

# Dykkede spildevandspumpe type ABS XFP 80C - 201G

**SULZER**

Solid og driftssikre spildevandspumper med premium efficiency motorer fra 1,3 til 25 kW. De bruges til at pumpe spildevand fra bygninger og private, kommercielle, industrielle og kommunale områder.

## Egenskaber

- Den vandtrykstætte, indkapslede og oversvømmelsessikrede motor, samt pumpesnittet udgør en komplet and solid modulkonstruktion.
- NEMA klasse A temperatur stigning.
- Premium Efficiency motorer i overensstemmelse med IEC60034-30 på niveau med IE3 test i overensstemmelse med IEC60034-2-1.
- Kontinuerlig bedømt motor til dykkede og tørtopstillede anvendelsesområder.
- Dobbelt mekanisk tætning; SiC-Six ved medium størrelse, SiC-C ved motoren. Alle tætninger er uafhængig af rotationsretningen and modstandsdygtig overfor temperatur chok.
- Anti-wicking kablestikløsning (80C-150E) eller vandtryksforseglet forbindelses kammer (100G-201G).
- Hydrauliske muligheder til Contrablock og Contrablock Plus pumpehjul for større effektivitet eller vortex pumpehjul for den bedste håndtering af faste materialer.
- Livstidssmurte lejer med en beregnet levetid på minimum 50.000 timer (80C-150E), og 100.000 timer (100G-201G).
- Rustfri stålaksel. Designet med højsikkerhedsfaktor for at undgå træthedsbrud.
- Temperaturovervågning med termiske sensorer (140 °C) i stator viklingerne.
- Tætningsovervågning med en fugtighedsføler (DI) i tætningskammeret (80C-150E), eller i det tørre kammer, der sender en inspektionsalarm, hvis der er en lækage i akslens tætninger.
- Glat udvendigt design for at undgå ophobning af ristegods.
- Løftering i rustfrit stål.
- DN 80, DN 100, DN 150 og DN 200 radial åben DIN flange afledning.
- Maximal tilladt temperatur på mediet ved kontinuert drift er 40 °C.
- Maximal dykket dybde på 20,m.
- Eksplosions sikker som standard i henhold med de international standard ATEX II 2G Ex db IIB T4 Gb.



## Motor

Premium Efficiency IE3, three-phase, squirrel-cage motor; 400 V; 50 Hz; 2-pole (2900 r/min), 4-pole (1450) and 6-pole (980). Protection type IP 68, with stator insulation Class H.

Start-up: 1.3 - 3.0 kW = direct on line (DOL)  
4.0 - 25.0 kW and 3.0 kW 6-pole = star-delta (YΔ).

Service factor: 1.3

Motors with other operating voltages and frequencies are also available.

**Identification Code:** e.g. XFP 80C CB1.3 PE22/4-C-50

Hydraulics:

XFP ..... Product range

8 ..... Discharge outlet DN (cm)

0 ..... Hydraulic type

C ..... Volute opening (dia. mm): C = 222, E = 265, G = 335

CB..... Impeller type: CB = Contrablock, VX = vortex

1 ..... Number of impeller vanes

3 ..... Impeller size

Motor:

PE ..... Premium Efficiency

22 ..... Motor power  $P_2$  kW x 10

4 ..... Number of poles

C ..... Volute opening (dia. mm): C = 222, E = 265, G = 335

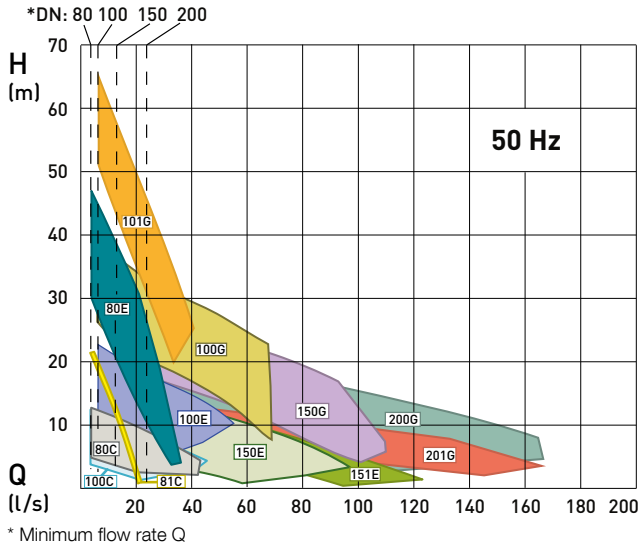
50 ..... Frequency

## Technical data

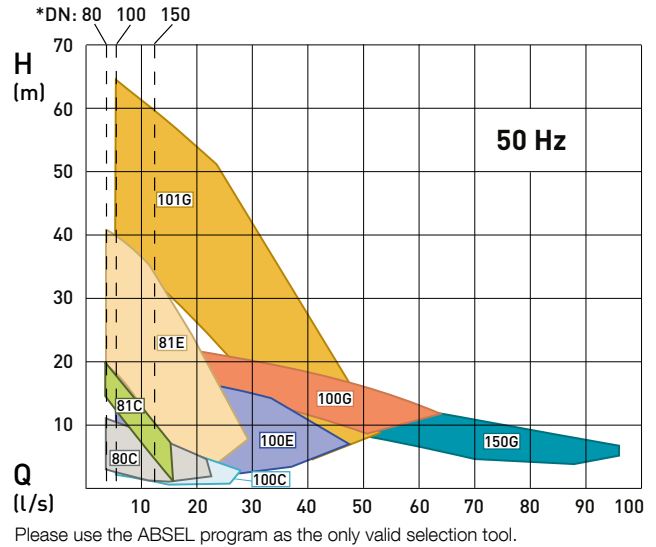
| XFP      | Motor    | Impeller size | Rated voltage (V) | Motor power* (kW) |                | Rated current (A) | Speed (r/min) | Cable size     | Weight** (kg) |
|----------|----------|---------------|-------------------|-------------------|----------------|-------------------|---------------|----------------|---------------|
|          |          |               |                   | P <sub>1</sub>    | P <sub>2</sub> |                   |               |                |               |
| 80C-CB1  | PE 22/4  | 3, 4          | 400 3~            | 2.5               | 2.2            | 4.6               | 1450          | 7G1.5          | 110 / n.a.    |
|          | PE 29/4  | 2             | 400 3~            | 3.4               | 3.0            | 6.4               | 1450          | 7G1.5          | 110 / n.a.    |
|          | PE 13/6  | 1, 2, 4       | 400 3~            | 1.6               | 1.3            | 3.6               | 980           | 7G1.5          | 110 / n.a.    |
| 80C-VX   | PE 15/4  | 4, 5, 6, 7    | 400 3~            | 1.8               | 1.5            | 3.2               | 1450          | 7G1.5          | 100 / n.a.    |
|          | PE 22/4  | 2, 3,         | 400 3~            | 2.5               | 2.2            | 4.6               | 1450          | 7G1.5          | 110 / n.a.    |
|          | PE 29/4  | 1             | 400 3~            | 3.4               | 3.0            | 6.4               | 1450          | 7G1.5          | 110 / n.a.    |
| 80E-CB1  | PE 70/2  | 4             | 400 3~            | 7.7               | 7.0            | 13.5              | 2900          | 10G1.5         | 150 / n.a.    |
|          | PE 110/2 | 1, 2, 3       | 400 3~            | 12.1              | 11.0           | 20.1              | 2900          | 10G1.5         | 180 / n.a.    |
| 81C-CB1  | PE 40/2  | 1             | 400 3~            | 4.5               | 4.0            | 7.4               | 2900          | 10G1.5         | 120 / n.a.    |
| 81C-VX   | PE 30/2  | 2             | 400 3~            | 3.4               | 3.0            | 5.6               | 2900          | 7G1.5          | 110 / n.a.    |
|          | PE 40/2  | 1, 2          | 400 3~            | 4.5               | 4.0            | 7.4               | 2900          | 10G1.5         | 120 / n.a.    |
| 81E-VX   | PE 55/2  | 5             | 400 3~            | 6.1               | 5.5            | 10.3              | 2900          | 10G1.5         | 140 / n.a.    |
|          | PE 70/2  | 4             | 400 3~            | 7.7               | 7.0            | 13.5              | 2900          | 10G1.5         | 140 / n.a.    |
|          | PE 110/2 | 1, 2, 3       | 400 3~            | 12.1              | 11.0           | 20.1              | 2900          | 10G1.5         | 160 / n.a.    |
| 100C-CB1 | PE 22/4  | 3, 4          | 400 3~            | 2.5               | 2.2            | 4.6               | 1450          | 7G1.5          | 110 / n.a.    |
|          | PE 29/4  | 2             | 400 3~            | 3.4               | 3.0            | 6.4               | 1450          | 7G1.5          | 110 / n.a.    |
|          | PE 13/6  | 1, 2, 4       | 400 3~            | 1.6               | 1.3            | 3.6               | 980           | 7G1.5          | 110 / n.a.    |
| 100C-VX  | PE 15/4  | 4, 5, 6       | 400 3~            | 1.8               | 1.5            | 3.2               | 1450          | 7G1.5          | 100 / n.a.    |
|          | PE 22/4  | 2, 3,         | 400 3~            | 2.5               | 2.2            | 4.6               | 1450          | 7G1.5          | 110 / n.a.    |
|          | PE 29/4  | 1             | 400 3~            | 3.4               | 3.0            | 6.4               | 1450          | 7G1.5          | 110 / n.a.    |
| 100E-CB1 | PE 40/4  | 5             | 400 3~            | 4.4               | 4.0            | 8.4               | 1450          | 10G1.5         | 160 / n.a.    |
|          | PE 60/4  | 3, 4          | 400 3~            | 6.7               | 6.0            | 13.6              | 1450          | 10G1.5         | 170 / n.a.    |
|          | PE 90/4  | 1, 2          | 400 3~            | 9.9               | 9.0            | 18.1              | 1450          | 10G1.5         | 190 / n.a.    |
| 100E-VX  | PE 40/4  | 4, 5, 6       | 400 3~            | 4.4               | 4.0            | 8.4               | 1450          | 10G1.5         | 140 / n.a.    |
|          | PE 60/4  | 2, 3, 4       | 400 3~            | 6.7               | 6.0            | 13.6              | 1450          | 10G1.5         | 150 / n.a.    |
|          | PE 90/4  | 1, 2, 3       | 400 3~            | 9.9               | 9.0            | 18.1              | 1450          | 10G1.5         | 170 / n.a.    |
| 100G-CB1 | PE 110/4 | 5             | 400 3~            | 12.0              | 11.0           | 23.4              | 1450          | 10G1.5         | 340 / 380     |
|          | PE 140/4 | 4             | 400 3~            | 15.2              | 14.0           | 27.8              | 1450          | 10G2.5         | 340 / 380     |
|          | PE 160/4 | 3             | 400 3~            | 17.4              | 16.0           | 33.1              | 1450          | 2 x 4G4+2x0.75 | 360 / 400     |
|          | PE 185/4 | 1, 2          | 400 3~            | 20.0              | 18.5           | 36.9              | 1450          | 2 x 4G4+2x0.75 | 360 / 400     |
|          | PE 220/4 | 1             | 400 3~            | 23.7              | 22.0           | 42.5              | 1450          | 2 x 4G4+2x0.75 | 370 / 420     |
| 100G-VX  | PE 110/4 | 4             | 400 3~            | 12.0              | 11.0           | 23.4              | 1450          | 10G1.5         | 330 / 370     |
|          | PE 140/4 | 3             | 400 3~            | 15.2              | 14.0           | 27.8              | 1450          | 10G2.5         | 330 / 370     |
|          | PE 160/4 | 2             | 400 3~            | 17.4              | 16.0           | 33.1              | 1450          | 2 x 4G4+2x0.75 | 350 / 390     |
|          | PE 185/4 | 1             | 400 3~            | 20.0              | 18.5           | 36.9              | 1450          | 2 x 4G4+2x0.75 | 350 / 390     |
| 101G-CB1 | PE 150/2 | 2, 3          | 400 3~            | 16.0              | 15.0           | 27.5              | 2900          | 10G2.5         | 320 / 360     |
|          | PE 185/2 | 1             | 400 3~            | 20.0              | 18.5           | 33.7              | 2900          | 2 x 4G4+2x0.75 | 320 / 360     |
|          | PE 250/2 | 1             | 400 3~            | 26.9              | 25.0           | 44.0              | 2900          | 2 x 4G4+2x0.75 | 340 / 380     |
| 101G-VX  | PE 150/2 | 6, 7          | 400 3~            | 16.0              | 15.0           | 27.5              | 2900          | 10G2.5         | 330 / 370     |
|          | PE 185/2 | 4, 5, 6, 7    | 400 3~            | 20.0              | 18.5           | 33.7              | 2900          | 2 x 4G4+2x0.75 | 330 / 370     |
|          | PE 250/2 | 1, 2, 3, 4, 5 | 400 3~            | 26.9              | 25.0           | 44.0              | 2900          | 2 x 4G4+2x0.75 | 350 / 390     |
| 150E-CB1 | PE 40/4  | 5, 6          | 400 3~            | 4.4               | 4.0            | 8.4               | 1450          | 10G1.5         | 170 / n.a.    |
|          | PE 60/4  | 3, 4, 5       | 400 3~            | 6.7               | 6.0            | 13.6              | 1450          | 10G1.5         | 170 / n.a.    |
|          | PE 90/4  | 1, 2, 3       | 400 3~            | 9.9               | 9.0            | 18.1              | 1450          | 10G1.5         | 190 / n.a.    |
|          | PE 30/6  | 1, 2, 3, 4    | 400 3~            | 3.5               | 3.0            | 6.4               | 980           | 10G1.5         | 170 / n.a.    |
| 150G-CB1 | PE 110/4 | 5             | 400 3~            | 12.0              | 11.0           | 23.4              | 1450          | 10G1.5         | 340 / 390     |
|          | PE 140/4 | 4             | 400 3~            | 15.2              | 14.0           | 27.8              | 1450          | 10G2.5         | 340 / 390     |
|          | PE 160/4 | 3             | 400 3~            | 17.4              | 16.0           | 33.1              | 1450          | 2 x 4G4+2x0.75 | 370 / 410     |
|          | PE 185/4 | 2             | 400 3~            | 20.0              | 18.5           | 36.9              | 1450          | 2 x 4G4+2x0.75 | 370 / 410     |
|          | PE 220/4 | 1             | 400 3~            | 23.7              | 22.0           | 42.5              | 1450          | 2 x 4G4+2x0.75 | 380 / 430     |
| 150G-VX  | PE 110/4 | 4             | 400 3~            | 12.0              | 11.0           | 23.4              | 1450          | 10G1.5         | 330 / 380     |
|          | PE 140/4 | 3             | 400 3~            | 15.2              | 14.0           | 27.8              | 1450          | 10G2.5         | 330 / 380     |
|          | PE 160/4 | 2             | 400 3~            | 17.4              | 16.0           | 33.1              | 1450          | 2 x 4G4+2x0.75 | 360 / 400     |
|          | PE 185/4 | 1, 2          | 400 3~            | 20.0              | 18.5           | 36.9              | 1450          | 2 x 4G4+2x0.75 | 360 / 400     |
| 151E-CB2 | PE 49/4  | 5             | 400 3~            | 5.5               | 4.9            | 10.2              | 1450          | 10G1.5         | 180 / n.a.    |
|          | PE 60/4  | 4             | 400 3~            | 6.7               | 6.0            | 13.6              | 1450          | 10G1.5         | 180 / n.a.    |
|          | PE 90/4  | 2, 4          | 400 3~            | 9.9               | 9.0            | 18.1              | 1450          | 10G1.5         | 200 / n.a.    |
| 200G-CB1 | PE 110/4 | 5             | 400 3~            | 12.0              | 11.0           | 23.4              | 1450          | 10G1.5         | 380 / 420     |
|          | PE 140/4 | 4             | 400 3~            | 15.2              | 14.0           | 27.8              | 1450          | 10G2.5         | 380 / 420     |
|          | PE 160/4 | 3             | 400 3~            | 17.4              | 16.0           | 33.1              | 1450          | 2 x 4G4+2x0.75 | 400 / 450     |
|          | PE 185/4 | 2             | 400 3~            | 20.0              | 18.5           | 36.9              | 1450          | 2 x 4G4+2x0.75 | 400 / 450     |
|          | PE 220/4 | 1             | 400 3~            | 23.7              | 22.0           | 42.5              | 1450          | 2 x 4G4+2x0.75 | 410 / 470     |
|          | PE 90/6  | 1, 2, 3       | 400 3~            | 10.1              | 9.0            | 20.9              | 980           | 10G1.5         | 380 / 430     |
| 201G-CB2 | PE 90/6  | 5, 6          | 400 3~            | 10.1              | 9.0            | 20.9              | 980           | 10G1.5         | 380 / 430     |
|          | PE 110/6 | 3             | 400 3~            | 12.2              | 11.0           | 23.8              | 980           | 10G1.5         | 380 / 430     |
|          | PE 140/6 | 1             | 400 3~            | 15.4              | 14.0           | 29.4              | 980           | 10G2.5         | 400 / 440     |

\* P<sub>1</sub> = power at mains. P<sub>2</sub> = power at motor shaft. \*\*Without / with cooling jacket; includes 10 m cable. Data for alternative voltages available on request.

## Performance fields with Contrablock impeller



## Performance fields with vortex impeller



## Standard and options

| Description                      | Standard  | Option                       |
|----------------------------------|---|------------------------------|
| Mains voltage                    | 400 V 3~  | 230, 500, 695 V *            |
| Voltage tolerance                | ± 10%   | -                            |
| Motor efficiency                 | Premium Eff. IE3  | -                            |
| Insulation class                 | H   | -                            |
| Start-up                         | Direct on line (DOL), star-delta (YΔ)                     | -                            |
| Approvals                        | Ex / ATEX   | -                            |
| Mechanical seal (at medium side) | SiC-SiC-NBR   | SiC-SiC-Viton                |
| Mechanical seal (at motor side)  | SiC-C-NBR   | -                            |
| O-rings                          | NBR   | Viton (external seals)       |
| Cables                           | HO7RN8-F  | EMC                          |
| Cable length (m)                 | 10  | 20, 30, 40, 50               |
| Protective coating               | 2k Epoxy 120 µm   | 2k Epoxy 400 µm              |
| Preparation for lifting hoist    | Lifting hoop  | -                            |
| Cooling                          | Self-cooling (80C - 150E);<br>by the medium (100G - 201G) | Closed cooling (100G - 201G) |
| Installation                     | Wet-well  | Dry well or transportable    |

\* Selected motors only. Contact Sulzer for details.

## Monitoring

| Description                   |   | Standard | Option |
|-------------------------------|---|----------|--------|
| <b>Motor</b><br>(temperature) | Bi-metallic switch in windings<br>PTC thermistor in windings  | ●<br>-   | -<br>● |
| <b>Seals</b><br>(leakage)     | Moisture sensor (DI) in oil chamber (80C - 150E)<br>Moisture sensor (DI) in dry chamber (100G - 201G) | ●<br>●   | -<br>- |

Temperature and leakage relays are required. See accessories table.

## Materials

| Description   | Material                          | Option   |
|---------------|-----------------------------------|--|
| Motor housing | Cast iron EN-GJL-250              | -  |
| Volute        | Cast iron EN-GJL-250              | Ceramic coated EN-GJL-250**  |
| Impeller      | Cast iron EN-GJL-250              | Stainless steel 1.4470 (AISI 329)**, Flame hardened or ceramic coated EN-GJL-250** |
| Bottom plate  | Cast iron EN-GJL-250              | Stainless steel 1.4470 (AISI 329)**, Flame hardened or ceramic coated EN-GJL-250** |
| Motor shaft   | Stainless steel 1.4021 (AISI 420) | -  |
| Lifting hoop  | Stainless steel 1.4401 (AISI 316) | -  |
| Fasteners     | Stainless steel 1.4401 (AISI 316) | -  |

\*\* Selected models only. Contact Sulzer for details.

## Accessories

|  | Description   | Size                       | XFP                           | Part no.    |
|--|---|----------------------------|-------------------------------|-------------|
| <b>Fixed installation - wet well with Sulzer Automatic Coupling System</b>         | <b>Pedestal*</b> (cast iron EN-GJL-250)<br>90° cast bend (single guide rail) - DIN flange connection    | DN 80                      | 80C - 81E                     | 62320649    |
|  |   | DN 100                     | 100C - 100G                   | 62320652    |
|  |   | DN 100 (high-head)         | 101G                          | DPR31211A   |
|  |   | DN 150                     | 150E - 150G                   | 62320655    |
|  |   | DN 200                     | 200G (4-pole)                 | DPT91211A   |
|  |   | DN 200                     | 200G (6-pole)                 | 62320658    |
|  |   | DN 200                     | 201G                          | 62320658    |
|  | 90° cast bend (single guide rail) - plug/clamp connection   | DN 80 (pipe Ø90 mm)        | 80C - 81E                     | 62320650    |
|  |   | DN 100 (pipe Ø109 mm)      | 100C - 100G                   | 62320653    |
|  |   | DN 100 high head (Ø109 mm) | 101G                          | DPR32211A   |
|  |   | DN 100 (pipe Ø115 mm)      | 100C - 100G                   | 62320654    |
|  |   | DN 150 (pipe Ø160 mm)      | 150E - 150G                   | 62320656    |
|  | 90° cast bend (twin guide rail) - DIN flange connection   | DN 80                      | 80C - 81E                     | 62325025    |
|  |   | DN 100                     | 100C - 101G                   | 62325026    |
|  |   | DN 150                     | 150E - 150G                   | 62325027    |
|  |   | DN 200                     | 200G & 201G                   | 62325028    |
|  | <b>Pedestal bracket fasteners</b><br>single guide rail version (galvanised steel)                       |                            | 80C - 81E                     | 62610632    |
|  |   |                            | 100C - 101G                   | 62610633    |
|  | single guide rail version (stainless steel)   |                            | 150E - 150G                   | 62610635    |
|  |   |                            | 200G & 201G                   | 62610883    |
|  |   | 80C - 81E                  | 62610899                      |             |
|  |   | 100C - 101G                | 62610637                      |             |
| twin guide rail version (galvanised steel)   |   | 150E - 150G                | 62610639                      |             |
|  |   | 200G & 201G                | 62610862                      |             |
|  |   | 80C - 81E                  | 62615053                      |             |
|  |   | 100C - 101G                | 62615054                      |             |
| <b>Pedestal base anchor bolts</b><br>single and twin guide rail (galvanised steel) |   | 150E - 150G                | 62615055                      |             |
|  |   | 200G & 201G                | 62615056                      |             |
|  |   | 80C - 101G                 | 62610775                      |             |
|  |   | 150E - 150G                | 62610784                      |             |
| <b>Chain Kit</b> (galvanized steel)<br>including shackle                           | 3 m   | 200G & 201G                | 62610785                      |             |
|  | 4 m   |                            | 61265065                      |             |
|  | 6 m   |                            | 61265093                      |             |
|  | 7 m   |                            | 61265069                      |             |
| <b>Chain Kit</b> (stainless steel)<br>including shackle                            | 3 m   |                            | 61265096                      |             |
|  | 4 m   |                            | 61265081                      |             |
|  | 6 m   |                            | 61265099                      |             |
|  | 7 m   |                            | 61265085                      |             |
| <b>Fixed installation - dry well,</b><br>(horizontal)                              | <b>Pump Support Kit</b> (EN-GJL-250)<br>head and volute supports with fixing bolts and vibration damper |                            | 80C - 201G                    | 61265102    |
|  |   |                            | 80C - 81C.                    | 61825023    |
|  |   |                            | 80C, 81C, 100C.               | 61825033**  |
|  |   |                            | 80E.                          | 61825029    |
|  |   |                            | 81E.                          | 61825038    |
|  |   |                            | 100C.                         | 61825024    |
|  |   |                            | 100E.                         | 61825030    |
|  |   |                            | 150E, 151E.                   | 61825031    |
|  |   |                            | 101G.                         | 61825036*** |
|  |   |                            | 100G, 101G, 150G, 200G, 201G. | 61825037    |
| (vertical)   | <b>Ground Support Stand</b>   |                            | 80C, 81C.                     | 61355014    |
|  |   |                            | 80E & 81E.                    | 61355020    |
|  |   |                            | 100C.                         | 61355015    |
|  |   |                            | 100E.                         | 61355021    |
|  | 150E, 151E.   | 61355022                   |                               |             |
|  | 101G.   | 61355024***                |                               |             |
|  | 100G, 101G, 150G, 200G, 201G.   | 61355023                   |                               |             |
| <b>Adapter kit</b><br>(required with support stand)                                |   | 80C.                       | 62665347***                   |             |
|  |   | 100C.                      | 62665348***                   |             |
| <b>Transportable</b>   | <b>Skirtbase</b>  |                            | 80C, 81C, 100C.               | 61355016    |
|  |   |                            | 80E & 81E.                    | 61355017    |
|  |   |                            | 100E.                         | 61355018    |
|  |   |                            | 150E, 151E.                   | 61355019    |
|  |   |                            | 101G.                         | 61355026*** |
|  |   |                            | 100G, 101G, 150G, 200G, 201G  | 61355025    |
| <b>General</b>   | <b>Cathodic Protection</b> (zinc anodes)  |                            | 80C - 201G                    | 13905000    |
|  | <b>Leakage Relay Type ABS CA 461</b>  | 110 - 230 VAC              | 80C - 201G                    | 16907010    |
|  |   | 18 - 36 VDC, SELV          |                               | 16907011    |
|  | <b>Temperature and Leakage Relay Type ABS CA 462</b>  | 110 - 230 VAC              | 80C - 201G                    | 16907006    |
| 18 - 36 VDC, SELV  |   |                            | 16907007                      |             |

\*Guide rail not included \*\*Vortex version of pumps (VX) \*\*\* Contrablock version of pump (CB)

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