

# Technical data

Pump name

250x150 CNJA 5 150

|          |            |            |           |
|----------|------------|------------|-----------|
| Customer | Date       | 2021-05-14 | Company   |
| Contact  | Item no.   |            | Issued by |
| Phone    | Project    |            | Phone     |
| E-mail   | Project ID |            | E-mail    |

## Requested data

|   |                           |                         |                    |             |
|---|---------------------------|-------------------------|--------------------|-------------|
| 1 | Pump type                 | Horizontal Split Casing | Fluid              | Water       |
| 2 | Number of pumps / Reserve | 1 / 0                   | Liquid temperature | °C 20       |
| 3 | Flow                      | m³/h                    | Kin. viscosity     | mm²/s 1.005 |
| 4 | Head                      | m                       | Vapour pressure    | kPa 2.34    |
| 5 | Geodetic head             | m                       | PH value           |             |
| 6 | Inlet pressure (pin)      | kPa 0                   | Density            | kg/m³ 998.3 |
| 7 | Available system NPSH     |                         | Solids             | Weight % 0  |
| 8 | Ambient temperature       | °C 20                   |                    |             |

## Pump

|    |                           |                                   |                                   |                  |
|----|---------------------------|-----------------------------------|-----------------------------------|------------------|
| 9  | Pump name                 | 250x150 CNJA 5 150                | Frequency                         | Hz 50            |
| 10 | Design                    | Horizontal Split Casing           | Installation type                 | with base, motor |
| 11 | Manufacturer              | EBARA                             | Impeller Diameter                 | Max. mm 517      |
| 12 | Speed                     | rpm 1450                          |                                   | Designed mm 517  |
| 13 | No. of Stage              | 1                                 |                                   | Min. mm 418      |
| 14 | Connection Suction side   | JIS 16K                           | Flow                              | Operating m³/h   |
| 15 | Connection Discharge side | JIS 16K                           |                                   | Max- m³/h 630    |
| 16 | Max Working Pressure      | kPa 1600                          |                                   | Min- m³/h 0      |
| 17 | Shut-off head             | kPa 938.92                        | Head                              | Operating m      |
| 18 | Total weight              | kg See the table of "Dimensions". |                                   | - (Qmax.) m 65.5 |
| 19 | Shaft power               | kW                                |                                   | - (Qmin.) m 95.9 |
| 20 |                           |                                   | Max. Shaft Power at max. impeller | kW 146.58        |
| 21 | Required pump NPSH        | m                                 | Efficiency                        | %                |

## Materials

|    |                 |                     |  |
|----|-----------------|---------------------|--|
| 22 | Casing          | Cast iron           |  |
| 23 | Impeller        | Bronze              |  |
| 24 | Shaft           | 316 Stainless steel |  |
| 25 | Shaft sleeve    | .                   |  |
| 26 | Mechanical seal | .                   |  |
| 27 | Ball bearing    | .                   |  |

## Motor

|    |                      |                             |                  |         |
|----|----------------------|-----------------------------|------------------|---------|
| 28 | Manufacturer         | TECO                        | Insulation class | F       |
| 29 | Type                 | 315MC_B3_150_3_400          | Phases           | 3~      |
| 30 | Specific design      | TEFC / 50 Hz / Pole pairs 2 | Frame size       | 315 MC  |
| 31 | Rated power          | kW 150                      | Weight           | kg 1030 |
| 32 | Number of poles      | 4                           | Electric voltage | V 400   |
| 33 | Speed                | rpm 1480                    | Electric current | A 262   |
| 34 | Degree of protection | IP 55                       |                  |         |
| 35 |                      |                             |                  |         |

## Remarks

# Performance curve

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## Requested data

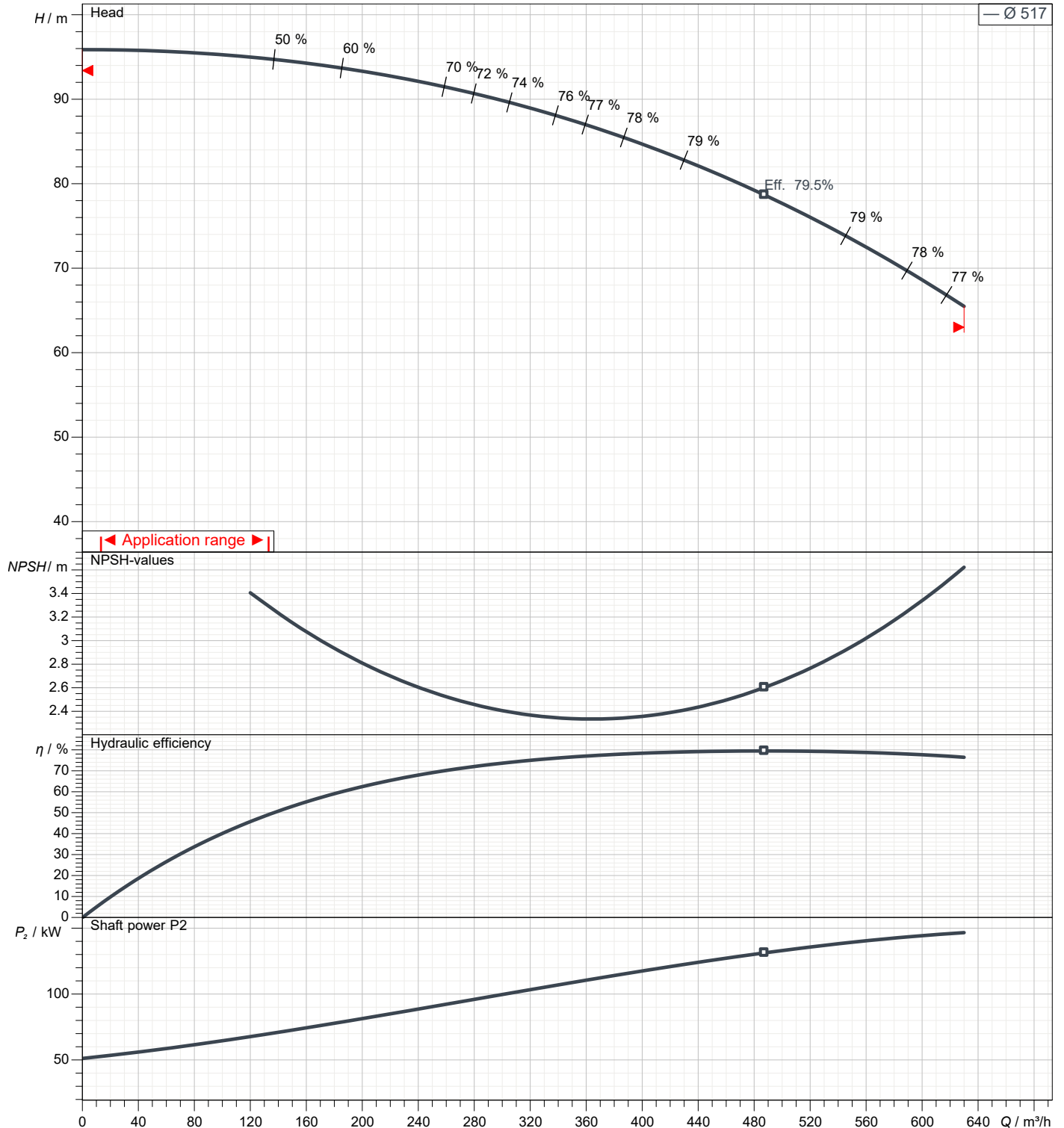
|   |               |                   |  |
|---|---------------|-------------------|--|
| 1 | Flow          | m <sup>3</sup> /h |  |
| 2 | Head          | m                 |  |
| 3 | Geodetic head | m                 |  |

## Pump

|                            |                   |     |                 |     |      |
|----------------------------|-------------------|-----|-----------------|-----|------|
| Operating Flow             | m <sup>3</sup> /h |     | Frequency       | Hz  | 50   |
| Operating Head             | m                 |     | Number of poles |     | 4    |
| Impeller Diameter Designed | mm                | 517 | Speed           | rpm | 1450 |

Test standard: ISO 9906:2012 - Grade3B

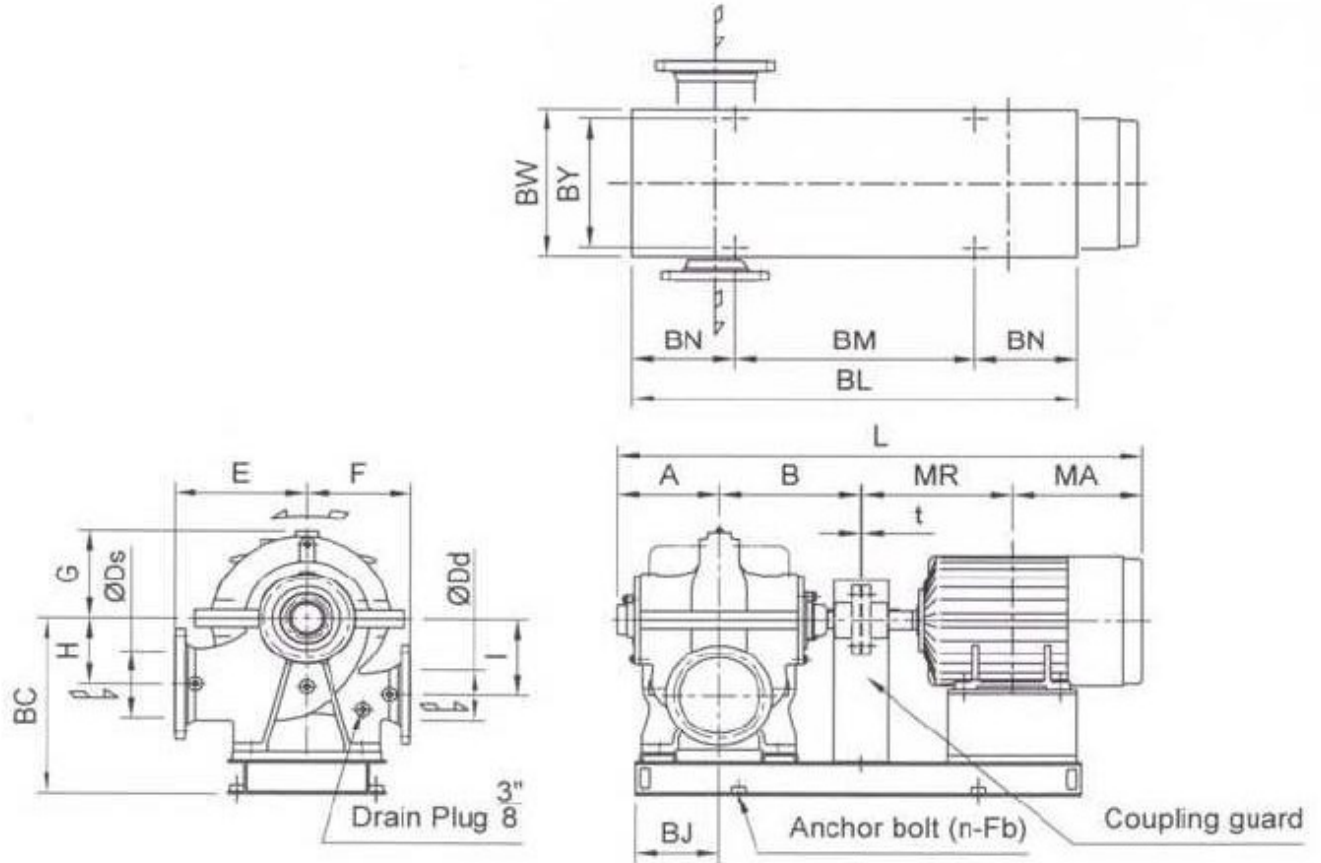
Water; 20°C; 998.3kg/m<sup>3</sup>; 1.005mm<sup>2</sup>/s



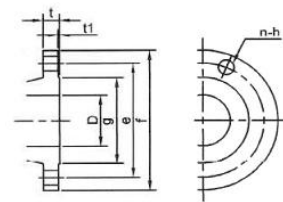
# Dimensions

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### Flange Dimension - Flange (JIS 16K RF)



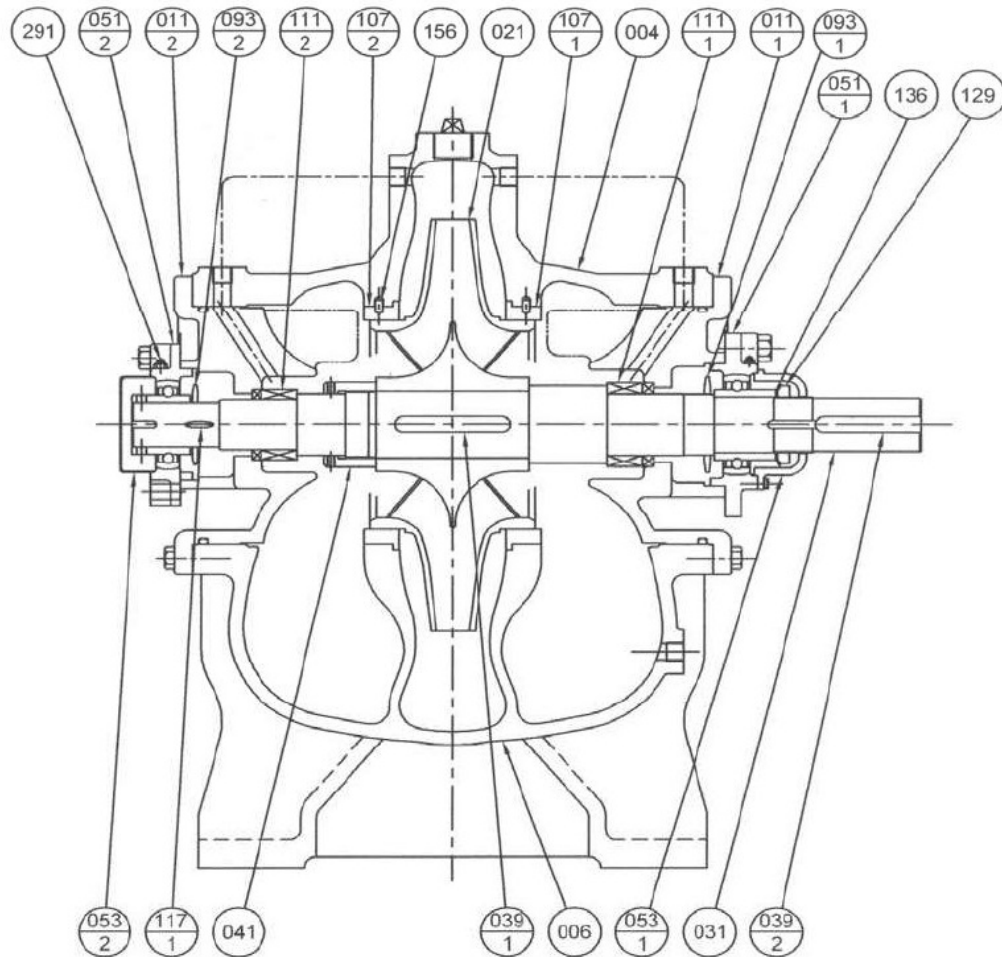
Total weight : 1855 kg

| Pump dimensions |       |    |         | Suction side |          | Discharge side |         |
|-----------------|-------|----|---------|--------------|----------|----------------|---------|
| mm              |       |    |         | mm           |          | mm             |         |
| A               | 350   | H  | 220     | D            | 250      | D              | 150     |
| B               | 500   | l  | 300     | e            | 380      | e              | 260     |
| BC              | 636   | L  | 2021    | f            | 430      | f              | 305     |
| BJ              | 295   | MA | 552.5   | g            | 345      | g              | 230     |
| BL              | 1700  | MR | 614.5   | h            | 25       | h              | 25      |
| BM              | 2x675 | n  | 6 (Num) | n Num        | 12 (Num) | n Num          | 8 (Num) |
| BN              | 175   | t  | 4       | t            | 34       | t              | 28      |
| BW              | 640   |    |         | t1           | 2        | t1             | 2       |
| BY              | 580   |    |         |              |          |                |         |
| Dd              | 150   |    |         |              |          |                |         |
| Ds              | 250   |    |         |              |          |                |         |
| E               | 470   |    |         |              |          |                |         |
| F               | 355   |    |         |              |          |                |         |
| Fb              | M20   |    |         |              |          |                |         |
| G               | 346   |    |         |              |          |                |         |

# (1/2) Construction

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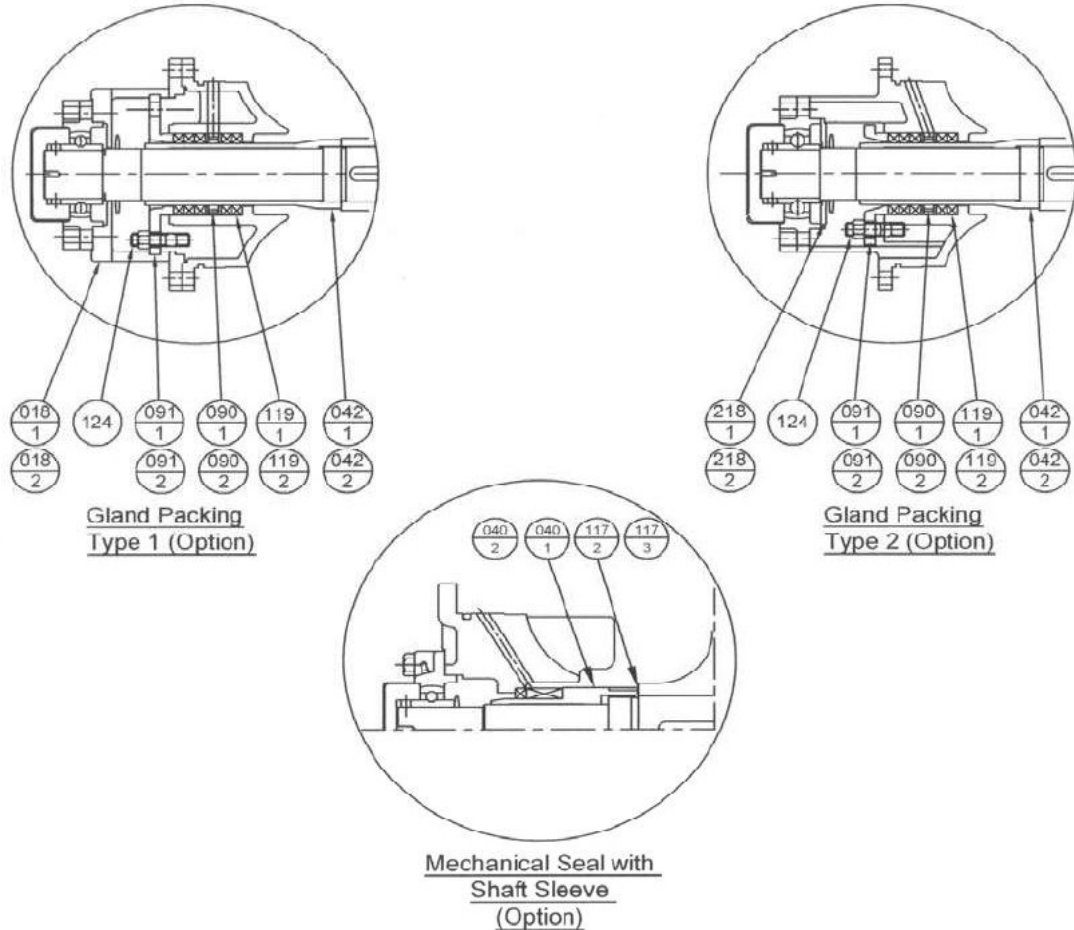
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### Mechanical Seal Type (Standard)

| No.   | Part Name         | Material      | Qty | No.           | Part Name            | Material  | Qty |
|-------|-------------------|---------------|-----|---------------|----------------------|-----------|-----|
| 051-2 | Bearing Unit      | FC200         | 1   | 291           | Grease Nipple        | C3604BD-F | 2   |
| 051-1 | Bearing Unit      |               |     | 156           | Lock Pin             | SUS304    |     |
| 041   | Impeller Nut      | BC6           |     | 136           | Bearing Washer       | SS400     |     |
| 039-2 | Coupling Key      | S50C          |     | 129           | Bearing Nut          |           |     |
| 039-1 | Impeller Key      | 316 Stainless |     | 117-1         | Gasket (Casing)      | V#6500    | 1   |
| 031   | Shaft             | Steel         |     | 111-2         | Mechanical Seal      | -         |     |
| 021   | Impeller          | BC6           |     | 111-1         | Mechanical Seal      | -         |     |
| 011-2 | Side Cover        | FC250         |     | 107           | Casing Wear Ring     | BC6       | 2   |
| 011-1 | Side Cover        |               |     | 093-2         | Deflector (CCP Side) | Rubber    |     |
| 006   | Casing Lower Half |               |     | 093-1         | Deflector (CP Side)  |           |     |
| 004   | Casing Upper Half |               |     | 053-2         | Bearing Cover        | FC200     |     |
|       |                   | 053-1         |     | Bearing Cover |                      |           |     |

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**Gland Packing Type 2 (Option)**

|       |                                |           |   |       |                          |                  |   |
|-------|--------------------------------|-----------|---|-------|--------------------------|------------------|---|
| 042-2 | Shaft Sleeve (CCP Side)        | BC6       | 1 | 119-2 | Gland Packing (CCP Side) | Carbonised Fiber | 5 |
| 042-1 | Shaft Sleeve (CP Side)         |           |   | 119-1 | Gland Packing (CP Side)  | Carbonised Fiber | 5 |
| 218-2 | Bearing Cover Plate (CCP Side) | FC150     | 1 | 090-2 | Lantern Ring (CCP Side)  | BC6              | 1 |
| 218-1 | Bearing Cover Plate (CP Side)  |           |   | 090-1 | Lantern Ring (CP Side)   |                  |   |
| 124   | Gland Bolt                     | C3604BD-F | 4 | 091-2 | Gland (CCP Side)         |                  |   |
|       |                                |           |   | 091-1 | Gland (CP Side)          |                  |   |

**Gland Packing Type 1 (Option)**

|       |                            |           |   |       |                          |                  |   |
|-------|----------------------------|-----------|---|-------|--------------------------|------------------|---|
| 042-2 | Shaft Sleeve (CCP Side)    | BC6       | 1 | 119-2 | Gland Packing (CCP Side) | Carbonised Fiber | 5 |
| 042-1 | Shaft Sleeve (CP Side)     |           |   | 119-1 | Gland Packing (CP Side)  | Carbonised Fiber | 5 |
| 018-2 | Bearing Support (CCP Side) | FC200     | 1 | 090-2 | Lantern Ring (CCP Side)  | BC6              | 1 |
| 018-1 | Bearing Support (CP Side)  |           |   | 090-1 | Lantern Ring (CP Side)   |                  |   |
| 124   | Gland Bolt                 | C3604BD-F | 4 | 091-2 | Gland (CCP Side)         |                  |   |
|       |                            |           |   | 091-1 | Gland (CP Side)          |                  |   |

**Mechanical Seal with Shaft Sleeve Type (Option)**

|            |                         |                 |            |            |                          |                 |            |
|------------|-------------------------|-----------------|------------|------------|--------------------------|-----------------|------------|
| 040-2      | Shaft Sleeve (CCP Side) | BC6             | 1          | 117-3      | Sleeve Gasket (CCP Side) | V#6500          | 1          |
| 040-1      | Shaft Sleeve (CP Side)  | BC6             |            | 117-2      | Sleeve Gasket (CP Side)  | V#6500          |            |
| <b>No.</b> | <b>Part Name</b>        | <b>Material</b> | <b>Qty</b> | <b>No.</b> | <b>Part Name</b>         | <b>Material</b> | <b>Qty</b> |