



# CRN1s

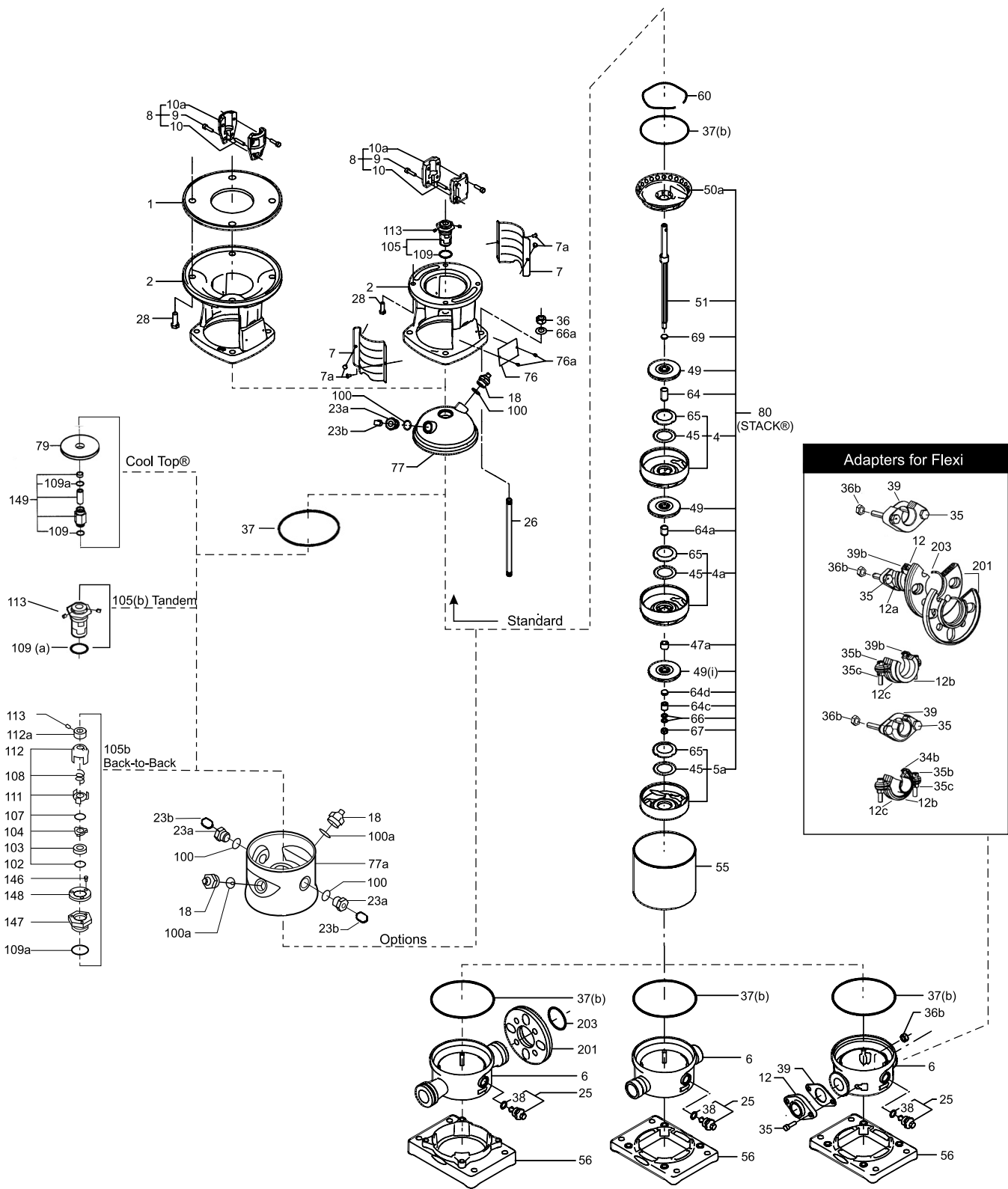
## Parts List & Kits

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Spare Part Kits  
Accessories  
Special Tools  
Standard Tools  
Tools for Torques

Exploded View CRN1s



| Pos. No.          | Part Description                                   | Model | Stages | No. Used | Comments/Dimensions                                 | B.O.M. Ref. No. | Material No. | Included in kits ? |
|-------------------|----------------------------------------------------|-------|--------|----------|-----------------------------------------------------|-----------------|--------------|--------------------|
| <b>PARTS LIST</b> |                                                    |       |        |          |                                                     |                 |              |                    |
| 1                 | Adapter for Motor Stool                            |       |        |          | For NEMA, 213/215TC, 7.5 - 10HP                     | 96476208        |              | No                 |
| 2                 | Motor Stool                                        |       | 3/2-27 | 1        | NEMA, 56C, 1/3 - 2HP                                | 96436510        |              | No                 |
|                   |                                                    |       |        |          | NEMA, 182/184TC, 3 - 5HP                            | 96436511        |              | No                 |
|                   |                                                    |       |        |          | Add Pos. 1, NEMA, 213TC, 7.5 - 10HP                 | 96436511        |              | No                 |
|                   |                                                    |       | 3/2-19 | 1        | IEC, F85, MG 71, .37 - .55kW                        | 96436506        |              | No                 |
|                   |                                                    |       | 21-36  | 1        | IEC, F100, MG 80, .75 - 1.1kW                       | 96436507        |              | No                 |
|                   |                                                    |       |        |          | IEC, F115, MG 90, 1.5 - 2.2kW                       | 96436508        |              | No                 |
|                   |                                                    |       |        |          | IEC, F130, MG 100/112, 3.0 - 4.0 kW                 | 96436509        |              | No                 |
|                   |                                                    |       |        |          | IEC, F265, MG132, 5.5 - 7.5kW                       | 96436514        |              | No                 |
| 4                 | Chamber, Complete with Pos. 45 & 65                |       | 3/2-36 | ^^^      | PTFE Pos.45                                         | 96439481        |              | No                 |
| 4a                | Chamber Cpl. w/Pos. 45 & 65 & Bearing              |       | 3/2-36 | ^^^      | Silicon Carbide Bearing, PTFE Pos. 45               | 96439476        |              | YES                |
|                   | Chamber Cpl. w/Pos. 45 & 65 & Brg. (option)        |       | 3/2-36 | ^^^      | Graflon Bearing, PTFE Pos. 45                       | 96440615        |              | YES                |
| 5a                | Chamber, Bottom Complete with Pos. 45 & 65         |       | 3/2-36 | 1        | PTFE Pos. 45                                        | 96439485        | 96588149     | No                 |
| 6                 | Base                                               |       | 3/2-17 | 1        | Flexi -Clamp / Oval, Stainless (max 232 PSI)        | 96438394        |              | No                 |
|                   |                                                    |       | 3/2-36 | 1        | For Flanges JIS, FGJ, ANSI, Stainless (max 362 PSI) | 96438328        |              | No                 |
|                   |                                                    |       | 3/2-36 | 1        | Victualic (PJE) 1.25", Stainless (max 232 PSI)      | 96436851        |              | No                 |
| 7                 | Coupling Guard                                     |       |        | 2        | IEC, F85-F100                                       | 96438136        |              | YES                |
|                   |                                                    |       |        | 2        | NEMA-56C, IEC-F115,130, & 265                       | 96438137        |              | YES                |
|                   |                                                    |       |        |          | NEMA, 182-215TC                                     | 96438138        |              | YES                |
| 7a                | Screw for Coupling Guard                           |       | 3/2-36 | 4        | M4 x 8mm                                            | 96488481        |              | YES                |
| 9                 | Allen Screw                                        |       | 3/2-27 | 4        | M6 x 20mm, Delta Seal                               | 00ID7899        |              | YES                |
|                   |                                                    |       |        | 4        | M8 x 25mm, Delta Seal                               | 00ID7900        |              | YES                |
|                   |                                                    |       |        |          | M10 x 25mm, Delta Seal                              | 00ID7901        |              | YES                |
| 10                | Shaft Pin                                          |       | 3/2-36 | 1        | ø5 x 26mm                                           | 310192          |              | YES                |
| 10a               | Coupling Half                                      |       | 3/2-27 | 2        | NEMA, 56C, 1/3 - 2HP. ø15.8 / ø12                   | 410108          |              | YES                |
|                   |                                                    |       |        | 2        | NEMA, 182/184TC, 3-5HP. ø28.5/ø12                   | 410109          |              | YES                |
|                   |                                                    |       |        |          | NEMA, 213TC, 7.5-10HP. ø34.9/ø12                    | 96472175        |              | YES                |
|                   |                                                    |       | 3/2-19 | 2        | IEC, F85, MG71, .37-.55kW. ø14/ø12                  | 410041          |              | YES                |
|                   |                                                    |       | 21-36  | 2        | IEC, F100, MG80,.75-1.1kW. ø19/ø12                  | 410043          |              | YES                |
|                   |                                                    |       |        | 2        | IEC, F115, MG 90, 1.5-2.2kW. ø24/ø12                | 410045          |              | YES                |
|                   |                                                    |       |        |          | IEC, F130, MG100/112, 3-4 kW.ø28/ø12                | 410047          |              | YES                |
|                   |                                                    |       |        |          | IEC, F265, MG132, 5.5-7.5kW. ø38/ø12                | 410115          |              | YES                |
| 12                | Oval Flange for Flexi Base                         |       | 3/2-17 | 2        | Stainless, 1" -11.5 NPT (max 232 PSI)               | 96468336        |              | YES                |
|                   |                                                    |       | 3/2-23 | 2        | Stainless, RP 1" BSP DIN (max 232 PSI)              | 96437814        |              | No                 |
| 12a               | Adapter Flg. for ANSI Pos. 201/Flexi Base (option) |       | 3/2-17 | 2        | Stainless, (max 232 PSI)                            | 96437818        |              | YES                |
| 12b               | Pipe Stub for Clamp/Flexi Base (option)            |       | 3/2-17 | 2        | Stainless, Internal 1" -11.5 NPT (max 232 PSI)      | 400182          |              | YES                |
|                   |                                                    |       | 3/2-17 | 2        | Stainless, Internal 1.25" -11.5 NPT (max 232 PSI)   | 410279          |              | YES                |
|                   |                                                    |       | 3/2-17 | 2        | Stainless, External 2" -11.5 NPT (max 232 PSI)      | 96468338        |              | YES                |
| 12c               | Clamp for Flexi Base & Pos. 12b (option)           |       | 3/2-17 | 4        | Stainless, (max 232 PSI)                            | 00ID7194        |              | YES                |
| 18                | Priming/Vent Plug                                  |       | 3/2-36 | *        | G 1/2A, NV24 with NV9 x M8 stem                     | 405150          | 95061351     | No                 |
| 23                | Plug (option)                                      |       | 3/2-36 | **       | G 1/2A, Solid no port, NV24                         | 370025          | 95061733     | No                 |
| 23a               | Plug                                               |       | 3/2-36 | **       | G 1/2A, w/1/4"port, NV24                            | 91120659        |              | No                 |
| 23b               | Pipe Plug for Pos. 23 & 25 with hollow stem        |       | 3/2-36 | **       | 1/4" NPT,SS SQHD                                    | 00ID7216        |              | No                 |
| 25                | Drain/Priming Plug Cpl. with O-rings               |       | 3/2-36 | 1        | G 1/2A, NV24 w/NV9 x M8 stem, EPDM                  | 96440611        |              | No                 |
|                   |                                                    |       | 3/2-36 | 1        | G 1/2A, NV24 w/NV9 x M8 stem, FKM                   | 96446891        |              | No                 |
|                   | Drain/Priming Plug Cpl. with O-rings (option)      |       | 3/2-36 | 1        | G 1/2A, NV24 w/NV9 x M8 stem, FXM                   | 96460009        |              | No                 |
|                   |                                                    |       | 3/2-36 | 1        | G 1/2A, NV24 w/NV9 x M8 stem, FFKM                  | 96475474        |              | No                 |
|                   | Dr./Pr. Plug Cpl. for gauge, w/O-rings (option)    |       | 3/2-36 | 1        | G 1/2A, NV24 w/NV9 x M8 hollow stem, EPDM           | 96527050        |              | No                 |
|                   |                                                    |       | 3/2-36 | 1        | G 1/2A, NV24 w/NV9 x M8 hollow stem, FKM            | 96527051        |              | No                 |
|                   |                                                    |       | 3/2-36 | 1        | G 1/2A, NV24 w/NV9 x M8 hollow stem, FXM            | 96549174        |              | No                 |
|                   |                                                    |       | 3/2-36 | 1        | G 1/2A, NV24 w/NV9 x M8 hollow stem, FFKM           | 96527052        |              | No                 |
| 26                | Staybolt                                           |       | 3/2-3  | 4        | M12 x 151mm                                         | 96487020        |              | No                 |
|                   |                                                    |       | 4      | 4        | M12 x 169mm                                         | 96442055        |              | No                 |
|                   |                                                    |       | 5      | 4        | M12 x 187mm                                         | 414103          |              | No                 |
|                   |                                                    |       | 6      | 4        | M12 x 209mm                                         | 404135          |              | No                 |
|                   |                                                    |       | 7      | 4        | M12 x 227mm                                         | 414134          |              | No                 |
|                   |                                                    |       | 8      | 4        | M12 x 241mm                                         | 414105          |              | No                 |
|                   |                                                    |       | 9      | 4        | M12 x 259mm                                         | 96459210        |              | No                 |
|                   |                                                    |       | 10     | 4        | M12 x 281mm                                         | 414136          |              | No                 |
|                   |                                                    |       | 11     | 4        | M12 x 295mm                                         | 414107          |              | No                 |
|                   |                                                    |       | 12     | 4        | M12 x 313mm                                         | 96463414        |              | No                 |
|                   |                                                    |       | 13     | 4        | M12 x 335mm                                         | 414138          |              | No                 |
|                   |                                                    |       | 15     | 4        | M12 x 367mm                                         | 96459214        |              | No                 |
|                   |                                                    |       | 17     | 4        | M12 x 403mm                                         | 414111          |              | No                 |
|                   |                                                    |       | 19     | 4        | M12 x 439mm                                         | 96442118        |              | No                 |
|                   |                                                    |       | 21     | 4        | M12 x 475mm                                         | 414143          |              | No                 |
|                   |                                                    |       | 23     | 4        | M12 x 511mm                                         | 414115          |              | No                 |
|                   |                                                    |       | 25     | 4        | M12 x 547mm                                         | 96442119        |              | No                 |
|                   |                                                    |       | 27     | 4        | M12 x 587mm                                         | 404156          |              | No                 |
|                   |                                                    |       | 30     | 4        | M12 x 637mm (50 Hz.)                                | 96461557        |              | No                 |
|                   |                                                    |       | 33     | 4        | M12 x 691mm (50 Hz.)                                | 96442122        |              | No                 |
|                   |                                                    |       | 36     | 4        | M12 x 745mm (50 Hz.)                                | 96442123        |              | No                 |

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| Pos. No.   | Part Description                                           | Model | Stages | No. Used            | Comments/Dimensions                      | B.O.M. Ref. No. | Material No. | Included in kits ? |
|------------|------------------------------------------------------------|-------|--------|---------------------|------------------------------------------|-----------------|--------------|--------------------|
| PARTS LIST |                                                            |       |        |                     |                                          |                 |              |                    |
| 26         | Staybolt (Cool Top®, Back-to-Back & Tandem Seal option)    |       | 3/2-3  | 4                   | M12 x 263mm                              | 404138          |              | No                 |
|            |                                                            |       | 4      | 4                   | M12 x 281mm                              | 414136          |              | No                 |
|            |                                                            |       | 5      | 4                   | M12 x 295mm                              | 414107          |              | No                 |
|            |                                                            |       | 6      | 4                   | M12 x 317mm                              | 404141          |              | No                 |
|            |                                                            |       | 7      | 4                   | M12 x 335mm                              | 414138          |              | No                 |
|            | 8                                                          |       | 4      | M12 x 349mm         | 414109                                   |                 | No           |                    |
|            | 9                                                          |       | 4      | M12 x 367mm         | 96459214                                 |                 | No           |                    |
|            | 10                                                         |       | 4      | M12 x 385mm         | 96458503                                 |                 | No           |                    |
|            | 11                                                         |       | 4      | M12 x 403mm         | 414111                                   |                 | No           |                    |
|            | 12                                                         |       | 4      | M12 x 425mm         | 404147                                   |                 | No           |                    |
|            | 13                                                         |       | 4      | M12 x 439mm         | 96442118                                 |                 | No           |                    |
|            | 15                                                         |       | 4      | M12 x 475mm         | 414143                                   |                 | No           |                    |
|            | 17                                                         |       | 4      | M12 x 511mm         | 414115                                   |                 | No           |                    |
|            | 19                                                         |       | 4      | M12 x 547mm         | 96442119                                 |                 | No           |                    |
|            | 21                                                         |       | 4      | M12 x 587mm         | 404156                                   |                 | No           |                    |
|            | 23                                                         |       | 4      | M12 x 619mm         | 414119                                   |                 | No           |                    |
|            | 25                                                         |       | 4      | M12 x 659mm         | 414160                                   |                 | No           |                    |
|            | 27                                                         |       | 4      | M12 x 691mm         | 96442122                                 |                 | No           |                    |
|            | 30                                                         |       | 4      | M12 x 745mm (50Hz.) | 96442123                                 |                 | No           |                    |
|            | 33                                                         |       | 4      | M12 x 799mm (50Hz.) | 414155                                   |                 | No           |                    |
|            | 36                                                         |       | 4      | M12 x 853mm (50Hz.) | 96458507                                 |                 | No           |                    |
| 28         | Motor Bolt                                                 |       | 3/2-27 | 4                   | NEMA, 56C, 1/3 - 2HP. UNC 3/8" x 25mm    | 001D1839        |              | No                 |
|            |                                                            |       |        |                     | NEMA, 182/184TC, 3 - 5HP.UNC1/2" x 25mm  | 001D1840        |              | No                 |
|            |                                                            |       |        |                     | NEMA, 213TC, 7.5 -10HP. UNC 1/2" x 1.25" | 91128631        |              | No                 |
|            |                                                            |       | 3/2-19 | 4                   | IEC, F85, MG71, .37-.55kW. M6 x 20mm     | 001D8022        |              | No                 |
|            |                                                            |       | 21-36  | 4                   | IEC, F100, MG80,.75-1.1kW. M6 x 25mm     | 001D8023        |              | No                 |
|            |                                                            |       |        |                     | IEC, F115, MG 90, 1.5-2.2kW. M8 x 20mm   | 001D8024        |              | No                 |
|            |                                                            |       |        |                     | IEC, F130, MG100/112, 3-4 kW. M8 x 25mm  | 001D8025        |              | No                 |
|            |                                                            |       |        |                     | IEC, F265, MG132, 5.5-7.5kW. M12 x 45mm  | 001D7914        |              | No                 |
|            |                                                            |       |        |                     |                                          |                 |              |                    |
|            |                                                            |       |        |                     |                                          |                 |              |                    |
| 35         | Hex. Head Screw for Oval "CI" Flange (Flexi option)        |       | 3/2-17 | 4                   | M10 x70mm, 8.8, A4, DIN931               | 96447227        |              | YES                |
|            | Hex. Head Screw for Oval "N" Flange (Flexi option)         |       | 3/2-17 | 4                   | M10 x 60mm, A4, DIN931                   | 96447228        |              | YES                |
| 35b        | Screw for Clamp Pos.12c (Flexi option)                     |       | 3/2-17 | 4                   | M8 x 40mm - A2, RR DIN933                | 001D7188        |              | YES                |
| 35c        | Nut for Screw Pos. 35b for Clamp Pos. 12c (Flexi option)   |       | 3/2-17 | 4                   | M8, 304SS                                | 001D7187        |              | YES                |
| 36         | Staybolt Nut                                               |       | 3/2-36 | 4                   | 19mm x M12, 316SS                        | 001D0876        |              | No                 |
| 36b        | Nut for Screw Pos. 35 Oval Flange (Flexi option)           |       | 3/2-17 | 4                   | M10, 316SS w/Delta Seal                  | 96438757        |              | YES                |
| 37         | Sleeve O-ring                                              |       | 3/2-36 | ◆◆                  | EPDM, ø137.5 x 3.3mm                     | 96438743        | 97683277     | YES                |
|            |                                                            |       | 3/2-36 | ◆◆                  | FKM, ø137.5 x 3.3mm                      | 96438744        | 97683278     | YES                |
|            |                                                            |       | 3/2-36 | ◆◆                  | FXM, ø137.5 x 3.3mm                      | 96458109        | 97683279     | YES                |
|            |                                                            |       | 3/2-36 | ◆◆                  | FFKM, ø136.12 x 3.53mm                   | 96466718        | 97683280     | YES                |
| 38         | Drain Plug O-ring                                          |       | 3/2-36 | 1                   | EPDM, ø16.3 x 2.4mm                      | 001D1288        |              | YES                |
|            |                                                            |       | 3/2-36 | 1                   | FKM, ø16.3 x 2.4mm                       | 001D2231        |              | YES                |
|            |                                                            |       | 3/2-36 | 1                   | FFKM, ø16.3 x 2.4mm                      | 96428162        |              | YES                |
|            |                                                            |       | 3/2-36 | 1                   | FXM, ø16.3 x 2.4mm                       | 96442869        |              | YES                |
|            |                                                            |       | 3/2-17 | 2                   | 95 x 55 x ø35 x 2mm, KLINGERSIL C4430    | 400189          |              | YES                |
| 39         | Gasket for Oval Flange                                     |       | 3/2-17 | 2                   | EPDM, ø44.45 x 3.53mm                    | 96407726        |              | YES                |
| 39b        | O-ring for Clamp,Thread stub-Union-& FGJ - Flange (option) |       | 3/2-17 | 2                   | FKM, ø44.45 x 3.53mm                     | 96411713        |              | YES                |
| 45         | Neck Ring                                                  |       | 3/2-36 | # stgs              | ø41.3 x ø30.6 x .75mm, PTFE              | 400003          |              | YES                |
| 47a        | Bearing Ring/Spacer                                        |       | 3/2-36 | ^^^^                | SiC 150, ø17.37 x ø13.10 x ø10.9 x 13mm  | 96437488        |              | YES                |
|            |                                                            |       | 3/2-36 | ^^^^                | TC, ø15.92 x ø13.10 x ø10.9 x 9.7mm      | 400041          |              | YES                |
| 49         | Impeller                                                   |       | 3/2-36 | # stgs              | ø73.0 x ø30.6 x 9.0mm (back-plate .5mm)  | 96433166        |              | No                 |
| 50a        | Top Guide Vane                                             |       | 3-36   | 1                   |                                          | 96457638        |              | No                 |
|            |                                                            |       | 3/2    | 1                   |                                          | 96478562        |              | No                 |
| 51         | Shaft, Complete                                            |       | 3/2-3  | 1                   | ø12 x 160.5mm                            | 96439607        | 96588198     | No                 |
|            |                                                            |       | 4      | 1                   | ø12 x 180.5mm                            | 96440386        | 96588199     | No                 |
|            |                                                            |       | 5      | 1                   | ø12 x 196.5mm                            | 96440387        | 96588230     | No                 |
|            |                                                            |       | 6      | 1                   | ø12 x 214.5mm                            | 96440388        |              | No                 |
|            |                                                            |       | 7      | 1                   | ø12 x 234.5mm                            | 96440389        | 96588231     | No                 |
|            |                                                            |       | 8      | 1                   | ø12 x 250.5mm                            | 96440390        |              | No                 |
|            |                                                            |       | 9      | 1                   | ø12 x 268.5mm                            | 96440391        |              | No                 |
|            |                                                            |       | 10     | 1                   | ø12 x 288.5mm                            | 96440392        |              | No                 |
|            |                                                            |       | 11     | 1                   | ø12 x 304.5mm                            | 96440393        |              | No                 |
|            |                                                            |       | 12     | 1                   | ø12 x 322.5mm                            | 96440394        | 96588233     | No                 |
|            |                                                            |       | 13     | 1                   | ø12 x 342.5mm                            | 96440395        | 96588234     | No                 |
|            |                                                            |       | 15     | 1                   | ø12 x 376.5mm                            | 96440396        | 96588235     | No                 |
|            |                                                            |       | 17     | 1                   | ø12 x 412.5mm                            | 96440398        |              | No                 |
|            |                                                            |       | 19     | 1                   | ø12 x 450.5mm                            | 96440400        |              | No                 |
|            |                                                            |       | 21     | 1                   | ø12 x 484.5mm                            | 96440401        | 96588236     | No                 |
|            |                                                            |       | 23     | 1                   | ø12 x 520.5mm                            | 96440403        |              | No                 |
|            |                                                            |       | 25     | 1                   | ø12 x 556.5mm                            | 96440405        | 96588237     | No                 |
|            |                                                            |       | 27     | 1                   | ø12 x 592.5mm                            | 96440406        |              | No                 |
|            |                                                            |       | 30     | 1                   | ø12 x 646.5mm (50 Hz.)                   | 96440408        |              | No                 |
|            |                                                            |       | 33     | 1                   | ø12 x 700.5mm (50 Hz.)                   | 96440410        |              | No                 |

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|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------|----------------|-------------------------------------------|-----------------|--------------|--------------------|
| PARTS LIST |                                                                                                                                                                                                               |       |                        |                |                                           |                 |              |                    |
| 51         | Shaft, Complete<br>Shaft, Cpl. (Cool Top®, Back-to-Back & Tandem Seal option)                                                                                                                                 |       | 36                     | 1              | ø12 x 754.5mm (50 Hz.)                    | 96440411        | 96588238     | No                 |
|            |                                                                                                                                                                                                               |       | 3/2-3                  | 1              | ø12 x 265.5mm                             | 96457560        |              | No                 |
|            |                                                                                                                                                                                                               |       | 4                      | 1              | ø12 x 285.5mm                             | 96457561        |              | No                 |
|            |                                                                                                                                                                                                               |       | 5                      | 1              | ø12 x 301.5mm                             | 96457562        |              | No                 |
|            |                                                                                                                                                                                                               |       | 6                      | 1              | ø12 x 319.5mm                             | 96457563        |              | No                 |
|            |                                                                                                                                                                                                               |       | 7                      | 1              | ø12 x 339.5mm                             | 96457564        |              | No                 |
|            |                                                                                                                                                                                                               |       | 8                      | 1              | ø12 x 355.5mm                             | 96457565        |              | No                 |
|            |                                                                                                                                                                                                               |       | 9                      | 1              | ø12 x 373.5mm                             | 96457566        |              | No                 |
|            |                                                                                                                                                                                                               |       | 10                     | 1              | ø12 x 393.5mm                             | 96457567        |              | No                 |
|            |                                                                                                                                                                                                               |       | 11                     | 1              | ø12 x 409.5mm                             | 96457568        |              | No                 |
|            | Shaft, Cpl. (Cool Top®, Back-to-Back & Tandem Seal option)                                                                                                                                                    |       | 12                     | 1              | ø12 x 427.5mm                             | 96457569        |              | No                 |
|            |                                                                                                                                                                                                               |       | 13                     | 1              | ø12 x 447.5mm                             | 96457570        |              | No                 |
|            |                                                                                                                                                                                                               |       | 15                     | 1              | ø12 x 481.5mm                             | 96457571        |              | No                 |
|            |                                                                                                                                                                                                               |       | 17                     | 1              | ø12 x 517.5mm                             | 96457573        |              | No                 |
|            |                                                                                                                                                                                                               |       | 19                     | 1              | ø12 x 555.5mm                             | 96457575        |              | No                 |
|            |                                                                                                                                                                                                               |       | 21                     | 1              | ø12 x 589.5mm                             | 96457576        |              | No                 |
|            |                                                                                                                                                                                                               |       | 23                     | 1              | ø12 x 625.5mm                             | 96457578        |              | No                 |
|            |                                                                                                                                                                                                               |       | 25                     | 1              | ø12 x 661.5mm                             | 96457580        |              | No                 |
|            |                                                                                                                                                                                                               |       | 27                     | 1              | ø12 x 697.5mm                             | 96457581        |              | No                 |
|            |                                                                                                                                                                                                               |       | 30                     | 1              | ø12 x 751.5mm (50 Hz.)                    | 96457583        |              | No                 |
| 33         | 1                                                                                                                                                                                                             |       | ø12 x 805.5mm (50 Hz.) | 96457585       | No                                        |                 |              |                    |
| 36         | 1                                                                                                                                                                                                             |       | ø12 x 859.5mm (50 Hz.) | 96457586       | No                                        |                 |              |                    |
| 55         | Outer Sleeve                                                                                                                                                                                                  |       | 3/2-3                  | 1              | ø138 x 44.6mm                             | 96439996        |              | No                 |
|            |                                                                                                                                                                                                               |       | 4                      | 1              | ø138 x 62.6mm                             | 96440025        |              | No                 |
|            |                                                                                                                                                                                                               |       | 5                      | 1              | ø138 x 80.6mm                             | 96441528        |              | No                 |
|            |                                                                                                                                                                                                               |       | 6                      | 1              | ø138 x 98.6mm                             | 96440014        |              | No                 |
|            |                                                                                                                                                                                                               |       | 7                      | 1              | ø138 x 116.6mm                            | 96441529        |              | No                 |
|            |                                                                                                                                                                                                               |       | 8                      | 1              | ø138 x 134.6mm                            | 96441531        |              | No                 |
|            |                                                                                                                                                                                                               |       | 9                      | 1              | ø138 x 152.6mm                            | 96440015        |              | No                 |
|            |                                                                                                                                                                                                               |       | 10                     | 1              | ø138 x 170.6mm                            | 96441532        |              | No                 |
|            |                                                                                                                                                                                                               |       | 11                     | 1              | ø138 x 188.6mm                            | 96441534        |              | No                 |
|            |                                                                                                                                                                                                               |       | 12                     | 1              | ø138 x 206.6mm                            | 96440016        |              | No                 |
|            |                                                                                                                                                                                                               |       | 13                     | 1              | ø138 x 224.6mm                            | 96441535        |              | No                 |
|            |                                                                                                                                                                                                               |       | 15                     | 1              | ø138 x 260.6mm                            | 96440017        |              | No                 |
|            |                                                                                                                                                                                                               |       | 17                     | 1              | ø138 x 296.6mm                            | 96441538        |              | No                 |
|            |                                                                                                                                                                                                               |       | 19                     | 1              | ø138 x 332.6mm                            | 96441539        |              | No                 |
|            |                                                                                                                                                                                                               |       | 21                     | 1              | ø138 x 368.6mm                            | 96440019        |              | No                 |
|            |                                                                                                                                                                                                               |       | 23                     | 1              | ø138 x 404.6mm                            | 96441542        |              | No                 |
|            |                                                                                                                                                                                                               |       | 25                     | 1              | ø138 x 440.6mm                            | 96441543        |              | No                 |
|            |                                                                                                                                                                                                               |       | 27                     | 1              | ø138 x 476.6mm                            | 96440021        |              | No                 |
|            |                                                                                                                                                                                                               |       | 30                     | 1              | ø138 x 530.6mm (50Hz.)                    | 96440022        |              | No                 |
|            |                                                                                                                                                                                                               |       | 33                     | 1              | ø138 x 584.6mm (50Hz.)                    | 96440023        |              | No                 |
| 36         | 1                                                                                                                                                                                                             |       | ø138 x 638.6mm (50Hz.) | 96439997       | No                                        |                 |              |                    |
| 56         | Base Plate (Low) for PIE / Flexi-clamp Pos. 6<br>B. P. (High) for Flexi-clamp w/ANSI/DIN/JIS Pos. 6<br>Base Plate N (Low) for PIE / Flexi-clamp Pos.6<br>B. P. N (High) for Flexi-clamp w/ANSI/DIN/JIS Pos. 6 |       | 2-36                   | 1              | Cast Iron                                 | 96438133        |              | No                 |
|            |                                                                                                                                                                                                               | 2-36  | 1                      | Cast Iron      | 96438132                                  | No              |              |                    |
|            |                                                                                                                                                                                                               | 2-36  | 1                      | Cast Stainless | 96437870                                  | No              |              |                    |
|            |                                                                                                                                                                                                               | 2-36  | 1                      | Cast Stainless | 96437868                                  | No              |              |                    |
| 60         | Stack Compression Spring                                                                                                                                                                                      |       | 3/2-36                 | 1              | ø136 x 3.5mm                              | 96439662        | 95061339     | No                 |
| 64         | Spacing Pipe                                                                                                                                                                                                  |       | 2-36                   | ^^^            | ø15.85 x ø12.85 x 17.52mm                 | 400035          |              | No                 |
| 64a        | Spacing Pipe                                                                                                                                                                                                  |       | 3/2-36                 | ^^^^           | ø15.85 x ø12.85 x 4.5mm                   | 96440292        |              | YES                |
|            | Spacing Pipe (option for Graflon Pos. 4a)                                                                                                                                                                     |       | 3/2-36                 | ^^^^           | Use with TC Pos. 47a, ø15 x ø12.7 x 7.8mm | 400016          |              | YES                |
| 64c        | Clamp, Splined                                                                                                                                                                                                |       | 3/2-36                 | 1              | ø15 x ø13.10 x ø10.9 x 13mm               | 96439668        |              | YES                |
| 65         | Neck Ring Retainer                                                                                                                                                                                            |       | 3/2-36                 | # stgs         | ø43.5 x ø34.0 x 3.6mm                     | 96438746        | 95061443     | YES                |
| 66         | Lock Washer Set for Shaft                                                                                                                                                                                     |       | 3/2-36                 | 1              | ø13.5 x ø8.2 x 2.6mm                      | 96417297        |              | YES                |
| 66a        | Washer for Staybolt                                                                                                                                                                                           |       | 3/2-36                 | 4              | DIN 125A, ø24 x ø13 x 2.5mm               | 001D3103        |              | No                 |
| 67         | Lock Nut for Shaft                                                                                                                                                                                            |       | 3/2-36                 | 1              | 13mm x M8                                 | 001D2061        |              | YES                |
| 69         | Spacing Pipe                                                                                                                                                                                                  |       | 3/2                    | 1              | ø15.85 x 12.85 x 18.0mm                   | 400125          |              | No                 |
| 76         | Nameplate                                                                                                                                                                                                     |       | 3/2-36                 | 1              | 304SS, 60 x 45mm                          | 96439820        |              | No                 |
| 76a        | Rivet for Nameplate                                                                                                                                                                                           |       | 3/2-36                 | 2              | 304SS, ø3 x 5mm                           | 96022882        |              | No                 |
| 77         | Pump Head Cover for Motor Stool Pos.2                                                                                                                                                                         |       | 3/2-36                 | 1              | Cast Stainless                            | 96436340        |              | No                 |
| 77a        | Pump Head Cover for Back-to-Back & Tand. Seal                                                                                                                                                                 |       | 3/2-36                 | 1              | Cast Stainless                            | 96456293        |              | No                 |
|            | Pump Head Cover for Cool Top® (option)                                                                                                                                                                        |       | 3/2-36                 | 1              | Cast Stainless                            | 96456294        |              | No                 |
| 79         | Disc / Plate for Cool Top®                                                                                                                                                                                    |       | 3/2-36                 | ■              | Stainless                                 | 96456296        |              | No                 |
| 100        | Priming/Vent Plug O-ring                                                                                                                                                                                      |       | 3/2-36                 | ■              | EPDM, ø16.3 x 2.4mm                       | 001D1288        |              | YES                |
|            |                                                                                                                                                                                                               |       | 3/2-36                 | ■              | FKM, ø16.3 x 2.4mm                        | 001D2231        |              | YES                |
| 100a       | Priming/Vent Plug O-ring (option)                                                                                                                                                                             |       | 3/2-36                 | ■              | FFKM, ø16.3 x 2.4mm                       | 96428162        |              | YES                |
|            |                                                                                                                                                                                                               |       | 3/2-36                 | ■              | FXM, ø16.3 x 2.4mm                        | 96442869        |              | YES                |
| 102        | O-ring for Pos. 105b Back-to-Back                                                                                                                                                                             |       | 3/2-36                 | 1              | EPDM, ø18 x 2.5mm                         | 001D2041        |              | YES                |
|            |                                                                                                                                                                                                               |       | 3/2-36                 | 1              | FKM, ø17.86 x 2.62mm                      | 001D2187        |              | YES                |
|            |                                                                                                                                                                                                               |       | 3/2-36                 | 1              | FFKM, ø17.86 x 2.62mm                     | 96440281        |              | No                 |
|            |                                                                                                                                                                                                               |       | 3/2-36                 | 1              | FXM, ø17.86 x 2.62mm                      | 96472584        |              | No                 |
| 103        | Station. Seal Ring for 105b Back-to-Back<br>Station. Seal Ring for 105b Back-to-Back (option)                                                                                                                 |       | 3/2-36                 | 1              | TC, 12mm                                  | 980190          |              | No                 |
|            |                                                                                                                                                                                                               |       | 3/2-36                 | 1              | SiC,12mm                                  | 980746          |              | YES                |

Due to part changes over time, all position numbers (1-203) may not be used.

This column indicates which model uses the spare part. If blank, the part is used in all models.

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# Parts List & Kits CRN1s

| Pos. No.          | Part Description                                   | Model | Stages | No. Used | Comments/Dimensions                      | B.O.M. Ref. No. | Material No. | Included in kits ? |
|-------------------|----------------------------------------------------|-------|--------|----------|------------------------------------------|-----------------|--------------|--------------------|
| <b>PARTS LIST</b> |                                                    |       |        |          |                                          |                 |              |                    |
| 104               | Rotating Seal Ring for 105b Back-to-Back           |       | 3/2-36 | 1        | TC, 12mm                                 | 980163          |              | No                 |
|                   | Rotating Seal Ring for 105b Back-to-Back (opt.)    |       | 3/2-36 | 1        | SiC, 12mm                                | 980733          |              | YES                |
| 105(b)            | Shaft Seal HQBE                                    |       | 3/2-36 | ***      | SiC, Carbon with resin-impregnated, EPDM | 96441879        |              | YES                |
|                   | Shaft Seal HQBV                                    |       | 3/2-36 | ***      | SiC, Carbon with resin-impregnated, FKM  | 96441880        |              | YES                |
|                   | Shaft Seal HQBK (option)                           |       | 3/2-36 | ***      | SiC, Carbon with resin-impregnated, FFKM | 96489537        |              | YES                |
|                   | Shaft Seal HQQE                                    |       | 3/2-36 | ***      | SiC, SiC, EPDM                           | 96441877        |              | YES                |
|                   | Shaft Seal HQQV                                    |       | 3/2-36 | ***      | SiC, SiC, FKM                            | 96441878        |              | YES                |
|                   | Shaft Seal HQQF (option)                           |       | 3/2-36 | ***      | SiC, SiC, FXM                            | 96472620        |              | YES                |
|                   | Shaft Seal HQQK (option)                           |       | 3/2-36 | ***      | SiC, SiC, FFKM                           | 96464381        |              | YES                |
|                   | Shaft Seal HUBE                                    |       | 3/2-36 | ***      | TC, Carbon with resin-impregnated, EPDM  | 96441873        |              | YES                |
|                   | Shaft Seal HUBV                                    |       | 3/2-36 | ***      | TC, Carbon with resin-impregnated, FKM   | 96441874        |              | YES                |
|                   | Shaft Seal HUBF (option)                           |       | 3/2-36 | ***      | TC, Carbon with resin-impregnated, FXM   | 96481464        |              | YES                |
|                   | Shaft Seal HUBK (option)                           |       | 3/2-36 | ***      | TC, Carbon with resin-impregnated, FFKM  | 96481463        |              | YES                |
|                   | Shaft Seal HUUE                                    |       | 3/2-36 | ***      | TC, TC, EPDM                             | 96441875        |              | YES                |
|                   | Shaft Seal HUUV                                    |       | 3/2-36 | ***      | TC, TC, FKM                              | 96441876        |              | YES                |
|                   | Shaft Seal HUUF (option)                           |       | 3/2-36 | ***      | TC, TC, FXM                              | 96475542        |              | YES                |
|                   | Shaft Seal HUUK (option)                           |       | 3/2-36 | ***      | TC, TC, FFKM                             | 96467885        |              | YES                |
| 105b              | Shaft Seal/inboard for Back-to-Back OQQE           |       | 3/2-36 | 1        | SiC, SiC, EPDM                           | 985200          |              | YES                |
|                   | Shaft Seal/inboard for Back to Back OQQV           |       | 3/2-36 | 1        | SiC, SiC, FKM                            | 985760          |              | YES                |
|                   | Shaft Seal/inboard for Back-to-Back OUUE           |       | 3/2-36 | 1        | TC, TC, EPDM                             | 985189          | 405145       | No                 |
|                   | Shaft Seal/inboard for Back-to-Back OUUV           |       | 3/2-36 | 1        | TC, TC, FKM                              | 985190          | 405145       | No                 |
| 107               | O-ring for Pos. 105b Back-to-Back                  |       | 3/2-36 | 1        | EPDM, ø11.5 x 4.3mm                      | 00ID2040        |              | YES                |
|                   |                                                    |       | 3/2-36 | 1        | FKM, ø11.5 x 4.3mm                       | 00ID2186        |              | YES                |
|                   | O-ring for Pos. 105b Back-to-Back (option)         |       | 3/2-36 | 1        | FFKM, ø11.5 x 4.3mm                      | 96440282        |              | No                 |
|                   |                                                    |       | 3/2-36 | 1        | FXM, ø11.5 x 3.18mm                      | 96472618        |              | No                 |
| 108               | Spring for Pos. 105b Back-to-Back                  |       | 3/2-36 | 1        | 12mm                                     | 980195          |              | YES                |
| 109(a)            | O-ring for Shaft Seal Pos. 105                     |       | 3/2-36 | 1        | EPDM, ø21.3 x 3.0mm                      | 00ID1798        |              | YES                |
|                   |                                                    |       | 3/2-36 | 1        | FKM, ø21.2 x 3.0mm                       | 00ID2339        |              | YES                |
| 109b              | O-ring for Shaft Seal Pos. 105 (option)            |       | 3/2-36 | 1        | FXM, ø22 x 2.75mm                        | 96458111        |              | YES                |
|                   |                                                    |       | 3/2-36 | 1        | FFKM, ø23.47 x 2.62mm                    | 96464384        |              | YES                |
| 111               | Seal Driver (small) for Pos. 105b Back-to-Back     |       | 3/2-36 | 1        |                                          | 980192          |              | YES                |
| 112               | Seal Driver (large) for Pos. 105b Back-to-Back     |       | 3/2-36 | 1        |                                          | 980191          |              | YES                |
| 112a              | Seal Drv thread. for 112, Pos. 105b Back-to-Back   |       | 3/2-36 | 1        |                                          | 400203          |              | YES                |
| 113               | Set Screw for 112a, for Pos. 105b Back-to-Back     |       | 3/2-36 | 1        | 3mm x M5 x 6mm                           | 00ID7392        |              | YES                |
| 117               | Pipe for Air Vent (option)                         |       | 3/2-36 | 1        | R 1/2", 316 Stainless                    | 330272          |              | YES                |
| 118               | Automatic Air Vent (option)                        |       | 3/2-36 | 1        | Type AE50S 1/2" BSP, Stainless           | 96498508        |              | YES                |
| 146               | Allen Bolt for 147/148, for Pos. 105b Back-to-Back |       | 3/2-36 | 1        | 2.5mm x M3 x 5mm                         | 96462639        |              | YES                |
| 147               | Stationary Seal Retainer - Pos. 105b Back-to-Back  |       | 3/2-36 | 1        | NV36, 316SS                              | 96457354        |              | No                 |
| 148               | Seal Retainer Washer - Pos. 105b Back-to-Back      |       | 3/2-36 | 1        | 316SS, ø36.0 x ø21.6 x 5.0mm             | 96457355        |              | No                 |
| 149               | Connecting Pipe for Cool Top®                      |       | 3/2-36 | 1        | NV36, 316SS, FXM & EPDM                  | 96460414        |              | No                 |
|                   |                                                    |       | 3/2-36 | 1        | NV36, 316SS, FXM & FKM                   | 96460415        |              | No                 |
| 201               | Flange                                             |       | 3/2-36 | 1        | ANSI, DIN, JIS PN40/30K, Cast Iron       | 96439203        |              | YES                |
| 203               | Lock Ring for Flange                               |       | 3/2-36 | 1        | ANSI, DIN, JIS PN40/30K, Stainless       | 96439492        |              | YES                |
|                   |                                                    |       | 3/2-36 | 1        | Stainless                                | 96439718        |              | YES                |

Due to part changes over time, all position numbers (1-203) may not be used.

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## Notes:

- ^^^ 3/2 to 9 stage= # of Stages less 2  
10 to 19 stage= # of stages less 3  
21 to 27 stage = # of stages less 4  
29 to 36 stage = # of stages less 5
- ^^^^ 3/2 to 9 stage= use 1  
10 to 19 stage= use 2  
21 to 27 stage = use 3  
29 to 36 stage = use 4
- \* Standard use 1. Back-to-Back or Tandem pump version use 3  
\*\* Standard use 1. Back-to-Back or Tandem pump version use 3  
\*\*\* 1 used in Hxxx (Standard), 2 used in Pxxx (Tandem) pump version
- ◆◆ Standard use 2. Back-to-Back or Tandem pump version use 3
- Standard use 2. Back-to-Back or Tandem pump version use 6

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## Keys to Symbol

- KITS (YES) ..... Recommended spare part**
- Ø ..... Diameter
- ANSI ..... American National Standards Institute
- CPL ..... Complete Assembly – these parts consist of more than one component
- EPDM ..... Ethylene Propylene (also known as EPR and EPT) – an elastic substance similar to rubber
- FFKM ..... Kalrez Elastomer made by DuPont
- FKM ..... Fluoro Elastomer (generic for Viton)
- FXM ..... Fluoraz Elastomer made by Greene Tweed
- M ..... International standard thread size designation (thread diameter in mm)
- mm ..... Millimeter
- MG ..... Identifies Grundfos motor type/size
- N ..... Stainless
- NBR ..... Buna - N (also known as Nitrile) – an elastic substance similar to rubber
- NEMA ..... National Electrical Manufacturers Association
- PTFE ..... Teflon
- SiC ..... Silicon Carbide
- TC ..... Tungsten Carbide
- UNC ..... Unified National Coarse – a standard for threads on bolts

## Spare Part Kits

Since certain pump parts can be expected to exhibit wear at the same time as related pump parts, they have been grouped into the following kits for your convenience. The numbers indicate the quantity of the part within each kit. Please order these kits using the kit material number at the top of the columns.

| CR(I, N)1S, 1, & 3 SiC Bearing |                                              |                  |                           |    |    |    |
|--------------------------------|----------------------------------------------|------------------|---------------------------|----|----|----|
| WEAR PARTS KIT 2-9             |                                              | Kit No. 96455095 |                           |    |    |    |
| WEAR PARTS KIT 10-19           |                                              | Kit No. 96455092 |                           |    |    |    |
| WEAR PARTS KIT 20-27           |                                              | Kit No. 96455093 |                           |    |    |    |
| WEAR PARTS KIT 28-36           |                                              | Kit No. 96455094 |                           |    |    |    |
| Pos. No.                       | Description                                  | Material No.     | Qty. Included in each Kit |    |    |    |
| 4a                             | Chamber N Cpl. w/Pos.45 & 65 & SiC Bearing   | 96439476         | 1                         | 2  | 3  | 4  |
| 39                             | Gasket for Oval Flange, 95 x 55 x ø35 x 2mm  | 400189           | 2                         | 2  | 2  | 2  |
| 45                             | Neck Ring, ø41.3 x ø30.6 x .75mm, PTFE       | 400003           | 8                         | 17 | 24 | 32 |
| 47a                            | Bearing Ring/Spacer, SiC 150, 13mm           | 96437488         | 1                         | 2  | 3  | 4  |
| 64a                            | Spacing Pipe, ø15.85 x ø12.85 x 4.5mm        | 96440292         | 1                         | 2  | 3  | 4  |
| 64c                            | Clamp, Splined, ø15 x ø13.10 x ø10.9 x 13mm  | 96439668         | 1                         | 1  | 1  | 1  |
| 65                             | Neck Ring Retainer, N, ø43.5 x ø34.0 x 3.6mm | 96438746         | 8                         | 17 | 24 | 32 |
| 66                             | Lock Washer Set of 2, ø13.5 x ø8.2 x 2.6mm   | 96417297         | 1                         | 1  | 1  | 1  |
| 67                             | Lock Nut, 13mm x M8                          | 00ID2061         | 1                         | 1  | 1  | 1  |

| CR(I, N)1S, 1, & 3 Graflon Bearing |                                              |                  |                           |    |    |    |
|------------------------------------|----------------------------------------------|------------------|---------------------------|----|----|----|
| WEAR PARTS KIT 2-9                 |                                              | Kit No. 96460140 |                           |    |    |    |
| WEAR PARTS KIT 10-19               |                                              | Kit No. 96455110 |                           |    |    |    |
| WEAR PARTS KIT 20-27               |                                              | Kit No. 96455111 |                           |    |    |    |
| WEAR PARTS KIT 28-36               |                                              | Kit No. 96455112 |                           |    |    |    |
| Pos. No.                           | Description                                  | Material No.     | Qty. Included in each Kit |    |    |    |
| 4a                                 | Chamber N Cpl. w/Pos.45 & 65 & Graflon Brg.  | 96440615         | 1                         | 2  | 3  | 4  |
| 39                                 | Gasket for Oval Flange, 95 x 55 x ø35 x 2mm  | 400189           | 2                         | 2  | 2  | 2  |
| 45                                 | Neck Ring, ø41.3 x ø30.6 x .75mm, PTFE       | 400003           | 8                         | 17 | 24 | 32 |
| 47a                                | Bearing Ring/Spacer, TC, 9.7mm               | 400041           | 1                         | 2  | 3  | 4  |
| 64a                                | Spacing Pipe, ø15.85 x ø12.85 x 7.8mm        | 400016           | 1                         | 2  | 3  | 4  |
| 64c                                | Clamp, Splined, ø15 x ø13.10 x ø10.9 x 13mm  | 96439668         | 1                         | 1  | 1  | 1  |
| 65                                 | Neck Ring Retainer, N, ø43.5 x ø34.0 x 3.6mm | 96438746         | 8                         | 17 | 24 | 32 |
| 66                                 | Lock Washer Set of 2, ø13.5 x ø8.2 x 2.6mm   | 96417297         | 1                         | 1  | 1  | 1  |
| 67                                 | Lock Nut, 13mm x M8                          | 00ID2061         | 1                         | 1  | 1  | 1  |

| STACK KITS   |              |
|--------------|--------------|
| Model        | Material No. |
| CRN1S-3/2    | 96479078     |
| CRN1S-3      | 96479079     |
| CRN1S-4      | 96479080     |
| CRN1S-5      | 96479081     |
| CRN1S-6      | 96479082     |
| CRN1S-7      | 96479083     |
| CRN1S-8      | 96479084     |
| CRN1S-9      | 96479085     |
| CRN1S-10     | 96479086     |
| CRN1S-11     | 96479087     |
| CRN1S-12     | 96479088     |
| CRN1S-13     | 96479089     |
| CRN1S-15     | 96479090     |
| CRN1S-17     | 96479091     |
| CRN1S-19     | 96479092     |
| CRN1S-21     | 96479093     |
| CRN1S-23     | 96479094     |
| CRN1S-25     | 96479095     |
| CRN1S-27     | 96479096     |
| *** CRN1S-30 | 96479097     |
| *** CRN1S-33 | 96479098     |
| *** CRN1S-36 | 96479099     |

\*\*\*For 50 Hz operation only.

|                                           |                                                    |              |                           |   |          |   |   |   |   |   |
|-------------------------------------------|----------------------------------------------------|--------------|---------------------------|---|----------|---|---|---|---|---|
| GASKET KIT (EPDM)                         |                                                    |              | Kit No.                   |   | 96455090 |   |   |   |   |   |
| GASKET KIT (FKM)                          |                                                    |              | Kit No.                   |   | 96455091 |   |   |   |   |   |
| GASKET KIT (FKM)                          |                                                    |              | Kit No.                   |   | 96463944 |   |   |   |   |   |
| GASKET KIT (FFKM)                         |                                                    |              | Kit No.                   |   | 96533328 |   |   |   |   |   |
| GASKET KIT (EPDM)-Double Seal option.     |                                                    |              | Kit No.                   |   | 96533362 |   |   |   |   |   |
| GASKET KIT (FKM)-Double Seal option.      |                                                    |              | Kit No.                   |   | 96533363 |   |   |   |   |   |
| GASKET KIT (FFKM)-Double Seal option.     |                                                    |              | Kit No.                   |   | 96533364 |   |   |   |   |   |
| GASKET KIT (FKM, & EPDM)- Cool-Top option |                                                    |              | Kit No.                   |   | 96533329 |   |   |   |   |   |
| Pos. No.                                  | Description                                        | Material No. | Qty. Included in each Kit |   |          |   |   |   |   |   |
| 37                                        | Sleeve O-ring, EPDM, ø137.5 x 3.3mm                | 96438743     | 2                         |   |          |   | 3 |   |   | 1 |
|                                           | Sleeve O-ring, FKM, ø137.5 x 3.3mm                 | 96438744     |                           | 2 |          |   |   | 3 |   |   |
| 37b                                       | Sleeve O-ring, FKM, ø137.5 x 3.3mm                 | 96458109     |                           |   | 2        |   |   |   |   | 2 |
|                                           | Sleeve O-ring, FFKM, ø136.12 x 3.53mm              | 96466718     |                           |   |          | 2 |   |   | 3 |   |
| 38, 100(a)                                | Drain Plug O-ring, EPDM, ø16.3 x 2.4mm             | 00ID1288     | 3                         |   |          |   | 7 |   |   | 4 |
|                                           | Drain Plug O-ring, FKM, ø16.3 x 2.4mm              | 00ID2231     |                           | 3 |          |   |   | 7 |   |   |
| 38, 100a                                  | Drain Plug O-ring, FKM, ø16.3 x 2.4mm              | 96442869     |                           |   | 3        |   |   |   |   | 3 |
|                                           | Drain Plug O-ring, FFKM, ø16.3 x 2.4mm             | 96428162     |                           |   |          | 3 |   |   | 7 |   |
| 109(a)                                    | O-ring for Pos.105(b) & 149, EPDM, Ø21.3 x 3.0mm   | 00ID1798     | 1                         |   |          |   | 1 |   |   |   |
|                                           | O-ring for Pos.105(b) & 149, FKM, Ø21.2 x 3.0mm    | 00ID2339     |                           | 1 |          |   |   | 1 |   |   |
| 109b                                      | O-ring for Pos.105(b) & 149, FKM, Ø22.0 x 2.75mm   | 96458111     |                           |   | 1        |   |   |   |   | 2 |
|                                           | O-ring for Pos.105(b) & 149, FFKM, Ø23.47 x 2.62mm | 96464384     |                           |   |          | 1 |   |   | 2 |   |

|                                                                                                                                                  |             |                                      |                           |   |   |   |   |   |   |   |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------|---------------------------|---|---|---|---|---|---|---|
| STANDARD SHAFT SEAL KIT, BALANCED CARTRIDGE<br>(Maximum allowed working PSI is 435)<br><br>(Tandem Seal option Pumps require 2 of each Seal Kit) |             |                                      | Kit No. 96455088          |   |   |   |   |   |   |   |
|                                                                                                                                                  |             |                                      | Kit No. 96455089          |   |   |   |   |   |   |   |
|                                                                                                                                                  |             |                                      | Kit No. 96455086          |   |   |   |   |   |   |   |
|                                                                                                                                                  |             |                                      | Kit No. 96455087          |   |   |   |   |   |   |   |
|                                                                                                                                                  |             |                                      | Kit No. 96455082          |   |   |   |   |   |   |   |
|                                                                                                                                                  |             |                                      | Kit No. 96455083          |   |   |   |   |   |   |   |
|                                                                                                                                                  |             |                                      | Kit No. 96455084          |   |   |   |   |   |   |   |
|                                                                                                                                                  |             |                                      | Kit No. 96455085          |   |   |   |   |   |   |   |
|                                                                                                                                                  |             |                                      | Kit No.                   |   |   |   |   |   |   |   |
| Pos. No.                                                                                                                                         | Description | Material No.                         | Qty. Included in each Kit |   |   |   |   |   |   |   |
| 105                                                                                                                                              | HQBE        | 96441879                             | 1                         |   |   |   |   |   |   |   |
|                                                                                                                                                  | HQBV        | 96441880                             |                           | 1 |   |   |   |   |   |   |
|                                                                                                                                                  | HQQE        | 96441877                             |                           |   | 1 |   |   |   |   |   |
|                                                                                                                                                  | HQQV        | 96441878                             |                           |   |   | 1 |   |   |   |   |
|                                                                                                                                                  | HUBE        | 96441873                             |                           |   |   |   | 1 |   |   |   |
|                                                                                                                                                  | HUBV        | 96441874                             |                           |   |   |   |   | 1 |   |   |
|                                                                                                                                                  | HUUE        | 96441875                             |                           |   |   |   |   |   | 1 |   |
|                                                                                                                                                  | HUUV        | 96441876                             |                           |   |   |   |   |   |   | 1 |
|                                                                                                                                                  | N/A         | Grinding Device Tool for Emery Cloth | 370711                    | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| N/A                                                                                                                                              | Emery Cloth | 370712                               | 1                         | 1 | 1 | 1 | 1 | 1 | 1 |   |

## Spare Part Kits (continued)

|                                                                                                                                              |             |                                      |                           |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPTIONAL SHAFT SEAL KIT, BALANCED CARTRIDGE<br>(Maximum allowed working PSI is 435)<br>(Tandem Seal option Pumps require 2 of each Seal Kit) |             |                                      | Kit No. 96491375          |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                                                                                                              |             |                                      | Kit No. 96533327          |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                                                                                                              |             |                                      | Kit No. 96533326          |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                                                                                                              |             |                                      | Kit No. 96533323          |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                                                                                                              |             |                                      | Kit No. 96533322          |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                                                                                                              |             |                                      | Kit No. 96533325          |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                                                                                                              |             |                                      | Kit No. 96533324          |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pos. No.                                                                                                                                     | Description | Material No.                         | Qty. Included in each Kit |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 105                                                                                                                                          | HQBK        | 96489537                             | 1                         |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                                                                                                              | HQQF        | 96472620                             |                           | 1 |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                                                                                                              | HQQK        | 96498109                             |                           |   | 1 |   |   |   |   |   |   |   |   |   |   |   |
|                                                                                                                                              | HUBF        | 96481464                             |                           |   |   | 1 |   |   |   |   |   |   |   |   |   |   |
|                                                                                                                                              | HUBK        | 96481463                             |                           |   |   |   | 1 |   |   |   |   |   |   |   |   |   |
|                                                                                                                                              | HUUF        | 96475542                             |                           |   |   |   |   | 1 |   |   |   |   | 1 |   |   |   |
|                                                                                                                                              | HUUK        | 96498108                             |                           |   |   |   |   |   |   |   |   |   |   |   | 1 |   |
|                                                                                                                                              | N/A         | Grinding Device Tool for Emery Cloth | 370711                    | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| N/A                                                                                                                                          | Emery Cloth | 370712                               | 1                         | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |   |

| INBOARD SHAFT SEAL & Gasket KIT, Back to Back OQQE     |                                                | Kit No.      | 96533360                  |          |   |
|--------------------------------------------------------|------------------------------------------------|--------------|---------------------------|----------|---|
| INBOARD SHAFT SEAL & Gasket KIT, Back to Back OQQV     |                                                | Kit No.      |                           | 96533361 |   |
| (An HQQx seal kit must also be used for a seal repair) |                                                |              |                           |          |   |
| Pos. No.                                               | Description                                    | Material No. | Qty. Included in each Kit |          |   |
| 37                                                     | Sleeve O-ring, EPDM, ø137.5 x 3.3mm            | 96438743     | 3                         |          |   |
|                                                        | Sleeve O-ring, FKM, ø137.5 x 3.3mm             | 96438744     |                           |          | 3 |
| 38, 100(a)                                             | Drain Plug O-ring, EPDM, Ø16.3 x 2.4mm         | 00ID1288     | 7                         |          |   |
|                                                        | Drain Plug O-ring, FKM, Ø16.3 x 2.4mm          | 00ID2231     |                           |          | 7 |
| 102                                                    | O-ring, EPDM, ø18 x 2.5mm                      | 00ID2041     | 1                         |          |   |
|                                                        | O-ring, FKM, ø17.86 x 2.62mm                   | 00ID2187     |                           |          | 1 |
| 103                                                    | Stationary Seal Ring, SiC,12mm                 | 980746       | 1                         |          |   |
| 104                                                    | Rotating Seal Ring, SiC, 12mm                  | 980733       | 1                         |          | 1 |
| 107                                                    | O-ring, EPDM, ø11.5 x 4.3mm                    | 00ID2040     | 1                         |          |   |
|                                                        | O-ring, FKM, ø11.5 x 4.3mm                     | 00ID2186     |                           |          | 1 |
| 108                                                    | Spring, 12mm                                   | 980195       | 1                         |          | 1 |
| 109a                                                   | O-ring, EPDM, ø21.3 x 3.0mm                    | 00ID1798     | 1                         |          |   |
|                                                        | O-ring, FKM, ø21.2 x 3.0mm                     | 00ID2339     |                           |          | 1 |
| 111                                                    | Driver for pos.104                             | 980192       | 1                         |          | 1 |
| 112                                                    | Driver for pos.111                             | 980191       | 1                         |          | 1 |
| 112a                                                   | Driver for pos.112                             | 400203       | 1                         |          | 1 |
| 113                                                    | Set Screw for pos.112a                         | 00ID7392     | 2                         |          | 2 |
| 146                                                    | Allen Bolt for pos.147 & 148, 2.5mm x M3 x 5mm | 96462639     | 3                         |          | 3 |

| IEC COUPLING KIT |                                                 |  | ø14/ø12      |                           | Kit No. 415060 |  | ø19/ø12 |  | Kit No. 415061 |  | ø24/ø12 |  | Kit No. 415062 |  | ø28/ø12 |  | Kit No. 415063 |  | ø38/ø12 |  | Kit No. 415065 |   |
|------------------|-------------------------------------------------|--|--------------|---------------------------|----------------|--|---------|--|----------------|--|---------|--|----------------|--|---------|--|----------------|--|---------|--|----------------|---|
| Pos. No.         | Description                                     |  | Material No. | Qty. Included in each Kit |                |  |         |  |                |  |         |  |                |  |         |  |                |  |         |  |                |   |
| 9                | Allen Screw, M6 x 20mm, Delta Seal              |  | 00ID7899     | 4                         |                |  |         |  |                |  |         |  |                |  |         |  |                |  |         |  |                |   |
|                  | Allen Screw, M8 x 25mm, Delta Seal              |  | 00ID7900     |                           | 4              |  | 4       |  | 4              |  |         |  |                |  |         |  |                |  |         |  |                |   |
|                  | Allen Screw, M10 x 25mm, Delta Seal             |  | 00ID7901     |                           |                |  |         |  |                |  |         |  |                |  |         |  |                |  |         |  |                | 4 |
| 10               | Shaft Pin, ø5 x 26mm, Stainless                 |  | 310192       | 1                         | 1              |  | 1       |  | 1              |  | 1       |  | 1              |  | 1       |  | 1              |  | 1       |  | 1              |   |
| 10a              | Coupling Half, F85, MG71, .37-55kW. ø14/ø12     |  | 410041       | 2                         |                |  |         |  |                |  |         |  |                |  |         |  |                |  |         |  |                |   |
|                  | Coupling Half, F100, MG80, .75-1.1kW. ø19/ø12   |  | 410043       |                           | 2              |  |         |  |                |  |         |  |                |  |         |  |                |  |         |  |                |   |
|                  | Coupling Half, F115, MG 90, 1.5-2.2kW. ø24/ø12  |  | 410045       |                           |                |  |         |  | 2              |  |         |  |                |  |         |  |                |  |         |  |                |   |
|                  | Coupling Half, F130, MG100/112, 3-4 kW. ø28/ø12 |  | 410047       |                           |                |  |         |  |                |  |         |  | 2              |  |         |  |                |  |         |  |                |   |
|                  | Coupling Half, F265, MG132, 5.5-7.5kW. ø38/ø12  |  | 410115       |                           |                |  |         |  |                |  |         |  |                |  |         |  |                |  |         |  |                | 2 |

| NEMA COUPLING KIT |                                            | ø15.8/ø12 |  | Kit No. 415314 |  | ø28.5/ø12                 |  | Kit No. 415315 |  | ø34.9/ø12 |  | Kit No. 96478700 |  |
|-------------------|--------------------------------------------|-----------|--|----------------|--|---------------------------|--|----------------|--|-----------|--|------------------|--|
| Pos. No.          | Description                                |           |  | Material No.   |  | Qty. Included in each Kit |  |                |  |           |  |                  |  |
| 9                 | Allen Screw, M6 x 20mm, Delta Seal         |           |  | 00ID7899       |  | 4                         |  |                |  |           |  |                  |  |
|                   | Allen Screw, M8 x 25mm, Delta Seal         |           |  | 00ID7900       |  |                           |  | 4              |  |           |  | 4                |  |
|                   | Allen Screw, M10 x 25mm, Delta Seal        |           |  | 00ID7901       |  |                           |  |                |  |           |  | 4                |  |
| 10                | Shaft Pin, ø5 x 26mm, Stainless            |           |  | 310192         |  | 1                         |  | 1              |  |           |  | 1                |  |
| 10a               | Coupling Half, 56C, 1/3 - 2HP. ø15.8 / ø12 |           |  | 410108         |  | 2                         |  |                |  |           |  |                  |  |
|                   | Coupling Half, 182/184TC, 3-5HP. ø28.5/ø12 |           |  | 410109         |  |                           |  | 2              |  |           |  |                  |  |
|                   | Coupling Half, 213TC, 7.5-10HP. ø34.9/ø12  |           |  | 96472175       |  |                           |  |                |  |           |  | 2                |  |

| COUPLING GUARD KIT                |                                          |              | Kit No. 96505130          |   | 96505131 |  | 96505132 |  |
|-----------------------------------|------------------------------------------|--------------|---------------------------|---|----------|--|----------|--|
| IEC, F85-F100, .37 to 1.1 kW      |                                          |              | Kit No.                   |   | 96505130 |  |          |  |
| NEMA 56C, 1/3-2HP; IEC-F115-130 & |                                          |              | Kit No.                   |   | 96505131 |  |          |  |
| NEMA 182-215TC, 3-10HP            |                                          |              | Kit No.                   |   |          |  | 96505132 |  |
| Pos. No.                          | Description                              | Material No. | Qty. Included in each Kit |   |          |  |          |  |
| 7                                 | Coupling Guard, W=127mm x H=66mm         | 96438136     | 2                         |   |          |  |          |  |
|                                   | Coupling Guard, W=127mm x H=90.5mm       | 96438137     |                           | 2 |          |  |          |  |
|                                   | Coupling Guard, W=157mm x H=171mm        | 96438138     |                           |   | 2        |  |          |  |
| 7a                                | Screw comb.slot torx/straight slot 4x8mm | 96488481     | 4                         | 4 |          |  | 4        |  |

**Spare Part Kits** (continued)

| FLEXI FLANGE KIT FOR SMALL CRI1S, 1, & 3<br>1" Threaded Stainless ( 232 PSI Max.) |                                              |              |                           |
|-----------------------------------------------------------------------------------|----------------------------------------------|--------------|---------------------------|
|                                                                                   |                                              | Kit No.      | 964680850                 |
| Pos. No.                                                                          | Description                                  | Material No. | Qty. Included in each Kit |
| 12                                                                                | Flange, Stainless, 1" - 11.5 NPT             | 96468336     | 2                         |
| 35                                                                                | Hex Head Bolt, M10 x 60mm, A4, DIN931        | 96447228     | 4                         |
| 36b                                                                               | Nut, M10, 316SS w/Delta Seal                 | 96438757     | 4                         |
| 39                                                                                | Gasket, 95 x 55 x 35 x 2mm, KLINGERSIL C4430 | 400189       | 2                         |

| FLEXI FLANGE KIT FOR SMALL CRI1S, 1, 3, & 5<br>1-1/4" Threaded Stainless ( 232 PSI Max.) |                                              |              |                           |
|------------------------------------------------------------------------------------------|----------------------------------------------|--------------|---------------------------|
|                                                                                          |                                              | Kit No.      | 96480851                  |
| Pos. No.                                                                                 | Description                                  | Material No. | Qty. Included in each Kit |
| 12                                                                                       | Flange, Stainless, 1" - 11.5 NPT             | 96468337     | 2                         |
| 35                                                                                       | Hex Head Bolt, M10 x 60mm, A4, DIN931        | 96447228     | 4                         |
| 36b                                                                                      | Nut, M10, 316SS w/Delta Seal                 | 96438757     | 4                         |
| 39                                                                                       | Gasket, 95 x 55 x 35 x 2mm, KLINGERSIL C4430 | 400189       | 2                         |

| FLEXI CLAMP FLANGE KIT FOR SMALL CRI(N)1S, 1, 3, & 5<br>1-1/4" Stainless Flange<br>(Conversion max. allowable operating pressure 232 ) |                                                    |              |                           |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------|---------------------------|
|                                                                                                                                        |                                                    | Kit No.      | 96480858                  |
|                                                                                                                                        |                                                    | Kit No.      | 96480859                  |
| Pos. No.                                                                                                                               | Description                                        | Material No. | Qty. Included in each Kit |
| 12a                                                                                                                                    | Adapter Flg. for ANSI pos.201/Flexi Base (232 PSI) | 96437818     | 2                         |
| 35                                                                                                                                     | Hex Head Bolt, M10 x 60mm, A4, DIN931              | 96447228     | 4                         |
| 36b                                                                                                                                    | Nut, M10, 316SS w/Delta Seal                       | 96438757     | 4                         |
| 39b                                                                                                                                    | O-ring, EPDM, 44.45 x 3.53mm                       | 96407726     | 2                         |
|                                                                                                                                        | O-ring, FKM, 44.45 x 3.53mm                        | 96411713     | 2                         |
| 201                                                                                                                                    | Flange, ANSI, DIN, JIS PN40/30K, Stainless         | 96439492     | 2                         |
| 203                                                                                                                                    | Lock Ring, Stainless                               | 96439718     | 2                         |

| FLEXI CLAMP KIT FOR SMALL CRI1S, 1, & 3<br>1" Internal Threaded SS Pipe Stub ( 232 PSI Max.) |                                               |              |                           |
|----------------------------------------------------------------------------------------------|-----------------------------------------------|--------------|---------------------------|
|                                                                                              |                                               | Kit No.      | 96480854                  |
|                                                                                              |                                               | Kit No.      | 96480855                  |
| Pos. No.                                                                                     | Description                                   | Material No. | Qty. Included in each Kit |
| 12b                                                                                          | Stainless, Internal 1" -11.5 NPT              | 400182       | 2                         |
| 12c                                                                                          | Clamp for Flexi Base & pos.12b                | 00ID7194     | 4                         |
| 35b                                                                                          | Screw for Pos. 12c, M8 x 40mm - A2, RR DIN933 | 00ID7188     | 4                         |
| 35c                                                                                          | Nut for Pos. 35b, M8, 304SS                   | 00ID7187     | 4                         |
| 39b                                                                                          | O-ring, EPDM, 44.45 x 3.53mm                  | 96407726     | 2                         |
|                                                                                              | O-ring, FKM, 44.45 x 3.53mm                   | 96411713     | 2                         |

| FLEXI CLAMP KIT FOR SMALL CRI1S, 1, 3, & 5<br>1-1/4" Internal Threaded SS Pipe Stub ( 232 PSI Max.) |                                               |              |                           |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------|---------------------------|
|                                                                                                     |                                               | Kit No.      | 96480856                  |
|                                                                                                     |                                               | Kit No.      | 96480857                  |
| Pos. No.                                                                                            | Description                                   | Material No. | Qty. Included in each Kit |
| 12b                                                                                                 | Stainless, Internal 1-1/4" -11.5 NPT          | 410279       | 2                         |
| 12c                                                                                                 | Clamp for Flexi Base & pos.12b                | 00ID7194     | 4                         |
| 35b                                                                                                 | Screw for Pos. 12c, M8 x 40mm - A2, RR DIN933 | 00ID7188     | 4                         |
| 35c                                                                                                 | Nut for Pos. 35b, M8, 304SS                   | 00ID7187     | 4                         |
| 39b                                                                                                 | O-ring, EPDM, 44.45 x 3.53mm                  | 96407726     | 2                         |
|                                                                                                     | O-ring, FKM, 44.45 x 3.53mm                   | 96411713     | 2                         |

| FLEXI CLAMP KIT FOR SMALL CRI1S, 1, 3, & 5<br>2" External Threaded SS Pipe Stub ( 232 PSI Max.) |                                               |              |                           |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------|---------------------------|
|                                                                                                 |                                               | Kit No.      | 96480852                  |
|                                                                                                 |                                               | Kit No.      | 96480853                  |
| Pos. No.                                                                                        | Description                                   | Material No. | Qty. Included in each Kit |
| 12b                                                                                             | Stainless, Internal 2" -11.5 NPT              | 96468338     | 2                         |
| 12c                                                                                             | Clamp for Flexi Base & pos.12b                | 00ID7194     | 4                         |
| 35b                                                                                             | Screw for Pos. 12c, M8 x 40mm - A2, RR DIN933 | 00ID7188     | 4                         |
| 35c                                                                                             | Nut for Pos. 35b, M8, 304SS                   | 00ID7187     | 4                         |
| 39b                                                                                             | O-ring, EPDM, 44.45 x 3.53mm                  | 96407726     | 2                         |
|                                                                                                 | O-ring, FKM, 44.45 x 3.53mm                   | 96411713     | 2                         |

| AIR VENT FOR SMALL CR |                                              |              |                           |
|-----------------------|----------------------------------------------|--------------|---------------------------|
|                       |                                              | Kit No.      | 91128708                  |
| Pos. No.              | Description                                  | Material No. | Qty. Included in each Kit |
| 117                   | Pipe for Air Vent, R1/2", 316SS              | 330272       | 1                         |
| 118                   | Automatic Air Vent, Type AE50S 1/2" BSP, SS. | 96498508     | 1                         |

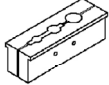
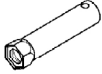
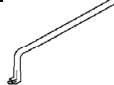
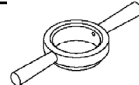
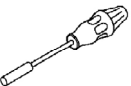
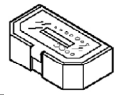
**Accessories**

| ANSI COMPANION FLANGES FOR SMALL CR<br>1-1/4" Threaded Stainless, 300 Lb. Class |                                                   |              |                           |
|---------------------------------------------------------------------------------|---------------------------------------------------|--------------|---------------------------|
|                                                                                 |                                                   | Kit No.      | 91129013                  |
| Pos. No.                                                                        | Description                                       | Material No. | Qty. Included in each Kit |
| N/A                                                                             | Nut, HEX 5/8"-11 UNC, 18-8SS                      | 01D00164     | 8                         |
| N/A                                                                             | Bolt, HEX 5/8" x 2-3/4", UNC 18-8SS               | 00ID7241     | 8                         |
| N/A                                                                             | Flange 1-1/4" Stainless, ANSI, DIN, JIS PN40/30K, | 00ID7239     | 2                         |
| N/A                                                                             | Gasket Full Face Flange, 1-1/4", 300#, Cut Ring   | 400201       | 2                         |

| VICTAULIC TYPE COMPANION CONNECTIONS FOR SMALL CRI(N) |                                         |              |                           |
|-------------------------------------------------------|-----------------------------------------|--------------|---------------------------|
|                                                       |                                         | Kit No.      | 4013010                   |
|                                                       |                                         | Kit No.      | 01D00118                  |
| Pos. No.                                              | Description                             | Material No. | Qty. Included in each Kit |
| N/A                                                   | Victaulic Type Coupling, 1-1/4", EPDM   | 01D17810     | 2                         |
| N/A                                                   | Victaulic Type Coupling, 1-1/4", 77 FKM | 01D00112     | 2                         |
| N/A                                                   | 1-1/4" Stainless NPT Nipple             | 4000011      | 2                         |

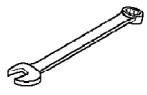
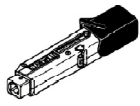
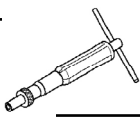
## Special Tools

Tools not generally available from normal sources.

| Mat. No. | Description and Use                                                                                                           |                                                                                     |
|----------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 00SV0040 | <b>Shaft Holder for Dismantling/Assembly</b><br>Used to hold and protect the shaft during dismantling and assembly.           |  |
| 00SV2007 | <b>Tubular Box Spanner for Shaft Seal 36.1 mm</b><br>Used to install and remove the shaft seal.<br>Fits a 1/2" drive ratchet. |    |
| 00SV0239 | <b>Puller for Neck Ring</b><br>Used to remove the Neck Ring from Chamber.                                                     |  |
| 00SV2014 | <b>Circlip Pliers for Flange Lock Ring</b><br>Used to remove the Lock Ring for the Flange.                                    |    |
| 00SV2066 | <b>Tool for Outer Sleeve</b><br>Used to press sleeve into base.                                                               |  |
| 00SV2011 | <b>Bit Holder</b><br>Used with Bits Kit, 1/4"                                                                                 |    |
| 00SV2010 | <b>Bits Kit</b><br>NV 5 mm for M6, 1/4"<br>NV 6 mm for M8, 1/4"<br>NV 8 mm for M10, 1/4"                                      |    |
| 00SV2012 | <b>Hexagon Socket Bit</b><br>Used for Shaft Seal<br>NV 2.5 mm for M5, 1/4"                                                    |    |

## Standard Tools

In addition to being available from Grundfos, comparable tools can be purchased through normal sources.

| Mat. No.                                                 | Description and Use                                                                                                                                |                                                                                      |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 00SV0083<br>00SV0055<br>00SV0056<br>00SV0054<br>00SV0122 | <b>Wrenches</b><br>Used to tighten various nuts.<br>NV 10 mm for M6<br>NV 13 mm for M8<br>NV 17 mm for M10<br>NV 19 mm for M12<br>NV 24 mm for M16 |   |
| 00SV0292<br>00SV0269<br>00SV0400                         | <b>Torque Wrench</b><br>Used to torque various screws.<br>4-20 Nm, 9 x 12<br>20-100 Nm, 9 x 12<br>40-200 Nm, 14x18                                 |  |
| 00SV0438                                                 | <b>Torque Screwdriver</b><br>Used to tighten various nuts.<br>1-6 Nm, 1/4"                                                                         |   |
| 00SV0295                                                 | <b>Ratchet Spanner for all Adapters</b><br>9 mm x 12 mm, 1/2"                                                                                      |  |
| 00SV0296<br>00SV0297<br>00SV0298                         | <b>Socket Spanner with Inside Hex</b><br>NV 5 mm for M6, 1/2" x 1/2"<br>NV 6 mm for M8, 1/2" x 1/2"<br>NV 8 mm for M10, 1/2" x 1/2"                |   |
| 00SV0310<br>00SV0294<br>00SV0270<br>00SV0271<br>00SV0524 | <b>Ring Spanner</b><br>NV 10 mm for M6<br>NV 13 mm for M8<br>NV 17 mm for M10<br>NV 19 mm for M12<br>NV 24 mm for M16                              |   |
| 00SV2013                                                 | <b>Socket Spanner</b><br>NV 13 mm for M8, 9 x 12                                                                                                   |   |



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