

# HTM

*Hyosung Turbine Type Multi-Stage Pump*



*Springs of Living Water*

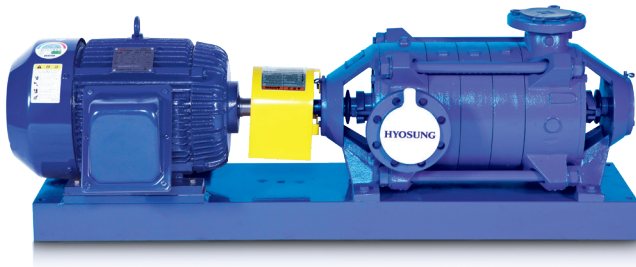


## G

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## 용도 Application



## 특징 Features

01. 소형 경량의 다단 터빈 고압 원심펌프로서 우수한 설계와 제조기술로 저진동, 저소음, 고효율 구현
02. 고속회전에서도 안전하며, 고효율을 발휘할 수 있도록 설계
03. 표준화 및 시리즈화(Series)하여 부품의 호환성을 극대화시킨 구조

01. Compact and lightweight high pressure multi-stage centrifugal pump through excellent manufacturing technology, simple and unique design for high efficiency and low vibration and noise.
02. Safe and high efficiency design in a high speed rotating condition
03. Standardization with high compatible of component

## 호칭 Model Designation

# HTM80/4

펌프 모델명  
**HTM**  
Model Name

토출구경  
**80**  
Discharge Diameter [mm]

단수 [회전차수]  
**4**  
Number of Stages  
[Number of Impellers]

## 표준 사양 Standard Specification

|                 |                    |                    |                                                                      |
|-----------------|--------------------|--------------------|----------------------------------------------------------------------|
| 취급액             | Applicable Liquid  |                    | 청수 Clean Water (pH 5.8 ~ 8.6) 0 ~ 90℃                                |
| 유량 / 양정         | Capacity / Head    |                    | 3 ~ 500 m <sup>3</sup> /h / 10 ~ 380 m                               |
| 구경              | Diameter           |                    | 32 ~ 150 mm                                                          |
| 회전방향            | Rotation Direction |                    | CW (구동기 측에서 펌프를 바라보았을 때)<br>(From the Motor Side to the Pump)        |
| 구조<br>Structure | 회전차                | Impeller           | 클로즈형 Closed Type                                                     |
|                 | 축봉                 | Shaft Seal         | Packing (테프론 함침 탄화섬유)<br>(Carbonized fibers impregnated with Teflon) |
|                 | 베어링                | Bearing            | Ball Bearing, Roller Bearing                                         |
| 플랜지<br>Flanges  | 흡입                 | Suction            | KS B 1511 10K, RF, SIDE                                              |
|                 | 토출                 | Discharge          | KS B 1511 20K, RF, TOP                                               |
| 카플링<br>Coupling | 45kW 이하            | Below 45kW         | 몰림형 카플링 Jaw Coupling                                                 |
|                 | 55kW 이상            | Above 55kW         | 플랜지 카플링 Flange Coupling                                              |
| 재질<br>Material  | 흡입, 토출케이싱          | Suc. & Dis. Casing | GC200 (Option : SSC13, etc)                                          |
|                 | 중간케이싱              | Middle Casing      | GC200 (Option : SSC13, etc)                                          |
|                 | 회전차                | Impeller           | GC200 (Option : CAC406, SSC13, etc)                                  |
|                 | 축                  | Shaft              | SM45C (Option : STS304, etc)                                         |

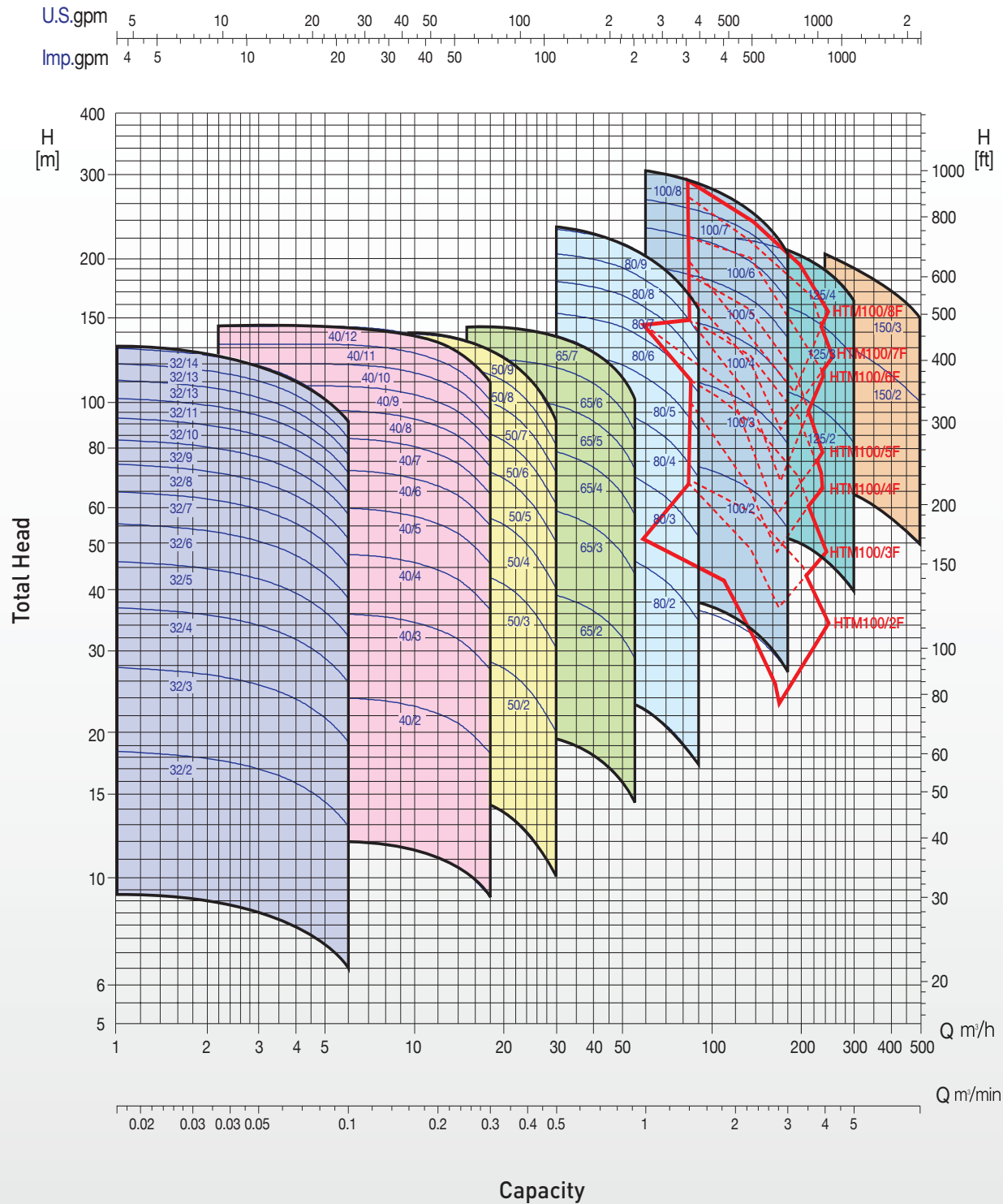
### 선택사양 Option

- 접액부 재질 (조립단면도 선택사양 참고)
- 전동기 형식 (요구사항)
- 축봉장치 (요구사항)
- 커플링 (요구사항)
- 각종 계기류, Drain/Vent 배관 구성
- 흡·토출 플랜지 방향 및 규격 (별도 문의요망)
- 도장사양 (요구사항)
- Material of the Liquid Contacting Part (Refer to the Specifications in the Sectional Drawing)
- Motor Type (Requirement)
- Shaft Seal (Requirement)
- Coupling (Requirement)
- Instrument, Drain/Vent Piping
- Suction, Discharge Flange Direction and Specification (Contact us)
- Painting (Requirement)

※ GC200 : Cast Iron / CAC406 : Cast Bronze / SSC13 : Stainless Steel Casting  
※ SM45C : Carbon Steel / STS304 : Stainless Steel

## 선정도 Selection Chart

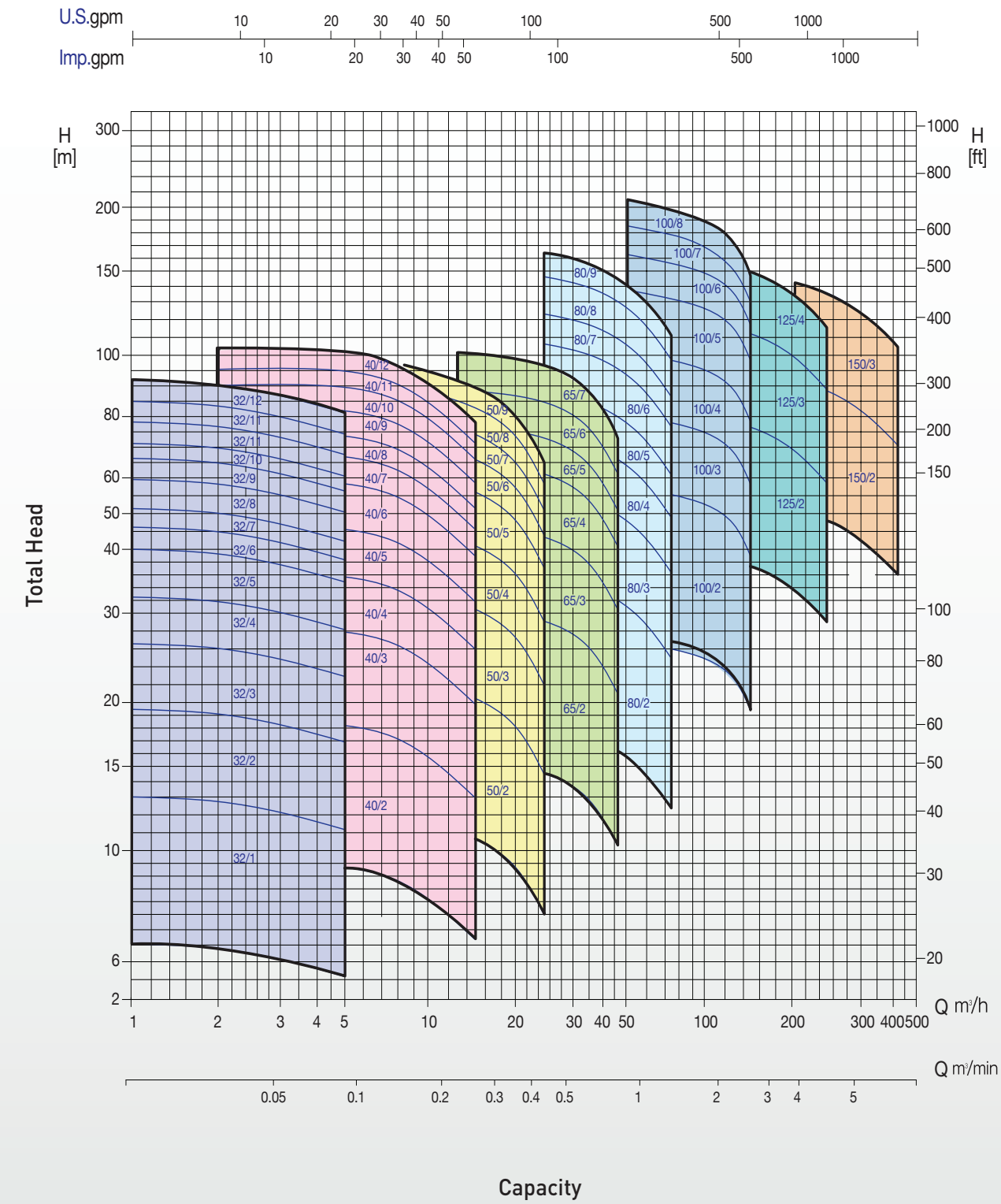
60Hz (1750RPM)



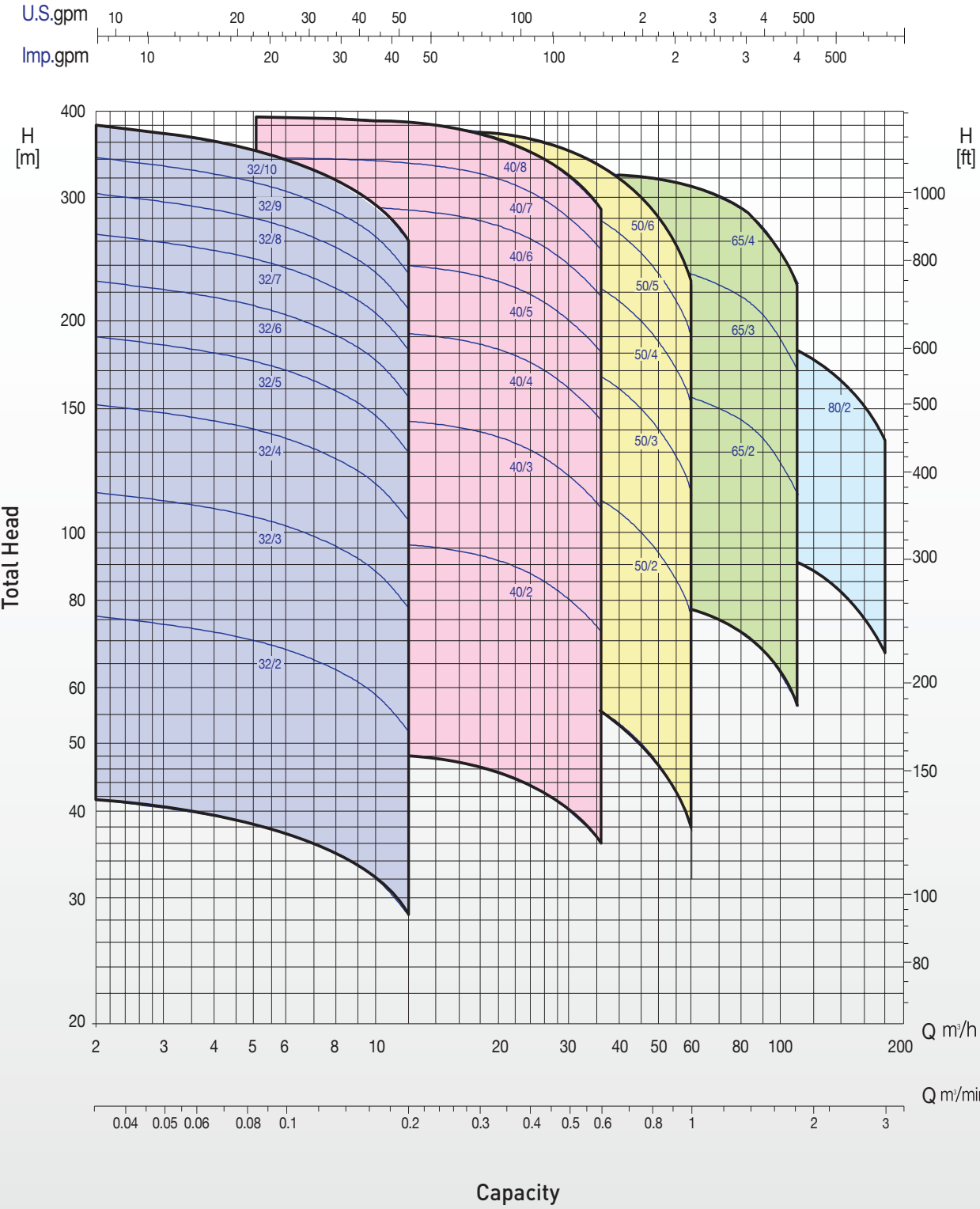
※ F Type은 소방펌프임.

선정도 Selection Chart

50Hz (1450RPM)

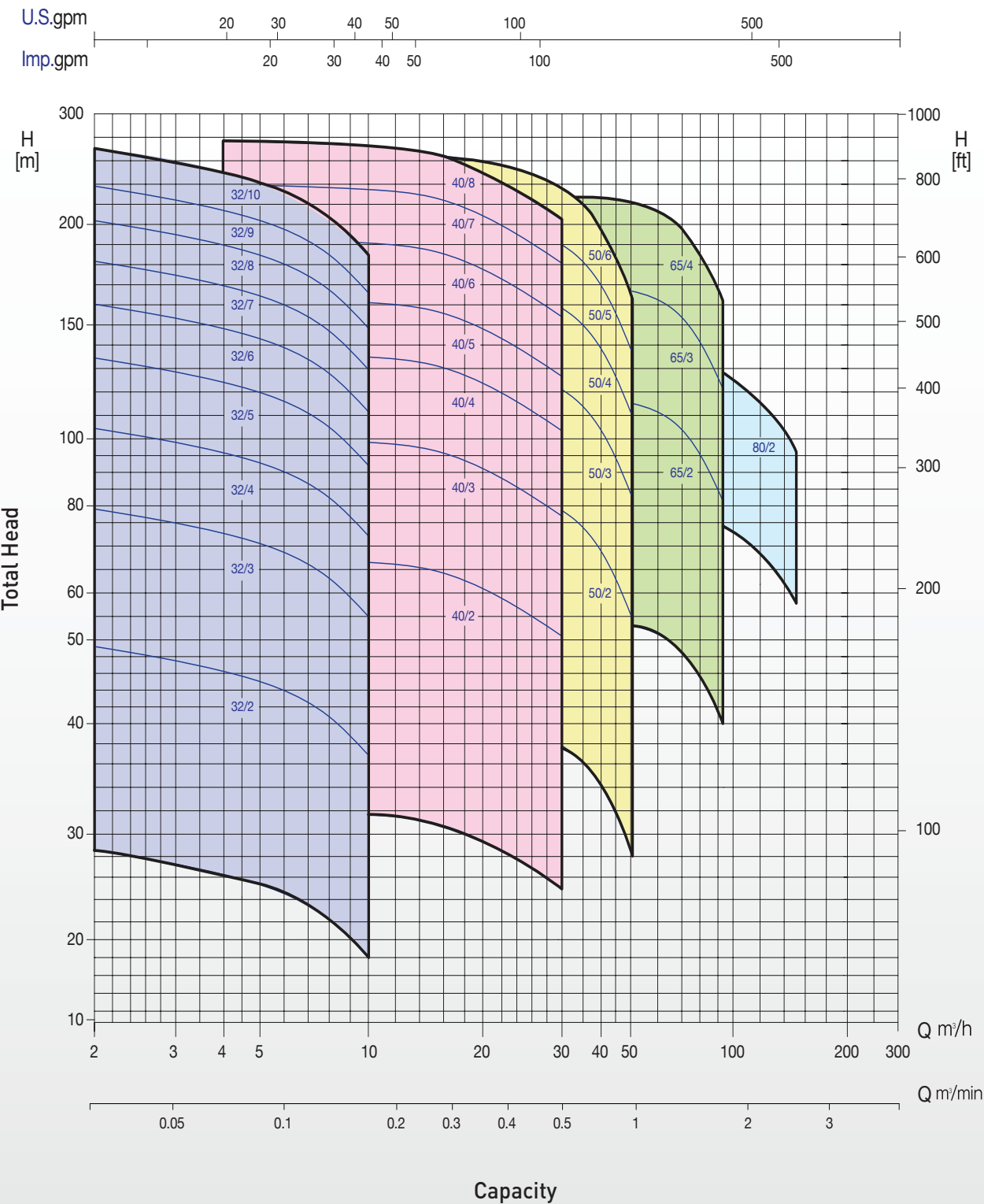


60Hz (3500RPM)



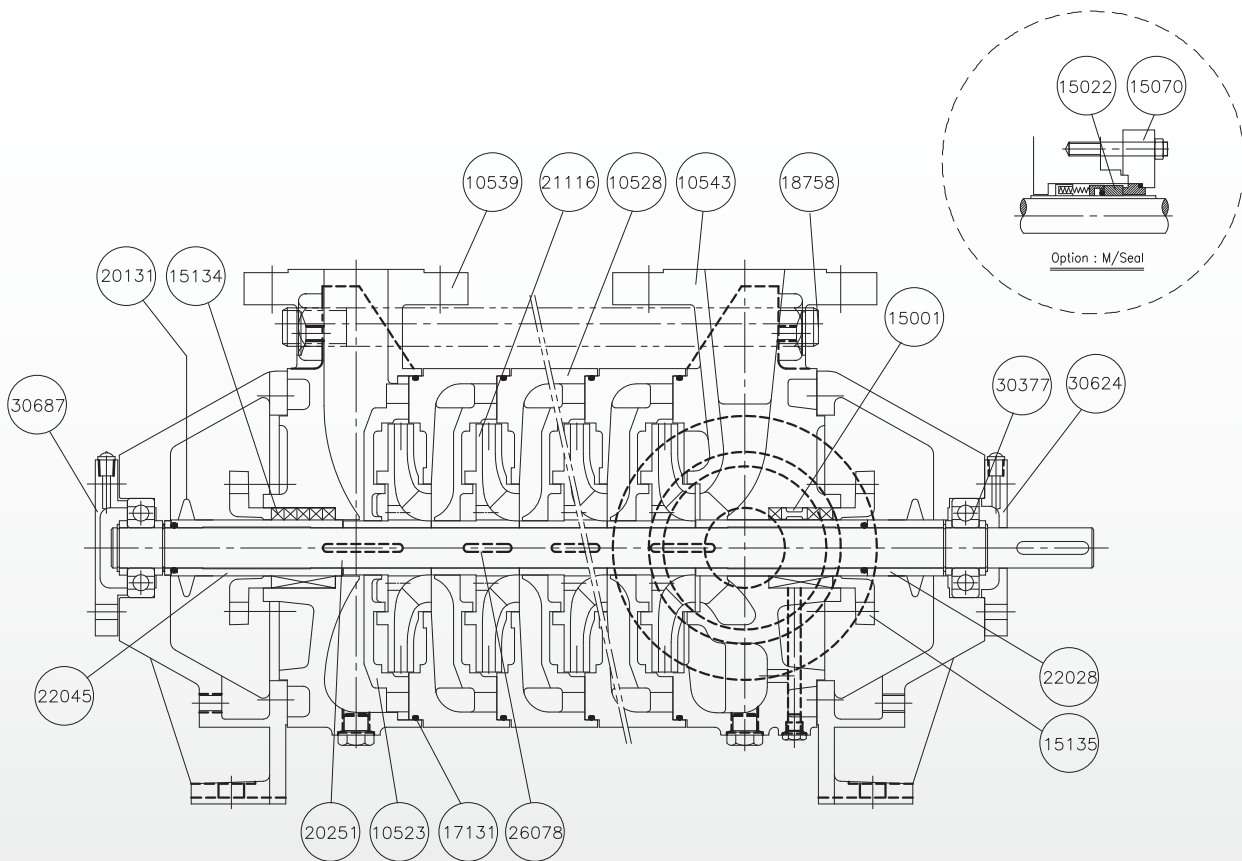
선택도 Selection Chart

50Hz (3000RPM)



조립 단면도 Sectional Drawing

[ HTM32/40/50/65 ]



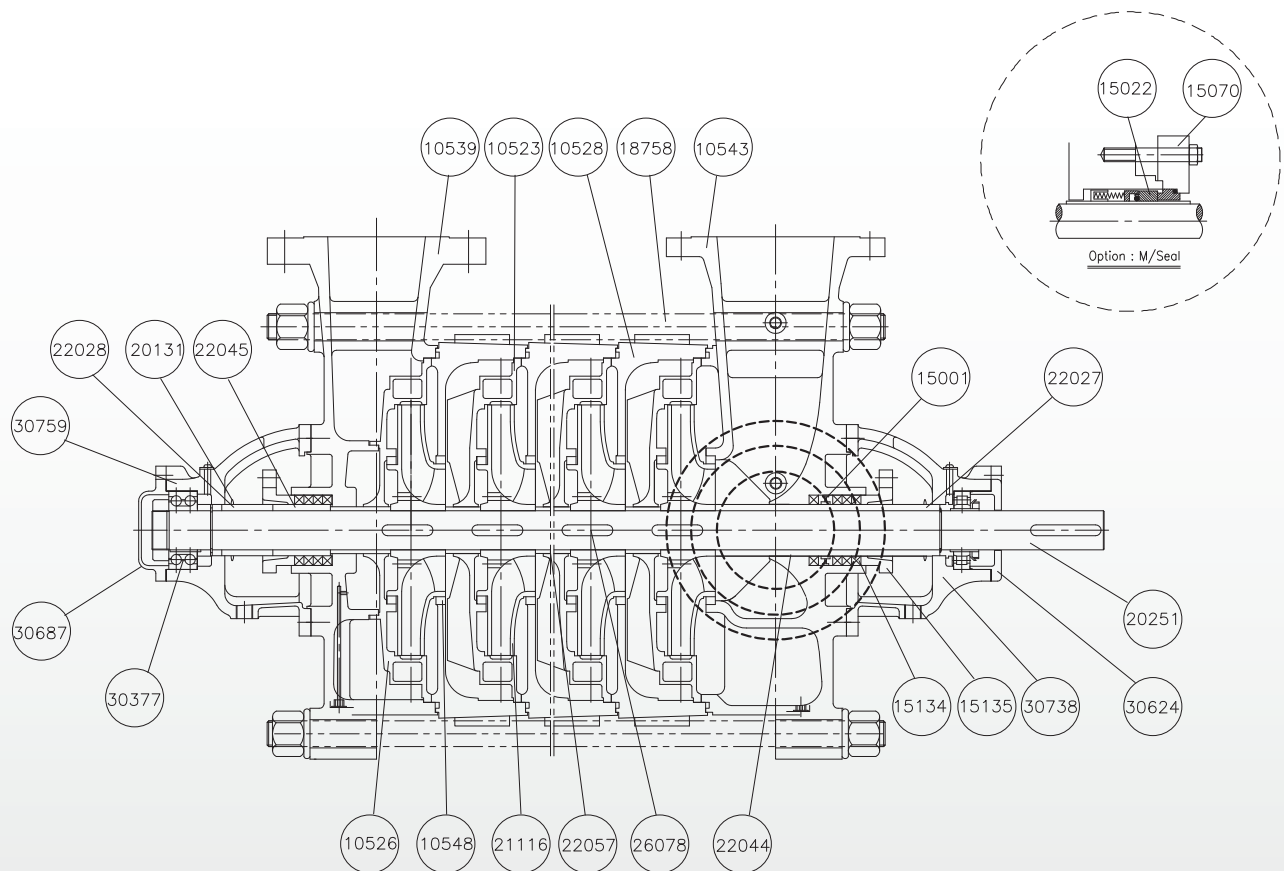
※ 2P 제작 가능 모델 2P-applicable Model  
: HTM32, HTM40, HTM50, HTM65, HTM80

| 부품번호<br>Part No. | 부품명<br>Part Name  | 표준재질<br>Material | 선택사양<br>Option | 부품번호<br>Part No. | 부품명<br>Part Name  | 표준재질<br>Material | 선택사양<br>Option  |
|------------------|-------------------|------------------|----------------|------------------|-------------------|------------------|-----------------|
| 10523            | GUIDE CASING      | GC200            | SSC13,14       | 18758            | TIE BOLT          | SM25C            | —               |
| 10528            | INTERSTAGE CASING | GC200            | SSC13,14       | 20131            | PROTECT RING      | RUBBER           | RUBBER          |
| 10539            | DISCHARGE CASING  | GC200            | SSC13,14       | 20251            | SHAFT             | SM45C            | STS304,316      |
| 10543            | SUCTION CASING    | GC200            | SSC13,14       | 21116            | IMPELLER          | GC200            | CAC406,SSC13,14 |
| 15001            | LANTERN RING      | ACETAL           | ACETAL         | 22028            | SPACE SLEEVE      | SM45C            | STS304,316      |
| 15022            | MECHANICAL SEAL   | —                | —              | 22045            | SHAFT SLEEVE      | SM45C            | STS304,316      |
| 15070            | SEAL COVER        | GC200            | STS304,316     | 26078            | KEY               | SM45C            | STS304,316      |
| 15134            | PACKING           | SC#7295          | SC#7295        | 30377            | BEARING           | STEEL            | STEEL           |
| 15135            | PACKING RETAINER  | GC200            | —              | 30624            | BEARING COVER(CP) | GC200            | —               |
| 17131            | O-RING            | NBR              | NBR            | 30687            | BEARING COVER(TH) | GC200            | —               |

※ Part No. 407, 408 are applicable for M/Seal Option  
※ P,T,F,E : Carbonized fibers impregnated with Teflon

조립 단면도 Sectional Drawing

[ HTM80/100/125/150 ]



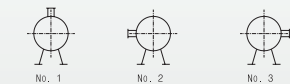
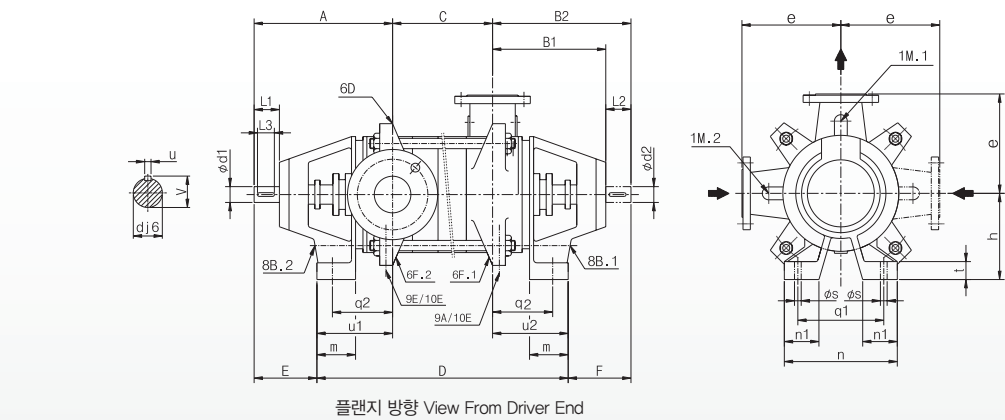
※ 2P 제작 가능 모델 2P-applicable Model  
: HTM32, HTM40, HTM50, HTM65, HTM80

| 부품번호<br>Part No. | 부품명<br>Part Name  | 표준재질<br>Material | 선택사양<br>Option | 부품번호<br>Part No. | 부품명<br>Part Name    | 표준재질<br>Material | 선택사양<br>Option  |
|------------------|-------------------|------------------|----------------|------------------|---------------------|------------------|-----------------|
| 10523            | GUIDE CASING      | GC200            | SSC13,14       | 20251            | SHAFT               | SM45C            | STS304,316      |
| 10526            | GUIDE CASING-L    | GC200            | SSC13,14       | 21116            | IMPELLER            | GC200            | CAC406,SSC13,14 |
| 10528            | INTERSTAGE CASING | GC200            | SSC13,14       | 22027            | SPACE SLEEVE        | SM45C            | STS304,316      |
| 10539            | DISCHARGE CASING  | GC200            | SSC13,14       | 22028            | SPACE SLEEVE        | SM45C            | STS304,316      |
| 10543            | SUCTION CASING    | GC200            | SSC13,14       | 22044            | SHAFT SLEEVE        | SM45C            | STS304,316      |
| 10548            | CASING RING       | GC200            | SSC13,14       | 22045            | SHAFT SLEEVE        | SM45C            | STS304,316      |
| 15001            | LANTERN RING      | ACETAL           | ACETAL         | 22057            | SLEEVE              | SM45C            | STS304,316      |
| 15022            | MECHANICAL SEAL   | -                | -              | 26078            | KEY                 | SM45C            | STS304,316      |
| 15070            | SEAL COVER        | GC200            | STS304,316     | 30377            | BEARING             | STEEL            | STEEL           |
| 15134            | PACKING           | SC#7295          | SC#7295        | 30624            | BEARING COVER(OP)   | GC200            | -               |
| 15135            | PACKING RETAINER  | GC200            | -              | 30687            | BEARING COVER(TH)   | GC200            | -               |
| 18758            | TIE BOLT          | SM25C            | -              | 30738            | BEARING HOUSING(OP) | GC200            | -               |
| 20131            | PROTECT RING      | RUBBER           | RUBBER         | 30759            | BEARING HOUSING(TH) | GC200            | -               |

※ Part No. 407, 408 are applicable for M/Seal Option  
※ P.T.F.E : Carbonized fibers impregnated with Teflon

외형도 & 외형 치수표 Outline Drawing & Dimension

[ HTM 32~65 ]



흡입 및 토출 노즐(모터측에서 본)방향  
The direction of suction and discharge nozzles  
(From the Motor Side to the Pump)

※ 주의  
1. 표준 플랜지 방향  
• 흡입측 : No. 3 오른쪽 수평방향  
• 토출측 : No. 1 수직방향 (TOP)  
2. 비표준 플랜지는 별도 제작하며  
가격 추가 및 제작기간 별도 고려

※ Note  
1. Standard Flange Direction  
• Suction : No. 3 right horizontal  
• Discharge : No. 1 vertical (top)  
2. Non-standard flanges can be manufactured.  
Additional costs and periods should be considered

| Type | 흡입<br>구경<br>Suc. | 토출<br>구경<br>Dis. | Pump Dimension |     |                  |       |     |     |     |     |    |     |    |     |    |    |    |     | Shaft Dimension |          |          |    |    |    |    |    |
|------|------------------|------------------|----------------|-----|------------------|-------|-----|-----|-----|-----|----|-----|----|-----|----|----|----|-----|-----------------|----------|----------|----|----|----|----|----|
|      |                  |                  | A              | B1  | B2 <sup>1)</sup> | D     | E   | F   | e   | h   | m  | n   | n1 | q1  | q2 | s  | t  | u1  | u2              | d1<br>j6 | d2<br>j6 | L1 | L2 | L3 | v  | u  |
| 32   | 40               | 32               | 242            | 170 | 242              | C+200 | 142 | 142 | 152 | 132 | 60 | 186 | 65 | 136 | 75 | 14 | 14 | 100 | 100             | 25       | 25       | 71 | 71 | 45 | 28 | 8  |
| 40   | 50               | 40               | 231            | 161 | 231              | C+208 | 127 | 127 | 174 | 160 | 60 | 224 | 65 | 175 | 80 | 14 | 14 | 104 | 104             | 25       | 25       | 69 | 69 | 45 | 28 | 8  |
| 50   | 65               | 50               | 240            | 173 | 240              | C+224 | 128 | 128 | 190 | 160 | 60 | 250 | 65 | 200 | 86 | 14 | 15 | 112 | 112             | 30       | 30       | 69 | 69 | 50 | 33 | 8  |
| 65   | 80               | 65               | 257            | 193 | 257              | C+236 | 139 | 139 | 215 | 180 | 60 | 290 | 75 | 240 | 93 | 14 | 16 | 118 | 118             | 35       | 35       | 69 | 69 | 50 | 38 | 10 |

1) Both Side Shaft Pump

| Type | 흡입<br>구경<br>Suc. | 토출<br>구경<br>Dis. | 단수에 따른 치수<br>"C" Dimension "C" by No. of Stages |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------|------------------|------------------|-------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|      |                  |                  | 1                                               | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  |
| 32   | 40               | 32               | 70                                              | 113 | 156 | 199 | 242 | 285 | 328 | 371 | 414 | 457 | 500 | 543 | 586 | 629 |
| 40   | 50               | 40               | 78                                              | 133 | 188 | 243 | 298 | 353 | 408 | 463 | 518 | 573 | 628 | 683 |     |     |
| 50   | 65               | 50               | 89                                              | 151 | 213 | 275 | 337 | 399 | 461 | 523 | 585 |     |     |     |     |     |
| 65   | 80               | 65               | 109                                             | 180 | 251 | 322 | 393 | 464 | 535 |     |     |     |     |     |     |     |

| Type | 흡입<br>구경<br>Suc. | 토출<br>구경<br>Dis. | 단수에 따른 펌프 무게<br>Pump Weight by No. of Stages |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------|------------------|------------------|----------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|      |                  |                  | 1                                            | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  |
| 32   | 40               | 32               | 42                                           | 47  | 52  | 57  | 62  | 67  | 72  | 77  | 82  | 87  | 92  | 97  | 102 | 107 |
| 40   | 50               | 40               | 63                                           | 72  | 81  | 90  | 99  | 108 | 117 | 126 | 135 | 144 | 153 | 162 |     |     |
| 50   | 65               | 50               | 85                                           | 98  | 111 | 124 | 137 | 150 | 163 | 176 | 189 |     |     |     |     |     |
| 65   | 80               | 65               | 113                                          | 132 | 151 | 170 | 189 | 208 | 227 |     |     |     |     |     |     |     |

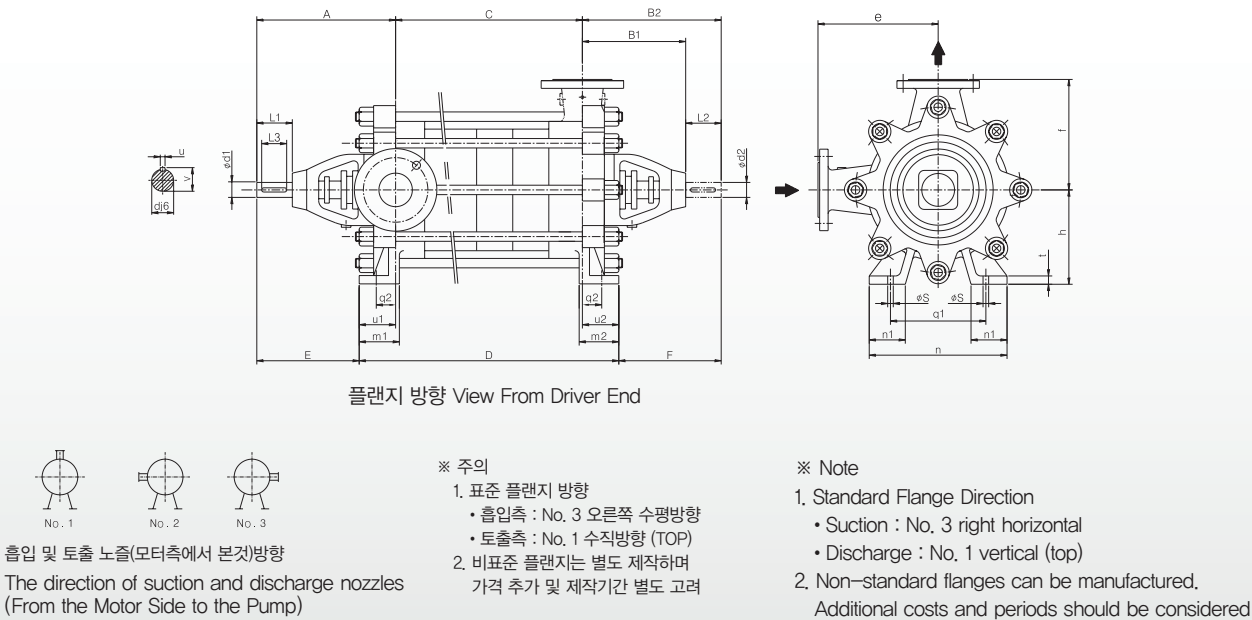


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Hyosung Turbine Type Multi-Stage Pump

외형도 & 외형 치수표 Outline Drawing & Dimension

[ HTM 80~150 ]



| Type | 흡입<br>구경<br>Suc. | 토출<br>구경<br>Dis. | Pump Dimension |     |                  |       |     |     |     |     |     |     |     |     |    |    |    |     | Shaft Dimension |          |          |     |     |    |      |    |
|------|------------------|------------------|----------------|-----|------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|-----------------|----------|----------|-----|-----|----|------|----|
|      |                  |                  | A              | B1  | B2 <sup>1)</sup> | D     | E   | F   | e   | h   | m   | n   | n1  | q1  | q2 | s  | t  | u1  | u2              | d1<br>j6 | d2<br>j6 | L1  | L2  | L3 | v    | u  |
| 80   | 100              | 80               | 320            | 250 | 335              | C+120 | 260 | 275 | 265 | 210 | 60  | 370 | 70  | 310 | 40 | 15 | 14 | 60  | 60              | 40       | 35       | 85  | 85  | 75 | 43   | 12 |
| 100  | 125              | 100              | 360            | 275 | 380              | C+140 | 290 | 310 | 300 | 250 | 75  | 440 | 80  | 370 | 45 | 15 | 14 | 70  | 70              | 45       | 40       | 95  | 95  | 80 | 48.5 | 14 |
| 125  | 150              | 125              | 420            | 300 | 440              | C+170 | 335 | 355 | 375 | 300 | 85  | 550 | 95  | 46  | 51 | 20 | 18 | 85  | 85              | 50       | 45       | 125 | 125 | 90 | 53.5 | 14 |
| 150  | 200              | 150              | 490            | 355 | 500              | C+200 | 390 | 400 | 425 | 350 | 100 | 650 | 100 | 550 | 65 | 23 | 18 | 100 | 100             | 60       | 48       | 140 | 140 | 90 | 64   | 18 |

1) Both Side Shaft Pump

| Type | 흡입<br>구경<br>Suc. | 토출<br>구경<br>Dis. | 단수에 따른 치수<br>"C" Dimension "C" by No. of Stages |     |     |     |     |     |     |     |     |     |
|------|------------------|------------------|-------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|      |                  |                  | 1                                               | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |
| 80   | 100              | 80               | 110                                             | 193 | 276 | 359 | 442 | 525 | 608 | 691 | 774 | 857 |
| 100  | 125              | 100              | 135                                             | 235 | 335 | 435 | 535 | 635 | 735 | 835 |     |     |
| 125  | 150              | 125              | 165                                             | 280 | 395 | 510 | 625 | 740 |     |     |     |     |
| 150  | 200              | 150              | 215                                             | 360 | 505 | 650 | 795 |     |     |     |     |     |

| Type | 흡입<br>구경<br>Suc. | 토출<br>구경<br>Dis. | 단수에 따른 펌프 무게<br>Pump Weight by No. of Stages |     |     |     |       |     |     |     |     |     |
|------|------------------|------------------|----------------------------------------------|-----|-----|-----|-------|-----|-----|-----|-----|-----|
|      |                  |                  | 1                                            | 2   | 3   | 4   | 5     | 6   | 7   | 8   | 9   | 10  |
| 80   | 100              | 80               | 134                                          | 161 | 188 | 215 | 242   | 269 | 296 | 323 | 350 | 377 |
| 100  | 125              | 100              | 195                                          | 238 | 281 | 324 | 367   | 410 | 453 | 496 |     |     |
| 125  | 150              | 125              | 320                                          | 390 | 460 | 530 | 600   | 670 |     |     |     |     |
| 150  | 200              | 150              | 545                                          | 670 | 795 | 920 | 1,045 |     |     |     |     |     |



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Hyosung Turbine Type Multi-Stage Pump