

|                       |                        |                 |
|-----------------------|------------------------|-----------------|
| PROJECT: _____        | UNIT TAG: _____        | QUANTITY: _____ |
| REPRESENTATIVE: _____ | TYPE OF SERVICE: _____ | DATE: _____     |
| ENGINEER: _____       | SUBMITTED BY: _____    | DATE: _____     |
| CONTRACTOR: _____     | APPROVED BY: _____     | DATE: _____     |
|                       | ORDER NO.: _____       | DATE: _____     |

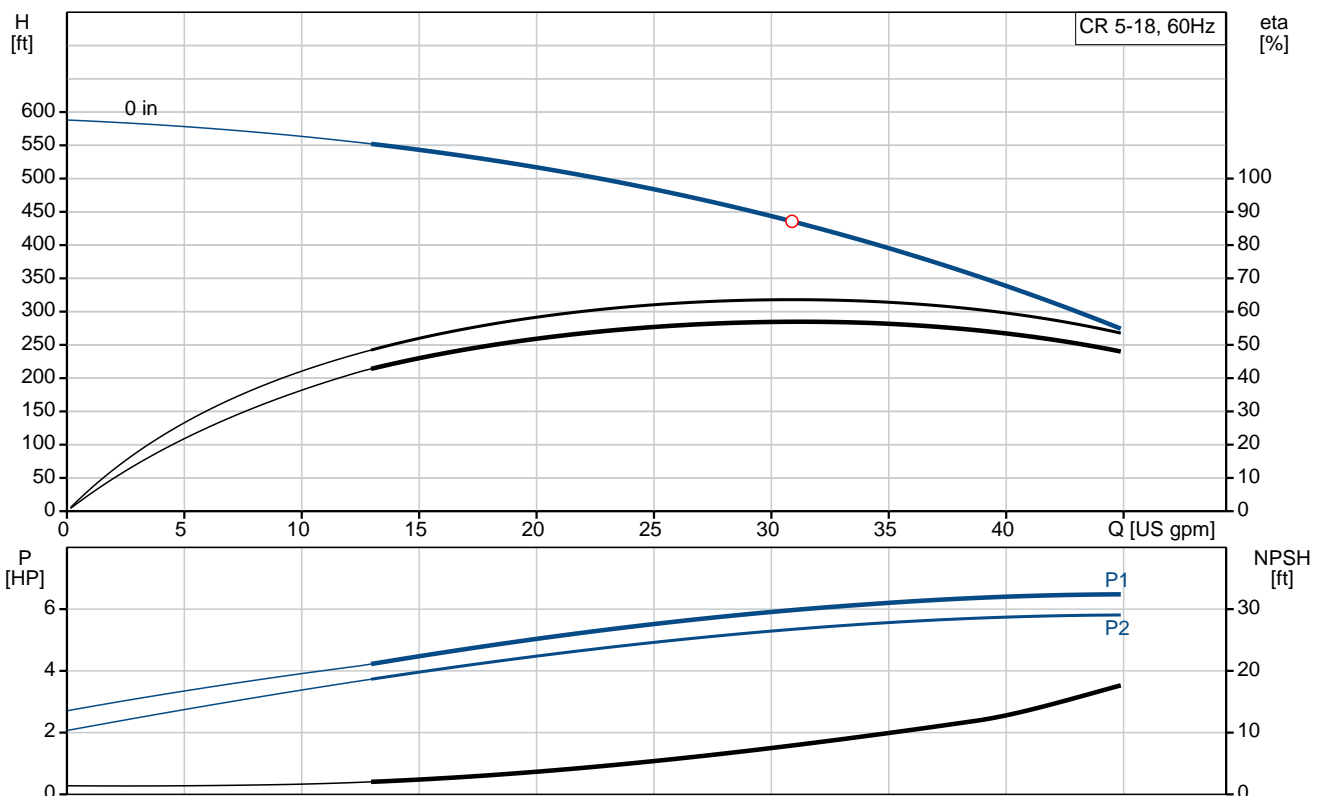
## CR 5-18

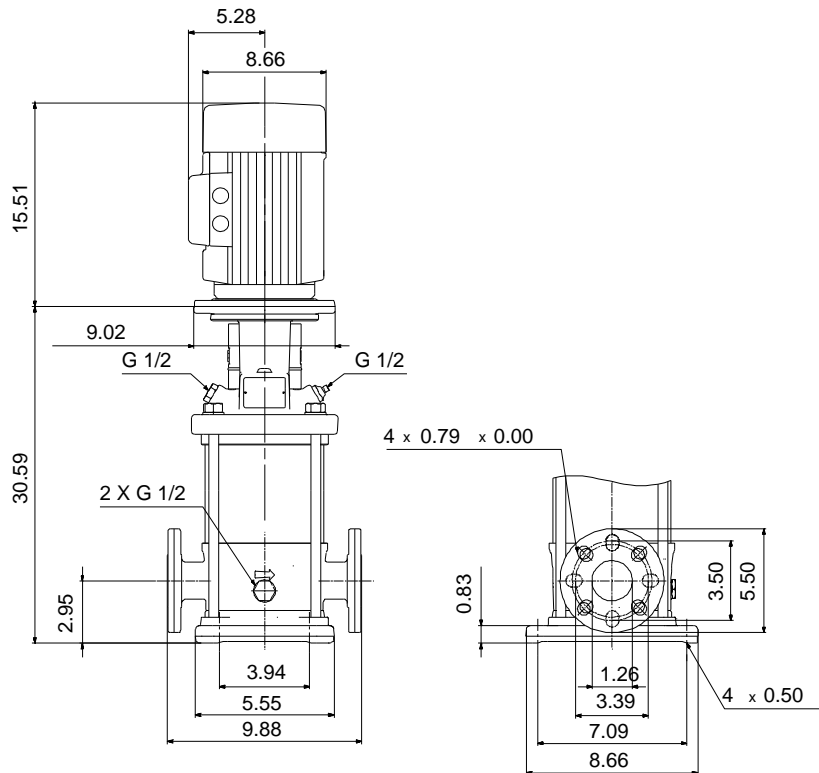


Vertical, multistage centrifugal pump with suction and discharge ports on the same level. The pump head and base are in cast iron. All other wetted parts are in stainless steel (EN 1.4301)(AISI 304)

Product photo could vary from the actual product

| Conditions of Service   | Pump Data  | Motor Data                       |
|-------------------------|--|----------------------------------|
| Flow: _____             | Max pressure at stated temperature: 363 psi / 250 °F | Rated power - P2: 7.5 HP         |
| Head: _____             | Maximum ambient temperature: 140 °F                  | Rated voltage: 208-230YY/460Y V  |
| Efficiency: _____       | Approvals: CURUS,NSF61                               | Main frequency: 60 Hz            |
| Liquid: Water           | Shaft seal: HQQE                                     | Enclosure class: 55 Dust/Jetting |
| Temperature: 68 °F      | Product number: 96084281                             | Insulation class: F              |
| NPSH required: ft       |  | Motor protection: PTC            |
| Viscosity: _____        |  | Motor type: 132DA                |
| Specific Gravity: 1.000 |  | Motor_efficiency: 89.5 %         |





**Materials:**

|                  |   |
|------------------|---|
| Base:            | Cast iron<br>EN 1561 EN-GJL-200<br>ASTM A48-25B |
| Impeller:        | Stainless steel<br>AISI 304<br>EN 1.4301        |
| Material code:   | A   |
| Code for rubber: | E   |

## Tender Text



Product No.: [96084281](#)

### CR 5-18 A-FGJ-A-E-HQQE

Vertical, non-self-priming, multistage, in-line, centrifugal pump for installation in pipe systems and mounting on a foundation.

The pump has the following characteristics:

- Impellers and intermediate chambers are made of
- The shaft seal has assembly length

according to EN 12756.

- Power transmission is via cast iron split coupling.

The motor is a 3-phase AC motor.

#### Controls:

Frequency converter: NONE

#### Liquid:

Pumped liquid: Water

Liquid temperature during operation: 68 °F

Density: 62.29 lb/ft<sup>3</sup>

#### Technical:

Speed for pump data: 3467 rpm

Pump orientation: Vertical

Shaft seal arrangement: Single

Code for shaft seal: HQQE

Approvals on nameplate: CURUS, NSF61

Curve tolerance: ISO9906:2012 3B

#### Materials:

Base: Cast iron  
EN 1561 EN-GJL-200  
ASTM A48-25B

Impeller: Stainless steel  
EN 1.4301

Bearing material: AISI 304

Bearing material: SIC

#### Installation:

Maximum ambient temperature: 140 °F

Max pressure at stated temperature: 363 psi / 250 °F  
363 psi / -4 °F

Type of connection: DIN / ANSI / JIS

Size of inlet connection: DN 25/32

Size of suction port: 1 1/4 inch

Size of outlet connection: DN 25/32



Company name:

Created by:

Phone:

Date:

2/20/2018


Size of outlet port: 1 1/4 inch  
Pressure rating: PN 25  
Flange size for motor: 213TC  
Flange rating inlet: 250 lb

**Electrical data:**

Motor standard: NEMA  
Motor type: 132DA  
IE Efficiency class: NEMA Premium / IE3 60Hz  
Rated power - P2: 7.5 HP  
Power (P2) required by pump: 7.5 HP  
Main frequency: 60 Hz  
Rated voltage: 3 x 208-230YY/460Y V  
Service factor: 1,15  
Rated current: 19,5-18,1/9,09 A  
Starting current: 1020-1480 %  
Cos phi - power factor: 0,89-0,86  
Rated speed: 3490-3515 rpm  
IE efficiency: IE3 89,5%  
Motor efficiency at full load: 89.5 %  
Motor efficiency at 3/4 load: 89.7 %  
Motor efficiency at 1/2 load: 88.3 %  
Number of poles: 2  
Enclosure class (IEC 34-5): 55 Dust/Jetting  
Insulation class (IEC 85): F

**Others:**

Net weight: 166 lb  
Gross weight: 184 lb  
Shipping volume: 11.3 ft<sup>3</sup>

| Position | Count | Description   |
|----------|-------|---|
|          | 1     | <p><b>CR 5-18 A-FGJ-A-E-HQQE</b></p>  <p>Product No.: <a href="#">96084281</a><br/>           Vertical, non-self-priming, multistage, in-line, centrifugal pump for installation in pipe systems and mounting on a foundation.</p> <p>The pump has the following characteristics:</p> <ul style="list-style-type: none"> <li>- Impellers and intermediate chambers are made of</li> <li>- The shaft seal has assembly length according to EN 12756.</li> <li>- Power transmission is via cast iron split coupling.</li> </ul> <p>The motor is a 3-phase AC motor.</p> <p>Controls:<br/>           Frequency converter: NONE</p> <p><b>Liquid:</b><br/>           Pumped liquid: Water<br/>           Liquid temperature during operation: 68 °F<br/>           Density: 62.29 lb/ft<sup>3</sup></p> <p><b>Technical:</b><br/>           Speed for pump data: 3467 rpm<br/>           Pump orientation: Vertical<br/>           Shaft seal arrangement: Single<br/>           Code for shaft seal: HQQE<br/>           Approvals on nameplate: CURUS,NSF61<br/>           Curve tolerance: ISO9906:2012 3B</p> <p><b>Materials:</b><br/>           Base: Cast iron<br/>                     EN 1561 EN-GJL-200<br/>                     ASTM A48-25B<br/>           Impeller: Stainless steel<br/>                     EN 1.4301<br/>                     AISI 304<br/>           Bearing material: SIC</p> <p><b>Installation:</b><br/>           Maximum ambient temperature: 140 °F<br/>           Max pressure at stated temperature: 363 psi / 250 °F<br/>             363 psi / -4 °F</p> <p>Type of connection: DIN / ANSI / JIS<br/>           Size of inlet connection: DN 25/32<br/>           Size of suction port: 1 1/4 inch<br/>           Size of outlet connection: DN 25/32<br/>           Size of outlet port: 1 1/4 inch</p> |



Company name:

Created by:

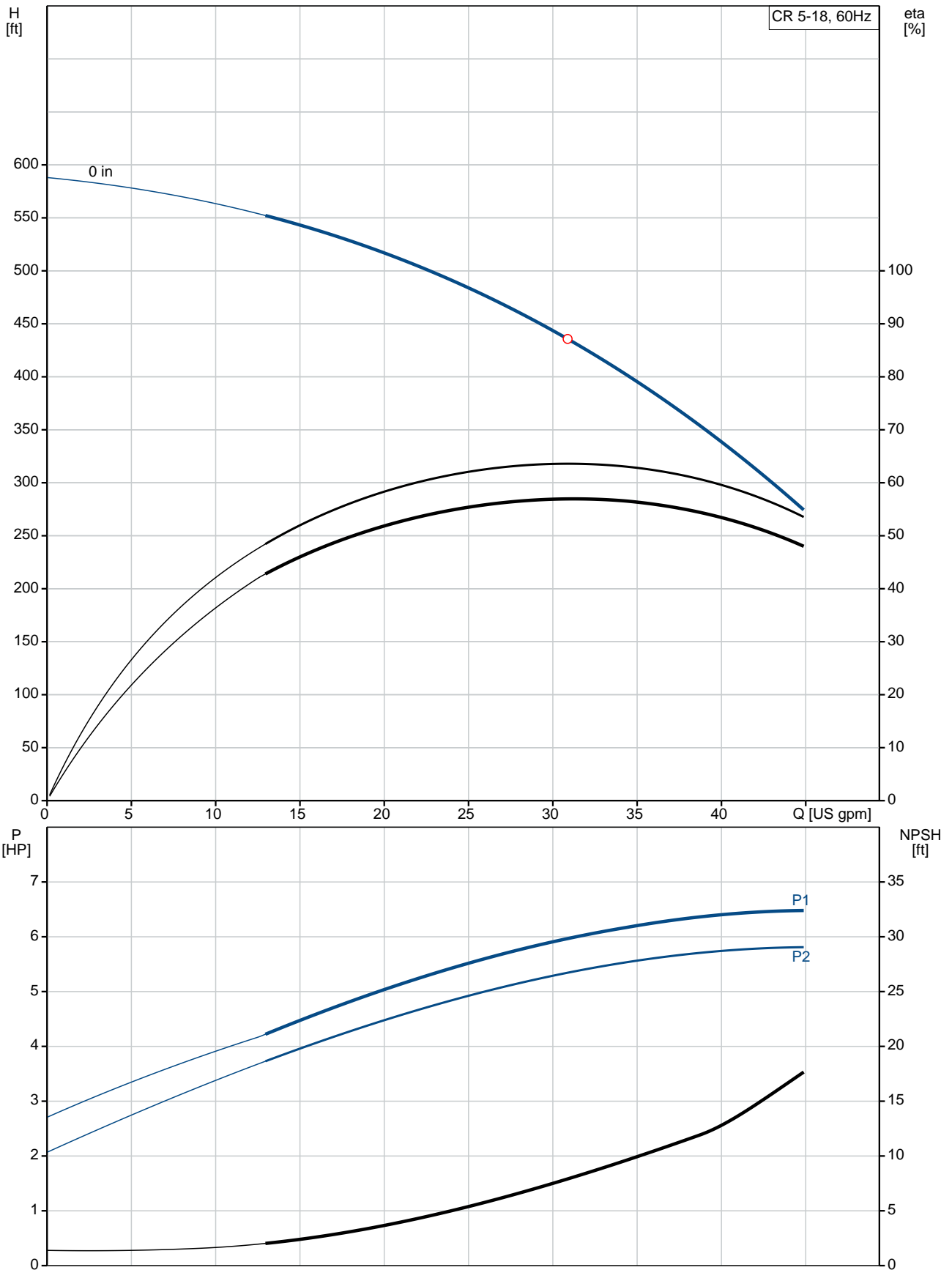
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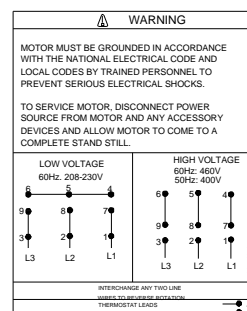
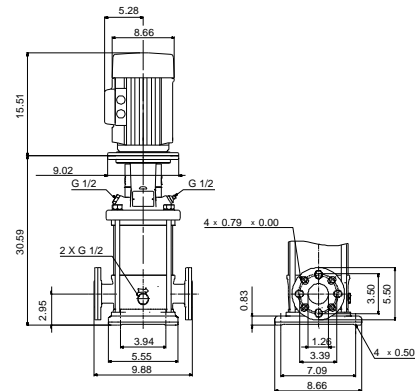
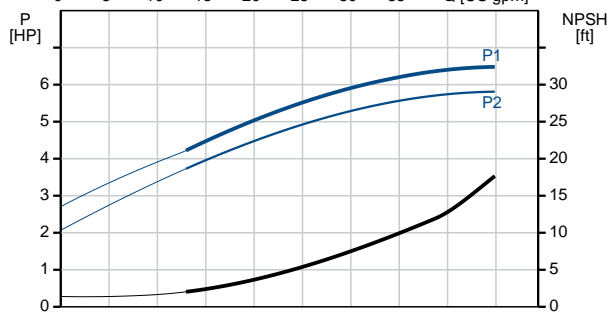
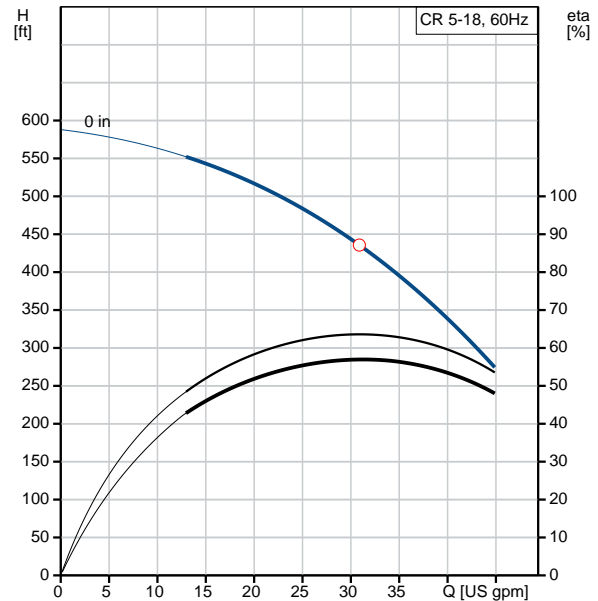
2/20/2018

| Position | Count | Description   |
|----------|-------|---|
|          |       | Pressure rating: PN 25<br>Flange size for motor: 213TC<br>Flange rating inlet: 250 lb |
|          |       | <b>Electrical data:</b>   |
|          |       | Motor standard: NEMA  |
|          |       | Motor type: 132DA   |
|          |       | IE Efficiency class: NEMA Premium / IE3 60Hz  |
|          |       | Rated power - P2: 7.5 HP  |
|          |       | Power (P2) required by pump: 7.5 HP   |
|          |       | Main frequency: 60 Hz   |
|          |       | Rated voltage: 3 x 208-230YY/460Y V   |
|          |       | Service factor: 1,15  |
|          |       | Rated current: 19,5-18,1/9,09 A   |
|          |       | Starting current: 1020-1480 %   |
|          |       | Cos phi - power factor: 0,89-0,86   |
|          |       | Rated speed: 3490-3515 rpm  |
|          |       | IE efficiency: IE3 89,5%  |
|          |       | Motor efficiency at full load: 89.5 %   |
|          |       | Motor efficiency at 3/4 load: 89.7 %  |
|          |       | Motor efficiency at 1/2 load: 88.3 %  |
|          |       | Number of poles: 2  |
|          |       | Enclosure class (IEC 34-5): 55 Dust/Jetting   |
|          |       | Insulation class (IEC 85): F  |
|          |       | <b>Others:</b>  |
|          |       | Net weight: 166 lb  |
|          |       | Gross weight: 184 lb  |
|          |       | Shipping volume: 11.3 ft <sup>3</sup>   |

## 96084281 CR 5-18 60 Hz



| Description                          | Value   |
|--------------------------------------|---|
| <b>General information:</b>          |   |
| Product name:                        | CR 5-18 A-FGJ-A-E-HQQE                          |
| Product No.:                         | 96084281  |
| EAN:                                 | 5700395191196                                   |
| <b>Technical:</b>                    |   |
| Speed for pump data:                 | 3467 rpm  |
| Stages:                              | 18  |
| Impellers:                           | 18  |
| Low NPSH:                            | N   |
| Pump orientation:                    | Vertical  |
| Shaft seal arrangement:              | Single  |
| Code for shaft seal:                 | HQQE  |
| Approvals on nameplate:              | CURUS,NSF61                                     |
| Curve tolerance:                     | ISO9906:2012 3B                                 |
| Pump version:                        | A   |
| Model:                               | A   |
| Cooling:                             | TEFC  |
| <b>Materials:</b>                    |   |
| Base:                                | Cast iron<br>EN 1561 EN-GJL-200<br>ASTM A48-25B |
| Impeller:                            | Stainless steel<br>EN 1.4301<br>AISI 304        |
| Material code:                       | A   |
| Code for rubber:                     | E   |
| Bearing material:                    | SIC   |
| <b>Installation:</b>                 |   |
| Maximum ambient temperature:         | 140 °F  |
| Max pressure at stated temperature:  | 363 psi / 250 °F<br>363 psi / -4 °F             |
| Type of connection:                  | DIN / ANSI / JIS                                |
| Connect code:                        | FGJ   |
| Size of inlet connection:            | DN 25/32  |
| Size of suction port:                | 1 1/4 inch                                      |
| Size of outlet connection:           | DN 25/32  |
| Size of outlet port:                 | 1 1/4 inch                                      |
| Pressure rating:                     | PN 25   |
| Flange size for motor:               | 213TC   |
| Flange rating inlet:                 | 250 lb  |
| <b>Liquid:</b>                       |   |
| Pumped liquid:                       | Water   |
| Liquid temperature during operation: | 68 °F   |
| Density:                             | 62.29 lb/ft <sup>3</sup>                        |
| <b>Electrical data:</b>              |   |
| Motor standard:                      | NEMA  |
| Motor type:                          | 132DA   |
| IE Efficiency class:                 | NEMA Premium / IE3 60Hz                         |
| Rated power - P2:                    | 7.5 HP  |
| Power (P2) required by pump:         | 7.5 HP  |
| Main frequency:                      | 60 Hz   |
| Rated voltage:                       | 3 x 208-230YY/460Y V                            |
| Service factor:                      | 1,15  |
| Rated current:                       | 19,5-18,1/9,09 A                                |







Company name:

Created by:

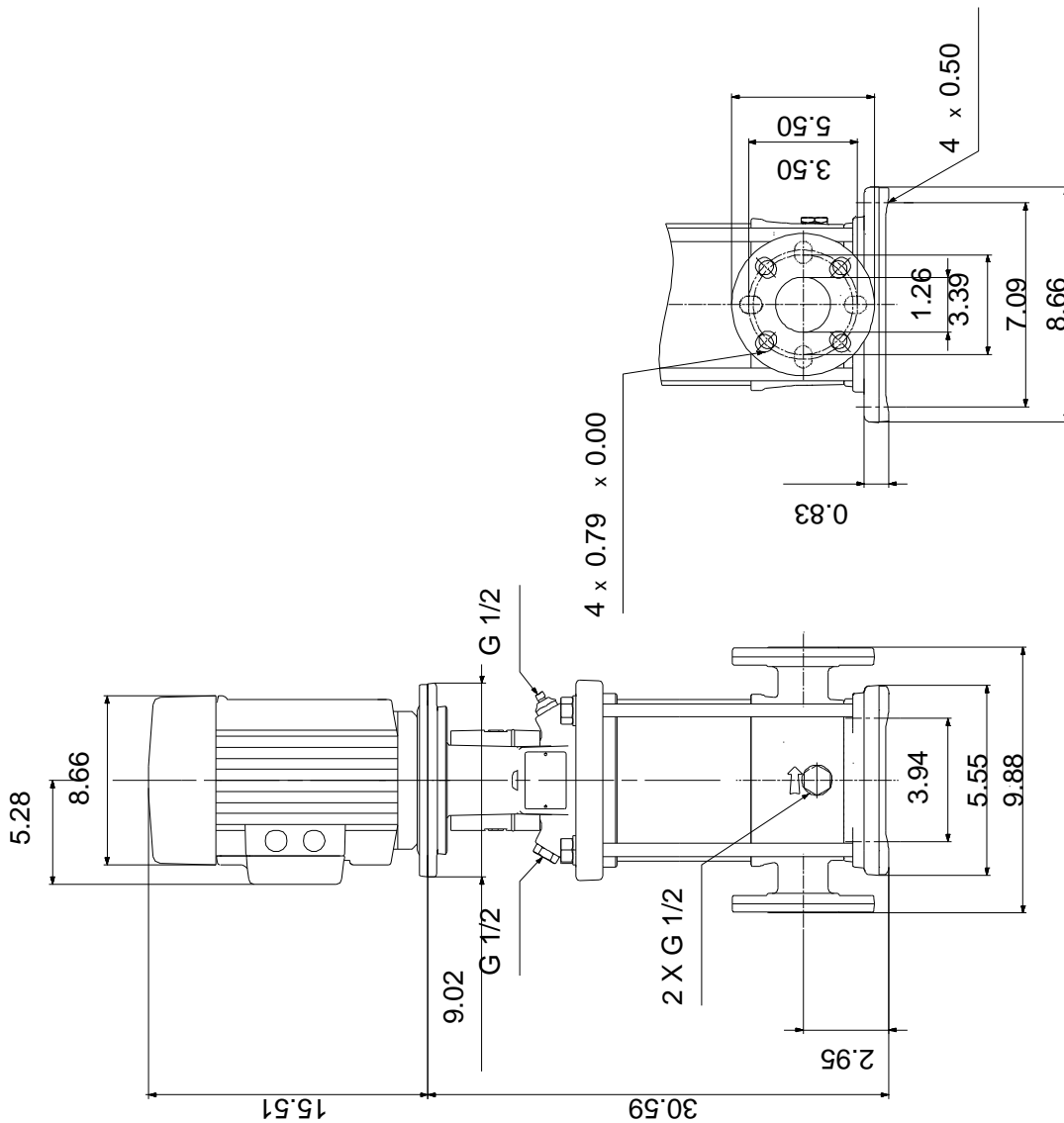
Phone:

Date:

2/20/2018

| Description                    | Value                |
|--------------------------------|----------------------|
| Starting current:              | 1020-1480 %          |
| Load current:                  | 22,4-20,8/10,4 A     |
| Cos phi - power factor:        | 0,89-0,86            |
| Rated speed:                   | 3490-3515 rpm        |
| IE efficiency:                 | IE3 89,5%            |
| Motor efficiency at full load: | 89.5 %               |
| Motor efficiency at 3/4 load:  | 89.7 %               |
| Motor efficiency at 1/2 load:  | 88.3 %               |
| Number of poles:               | 2                    |
| Enclosure class (IEC 34-5):    | 55 Dust/Jetting      |
| Insulation class (IEC 85):     | F                    |
| Motor protection:              | PTC                  |
| Motor Number:                  | 85904392             |
| <b>Controls:</b>               |                      |
| Frequency converter:           | NONE                 |
| <b>Others:</b>                 |                      |
| Net weight:                    | 166 lb               |
| Gross weight:                  | 184 lb               |
| Shipping volume:               | 11.3 ft <sup>3</sup> |

## 96084281 CR 5-18 60 Hz



Note! All units are in [mm] unless otherwise stated.  
Disclaimer: This simplified dimensional drawing does not show all details.

## 96084281 CR 5-18 60 Hz

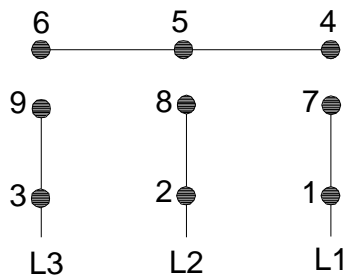


### WARNING

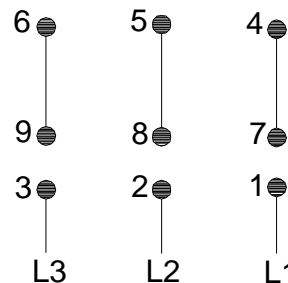
MOTOR MUST BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES BY TRAINED PERSONNEL TO PREVENT SERIOUS ELECTRICAL SHOCKS.

TO SERVICE MOTOR, DISCONNECT POWER SOURCE FROM MOTOR AND ANY ACCESSORY DEVICES AND ALLOW MOTOR TO COME TO A COMPLETE STAND STILL.

#### LOW VOLTAGE 60Hz. 208-230V

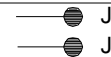


#### HIGH VOLTAGE 60Hz: 460V 50Hz: 400V



96553852

INTERCHANGE ANY TWO LINE WIRES TO REVERSE ROTATION  
THERMOSTAT LEADS  
(WHEN PROVIDED)





Company name:

Created by:

Phone:

Date: 2/20/2018

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**Order Data:**

Product name: CR 5-18 A-FGJ-A-E-HQQE

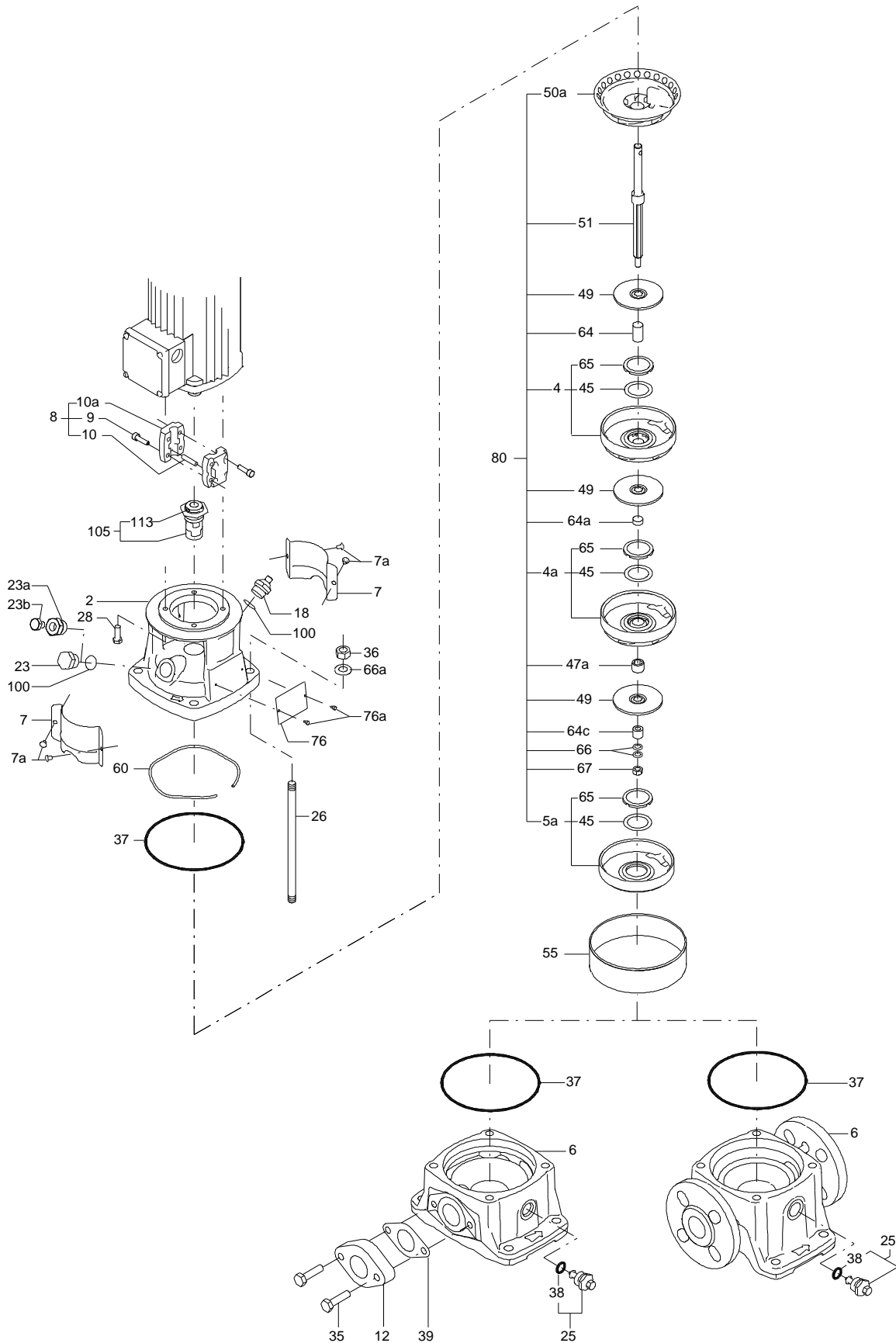
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Product No.: 96084281

Total: Price on request

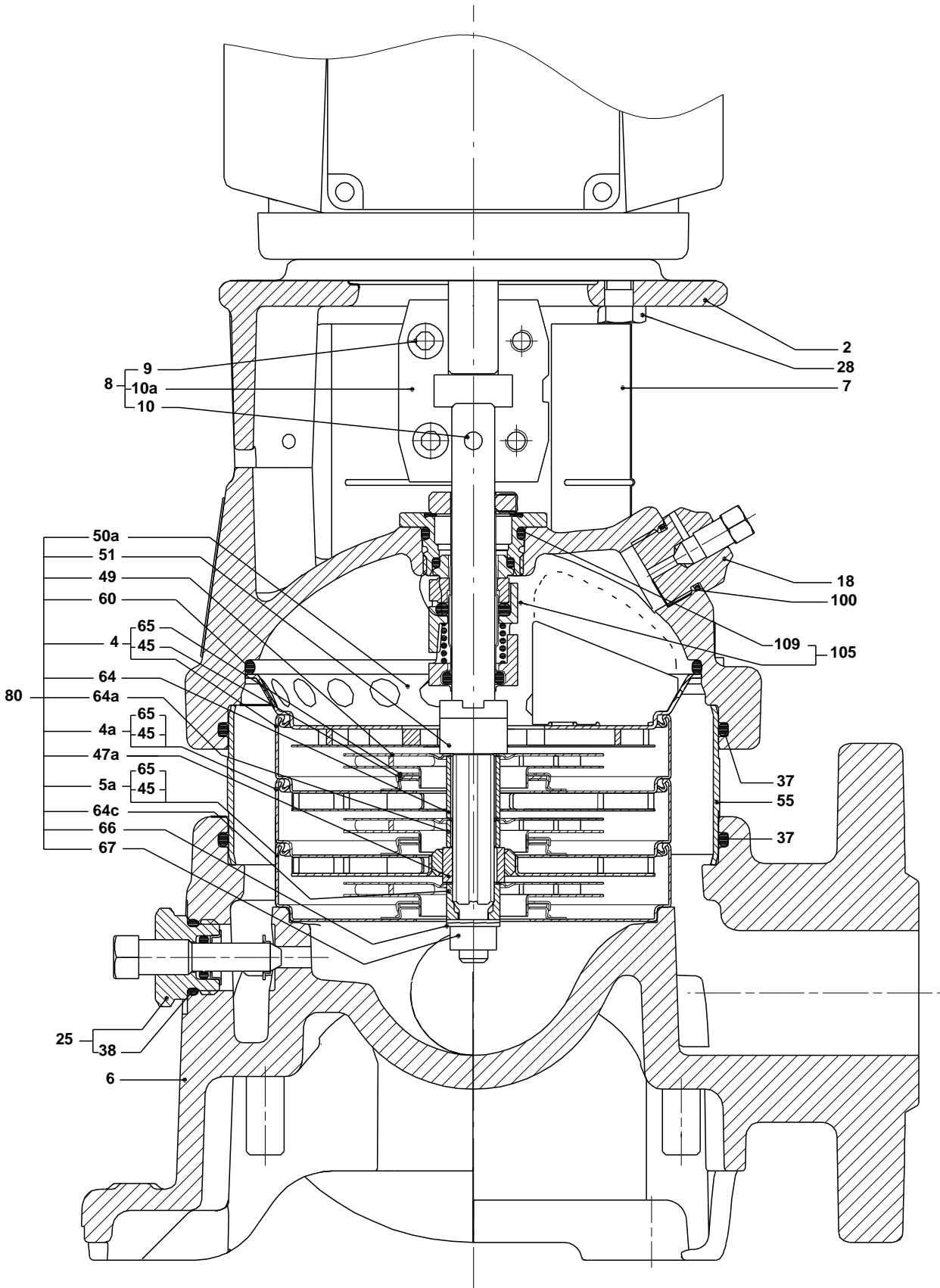
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Exploded view (tm020210 4100)

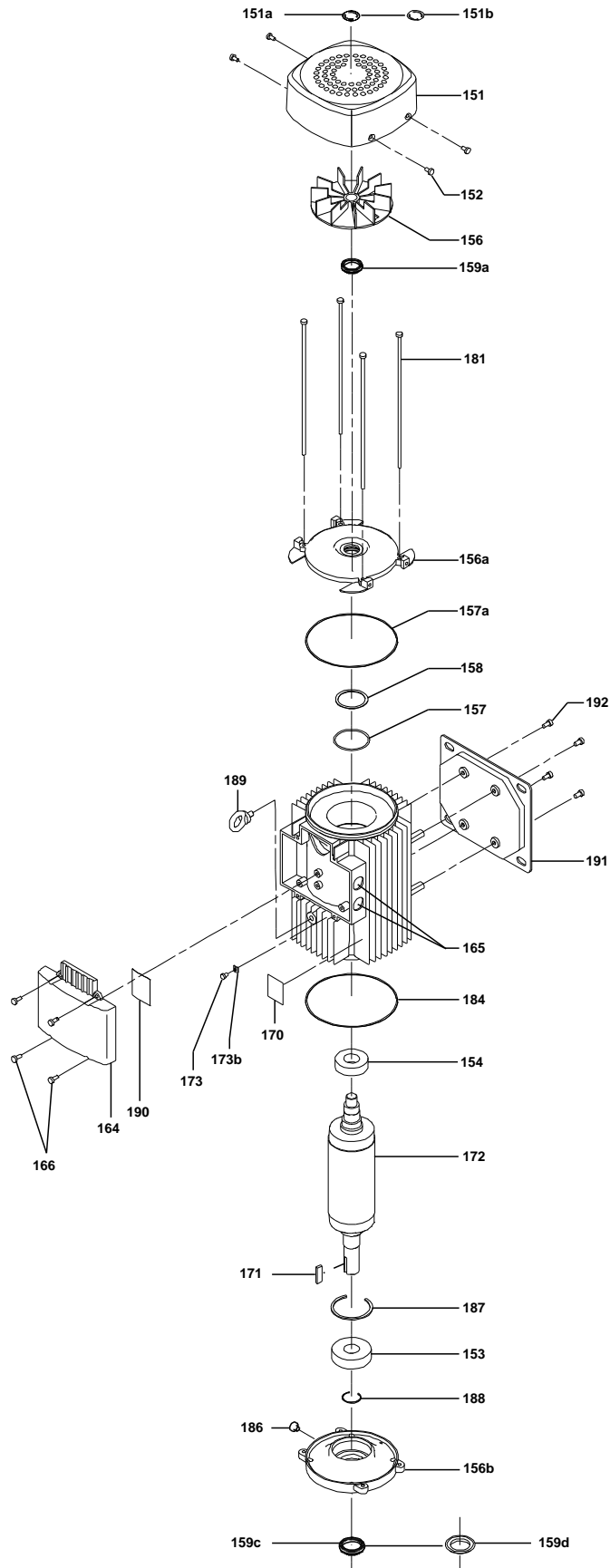


TM020210

Sectional drawing (tm020211 4100)

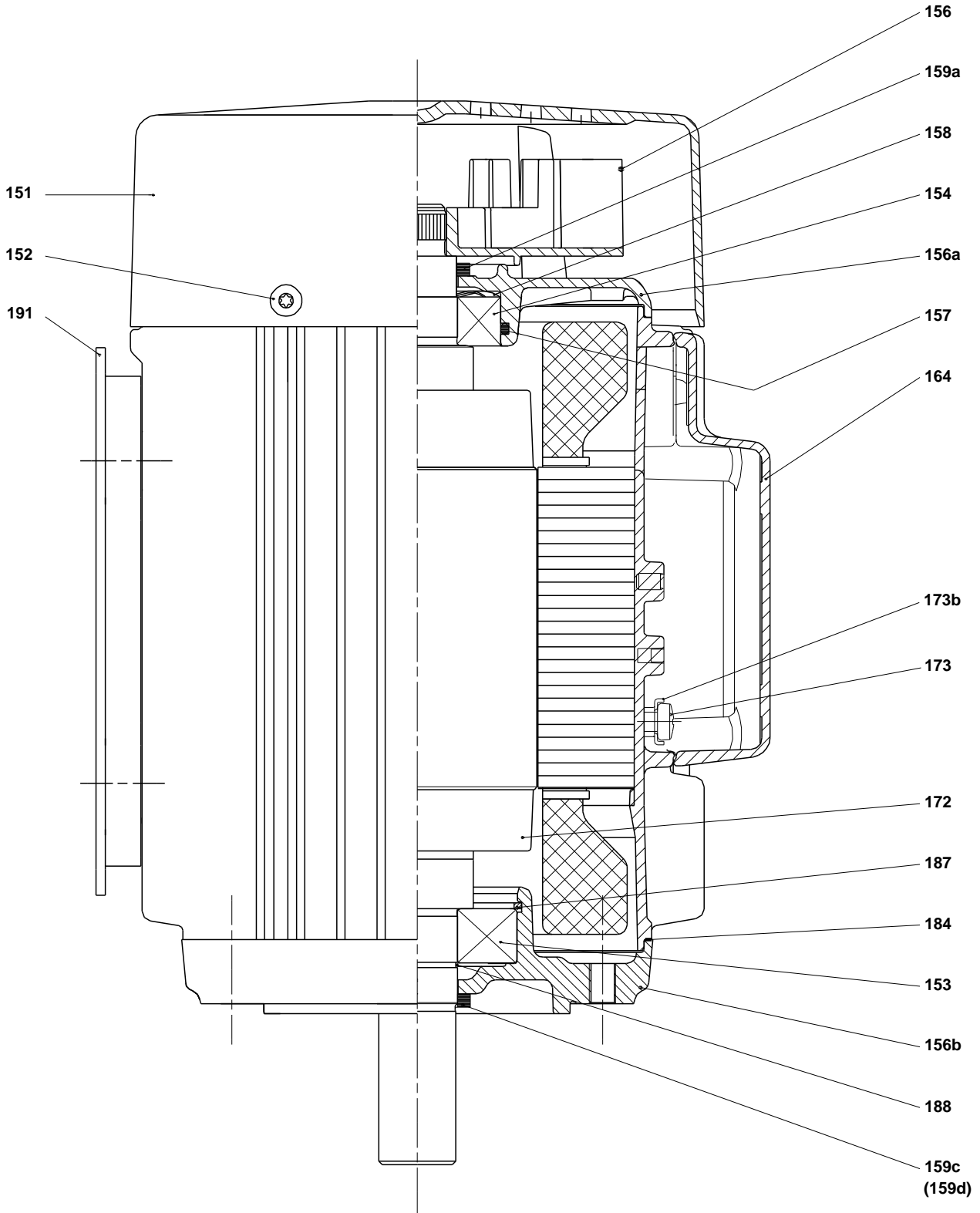


## Exploded view (tm030553)



TM030553)

Sectional drawing (TM031465)





**Parts list CR 5-18, Prod number 96084281**

**Valid from 1.7.2011 (1127)**

| Position | Description               | Annotation | Classification data    | Part No. | Count | Unit |
|----------|---------------------------|------------|------------------------|----------|-------|------|
| +        | Motor                     |            |                        |          | 1     | pcs  |
|          | Motor                     |            |                        |          | 1     | pcs  |
| -        | Base cpl.                 |            |                        |          | 1     | pcs  |
| 6        | Base                      |            |                        |          | 1     |      |
| -        | Sealing parts             |            |                        |          | 1     | pcs  |
| - 25     | Drain plug w/bypass valve |            |                        |          | 1     |      |
| 38       | O-ring                    |            | Diameter: 16,3         |          |       |      |
|          |                           |            | Material type: EPDM    |          |       |      |
|          |                           |            | Thickness: 2,4         |          |       |      |
| 37       | O-ring                    |            |                        |          | 2     |      |
| 100      | O-ring                    |            | Diameter: 16,3         |          | 2     |      |
|          |                           |            | Material type: EPDM    |          |       |      |
|          |                           |            | Thickness: 2,4         |          |       |      |
| - 2      | Pump head cpl.            |            |                        |          | 1     | pcs  |
| 1        | Adapter flange            |            |                        |          | 1     |      |
| 2        | Pump head                 |            |                        |          | 1     |      |
| 7        | Coupling guard            |            |                        |          | 2     |      |
| 7a       | Thread cutting screw      |            |                        |          | 4     |      |
| - 18     | Air vent screw            |            |                        |          | 1     |      |
|          | Plug                      |            |                        |          |       |      |
|          | Spindle                   |            |                        |          |       |      |
| - 25     | Drain plug                |            |                        |          | 1     |      |
| 23       | Pipe plug                 |            |                        |          |       |      |
| 25       | Drain plug                |            |                        |          |       |      |
| 28       | Hex head bolt             |            |                        |          | 4     |      |
| 60       | Formed wire spring        |            |                        |          | 1     |      |
| - 8      | Coupling                  |            |                        |          | 1     | pcs  |
| 9        | Hex socket head cap screw |            | Designation: DIN 912   |          | 4     |      |
|          |                           |            | Length: 25             |          |       |      |
|          |                           |            | Thread: M10            |          |       |      |
| 10       | Shaft pin                 |            | Diameter: 5            |          | 1     |      |
|          |                           |            | Length: 26             |          |       |      |
| 10a      | Coupling                  |            |                        |          | 1     |      |
| 26       | Staybolt                  |            | Length: 511            |          | 4     | pcs  |
|          |                           |            | Thread: M12            |          |       |      |
| 36a      | Washer                    |            | Designation: DIN 125 A |          | 4     | pcs  |
|          |                           |            | Inner diameter: 13     |          |       |      |
|          |                           |            | Outer diameter: 24     |          |       |      |
|          |                           |            | Thickness: 2,5         |          |       |      |
| 55       | Outer sleeve              |            |                        |          | 1     | pcs  |
| 66a      | Nut                       |            | Thread: M12            |          | 4     | pcs  |
| - 80     | Chamber stack             |            |                        |          | 1     | pcs  |
|          | Spacing pipe              |            | Length: 2.00           |          | 1     |      |
| -        | Guide vane cpl.           |            |                        |          | 1     |      |
|          | Guide vane                |            |                        |          |       |      |
|          | Plate                     |            |                        |          |       |      |
| 50b      | Top plate                 |            |                        |          |       |      |
| - 4      | Chamber cpl.              |            |                        |          | 13    |      |
|          | Chamber                   |            |                        |          |       |      |
|          | Retainer for seal ring    |            |                        |          |       |      |
|          | Guide vane                |            |                        |          |       |      |
|          | Plate                     |            |                        |          |       |      |
|          | Vane                      |            |                        |          |       |      |

| Position | Description             | Annotation | Classification data  | Part No. | Count | Unit |
|----------|-------------------------|------------|--|----------|-------|------|
| 45       | Neck ring               |            |  |          |       |      |
| 65       | Retainer                |            |  |          |       |      |
| - 4a     | Chamber w. bearing cpl. |            |  |          | 4     |      |
|          | Chamber                 |            |  |          |       |      |
|          | Retainer for seal ring  |            |  |          |       |      |
|          | Guide vane              |            |  |          |       |      |
|          | Retainer for bearing    |            |  |          |       |      |
|          | Bearing bush            |            |  |          |       |      |
|          | Vane                    |            |  |          |       |      |
| 45       | Neck ring               |            |  |          |       |      |
| 65       | Retainer                |            |  |          |       |      |
| - 5a     | Chamber cpl.            |            |  |          | 1     |      |
|          | Chamber                 |            |  |          |       |      |
| 45       | Neck ring               |            |  |          |       |      |
| 65       | Retainer                |            |  |          |       |      |
| 36       | Lock nut                |            | Thread: M8   |          | 1     |      |
| 47a      | Bearing ring, rotating  |            |  |          | 4     |      |
| 49       | Impeller cpl.           |            |  |          | 18    |      |
| 51       | Shaft, spline, cpl.     |            |  |          | 1     |      |
| 64a      | Spacing pipe            |            | Inner diameter: 12,85<br>Outer diameter: 15,85<br>Length: 4,50 |          | 1     |      |
| 64a      | Spacing pipe            |            | Length: 13.00  |          | 4     |      |
| 64c      | Clamp, splined          |            | Inner diameter: 8,5<br>Outer diameter: 15                      |          | 1     |      |
| 66       | Wedge lock washer       |            |  |          | 1     |      |
| 69       | Spacing pipe            |            | Length: 26.0   |          | 13    |      |
| - 105    | Shaft seal              |            | Material type: HQQE  |          | 1     | pcs  |
|          | O-ring                  |            |  |          | 1     |      |
|          | O-ring                  |            |  |          | 1     |      |
|          | Seal driver, upper      |            |  |          | 1     |      |
|          | Seal driver, lower      |            |  |          | 1     |      |
|          | Spacer ring             |            |  |          | 1     |      |
|          | Pipe                    |            |  |          | 1     |      |
|          | Plug                    |            |  |          | 1     |      |
|          | Plug                    |            |  |          | 1     |      |
|          | Compression spring      |            |  |          | 1     |      |
|          | Socket set screw        |            |  |          | 1     |      |
| 102      | O-ring                  |            | Diameter: 22,00<br>Material type: EPDM<br>Thickness: 2,75      |          | 1     |      |
| 103      | Seal ring, stationary   |            |  |          | 1     |      |
| 105      | Seal ring, rotating     |            |  |          | 1     |      |
| 107      | O-ring                  |            |  |          | 1     |      |
| 113      | Driver                  |            |  |          | 1     |      |