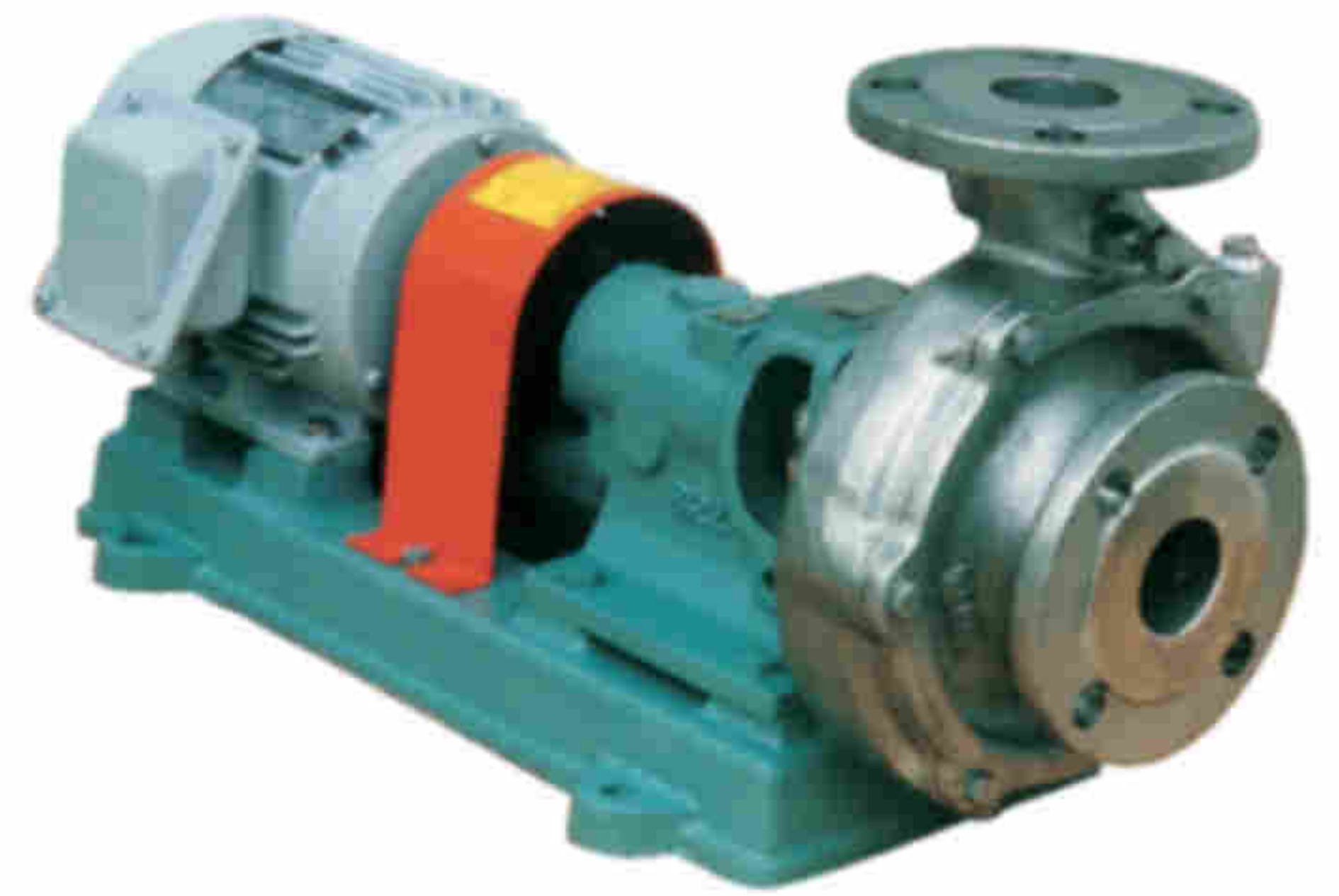


● FMS (Self-priming type)



No.	Parts name	FM	FMS	No.	Parts name	FM	FMS
1	Pump casing	SCS13/SCS14		60	Impeller nut	SUS304/SUS316	
2	Suction cover	SCS13/SCS14	—	61	Spring washer	SUS304/SUS316	
4	Suction flange	—	SCS13/SCS14	68/69	Key	SUS316	
6	Disk	—	SUS304/SUS316	71	Deflector	NBR	
7	Front cover	—	SCS13/SCS14	74	Gland packing	PTFE fiber	
20	Impeller	SCS13/SCS14		75	Mechanical seal		
30	Stuffing box	—	SCS13/SCS14	80-1/2	Bearing	SUJ2	
34	Gland	SCS13/SCS14		90-1/2	Oil seal	NBR	
35	Mechanical seal cover	SUS304/SUS316		110	Air cock	SUS304/SUS316	—
39-1	Priming plug	—	SCS13/SCS14	122-1/2	Plug	SUS304/SUS316	
39-2	Priming packing	—	NBR	140-1/2	Bearing cover packing	Three sheet	
40	Bracket	FC200		150	Cover packing	PTFE	
42-1/2	Bearing cover	FC200		153	Check valve	—	NBR
50	Shaft	SUS304/SUS316		155	Front cover packing	—	NBR

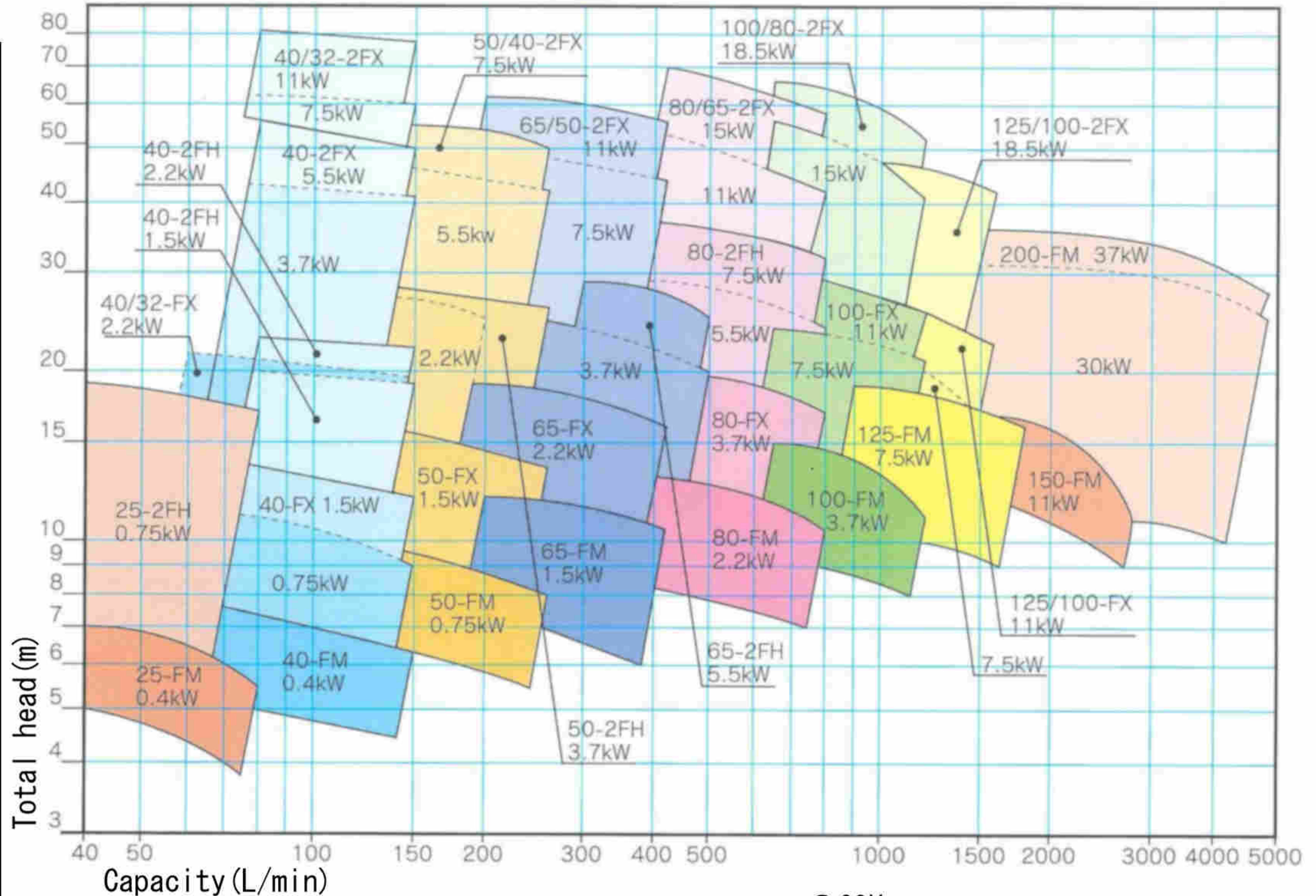
[Non self-priming type] Standard specifications / Performance curves



- FM : 4P motor / Normal model
- FX : 4P motor / High pump head model
- 2FH : 2P motor / High pump head model
- 2FX (H) : 2P motor / High pump head model

● 50Hz

	Bore (mm)	Power (kW)	Head (m)	Capacity (L/min)
FM	25	0.4	5.5	80
	40	0.4	6.5	150
	50	0.75	8	260
	65	1.5	10.5	420
	80	2.2	10.5	800
	100	3.7	11	1200
	125	7.5	16	1800
	150	11	11	2800
FX	40x32	2.2	19.5	150
	40	0.75	9	150
		1.5	12	
	50	1.5	13.5	260
	65	2.2	16	420
	80	3.7	17	800
	100	7.5	21	1200
	125x100	7.5	15	1600
2FH	25	0.75	17	80
	40	2.2	22	150
		1.5	19	
	50	2.2	25	200
		3.7	26	
	65	3.7	20	500
		5.5	25	
	80	7.5	32	800
2FX 2FXH	40x32	7.5	60	150
		11	79	
	40	3.7	41	150
		5.5	52	
	50x40	5.5	42	260
		7.5	50	
	65x50	7.5	44	420
		11	56	
80x65	11	42	800	
	15	58		
100x80	15	41	1200	
	18.5	52		
125x100	18.5	42	1600	



Pump identification

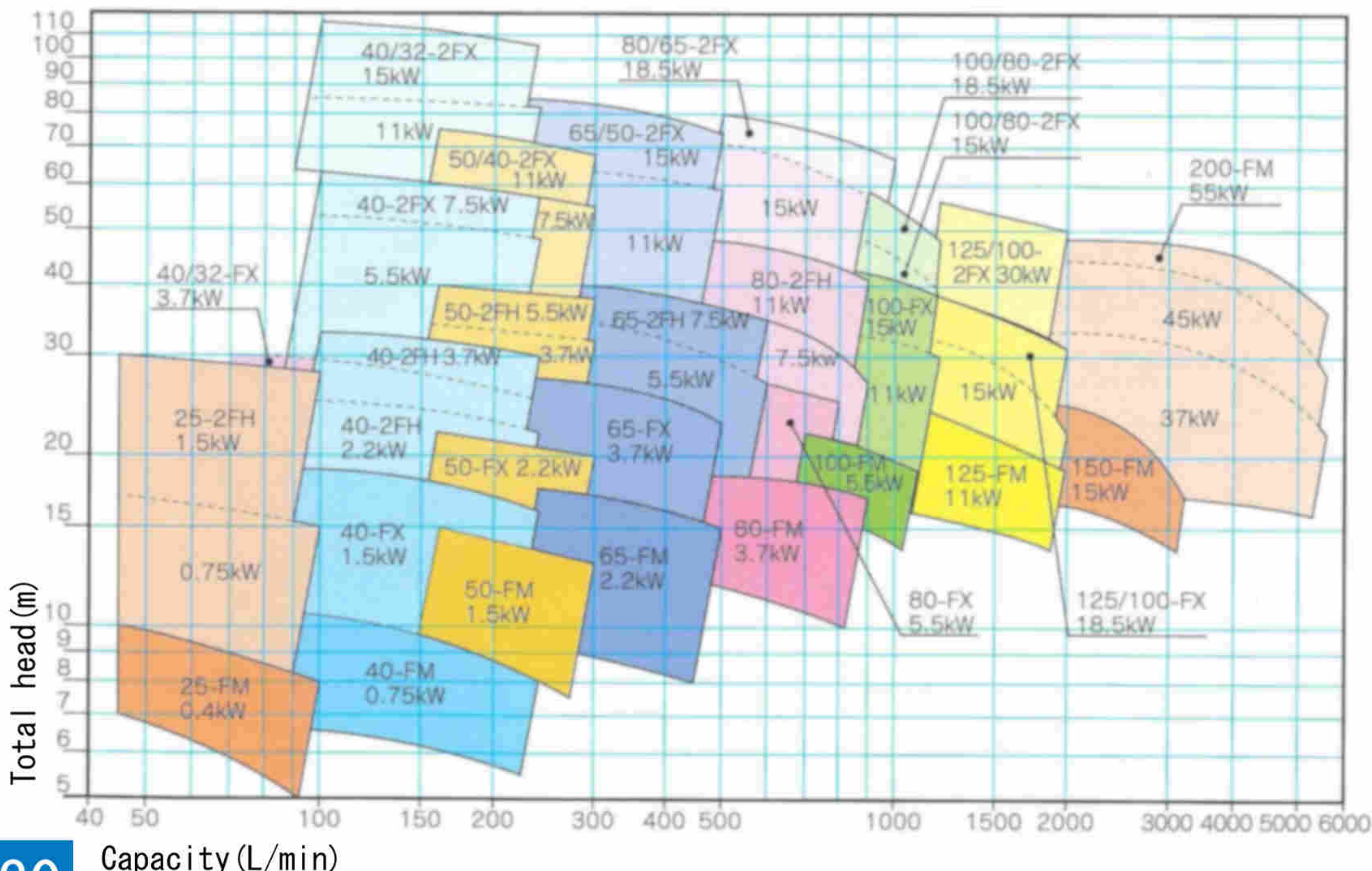
Model : 25 FM - 27 M

① ② ③ ④

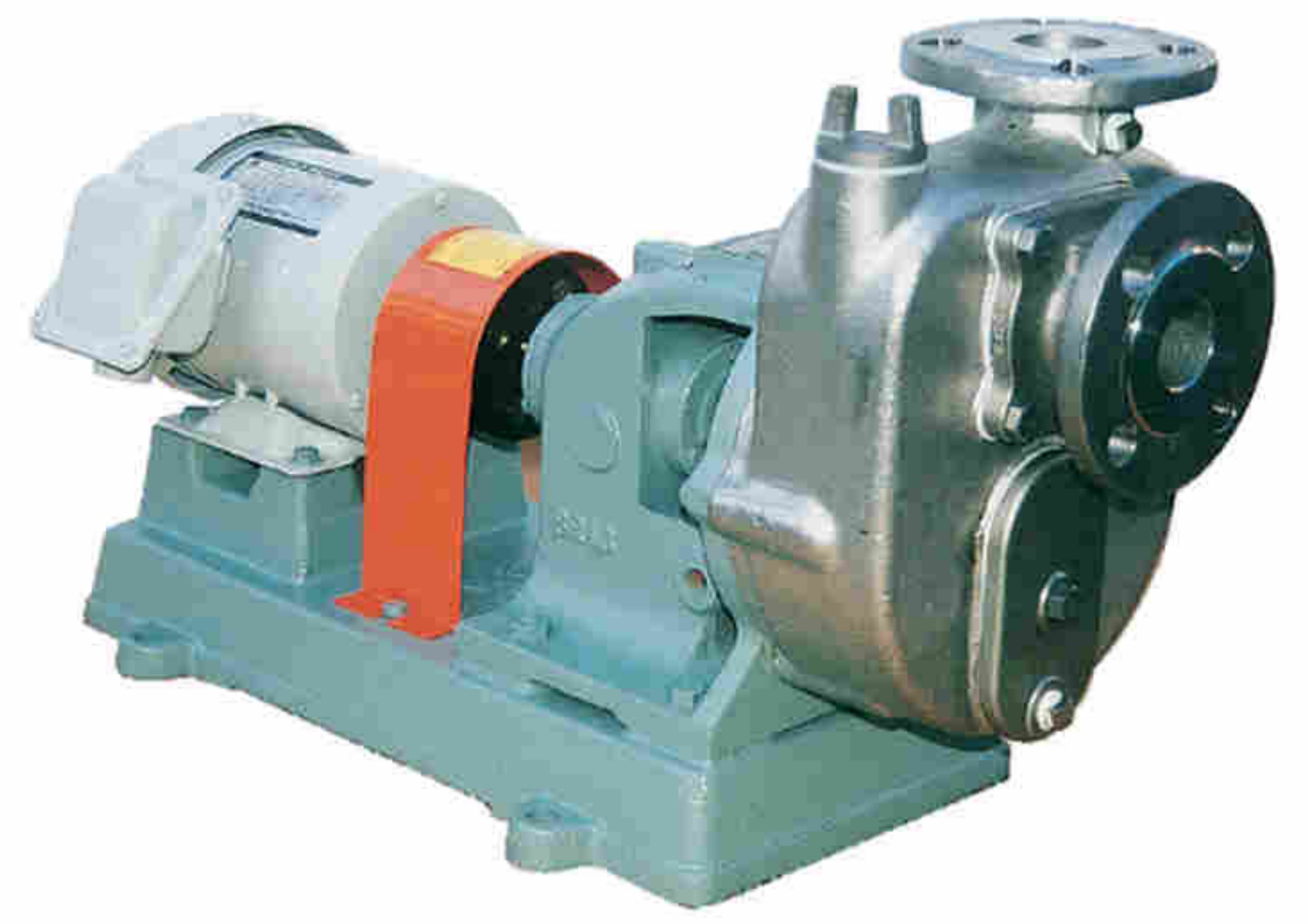
- ① Bore
- ② Model
- ③ Wetted Material 27 (SUS304 /SCS13)
32 (SUS316 /SCS14)
- ④ Shaft seal M (Mechanical seal)
G (Gland packing)

● 60Hz

	Bore (mm)	Power (kW)	Head (m)	Capacity (L/min)
FM	25	0.4	8	100
	40	0.75	8	240
	50	1.5	13	300
	65	2.2	15	500
	80	3.7	17	900
	100	5.5	18	1100
	125	11	18	2000
	150	15	17	3200
FX	40x32	3.7	25	240
	40	1.5	16	240
	50	2.2	20	300
	65	3.7	23	500
	80	5.5	25	800
	100	11	30	1200
		15	38	
	125x100	15	22	2000
2FH	25	0.75	15	100
	40	2.2	22	240
		3.7	30	
	50	3.7	32	300
		5.5	38	
	65	5.5	27	600
		7.5	35	
	80	7.5	27	900
2FX 2FXH	40x32	11	82	240
		15	106	
	40	5.5	48	240
		7.5	57	
	50x40	7.5	55	300
		11	68	
	65x50	11	59	500
		15	74	
80x65	15	58	900	
	18.5	67		
100x80	15	39	1200	
	18.5	48		
125x100	30	50	2000	



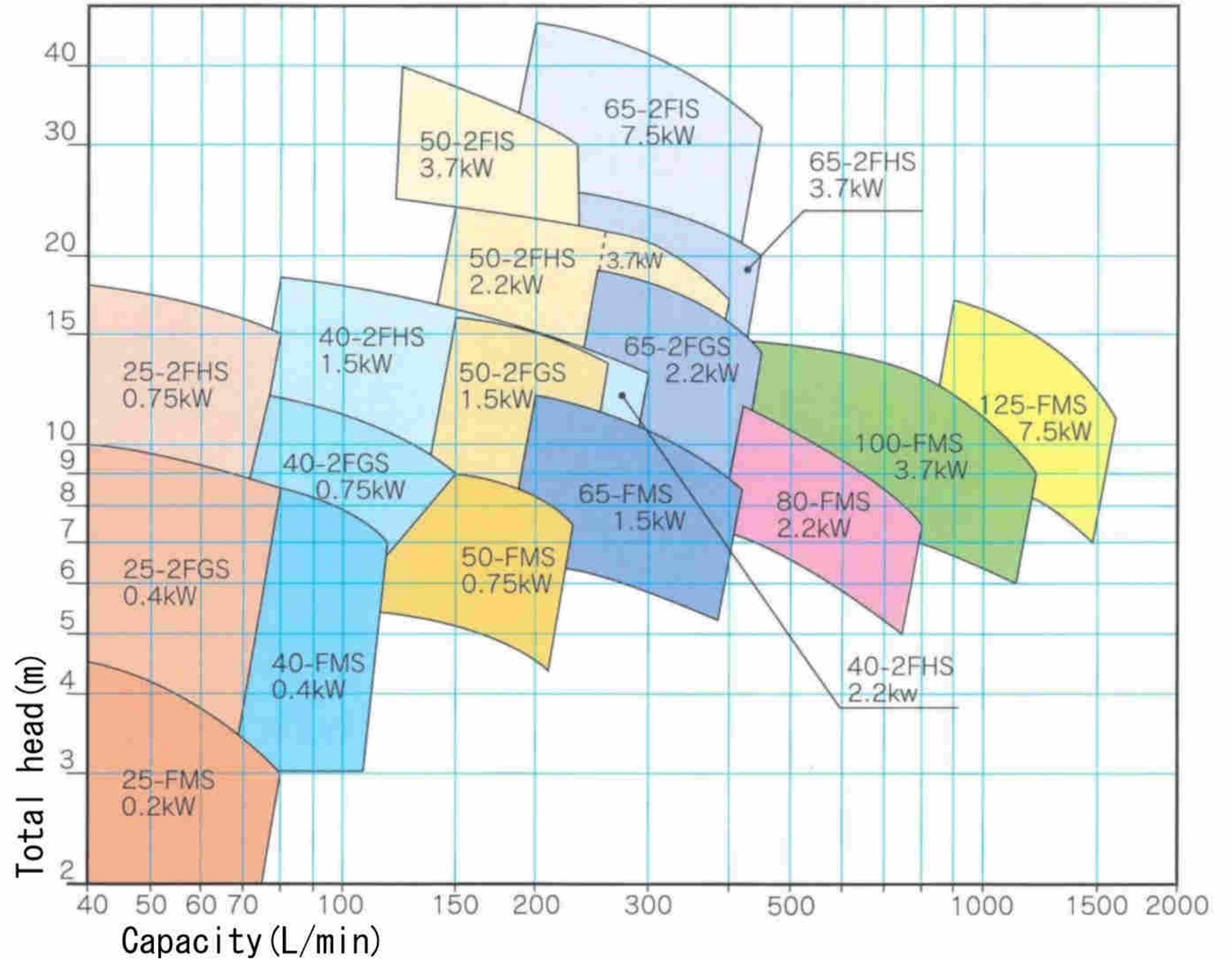
[Self-priming type] Standard specifications / Performance curves



FMS 4P motor / Normal model
 2FGS 2P motor / Normal model
 2FHS 2P motor / High pump head model
 2FIS 2P motor / High pump head model

● 50Hz

	Bore (mm)	Power (kW)	Head (m)	Capacity (L/min)
FMS	25	0.2	3	80
	40	0.4	7	125
	50	0.75	7.5	250
	65	1.5	8.5	420
	80	2.2	7.5	800
	100	3.7	9	1200
	125	7.5	11	1600
2FGS	25	0.4	8.5	80
	40	0.75	9	150
	50	1.5	13.5	260
	65	2.2	14	450
2FHS	25	0.75	15	80
	40	1.5	16	150
		2.2	13	300
	50	2.2	22	260
		3.7	17	400
65	3.7	20	450	
2FIS	50	3.7	32	200
	65	7.5	32	450

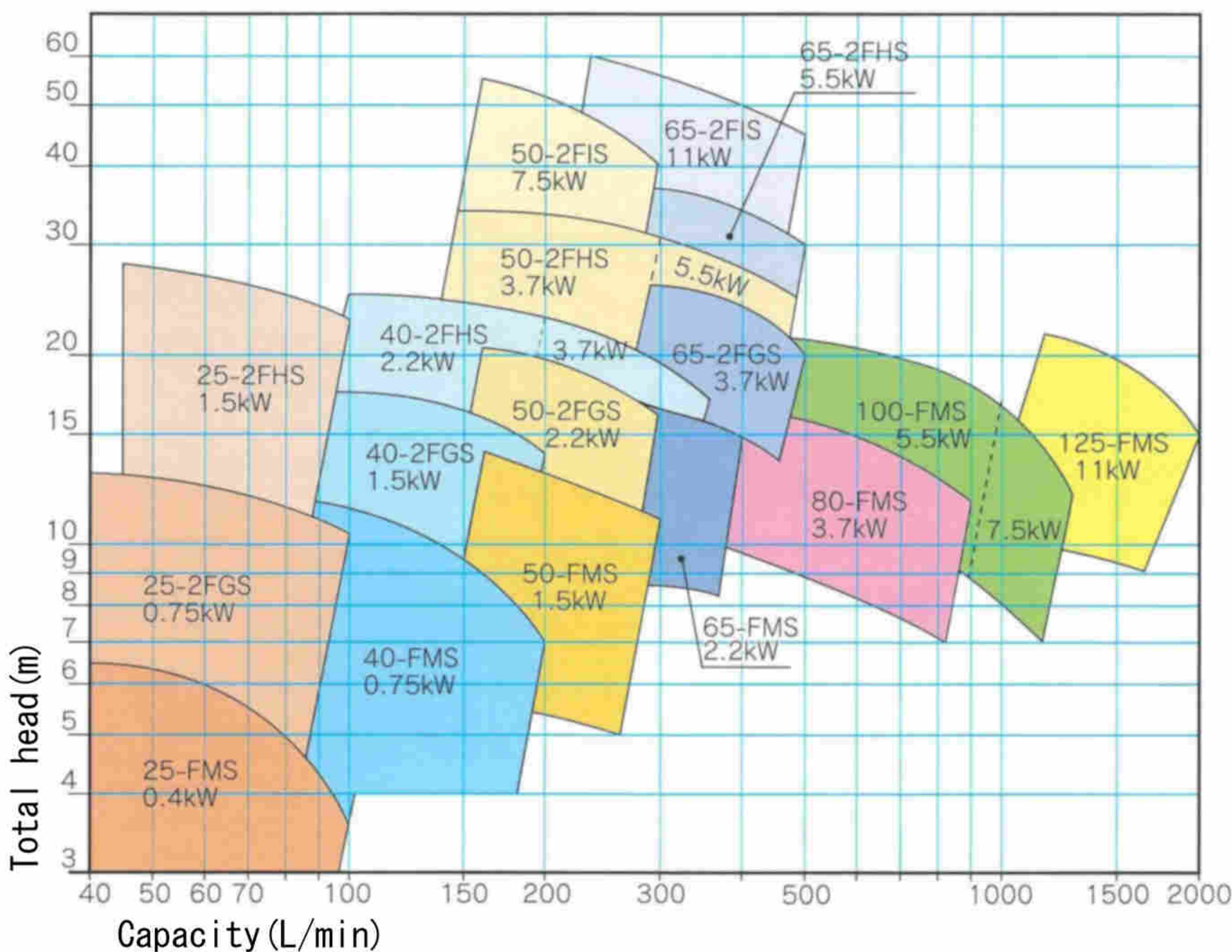


Pump identification

Model : 25 - FMS - 27 M
 ① ② ③ ④

- ① Bore
- ② Model
- ③ Wetted Material 27 (SUS304/SCS13)
32 (SUS316/SCS14)
- ④ Shaft seal M (Mechanical seal)
G (Gland packing)

● 60Hz



	Bore (mm)	Power (kW)	Head (m)	Capacity (L/min)
FMS	25	0.4	3.6	100
	40	0.75	7	200
	50	1.5	11	300
	65	2.2	15	400
	80	3.7	12	900
	100	5.5	17	1000
		7.5	12	1300
125	11	15	2000	
	25	0.75	10.5	100
2FGS	40	1.5	14	200
	50	2.2	16	300
	65	3.7	20	500
	25	1.5	23	100
2FHS	40	2.2	23	200
		3.7	17	360
	50	3.7	32	300
		5.5	25	480
65	5.5	30	500	
2FIS	50	7.5	40	300
	65	11	45	500

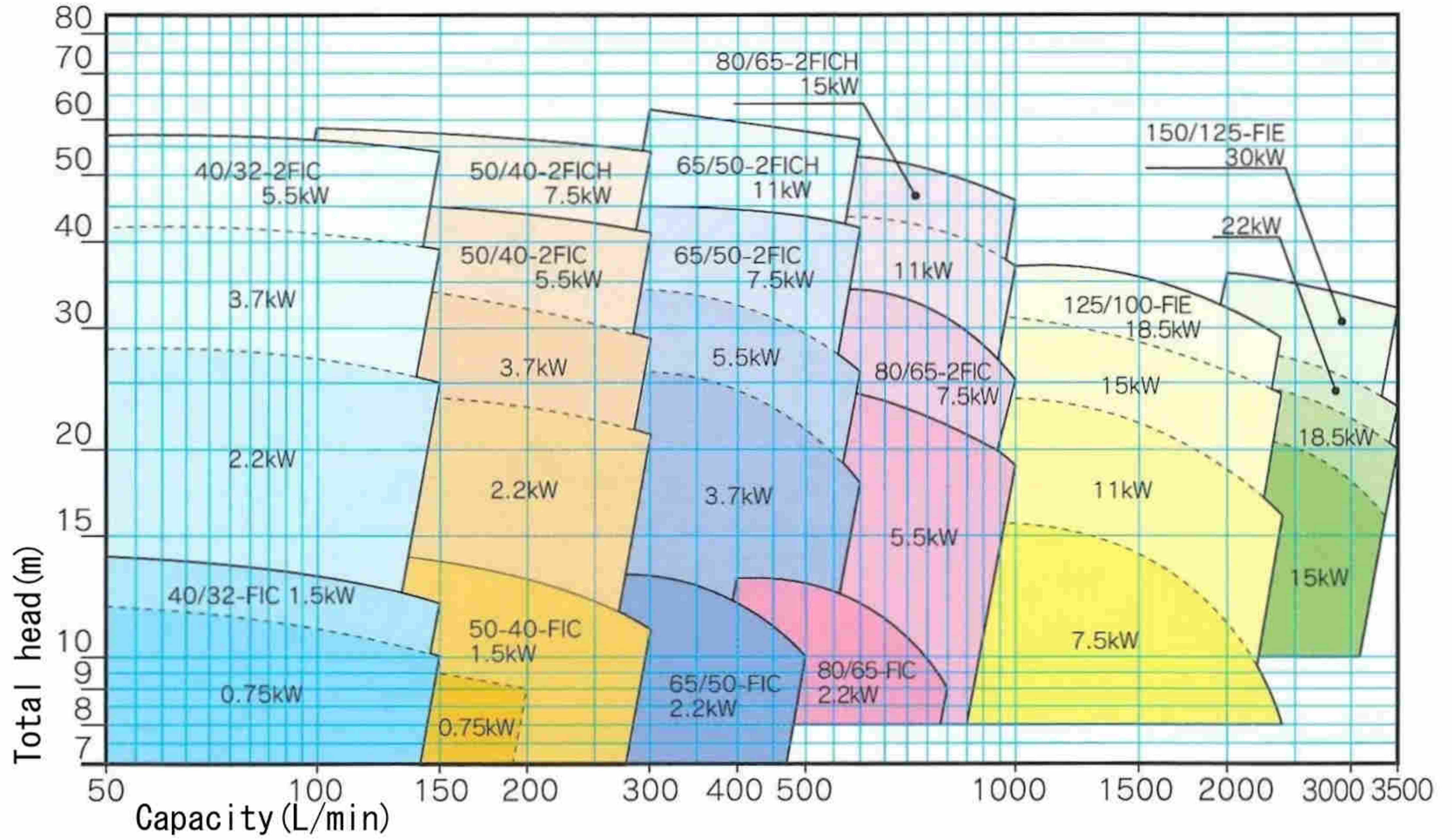
JIMS 16bar standard (Non self-priming type) Standard specifications / Performance curves



FIC 4P motor / Normal model
 2FIC(H) 2P motor / High pump head model
 FIE 4P motor / High pump head model

●50Hz

	Bore (mm)	Power (kW)	Head (m)	Capacity (L/min)		
FIC	40x32	0.75	10	150		
		1.5	12			
	50x40	0.75	9	200		
		1.5	11			
65x50	2.2	10	500			
	2.2	9				
2FIC 2FICH	40x32	2.2	25	150		
		3.7	39			
		5.5	54			
	50x40	2.2	21	300		
		3.7	29			
		5.5	41			
	65x50	7.5	54	600		
		3.7	18			
		5.5	26			
		7.5	42			
		11	56			
		15	71			
80x65	5.5	18	1000			
	7.5	25				
	11	37				
	15	46				
	FIE	125x100		7.5	8	2400
				11	16	
15			24			
150x125		18.5	29	3500		
		15	16			
		22	23			
		30	32			



Pump identification

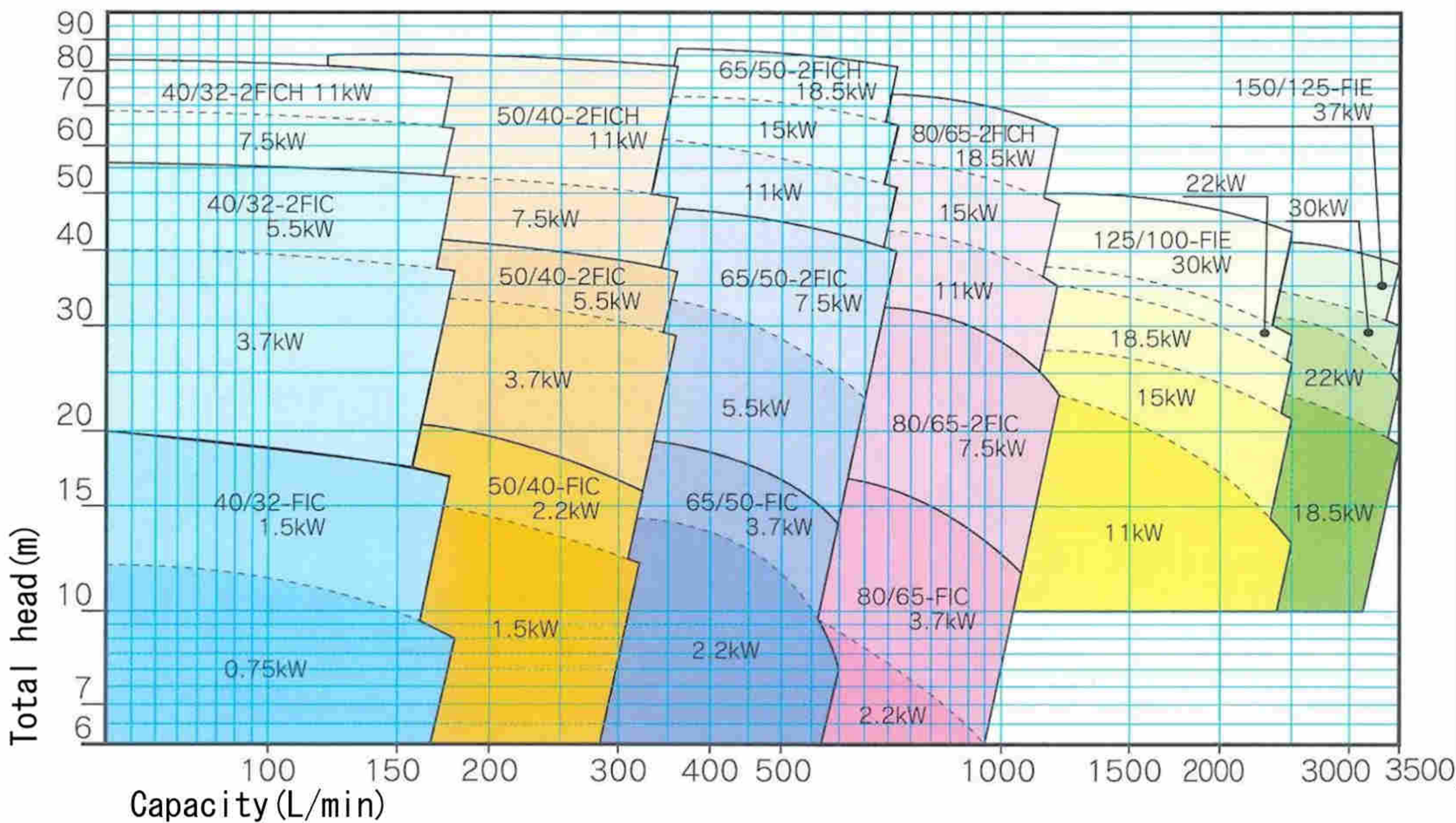
Model : 40x32 FIC-27 M

① ② ③ ④

- ① Bore
- ② Model
- ③ Wetted Material 27 (SUS304/SCS13)
32 (SUS316/SCS14)
- ④ Shaft seal M (Mechanical seal)
G (Gland packing)

●60Hz

	Bore (mm)	Power (kW)	Head (m)	Capacity (L/min)		
FIC	40x32	0.75	9	180		
		1.5	17			
	50x40	1.5	12	320		
		2.2	16			
65x50	2.2	8	600			
	3.7	14				
80x65	2.2	6	960			
	3.7	13				
2FIC 2FICH	40x32	3.7	37	180		
		5.5	53			
		7.5	65			
	50x40	3.7	29	360		
		5.5	37			
		7.5	49			
	65x50	11	81	720		
		5.5	20			
		7.5	40			
		15	65			
		18.5	81			
		22	101			
80x65	7.5	23	1200			
	11	35				
	15	48				
	18.5	64				
	FIE	125x100		11	13	2500
				15	21	
18.5			26			
150x125		22	29	3500		
		30	43			
		37	57			





HDI (Small capacity)



HDI-D (middle capacity)



HDI-L (large capacity)

Product lineup

Pump head material

- PVC
- MMA :Acrylic
- SUS :SUS316/SCS14
- PTFE
- FC :FC200

PVC



Φ6 hose

MMA



Φ15 hose

PTFE

Union pipe
(R 1/2)

SUS



15A Flange

Features

Reduction gear

- HDI (small model) : planetary gear reduction
 HDI-D/L (middle/large model) : worm gear reduction

Stable flow rate

HDI series have stable flow rate in other metering pumps.

Chemical resistance

It can be used to transfer almost all kinds of chemicals for its diaphragm lining made from PTFE.
 It can be used to transfer liquid with slurry.
 (except HDI-30)

Application

- Sterilization (water supply)
- Various chemicals (water treatment equipment)
- Food additives (food plant)
- Various chemicals (chemical plant)
- Pressure pump for dewatering machine and filter press

Pump identification

<u>HDI</u>	-	<u>100</u>	-	<u>V</u>	<u>T</u>	<u>F</u>	-	<u>1</u>	-	<u>6</u>	-	<u>Y</u>		
<u>HDI</u>	-	<u>4D</u>	-	<u>V</u>	<u>T</u>	<u>F</u>	-	<u>2</u>	-	<u>20F</u>	-	<u>C</u>	-	<u>Y</u>
<u>HDI</u>	-	<u>15L</u>	-	<u>FC</u>	<u>NN</u>		-	<u>2</u>	-	<u>20F</u>			-	<u>Y</u>
①		②		③	④	⑤		⑥		⑦		⑧		⑨

① Series symbol (HDI)

HDI :Standard
 ※HDI-S: Explosion proof
 Inverter motor
 etc.

② Pump model

HDI Small (30-2500)
 HDI-D Midium (4D-6D)
 HDI-L Large (4L-45L)

③ Pump head Material

V : PVC
 A : MMA (Acrylic)
 S : SUS316 (SCS14)
 T : PTFE
 FC : FC200

④ Ball valve

T : PTFE
 F : FKM
 N : NBR
 C : Ceramics
 H : Hastelloy-C
 S : SUS316
 SS : SUS316 (with spring)

⑤ O-ring

T : PTFE
 F : FKM
 E : EPT
 N : NBR

⑥ Motor

1:100V 1phase indoor
 2:200V 3phase outdoor
 X:other voltage
 (380V/440V etc.)

⑦ Connection

⑧ HDI-D symbol (Double head type)

⑨ Special (Y)

Standard specification

Model	Max flow rate(ml/min)		Max disc. press. (Mpa)	Max stroke length (mm)	Pump head (φ)	Connection			Motor	N/W(kg)					
	50Hz	60Hz				Hose	Union(pipe)	Flange		PVC,MMA PTFE	SUS				
HDI	30	2.5~25	3~30	1.0(0.3)	2	Φ6×Φ11 HOSE	16A TS union	JIS10K	200V 100W TENV*1 3Φ outdoor or 100V 65W TEFC*2 1Φ indoor	12	14				
	50	5~50	6~60		4					70	12	14			
	100	10~100	12~120		6					100	12	14			
	250	25~250	30~300	0.5(0.3)	6					Φ15×Φ22 HOSE	R1/2 pipe	20mm	13	15	
	500	67~670	80~800										13	15	
	1000	100~1000	120~1200										13	17	
	2000	200~2000	240~2400										13	17	
	2500	250~2500	300~3000										0.3	130	14
HDI-D	4D	400~4000	480~4800	0.5(0.3)	8.4	R1/2 pipe	[PTFE type] [SUS type]	200V 0.2kW TEFC*2 3Φ outdoor	28	36					
	6D	500~5000	600~6000	0.3					120	29	37				
HDI-L	4L	300~3000	360~3600	1.0	10	Φ25×Φ33 HOSE	R3/4 pipe	20mm	200V 0.75kW (200V 1.5kW) TEFC*2 3Φ outdoor	---	40				
	8L	660~6600	800~8000	1.0(0.5)						55	60				
	10L	1000~10000	1200~12000	0.5						55	60				
	15L	1320~13200	1600~16000	1.0(0.5)						70	75				
	20L	2000~20000	2400~24000	0.5						70	75				
	30L	3000~30000	3600~36000	0.5(0.2)						18	275	50mm	200V 1.5kW TEFC 3Φ outdoor	110	115
	45L	4500~45000	5400~54000	0.5(0.2)						20	300	65mm	200V 2.2kW TEFC 3Φ outdoor	135	140

*1 TENV : Totally enclosed non ventilated type motor

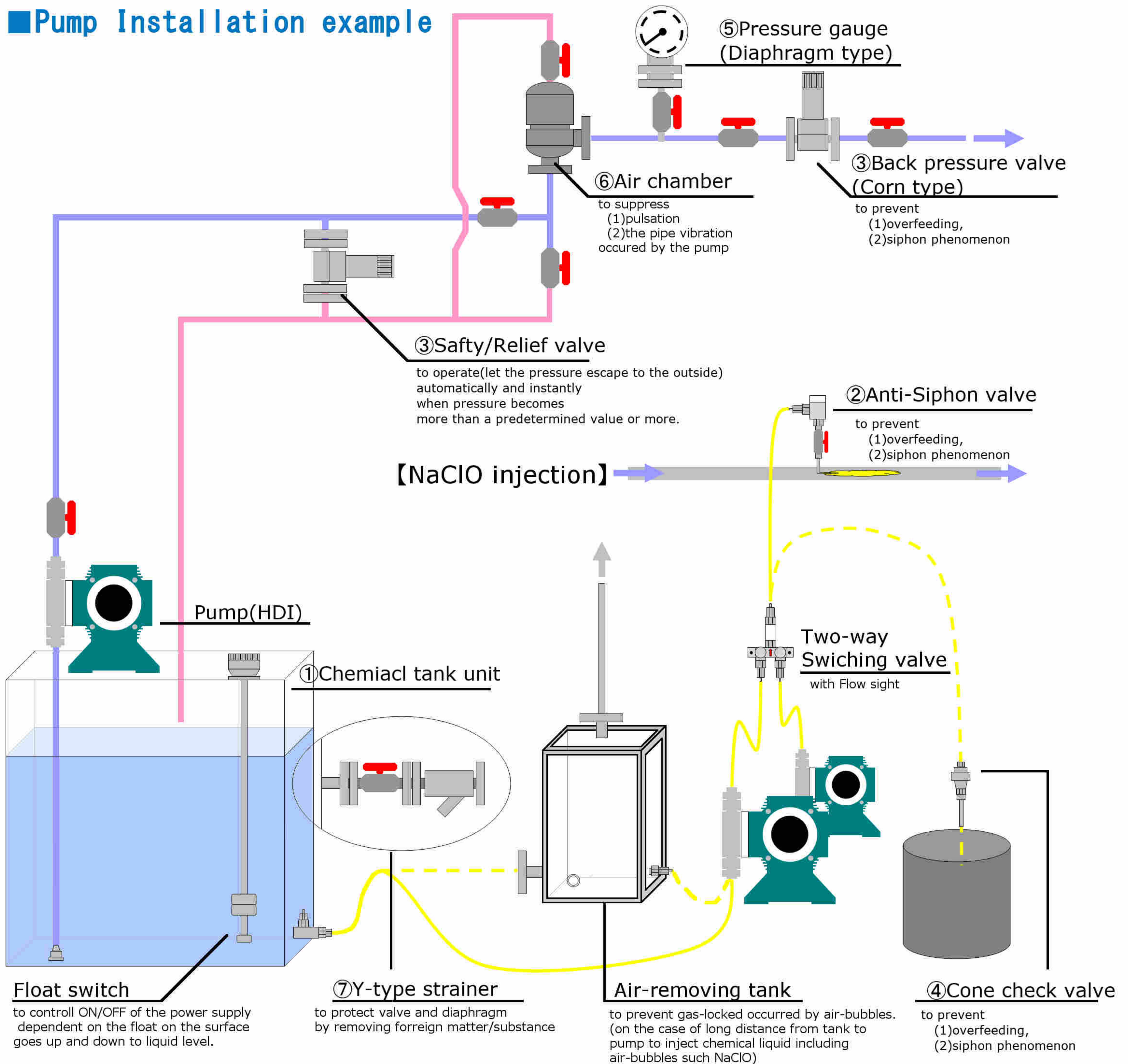
*2 TEFC : Totally enclosed fan-cooled type motor

- Capacity(flow rate) shows on the condition at Discharge pressure 0.3Mpa(at 0.5Mpa on HDI-4L~20L) (water, RT), If discharge pressure is low, it is possible to flow more than the table above by the overfeeding phenomenon.
- The diameter of pump head depends on its material.(Cf. P.5 Dimensions)
- The figure inside Parentheses(-) of max disc. pressure indicates on the case of PTFE type.(HDI-L is PVC/PTFE)
- Explosion-proof motor, different voltage motor can be attached.
- Stroke length(controll flow rate) can be adjusted steplessly.
- Suction head is 2.0m Max at the full stroke)
- Painting: Munsel 10BG3/4(HDI) ,2.5BG6/4(HDI-D/L) and N5.5(motor)
- Grease in reduction gear contains Molybdenum disulfide

Pump head combination table

	PVC type	MMA type *HDI/HDI-D	PTFE type	SUS type	FC type *HDI-4L~20L
Pump head	V : PVC	A : Acrylic	T : PTFE	S : SUS316(SCS14)	FC : FC200
Connector (Joint)	V : PVC	V : PVC	T : PTFE	S : SUS316(SCS14)	FC : FC200
Valve ball	T : PTFE	T : PTFE	T : PTFE	S : SUS316	N : NBR
Diaphragm	PTFE + Hypalon(no contact of liquid)			T : PTFE	T : PTFE
O-ring	F : FKM	F : FKM	F(FKM) / T(PTFE)	F(FKM) / T(PTFE)	F(FKM) / T(PTFE)
Application	HCL H2SO4 (~60%) NH03 NaOH (O-ring:E) NH3 (O-ring:E) FeCL3 PAC Al2(SO4)3	NaClO Ca(OH)2	HF N2SO4 (conc.) HNO3 (conc.)	Organic solvent Oil Alcohols H2SO4 (98%) Sludge dewatering Ca(OH)2	Organic solvent Oil Alcohols Sludge dewatering

Pump Installation example



Accessories

① Chemical tank unit



② Anti-Siphon valve



③ Safety/Relief valve Back pressure valve



④ Cone check valve



Handy pump

*pump for chemical subdivisions from 5-gallon square can or drum.



⑤ Pressure gauge



⑥ Air chamber



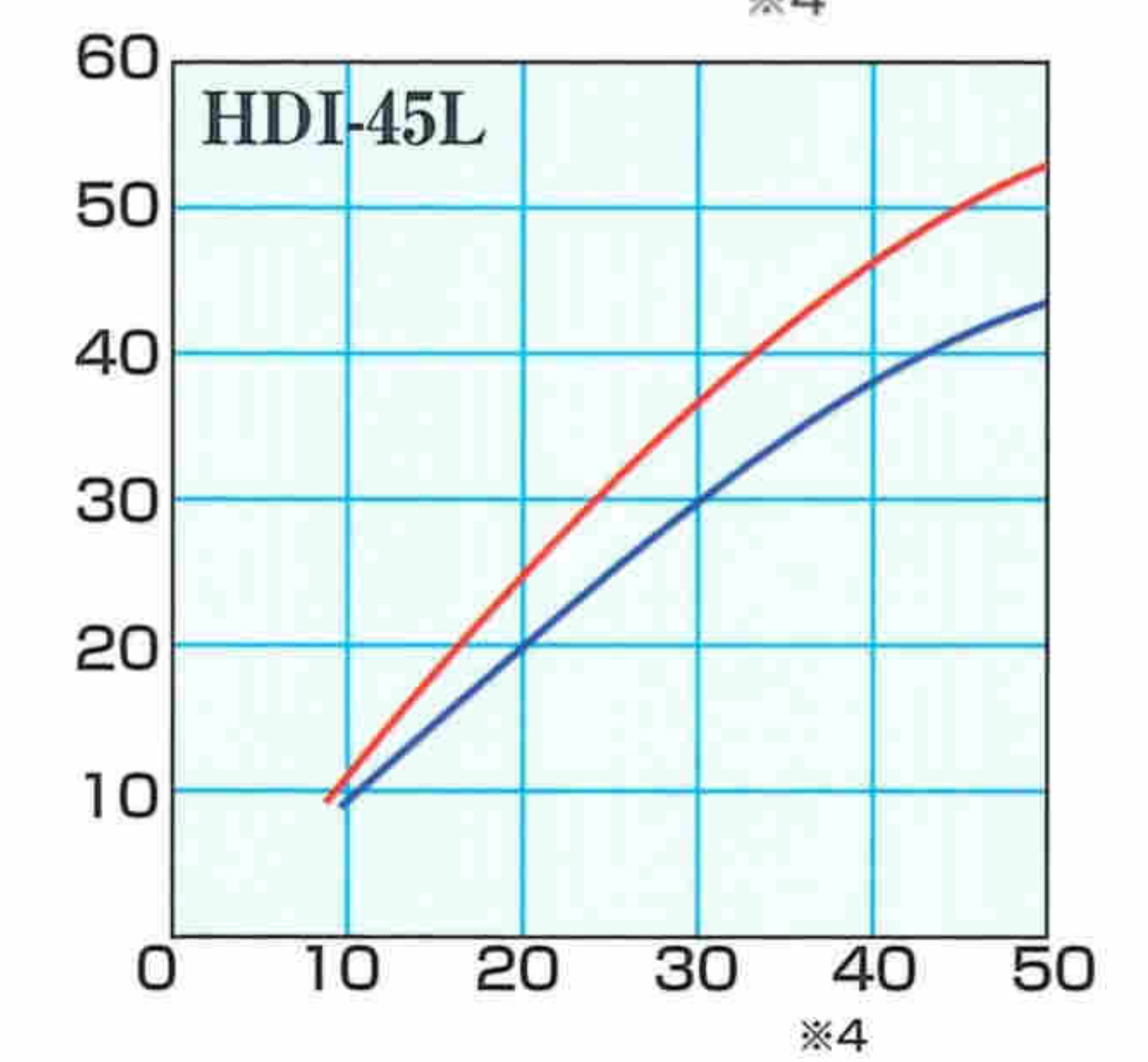
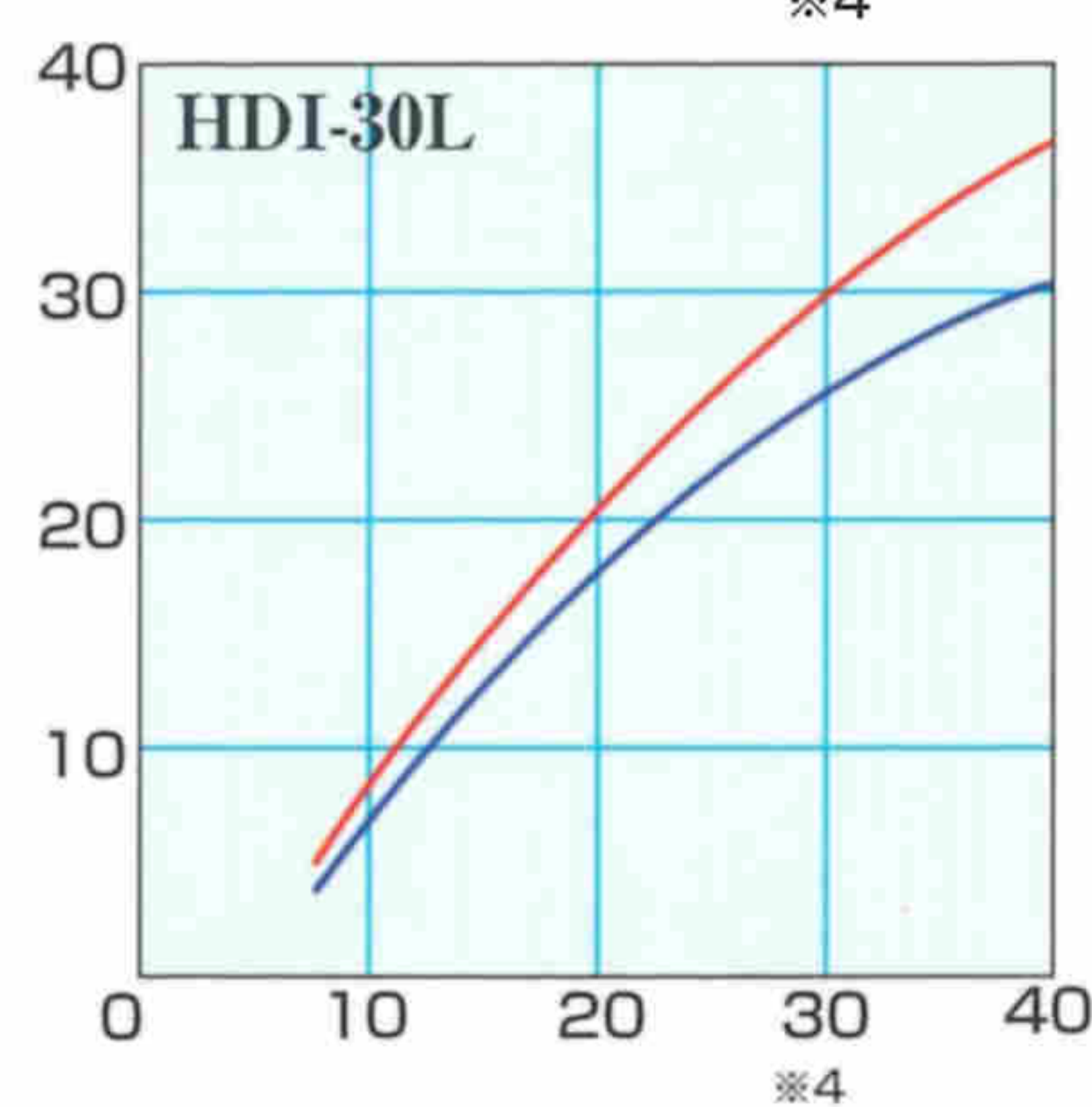
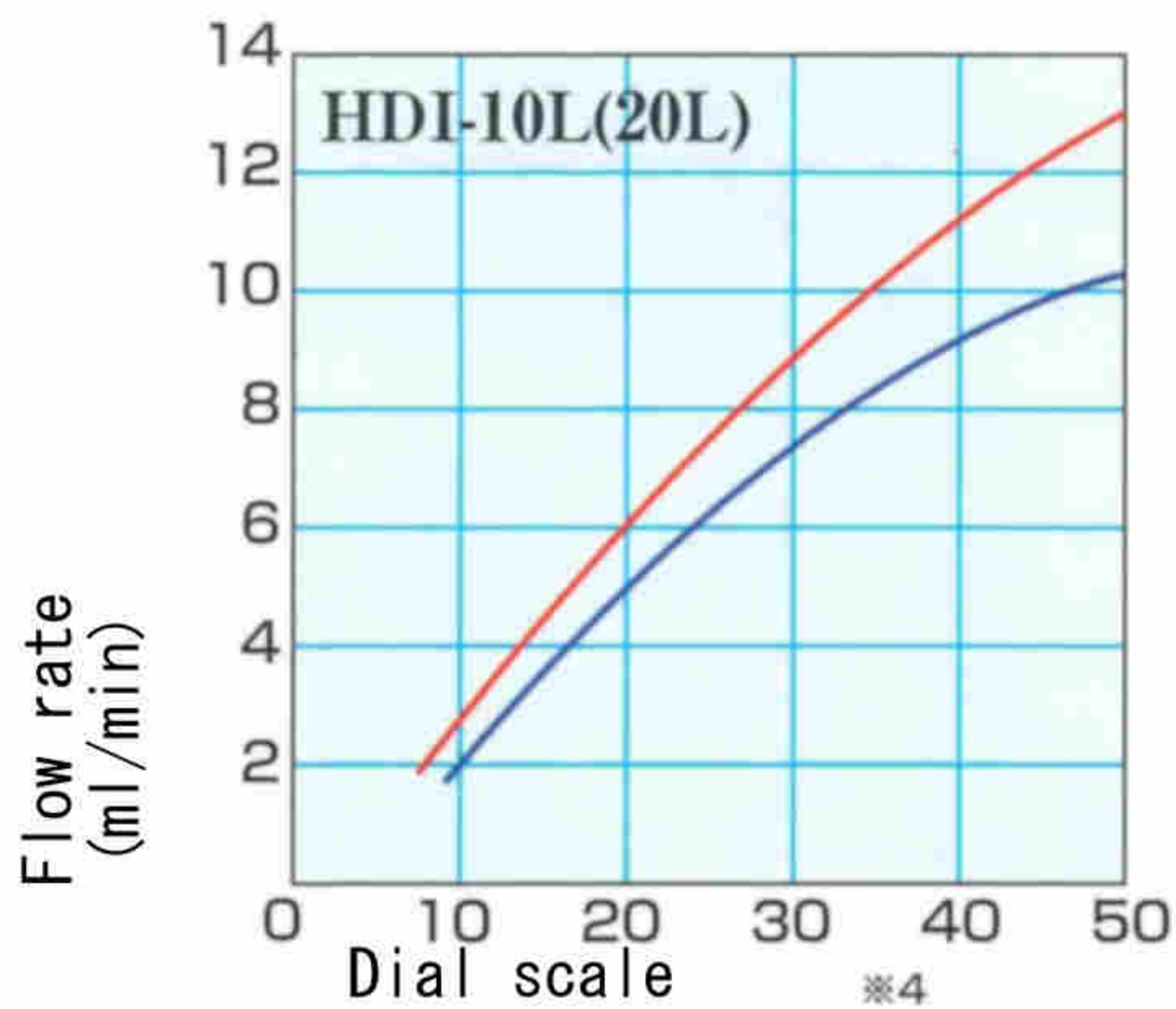
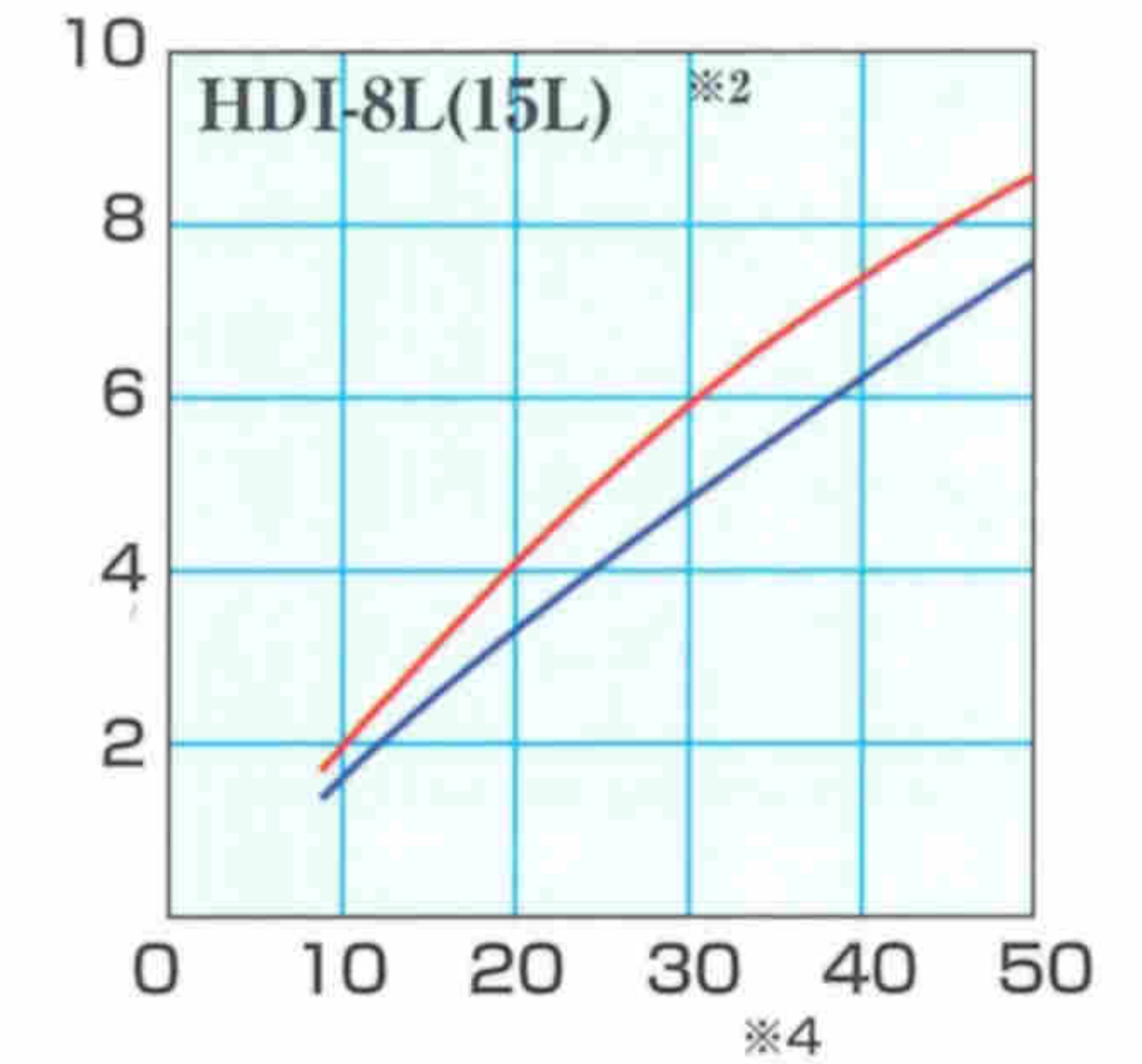
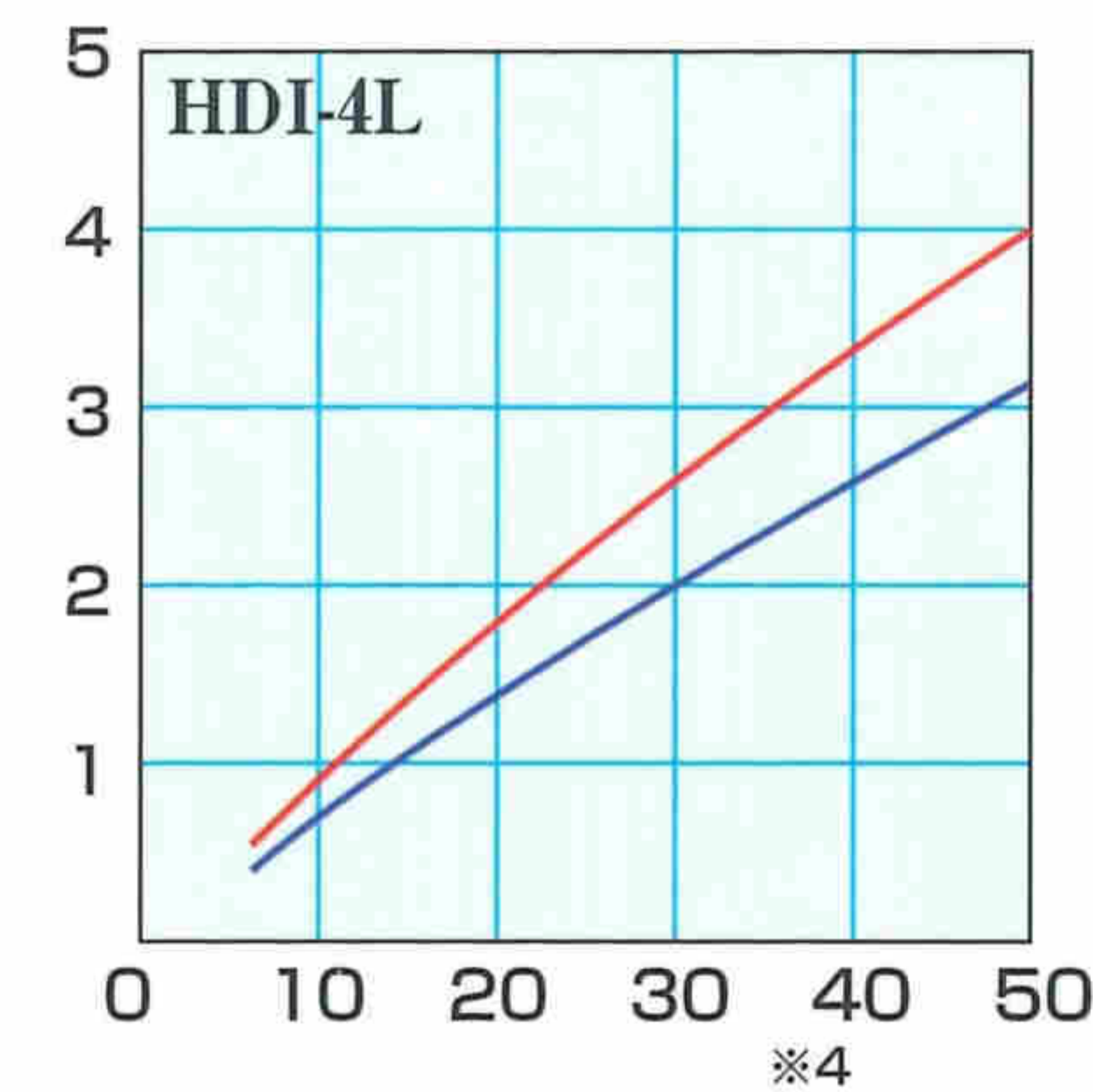
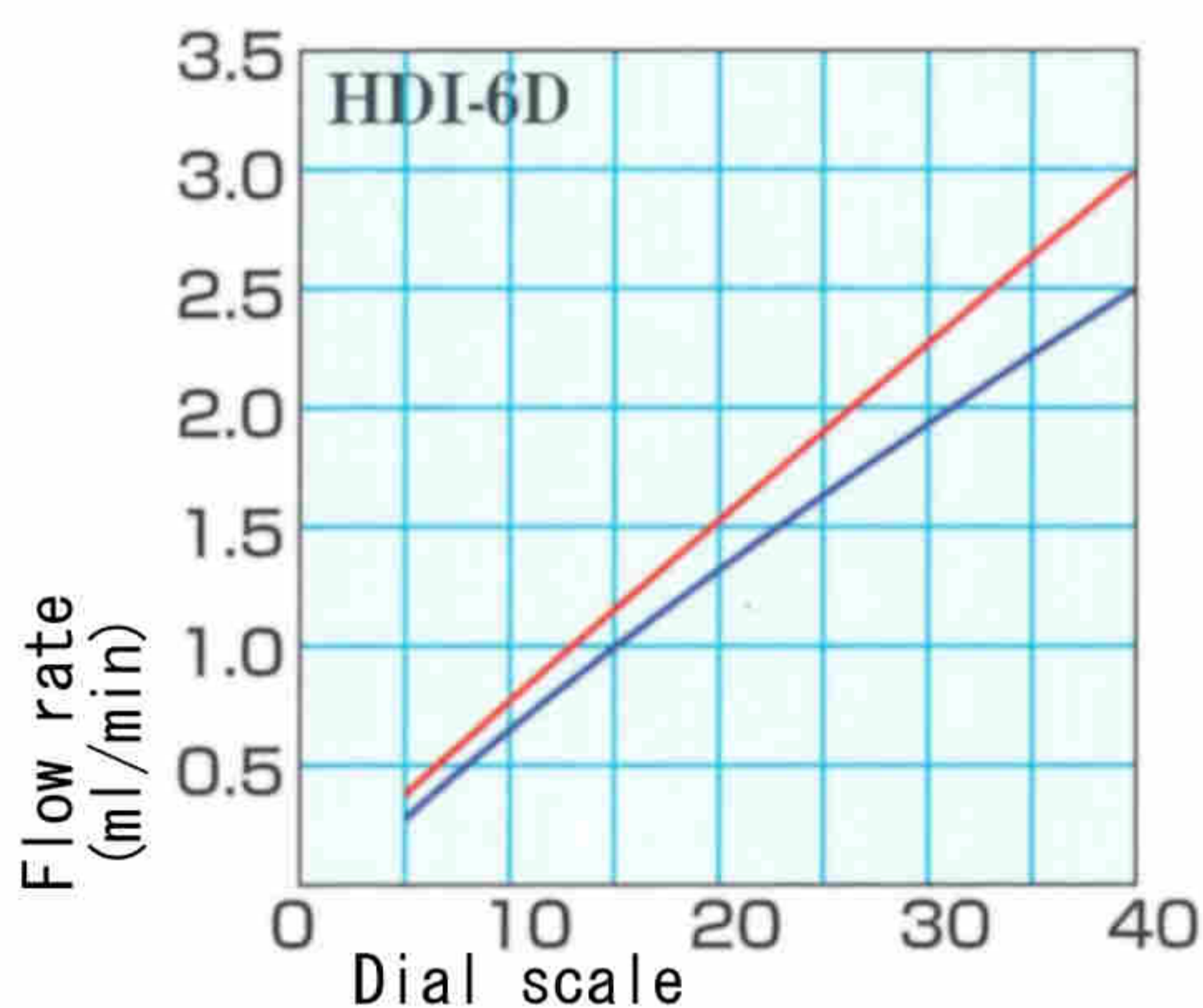
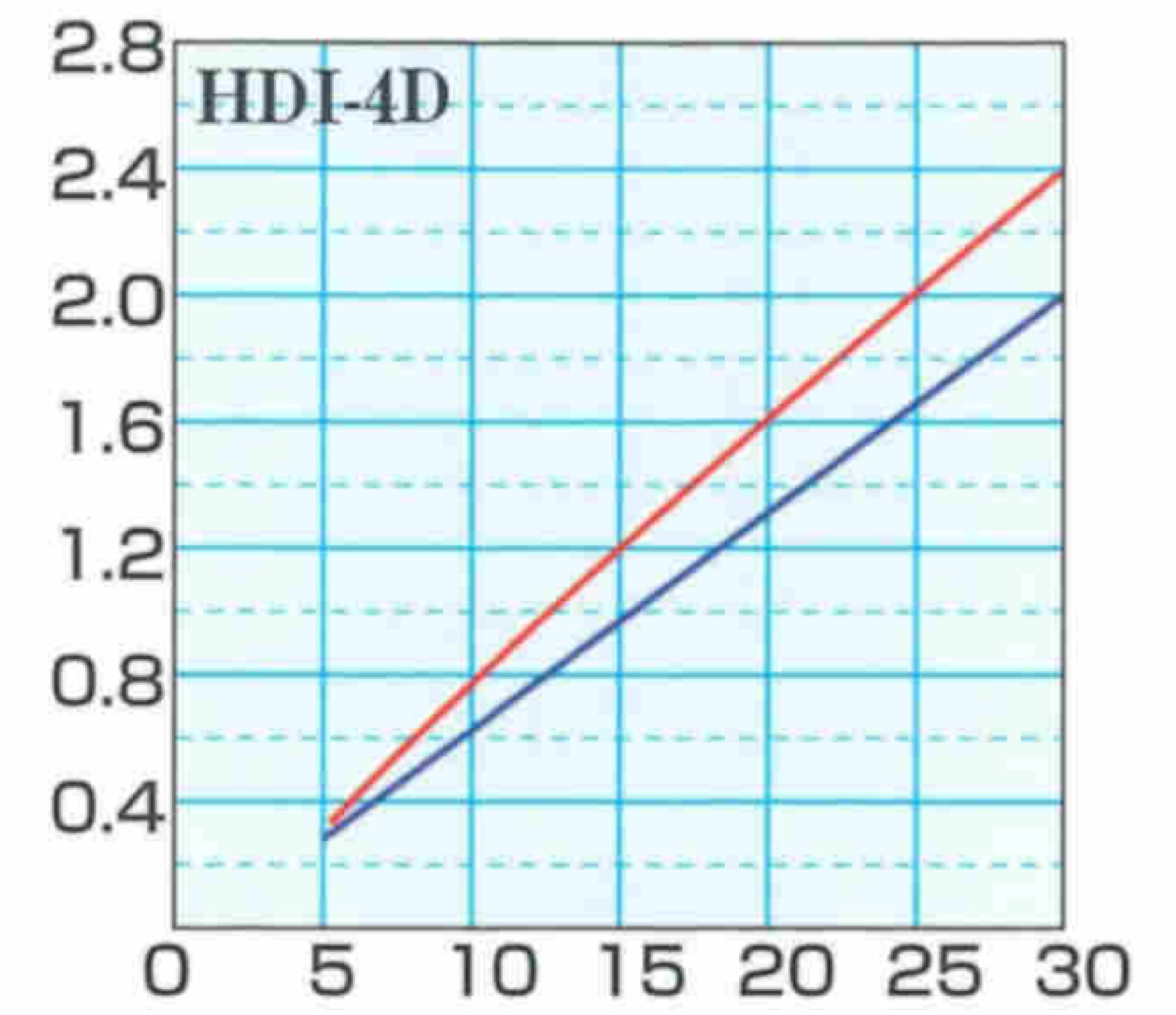
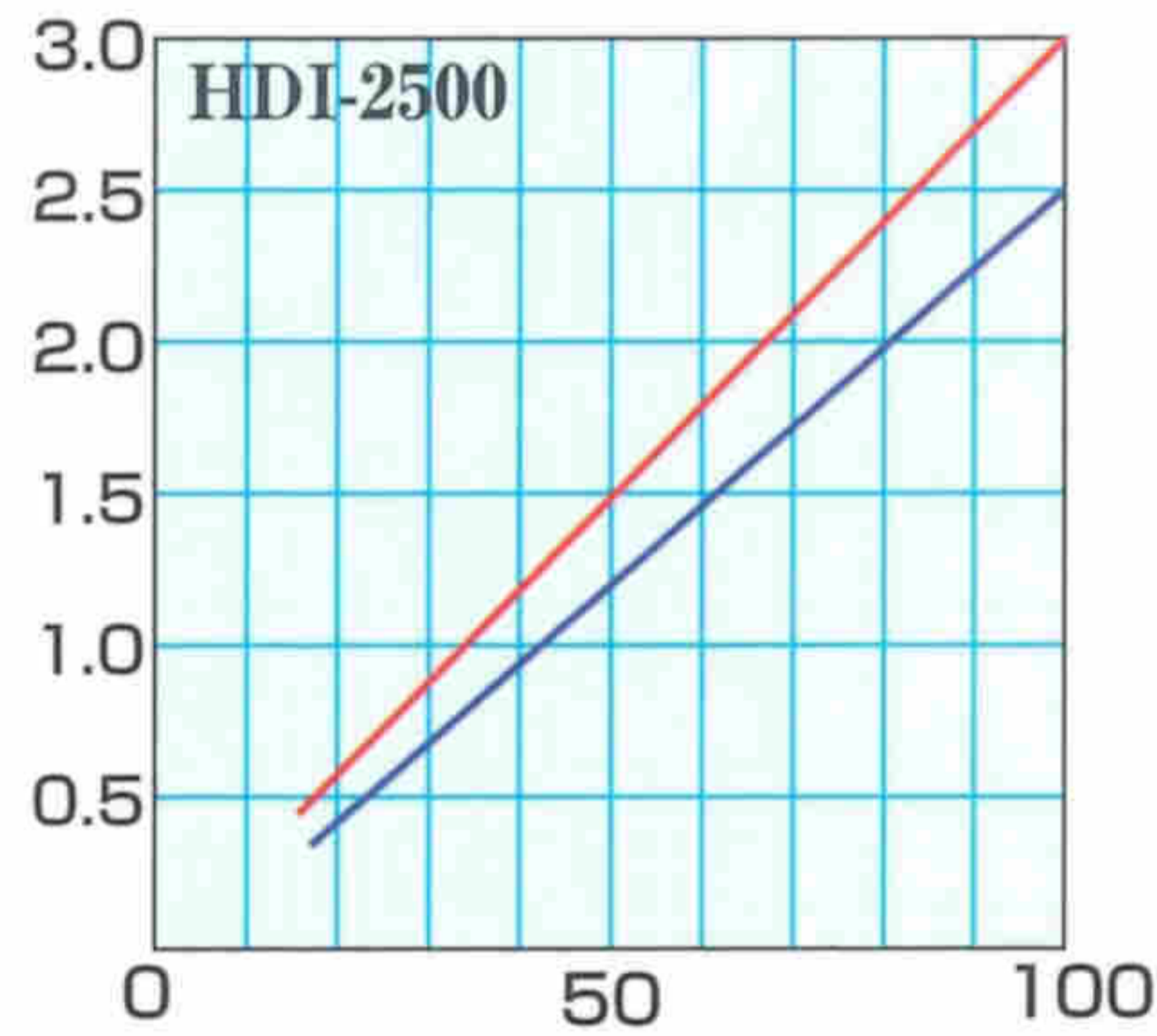
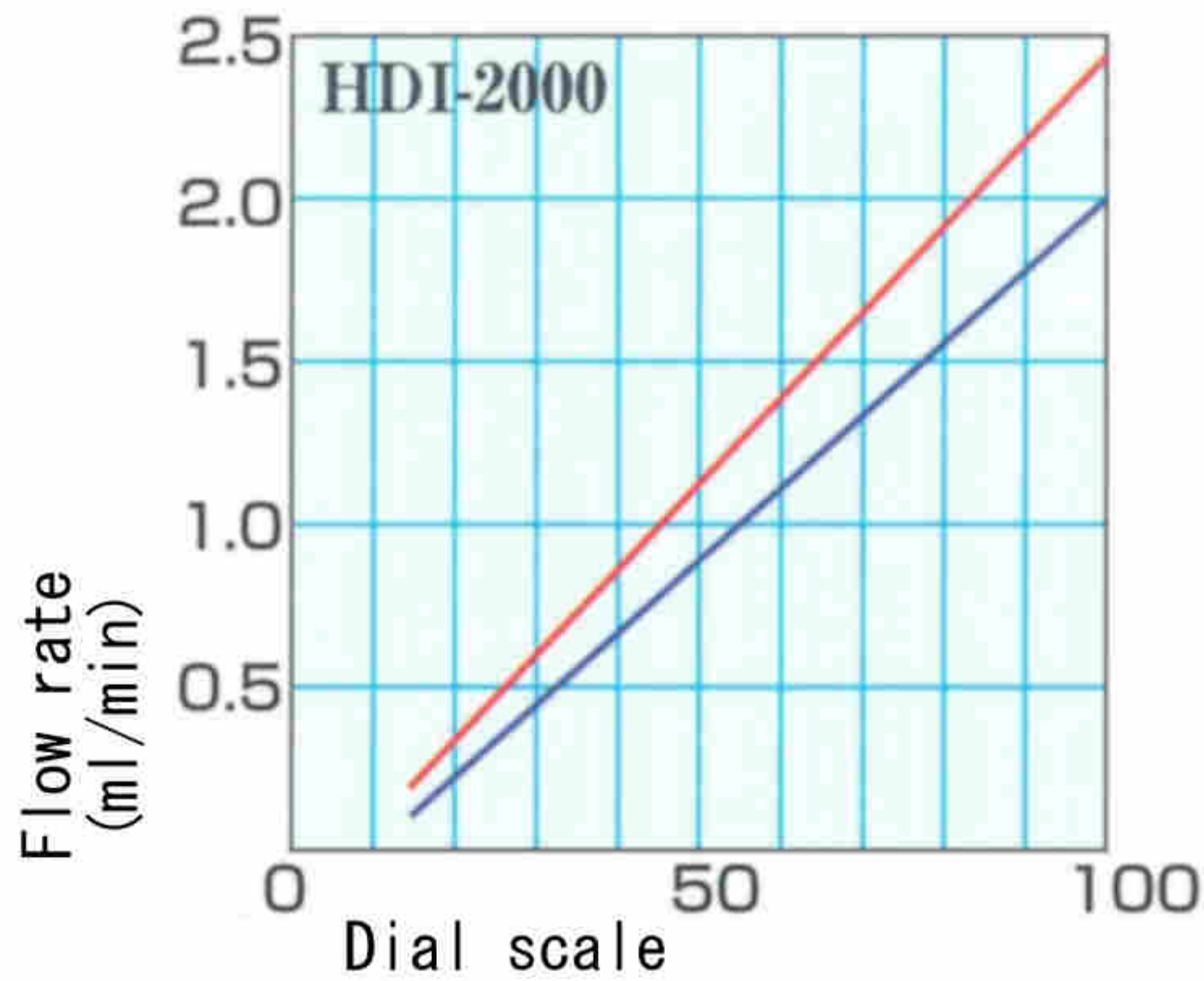
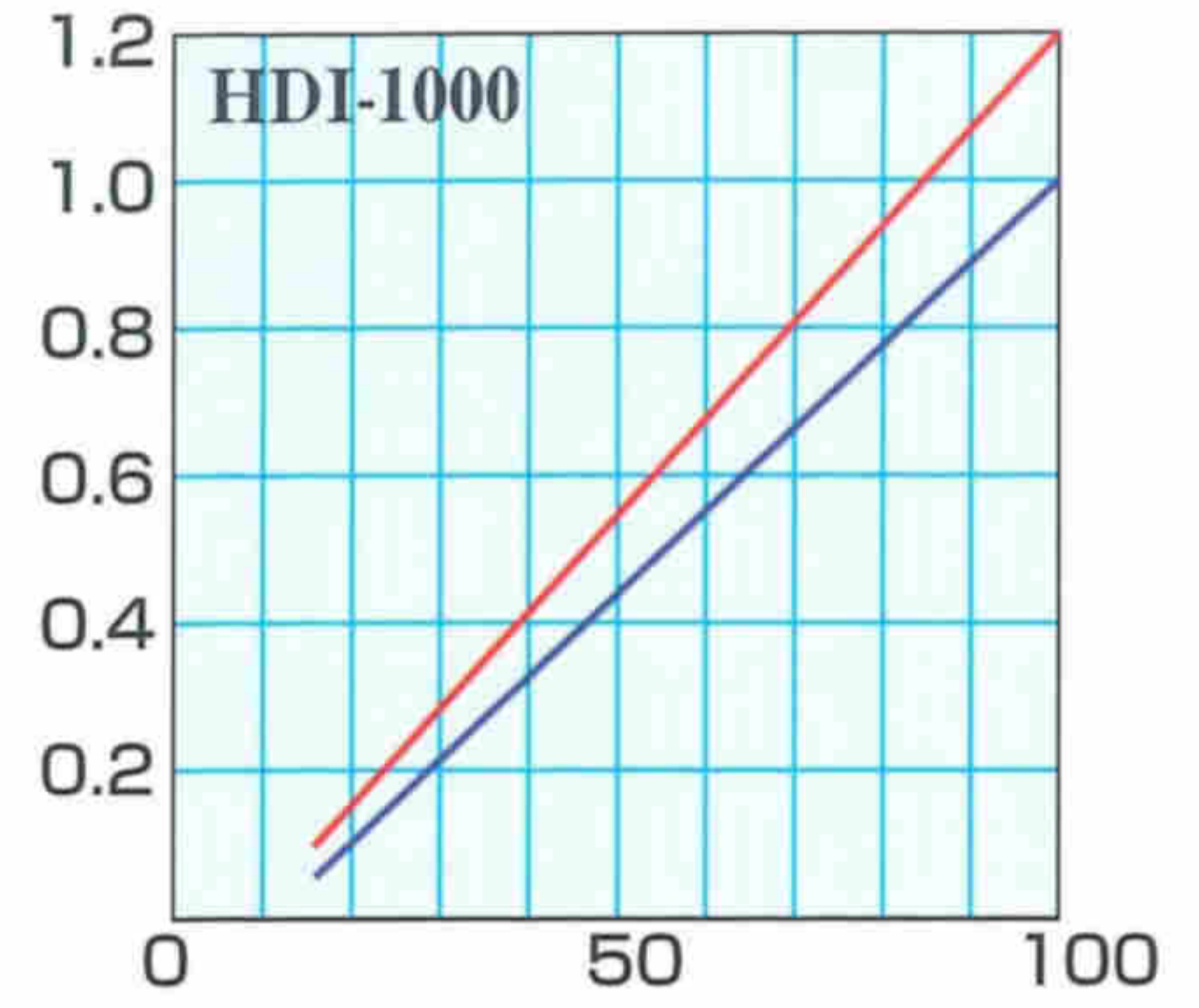
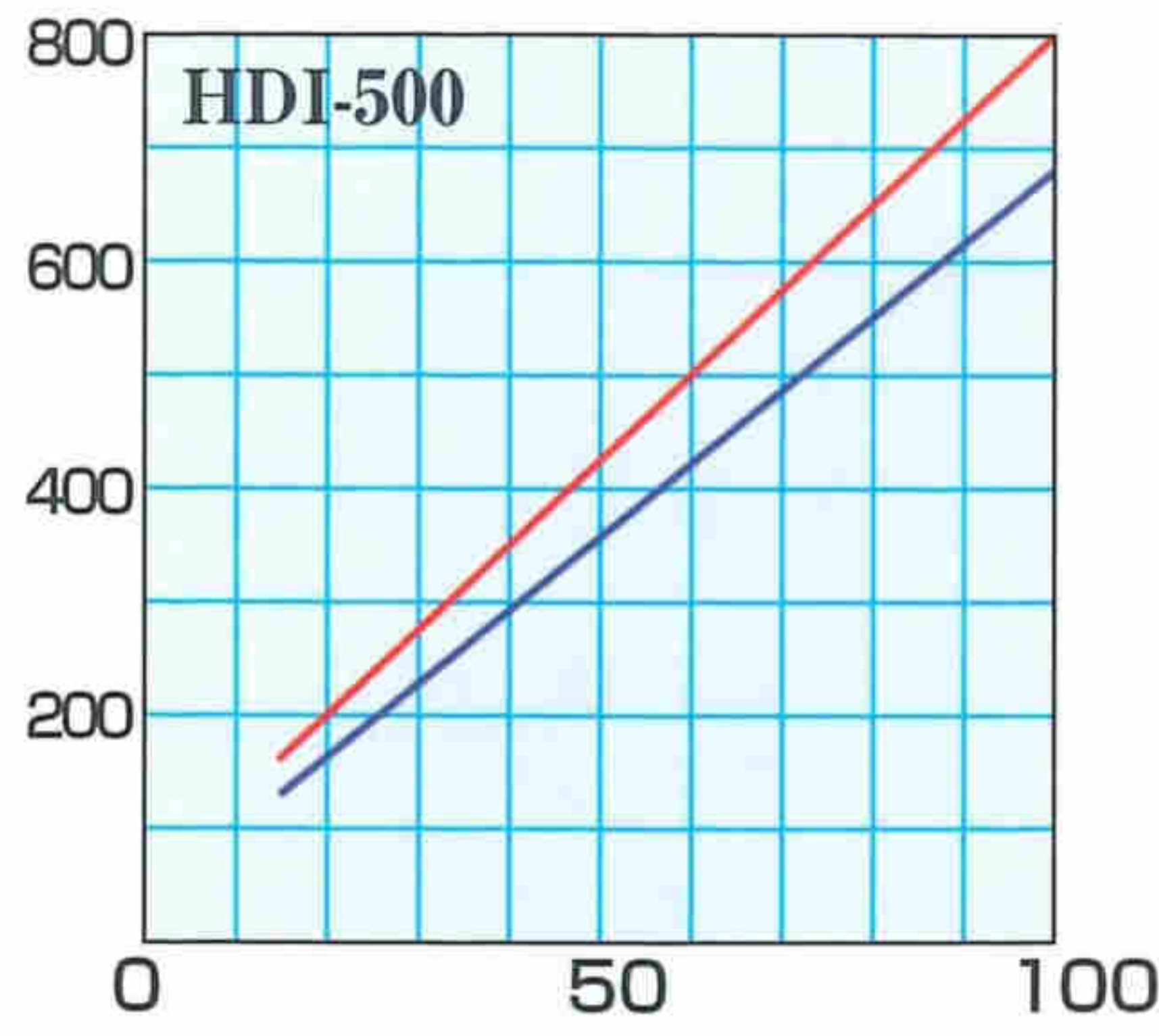
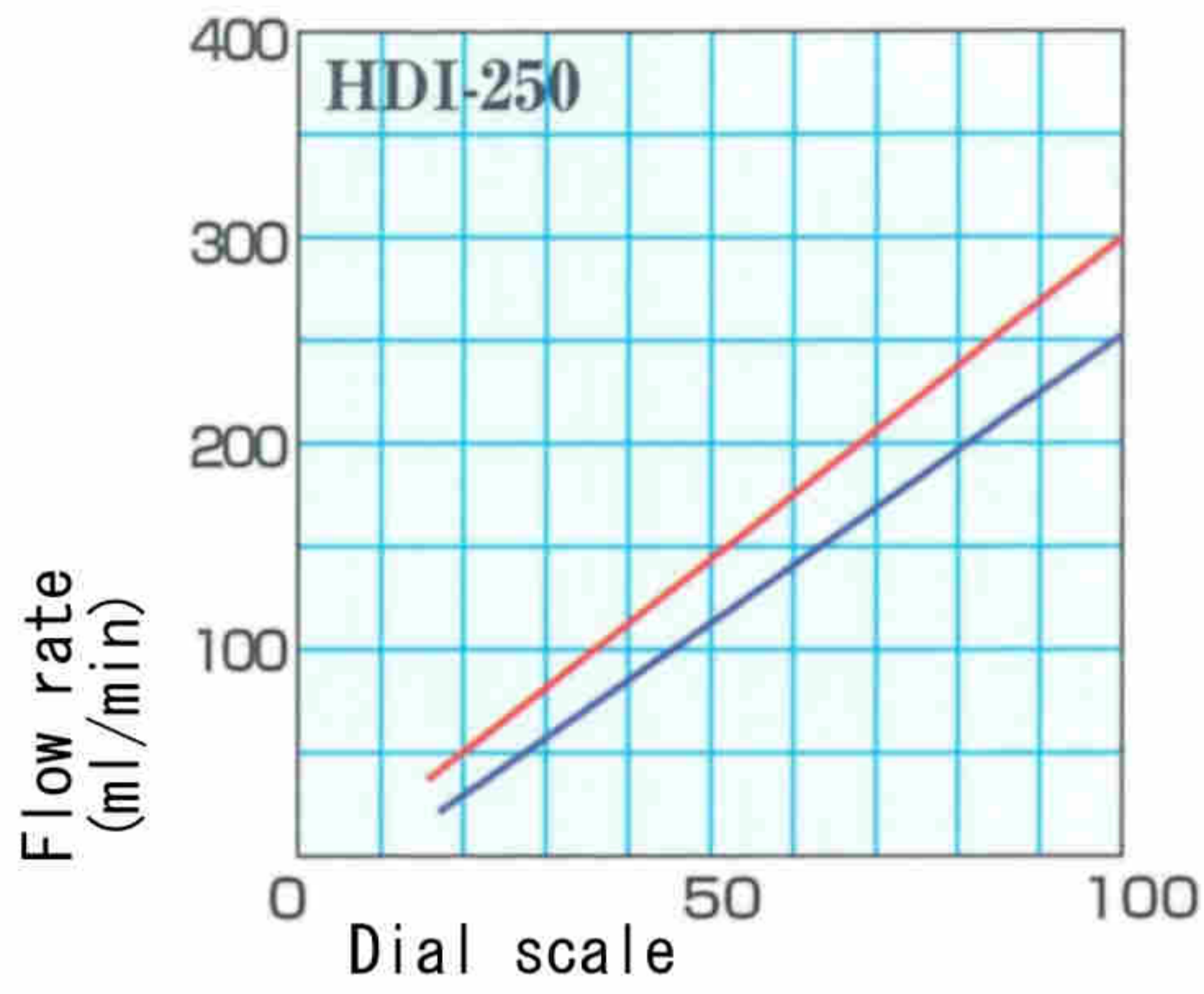
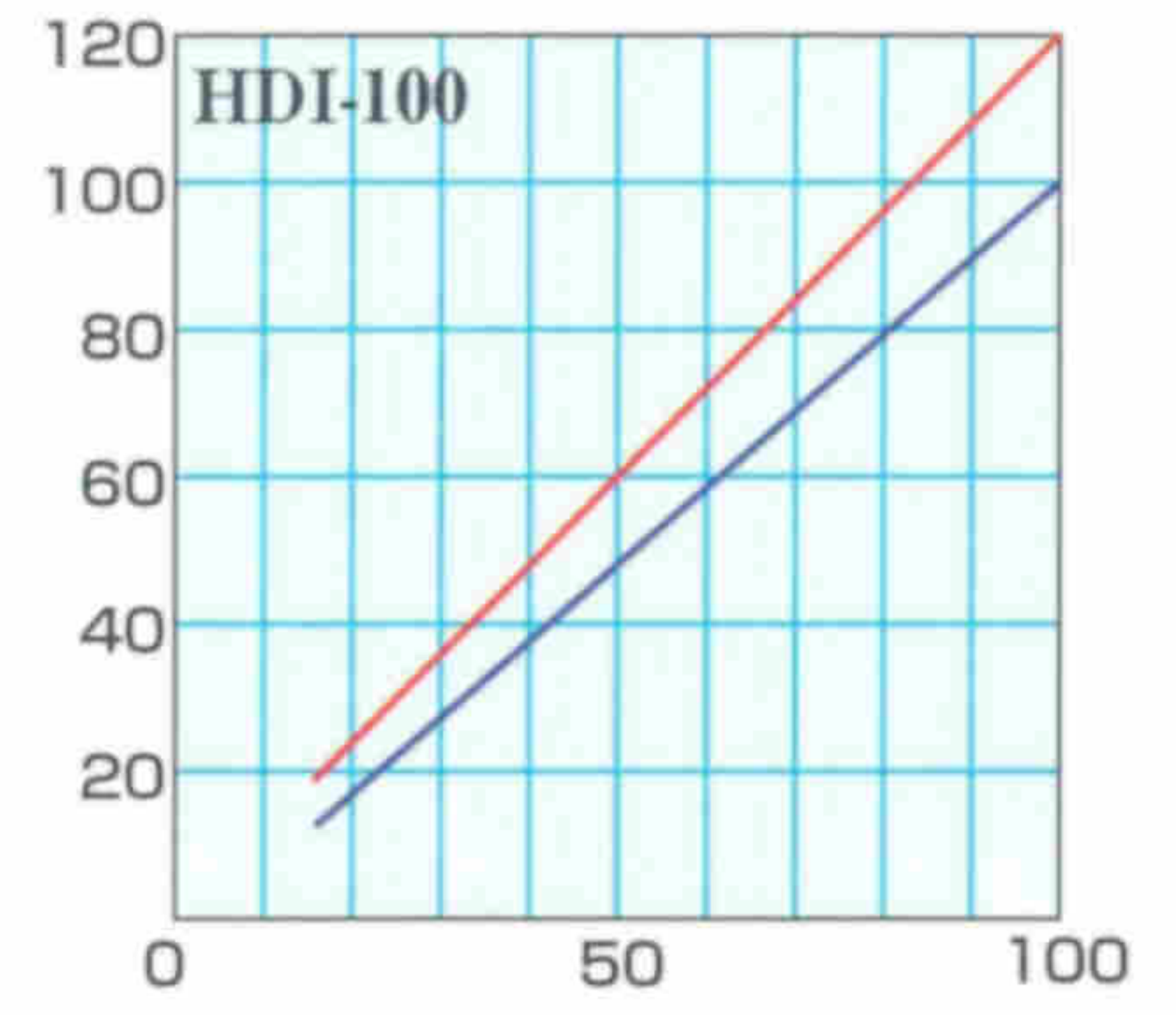
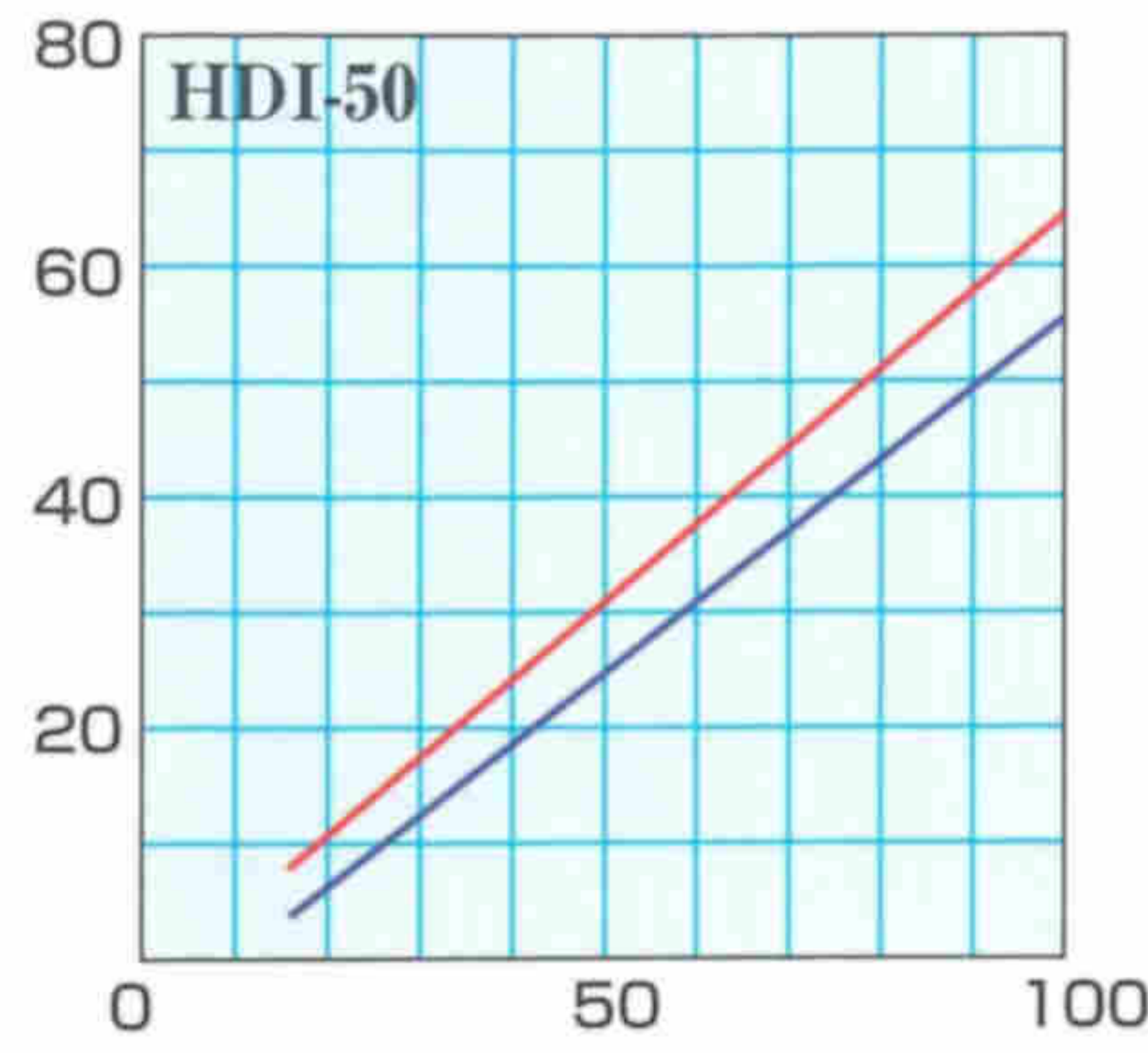
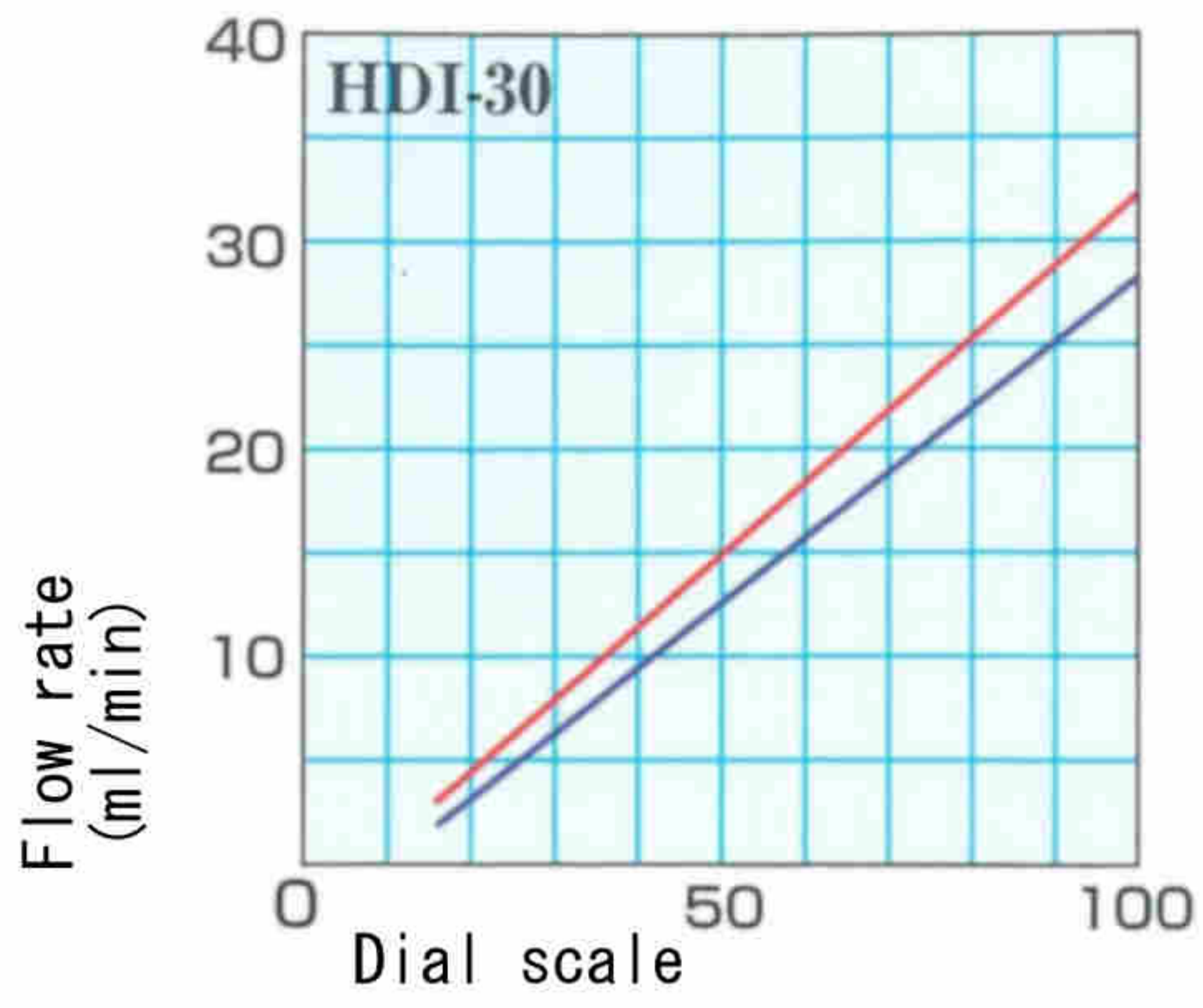
⑦ Y-type strainer



Performance curves

— 50Hz
— 60Hz

※ on the condition that clean water at RT, suction head -1m, and discharge pressure 0.3Mpa (3kg/cm²)



※1 On the case of double head type (HDI-4D and HDI-6D), actual flow rate is two times above.

※2 HDI-15L's flow rate is two times HDI-8L's flow rate

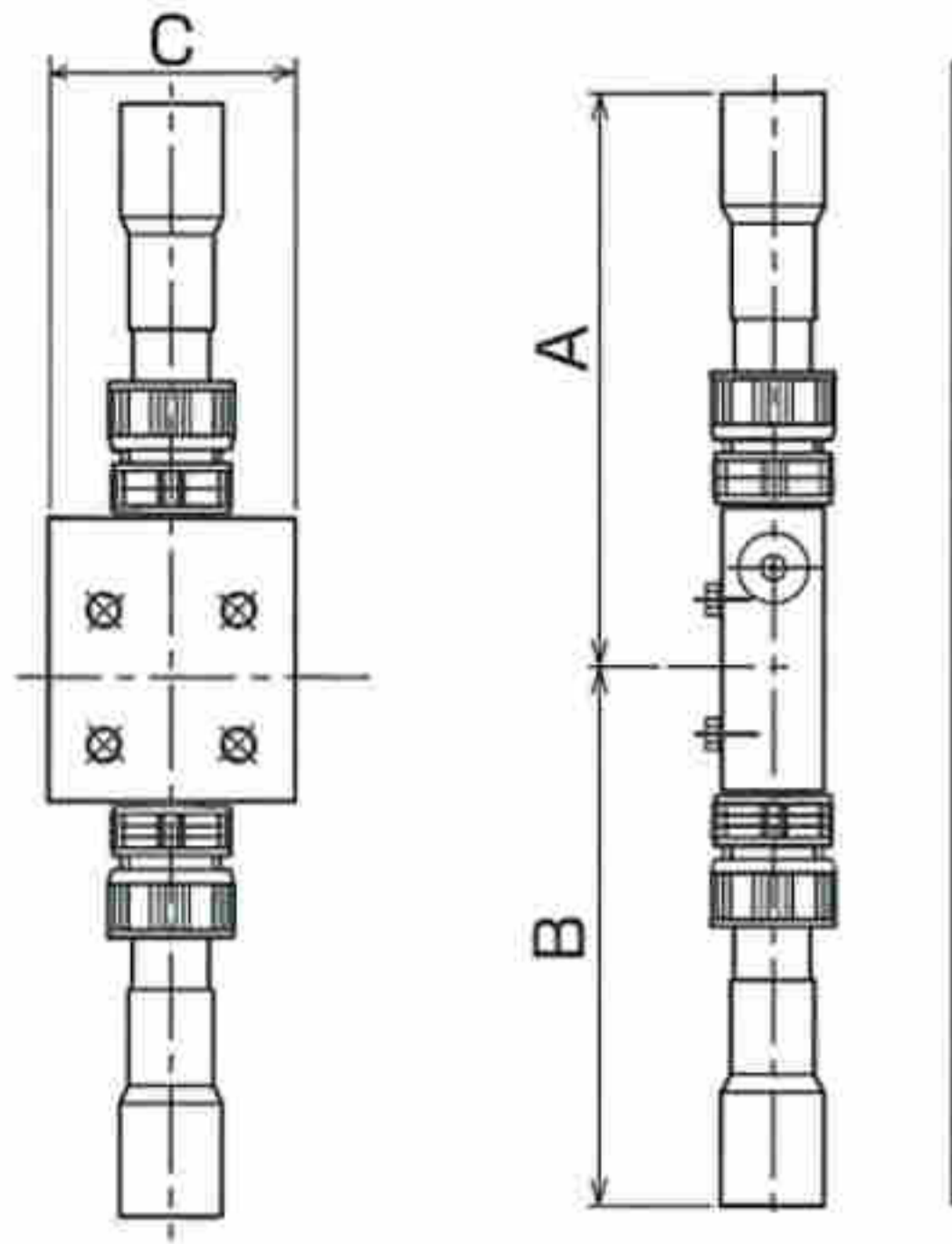
※3 HDI-20L's flow rate is two times HDI-10L's flow rate.

※4 Dial scale for flow rate adjustment "50" (about HDI-30L, Dial scale "40") is full stroke position.

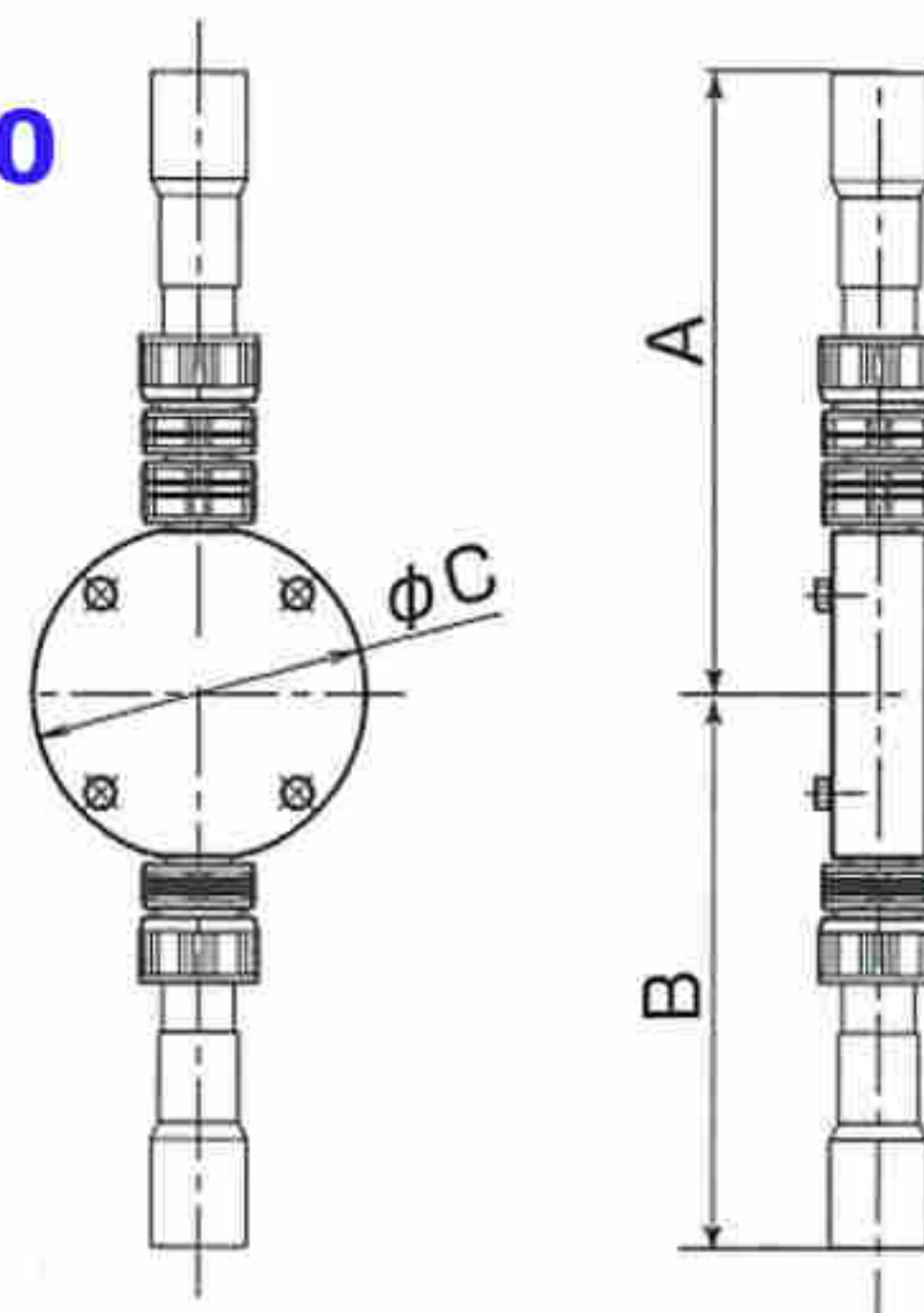
Dimensions

※please contact us for more detail.

HDI-30 Pump head (Union pipe)

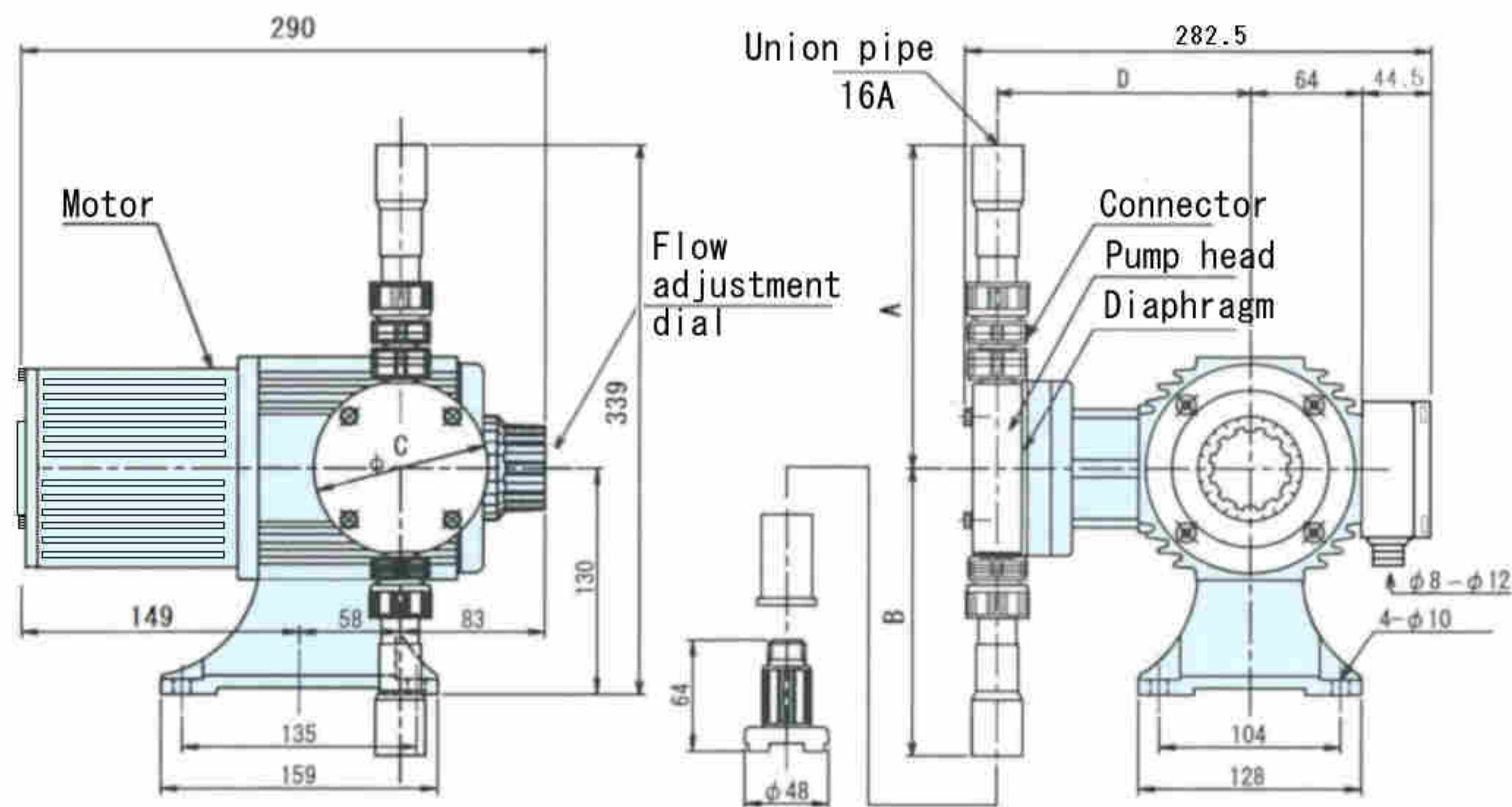


HDI-50~2500 Pump head (Union pipe)

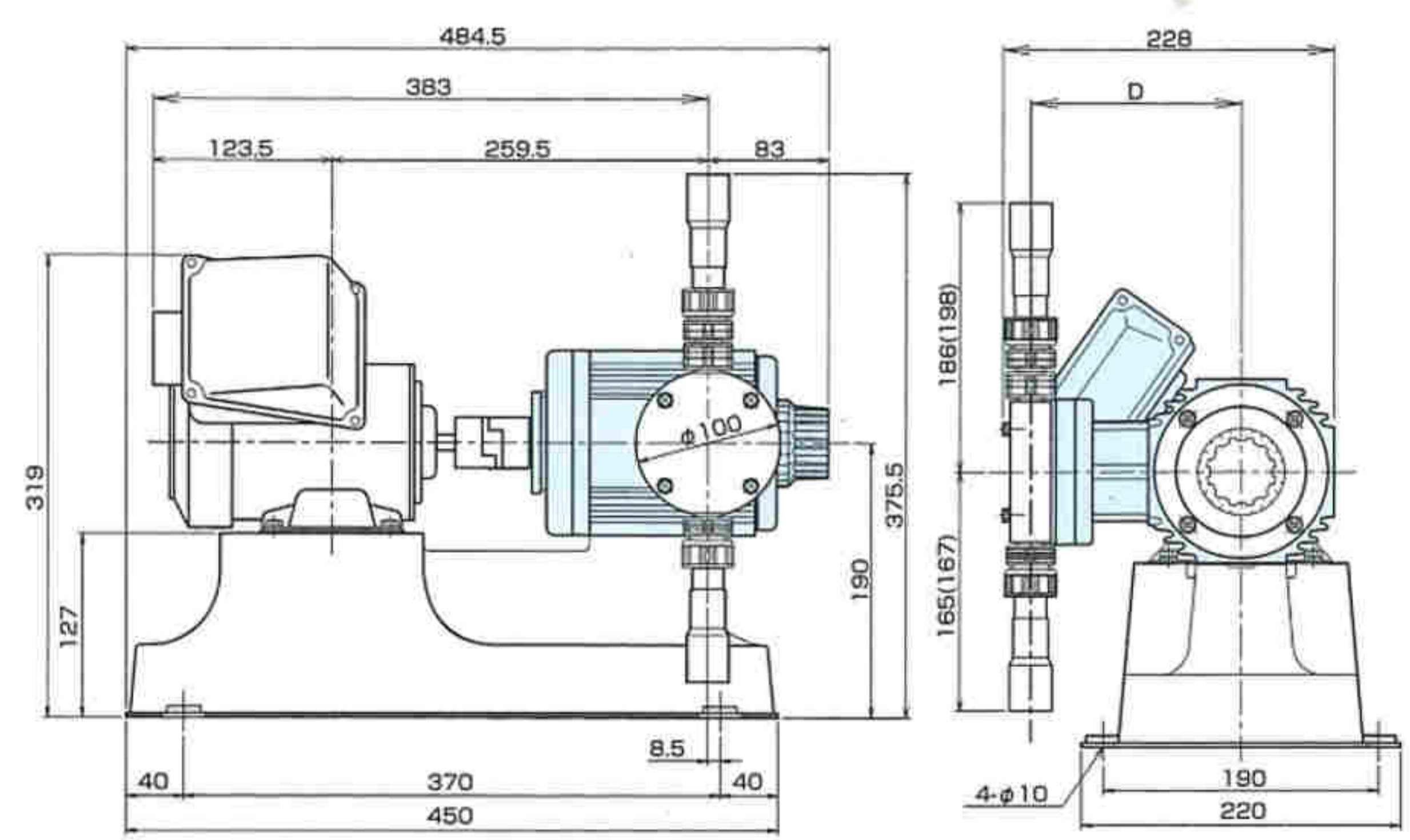


Model	A	B	C	D
HDI- 30	153	163	70	144
HDI- 50	170	150	70	145
HDI- 100				
HDI- 250	186	165	100	
HDI- 500				
HDI-1000	209	176	120	150
HDI-2000				
HDI-2500				

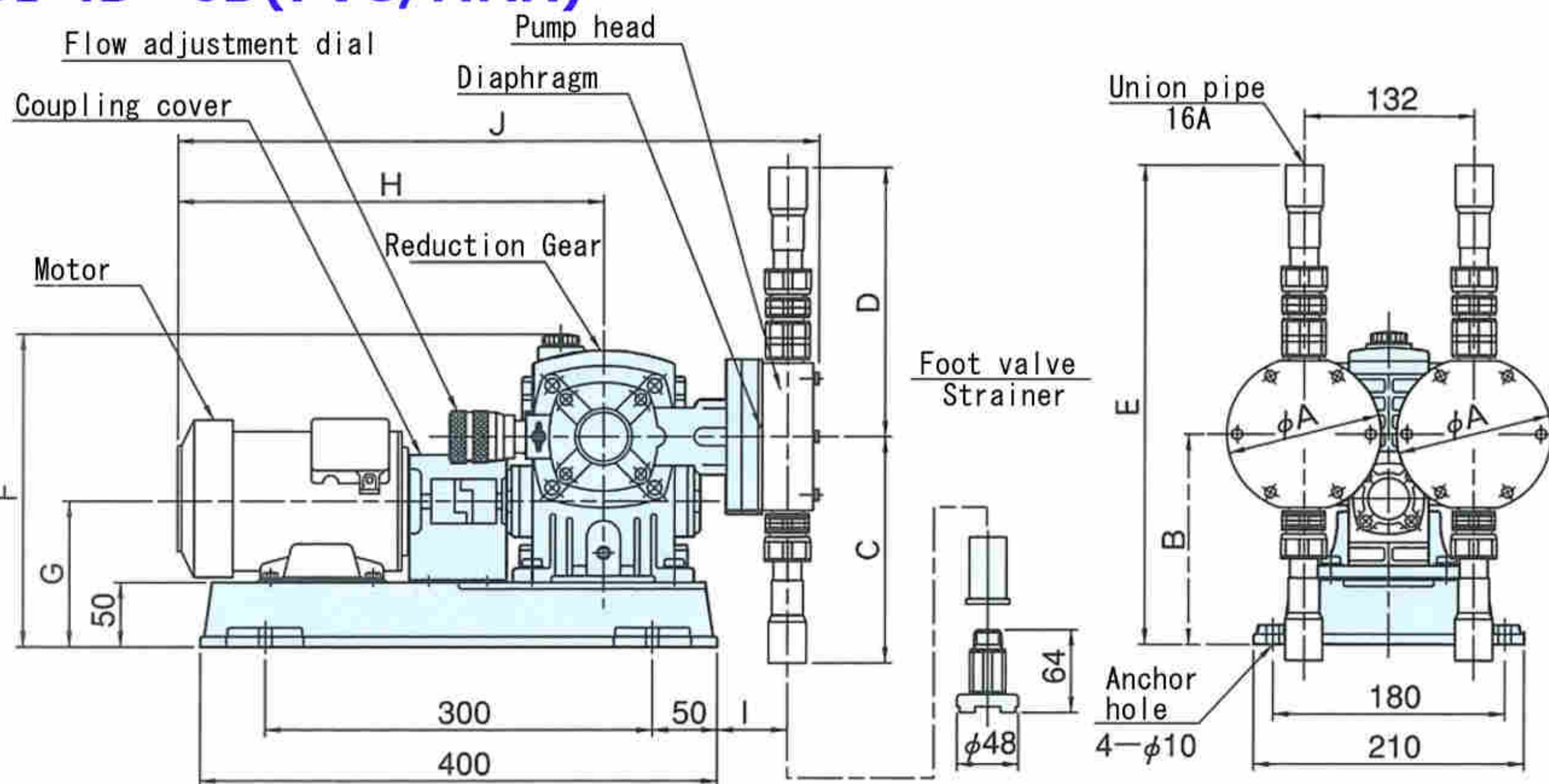
HDI-30~2500



HDIS

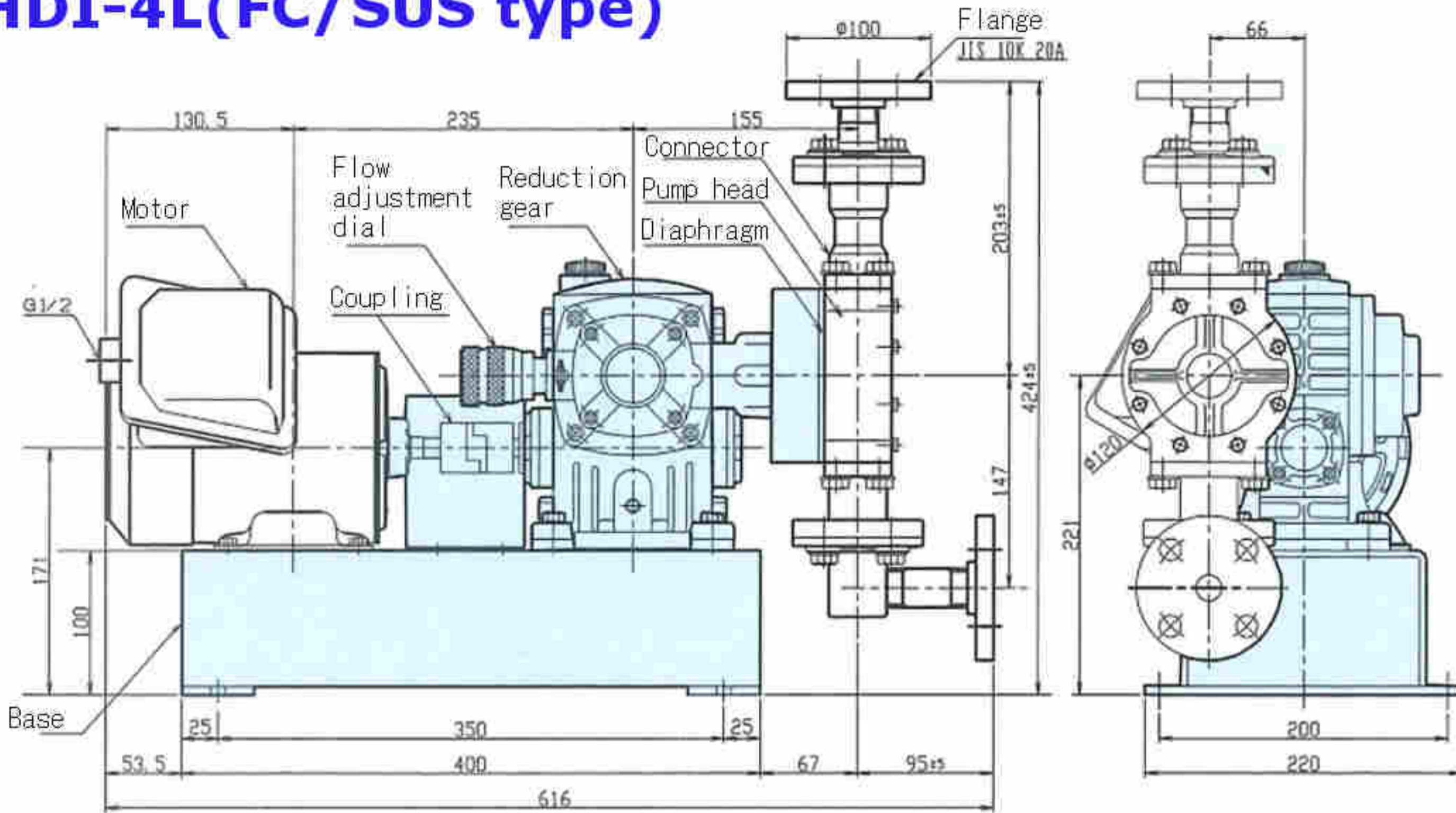


HDI-4D · 6D(PVC/MMA)

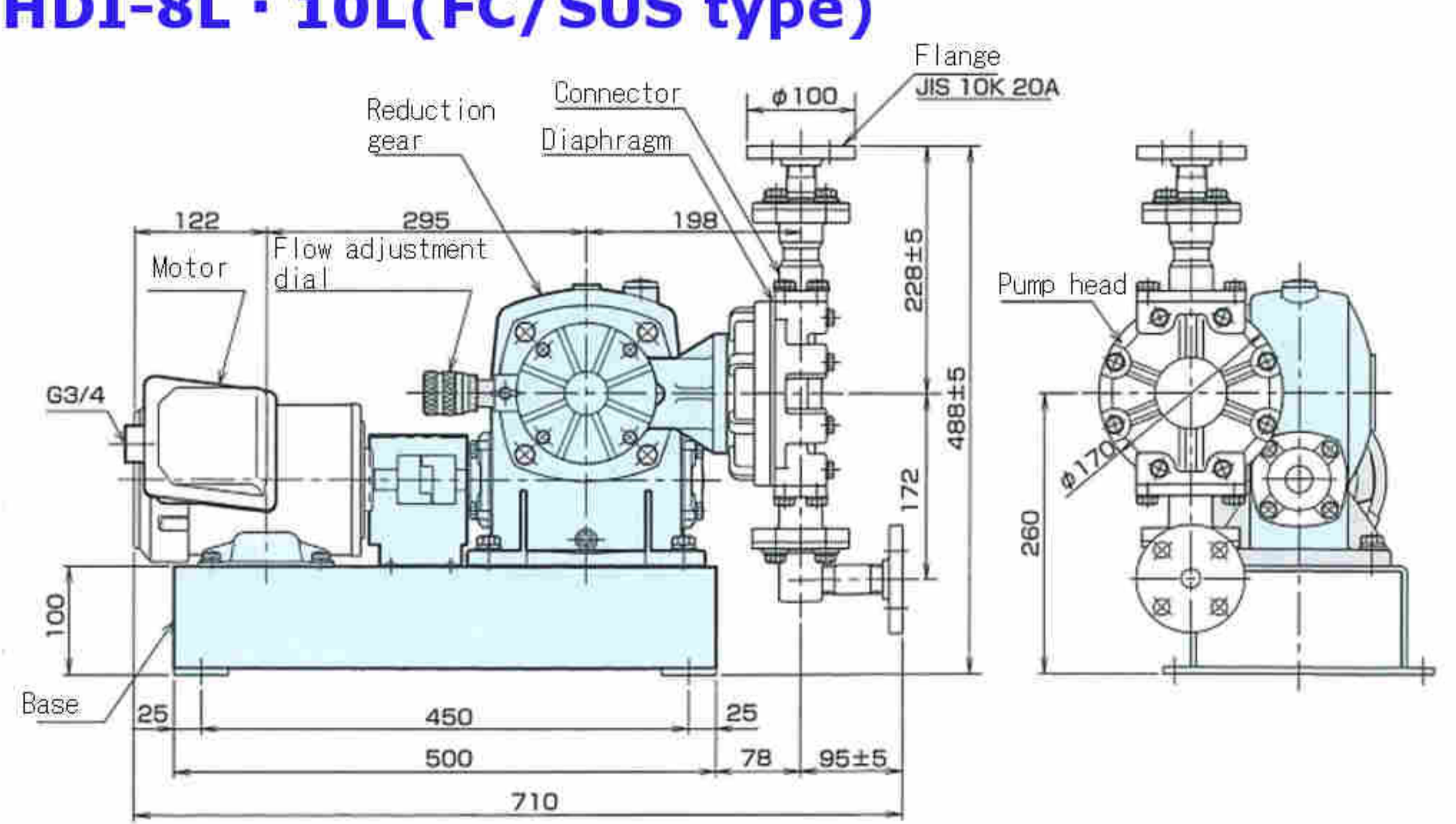


Model	HDI-4D		HDI-6D	
	HOSE	PIPE	HOSE	PIPE
A	120		120	
B	163		171	
C	130.5	176	130.5	176
D	163.5	209	163.5	209
E	326.5	372	334.5	380
F	243		251	
G	113		121	
H	330		353	
I	55		55	
J	497		520	

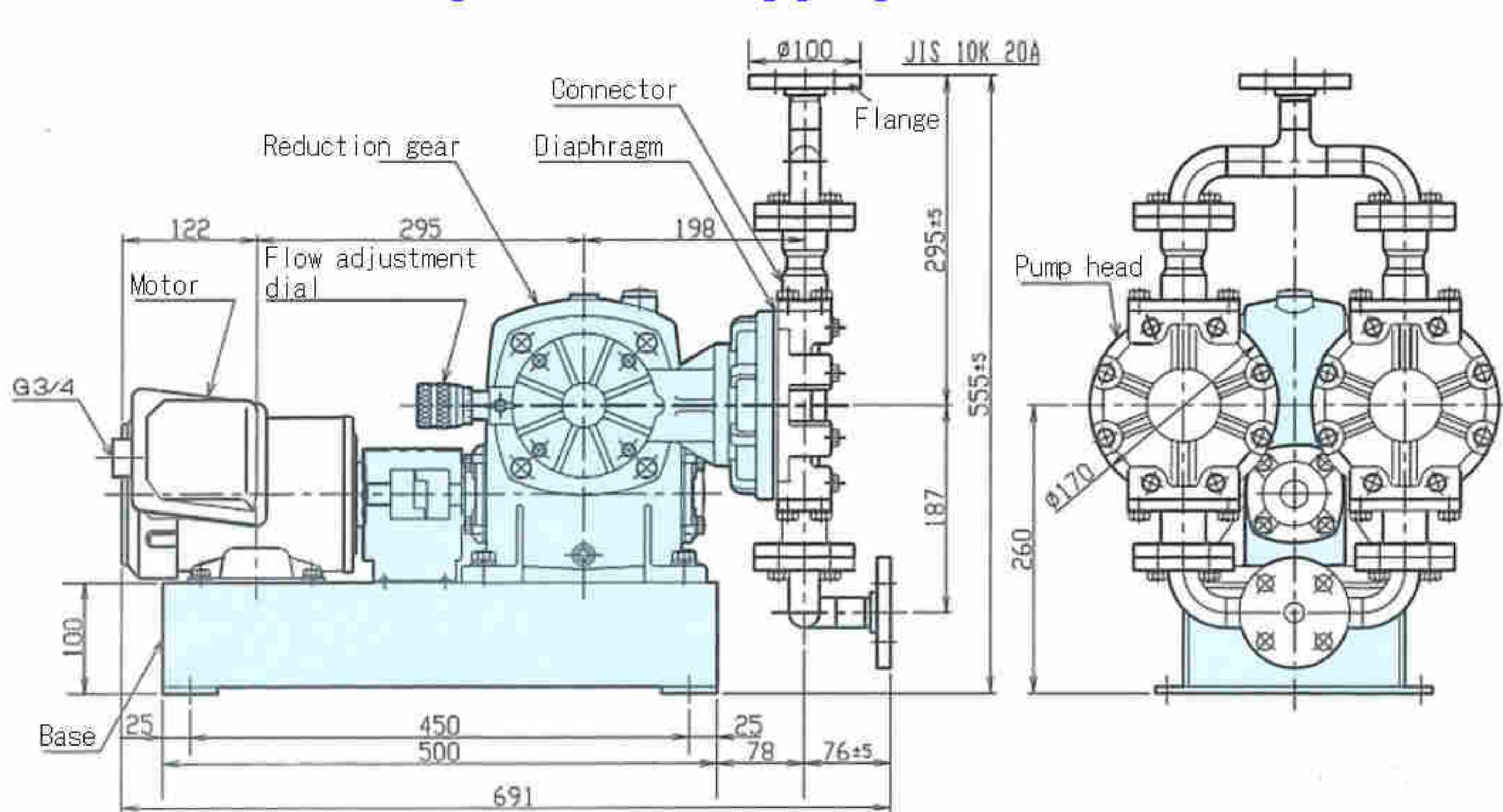
HDI-4L(FC/SUS type)



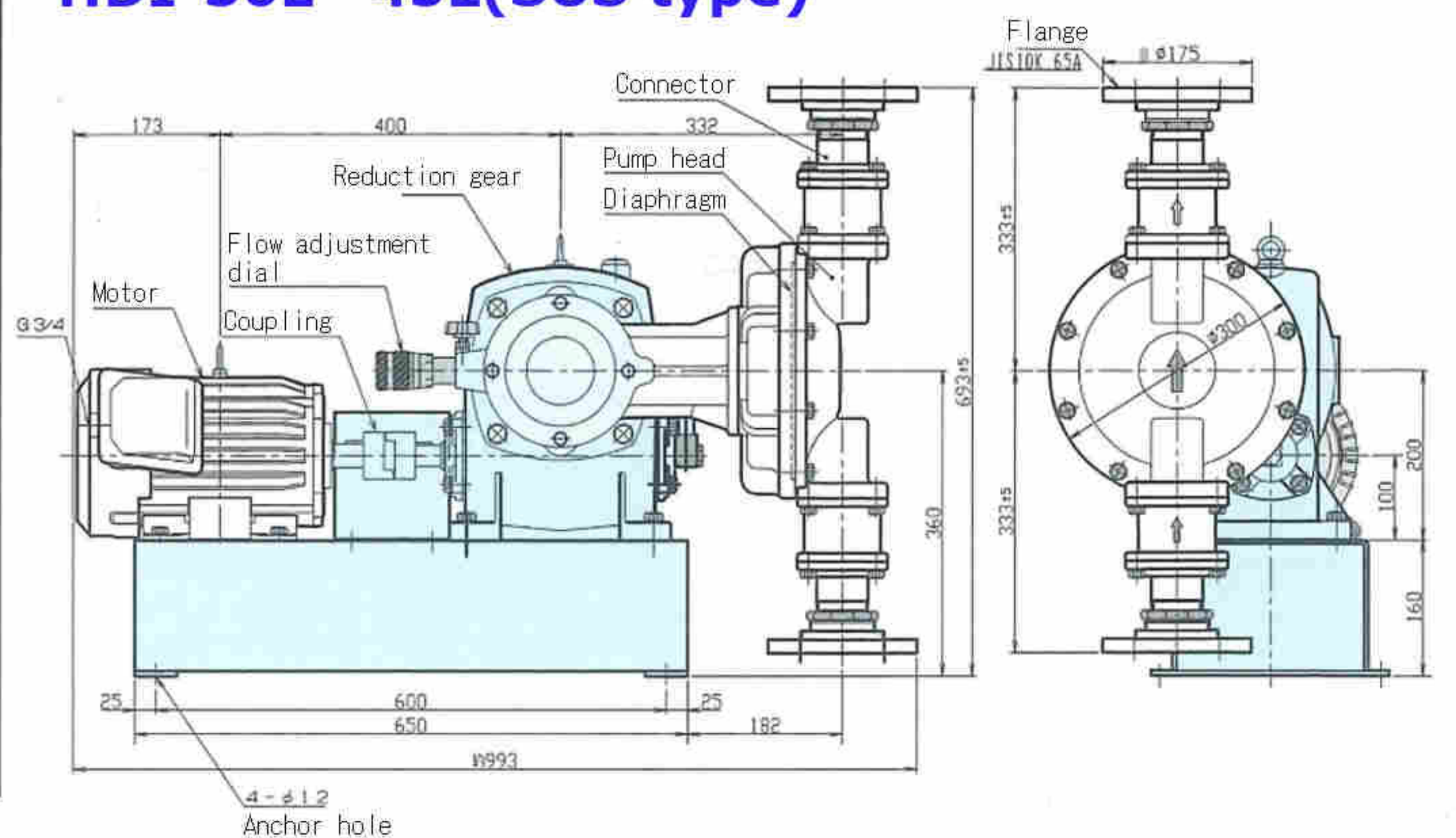
HDI-8L · 10L(FC/SUS type)



HDI-15L · 20L(FC/SUS type)



HDI-30L · 45L(SUS type)



Pump protector



[Current detection type]

Model : EOGR-3DE / Panel Mounting type
EOGR-FDE / Flush Mounting type (Display)

■ Features

- Compact design
- Protection for over current, under current, phase loss, phase unbalance, phase reversal, stall, locked rotor, ground fault.
- Current range : 0.5A ~ 60A
- Voltage : 100V ~ 240V



[Thermosensitive type]

■ Features

- For HD-SFV and HD-TFV
- Detection by liquid temperature in the pump casing.
- It can protect pumps from thermal deformation of pump parts by the following reasons.
running with closed valves, blocked pipe or strainer and so on.
- Temperature set: FRP casing 75°C
PVC casing 50°C
- Alarm will be set easily by using relay.

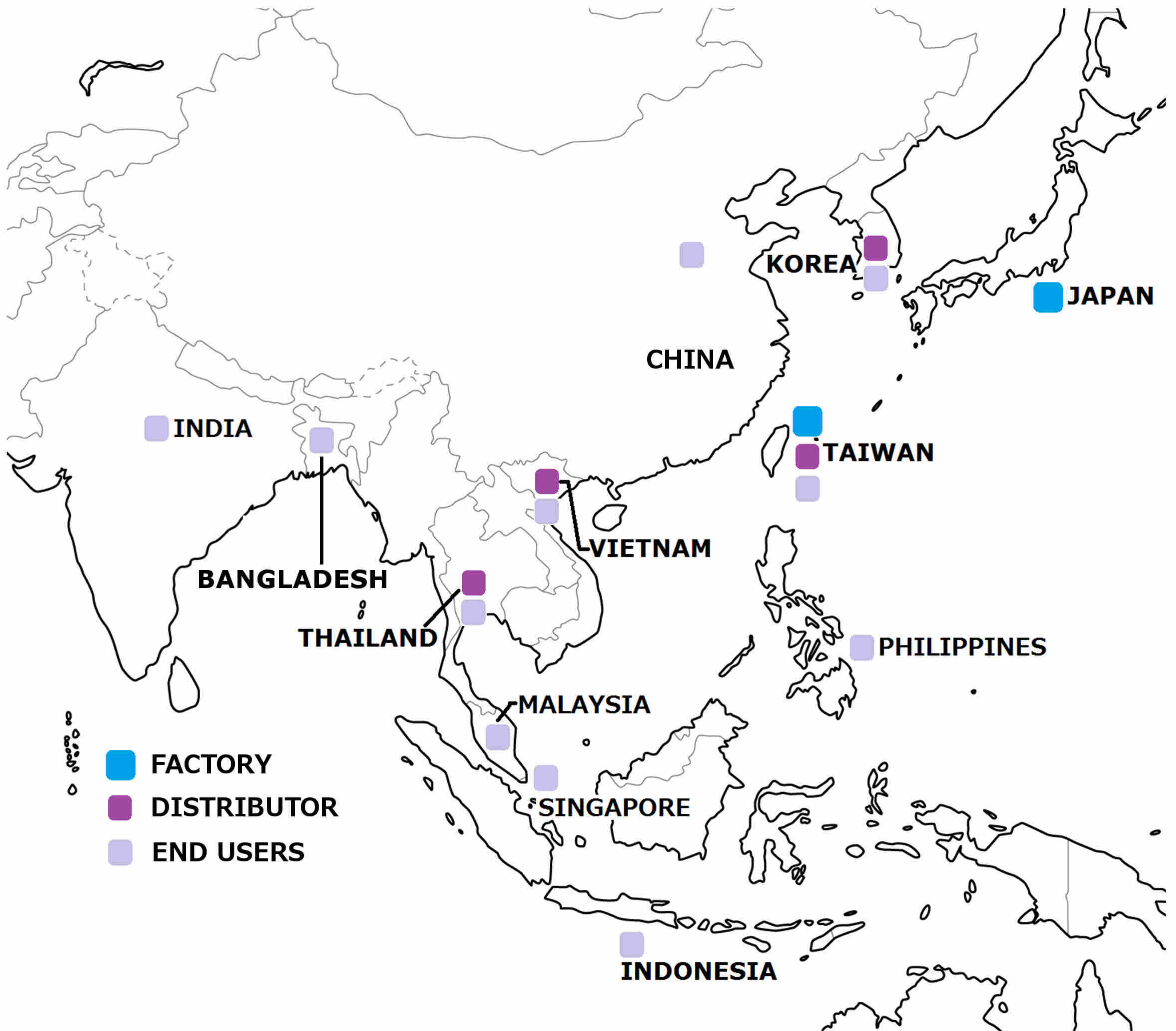
Pump casing cover



■ Features

- For HD-SFV
- It can help to prevent using liquid from freezing in cold region.
- Easy attaching and detaching.
- Reusable (Re-piping is unnecessary).
- Material
 - Surface : Glass fiber cloth (reinforced Fluorine resin)
 - Heat insulation : NBR based form
 - Sewing thread : Fluorine resin based thread

■ Networks / Logistics



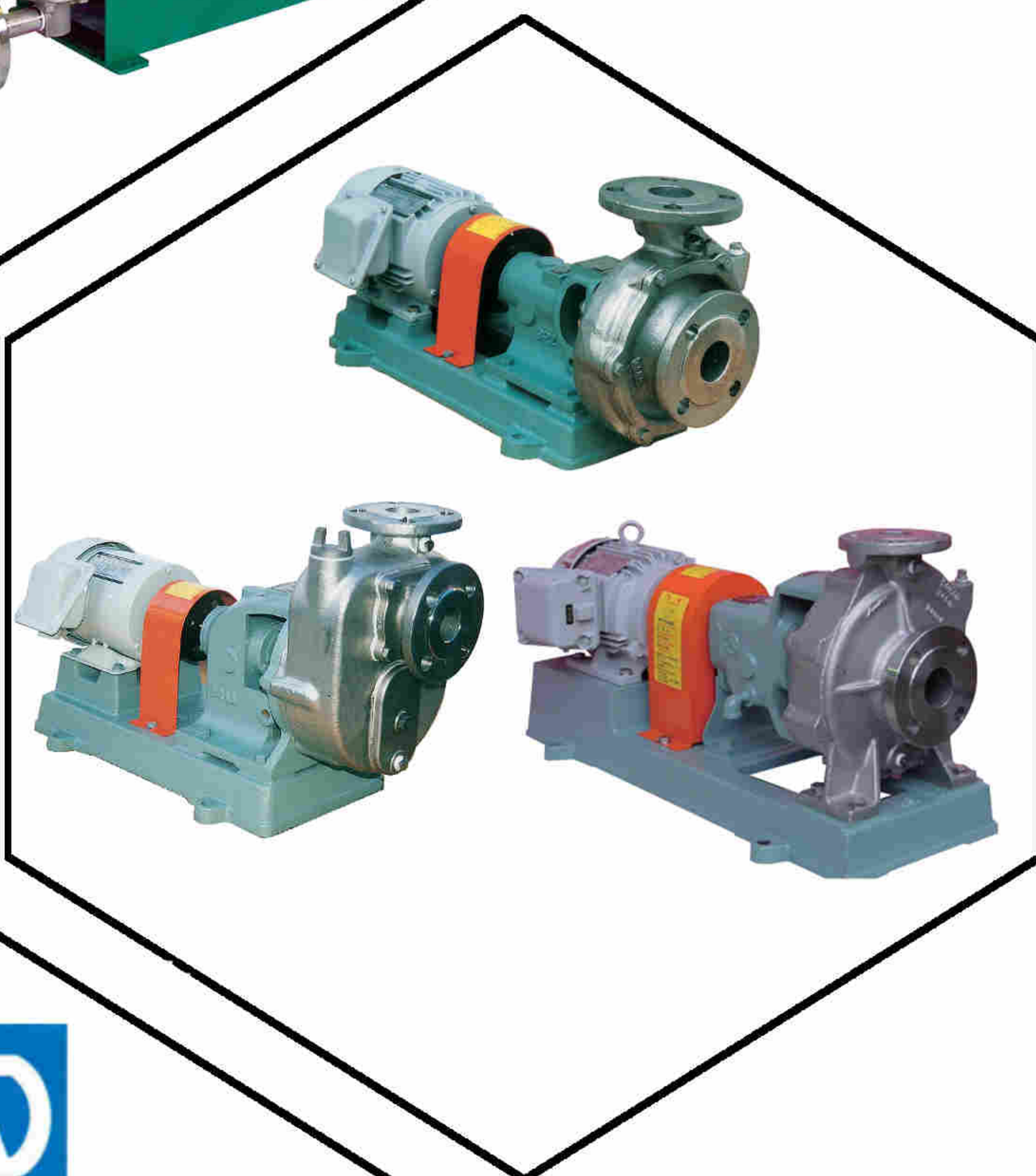
PRODUCTS		SHIPMENT	
		From JAPAN	From TAIWAN
VERTICAL PUMP	HD-SFV HD-TFV HD-RE	○	×
STAINLESS STEEL PUMP	METERING PUMP		
LEAKLESS PUMP	HDG-PG HDG-PX	○	○
	HDG-TF HDG-TC HDG-PF	×	○



**Metering
pump**

**Stainless
steel pump**

**Customer
support**



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