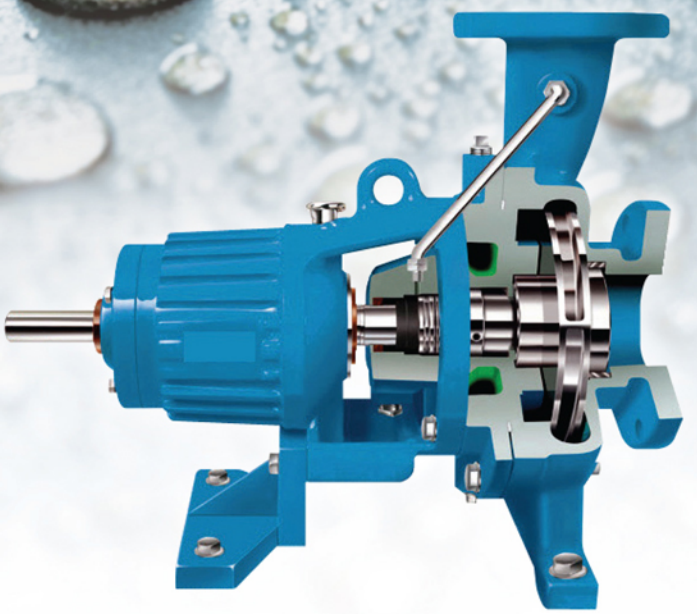
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A company dedicated to save environment with clean water management

GREEN TECH PUMP

GPA

프로세스 펌프



GREEN TECH Co., Ltd.
Pump & System Engineering

GPA

PROCESS PUMP

PROCESS PUMP/ 프로세스 펌프

Usages and Applications / 용도 및 적용 분야

- Chemical industry
- Petroleum refinery
- Petrochemical industry
- Industrial plant facilities

- 화학공업
- 석유 정제
- 석유화학공업
- 공업 플랜트설비

Design and Operation Features / 설계 및 구조적 특징

- Process pumps has suitable structure for chemical industry, petroleum refinery, petrochemical industry as well as industrial plant facilities and the features are as follows.

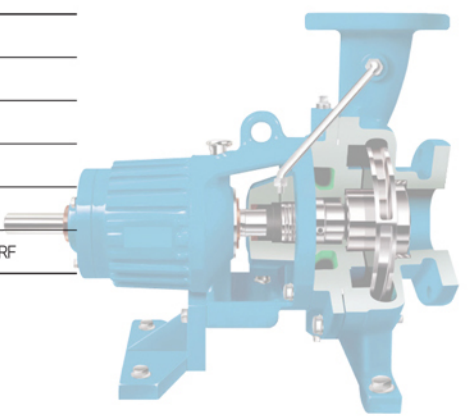
1. Presentation of new direction for the use of process pump.
   It adopted a solid design based on the major points in API 610 Specification.
2. High efficiency and low stuffing box pressure with its closed impeller, loss of flow rate, being occurred in the use of open impeller, is deceased to make higher efficiency, and loss of mechanical seal is minimized due to lower stuffing box pressure.
3. Easy maintenance
   - Its back pull-out structure allows repairing without disassembling of suction & discharging pipes.
   - Bearing housing adapter free structure allows easy alignment maintenance.
   - Wearing in the casing reduces maintenance cost.
   - Labyrinth type bearing housing sealing allows longer life span.
4. Maintenance of hydraulic radial balance Pumps with more than 4"of discharge bore are designed with double volute of the casing.
5. Stuffing box jacket
   Installation without welding process.

- Process Pump는 화학공업, 석유 정제, 석유화학공업 및 공업 PLANT 설비에 적합한 구조이며 특징은 다음과 같습니다.

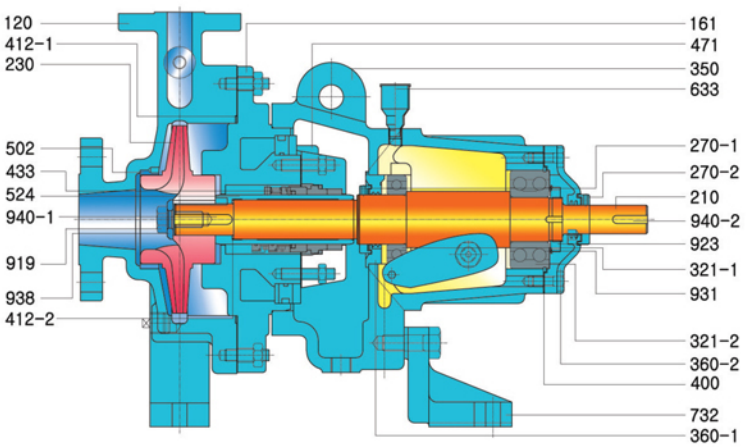
1. Process Pump 사용에 새로운 방향 제시
   API 610규격의 주요 사항을 수용한 견고한 설계를 채택 하였습니다.
2. 높은 효율 및 낮은 Stuffing Box 압력
   Closed Impeller를 채용하여 Open Impeller사용시 발생되는 유량의 손실을 작게하여 높은 효율을 내며 낮은 Stuffing Box 압력으로 Mechanical Seal 손실을 최소화 하였습니다.
3. 간편한 유지보수
   - 흡, 토출관을 분해하지 않고 수리가 가능한 Back Pull-Out구조입니다.
   - Bearing Housing Adapter가 없어 Alignment 작업이 용이합니다.
   - Casing에 Wear Ring이 장착되어 유지 보수비용이 절감됩니다.
   - Labyrinth Type Bearing Housing Sealing 구조로 수명이 깁니다.
4. 수력학적 Radial Balance 유지 토출구경이 4" 이상의 Pump는 Casing Double Volute로 설계되어 있습니다.
5. Stuffing box jacket
   설치 시 Welding이 필요없는 구조입니다.

Standard Specification / 표준사양

Capacity (유량)	680㎥/hr (3000 USGPM)
Total Head (양정)	12 – 210m (40 – 689FT)
Impeller (임펠러)	Closed Type (밀폐형)
Max. Design Pressure (최고설계 압력)	31.6 kgf/㎠ (400psi)
Temperature (사용온도)	0 – 120℃ (32 – 248°F)
Flange Rating (플랜지 규격)	ANSI 150 lbs×RF / 300 lbs×RF

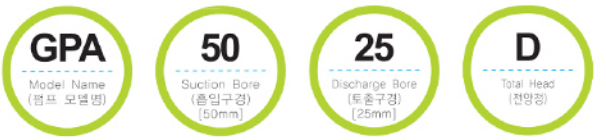


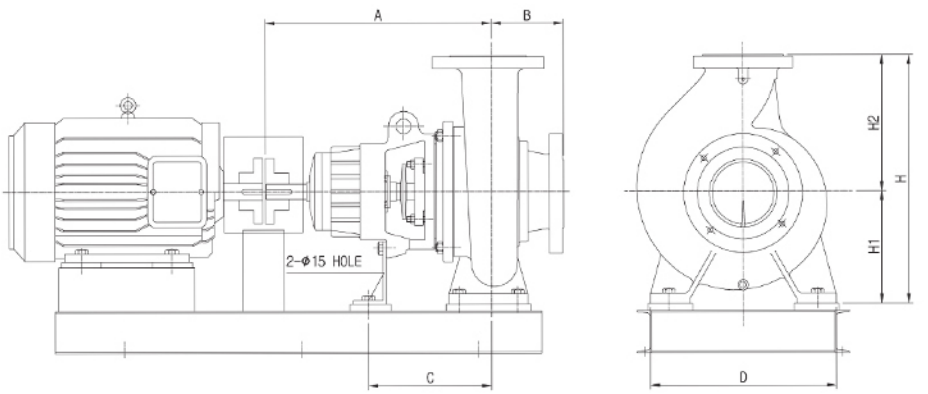
Sectional Drawing / 조립 단면도



Part No. (품번)	Part Name (부품명)	Standard Material (표준재질)		Q'ty (수량)
		ASTM	KS	
102	Volute Casing	A743-CF8	SSC13	1
161	Casing Cover	A743-CF8	SSC13	1
210	Shaft	A276-304	STS304	1
230	Impeller	A743-CF8	SSC13	1
270-1	Deflector A	B584-C83600	CAC406	1
270-2	Deflector B	B584-C83600	CAC406	1
321-1	Bearing (A)	A295-52100	STB2	1
321-2	Bearing (B)	A295-52100	STB2	1
350	Bearing Housing	A48-CL30	GC200	1
360-1	Bearing Cover (A)	A48-CL30	GC200	1
360-2	Bearing Cover (B)	A48-CL30	GC200	1
400	Gasket (Bearing Cover)	Paper	Paper	1
321-1	O-Ring (Casing)	Viton	Viton	1
321-2	O-Ring (Sleeve)	Viton	Viton	1
433	Mechanical Seal	SiC/Carbon	SiC/Carbon	1
471	Mechanical Seal Cover	A108-1045	SM45C	1
502	Casing Wear Ring	A743-CF8	SSC13	1
524	Sleeve	A276-304	STS304	1
633	Oil Filler Cup	STEEL	STEEL	1
732	Support	A36	SS400	1
919	Impeller Bolt	A276-304	STS304	1
923	Bearing Nut	A108-1045	SM45C	1
931	Bearing Lock Washer	A686 Type W1 Gr. C	SK 5M	1
938	Impeller Washer	A276-304	STS304	1
940-1	Key (Impeller)	A276-304	STS304	1
940-2	Key (Coupling)	A108-1045	SM45C	1

Outline Drawing / 외형 치수도



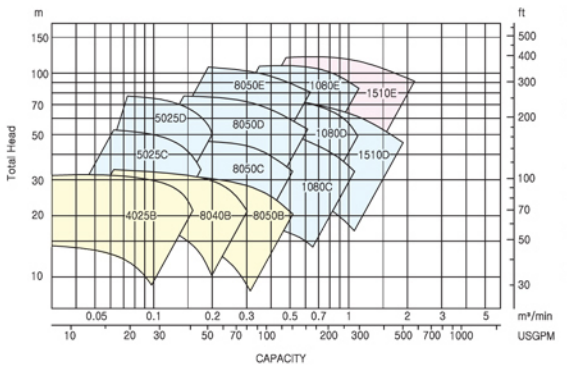


Model (형식)	Dimensions [mm]							Pump Weight [kg]
	A	B	C	D	H1	H2	H	
GPA 4025B	345	102	185	190	135	165	300	43
GPA 5025C	495	102	318	312	210	210	420	91
GPA 5025D	495	102	318	292	210	210	420	85
GPA 8040B	345	102	185	190	135	165	300	55
GPA 8050B	345	102	185	190	160	180	340	52
GPA 8040D	495	102	318	292	210	215	425	89
GPA 8050C	495	102	318	312	210	210	420	97
GPA 8050D	495	102	318	292	210	240	450	94
GPA 8050E	495	102	318	312	255	290	545	114
GPA 8050F	495	102	318	312	255	290	545	111
GPA 1080C	495	102	318	312	210	240	450	105
GPA 1080D	495	102	318	312	210	280	490	101
GPA 1080E	495	102	318	312	255	320	575	121
GPA 1510D	495	140	318	308	255	345	600	99
GPA 1510E	622	140	365	500	280	343	623	142
GPA 1515E	622	140	365	500	280	380	660	165
GPA 1515F	622	140	365	500	355	420	775	180
GPA 2020FL	622	178	365	520	380	508	888	215
GPA 2020FH	622	178	365	520	380	508	888	215

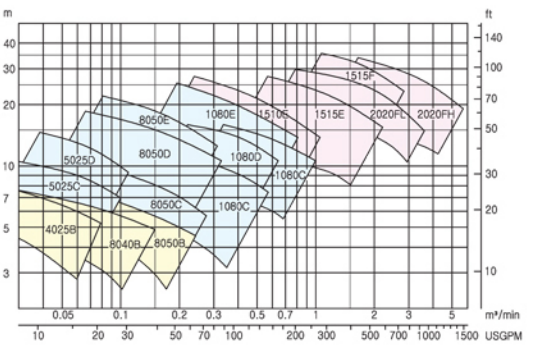
※ Note : All dimensions (millimeters) / Contact us for specific dimensions.

Selection Chart / 선정도

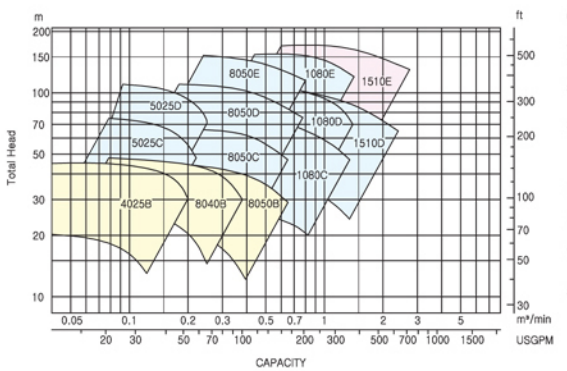
50Hz, 2P (3000RPM)



50Hz, 4P (1500RPM)



60Hz, 2P (3600RPM)



60Hz, 4P (1800RPM)

