

# SuperSet Part Numbers and Reference Information



## EnviroSeal and Chesterton The Ultimate Sealing Solution

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## AHLSTROM - Imperial

| Pump & Model             | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|--------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                          |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| Ahlstrom APT 1           |          |                      |              |             |               |                |               |
| SpiralTrac Part #        |          |                      |              |             |               |                |               |
| PI1625RS2375(XXX)0L1.340 | ESC      | 210236               | 210237       | 210238      | 210239        | 210241         | 2             |
|                          | 316      | 210477               | 210478       | 210479      | 210480        | 210481         | 2             |

|                          |     |        |        |        |        |        |   |
|--------------------------|-----|--------|--------|--------|--------|--------|---|
| Ahlstrom APT 2           |     |        |        |        |        |        |   |
| SpiralTrac Part #        |     |        |        |        |        |        |   |
| PI2000RS2750(XXX)0L1.340 | ESC | 210242 | 210243 | 210244 | 210245 | 210246 | 2 |
|                          | 316 | 210482 | 210483 | 210484 | 210485 | 210486 | 2 |

|                          |     |        |        |        |        |        |   |
|--------------------------|-----|--------|--------|--------|--------|--------|---|
| Ahlstrom APT 3           |     |        |        |        |        |        |   |
| SpiralTrac Part #        |     |        |        |        |        |        |   |
| PI2375RS3375(XXX)0L1.670 | ESC | 210247 | 210248 | 210249 | 210250 | 210251 | 2 |
|                          | 316 | 210487 | 210488 | 210489 | 210490 | 210491 | 2 |

|                          |     |        |        |        |        |        |   |
|--------------------------|-----|--------|--------|--------|--------|--------|---|
| Ahlstrom APT 4           |     |        |        |        |        |        |   |
| SpiralTrac Part #        |     |        |        |        |        |        |   |
| PI2750RS3750(XXX)0L1.670 | ESC | 210252 | 210253 | 210254 | 210255 | 210257 | 2 |
|                          | 316 | 210492 | 210493 | 210494 | 210495 | 210496 | 2 |

|                          |     |        |        |        |        |        |   |
|--------------------------|-----|--------|--------|--------|--------|--------|---|
| Ahlstrom APT 5           |     |        |        |        |        |        |   |
| SpiralTrac Part #        |     |        |        |        |        |        |   |
| PI3500RS4750(XXX)1L1.415 | ESC | 210258 | 210259 | 210261 | 210262 | 210263 | 2 |
|                          | 316 | 210497 | 210498 | 210499 | 210500 | 210501 | 2 |

|                          |     |        |        |        |        |        |   |
|--------------------------|-----|--------|--------|--------|--------|--------|---|
| Ahlstrom APT 6           |     |        |        |        |        |        |   |
| SpiralTrac Part #        |     |        |        |        |        |        |   |
| PI3937RS5197(XXX)1L1.415 | ESC | 210264 | 210265 | 210266 | 210267 | 210268 | 2 |
|                          | 316 | 210502 | 210503 | 210504 | 210505 | 210506 | 2 |

## AHLSTROM- Metric

| Pump & Model               | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|----------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                            |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| Ahlstrom APP 1             |          |                      |              |             |               |                |               |
| SpiralTrac Part #          |          |                      |              |             |               |                |               |
| PM04000RS06000(XXX)0L35.00 | ESC      | 210201               | 210202       | 210203      | 210204        | 210205         | 2             |
|                            | 316      | 210446               | 210447       | 210449      | 210450        | 210451         | 2             |

|                            |     |        |        |        |        |        |   |
|----------------------------|-----|--------|--------|--------|--------|--------|---|
| Ahlstrom APP 2             |     |        |        |        |        |        |   |
| SpiralTrac Part #          |     |        |        |        |        |        |   |
| PM05000RS07000(XXX)0L35.00 | ESC | 210206 | 210207 | 210209 | 210210 | 210211 | 2 |
|                            | 316 | 210452 | 210453 | 210454 | 210455 | 210456 | 2 |

|                            |     |        |        |        |        |        |   |
|----------------------------|-----|--------|--------|--------|--------|--------|---|
| Ahlstrom APP 3             |     |        |        |        |        |        |   |
| SpiralTrac Part #          |     |        |        |        |        |        |   |
| PM06000RS08500(XXX)0L42.00 | ESC | 210212 | 210213 | 210214 | 210215 | 210216 | 2 |
|                            | 316 | 210457 | 210458 | 210459 | 210460 | 210461 | 2 |

|                            |     |        |        |        |        |        |   |
|----------------------------|-----|--------|--------|--------|--------|--------|---|
| Ahlstrom APP 4             |     |        |        |        |        |        |   |
| SpiralTrac Part #          |     |        |        |        |        |        |   |
| PM07000RS09500(XXX)0L42.00 | ESC | 210217 | 210218 | 210219 | 210221 | 210222 | 2 |
|                            | 316 | 210462 | 210463 | 210464 | 210465 | 210466 | 2 |

|                            |     |        |        |        |        |        |   |
|----------------------------|-----|--------|--------|--------|--------|--------|---|
| Ahlstrom APP 5             |     |        |        |        |        |        |   |
| SpiralTrac Part #          |     |        |        |        |        |        |   |
| PM09000RS12200(XXX)1L36.00 | ESC | 210223 | 210225 | 210226 | 210227 | 210228 | 2 |
|                            | 316 | 210467 | 210468 | 210469 | 210470 | 210471 | 2 |

|                            |     |        |        |        |        |        |   |
|----------------------------|-----|--------|--------|--------|--------|--------|---|
| Ahlstrom APP 6             |     |        |        |        |        |        |   |
| SpiralTrac Part #          |     |        |        |        |        |        |   |
| PM10000RS13200(XXX)1L36.00 | ESC | 210229 | 210231 | 210232 | 210233 | 210234 | 2 |
|                            | 316 | 210472 | 210473 | 210474 | 210475 | 210476 | 2 |

## DURCO

| Pump & Model                  | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|-------------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                               |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| <b>Durco MKII GRI</b>         |          |                      |              |             |               |                |               |
| <b>SpiralTrac Part #</b>      |          |                      |              |             |               |                |               |
| <b>PI1125RS1750(XXX)24293</b> | ESC      | 210551               | 210587       | 210521      | 210627        | 210667         | <b>2</b>      |
|                               | 316      | 210550               | 210586       | 210520      | 210626        | 210666         | <b>2</b>      |

|                               |     |        |        |        |        |        |          |
|-------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Durco MKII GRII</b>        |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>      |     |        |        |        |        |        |          |
| <b>PI1875RS2625(XXX)24294</b> | ESC | 210556 | 210594 | 210512 | 210632 | 210672 | <b>2</b> |
|                               | 316 | 210554 | 210590 | 210510 | 210630 | 210670 | <b>2</b> |

|                               |     |        |        |        |        |        |          |
|-------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Durco MKII GRIII</b>       |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>      |     |        |        |        |        |        |          |
| <b>PI2625RS3625(XXX)24295</b> | ESC | 210564 | 210600 | 210524 | 210640 | 210680 | <b>2</b> |
|                               | 316 | 210562 | 210598 | 210522 | 210638 | 210678 | <b>2</b> |

|                               |     |        |        |        |        |        |          |
|-------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Durco MKIII GRI</b>        |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>      |     |        |        |        |        |        |          |
| <b>PI1375RS2125(XXX)24296</b> | ESC | 210553 | 210589 | 210515 | 210629 | 210669 | <b>2</b> |
|                               | 316 | 210552 | 210588 | 210514 | 210628 | 210668 | <b>2</b> |

|                               |     |        |        |        |        |        |          |
|-------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Durco MKIII GRII</b>       |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>      |     |        |        |        |        |        |          |
| <b>PI1875RS2625(XXX)24297</b> | ESC | 210557 | 210595 | 210513 | 210633 | 210673 | <b>2</b> |
|                               | 316 | 210555 | 210591 | 210511 | 210631 | 210671 | <b>2</b> |

|                               |     |        |        |        |        |        |          |
|-------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Durco MKIII GRIII</b>      |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>      |     |        |        |        |        |        |          |
| <b>PI2625RS3625(XXX)24298</b> | ESC | 210565 | 210601 | 210525 | 210641 | 210681 | <b>2</b> |
|                               | 316 | 210563 | 210599 | 210523 | 210639 | 210679 | <b>2</b> |

## GOULDS 3175

| Pump & Model                    | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|---------------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                                 |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| <b>Goulds 3175 S</b>            |          |                      |              |             |               |                |               |
| <b>SpiralTrac Part #</b>        |          |                      |              |             |               |                |               |
| <b>PI3000RS4000(XXX)2L1.000</b> | ESC      | 210020               | 210021       | 210022      | 210023        | 210024         | <b>3</b>      |
|                                 | 316      | 210431               | 210432       | 210433      | 210434        | 210435         | <b>3</b>      |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3175 M</b>            |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>PI3750RS4750(XXX)2L1.000</b> | ESC | 210025 | 210026 | 210027 | 210028 | 210029 | <b>3</b> |
|                                 | 316 | 210436 | 210437 | 210438 | 210439 | 210440 | <b>3</b> |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3175 L</b>            |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>PI4750RS5750(XXX)2L1.000</b> | ESC | 210030 | 210031 | 210032 | 210033 | 210034 | <b>3</b> |
|                                 | 316 | 210441 | 210442 | 210443 | 210444 | 210445 | <b>3</b> |

## GOULDS 3196

| Pump & Model                     | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|----------------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                                  |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| <b>Goulds 3196 ST</b>            |          |                      |              |             |               |                |               |
| <b>SpiralTrac Part #</b>         |          |                      |              |             |               |                |               |
| <b>PI1375RS2000(XXX)3L0.4375</b> | ESC      | 210000               | 210001       | 210002      | 210003        | 210004         | <b>3</b>      |
|                                  | 316      | 210370               | 210375       | 210380      | 210386        | 210391         | <b>3</b>      |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3196 MT</b>           |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>PI1750RS2500(XXX)2L0.625</b> | ESC | 210005 | 210006 | 210007 | 210008 | 210009 | <b>3</b> |
|                                 | 316 | 210396 | 210402 | 210407 | 210412 | 210418 | <b>3</b> |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3196 LT</b>           |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>PI2125RS2875(XXX)2L0.625</b> | ESC | 210010 | 210011 | 210012 | 210013 | 210014 | <b>3</b> |
|                                 | 316 | 210421 | 210422 | 210423 | 210424 | 210425 | <b>3</b> |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3196 XLT</b>          |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>PI2500RS3375(XXX)2L0.625</b> | ESC | 210015 | 210016 | 210017 | 210018 | 210019 | <b>3</b> |
|                                 | 316 | 210426 | 210427 | 210428 | 210429 | 210430 | <b>3</b> |

## GOULDS 3405

| Pump & Model                    | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|---------------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                                 |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| <b>Goulds 3405 S</b>            |          |                      |              |             |               |                |               |
| <b>SpiralTrac Part #</b>        |          |                      |              |             |               |                |               |
| <b>Right Rotation</b>           | ESC      | 210372               | 210377       | 210382      | 210388        | 210393         | <b>3</b>      |
| <b>PI1375RS2000(XXX)0L1.250</b> | 316      | 210369               | 210374       | 210379      | 210385        | 210390         | <b>3</b>      |
|                                 |          |                      |              |             |               |                |               |
| <b>Left Rotation</b>            | ESC      | 210371               | 210376       | 210381      | 210387        | 210392         | <b>3</b>      |
| <b>PI1375LS2000(XXX)0L1.250</b> | 316      | 210368               | 210373       | 210378      | 210383        | 210389         | <b>3</b>      |

|                               |     |        |        |        |        |        |          |
|-------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3405 M</b>          |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>      |     |        |        |        |        |        |          |
| <b>Right Rotation</b>         | ESC | 210398 | 210404 | 210409 | 210414 | 210420 | <b>3</b> |
| <b>PI1750RS2500(XXX)25173</b> | 316 | 210395 | 210401 | 210406 | 210411 | 210417 | <b>3</b> |
|                               |     |        |        |        |        |        |          |
| <b>Left Rotation</b>          | ESC | 210397 | 210403 | 210408 | 210413 | 210419 | <b>3</b> |
| <b>PI1750LS2500(XXX)25173</b> | 316 | 210394 | 210399 | 210405 | 210410 | 210415 | <b>3</b> |

|                               |     |        |        |        |        |        |          |
|-------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3405 L</b>          |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>      |     |        |        |        |        |        |          |
| <b>Right Rotation</b>         | ESC | 210561 | 210597 | 210519 | 210637 | 210677 | <b>3</b> |
| <b>PI2500RS3250(XXX)25174</b> | 316 | 210559 | 210593 | 210517 | 210635 | 210675 | <b>3</b> |
|                               |     |        |        |        |        |        |          |
| <b>Left Rotation</b>          | ESC | 210560 | 210596 | 210518 | 210636 | 210676 | <b>3</b> |
| <b>PI2500LS3250(XXX)25174</b> | 316 | 210558 | 210592 | 210516 | 210634 | 210674 | <b>3</b> |

# GOULDS 3420

| Pump & Model                    | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|---------------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                                 |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| <b>Goulds 3420 (12x14-15)</b>   |          |                      |              |             |               |                |               |
| <b>SpiralTrac Part #</b>        |          |                      |              |             |               |                |               |
| <b>Right Rotation</b>           | ESC      | 210569               | 210605       | 210529      | 210645        | 210685         | <b>3</b>      |
| <b>PI4125RS5375(XXX)2L0.937</b> | 316      | 210567               | 210603       | 210527      | 210643        | 210683         | <b>3</b>      |
|                                 |          |                      |              |             |               |                |               |
| <b>Left Rotation</b>            | ESC      | 210568               | 210604       | 210528      | 210644        | 210684         | <b>3</b>      |
| <b>PI4125LS5375(XXX)2L0.937</b> | 316      | 210566               | 210602       | 210526      | 210642        | 210682         | <b>3</b>      |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3420 (16x18-17H)</b>  |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>Right Rotation</b>           | ESC | 210569 | 210605 | 210529 | 210645 | 210685 | <b>3</b> |
| <b>PI4125RS5375(XXX)2L0.937</b> | 316 | 210567 | 210603 | 210527 | 210643 | 210683 | <b>3</b> |
|                                 |     |        |        |        |        |        |          |
| <b>Left Rotation</b>            | ESC | 210568 | 210604 | 210528 | 210644 | 210684 | <b>3</b> |
| <b>PI4125LS5375(XXX)2L0.937</b> | 316 | 210566 | 210602 | 210526 | 210642 | 210682 | <b>3</b> |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3420 (18x20-24)</b>   |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>Right Rotation</b>           | ESC | 210570 | 210606 | 210530 | 210646 | 210686 | <b>3</b> |
| <b>PI5000RS6250(XXX)2L1.250</b> | 316 | 210573 | 210609 | 210533 | 210649 | 210689 | <b>3</b> |
|                                 |     |        |        |        |        |        |          |
| <b>Left Rotation</b>            | ESC | 210571 | 210607 | 210531 | 210647 | 210687 | <b>3</b> |
| <b>PI5000LS6250(XXX)2L1.250</b> | 316 | 210572 | 210608 | 210532 | 210648 | 210688 | <b>3</b> |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3420 (16x18-30)</b>   |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>Right Rotation</b>           | ESC | 210577 | 210613 | 210537 | 210653 | 210693 | <b>3</b> |
| <b>PI5500RS7500(XXX)2L1.250</b> | 316 | 210575 | 210611 | 210535 | 210651 | 210691 | <b>3</b> |
|                                 |     |        |        |        |        |        |          |
| <b>Left Rotation</b>            | ESC | 210576 | 210612 | 210536 | 210652 | 210692 | <b>3</b> |
| <b>PI5500LS7500(XXX)2L1.250</b> | 316 | 210574 | 210610 | 210534 | 210650 | 210690 | <b>3</b> |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3420 (18x20-30)</b>   |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>Right Rotation</b>           | ESC | 210577 | 210613 | 210537 | 210653 | 210693 | <b>3</b> |
| <b>PI5500RS7500(XXX)2L1.250</b> | 316 | 210575 | 210611 | 210535 | 210651 | 210691 | <b>3</b> |
|                                 |     |        |        |        |        |        |          |
| <b>Left Rotation</b>            | ESC | 210576 | 210612 | 210536 | 210652 | 210692 | <b>3</b> |
| <b>PI5500LS7500(XXX)2L1.250</b> | 316 | 210574 | 210610 | 210534 | 210650 | 210690 | <b>3</b> |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3420 (20x24-24)</b>   |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>Right Rotation</b>           | ESC | 210577 | 210613 | 210537 | 210653 | 210693 | <b>3</b> |
| <b>PI5500RS7500(XXX)2L1.250</b> | 316 | 210575 | 210611 | 210535 | 210651 | 210691 | <b>3</b> |
|                                 |     |        |        |        |        |        |          |
| <b>Left Rotation</b>            | ESC | 210576 | 210612 | 210536 | 210652 | 210692 | <b>3</b> |
| <b>PI5500LS7500(XXX)2L1.250</b> | 316 | 210574 | 210610 | 210534 | 210650 | 210690 | <b>3</b> |

# GOULDS 3420

| Pump & Model                    | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|---------------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                                 |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| <b>Goulds 3420 (20x24-28)</b>   |          |                      |              |             |               |                |               |
| <b>SpiralTrac Part #</b>        |          |                      |              |             |               |                |               |
| <b>Right Rotation</b>           | ESC      | 210577               | 210613       | 210537      | 210653        | 210693         | <b>3</b>      |
| <b>PI5500RS7500(XXX)2L1.250</b> | 316      | 210575               | 210611       | 210535      | 210651        | 210691         | <b>3</b>      |
|                                 |          |                      |              |             |               |                |               |
| <b>Left Rotation</b>            | ESC      | 210576               | 210612       | 210536      | 210652        | 210692         | <b>3</b>      |
| <b>PI5500LS7500(XXX)2L1.250</b> | 316      | 210574               | 210610       | 210534      | 210650        | 210690         | <b>3</b>      |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3420 (20x24-30)</b>   |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>Right Rotation</b>           | ESC | 210577 | 210613 | 210537 | 210653 | 210693 | <b>3</b> |
| <b>PI5500RS7500(XXX)2L1.250</b> | 316 | 210575 | 210611 | 210535 | 210651 | 210691 | <b>3</b> |
|                                 |     |        |        |        |        |        |          |
| <b>Left Rotation</b>            | ESC | 210576 | 210612 | 210536 | 210652 | 210692 | <b>3</b> |
| <b>PI5500LS7500(XXX)2L1.250</b> | 316 | 210574 | 210610 | 210534 | 210650 | 210690 | <b>3</b> |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3420 (24x30-32)</b>   |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>Right Rotation</b>           | ESC | 210581 | 210617 | 210541 | 210657 | 210697 | <b>3</b> |
| <b>PI6500RS8500(XXX)2L1.500</b> | 316 | 210579 | 210615 | 210539 | 210655 | 210695 | <b>3</b> |
|                                 |     |        |        |        |        |        |          |
| <b>Left Rotation</b>            | ESC | 210580 | 210616 | 210540 | 210656 | 210696 | <b>3</b> |
| <b>PI6500LS8500(XXX)2L1.500</b> | 316 | 210578 | 210614 | 210538 | 210654 | 210694 | <b>3</b> |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3420 (30x30-31)</b>   |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>Right Rotation</b>           | ESC | 210585 | 210621 | 210545 | 210661 | 210701 | <b>3</b> |
| <b>PI7500RS9500(XXX)2L1.125</b> | 316 | 210583 | 210619 | 210543 | 210659 | 210699 | <b>3</b> |
|                                 |     |        |        |        |        |        |          |
| <b>Left Rotation</b>            | ESC | 210584 | 210620 | 210544 | 210660 | 210700 | <b>3</b> |
| <b>PI7500LS9500(XXX)2L1.125</b> | 316 | 210582 | 210618 | 210542 | 210658 | 210698 | <b>3</b> |

|                                 |     |        |        |        |        |        |          |
|---------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3420 (30x30-38)</b>   |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>        |     |        |        |        |        |        |          |
| <b>Right Rotation</b>           | ESC | 210585 | 210621 | 210545 | 210661 | 210701 | <b>3</b> |
| <b>PI7500RS9500(XXX)2L1.125</b> | 316 | 210583 | 210619 | 210543 | 210659 | 210699 | <b>3</b> |
|                                 |     |        |        |        |        |        |          |
| <b>Left Rotation</b>            | ESC | 210584 | 210620 | 210544 | 210660 | 210700 | <b>3</b> |
| <b>PI7500LS9500(XXX)2L1.125</b> | 316 | 210582 | 210618 | 210542 | 210658 | 210698 | <b>3</b> |

|                                  |     |        |        |        |        |        |          |
|----------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>Goulds 3420 (30x36-42)</b>    |     |        |        |        |        |        |          |
| <b>SpiralTrac Part #</b>         |     |        |        |        |        |        |          |
| <b>Right Rotation</b>            | ESC | 210335 | 210622 | 210546 | 210662 | 210702 | <b>3</b> |
| <b>PI8000RS10000(XXX)2L1.500</b> | 316 | 210508 | 210624 | 210548 | 210664 | 210704 | <b>3</b> |
|                                  |     |        |        |        |        |        |          |
| <b>Left Rotation</b>             | ESC | 210509 | 210625 | 210549 | 210665 | 210705 | <b>3</b> |
| <b>PI8000LS10000(XXX)2L1.500</b> | 316 | 210507 | 210623 | 210547 | 210663 | 210703 | <b>3</b> |

# WARMAN - Imperial

| Pump & Model                           | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|----------------------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                                        |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| <b>1 1/2-1 BM</b>                      |          |                      |              |             |               |                |               |
| <b>SpiralTrac # for a Solid Device</b> |          |                      |              |             |               |                |               |
| <b>PI1785RA2435(XXX)24227</b>          | ESC      | 211710               | 210974       | 211156      | 211346        | 211530         | <b>3</b>      |
|                                        | 416      | 210795               | 210975       | 211157      | 211347        | 211531         | <b>3</b>      |
|                                        | 316      | 210796               | 210976       | 211158      | 211348        | 211532         | <b>3</b>      |
| <b>SpiralTrac # for a Split Device</b> |          |                      |              |             |               |                |               |
| <b>PI1785RS2435(XXX)24227</b>          | ESC      | 210797               | 210977       | 211159      | 211349        | 211533         | <b>3</b>      |
|                                        | 416      | 210798               | 210978       | 211161      | 211350        | 211534         | <b>3</b>      |
|                                        | 316      | 210799               | 210979       | 211162      | 211351        | 211535         | <b>3</b>      |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>3/2-CAH</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI2312RA3060(XXX)24229</b>          | ESC | 210812 | 210992 | 211175 | 211365 | 211548 | <b>3</b> |
|                                        | 416 | 210813 | 210993 | 211177 | 211366 | 211549 | <b>3</b> |
|                                        | 316 | 210814 | 210994 | 211178 | 211367 | 211550 | <b>3</b> |
| <b>Split Device</b>                    |     |        |        |        |        |        |          |
| <b>PI2312RS3060(XXX)24229</b>          | ESC | 210815 | 210995 | 211179 | 211369 | 211551 | <b>3</b> |
|                                        | 416 | 210816 | 210996 | 211180 | 211370 | 211552 | <b>3</b> |
|                                        | 316 | 210817 | 210997 | 211181 | 211371 | 211553 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>4/3-CAM</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI2312RA3060(XXX)24230</b>          | ESC | 210824 | 211004 | 211188 | 211378 | 211560 | <b>3</b> |
|                                        | 416 | 210825 | 211005 | 211189 | 211379 | 211561 | <b>3</b> |
|                                        | 316 | 210826 | 211006 | 211190 | 211380 | 211562 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI2312RS3060(XXX)24230</b>          | ESC | 210827 | 211007 | 211191 | 211381 | 211563 | <b>3</b> |
|                                        | 416 | 210828 | 211008 | 211193 | 211382 | 211564 | <b>3</b> |
|                                        | 316 | 210829 | 211009 | 211194 | 211383 | 211565 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>4/3-DAH</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI3250RA4250(XXX)24231</b>          | ESC | 210836 | 211016 | 211201 | 211391 | 211572 | <b>3</b> |
|                                        | 416 | 210837 | 211017 | 211202 | 211392 | 211573 | <b>3</b> |
|                                        | 316 | 210838 | 211018 | 211203 | 211393 | 211574 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI3250RS4250(XXX)24231</b>          | ESC | 210839 | 211019 | 211204 | 211394 | 211575 | <b>3</b> |
|                                        | 416 | 210840 | 211020 | 211205 | 211395 | 211576 | <b>3</b> |
|                                        | 316 | 210841 | 211021 | 211206 | 211396 | 211577 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>6/4-DAM</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI3250RA4250(ESC)24232</b>          | ESC | 210848 | 211028 | 211214 | 211403 | 211584 | <b>3</b> |
|                                        | 416 | 210849 | 211029 | 211215 | 211404 | 211585 | <b>3</b> |
|                                        | 316 | 210850 | 211030 | 211216 | 211405 | 211586 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI3250RS4250(ESC)24232</b>          | ESC | 210851 | 211031 | 211217 | 211406 | 211587 | <b>3</b> |
|                                        | 416 | 210852 | 211032 | 211218 | 211407 | 211588 | <b>3</b> |
|                                        | 316 | 210853 | 211033 | 211219 | 211408 | 211589 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>6/4-EAH</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI3990RA5245(XXX)24233</b>          | ESC | 210860 | 211040 | 211227 | 211415 | 211596 | <b>3</b> |
|                                        | 416 | 210861 | 211041 | 211228 | 211417 | 211597 | <b>3</b> |
|                                        | 316 | 210862 | 211042 | 211229 | 211418 | 211598 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI3990RS5245(XXX)24233</b>          | ESC | 210863 | 211043 | 211230 | 211419 | 211599 | <b>3</b> |
|                                        | 416 | 210864 | 211044 | 211231 | 211420 | 211600 | <b>3</b> |
|                                        | 316 | 210865 | 211045 | 211232 | 211421 | 211601 | <b>3</b> |



# WARMAN - Imperial

| Pump & Model                           | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|----------------------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                                        |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| <b>8/6-EAM</b>                         |          |                      |              |             |               |                |               |
| <b>SpiralTrac # for a Solid Device</b> |          |                      |              |             |               |                |               |
| <b>PI3990RA5245(XXX)24234</b>          | ESC      | 210872               | 211052       | 211239      | 211428        | 211608         | <b>3</b>      |
|                                        | 416      | 210873               | 211053       | 211241      | 211429        | 211609         | <b>3</b>      |
|                                        | 316      | 210874               | 211054       | 211242      | 211430        | 211610         | <b>3</b>      |
| <b>SpiralTrac # for a Split Device</b> |          |                      |              |             |               |                |               |
| <b>PI3990RS5245(XXX)24234</b>          | ESC      | 210875               | 211055       | 211243      | 211431        | 211611         | <b>3</b>      |
|                                        | 416      | 210876               | 211056       | 211244      | 211432        | 211612         | <b>3</b>      |
|                                        | 316      | 210877               | 211057       | 211245      | 211433        | 211613         | <b>3</b>      |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>8/6-FAH</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI5125RA6665(XXX)24235</b>          | ESC | 210884 | 211064 | 211252 | 211440 | 211620 | <b>3</b> |
|                                        | 416 | 210885 | 211065 | 211253 | 211441 | 211621 | <b>3</b> |
|                                        | 316 | 210886 | 211066 | 211254 | 211442 | 211622 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI5125RS6665(XXX)24235</b>          | ESC | 210887 | 211067 | 211255 | 211443 | 211623 | <b>3</b> |
|                                        | 416 | 210888 | 211068 | 211257 | 211444 | 211624 | <b>3</b> |
|                                        | 316 | 210889 | 211069 | 211258 | 211445 | 211625 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>8/6-EM</b>                          |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI3990RA5245(XXX)24236</b>          | ESC | 210896 | 211076 | 211265 | 211452 | 211632 | <b>3</b> |
|                                        | 416 | 210897 | 211077 | 211266 | 211453 | 211633 | <b>3</b> |
|                                        | 316 | 210898 | 211078 | 211267 | 211454 | 211634 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI3990RS5245(XXX)24236</b>          | ESC | 210899 | 211079 | 211268 | 211455 | 211635 | <b>3</b> |
|                                        | 416 | 210900 | 211080 | 211269 | 211456 | 211636 | <b>3</b> |
|                                        | 316 | 210901 | 211081 | 211270 | 211457 | 211637 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>8/6-FM</b>                          |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI5125RA6665(XXX)24237</b>          | ESC | 210908 | 211088 | 211278 | 211464 | 211644 | <b>3</b> |
|                                        | 416 | 210909 | 211089 | 211279 | 211465 | 211645 | <b>3</b> |
|                                        | 316 | 210910 | 211090 | 211280 | 211466 | 211646 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI5125RS6665(XXX)24237</b>          | ESC | 210911 | 211091 | 211281 | 211467 | 211647 | <b>3</b> |
|                                        | 416 | 210912 | 211092 | 211282 | 211468 | 211648 | <b>3</b> |
|                                        | 316 | 210913 | 211093 | 211283 | 211469 | 211649 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>12/10-EM</b>                        |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI3990RA5245(XXX)24238</b>          | ESC | 210920 | 211100 | 211291 | 211476 | 211656 | <b>3</b> |
|                                        | 416 | 210921 | 211101 | 211292 | 211477 | 211657 | <b>3</b> |
|                                        | 316 | 210922 | 211102 | 211293 | 211478 | 211658 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI3990RS5245(XXX)24238</b>          | ESC | 210923 | 211103 | 211294 | 211479 | 211659 | <b>3</b> |
|                                        | 416 | 210924 | 211104 | 211295 | 211480 | 211660 | <b>3</b> |
|                                        | 316 | 210925 | 211105 | 211296 | 211481 | 211661 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>12/10-FM</b>                        |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI5125RA6665(XXX)24239</b>          | ESC | 210932 | 211112 | 211303 | 211488 | 211668 | <b>3</b> |
|                                        | 416 | 210933 | 211113 | 211304 | 211489 | 211669 | <b>3</b> |
|                                        | 316 | 210934 | 211114 | 211305 | 211490 | 211670 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI5125RS6665(XXX)24239</b>          | ESC | 210935 | 211115 | 211306 | 211491 | 211671 | <b>3</b> |
|                                        | 416 | 210936 | 211116 | 211307 | 211492 | 211672 | <b>3</b> |
|                                        | 316 | 210937 | 211117 | 211308 | 211493 | 211673 | <b>3</b> |

## WARMAN - Imperial

| Pump & Model                           | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|----------------------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                                        |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| <b>13.5/1 CHH</b>                      |          |                      |              |             |               |                |               |
| <b>SpiralTrac # for a Solid Device</b> |          |                      |              |             |               |                |               |
| <b>PI2500RA3120(XXX)24240</b>          | ESC      | 210944               | 211124       | 211315      | 211500        | 211680         | <b>3</b>      |
|                                        | 416      | 210945               | 211125       | 211316      | 211501        | 211681         | <b>3</b>      |
|                                        | 316      | 210946               | 211126       | 211319      | 211502        | 211682         | <b>3</b>      |
| <b>SpiralTrac # for a Split Device</b> |          |                      |              |             |               |                |               |
| <b>PI2500RS3120(XXX)24240</b>          | ESC      | 210947               | 211127       | 211318      | 211503        | 211683         | <b>3</b>      |
|                                        | 416      | 210948               | 211128       | 211319      | 211504        | 211684         | <b>3</b>      |
|                                        | 316      | 210949               | 211129       | 211320      | 211505        | 211685         | <b>3</b>      |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>3/2-DHH</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI3250RA4250(XXX)24241</b>          | ESC | 210950 | 211130 | 211321 | 211506 | 211686 | <b>3</b> |
|                                        | 416 | 210951 | 211131 | 211322 | 211507 | 211687 | <b>3</b> |
|                                        | 316 | 210952 | 211132 | 211323 | 211508 | 211688 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI3250RS4250(XXX)24241</b>          | ESC | 210953 | 211133 | 211324 | 211509 | 211689 | <b>3</b> |
|                                        | 416 | 210954 | 211134 | 211325 | 211510 | 211690 | <b>3</b> |
|                                        | 316 | 210955 | 211135 | 211326 | 211511 | 211691 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>4/3-EHH</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI3990RA5245(XXX)24242</b>          | ESC | 210956 | 211136 | 211327 | 211512 | 211692 | <b>3</b> |
|                                        | 416 | 210957 | 211137 | 211328 | 211513 | 211693 | <b>3</b> |
|                                        | 316 | 210958 | 211138 | 211329 | 211514 | 211694 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI3990RS5245(XXX)24242</b>          | ESC | 210959 | 211139 | 211330 | 211515 | 211695 | <b>3</b> |
|                                        | 416 | 210960 | 211140 | 211331 | 211516 | 211696 | <b>3</b> |
|                                        | 316 | 210961 | 211141 | 211332 | 211517 | 211697 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>6/4-FHH</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PI5125RA6665(XXX)24243</b>          | ESC | 210962 | 211142 | 211333 | 211518 | 211698 | <b>3</b> |
|                                        | 416 | 210963 | 211145 | 211334 | 211519 | 211699 | <b>3</b> |
|                                        | 316 | 210964 | 211146 | 211335 | 211520 | 211700 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PI5125RS6665(XXX)24243</b>          | ESC | 210965 | 211147 | 211337 | 211521 | 211701 | <b>3</b> |
|                                        | 416 | 210966 | 211148 | 211338 | 211522 | 211702 | <b>3</b> |
|                                        | 316 | 210967 | 211149 | 211339 | 211523 | 211703 | <b>3</b> |

# WARMAN - Metric

| Pump & Model                           | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|----------------------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                                        |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| <b>1 1/2-1 BM</b>                      |          |                      |              |             |               |                |               |
| <b>SpiralTrac # for a Solid Device</b> |          |                      |              |             |               |                |               |
| <b>PM04534RA06185(XXX)24227</b>        | ESC      | 210800               | 210980       | 211163      | 211353        | 211536         | <b>3</b>      |
|                                        | 416      | 210801               | 210981       | 211164      | 211354        | 211537         | <b>3</b>      |
|                                        | 316      | 210802               | 210982       | 211165      | 211355        | 211538         | <b>3</b>      |
| <b>SpiralTrac # for a Split Device</b> |          |                      |              |             |               |                |               |
| <b>PM04534RA06185(XXX)24227</b>        | ESC      | 210803               | 210983       | 211166      | 211356        | 211539         | <b>3</b>      |
|                                        | 416      | 210804               | 210984       | 211167      | 211357        | 211540         | <b>3</b>      |
|                                        | 316      | 210805               | 210985       | 211168      | 211358        | 211541         | <b>3</b>      |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>2-11/2 BAH</b>                      |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PM04500RA06185(XXX)24228</b>        | ESC | 210806 | 210986 | 211169 | 211359 | 211542 | <b>3</b> |
|                                        | 416 | 210807 | 210987 | 211170 | 211360 | 211543 | <b>3</b> |
|                                        | 316 | 210808 | 210988 | 211171 | 211361 | 211544 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PM04500RS06185(XXX)24228</b>        | ESC | 210809 | 210989 | 211172 | 211362 | 211545 | <b>3</b> |
|                                        | 416 | 210810 | 210990 | 211173 | 211363 | 211546 | <b>3</b> |
|                                        | 316 | 210811 | 210991 | 211174 | 211364 | 211547 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>3/2-CAH</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PM05872RA07772(XXX)24229</b>        | ESC | 210818 | 210998 | 211182 | 211372 | 211554 | <b>3</b> |
|                                        | 416 | 210819 | 210999 | 211183 | 211373 | 211555 | <b>3</b> |
|                                        | 316 | 210820 | 211000 | 211184 | 211374 | 211556 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PM05872RS07772(XXX)24229</b>        | ESC | 210821 | 211001 | 211185 | 211375 | 211557 | <b>3</b> |
|                                        | 416 | 210822 | 211002 | 211186 | 211376 | 211558 | <b>3</b> |
|                                        | 316 | 210823 | 211003 | 211187 | 211377 | 211559 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>4/3-CAM</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PM05872RA07772(XXX)24230</b>        | ESC | 210830 | 211010 | 211195 | 211385 | 211566 | <b>3</b> |
|                                        | 416 | 210831 | 211011 | 211196 | 211386 | 211567 | <b>3</b> |
|                                        | 316 | 210832 | 211012 | 211197 | 211387 | 211568 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PM05872RS07772(XXX)24230</b>        | ESC | 210833 | 211013 | 211198 | 211388 | 211569 | <b>3</b> |
|                                        | 416 | 210834 | 211014 | 211199 | 211389 | 211570 | <b>3</b> |
|                                        | 316 | 210835 | 211015 | 211200 | 211390 | 211571 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>4/3-DAH</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PM08255RA10795(XXX)24231</b>        | ESC | 210842 | 211022 | 211207 | 211397 | 211578 | <b>3</b> |
|                                        | 416 | 210843 | 211023 | 211209 | 211398 | 211579 | <b>3</b> |
|                                        | 316 | 210844 | 211024 | 211210 | 211399 | 211580 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PM08255RS10795(XXX)24231</b>        | ESC | 210845 | 211025 | 211211 | 211400 | 211581 | <b>3</b> |
|                                        | 416 | 210846 | 211026 | 211212 | 211401 | 211582 | <b>3</b> |
|                                        | 316 | 210847 | 211027 | 211213 | 211402 | 211583 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>6/4-DAM</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PM08255RA10795(XXX)24232</b>        | ESC | 210854 | 211034 | 211220 | 211409 | 211590 | <b>3</b> |
|                                        | 416 | 210855 | 211035 | 211221 | 211410 | 211591 | <b>3</b> |
|                                        | 316 | 210856 | 211036 | 211222 | 211411 | 211592 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PM08255RS10795(XXX)24232</b>        | ESC | 210857 | 211037 | 211223 | 211412 | 211593 | <b>3</b> |
|                                        | 416 | 210858 | 211038 | 211225 | 211413 | 211594 | <b>3</b> |
|                                        | 316 | 210859 | 211039 | 211226 | 211414 | 211595 | <b>3</b> |

# WARMAN - Metric

| Pump & Model                           | Material | SUPERSET PART NUMBER |              |             |               |                | Packing Rings |
|----------------------------------------|----------|----------------------|--------------|-------------|---------------|----------------|---------------|
|                                        |          | 1730 Packing         | 1760 Packing | 370 Packing | 1400R Packing | 477-1T Packing |               |
| <b>6/4-EAH</b>                         |          |                      |              |             |               |                |               |
| <b>SpiralTrac # for a Solid Device</b> |          |                      |              |             |               |                |               |
| <b>PM10135RA13322(XXX)24233</b>        | ESC      | 210866               | 211046       | 211233      | 211422        | 211602         | <b>3</b>      |
|                                        | 416      | 210867               | 211047       | 211234      | 211423        | 211603         | <b>3</b>      |
|                                        | 316      | 210868               | 211048       | 211235      | 211424        | 211604         | <b>3</b>      |
| <b>SpiralTrac # for a Split Device</b> |          |                      |              |             |               |                |               |
| <b>PM10135RS13322(XXX)24233</b>        | ESC      | 210869               | 211049       | 211236      | 211425        | 211605         | <b>3</b>      |
|                                        | 416      | 210870               | 211050       | 211237      | 211426        | 211606         | <b>3</b>      |
|                                        | 316      | 210871               | 211051       | 211238      | 211427        | 211607         | <b>3</b>      |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>8/6-EAM</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PM10135RA13322(XXX)24234</b>        | ESC | 210878 | 211058 | 211246 | 211434 | 211614 | <b>3</b> |
|                                        | 416 | 210879 | 211059 | 211247 | 211435 | 211615 | <b>3</b> |
|                                        | 316 | 210880 | 211060 | 211248 | 211436 | 211616 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PM10135RS13322(XXX)24234</b>        | ESC | 210881 | 211061 | 211249 | 211437 | 211617 | <b>3</b> |
|                                        | 416 | 210882 | 211062 | 211250 | 211438 | 211618 | <b>3</b> |
|                                        | 316 | 210883 | 211063 | 211251 | 211439 | 211619 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>8/6-FAH</b>                         |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PM13018RA16929(XXX)24235</b>        | ESC | 210890 | 211070 | 211259 | 211446 | 211626 | <b>3</b> |
|                                        | 416 | 210891 | 211071 | 211260 | 211447 | 211627 | <b>3</b> |
|                                        | 316 | 210892 | 211072 | 211261 | 211448 | 211628 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PM13018RS16929(XXX)24235</b>        | ESC | 210893 | 211073 | 211262 | 211449 | 211629 | <b>3</b> |
|                                        | 416 | 210894 | 211074 | 211263 | 211450 | 211630 | <b>3</b> |
|                                        | 316 | 210895 | 211075 | 211264 | 211451 | 211631 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>8/6-EM</b>                          |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PM10135RA13322(XXX)24236</b>        | ESC | 210902 | 211082 | 211271 | 211458 | 211638 | <b>3</b> |
|                                        | 416 | 210903 | 211083 | 211273 | 211459 | 211639 | <b>3</b> |
|                                        | 316 | 210904 | 211084 | 211274 | 211460 | 211640 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PM10135RS13322(XXX)24236</b>        | ESC | 210905 | 211085 | 211275 | 211461 | 211641 | <b>3</b> |
|                                        | 416 | 210906 | 211086 | 211276 | 211462 | 211642 | <b>3</b> |
|                                        | 316 | 210907 | 211087 | 211277 | 211463 | 211643 | <b>3</b> |

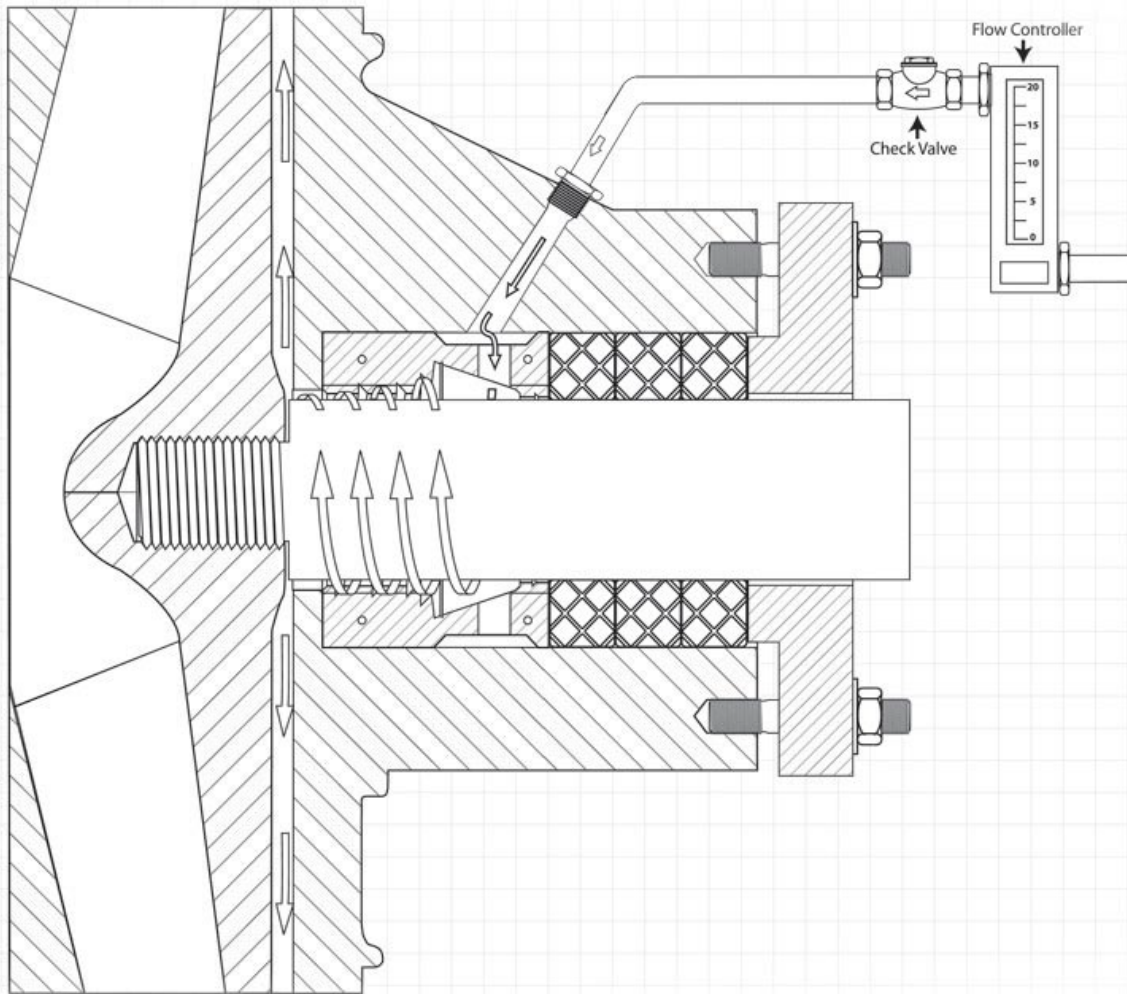
|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>8/6-FM</b>                          |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PM13018RA16929(XXX)24237</b>        | ESC | 210914 | 211094 | 211284 | 211470 | 211650 | <b>3</b> |
|                                        | 416 | 210915 | 211095 | 211285 | 211471 | 211651 | <b>3</b> |
|                                        | 316 | 210916 | 211096 | 211286 | 211472 | 211652 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PM13018RS16929(XXX)24237</b>        | ESC | 210917 | 211097 | 211287 | 211473 | 211653 | <b>3</b> |
|                                        | 416 | 210918 | 211098 | 211289 | 211474 | 211654 | <b>3</b> |
|                                        | 316 | 210919 | 211099 | 211290 | 211475 | 211655 | <b>3</b> |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>12/10-EM</b>                        |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PM10135RA13322(XXX)24238</b>        | ESC | 210926 | 211106 | 211297 | 211482 | 211662 | <b>3</b> |
|                                        | 416 | 210927 | 211107 | 211298 | 211483 | 211663 | <b>3</b> |
|                                        | 316 | 210928 | 211108 | 211299 | 211484 | 211664 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PM10135RS13322(XXX)24238</b>        | ESC | 210929 | 211109 | 211300 | 211485 | 211665 | <b>3</b> |
|                                        | 416 | 210930 | 211110 | 211301 | 211486 | 211666 | <b>3</b> |
|                                        | 316 | 210931 | 211111 | 211302 | 211487 | 211667 | <b>3</b> |

## WARMAN - Metric

| Pump & Model                           | Material | SUPERSET PART NUMBER |                 |                |                  |                   | Packing Rings |
|----------------------------------------|----------|----------------------|-----------------|----------------|------------------|-------------------|---------------|
|                                        |          | 1730<br>Packing      | 1760<br>Packing | 370<br>Packing | 1400R<br>Packing | 477-1T<br>Packing |               |
| <b>12/10-FM</b>                        |          |                      |                 |                |                  |                   |               |
| <b>SpiralTrac # for a Solid Device</b> |          |                      |                 |                |                  |                   |               |
| <b>PM13018RA16929(ESC)24239</b>        | ESC      | 210938               | 211118          | 211309         | 211494           | 211674            | <b>3</b>      |
|                                        | 416      | 210939               | 211119          | 211310         | 211495           | 211675            | <b>3</b>      |
|                                        | 316      | 210940               | 211120          | 211311         | 211496           | 211676            | <b>3</b>      |
| <b>SpiralTrac # for a Split Device</b> |          |                      |                 |                |                  |                   |               |
| <b>PM13018RS16929(ESC)24239</b>        | ESC      | 210941               | 211121          | 211312         | 211497           | 211677            | <b>3</b>      |
|                                        | 416      | 210942               | 211122          | 211313         | 211498           | 211678            | <b>3</b>      |
|                                        | 316      | 210943               | 211123          | 211314         | 211499           | 211679            | <b>3</b>      |

|                                        |     |        |        |        |        |        |          |
|----------------------------------------|-----|--------|--------|--------|--------|--------|----------|
| <b>10/8-GAH</b>                        |     |        |        |        |        |        |          |
| <b>SpiralTrac # for a Solid Device</b> |     |        |        |        |        |        |          |
| <b>PM17775RA22860(XXX)24244</b>        | ESC | 210968 | 211150 | 211340 | 211524 | 211704 | <b>3</b> |
|                                        | 416 | 210969 | 211151 | 211341 | 211525 | 211705 | <b>3</b> |
|                                        | 316 | 210970 | 211152 | 211342 | 211526 | 211706 | <b>3</b> |
| <b>SpiralTrac # for a Split Device</b> |     |        |        |        |        |        |          |
| <b>PM17775RS22860(XXX)24244</b>        | ESC | 210971 | 211153 | 211343 | 211527 | 211707 | <b>3</b> |
|                                        | 416 | 210972 | 211154 | 211344 | 211528 | 211708 | <b>3</b> |
|                                        | 316 | 210973 | 211155 | 211345 | 211529 | 211709 | <b>3</b> |



***How to obtain a SuperSet ordering number for your equipment.***

1. Fill in the SuperSet Order Form found on page 9 and send this information to EnviroSeal to obtain a SpiralTrac part number.
2. Send this information to the Chesterton Customer Service Team along with the style of packing you want, the number of rings, and the equipment make and model number.
3. If there is no SuperSet number for this combination then one is assigned.
4. The CST sends an order to EnviroSeal for the production and delivery of the SpiralTrac Version P.
5. Once the SpiralTrac is delivered to Chesterton it is packaged together with the specified cut rings of packing and sent out for delivery as a SuperSet.
6. Now that the SuperSet number is assigned it can be reordered at any time and the product will always be the same.

Fig.1 Regular Stuffing Box

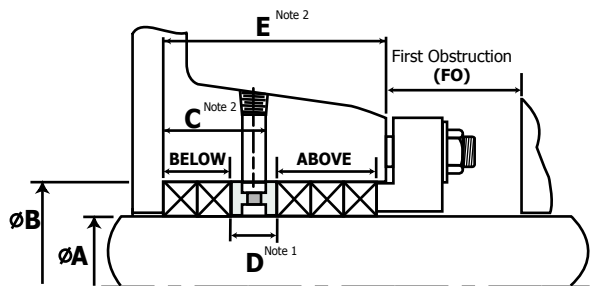


Fig.2 Stuffing Box With Flush Port At Bottom

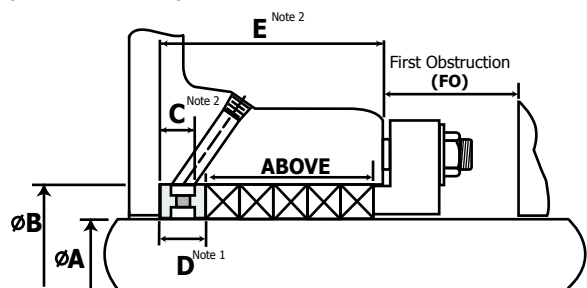
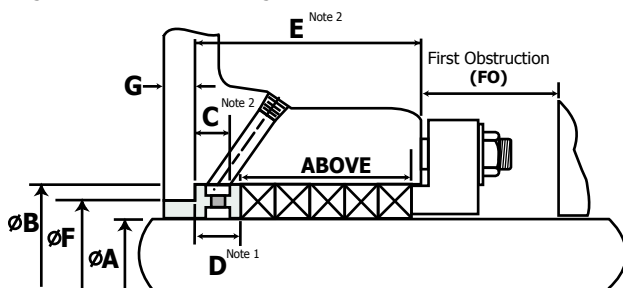


Fig.3 Stuffing Box With Counter Bore <sup>Note 3</sup>



## NOTES:

1. Axial length of lantern ring.
2. If there are less than 3 rings of packing **ABOVE**, measurements **C** and **E** must be provided.
3. If lantern ring / throat bushing is at the bottom of stuffing box, as in Fig 3, dimensions **F** and **G** are required.

## FOR ALL CONFIGURATIONS:

- Sufficient flush pressure to drive a positive flow into the box is required
- A check valve on the flush line must be utilized
- Discharge recirculation is not recommended
- Vertical applications sized the same as horizontal
- Minimum axial length of spiral track is 1.000 " / 25.4mm

Configuration: ☐ Fig. 1 ☐ Fig. 2 ☐ Fig. 3

Unit of Measurement: ☐ Inch ☐ Metric

Shaft Rotation: ☐ (R) CW ☐ (L) CCW  
(as viewed from motor end)

Ø A (Sleeve OD) = \_\_\_\_\_

Ø B (Box ID) = \_\_\_\_\_

C (To edge of Flush Port) = \_\_\_\_\_

D = \_\_\_\_\_

E (Box Length) = \_\_\_\_\_

Ø F (Counter Bore Diameter <sup>Note 3</sup>) = \_\_\_\_\_

G (Counter Bore Length <sup>Note 3</sup>) = \_\_\_\_\_

Rings of Packing **BELOW** = \_\_\_\_\_

Rings of Packing **ABOVE** (3 or more <sup>Note 2</sup>) = \_\_\_\_\_

FO (First Obstruction) = \_\_\_\_\_

Material: ☐ ESC (Carbon Graphite PTFE) ☐ 416 ☐ Split  
☐ GLF (Glass Filled PTFE) ☐ 316 ☐ Solid  
(Note: Radial cross-section must be greater than .500")

## Packing

Style: ☐ 1730 ☐ 370 ☐ 1760 ☐ 1400R ☐ 477-1T

☐ Other: \_\_\_\_\_

## Equipment Information:

Flush Rate: \_\_\_\_\_

Make: \_\_\_\_\_

Model: \_\_\_\_\_

Size: \_\_\_\_\_

Product: \_\_\_\_\_

% Solids: \_\_\_\_\_

Temperature: \_\_\_\_\_

## Distributor Information:

Company: \_\_\_\_\_

Specialist: \_\_\_\_\_

P.O. #: \_\_\_\_\_ Qty Each: \_\_\_\_\_

## Customer Information:

Company: \_\_\_\_\_

Customer Name: \_\_\_\_\_

Signature: \_\_\_\_\_



## A. W. CHESTERTON CO.

Middlesex Industrial Park, 225 Fallon Road  
Stoneham, Massachusetts 02180-9101 USA  
Customer Service Telephone: 978-469-6800  
Customer Service Fax: 978-469-6868  
www.chesterton.com

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SUPERSET ORDER FORM  
ENGLISH  
FORM NO. 071041 REV. 1  
PRINTED IN USA 2/02

**Example #1:** The following part number identifies a **SpiralTrac Version P**, measured in inches (**I**), to fit over a 3.000" shaft (**3000**) in a pump with right fluid rotation (**R**). This is a split (**S**) **SpiralTrac™** for in-place installation with packing in a pump with a 4.000" stuffing box bore diameter (**4000**). The device is made of Carbon Graphite Filled PTFE (**ESC**). This part number code applies to typical **SpiralTrac™** configurations. For special configurations please forward a drawing to EnviroSeal for review.

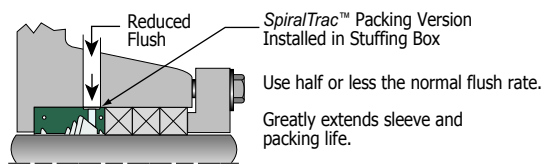
**Example #2:** The following part number identifies a **SpiralTrac Version P**, measured in metric (**M**), to fit over a 76.20mm shaft (**07620**) in a pump with right fluid rotation (**R**). This is a split (**S**) **SpiralTrac™** for in-place installation with packing in a pump with a 101.60mm stuffing box bore diameter (**10160**). The device is made of Carbon Graphite Filled PTFE (**ESC**). This part number code applies to typical **SpiralTrac™** configurations. For special configurations please forward a drawing to EnviroSeal for review.

|           |                                                                                                                            |   |                                                                                                                                                             |   |                                                                                                                                                                                                                                                        |       |       |           |
|-----------|----------------------------------------------------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-----------|
|           | <b>Shaft Size<sup>(4)</sup></b><br><input type="checkbox"/> Actual diameter of rotating component under <b>SpiralTrac™</b> |   | <b>Outside Diameter<sup>(1)</sup></b><br><input type="checkbox"/> Actual diameter of the seal<br><input type="checkbox"/> cavity bore.                      |   | This sequence of numbers determine the overall length of the <b>SpiralTrac Version P</b> . Please contact EnviroSeal for details.                                                                                                                      |       |       |           |
|           | <b>Measurement Units</b><br><b>I</b> <input type="checkbox"/> Inches<br><b>M</b> <input type="checkbox"/> Metric           |   | <b>Shaft Rotation<sup>(3)</sup></b><br><b>As Viewed From Motor End</b><br><b>R</b> <input type="checkbox"/> Right<br><b>L</b> <input type="checkbox"/> Left |   | <b>Material</b><br><b>316</b> <input type="checkbox"/> 316 Stainless Steel<br><b>416</b> <input type="checkbox"/> 416 Stainless Steel<br><b>ESC</b> <input type="checkbox"/> Carbon Graphite Filled PTFE<br><b>BRZ</b> <input type="checkbox"/> Bronze |       |       |           |
| <b>#1</b> | P                                                                                                                          | I | 3000                                                                                                                                                        | R | S                                                                                                                                                                                                                                                      | 4000  | (ESC) | 2 L 1.000 |
| <b>#2</b> | P                                                                                                                          | M | 07620                                                                                                                                                       | R | S                                                                                                                                                                                                                                                      | 10160 | (ESC) | 2 L 25.40 |

## SpiralTrac Version

**P**

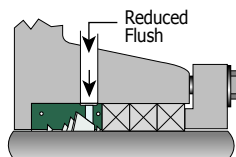
**For use with packing only.<sup>(2)</sup>**  
 A combined lantern ring and centrifugal separator, axially split and manufactured with a single spiral groove.



### Notes:

- For **Packing Version Type A** **SpiralTrac™** dimensions for the counterbore must be provided in addition to the part number. Please contact EnviroSeal for sizing information sheets.
- For **Packing Version** **SpiralTrac™** the width of the lantern ring as well as the size of packing and number of packing rings being replaced by **SpiralTrac™** must be provided in addition to the part number. Please contact EnviroSeal for sizing information sheets.
- For **Double Ended Pumps** both right and left rotation devices are required.
- Depending on the pump, this may be a shaft, sleeve, or impeller hub diameter.

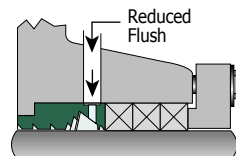
## Easy Installation Options (SpiralTrac Types)



### Type **S** Axially Split Device

**Press into Place using reduced Flush:**

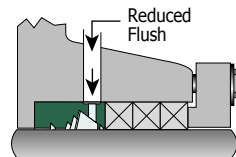
- ✓ Ease of installation
- ✓ No pump modifications required
- ✓ Removes **Particulate**.
- ✓ Less Packing used



### Type **A** Counterbore Fit

**Press into Place using reduced flush:**

- ✓ Extends under throat to place the exit groove at the impeller cavity.
- ✓ No pump modifications required
- ✓ Removes **Particulate**.
- ✓ Less Packing used



### Type **B** Bore Fit Solid Device

**Press into Place using reduced Flush:**

- ✓ Normally installed during pump rebuild
- ✓ No pump modifications required
- ✓ Removes **Particulate**.
- ✓ Less Packing used



# SuperSet™ featuring *SpiralTrac* Environmental Controller



***Dramatically reduces flush requirements- up to 90%***

***Extends packing life 2 - 6 times than that of a standard packed stuffing box***

***Prevents solids from getting between the packing and shaft***

***Minimizes erosion and wear of shaft/ sleeve***

***Typically reduces number of packing rings- 40% in typical stuffing box***

- ***Less consolidation and fewer gland adjustments required***
- ***Easier repacking***
- ***No lantern movement***

***Decreases product loss from the stuffing box***

The SuperSet combines the superior sealing capabilities of Chesterton's Mechanical Packing products with the patented design of the EnviroSeal SpiralTrac® Version P Environmental Controller for Packed Stuffing Boxes. This total sealing solution set is specifically designed and proven to increase packing and equipment service life while dramatically reducing flush rates. The savings are real- increased reliability with lower maintenance and operating costs.

The SpiralTrac Version P actually enhances the utilization of the flow and centrifugal effects around the shaft; it performs similarly to a centrifugal separator. The built-in tangential lantern ring and helical grooving system impart motion to the flush, and the resulting centrifugal force throws the particles in the fluid to the outside of the bushing. The patented SpiralTrac grooving system then hydro-dynamically pumps

the solids to the bottom of the stuffing box and back out into the pump casing. This ability to remove particulate from the stuffing box is what differentiates the SpiralTrac from plain restriction bushings on the market today.

The other component of the SuperSet sealing solution is Chesterton's line of high quality mechanical packings. In order to achieve maximum performance and sealability with the longest service life, the packing must have a number of features including minimal leakage capability, chemical compatibility, toughness, strength, and excellent thermal characteristics. Chesterton offers five high performance packing options in the SuperSet that cover a complete range of applications while meeting the needs and requirements of various industries (see table below).

| Sealing Solution | Features                                                                                                                                                             | Applications                                                                                                               |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 1730 SuperSet    | White synthetic fiber, non-staining, good leakage control with minimal gland adjustments, excellent resistance to heat.                                              | General Service in slurries and clean fluids.                                                                              |
| 1400R SuperSet   | Pure Graphite with Carbon reinforcement, excellent leakage control, capable of near zero to zero leakage, unaffected by frictional heat. Very conformable.           | Virtually any application. Also suitable for use on sleeves with some wear. Good option for large, higher speed equipment. |
| 370 SuperSet     | High Strength, high purity carbon fiber with multi-stage lube system. Excellent leakage control, capable of near zero to zero leakage. High-speed capability.        | Virtually any application. Particularly suited for high speed, high temperature applications.                              |
| 477-1T SuperSet  | PTFE coated carbon fiber. Excellent extrusion resistance, good leakage control, minimal consolidation and gland adjustments required, excellent chemical resistance. | Slow speed equipment. Originally designed for chemical digestion processes in the Pulp & Paper Industry.                   |
| 1760 SuperSet    | PTFE/ Graphite fiber. Excellent chemical resistance, good leakage control.                                                                                           | General Service and highly aggressive chemical environments. Widely used in many industries.                               |

The SuperSet offers a unique sealing solution for any application, and it helps dramatically reduce direct and indirect costs associated with packed pumps and equipment. Use less flush water more effectively and realize cost savings- the SuperSet is the Ultimate Sealing Solution for Packing. Call your Chesterton Technical Specialist to get your SuperSet today.

Patent # 5,553,868, # 5,167,418. Euro. Pat. App. 0 912 848

*\* SpiralTrac is a trademark of EnviroSeal Engineering Products Ltd.*

## A.W. CHESTERTON CO.

Middlesex Industrial Park, 225 Fallon Road  
Stoneham, Massachusetts 02180-9101 USA  
Telephone: 781-438-7000  
Fax: 781-438-8971  
www.chesterton.com

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## Frequently Asked Questions

### **Does the SpiralTrac rotate?**

The SpiralTrac does not rotate. SpiralTrac's patented design creates new and unique flow patterns from existing flows caused by shaft and sealing element rotation.

### **Our equipment's shaft moves axially. Will this affect SpiralTrac's operation?**

No, since SpiralTrac does not contact the shaft.

### **How do I know which material to specify when ordering SpiralTrac?**

EnviroSeal offers SpiralTrac in a number of materials: ESC (carbon-graphite filled PTFE), GLF (glass-filled PTFE), 416 & 316 stainless steel, bronze, and titanium. The material selection depends on the application and is normally made by the customer to fit the required needs. Often, the SpiralTrac is constructed of the same material as the pump, and since it is a machined product, it can be made from just about any machineable material. Consult EnviroSeal to determine which is best suited for your application.

### **Can a SpiralTrac be used with Latex or Paint?**

Generally, a SpiralTrac cannot be used for most latex compounds or latex based paint because the exit groove would be blocked by the material, and the functionality of the SpiralTrac would be degraded as a result.

### **Can a SpiralTrac be used with a dry powder?**

No, SpiralTrac is designed to operate in a fluid only.

### **How do I determine the rotation of the SpiralTracs required in my double-ended pump?**

There should be one left-hand rotation device and one right-hand rotation device (either packing or mechanical seal versions). Direction of rotation is determined from the motor end looking towards the impeller.

### **What is the maximum process temperature that an ESC/GLF SpiralTrac will handle?**

The maximum process temperature we recommend is 250°F/120°C. If your process temperature is higher than this, you should consider using a metal SpiralTrac.

### **What is the largest-sized contaminant that SpiralTrac can handle?**

The radial clearance between the shaft and inside diameter of the SpiralTrac is 0.020"-0.040" (0.51mm - 1.02mm). Upon flooding of the pump, contaminants larger than this size cannot enter the seal cavity. Contaminants this size or smaller that do enter the seal cavity are easily removed by SpiralTrac. Should a larger piece of contaminant enter the seal cavity through the flush port, the SpiralTrac will attempt to remove it. This larger contaminant will be crushed to a smaller size between the shaft and SpiralTrac, resulting in complete removal through the exit groove.

**How many rings of packing are used with the SpiralTrac Version P?**

We recommend a minimum of 3 rings of packing above the SpiralTrac.

**Can we use any grade of packing with the Version P?**

We recommend using a grade of packing that can tolerate slightly higher temperatures. Why? Since the leakage on the packing is at a controlled "drops-per-minute" rate (due to the greatly reduced flush rate), the packing will sometimes run a little hotter.

**We have unusual packing and lantern ring arrangements, such as: (A) one ring of packing, a lantern ring, and another ring of packing; (B) a lantern ring in the bottom of the box; or, (C) a customized lantern ring/bushing combination. Can SpiralTrac help in these cases?**

Case (A): In some cases, yes. If a 3/4" (19.05mm) cross-section is available, EnviroSeal can design a packing device where the cross-section is reduced and the minimum three rings of packing above can be used, providing a much better sealing solution. Consult EnviroSeal to discuss your particular application.

Case (B): A minimum of 1.000" (25.40mm) is required to incorporate the SpiralTrac technology into a device. For example, if the lantern ring is 1" (25.4mm) and there are 5 rings of packing on the gland follower side, SpiralTrac would replace the lantern ring and one ring of packing. This total length will give us the minimum space required, so a lantern ring in this position does not pose a problem.

Case (C): Consult with EnviroSeal. We've been able to manufacture customized SpiralTracs to replace many different bushing and lantern ring combinations (e.g. common in Warman and Allis-Chalmers SRL pumps). We may have already designed a SpiralTrac for your arrangement!

**Which non-metallic material should I specify for a Version P: GLF or ESC?**

ESC is a more stable, supportive material, and should be the non metallic-material of choice in most circumstances. Use GLF only if white material is absolutely required by the customer.

**Are Version P SpiralTracs available in metal?**

Yes. Non-split devices are standard, with Type S (Split) devices available at a premium.

**I noticed that the shaft/sleeve is worn under the packing. Do I have to replace it before installing the SpiralTrac?**

Typically, any wear is usually under the first two rings of packing, which is in the area that is covered by the SpiralTrac, and unless the wear is excessive, the device will function properly. It is very important that the shaft/sleeve area under the packing behind the SpiralTrac is in perfect condition.

**Does the Version P have to be changed when the packing is replaced?**

No; however, if you are changing the packing, and time is available, you can remove, inspect, clean and reinsert the SpiralTrac before replacing the packing.

**How can I tell if my SpiralTrac Version P is installed correctly?**

There are a number of methods to ensure the SpiralTrac Version P is installed correctly: There is an installation label indicating the impeller side of the device (which should be removed prior to installation!); Rotation direction is engraved on the lantern ring section; The part number is engraved on the impeller end of the SpiralTrac; The tangential hole will inject the flush in the direction of shaft rotation; and, The four pre-drilled and threaded holes that facilitate the removal of the device should be facing the gland.

**How much flush pressure is required for a SpiralTrac Version P?**

The required flush pressure is dependent on the pump seal chamber pressure. Normal flush pressure should be above seal chamber pressure to create a flow. This enables the flush to push any contaminants under the existing throat. Since the important issue is the flow rate, we strongly recommend the use of a flow controller and the installation of a check valve. The check valve will dead head the seal chamber in the event of a flush failure, preventing contaminants from being drawn into the chamber and flush piping.

**What is the typical flush rate I can set after installing a SpiralTrac Version P?**

Flush rates will vary from as little as 8-10 GPH (30-38 LPH) for smaller pumps and up, depending on the application and size of SpiralTrac. Generally: On small-shaft equipment up to 5" (127mm), you can immediately reduce your flush rate to 8-10 GPH (30- 38 LPH); On large-shaft equipment over 5" (127mm), decrease the previous flush rate by 1/2; If no problems are experienced, gradually reduce this flush rate until process begins to leak at the gland follower, or the pump housing becomes too hot to touch. At this point, increase the flush rate to the last known point where these problems weren't evident. In both cases, the previously recommended flow controller and check valve should be installed.

**How do you remove a SpiralTrac Version P?**

The SpiralTrac Version P has four pre-drilled, threaded holes on the gland side of the device to facilitate the starting of a packing extractor.

**Will SpiralTrac Version P work with no flush?**

No. At this time, all packing versions of SpiralTrac require a flush to force any contaminants under the existing throat. We do not recommend or support running these devices flush-free.

**Is a SpiralTrac Version P press fitted?**

No. For ease of installation, the SpiralTrac Version P is designed to be inserted from the gland side of the stuffing box with a locational clearance fit. The rings of packing above and the gland follower will keep the device in place.

**Are packing adjustments necessary?**

As this is still a "packed" application, the gland follower would be tightened just beyond finger tight. For this reason, double-nuts or lock nuts are recommended.

**How much room do you need to install a SpiralTrac Version P ?**

The length of the device is the first consideration: Version F (Type S) SpiralTrac is 1.850" (46.99mm) in length. Version P SpiralTrac's length is dependent on the width of the lantern ring and the number of rings of packing it's replacing. There are occasions when the axial length of the SpiralTrac is longer than the distance to the first obstruction. When this occurs, consult EnviroSeal.



Toll-free: 1-800-884-7325 (North America)  
Tel: (902) 861-3464  
Fax: (902) 861-3522  
Website: <http://www.enviroseal.ca>  
Email: [sales@enviroseal.ca](mailto:sales@enviroseal.ca)

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