



# HDR

*Hyosung Double Suction Radial Flow Pump*



*Springs of Living Water*



## E

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# HDR

Hyosung Double Suction Radial Flow Pump

## 용도 Application

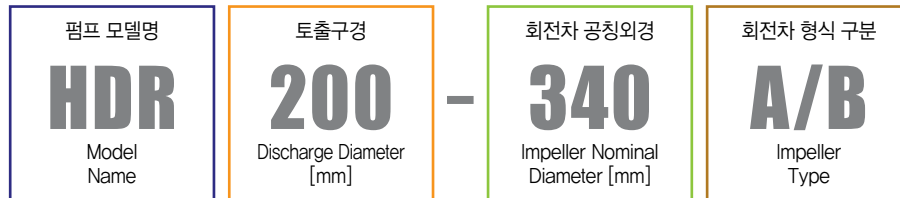


## 특징 Features

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>01. 고객의 다양한 Needs에 적용가능한 넓은 사용범위와 고효율 구현</li> <li>02. 회전체의 동적해석(Rotor Dynamics) 및 구조물의 유한요소법(FEM) 해석을 통한 저진동, 저소음 구현</li> <li>03. 흡입, 토출 배관을 분리하지 않고 분해, 점검이 가능한 Back-Pull-Out구조 채용</li> <li>04. GT(Group Technology)기법을 도입, 부품의 호환성을 극대화시킨 구조</li> <li>05. 국내 최대 납품실적으로 다양한 산업용으로 사용중인 고신뢰성, 경제적인 제품</li> <li>06. 한국산업규격(KS B 7501) 제품으로 표준화된 용량 및 치수 적용</li> </ul> | <ul style="list-style-type: none"> <li>01. Wide range of application and outstanding efficiency for various customer needs.</li> <li>02. Low vibration and noise through Rotor Dynamic and FEM analysis</li> <li>03. Easy to disassemble, inspect, repair and maintain due to horizontally separated structure</li> <li>04. Minimized shaft deflection clearance by optimized short bearing span arrangement</li> <li>05. The main shaft is protected by the shaft sleeve for semi-permanent life and low maintenance cost</li> <li>06. Capacity and dimension standardized to the Korean Industrial Standard (KS B 7501)</li> </ul> |
|---|--|

## 호칭 Model Designation

# HDR 200-340A



## 표준 사양 Standard Specification

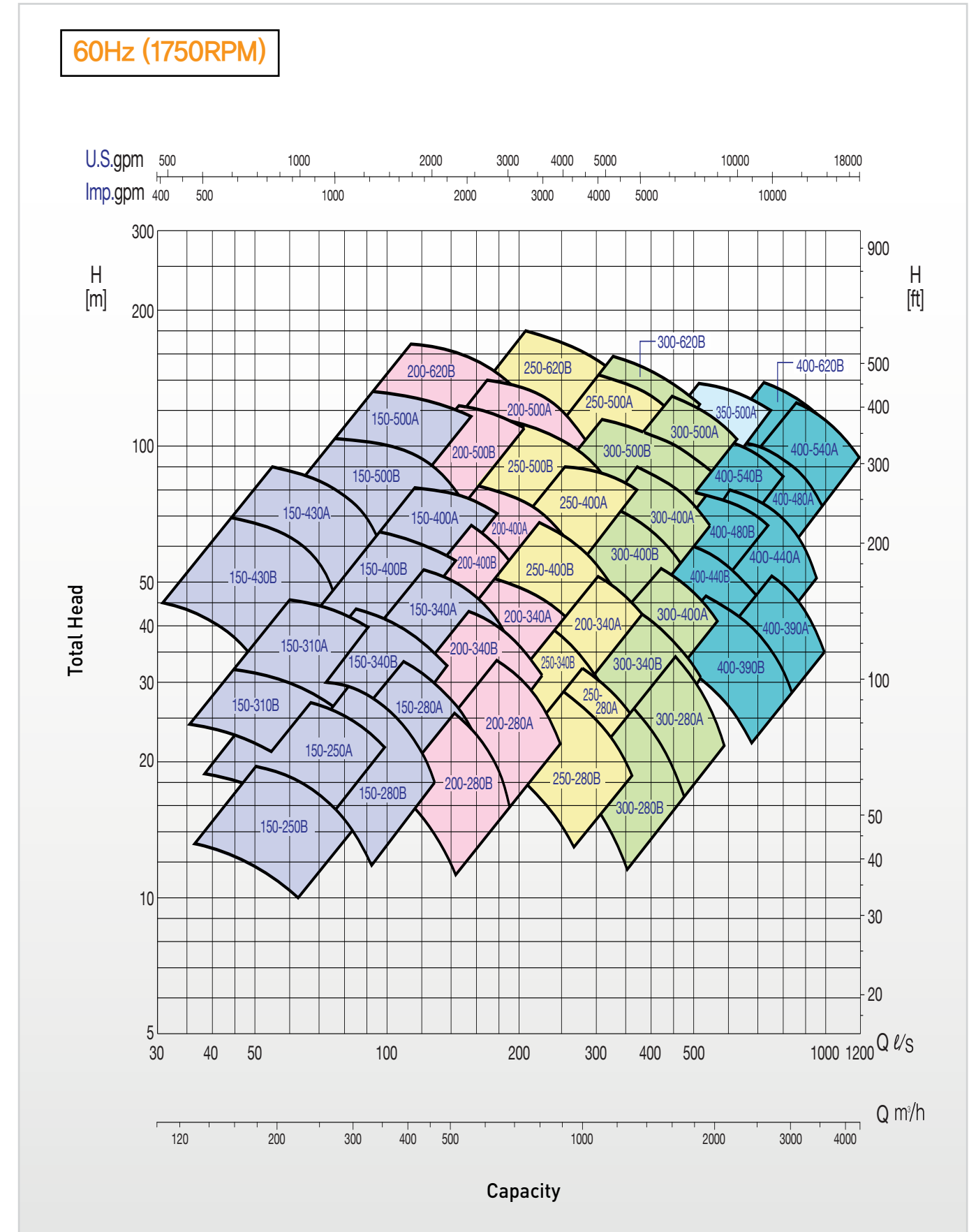
취급액	Applicable Liquid	청수 Clean Water (pH: 5.8 ~ 8.6) 0 ~ 90°C
유량 / 양정	Capacity / Head	150 ~ 18,000 m <sup>3</sup> /h / 15 ~ 180m
구경	Diameter	125 ~ 1400 mm
회전방향	Rotation Direction	CW (구동기 측에서 펌프를 바라보았을 때) (From the Motor Side to the Pump)
구조 Structure	회전차 Impeller	Closed Double Suction Type
	축봉타입 Shaft Seal	Packing (테프론 함침 탄화섬유) (Carbonized fibers impregnated with Teflon)
	베어링 Bearing	Ball Bearing, Roller Bearing
플랜지	Flange	KS B 1511 10K, RF
카플링	Coupling	플랜지 카플링 Flange Coupling
재질 Material	케이싱 Casing	GC200 (Option: GCD450, SC410, SSC13/14/16, etc)
	회전차 Impeller	GC200 (Option: CAC406, SSC13/14/16, etc.)
	축 Shaft	SM45C (Option: SCM440, STS304/316/316L, etc)

### 선택사양 Option

- 접액부 재질 (조립단면도 선택사항 참고)
- 축봉장치 (Mechanical Seal)
- 카플링 (요구사항)
- 전동기 형식 (요구사항)
- 각종 계기류, Drain/Vent 배관 구성
- 흡토출 플랜지 규격 (별도 문의 요청)
- 도장사양 (요구사항)
- 회전방향 (CCW)
- Material of the Liquid Contacting Part (Refer to the Specifications in the Sectional Drawing)
- Shaft Seal Type (Requirement)
- Coupling (Requirement)
- Motor Type (Requirement)
- Instrument, Drain/Vent Piping
- Suction and Discharge Flange Specification (Contact us)
- Painting (Requirement)
- Rotation Direction (CCW)

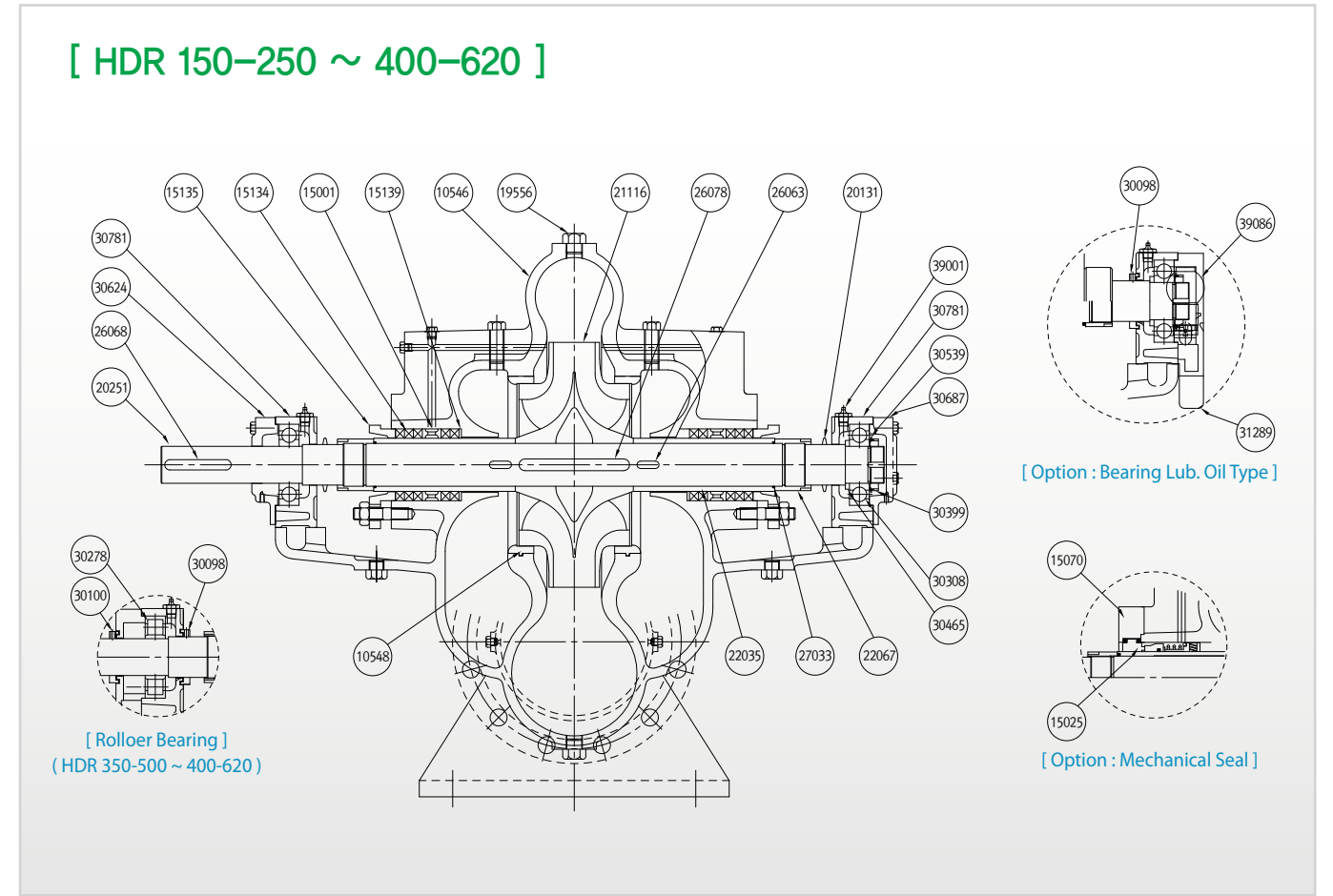
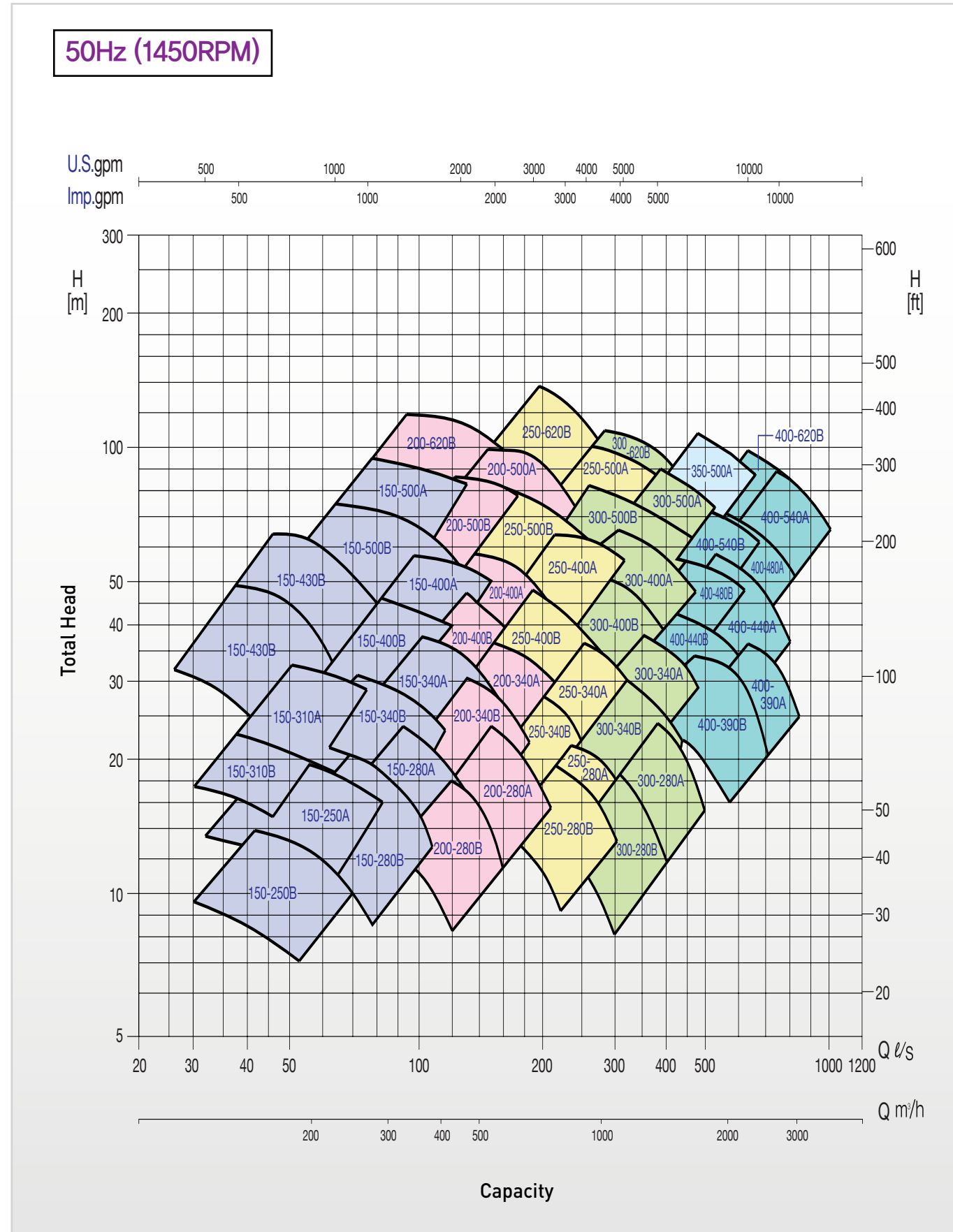
※ GC200 : Cast Iron / CAC406 : Cast Bronze / GCD450 : Ductile / SC410 : Carbon Steel / SSC13, SSC14, SSC16 : Stainless Steel Casting  
 ※ SM45C : Carbon Steel / SCM440 : Cr-Mo Steel / STS304, STS316, STS316L : Stainless Steel

## 선정도 Selection Chart (Impeller Type : A/B)



## ☑ 선정도 Selection Chart (Impeller Type : A/B)

## ☑ 조립 단면도 Sectional Drawing (Impeller Type : A/B)

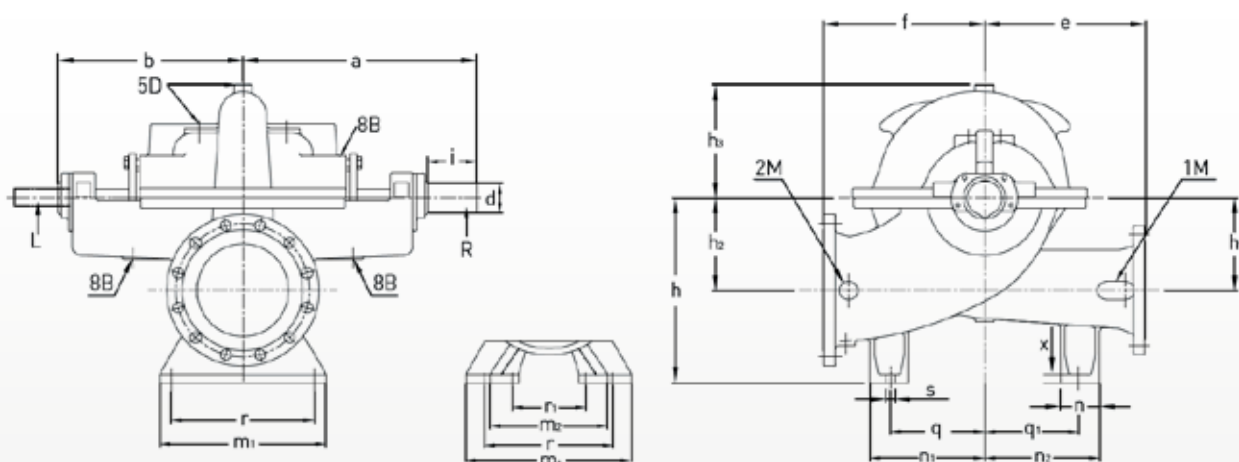


부품번호 Part No.	부품명 Part Name	표준재질 Material	선택사양 Option	부품번호 Part No.	부품명 Part Name	표준재질 Material	선택사양 Option
10546	CASING	GC200	GCD440 / SC410 / SSC13,14,16	26068	COUPLING KEY	SM45C	-
10548	CASE WEARING RING	GC200	CAC406 / SSC13, 14, 16	26078	IMPELLER KEY	SM45C	STS304 / STS316 / STS316L
15001	LANTERN RING	GC200	-	27033	O-RING SLEEVE	Rubber	-
15025	MECHANICAL SEAL	SiC / Carbon	-	30098	DEFLECTOR HOUSING	CAC406	-
15070	M/SEAL COVER	STS304	STS316, 316L	30100	DEFLECTOR COVER	CAC406	-
15134	PACKING	CARBON FIBER	-	30278	ROLLER BEARING	STEEL	-
15135	PACKING RETAINER	GC200	SSC13,14,16	30308	BALL BEARING	STEEL	-
15139	PACKING SEAT	SM45C	STS304	30399	BEARING NUT	SM45C	-
19556	PLUG	CAC406	-	30465	BEARING SEAT	SM45C	-
20131	PROTECT RING	Rubber	-	30539	BEARING WASHER	SM45C	-
20251	SHAFT	SM45C	SCM440 / STS304 / STS316 / STS316L	30624	BEARING COVER	GC200	-
21116	IMPELLER	GC200	CAC406 / SSC13,14,16	30687	BEARING COVER	GC200	-
22035	SHAFT SLEEVE	SM45C	STS304 / STS316 / STS316L	30781	BEARING HOUSING	GC200	-
22067	SHAFT NUT	SM45C	STS304 / STS316 / STS316L	31289	COOLING JACKET	GC200	-
26063	SLEEVE KEY	SM45C	STS304 / STS316 / STS316L	39001	GREASE NIPPLE	CAC406	-
				39086	CONSTANT LEVEL OILER	Glass	-

※ Part No. 15025, 15070 are applicable for M/Seal Option  
 ※ Part No. 30098, 30100, 31289, 39086 are applicable for lube oil type Option  
 ※ CARBON FIBER : Carbonized Fiber Impregnated with PTFE Braided Packing

## 외형도 & 외형 치수표 Outline Drawing & Dimension (Impeller Type : A/B)

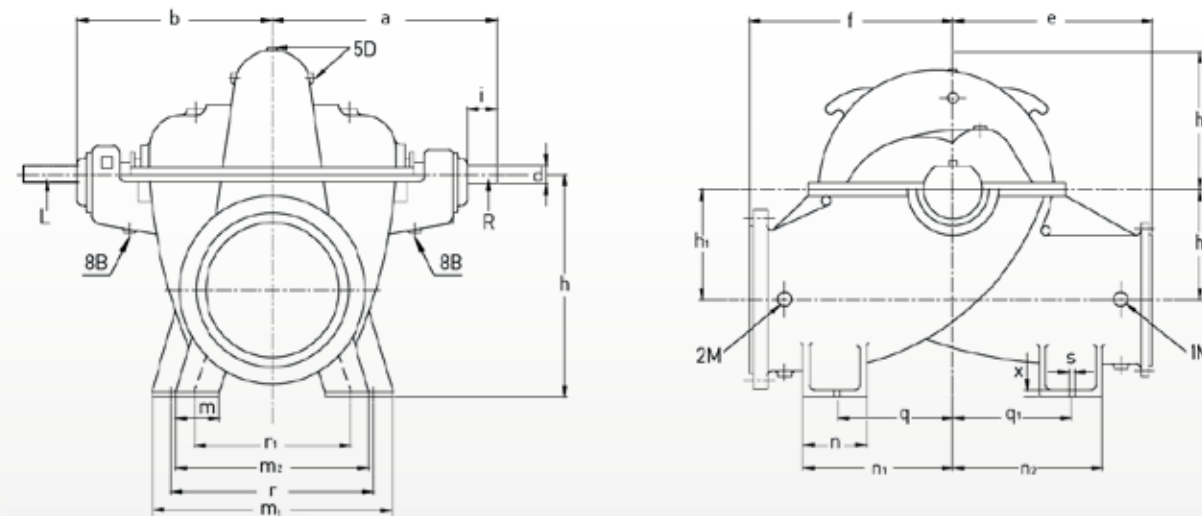
[ FIGURE I ]



Symbol	Connection Purpose	Size	
		HDR 150-250 ~ 150-500	HDR 200-280 ~ 300-620
1M	Pressure Gauge Connection	PT3/8	PT3/8
2M	Vacuum Gauge Connection	PT3/8	PT3/8
5D	Venting Hole	PT1/2	PT3/4
6B	Drain Hole	PT1/2	PT3/4
8B	Drip Water Hole	PT3/4	PT3/4

\*R : Counter Clockwise Viewed From Driver  
\*L : Clockwise Viewed From Driver

[ FIGURE II ]



Symbol	Connection Purpose	Size
		HDR 350-500 ~ 400-620
1M	Pressure Gauge Connection	PT3/8
2M	Vacuum Gauge Connection	PT3/8
5D	Venting Hole	PT3/4
6B	Drain Hole	PT3/4
8B	Drip Water Hole	PT3/4

\*R : Counter Clockwise Viewed From Driver  
\*L : Clockwise Viewed From Driver

unit : mm

Pump Size	구경 Diameter		Pump																	Foot		Stub Shaft	Weight (kg)	Fig			
	흡입 Suction	토출 Discharge	a	b	e	f	h	h1	h2	h3	m	m1	m2	n	n1	n2	q	q1	r	r1	s				x	dh6	i
			150-250	200	150	510	400	350	350	400	200	200	230	-	360	-	90	250	250	205	205				310	-	24
150-280	200	150	510	400	350	350	400	200	200	245	-	360	-	85	250	250	205	205	310	-	24	18	40	110	366	I	
150-310	200	150	510	400	375	375	400	200	200	267	-	360	-	90	250	250	205	205	310	-	24	18	40	110	378	I	
150-340	200	150	510	400	400	400	400	200	200	267	-	360	-	90	250	250	205	205	310	-	24	18	40	110	390	I	
150-400	200	150	510	400	400	400	400	200	200	282	-	360	-	90	250	250	205	205	310	-	24	20	40	110	438	I	
150-430	200	150	465	380	400	400	350	200	200	280	-	300	-	100	300	300	250	250	250	-	24	18	35	85	468	I	
150-500	200	150	560	450	450	450	400	200	200	330	-	420	-	100	300	300	250	250	370	-	24	18	50	110	558	I	
200-280	250	200	560	450	400	410	400	200	200	275	-	420	-	100	300	300	250	250	370	-	24	22	50	110	480	I	
200-340	250	200	560	450	400	400	450	240	240	300	-	420	-	100	300	300	250	250	370	-	24	22	50	110	516	I	
200-400	250	200	560	450	450	450	450	240	240	300	-	420	-	100	300	300	250	250	370	-	24	22	50	110	582	I	
200-500	250	200	655	530	450	450	450	240	240	370	-	420	-	100	300	300	250	250	370	-	24	22	60	125	726	I	
200-620	250	200	655	530	550	550	500	300	300	435	-	520	-	100	375	375	325	325	460	-	28	24	60	125	948	I	
250-280	300	250	655	530	500	500	550	300	300	333	-	450	-	100	325	325	275	275	400	-	28	24	60	125	672	I	
250-340	300	250	655	530	500	500	550	300	300	350	-	450	-	100	325	325	275	275	400	-	28	24	60	125	726	I	
250-400	300	250	655	530	550	550	550	300	300	500	-	450	-	100	325	325	275	275	400	-	28	24	60	125	804	I	
250-500	300	250	720	575	550	550	550	300	300	400	-	450	-	100	325	325	275	275	400	-	28	24	70	145	984	I	
250-620	300	250	720	575	600	600	560	300	300	455	-	520	-	100	375	375	325	325	460	-	28	24	70	145	1260	I	

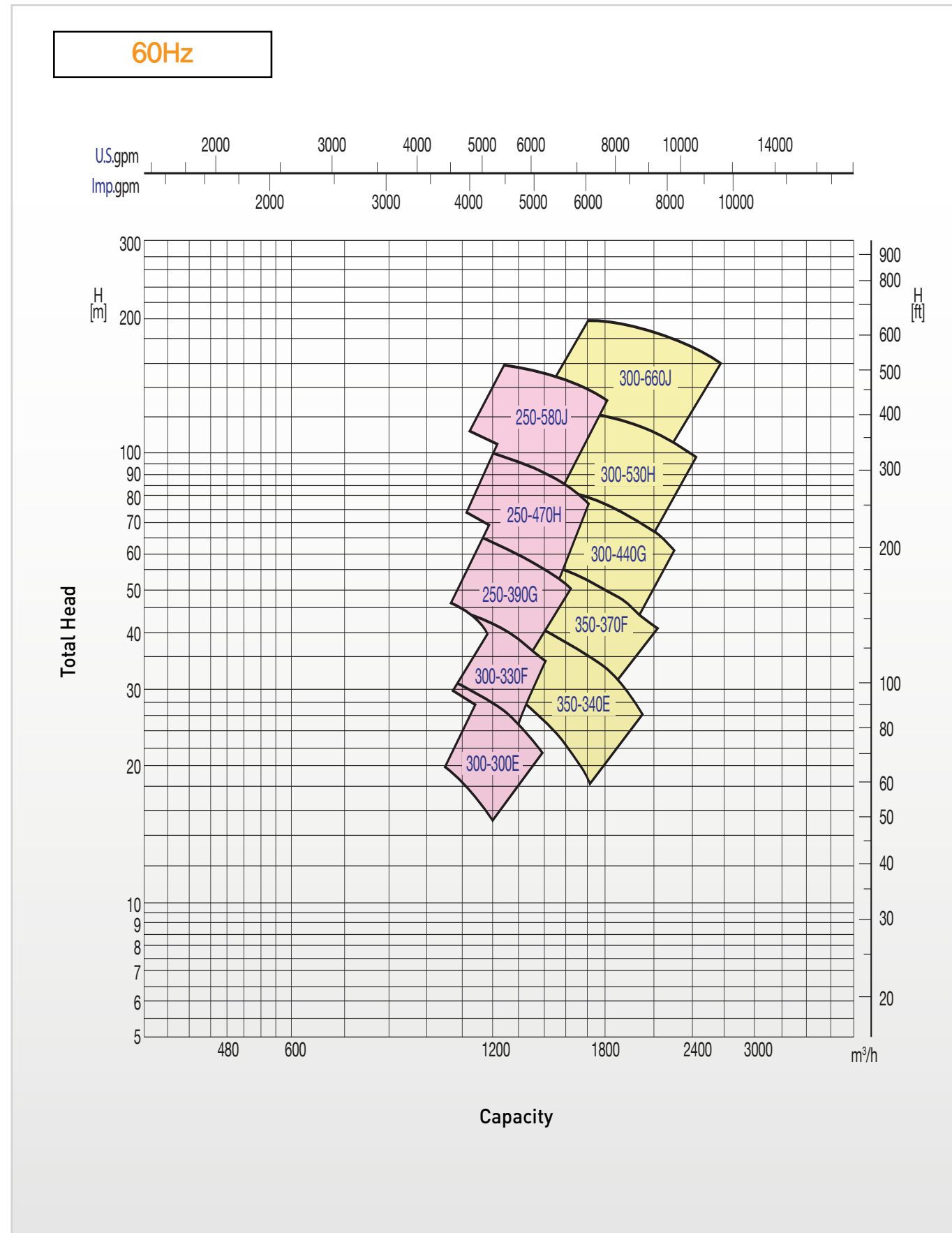
unit : mm

Pump Size	구경 Diameter		Pump																	Foot		Stub Shaft	Weight (kg)	Fig			
	흡입 Suction	토출 Discharge	a	b	e	f	h	h1	h2	h3	m	m1	m2	n	n1	n2	q	q1	r	r1	s				x	dh6	i
			300-280	350	300	720	575	550	550	580	300	300	385	-	550	-	120	400	400	340	340				480	-	28
300-340	350	300	720	575	500	650	640	330	330	400	150	680	540	180	450	350	360	260	580	440	32	30	70	145	1062	II	
300-400	350	300	720	575	650	550	600	325	325	385	160	740	560	200	370	450	270	350	620	440	28	30	70	145	1164	II	
300-500	350	300	825	655	650	650	650	350	350	430	-	550	-	200	430	430	350	350	450	-	32	30	80	165	1386	I	
300-620	350	300	825	655	750	750	700	400	400	550	-	600	-	200	540	540	450	450	500	-	32	30	80	165	1734	I	
350-500	400	350	910	710	620	690	730	415	415	470	140	830	570	210	550	490	445	385	710	450	32	30	95	190	2208	II	
350-620	400	350	910	710	670	740	775	460	460	505	140	830	570	210	550	490	445	385	710	450	32	30	95	190	2544	II	
400-390	500	400	860	665	460	680	730	370	370	444	150	900	600	180	420	320	330	230	800	500	35	30	65	160	1488	II	
400-440	500	400	905	720	650	700	750	390	390	460	150	900	600	180	480	480	390	390	800	500	35	30	75	180	1824	II	
400-480	500	400	905	700	600	750	770	430	480	487	200	950	700	250	575	475	450	350	750	500	38	35	75	180	2064	II	
400-540	500	400	940	720	700	750	820	400	460	500	200	950	700	250	600	550	475	425	800	550	35	35	85	200	2856	II	
400-620	500	400	955	740	700	800	850	490	490	530	200	950	700	250	650	550	525	425	800	550	35	35	95	200	3312	II	
300-340CE	400	300	758	616	500	650	680	300	300	378	-	680	600	180	450	350	360	260	580	500	33	30	70	140	1260	I	
300-400CE	300	300	720	616	500	650	640	319	319	378	-	680	540	180	450	350	360	260	580	440	33	30	70	150	1180	I	

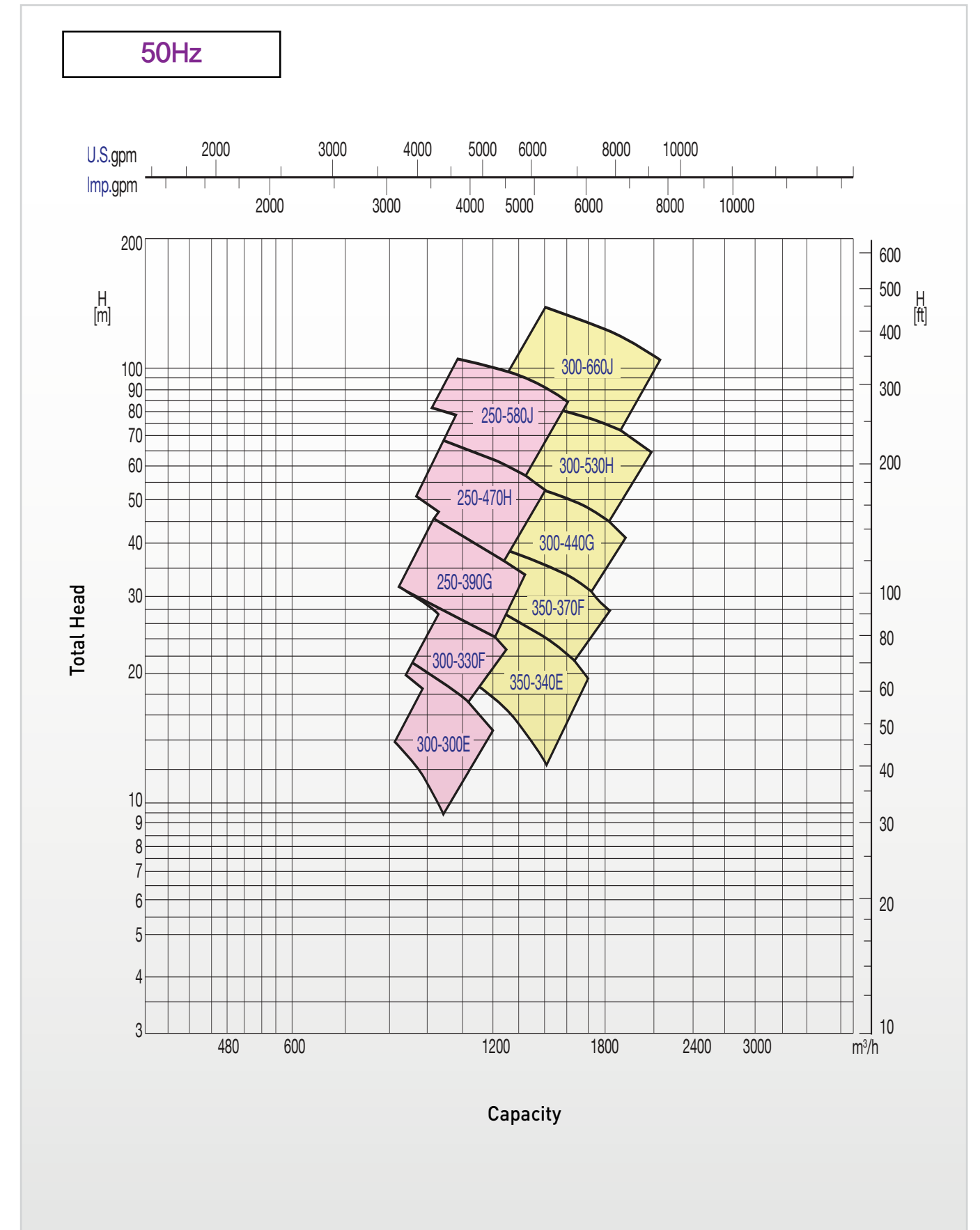
\* Footnotes : All dimensions given in millimeters, weight in kilograms.  
\* For a diameter of 400A or bigger, contact to head office.



**선택도** Selection Chart (Impeller Type : E~J)

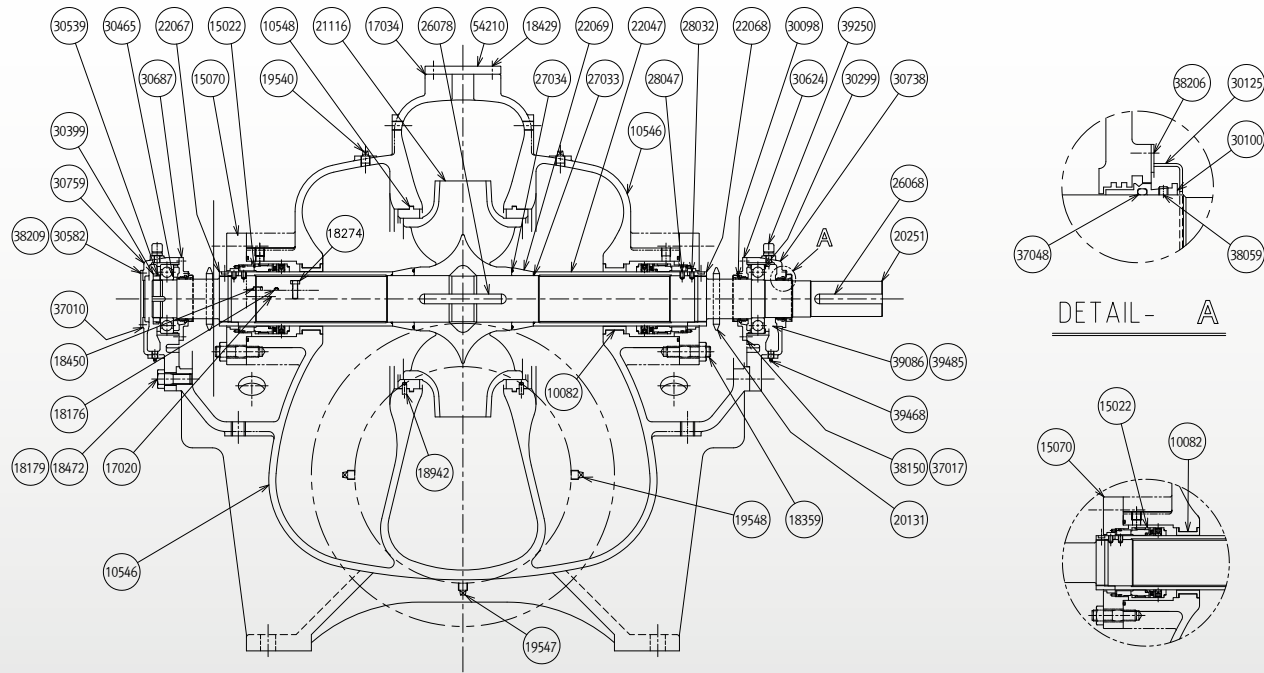


**선택도** Selection Chart (Impeller Type : E~J)



## 조립 단면도 Sectional Drawing (Impeller Type : E~J)

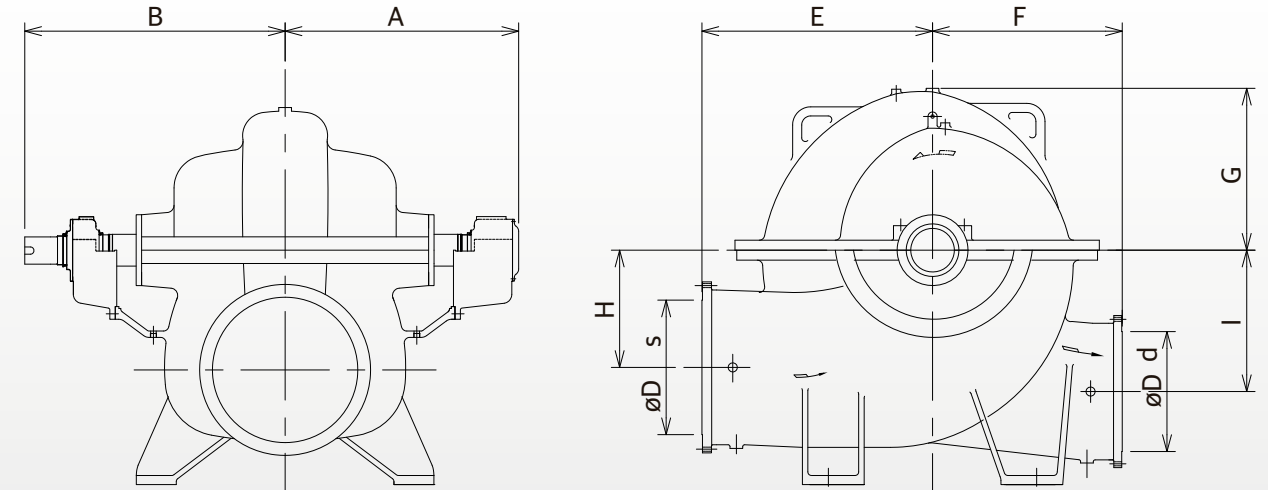
[ 흡입구경 350~500mm (60Hz) ]



부품번호 Part No.	부품명 Part Name	표준재질 Material	선택사양 Option	부품번호 Part No.	부품명 Part Name	표준재질 Material	선택사양 Option
10546	CASING	GC200	GCD450 / SC410 / SSC13,14,16	27033	O-RING	NBR	-
10548	CASE WEAR RING	GC200	CAC406 / SSC13, 14, 16	27034	O-RING	NBR	-
15001	LANTERN RING	GC200	-	28032	SET SCREW	STS304	-
15134	PACKING	PTFE	Requirement	28047	SET SCREW	STS304	-
15135	PACKING GLAND	GCD450	GCD450 / SC410 / SSC13,14,16	30299	BALL BEARING	STEEL	-
15139	PACKING SEAT	STS304	STS304	30399	BEARING NUT	SS275	-
17020	GASKET	Oil paper	-	30465	BEARING SEAT	SS275	-
17034	GASKET	-	-	30539	BEARING WASHER	SS275	-
18176	KNOCK BOLT	STS304	-	30624	BEARING COVER	GC200	-
18179	KNOCK BOLT	SS275	-	30687	BEARING COVER	GC200	-
18274	HEX BOLT	SM25C	-	30738	BEARING HOUSING	GC200	-
18359	STUD BOLT	STS304	-	30759	BEARING HOUSING	GC200	-
18429	HEX BOLT	SM25C	-	31030	OIL SEAL	RUBBER	-
18450	HEX BOLT	SM25C	-	31031	OIL SEAL	RUBBER	-
18472	HEX BOLT	SM25C	-	37017	GASKET	Oil paper	-
18492	PARALLEL REAMER PIN	STS304	-	38150	HEX BOLT	SM25C	-
19540	PLUG	CAC406	-	39001	GREASE NIPPLE	CAC406	-
19547	PLUG	CAC406	-	39468	PLUG	CAC406	-
19548	PLUG	CAC406	-	54210	BLIND FLANGE	A105	-
20131	PROTECT RING	NBR	-	30098	DEFLCTOR	CAC406	-
20251	SHAFT	STS304	SCM440 / STS304 / STS316 / STS316L	30100	DEFLCTOR	CAC406	-
21116	IMPELLER	SSC13	CAC406 / GCD450 / SSC13,14,16	30125	DEFLCTOR COVER	STS304	-
22047	SHAFT SLEEVE	STS304	STS304 / STS316 / STS316L	30125	DEFLCTOR COVER	STS304	-
22067	SLEEVE NUT	STS304	STS304 / STS316 / STS316L	38206	HEXBOLT	SM25C	-
22068	SLEEVE NUT	STS304	STS304 / STS316 / STS316L	37048	O-RING	NBR	-
22069	SLEEVE HEAD	STS304	STS304 / STS316 / STS316L	38059	SET SCREW	STS304	-
26068	COUPLING KEY	SM45C	-	15022	MECHANICAL SEAL	SIC / CARBON	-
26078	IMPELLER KEY	STS304	STS304 / STS316 / STS316L	15070	SEAL COVER	STS304	-
				10082	NECK BUSH	CAC406	-

## 외형도 & 외형 치수표 Outline Drawing & Dimension (Impeller Type : E~J)

[ 흡입구경 350~500mm ]



unit : mm

기종명	Flange Size		Pump Outline Dimension							W [KG]
	Suction S	Discharge d	LA	LB	LC	LD	HA	HB	HC	
			B	A	E	F	H	G	I	
HDR250-580J	350	250	750	563	650	500	380	490	450	1440
HDR250-470H	350	250	750	563	650	470	280	444	375	1100
HDR250-390G	350	250	750	563	550	450	280	390	330	840
HDR300-330F	350	300	730	563	550	420	290	375	310	690
HDR300-290E(U)	350	300	710	563	550	420	290	375	320	640
HDR300-300E(L)	350	300	710	563	550	420	290	375	320	640
HDR300-660J	400	300	850	623	730	560	430	545	505	2210
HDR300-530H	400	300	850	623	730	530	315	500	440	1580
HDR300-440G	400	300	800	613	620	510	315	435	380	1170
HDR350-370F	400	350	800	613	620	470	325	420	360	940
HDR350-330E(U)	400	350	775	613	620	470	325	415	360	870
HDR350-340E(L)	400	350	775	613	620	470	325	415	360	870
HDR300-740J	450	300	850	643	820	630	480	610	570	2180
HDR350-600H	450	350	850	643	800	600	355	549	475	1780
HDR350-490G	450	350	825	643	690	550	355	485	415	1270
HDR350-830J	500	350	925	698	920	710	535	675	635	3200
HDR350-670H	500	350	925	698	900	640	395	615	530	2430
HDR350-550G	500	350	900	688	750	600	395	535	470	1810

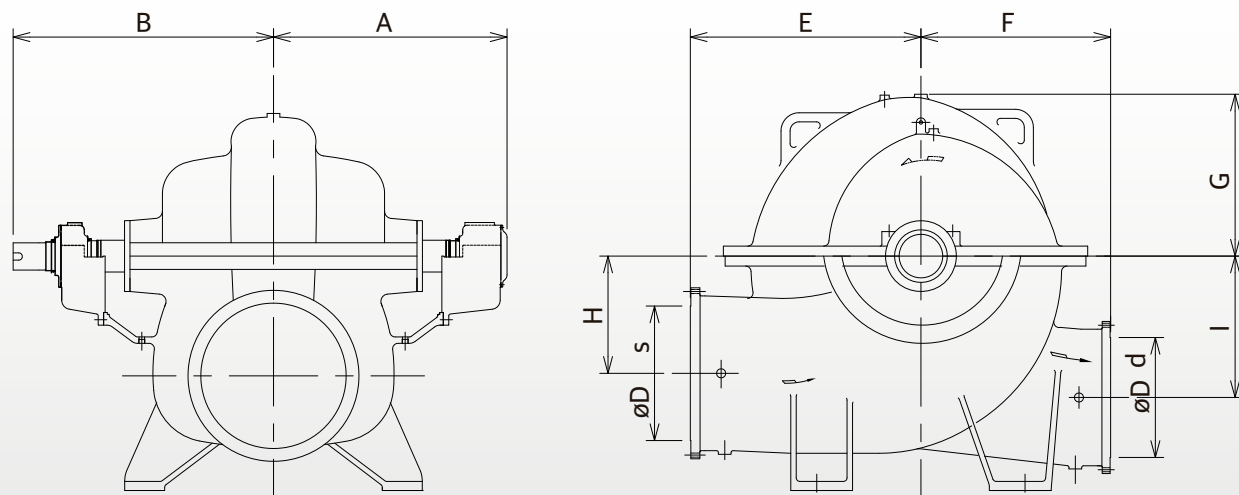
※ L, BL은 모터형식 및 출력에 따라 다를 수 있습니다.  
 ※ 상기치수는 참고용이므로 기초공사용으로 사용하지 마시기 바랍니다.  
 ※ 모든 사양은 예고없이 변동될 수 있습니다.

# HDR

Hyosung Double Suction Radial Flow Pump

## 외형도 & 외형 치수표 Outline Drawing & Dimension (Impeller Type : E~J)

[ 흡입구경 600~1000mm ]



unit : mm

모델명 Model	DS	Dd	A	B	E	F	G	H	I
HDR500-520E	600	500	798	975	900	650	600	500	545
HDR500-580F	600	500	820	1030	900	650	605	500	530
HDR500-680G	600	450	821	1030	900	650	635	475	560
HDR450-850H	600	450	907	1120	1050	750	710	500	630
HDR400-1000J	600	400	924	1180	1050	830	810	650	750
HDR600-620E	700	600	890	1090	1000	750	715	600	630
HDR600-690F	700	600	916	1120	1000	750	715	600	630
HDR500-810G	700	500	982	1220	1000	750	750	580	670
HDR500-1020H	700	500	1039	1280	1200	850	845	600	750
HDR450-1200J	700	450	1045	1320	1200	970	960	775	900
HDR700-680E	800	700	961	1150	1120	850	780	650	710
HDR600-760F	800	600	1047	1280	1120	850	785	650	690
HDR600-890G	800	600	1044	1280	1120	850	820	630	730
HDR600-1120H	800	600	1085	1360	1320	920	925	630	825
HDR500-1310J	800	500	1127	1400	1250	1050	1060	850	1000
HDR800-790E	900	800	1122	1400	1250	950	885	750	800
HDR700-870F	900	700	1169	1360	1250	950	890	750	775
HDR600-1020G	900	600	1150	1400	1500	950	935	730	850
HDR600-1280H	900	600	1217	1400	1500	1050	1050	730	950
HDR600-1500J	900	600	1245	1500	1450	1200	1200	975	1150
HDR900-890E	1000	900	1269	1500	1450	1100	1000	850	925
HDR800-990F	1000	800	1280	1550	1450	1100	1010	850	900
HDR700-1160G	1000	700	1267	1550	1450	1100	1060	825	950
HDR700-1460H	1000	700	1355	1650	1700	1150	1190	825	1090
HDR700-1710J	1000	700	1380	1750	1700	1350	1360	1120	1280

※ L, B는 모터형식 및 출력에 따라 다를 수 있습니다.  
 ※ 상기치수는 참고용이므로 기초공사용으로 사용하지 마시기 바랍니다.  
 ※ 모든 사양은 예고없이 변동될 수 있습니다.



# HDR

Hyosung Double Suction Radial Flow Pump