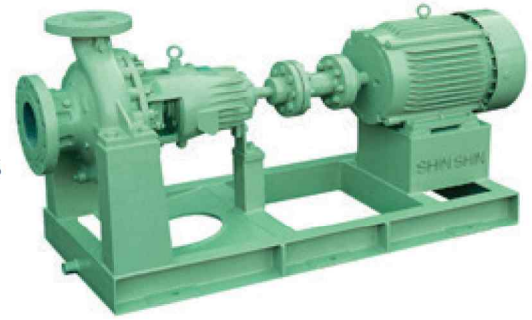


ZAH

Horizontal, Single Stage, Volute Casing Process Pumps Centerline Mounted Type API 610

횡축, 단단, 볼류트 케이싱 프로세스 원심 펌프



10Bar 급 / PN 10Bar

적용 분야 / Application ranges

청정액체 또는 약간 오염된 액체, 저온액체 또는 고온액체, 화학적으로 중성인 액체 또는 강성인 액체의 펌핑에 사용된다.

01. 정유공업, 석유화학공업, 석탄 프로세스 및 저온 엔지니어링 분야
02. 화학공업, 섬유 및 일반 프로세스 공업 특히 제지, 펄프공업, 제당공업분야
03. 물관련 공업, 특히 해수탈염 플랜트 분야
04. 난방 및 건조분야
05. 화력 및 원자력 발전분야
06. 환경보전 엔지니어링 분야
07. 조선 및 해양공업분야

For light duty process services in the chemical and petrochemical industries, refineries etc.

01. In refineries, petrochemical industry, coal processing and low temperature engineering
02. In chemical industry, fiber and general processing industries, particularly in paper and pulp industries, sugar industry.
03. In water industry, particularly seawater desalination plants.
04. In heating and air-conditioning
05. In fossile and nuclear power stations.
06. In environmental protection engineering.
07. In ship and offshore industries.

설계 / Design

01. API 610을 적용한 프로세스용 수평 원심 방향분리 볼류트 펌프
 02. 센터라인 지지 구조
 03. 편흡입 라디알 임펠러
 04. 베이스 플레이트의 페데스탈 냉각 가능
 05. ANSI 300에 따른 플랜지 규격
 06. 회전방향은 구동측에서 시계방향
 07. 운전조건에 따라 앞뒤의 웨어링과 발란스 홀에 의해 수력적 평형이 조절되는 구조
 08. 케이싱카버에 냉각 또는 가열 가능한 구조
 09. 축씰링은 그랜드 팩킹, 메카니컬 씰 가능한 구조임
- ※ 상기 사양범위를 초과하는 대형 펌프도 제작합니다.

01. Horizontal, radially split volute casing pump for process pattern according to API 610
02. Centerline mount type
03. Single-entry radial impeller
04. Cooling of baseplate pedestal possible
05. Flanges according to ANSI 300
06. Direction of rotation clockwise seen form the drive end
07. Depending on operating conditions hydraulic balance provided by front or rear wear rings and balance holes
08. Casing cover with cooling or heating connections
09. Shaft sealing by packing or mechanical seal

* The out of the above range can be supplied according to customer's order placement.

운전 데이터 / Operating data

01. 사이즈 : 25에서 200까지
02. 유량 : Q = 800m³/hr 까지
03. 양정 : H = 250m
04. 압력 : P = 25bar
05. 운전온도 : T = 230℃까지

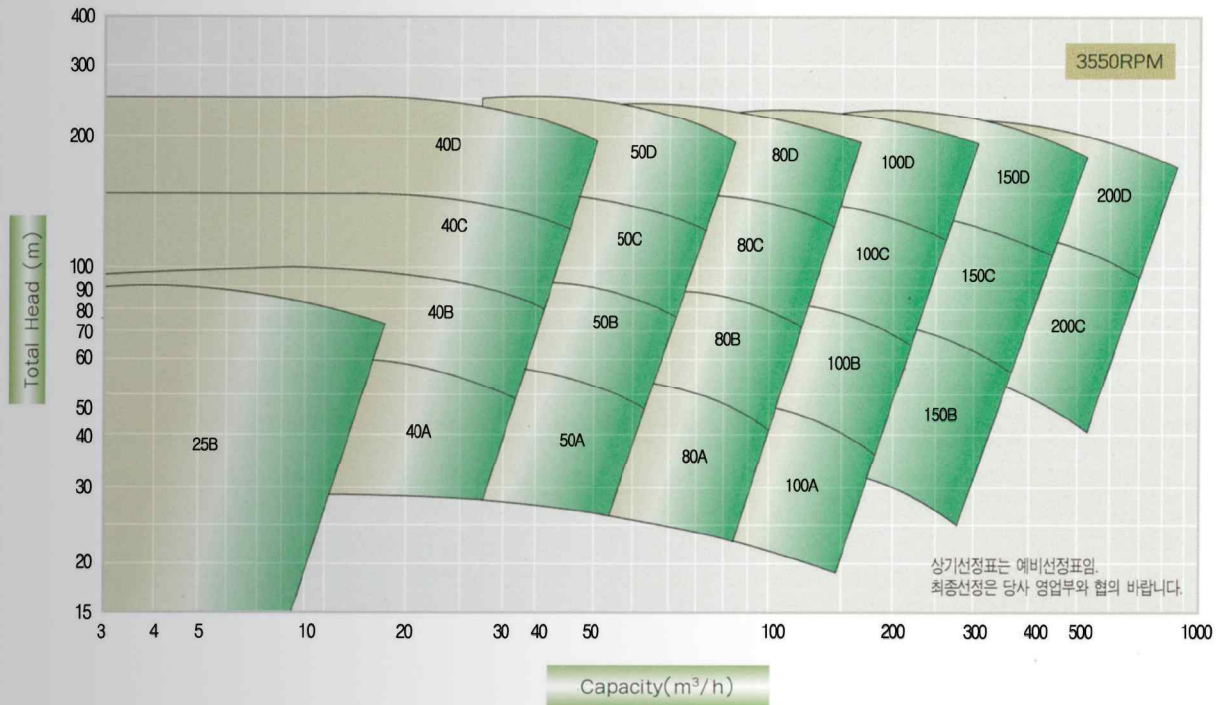
01. Size : 25 up to 200
02. Capacities : up to 800m³/hr
03. Heeds : up to 250m
04. Operating pressures : up to 25bar
05. Operating temperatures : up to + 230°C

형식 표시 방법 / Type nomenclature

- ▶ 씨리즈(Series) _____
- ▶ 사이즈/토출구경(Size/Nominal dia. of discharge nozzle) _____
- ▶ 양정 등급(Head ratings) : A,B,C..... _____

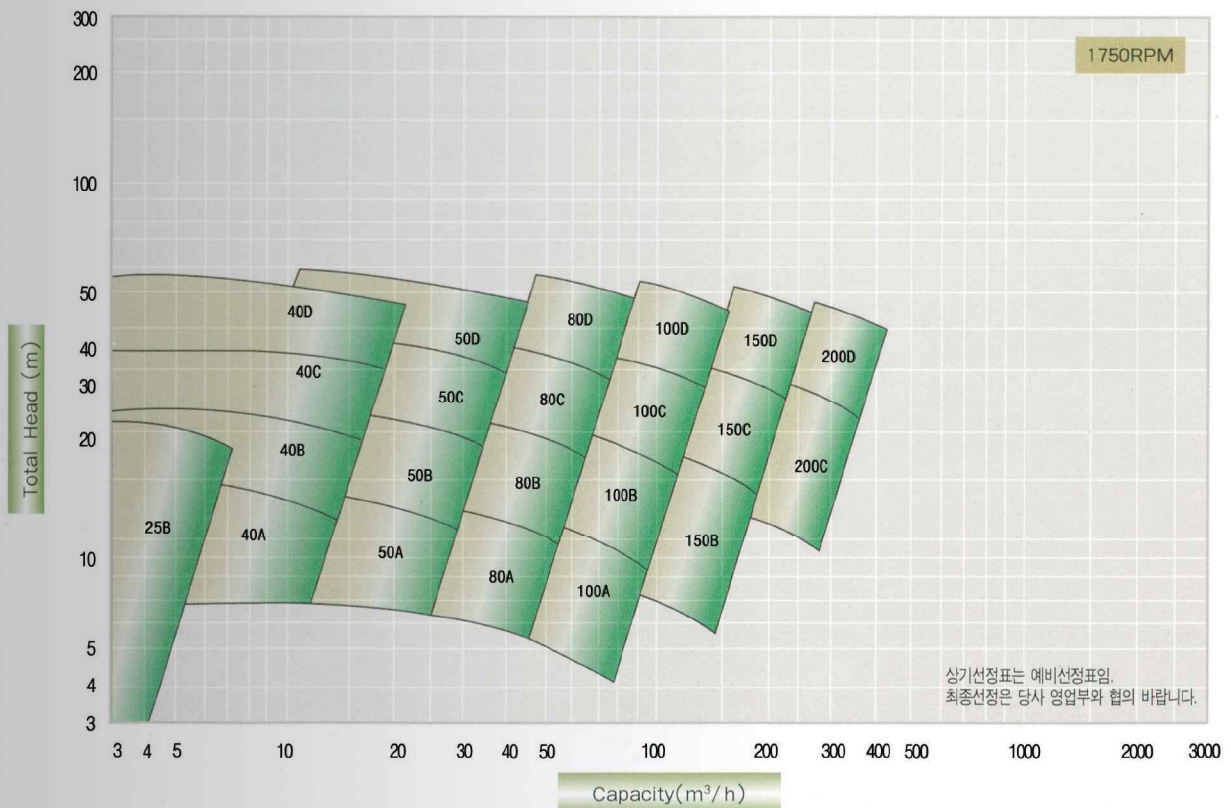
ZAH-40B

선정표(60HZ에서) / Performance selection chart(60Hz)



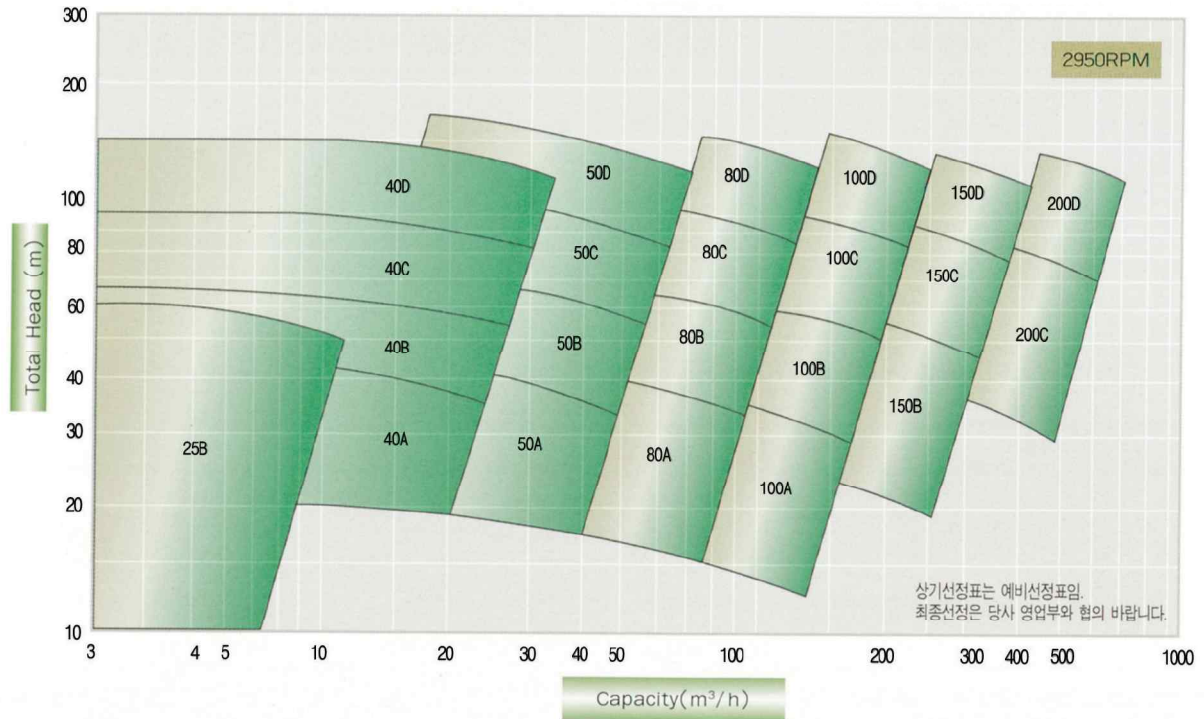
* The out of the above range can be supplied according to customer's order placement.

선정표(60HZ에서) / Performance selection chart(60Hz)



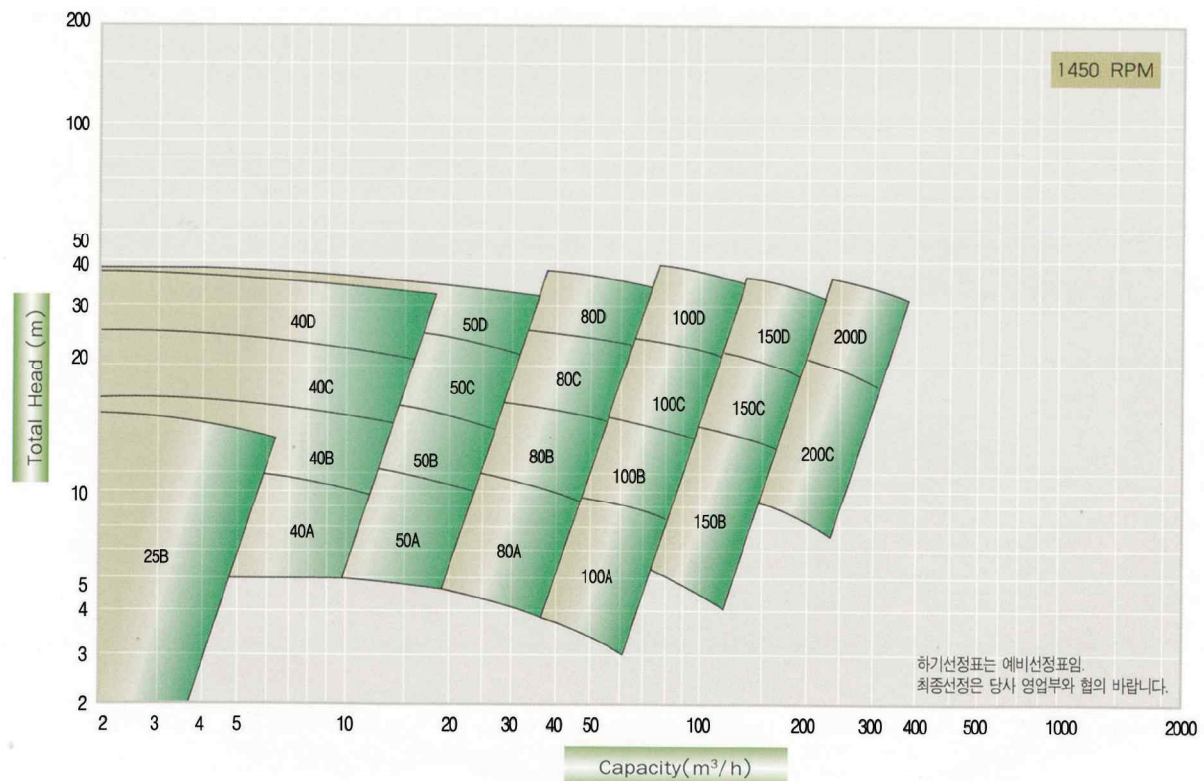
* The out of the above range can be supplied according to customer's order placement.

선정표(50HZ에서) / Performance selection chart(50Hz)



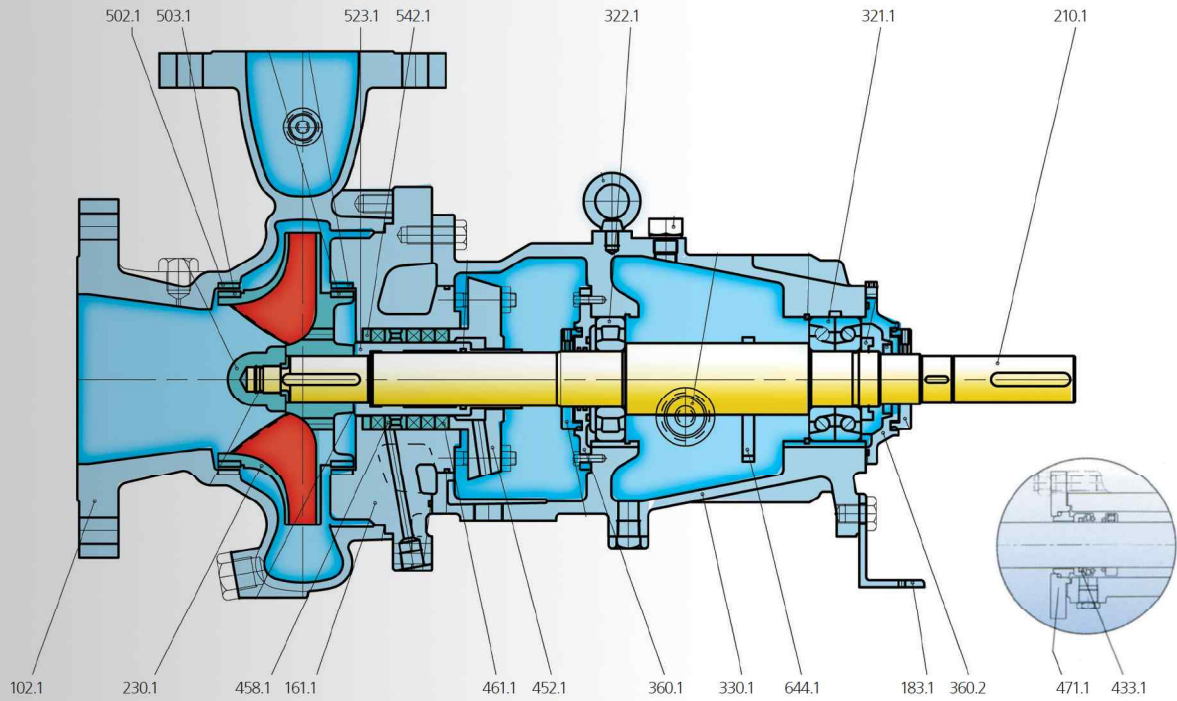
* The out of the above range can be supplied according to customer's order placement.

선정표(50HZ에서) / Performance selection chart(50Hz)



* The out of the above range can be supplied according to customer's order placement.

조립 단면도 / Sectional drawing



NO.	PART NAME	MATERIAL					Qty
		CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5	
102.1	VOLUTE CASING	GC 200	GCD 450	SC 450	SSC 13	SSC 14	1
161.1	CASING COVER	GC 200	GCD 450	SC 450	SSC 13	SSC 14	1
183.1	SUPPORT	SS 400					1
210.1	SHAFT	SM 45C		SCM 440	STS 304	STS 316	1
230.1	IMPELLER	GC 200		SSC 13		SSC 14	1
321.1	BALL BEARING			STB 2			1
322.1	ROLLER BEARING			STB 2			1
330.1	BEARING HOUSING			GC 200			1
360.1	BEARING COVER			GC 200			1
360.2	BEARING COVER			GC 200			1
452.1	PACKING GLAND		GC 200			SSC 14	1
458.1	LANTERN RING		SSC 13			SSC 14	1
461.1	PACKING		NON METALLIC				1SET
*471.1	SEAL COVER		STS 304				1
502.1	CASING WEAR RING	CAC 406		SSC 13		SSC 14	1
503.1	IMPELLER WEAR RING	CAC 406		SSC 13		SSC 14	1
523.1	SHAFT SLEEVE		STS 304			STS 316	1
542.1	THROTTLING BUSH		CAC 406				1
644.1	LUBRICATING RING		TEFLON				1

*OPTION



ZAH

외형치수도 / Outline dimensions

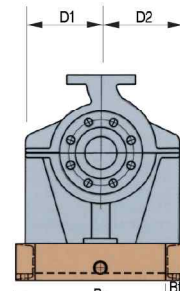
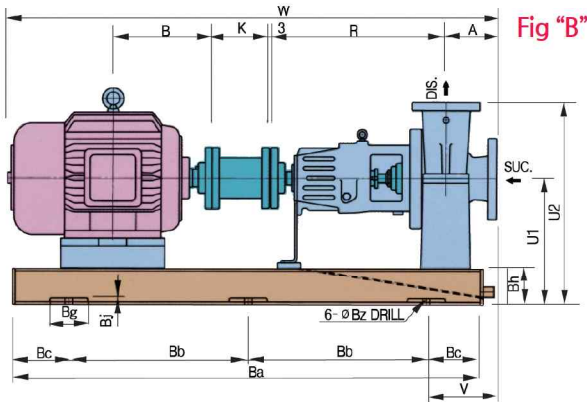
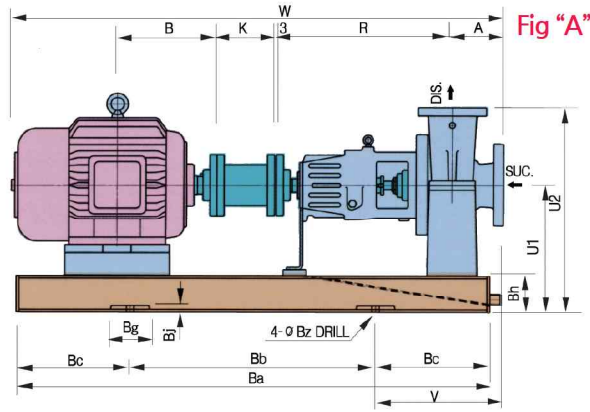


Fig "A" & "B"

TYPE	MOTOR FRAME NO.	FIG	BORE		PUMP & MOTOR DIMENSIONS(MM)										BASE PLATE DIMENSIONS(MM)								WEIGHT(KG)					
			SUC.	DIS.	A	B	D1	D2	K	R	T	U1	U2	V	W	Ba	Bb	Bc	Bd	Be	Bf	Bg	Bh	Bj	Bz	PUMP	MOTOR	BASE
ZAH 25B	71M	A	∅40	∅25	112	190	190	140	440	505	330	175	125	912	900	550	175	400	355	50	100	100	18	19	47	7	42	96
	80M				140								125	958	900	550	175									10	42	99
	90L				169								125	1008	900	550	175									24	42	113
	100L				193								125	1050	950	600	175									30	45	122
	112M	B			200								75	1124	1050	400	125									56	53	156
	132S				239								75	1162	1050	400	125									70	53	170
	132M				258								75	1273	1150	450	125									109	62	218
	160M				323								75	1317	1150	450	125									36	62	245
	160L				345								75															
ZAH 40A	71M	A	∅80	∅40	120	190	190	140	525	510	330	180	115	1027	950	600	175	400	355	50	100	100	18	19	66	7	45	118
	80M				140								115	1073	950	600	175									10	45	121
	90L				169								140	1123	1000	600	200									24	48	135
	100L				193								65	1165	1050	400	125									30	53	149
	112M	B			200								65	1177	1050	400	125									39	53	158
	132S				239								65	1239	1150	450	125									56	60	185
	132M				258								65	1277	1150	450	125									70	60	196
	160M				323								65	1388	1250	500	125									109	74	249
	160L				345								65	1432	1250	500	125									136	74	276
ZAH 40B	100L	B	∅80	∅40	193	200	200	140	610	550	350	200	53	1260	1150	450	125	425	380	50	100	100	18	19	90	30	59	179
	112M				200								53	1272	1150	450	125									39	59	188

• 치수는 참고용임

TYPE	MOTOR FRAME NO.	FIG	BORE		PUMP & MOTOR DIMENSIONS(MM)										BASE PLATE DIMENSIONS(MM)										WEIGHT(KG)																								
			SUC	DIS.	A	B	D1	D2	K	R	T	U1	U2	V	W	Ba	Bb	Bc	Bd	Be	Bf	Bg	Bh	Bi	Bj	Bk	PUMP	MOTOR	BASE	TOTAL																			
ZAH 40B	132S	A	Ø80	Ø40	140	239	200	200	140	610	550	350	200	78	1334	1200	450	150	425	380	50	100	100	18	19	90	56	76	222																				
	132M					258								78	1372	1200	450	150									70	76	236																				
	160M					323								53	1483	1350	550	125									109	92	291																				
	160L	345				53								1527	1350	550	125	136									92	318																					
	180M	352				78								1537	1400	550	150	161									97	348																					
	180L	371				78								1575	1400	550	150	177									97	364																					
ZAH 40C	112M	B	Ø80	Ø40	140	200	230	230	140	610	615	390	225	55	1272	1150	450	125	500	455	50	100	100	18	19	106	39	59	204																				
	132S					239								80	1334	1200	450	150									56	64	226																				
	132M					258								80	1372	1200	450	150									70	64	240																				
	160M					323								55	1483	1350	550	125									109	92	307																				
	160L					345								55	1527	1350	550	125									136	92	334																				
	180M					352								80	1537	1400	550	150									161	99	366																				
	180L					371								80	1575	1400	550	150									177	99	382																				
	200L					396								105	1637	1450	550	175									277	106	489																				
ZAH 40D	132S	B	Ø80	Ø40	160	239	290	290	140	682	770	490	280	70	1426	1300	500	150	670	610	65	130	125	20	23	177	56	90	323																				
	132M					258								70	1464	1300	500	150									70	90	337																				
	160M					323								95	1575	1450	550	125									109	112	398																				
	160L					345								95	1619	1450	550	125									136	112	425																				
	180M					352								120	1929	1500	550	150									161	124	462																				
	180L					371								120	1667	1500	550	150									177	124	478																				
	200L					396								95	1729	1550	600	175									277	152	606																				
	225S					415								120	1806	1600	600	200									325	164	666																				
	250S					453								120	1897	1600	600	200									435	164	778																				
	250M					453								120	1897	1600	600	200									505	164	846																				
	ZAH 50A					90L								B	Ø80	Ø50	140	169									190	190	140	610	515	330	185	90	1218	1100	400	150	450	405	50	100	100	18	19	91	24	60	715
						100L												193																65	1260	1150	450	125									30	74	195
112M		200	65	1272	1150	450	125	39	74	204																																							
132S		239	90	1334	1200	450	150	56	79	226																																							
132M		258	90	1372	1200	450	150	70	79	240																																							
160M		323	65	1483	1350	550	125	109	102	302																																							
160L		345	65	1527	1350	550	125	136	102	329																																							
ZAH 50B	100L	B	Ø80	Ø50	150	193	210	210	140	610	640	440	200	55	1270	1150	450	125	500	455	50	100	100	18	19	93	30	59	182																				
	112M					200								55	1282	1150	450	125									39	59	191																				
	132S					239								80	1344	1200	450	150									56	76	225																				
	132M					258								80	1382	1200	450	150									70	76	239																				
	160M					323								55	1493	1350	550	125									109	92	294																				
	160L					345								55	1537	1350	550	125									136	92	321																				
	180M					352								80	1547	1400	550	150									161	104	358																				
	180L					371								80	1585	1400	550	150									177	104	374																				
	200L					396								105	1647	1450	550	175									277	111	481																				
	225S					415								130	1724	1500	550	200									325	118	536																				
ZAH I 50C	80M	B	Ø80	Ø50	155	140	230	230	140	610	680	440	240	55	1183	1050	400	125	500	455	50	100	100	18	19	109	10	54	173																				
	90L					169								80	1233	1100	400	150									24	59	192																				
	100L					193								55	1275	1150	450	125									34	72	215																				
	112M					200								55	1287	1150	450	125									39	72	220																				
	132S					239								80	1349	1200	450	150									56	76	241																				
	132M					258								80	1402	1200	450	150									70	76	255																				
	160M					323								55	1498	1350	550	125									109	95	313																				
	160L					345								55	1542	1350	550	125									136	95	340																				
	180M					352								80	1552	1400	550	150									161	102	372																				
	180L					371								80	1590	1400	550	150									177	102	388																				
	200L					396								105	1652	1450	550	175									277	112	498																				
	225S					415								130	1729	1500	550	200									325	117	551																				
	ZAH 50D					132S								B	Ø100	Ø50	175	239									280	280	140	682	770	490	280	70	1456	1400	550	150	670	610	65	130	125	20	12	185	62	112	369
132M		258	70	1494	1400	550	150	70	122	377																																							
160M		323	95	1590	1450	550	175	109	112	406																																							
160L		345	95	1634	1450	550	175	136	112	433																																							

• 치수는 참고용임



TYPE	MOTOR FRAME NO.	FIG	BORE		PUMP & MOTOR DIMENSIONS(MM)													BASE PLATE DIMENSIONS(MM)								WEIGHT(KG)																											
			SUC.	DIS.	A	B	D1	D2	K	R	T	U1	U2	V	W	Ba	Bb	Bc	Bd	Be	Bf	Bg	Bh	Bj	Bz	PUMP	MOTOR	BASE	TOTAL																								
ZAH 50D	180M	B	Ø100	Ø 50	175	280	280	140	682	770	490	280	120	1644	1500	550	200	670	610	63	130	125	20	12	185	161	124	470																									
	180L																									177	124	486																									
	200L																									277	152	614																									
	225S																									325	152	662																									
	250S																									435	164	784																									
	250M																									505	164	854																									
	280S																									675	176	1038																									
	280M																									750	176	1111																									
ZAH 80A	90L	B	Ø100	Ø 80	155	185	210	140	610	610	390	220	75	1233	1100	400	150	450	405	50	100	100	18	19	102	24	54	180																									
	100L																									30	59	191																									
	112M																									39	59	200																									
	132S																									56	76	234																									
	132M																									70	76	248																									
	160M																									109	92	303																									
	160L																									136	92	330																									
	180M																									161	104	367																									
	180L																									177	104	383																									
ZAH 80B	132S	B	Ø100	Ø 80	160	225	240	140	610	680	440	240	35	1354	1250	500	125	500	440	65	130	125	20	23	113	56	76	245																									
	132M																									70	76	259																									
	160M																									109	93	315																									
	160L																									136	93	342																									
	180M																									161	102	376																									
	180L																									177	102	392																									
	220L																									277	118	508																									
	225S																									325	128	566																									
	ZAH 80C																									100L	B	Ø100	Ø 80	165	235	260	140	610	650	390	260	50	1285	1150	450	125	560	515	50	100	100	18	19	124	30	76	230
112M		39	76	239																																																	
132S		56	88	268																																																	
132M		70	88	282																																																	
160M		109	96	329																																																	
160L		136	96	359																																																	
180M		161	102	387																																																	
180L		177	102	403																																																	
200L		277	102	503																																																	
225S		325	128	577																																																	
250S		435	132	691																																																	
250M		505	132	761																																																	
ZAH 80D		132S	B	Ø100	Ø 80	185	300	310	180	682	790	490	300	65	1506	1400	550	150	670	610	65	130	125	20	23	195																									62	128	385
		132M																																																	70	128	393
	160M	102																									132	429																									
	160L	118																									132	445																									
	180M	161																									148	504																									
	180L	177																									148	520																									
	200L	277																									168	640																									
	225S	325																									168	688																									
	250S	435																									178	808																									
	250M	505																									178	878																									
	280S	678																									198	1068																									
	280M	750																									198	1143																									
	ZAH 100A	90L																									B	Ø100	Ø100	175	185	235	140	618	650	390	260	75	1261	1100	400	150	500	455	50	100	100	18	19	110	24	59	193
		100L																																																	30	59	199
112M		39	59	208																																																	

TYPE	MOTOR FRAME NO.	FIG	BORE		PUMP & MOTOR DIMENSIONS(MM)										BASE PLATE DIMENSIONS(MM)								WEIGHT(KG)													
			SUC	DIS.	A	B	D1	D2	K	R	T	U1	U2	V	W	Ba	Bb	Bc	Bd	Be	Bf	Bg	Bh	Bi	Bj	Bz	PUMP	MOTOR	BASE	TOTAL						
ZAH 100A	132S	B	Ø100	Ø100	175	239	185	235	140	618	700	400	260	50	1377	1250	500	125	500	440	65	130	125	20	23	110	56	76	242							
	132M					258							50	1415	1250	500	125	70									81	261								
	160M					323							50	1526	1350	550	125	109									92	311								
	160L					345							50	1570	1350	550	125	136									112	358								
	180M					352							75	1580	1400	550	150	161									112	383								
	180L					371							75	1618	1400	550	150	177									124	411								
	200L					396							100	1680	1450	550	175	277									124	511								
ZAH 100B	112M	B	Ø100	Ø100	165	200	230	270	180	610	690	420	270	35	1337	1250	500	125	600	540	65	130	125	20	23	121	39	81	241							
	132S					239								60	1399	1300	500	150									56	81	258							
	132M					258								60	1437	1300	500	150									70	89	280							
	160M					323								60	1548	1400	550	150									109	112	342							
	160L					345								60	1592	1400	550	150									136	124	381							
	180M					352								85	1602	1450	550	175									161	124	406							
	180L					371								85	1640	1450	550	175									177	133	431							
	200L					396								110	1702	1500	550	200									277	148	546							
	225S					415								85	1779	1550	600	175									325	120	566							
	250S					453								85	1870	1550	600	175									435	120	676							
	250M					453								85	1870	1550	600	175									505	120	746							
ZAH 100C	132S	B	Ø100	Ø100	200	239	240	290	180	682	780	490	290	35	1521	1350	550	125	670	610	65	130	125	20	23	165	62	125	352							
	132M													258	35	1559	1350	550									125	70	125	360						
	160M													323	110	1658	1500	550									200	102	135	402						
	160L													345	110	1702	1500	550									200	118	135	418						
	180M													352	85	1709	1550	600									175	161	172	498						
	180L													371	85	1747	1550	600									175	177	197	539						
	200L													396	85	1809	1550	600									175	277	197	639						
	225S					415	110	1888	1600	600	200	325	168	658																						
	250S					453	85	1977	1650	650	175	435	178	778																						
	250M					453	830	1977	1650	650	175	505	178	848																						
	280S					510	135	2093	1750	650	225	675	188	1028																						
	280M					510	135	2093	1750	650	225	750	188	1103																						
	ZAH 100D					180M	B	Ø150	Ø100	195	352	300	325	180	682	860	540	320	115	1716	1600	550	200	670	600	75	150	150	20	23	215	147	140	502		
180L		371	115	1754	1600	550													200	159	140	514														
200L		426	115	1858	1600	600													200	297	168	680														
225S		445	115	1911	1600	600													200	345	170	730														
250S		453	90	1972	1650	650													175	435	178	828														
250M		453	90	1972	1650	650													175	505	178	898														
280S		510	140	2088	1750	650													225	675	188	1078														
280M		510	140	2088	1750	650													225	750	188	1153														
ZAH 150B	112M	B	Ø150	Ø150	200	200	230	300	180	610	800	490	310	60	1372	1400	550	150	670	610	62	130	125	20	23	137	39	145	321							
	132S													239	110	1434	1500	550									200	56	145	338						
	132M													258	110	1472	1500	550									200	70	152	359						
	160M													323	110	1583	1600	600									200	109	166	412						
	160L													345	110	1627	1600	600									200	136	173	446						
	180M													352	85	1637	1650	650									175	161	173	471						
	180L													371	85	1675	1650	650									175	177	180	494						
	200L					396	110	1737	1700	650	200	277	180	594																						
	225S					415	135	1814	1750	650	225	325	187	649																						
	250S					453	135	1905	1750	650	225	435	194	766																						
	250M					453	135	1905	1750	650	225	505	194	836																						
	280S					510	160	2021	1900	700	250	675	208	1020																						
	280M					510	160	2021	1900	700	250	750	208	1095																						
ZAH 150C	132S	B	Ø150	Ø150	200	239	260	320	180	682	830	515	315	110	1506	1600	600	200	670	600	75	150	150	20	23	200	56	155	411							
	132M													258	110	1544	1600	600									200	70	160	430						
ZAH 200D	250M	B	Ø200	Ø200	235	453	290	370	250	687	990	600	390	125	2066	1750	650	225	670	600	80	150	200	20	27	165	505	237	977							
	250S													453	100	2028	1800	700	200								800	600	80	150	200	20	27	435	201	888
	280L													510	125	2306	1950	750	225								670	600	80	150	200	20	27	675	250	1485

• 치수는 참고용임

