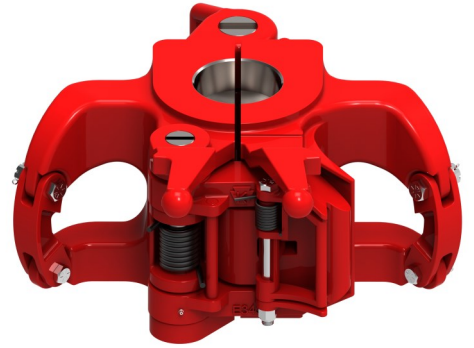
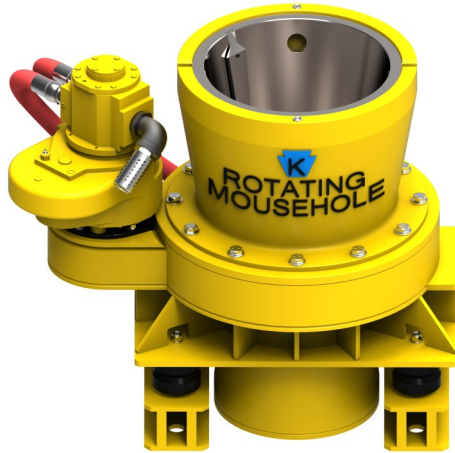
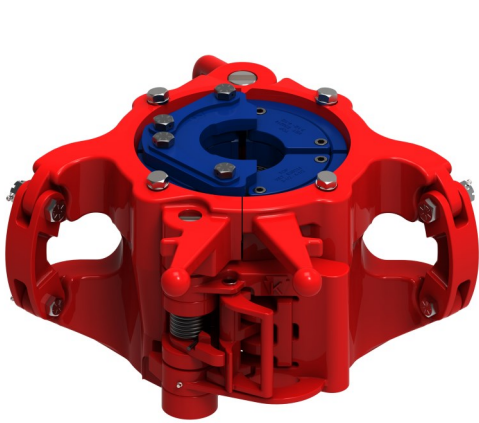


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# Certificate of Authority to use the Official API Monogram

License Number: 8C-0195

ORIGINAL

The American Petroleum Institute hereby grants to

## KEYSTONE ENERGY TOOLS

8404 Hwy 90 West

New Iberia, LA

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-8C** and in accordance with the provisions of the License Agreement.

**American  
Petroleum  
Institute**

®

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **8C-0195**

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Casing, Tubing, Drill Pipe and Drill Collar Elevators at PSL 1, PSL 2; Elevator Links at PSL 1

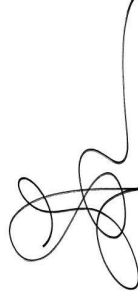
QMS Exclusions: No Exclusions Identified as Applicable

**Effective Date: JUNE 21, 2016**

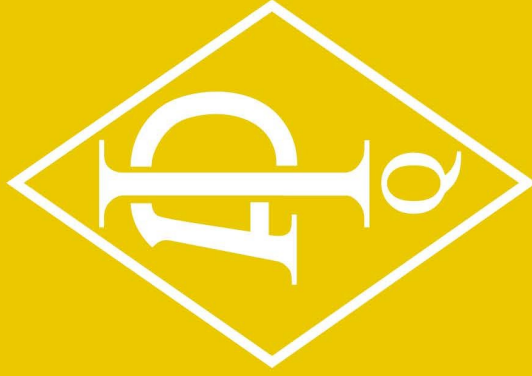
**Expiration Date: AUGUST 23, 2018**

2015-313

To verify the authenticity of this license, go to [www.api.org/compositelist](http://www.api.org/compositelist).



Vice President, API Global Industry Services



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bridge the gap.

# ABOUT US



**Keystone Energy Tools** was established to provide the industry with support and stability from an **API 8C** certified manufacturer with over fifty years of combined experience in designing, manufacturing, and delivering high-quality oilfield tools. In addition to providing complete in-house **certification**.

With our years of experience of **bridging the gap** between quality and service, customers and distributors, and performance and economy, Keystone understands the critical requirements of the oil and gas industry, from on-time delivery to competitive pricing and product availability.

By using the latest in 3D modeling for product design and by staying current with the rapid advances in manufacturing technology and quality-assurance standards, Keystone is able to manufacture and produce the most reliable products on the market today.

Our experienced sales team is dedicated, always here to support our customers and distributors and ready to answer any questions that you have regarding our products. We pride ourselves on same-day quotes and expedited shipping.

OUR NAME SAYS IT ALL:

**keystone** (kē'stōn')

1. the topmost stone of an arch
2. a central cohesive source of stability
3. something on which associated things depend for support

HISTORY:

Keystone was created in 2009 by Joe Ramey, founder of Access Oil Tools. Our focus is to build long-term relationships with our customers and distributors and to provide them with quality products and service with one phone call or e-mail.

The float valve product line was established in 2009, and in 2011 our product line was expanded to include **elevators, slips, rotating mouse holes, safety flex handles for slips, safety handles for tongs, safety clamps, baffle plates, valve pullers, ST-80' Dies and Inserts, stabbing guides, tong die drivers, tong blocks, beackets and bails, mud screens, and automated slip-lifting devices.**

# TERMS AND CONDITIONS

## QUOTATIONS

All quotations are in US dollars and are F.O.B. Company's point of manufacturing origin, unless otherwise expressly stipulated. Quotations are valid for 30 days unless otherwise stated. Lighterage, wharfage or landing charges, dues, duties, or any other charges at destination are not included in quotations or indicated by list prices unless specifically stipulated. List price and discounts on all products are subject to change without notice. Prices in effect at time of shipment or delivery whether higher or lower will prevail.

## TERMS OF PAYMENT

Unless otherwise specifically stated on the invoice, terms of payment are NET THIRTY DAYS following the date of the invoice and are subject to approved credit. Payments are accepted in US dollars only. Boxing, cartage, freight, insurance, and handling are always net. Interest at the maximum rate allowable by applicable law may be charged on past due accounts. Keystone Energy Tools, LLC (K.E.T.) reserves the right to revoke credit and suspend delivery if customer fails to make payment of an invoice when due.

## DELIVERY

Our responsibility ceases upon delivery to any common carrier, and we do not, unless previously instructed, insure shipments beyond the point of delivery to such carrier. We make every effort to ship all materials within the time promised by us, but we do not guarantee to do so, and all such promises are subject to delays occasioned by causes beyond reasonable control.

## PENALTY CLAUSES

No penalty clause of any description in any specification of an order will be effective unless approved in writing by an officer of K.E.T., LLC.

## INSURANCE

We will place insurance as nearly as possible in accordance with our customer's written instructions but do so solely on behalf of our customers and assume no liability for placing, effectiveness, or otherwise in connection with such insurance or in case of breakage, damage or loss.

## SHIPPING WEIGHT

All weights listed are approximate net weight only, unless otherwise specified, and do not include boxing. For approximate gross weight add 10% to net weight.

## CANCELLATIONS AND RETURNS

Orders for equipment of special design, size, or materials are not subject to cancellation, and all other orders are subject to a cancellation charge after having been accepted by the prescribed company office or authority. Equipment altered or made to customer's specifications is subject to special prices and conditions.

## WARRANTY

K.E.T., LLC. warrants goods of our manufacture for 12 months after date of shipment to be free from any defects in material and workmanship under normal use and service when installed, used, and serviced in the manner provided and intended by K.E.T., LLC. K.E.T.'s obligation under this warranty is limited to repair or replacement, at its option, if any products manufactured by K.E.T., LLC. and are returned F.O.B. to our plant and which we determine to be defective

Under no circumstances shall K.E.T., LLC. be liable for any consequential, special, incidental, punitive, or other damages resulting from or caused by any defective materials, products, or supplies, no charge for labor, transportation or other expense involved, to either repair allegedly defective goods outside our plant, or any other charge be allowed.

**THIS IS THE SOLE WARRANTY OF K.E.T., LLC. AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY AS TO THE MERCHANTABILITY OR FITNESS FOR PARTICULAR USE OR PURPOSE.**

# FLOAT VALVE OVERVIEW

## Valve Body

Keystone valve bodies are manufactured for today's increasingly harsh drilling environment. All valve bodies are cast out of alloy steel and are heat treated to a hardness equal to or less than 22 Rockwell C ( $\leq 22$  Rockwell C 2 HR) to address the corrosive effects of hydrogen-sulfide gas ( $H_2S$ ). Keystone's integral valve bodies are manufactured from one-piece casting and are not welded together the way some other competitors produce their bodies. This means that you receive a superior and more reliable valve body.

## Integral Plunger Valves

All of Keystone's plunger valves are machined from one solid piece of material to produce a more reliable float valve and reduce the risk of down hole valve failure. Other leading manufacturers use two separate pieces of material to construct their plungers, which are invariably either shrunk fit, screwed, or welded together.

## Flapper Valves

All Keystone standard-service flapper valves are made of low-alloy steel and then case hardened for wear resistance, thus giving a longer operating life.

## Elastomers

Available elastomers are nitrile butadiene (NBR, Buna-N) and Viton® (fluoroelastomer, FKM)( $H_2S$  Applications)

\*Standard Service Buna Nitrile (212 Deg F) Temperature Rating

\*  $H_2S$  Service Viton (450 Deg F) Temperature Rating

## Springs

Inconel® or stainless steel springs come standard on all our valves. These springs are good for sour gas ( $H_2S$ ) applications and are significantly more resistant to corrosion when compared with the standard-service springs provided by most other manufacturers.

## Interchangeability

All Keystone drill-pipe float valves and replacement parts are manufactured to standard industry dimensions and are interchangeable with other major manufacturers' parts.

## Sour-Gas ( $H_2S$ ) Service

Available in both F and G models.

## Operating Pressure

Standard valves - 7,500 PSI working pressure

High pressure valves - 10,000 PSI working pressure



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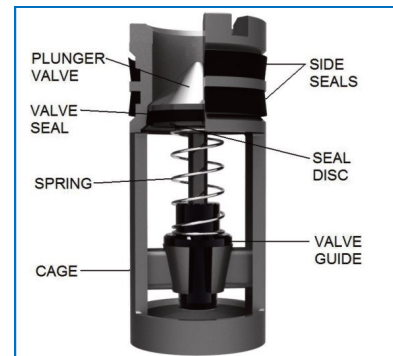
## PLUNGER-TYPE VALVES

### MODEL

F

### PLUNGER TYPE-STANDARD

The Model F is a plunger-type float valve that provides a positive instantaneous shut off, providing constant fluid control while drilling. The Model F is a reliable and economical selection under standard drilling operations

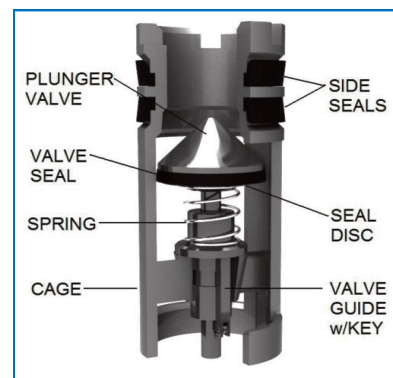


### MODEL

FC

### PLUNGER TYPE-AUTOMATIC FILL

The Model FC Automatic-Fill plunger-type float valve incorporates a unique key assembly and slotted valve stem to hold the plunger open during run in of the drill pipe and allows the pipe to fill from the bottom, saving time, reducing mess, and avoiding hazards. The plunger is automatically

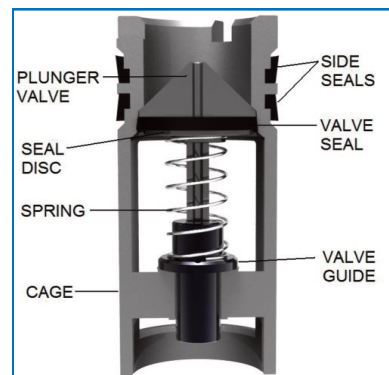


### MODEL

FA

### PLUNGER TYPE-PRESSURE MONITORING

The Model FA Pressure-Monitoring plunger-type float valve has a special port running through the plunger of the float valve. This valve is used when monitoring the bit head for gas pressure and allowing differential pressure measuring when required. The port also permits partial automatic fill during run in.



**FLOAT VALVE INSTALLATION:** Simply lubricate the side seals and slide the float valve into the cavity of the float sub or the bored-out drill collar. **Caution:** fill drill pipe regularly when going in the hole. Failure to do this can cause damage to the drill pipe and float valve.

bridge the gap.

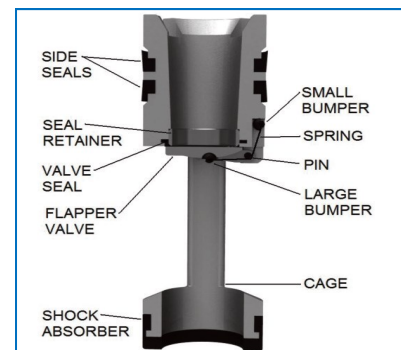
# FLAPPER-TYPE VALVES

## MODEL

# G

### FLAPPER TYPE-STANDARD

The Model G is a flapper-type float valve that, when opened, offers an unobstructed bore through the float valve. The uniquely designed flapper closes rapidly to prevent shavings from entering the drill string when circulation stops and also assists primary BOP equipment in maintaining internal pressure control. The valve will fully open when the first joint is raised from the hole, preventing pulling wet joints.

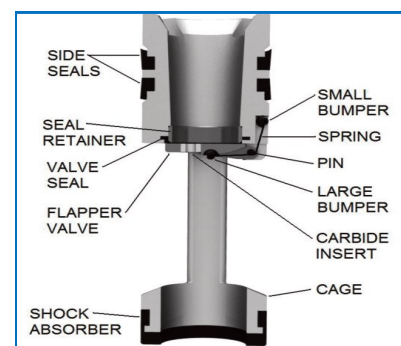


## MODEL

# GA

### FLAPPER TYPE-PRESSURE MONITORING

The Model GA Pressure-Monitoring flapper-type float valve is indistinguishable from the Model G with the exception of a tungsten-carbide insert in the flapper valve. The insert has a quarter-inch orifice through the center that allows for differential pressure monitoring. The orifice also allows for partial automatic filling of the drill pipe during run in.

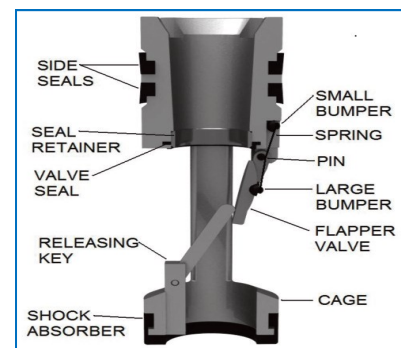


## MODEL

# GC

### FLAPPER TYPE-AUTOMATIC FILL

The Model GC Automatic-Fill flapper-type float valve incorporates a unique self-releasing key assembly that holds the flapper partially open during run in, allowing the pipe to fill from the bottom. This eliminates the need for filling the drill pipe from the top, saving time and money. The valve will fully open when the first joint is raised from the hole, preventing pulling wet joints while avoiding the environmental and safety risks related to having mud on the rig floor. The valve can be run with the automatic-fill option or in the standard, closed position.

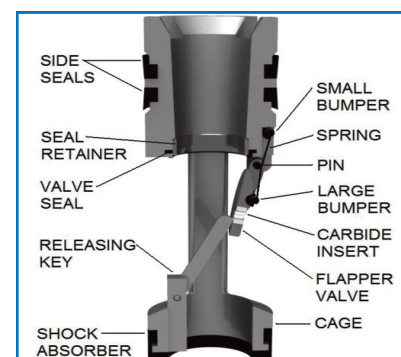


## MODEL

# GCA

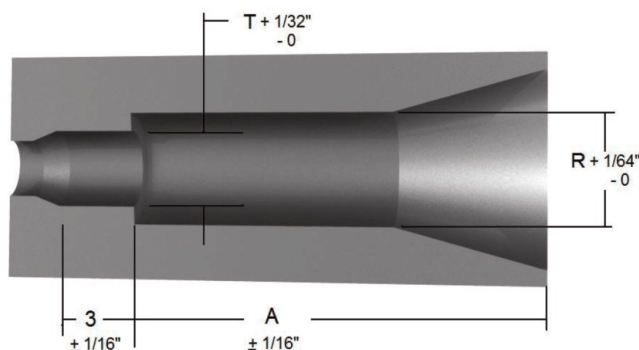
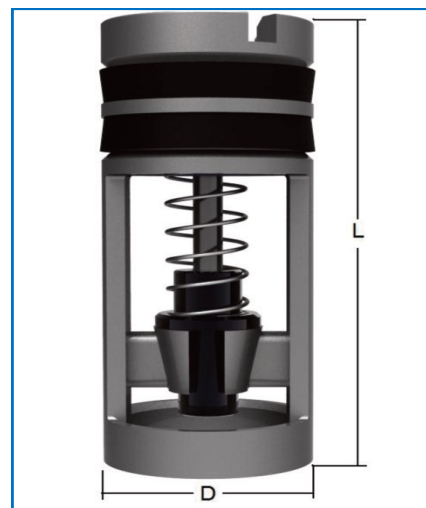
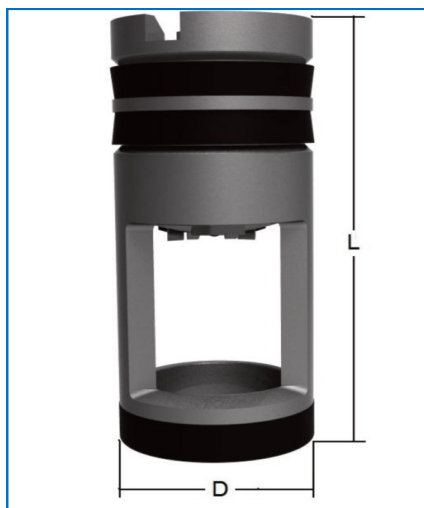
### FLAPPER TYPE-AUTO FILL PRESSURE MONITORING

The Model GCA Automatic-Fill/Pressure-Monitoring flapper-type float valve includes all the advantages of the Models G, GC, and GA. An unobstructed bore through the float valve, when open, permits automatic partial filling of the drill pipe from the bottom and measuring differential pressures when necessary.



bridge the gap.

## DIMENSIONAL DATA



$A = L$  (Length of Float Valve) + Length of Tool Joint Pin +  $1/4''$  Clearance

| Valve Size | <b>D</b><br>Diameter of Valve | <b>R</b><br>( $D + 1/32''$ )<br>Diameter Recess F/<br>Valve | <b>L</b><br>Valve Length | <b>T*</b><br>Baffle Plate<br>Recess Diameter | Valve I.D.<br>Model F | Valve I.D.<br>Model G |
|------------|-------------------------------|-------------------------------------------------------------|--------------------------|----------------------------------------------|-----------------------|-----------------------|
| 1R         | 1-21/32"                      | 1-11/16"                                                    | 5-7/8"                   | 1-5/16"                                      | 1"                    | N/A                   |
| 1F-2R      | 1-29/32"                      | 1-15/16"                                                    | 6-1/4"                   | 1-1/2"                                       | 1-1/4"                | 1"                    |
| 2F-3R      | 2-13/32"                      | 2-7/16"                                                     | 6-1/2"                   | 1-29/32"                                     | 1-9/16"               | 1-1/4"                |
| 3F         | 2-13/16"                      | 2-27/32"                                                    | 10"                      | 2-7/16"                                      | 1-7/8"                | 1-5/8"                |
| 3.5IF      | 3-1/8"                        | 3-5/32"                                                     | 10"                      | 2-11/16"                                     | 1-7/8"                | 1-5/8"                |
| 4R         | 3-15/32"                      | 3-1/2"                                                      | 8-5/16"                  | 2-15/16"                                     | 2-5/16"               | 1-31/32"              |
| 4F         | 3-21/32"                      | 3-11/16"                                                    | 12"                      | 3-1/4"                                       | 2-1/2"                | 2-3/16"               |
| 5R         | 3-7/8"                        | 3-29/32"                                                    | 9-3/4"                   | 3-3/8"                                       | 2-3/4"                | 2-1/4"                |
| 5F-6R      | 4-25/32"                      | 4-13/16"                                                    | 11-3/4"                  | 4-9/32"                                      | 3-1/4"                | 2-7/8"                |
| 6F         | 5-11/16"                      | 5-23/32"                                                    | 14-5/8"                  | 5-3/16"                                      | 4-1/8"                | N/A                   |

\* Disregard if this diameter is the same or smaller than the standard tool joint I.D.

bridge the gap.

## TOOL JOINT SPECIFICATION

| TOOL JOINT TYPES                                                                                                                                                                                                                                                                                                 | MODEL SIZES    |           |         |           |        |                |         |                |                 |         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------|---------|-----------|--------|----------------|---------|----------------|-----------------|---------|
|                                                                                                                                                                                                                                                                                                                  | 1R             | 1F-2R     | 2F-3R   | 3F        | 3.5IF  | 4R             | 4F      | 5R             | 5F-6R           | 6F      |
| API REGULAR                                                                                                                                                                                                                                                                                                      | 2-3/8"         | 2-7/8"    | 3-1/2"  |           |        | 4-1/2"         |         | 5-1/2" 5-      | 6-5/8" 7-       | 8-5/8"  |
| HUGHES OR REED ACME                                                                                                                                                                                                                                                                                              | 2-3/8"         | 2-7/8"    | 3-1/2"  |           |        | 4-1/2"         |         | 5-1/2" 5-9/16" | 6-5/8"          |         |
| UNION TOOL                                                                                                                                                                                                                                                                                                       | 2-3/8"         | 2-7/8" 3- |         |           |        |                | 4-1/2"  | 5-1/2" 5-      | 6-5/8"†         |         |
| HUGHES OR REED DOUBLE STREAM-                                                                                                                                                                                                                                                                                    |                | 2-7/8" 2- | 3-1/2"  | 4"        |        |                | 5"      | 5-1/2" 5-      |                 |         |
| API FULL HOLE                                                                                                                                                                                                                                                                                                    |                | 2-3/8"    | 2-7/8"  | 3-1/2"    | 4"     | 4-1/2"         | 4-1/2"* |                |                 | 6-5/8"* |
| REED ACME FULL HOLE                                                                                                                                                                                                                                                                                              |                |           |         | 3-1/2"*   |        |                | 4-1/2"* |                | 5-1/2" 5-9/16"* |         |
| HUGHES ACME STREAMLINE                                                                                                                                                                                                                                                                                           |                | 2-3/8"    | 2-7/8"  | 3-1/2" *  |        |                | 4-1/2"* |                | 5-1/2" 5-9/16"* |         |
| HUGHES XTRA HOLE                                                                                                                                                                                                                                                                                                 |                |           | 2-7/8"  | 3-1/2"    |        |                | 4-1/2"  | 5"             | 5-1/2" 5-9/16"* |         |
| REED SEMI-INTERNAL FLUSH                                                                                                                                                                                                                                                                                         |                |           | 2-7/8"  | 3-1/2"    |        |                | 4-1/2"  | 5"             |                 |         |
| API INTERNAL FLUSH                                                                                                                                                                                                                                                                                               |                | 2-3/8"    | 2-7/8"  |           | 3-1/2" |                | 4"      | 4-1/2"*        |                 |         |
| HYDRIL TYPE IF(INT .FLUSH EXT. UP-SET)                                                                                                                                                                                                                                                                           |                | 2-3/8"*   | 2-7/8"* | 3-1/2"*   |        |                |         | 4-1/2"         | 5"              |         |
| HYDRIL EIU (EXT. INT. UPSET)                                                                                                                                                                                                                                                                                     |                |           |         | 3-1/2"    |        | 4"             | 4-1/2"  |                | 5-1/2" 5-9/16"* | 6-5/8"  |
| HYDRIL TYPE F (EXT. FLUSH)                                                                                                                                                                                                                                                                                       | 2-7/8" 3-1/2"* |           |         | 4-1/2" 5" |        | 5-1/2" 5-9/16" |         | 6-5/8"         |                 |         |
| HUGHES EXT. FLUSH ACME                                                                                                                                                                                                                                                                                           |                | 3-1/2"    | 4-1/2"  |           |        | 5-1/2" 5-9/16" |         | 6-5/8"         |                 |         |
| HUGHES EXT. FLUSH FULL HOLE                                                                                                                                                                                                                                                                                      |                |           |         | 4-1/2"    |        |                |         |                |                 |         |
| * Indicates that the float subs id these sizes have a smaller ID. † Indicates interchangeability. Models G and GA, are available in sizes 1F-2R thru 5F-6R. Models GC and GCA are available in sizes 2F-3R thru 5F-6R. Models F and FA are available in all sizes. Model FC is available in sizes 2F-3R thru 6F. |                |           |         |           |        |                |         |                |                 |         |

## BIT AND SHANK SIZES

| Bit Size (in.)                | 3-1/4 | 3-3/8 | 4-1/2 | 4-3/4 | 5-1/2 | 6     | 6-1/8 | 6-1/4 | 6-1/2 | 6-3/4 | 7-1/8 | 8-1/4 | 8-1/2 | 8-3/4 | 9-1/2 | 9-3/4 | 10-1/2 | 11    | 12-1/4 | 13-1/2 | 20    | 24    | 25    |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|--------|--------|-------|-------|-------|
| Std. API Pin Shank Size (in.) | 2-3/8 | 2-3/8 | 2-3/8 | 2-7/8 | 3-1/2 | 3-1/2 | 3-1/2 | 3-1/2 | 3-1/2 | 3-1/2 | 4-1/2 | 4-1/2 | 4-1/2 | 4-1/2 | 6-5/8 | 6-5/8 | 6-5/8  | 6-5/8 | 6-5/8  | 6-5/8  | 7-5/8 | 7-5/8 | 7-5/8 |

bridge the gap.

## BIT SUB INFORMATION

| VALVE SIZE | THREAD SIZE | TOOL JOINT TYPE  | STANDARD OD | FACE TO SHOULDER<br>OR FACE TO FACE |
|------------|-------------|------------------|-------------|-------------------------------------|
| 1R         | 2-3/8"      | API REGULAR      | 3-1/8"      | 18"                                 |
| 1F-2R      | 2-7/8"      |                  | 3-3/4"      | 20"                                 |
| 2F-3R      | 3-1/2"      |                  | 4-1/4"      | 20"                                 |
| 4R         | 4-1/2"      |                  | 5-1/2"      | 24"                                 |
| 5R         | 5-1/2"      |                  | 6-3/4"      | 28"                                 |
| 5F-6R      | 6-5/8"      |                  | 7-3/4"      | 30"                                 |
| 5F-6R      | 7-5/8"      |                  | 8-7/8"      | 30"                                 |
| 6F         | 8-5/8"      |                  | 10"         | 30"                                 |
| 3F         | 3-1/2"      | API FULL HOLE    | 4-5/8"      | 24"                                 |
| 3.5 IF     | 4"          |                  | 5-1/4"      | 24"                                 |
| 4F         | 4-1/2"      |                  | 5-3/4"      | 28"                                 |
| 5F-6R      | 5-1/2"      |                  | 7"          | 30"                                 |
| 6F         | 6-5/8"      |                  | 8"          | 30"                                 |
| 1F-2R      | 2-3/8"      | API IF           | 3-3/8"      | 18"                                 |
| 2F-3R      | 2-7/8"      | API IF BOX X PIN | 4-1/8"      | 20"                                 |
| 3.5 IF     | 3-1/2"      | API IF           | 4-3/4"      | 24"                                 |
| 4F         | 4"          |                  | 5-3/4"      | 28"                                 |
| 5R         | 4-1/2"      |                  | 6-3/8"      | 28"                                 |
| 5F-6R      | 5-1/2"      |                  | 7-3/8"      | 30"                                 |
| 6F         | 6-5/8"      |                  | 8-3/4"      | 30"                                 |

The information guide above is for reference purposes only. Please use appropriate API specifications when manufacturing these subs.

bridge the gap.

# FLOAT VALVE REPAIR KITS

MODEL

**F**

MODEL

**FC**

MODEL

**FA**

## RUBBER REPAIR KIT F



MODEL

**F**

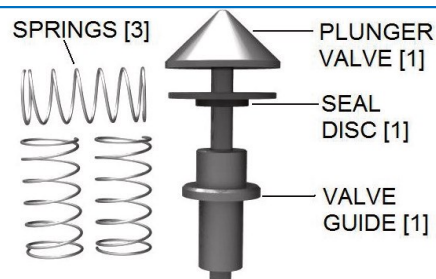
MODEL

**FC**

MODEL

**FA**

## METAL REPAIR KIT F



MODEL

**G**

MODEL

**GA**

MODEL

**GC**

MODEL

**GCA**

## RUBBER REPAIR KIT G



MODEL

**G**

MODEL

**GA**

MODEL

**GC**

MODEL

**GCA**

## METAL REPAIR KIT G





bridge the gap.

## VALVE PULLERS

MODEL

**F**

MODEL

**FC**

### MODEL F (TOP) PULLER

The model F valve (top) puller is designed to remove float valves from the top of the sub. Simply squeeze the forks together and press against the head of the valve plunger. Once the forks are engaged with the cage the valve can be pulled. Disengage by sliding the separator away from the valve and squeezing the forks together and the puller can be removed.



MODEL

**FA**

MODEL

**F**

MODEL

**FC**

### MODEL F (BOTTOM) PULLER

The Model F Valve Puller makes easy work of removing stuck or tight float valves from the sub or drill collar. Simply engage the special catch into the bottom of the float valve, rotate 90°, and then simply slide the bumper into the stop and the float valve is removed.



MODEL

**FA**

**Note: when using the puller to remove a Model FC valve, special care must be taken when engaging the catch so that it does not make contact with the releasing key.**

MODEL

**G**

MODEL

**GA**

### MODEL G PULLER

The Model G Valve Puller is dual-purpose tool. In addition to removing tight or stuck float valves from subs or drill collars, it assists in removing and installing the seal-retaining ring when changing out the valve seal.



MODEL

**GC**

MODEL

**GCA**

bridge the gap.

# COIL TUBING FLOAT VALVES

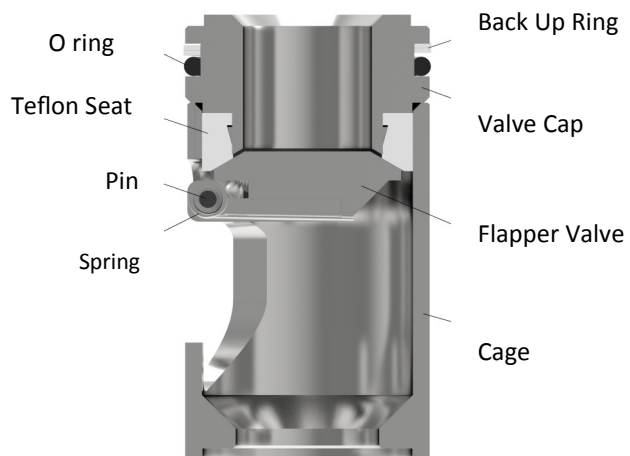
MODEL

**CTFV**

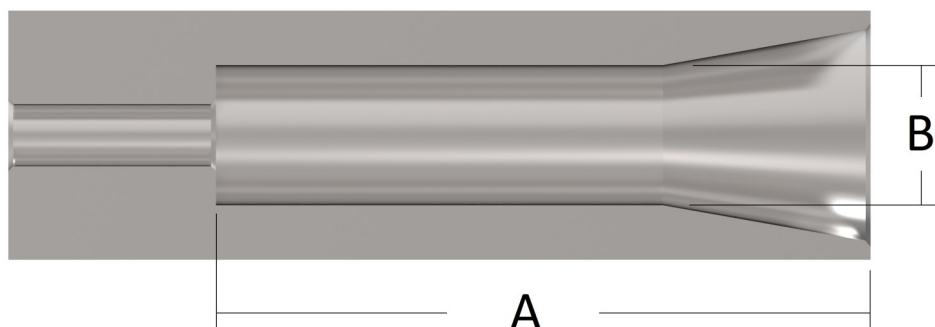
## FLAPPER VALVE F/ DUAL FLAPPER CHECK VALVE

| SIZE     | ASSEMBLY  | WEIGHT (lbs) | O.D    | I.D    | LENGTH EA. | STACKED LENGTH | SUB I.D/ B | SUB I.D/ A |
|----------|-----------|--------------|--------|--------|------------|----------------|------------|------------|
| 1"       | 480111100 | 1.00         | .990"  | .625"  | 2.993"     | 5.861"         | 1.000"     | 5.886"     |
| 1 5/16"  | 480111400 | 1.10         | 1.305" | .766"  | 2.375"     | 4.625"         | 1.313"     | 4.650"     |
| 1 1/2"   | 480111500 | 1.22         | 1.490" | .810"  | 2.720"     | 5.380"         | 1.500"     | 5.405"     |
| 1 11/16" | 480112100 | 1.45         | 1.680" | 1.060" | 2.720"     | 5.380"         | 1.688"     | 5.405"     |

- Cages, caps , and flappers are manufactured from heat-treated stainless steel.
- Inconel springs
- Viton elastomers.
- Working Pressure 10,000 PSI



$$A = SL \text{ (Stacked Length)} + \text{Length of Tool Joint Pin} + .063'' + .010 / -.000$$



**bridge the gap.**

INTENTIONALLY LEFT BLANK

bridge the gap.

# STANDARD SERVICE VALVES

MODEL

**F**

## PLUNGER TYPE

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL REPAIR KIT | WEIGHT (lbs) | RUBBER REPAIR KIT | WEIGHT (lbs) | TOP PULLER ASSEMBLY | WEIGHT (lbs) | BOTTOM PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|------------------|--------------|-------------------|--------------|---------------------|--------------|------------------------|--------------|
| 1R     | 480131200 | 1.44         | 15929800         | 0.37         | 16012200          | 0.28         | N/A                 | N/A          | 911200                 | 12.4         |
| 1F-2R  | 480131422 | 1.68         | 16011300         | 0.47         | 16012300          | 0.35         | N/A                 | N/A          | 911200                 | 12.4         |
| 2F-3R  | 480132432 | 3.05         | 16011400         | 0.91         | 16012400          | 0.55         | 933600              | 4.26         | 912432                 | 12.65        |
| 3F     | 480133400 | 5.63         | 16011500         | 1.42         | 16012500          | 0.60         | 933600              | 4.26         | 913400                 | 13.05        |
| 3.5 IF | 480133600 | 7.08         | 16011500         | 1.42         | 16012600          | 0.94         | 933600              | 4.26         | 913400                 | 13.05        |
| 4R     | 480134200 | 7.3          | 16011700         | 2.25         | 16012700          | 1.09         | 934200              | 8.7          | 914200                 | 8.0          |
| 4F     | 480134400 | 9.9          | 16011800         | 2.95         | 16012800          | 0.88         | 934210              | 9.0          | 914400                 | 13.4         |
| 5R     | 480135200 | 10.58        | 16011900         | 3.68         | 16012900          | 1.0          | 934225              | 8.7          | 914400                 | 13.4         |
| 5F-6R  | 480135462 | 18.01        | 16012000         | 4.910        | 16013000          | 1.23         | 934250              | 12.25        | 914400                 | 13.4         |
| 6F     | 480136400 | 27.63        | 16012100         | 8.48         | 16013100          | 1.95         | 934265              | 9.0          | 916400                 | 13.0         |

MODEL

**FA**

## PLUNGER TYPE-PRESSURE MONITORING

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL REPAIR KIT | WEIGHT (lbs) | RUBBER REPAIR KIT | WEIGHT (lbs) | TOP PULLER ASSEMBLY | WEIGHT (lbs) | BOTTOM PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|------------------|--------------|-------------------|--------------|---------------------|--------------|------------------------|--------------|
| 1R     | 480121200 | 1.5          | 15929805         | 1.0          | 16012200          | 0.1          | N/A                 | N/A          | 911200                 | 6.0          |
| 1F-2R  | 480121422 | 1.5          | 16011305         | 1.0          | 16012300          | 0.1          | N/A                 | N/A          | 911200                 | 6.0          |
| 2F-3R  | 480122432 | 2.5          | 16011405         | 2.0          | 16012400          | 0.8          | 933600              | 8.0          | 912432                 | 8.0          |
| 3F     | 480123400 | 5.0          | 16011505         | 2.0          | 16012500          | 1.0          | 933600              | 10.0         | 913400                 | 10.0         |
| 3.5 IF | 480123600 | 5.0          | 16011505         | 2.0          | 16012605          | 1.0          | 933600              | 10.0         | 913400                 | 10.0         |
| 4R     | 480124200 | 7.0          | 16011705         | 2.0          | 16012700          | 1.0          | 934200              | 12.0         | 914200                 | 12.0         |
| 4F     | 480124400 | 9.5          | 16011805         | 2.0          | 16012800          | 1.0          | 934210              | 13.0         | 914400                 | 13.4         |
| 5R     | 480125200 | 9.5          | 16011905         | 3.5          | 16012900          | 1.0          | 934225              | 15.0         | 914400                 | 13.4         |
| 5F-6R  | 480125462 | 16.0         | 16012005         | 5.0          | 16013000          | 1.1          | 934250              | 19.0         | 914400                 | 13.4         |
| 6F     | 480126400 | 28.0         | 16012105         | 5.0          | 16013100          | 1.2          | 934265              | 21.0         | 916400                 | 21.0         |

MODEL

**FC**

## PLUNGER TYPE-AUTOMATIC FILL

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL REPAIR KIT | WEIGHT (lbs) | RUBBER REPAIR KIT | WEIGHT (lbs) | TOP PULLER ASSEMBLY | WEIGHT (lbs) | BOTTOM PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|------------------|--------------|-------------------|--------------|---------------------|--------------|------------------------|--------------|
| 2F-3R  | 480182432 | 2.5          | 70017100         | 2.0          | 16012400          | 0.8          | 933600              | 8.0          | 912432                 | 8.0          |
| 3F     | 480183400 | 5.0          | 70017300         | 2.0          | 16012500          | 1.0          | 933600              | 10.0         | 913400                 | 10.0         |
| 3.5 IF | 480183600 | 5.0          | 70017300         | 2.0          | 16012600          | 1.0          | 933600              | 10.0         | 913400                 | 10.0         |
| 4R     | 480184200 | 7.0          | 70017400         | 2.0          | 16012700          | 1.0          | 934200              | 12.0         | 914200                 | 12.0         |
| 4F     | 480184400 | 9.5          | 70017500         | 3.0          | 16012800          | 1.0          | 934210              | 13.0         | 914400                 | 13.4         |
| 5R     | 480185200 | 9.5          | 70017600         | 4.0          | 16012900          | 1.0          | 934225              | 15.0         | 914400                 | 13.4         |
| 5F-6R  | 480185462 | 16.0         | 70017700         | 5.0          | 16013000          | 1.1          | 934250              | 19.0         | 914400                 | 13.4         |
| 6F     | 480186400 | 28.0         | 70017800         | 5.0          | 16013100          | 2.0          | 934265              | 21.0         | 916400                 | 21.0         |

bridge the gap.

# STANDARD SERVICE VALVES

MODEL **G**

## FLAPPER TYPE

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL<br>REPAIR KIT | WEIGHT (lbs) | RUBBER<br>REPAIR KIT | WEIGHT (lbs) | PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|---------------------|--------------|----------------------|--------------|-----------------|--------------|
| 1F-2R  | 480151422 | 2.0          | 51988400            | 0.7          | 51988300             | 0.5          | 901422          | 7.0          |
| 2F-3R  | 480152432 | 3.5          | 16013200            | 0.8          | 16013800             | 0.6          | 902432          | 8.0          |
| 3F     | 480153400 | 5.0          | 16013300            | 1.0          | 16013900             | 1.0          | 903400          | 10.0         |
| 3.5 IF | 480153600 | 5.5          | 16013300            | 1.0          | 51982000             | 1.0          | 903400          | 10.0         |
| 4R     | 480154200 | 7.0          | 16013400            | 1.1          | 16014000             | 1.5          | 904200          | 12.0         |
| 4F     | 480154400 | 8.0          | 16013500            | 1.4          | 16014100             | 1.6          | 904400          | 13.0         |
| 5R     | 480155200 | 9.0          | 16013600            | 1.6          | 16014200             | 1.6          | 905200          | 15.0         |
| 5F-6R  | 480155462 | 18.0         | 16013700            | 1.8          | 16014300             | 2.0          | 905462          | 19.0         |

MODEL **GA**

## FLAPPER TYPE-PRESSURE MONITORING

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL<br>REPAIR KIT | WEIGHT (lbs) | RUBBER<br>REPAIR KIT | WEIGHT (lbs) | PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|---------------------|--------------|----------------------|--------------|-----------------|--------------|
| 1F-2R  | 480161422 | 2.0          | 52070800            | 0.7          | 51988300             | 0.5          | 901422          | 7.0          |
| 2F-3R  | 480162432 | 3.5          | 17135000            | 0.8          | 16013800             | 0.6          | 902432          | 8.0          |
| 3F     | 480163400 | 5.0          | 17136700            | 1.0          | 16013900             | 1.0          | 903400          | 10.0         |
| 3.5 IF | 480163600 | 5.5          | 17136700            | 1.0          | 51982000             | 1.0          | 903400          | 10.0         |
| 4R     | 480164200 | 7.0          | 17116000            | 1.1          | 16014000             | 1.5          | 904200          | 12.0         |
| 4F     | 480164400 | 8.0          | 17136800            | 1.4          | 16014100             | 1.6          | 904400          | 13.0         |
| 5R     | 480165200 | 9.0          | 17136900            | 1.6          | 16014200             | 1.6          | 905200          | 15.0         |
| 5F-6R  | 480165462 | 18.0         | 17134200            | 1.8          | 16014300             | 2.0          | 905462          | 19.0         |

MODEL **GC**

## FLAPPER TYPE-AUTOMATIC FILL

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL<br>REPAIR KIT | WEIGHT (lbs) | RUBBER<br>REPAIR KIT | WEIGHT (lbs) | PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|---------------------|--------------|----------------------|--------------|-----------------|--------------|
| 2F-3R  | 480192432 | 3.5          | 16013200            | 0.8          | 16013800             | 0.6          | 902432          | 8.0          |
| 3F     | 480193400 | 5.0          | 16013300            | 1.0          | 16013900             | 1.0          | 903400          | 10.0         |
| 3.5 IF | 480193600 | 5.5          | 16013300            | 1.0          | 51982000             | 1.0          | 903400          | 10.0         |
| 4R     | 480194200 | 7.0          | 16013400            | 1.1          | 16014000             | 1.5          | 904200          | 12.0         |
| 4F     | 480194400 | 8.0          | 16013500            | 1.4          | 16014100             | 1.6          | 904400          | 13.0         |
| 5R     | 480195200 | 9.0          | 16013600            | 1.6          | 16014200             | 1.6          | 905200          | 15.0         |
| 5F-6R  | 480195462 | 18.0         | 16013700            | 1.8          | 16014300             | 2.0          | 905462          | 19.0         |

bridge the gap.

# STANDARD SERVICE VALVES

MODEL **GCA**

FLAPPER TYPE-AUTO FILL-PRESSURE MONITORING

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL<br>REPAIR KIT | WEIGHT (lbs) | RUBBER<br>REPAIR KIT | WEIGHT (lbs) | PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|---------------------|--------------|----------------------|--------------|-----------------|--------------|
| 2F-3R  | 480192433 | 3.5          | 17135000            | 0.8          | 16013800             | 0.6          | 902432          | 8.0          |
| 3F     | 480193401 | 5.0          | 17136700            | 1.0          | 16013900             | 1.0          | 903400          | 10.0         |
| 3.5 IF | 480193601 | 5.5          | 17136700            | 1.0          | 51982000             | 1.0          | 903400          | 10.0         |
| 4R     | 480194201 | 7.0          | 17116000            | 1.1          | 16014000             | 1.5          | 904200          | 12.0         |
| 4F     | 480194401 | 8.0          | 17136800            | 1.4          | 16014100             | 1.6          | 904400          | 13.0         |
| 5R     | 480195201 | 9.0          | 17136900            | 1.6          | 16014200             | 1.6          | 905200          | 15.0         |
| 5F-6R  | 480195463 | 18.0         | 17134200            | 1.8          | 16014300             | 2.0          | 905462          | 19.0         |

bridge the gap.

# H<sub>2</sub>S/HIGH TEMP SERVICE VALVES

MODEL **F**

## PLUNGER TYPE

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL REPAIR KIT | WEIGHT (lbs) | RUBBER REPAIR KIT | WEIGHT (lbs) | TOP PULLER ASSEMBLY | WEIGHT (lbs) | BOTTOM PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|------------------|--------------|-------------------|--------------|---------------------|--------------|------------------------|--------------|
| 1R     | 480301200 | 1.5          | 15929800         | 1.0          | 71081701          | 0.5          | N/A                 | N/A          | 911200                 | 6.0          |
| 1F-2R  | 480301422 | 1.5          | 16011300         | 2.0          | 71081801          | 0.7          | N/A                 | N/A          | 911200                 | 6.0          |
| 2F-3R  | 480302432 | 2.5          | 16011400         | 2.0          | 71081901          | 0.8          | 933600              | 8.0          | 912432                 | 8.0          |
| 3F     | 480303400 | 5.0          | 16011500         | 2.0          | 71082001          | 1.0          | 933600              | 10.0         | 913400                 | 10.0         |
| 3.5 IF | 480303600 | 5.0          | 16011500         | 2.0          | 71082101          | 1.0          | 933600              | 10.0         | 913400                 | 10.0         |
| 4R     | 480304200 | 7.0          | 16011700         | 2.0          | 71082201          | 1.0          | 934200              | 12.0         | 914200                 | 12.0         |
| 4F     | 480304400 | 9.5          | 16011800         | 3.0          | 71082301          | 1.0          | 934210              | 13.0         | 914400                 | 13.4         |
| 5R     | 480305200 | 9.5          | 16011900         | 4.0          | 71082401          | 1.0          | 934225              | 15.0         | 914400                 | 13.4         |
| 5F-6R  | 480305462 | 16.0         | 16012000         | 5.0          | 71082501          | 1.1          | 934250              | 19.0         | 914400                 | 13.4         |
| 6F     | 480306400 | 28.0         | 16012100         | 5.0          | 71082601          | 2.0          | 934265              | 21.0         | 916400                 | 21.0         |

MODEL **FA**

## PLUNGER TYPE-PRESSURE MONITORING

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL REPAIR KIT | WEIGHT (lbs) | RUBBER REPAIR KIT | WEIGHT (lbs) | TOP PULLER ASSEMBLY | WEIGHT (lbs) | BOTTOM PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|------------------|--------------|-------------------|--------------|---------------------|--------------|------------------------|--------------|
| 1F-2R  | 480351422 | 1.62         | 16011305         | 1.0          | 71081801          | 0.4          | N/A                 | N/A          | 911200                 | 6.0          |
| 2F-3R  | 480352432 | 2.5          | 16011405         | 2.0          | 71081901          | 0.8          | 933600              | 8.0          | 912432                 | 8.0          |
| 3F     | 480353400 | 5.0          | 16011505         | 2.0          | 71082001          | 1.0          | 933600              | 10.0         | 913400                 | 10.0         |
| 3.5 IF | 480353600 | 5.0          | 16011505         | 2.0          | 71082101          | 1.0          | 933600              | 10.0         | 913400                 | 10.0         |
| 4R     | 480354200 | 7.0          | 16011705         | 2.0          | 71082201          | 1.0          | 934200              | 12.0         | 914200                 | 12.0         |
| 5R     | 480355200 | 10.5         | 16011905         | 3.7          | 71082401          | 1.2          | 934225              | 8.7          | 914400                 | 13.4         |
| 5F-6R  | 480355462 | 16.0         | 16012005         | 5.0          | 71082501          | 1.1          | 934250              | 19.0         | 914400                 | 13.4         |



bridge the gap.

# H<sub>2</sub>S/HIGH TEMP SERVICE VALVES

MODEL **G**

## FLAPPER TYPE

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL REPAIR KIT | WEIGHT (lbs) | RUBBER REPAIR KIT | WEIGHT (lbs) | PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|------------------|--------------|-------------------|--------------|-----------------|--------------|
| 1F-2R  | 480311422 | 2.0          | 51997300         | 0.7          | 51997200          | 0.5          | 901422          | N/A          |
| 2F-3R  | 480312432 | 3.5          | 71085901         | 0.8          | 71082701          | 0.6          | 902432          | 8.0          |
| 3F     | 480313400 | 5.0          | 71086001         | 1.0          | 71082801          | 1.0          | 903400          | 10.0         |
| 3.5 IF | 480313600 | 5.5          | 71086001         | 1.0          | 52125001          | 1.0          | 903400          | 10.0         |
| 4R     | 480314200 | 7.0          | 71086101         | 1.1          | 71082901          | 1.5          | 904200          | 12.0         |
| 4F     | 480314400 | 8.0          | 71086201         | 1.4          | 71083001          | 1.6          | 904400          | 13.0         |
| 5R     | 480315200 | 9.0          | 71086301         | 1.6          | 71083101          | 1.6          | 905200          | 15.0         |
| 5F-6R  | 480315462 | 18.0         | 71086401         | 1.8          | 71083201          | 2.0          | 905462          | 19.0         |

MODEL **GA**

## FLAPPER TYPE-PRESSURE MONITORING

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL REPAIR KIT | WEIGHT (lbs) | RUBBER REPAIR KIT | WEIGHT (lbs) | PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|------------------|--------------|-------------------|--------------|-----------------|--------------|
| 1F-2R  | 480261422 | 2.0          | 52070801         | 0.7          | 51997200          | 0.5          | 901422          | 7.0          |
| 2F-3R  | 480262432 | 3.5          | 17135001         | 0.8          | 71082701          | 0.6          | 902432          | 8.0          |
| 3F     | 480263400 | 5.0          | 17136701         | 1.0          | 71082801          | 1.0          | 903400          | 10.0         |
| 3.5 IF | 480263600 | 5.0          | 17136701         | 1.0          | 52125001          | 1.0          | 903400          | 10.0         |
| 4R     | 480264200 | 7.0          | 17116001         | 1.1          | 71082901          | 1.5          | 904200          | 12.0         |
| 4F     | 480264400 | 8.0          | 17136801         | 1.4          | 71083001          | 1.6          | 904400          | 13.0         |
| 5R     | 480265200 | 9.0          | 17136901         | 1.6          | 71083101          | 1.6          | 905200          | 15.0         |
| 5F-6R  | 480265462 | 12.0         | 17134201         | 1.8          | 71083201          | 2.0          | 905462          | 19.0         |

MODEL **GC**

## FLAPPER TYPE-AUTOMATIC FILL

| SIZE   | ASSEMBLY  | WEIGHT (lbs) | METAL REPAIR KIT | WEIGHT (lbs) | RUBBER REPAIR KIT | WEIGHT (lbs) | PULLER ASSEMBLY | WEIGHT (lbs) |
|--------|-----------|--------------|------------------|--------------|-------------------|--------------|-----------------|--------------|
| 2F-3R  | 480332432 | 3.5          | 71085901         | 0.8          | 71082701          | 0.6          | 902432          | 8.0          |
| 3F     | 480333400 | 5.0          | 71086001         | 1.0          | 71082801          | 1.0          | 903400          | 10.0         |
| 3.5 IF | 480333600 | 5.0          | 71086001         | 1.0          | 52125001          | 1.0          | 903400          | 10.0         |
| 4R     | 480334200 | 7.0          | 71086101         | 1.1          | 71082901          | 1.5          | 904200          | 12.0         |
| 4F     | 480334400 | 8.0          | 71086201         | 1.4          | 71083001          | 1.6          | 904400          | 13.0         |
| 5R     | 480335200 | 9.0          | 71086301         | 1.6          | 71083101          | 1.6          | 905200          | 15.0         |
| 5F-6R  | 480335462 | 12.0         | 71086401         | 1.8          | 71083201          | 2.0          | 905462          | 19.0         |

bridge the gap.

## BAFFLE PLATES

### BAFFLE PLATES

Baffle plates can be placed on top of the drill-pipe float valve or the drill bit to help prevent damage from recorders or other wire-line tools that are dropped down the string.

### BAFFLE PLATES

#### RING AND SPIDER TYPE



RING TYPE



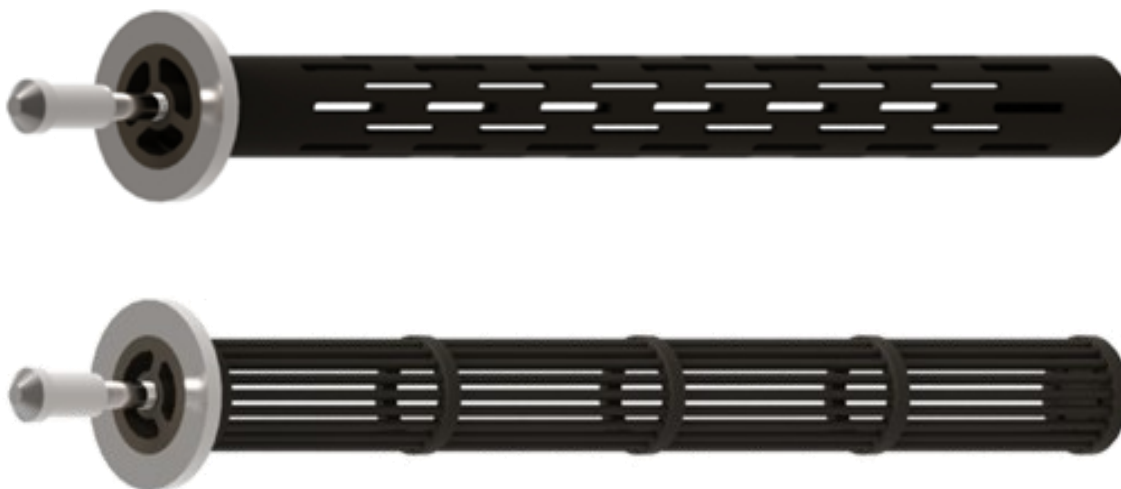
SPIDER TYPE

| PART NO.    | CONNECTION TYPE/SIZE                               | DPFV SIZE      | TYPE   | WEIGHT (lbs) | BAFFLE PLATE OD |
|-------------|----------------------------------------------------|----------------|--------|--------------|-----------------|
| K-91701 **  | 2-7/8" API REG                                     | 1F-2R          | SPIDER | 0.5          | 1.94            |
| K-91702 **  | 3-1/2" API REG                                     | 2F-3R          | RING   | 0.4          | 2.28            |
| K-91703 **  | 4-1/2" API REG                                     | 4R             | RING   | 0.8          | 3.22            |
| K-91704 **  | 5-9/16" API REG                                    | 5R             | RING   | 1.3          | 3.87            |
| K-91705 **  | 6-5/8" API REG                                     | 5F-6R          | RING   | 1.5          | 4.63            |
| K-91706 **  | 7-5/8" API REG                                     | 5F-6R          | RING   | 1.7          | 5.33            |
| K-91707 **  | 8-5/8" API REG                                     | 6F             | RING   | 2.2          | 6.18            |
| K-91711 *** | REPLACED BY K-91721                                | 3F             | SPIDER | 0.6          | 2.75            |
| K-91712 *** | 4-1/2" API FH                                      | 4F             | RING   | 0.9          | 3.36            |
| K-91713 *** | 5-9/16" API FH                                     | 5F-6R          | RING   | 1.5          | 4.63            |
| K-91714 **  | 6-5/8" API FH                                      | 6F             | RING   | 2.2          | 5.45            |
| K-91721 *   | 3-1/2" API FH                                      | 3F             | SPIDER | 0.6          | 2.63            |
| K-91722*    | 4-1/2" API FH<br>4-1/2" API REG<br>5-9/16" API REG | 4F<br>4R<br>5R | SPIDER | 0.7          | 3.44            |
| K-91723*    | 5-9/16" FH<br>6-5/8" FH/ 6-5/8" REG                | 5F-6R<br>5F-6R | SPIDER | 1.0          | 4.68            |
| K-91724 *   | 6-5/8" API FH                                      | 6F             | SPIDER | 1.0          | 6.56            |
| K-91725 *   | 3-1/2" API IF                                      | 3.5IF          | SPIDER | 0.6          | 3.06            |
| K-91726 *   | REPLACED BY K-91722                                | 5R             | SPIDER | 0.8          | 3.76            |
| K-91741 *** | 3-1/2" API IF                                      | 3.5IF          | RING   | 0.7          | 3.06            |
| K-91742 *** | 4-1/2" API IF                                      | 5R             | RING   | 1.6          | 4.22            |
| K-91743 *** | 2-7/8" API IF                                      | 2F-3R          | SPIDER | 0.7          | 2.44            |
| K-91744 *** | 4" API IF / 4-1/2" XH                              | 4F             | RING   | 1.0          | 3.88            |

\* For use on float. \*\*For use on bit. \*\*\*For use in joint.

bridge the gap.

## KET MUD SCREENS



### SLOTTED AND ROD TYPE DRILL PIPE MUD SCREENS

| SLOTTED TYPE * |           | ROD TYPE ** |            |
|----------------|-----------|-------------|------------|
| PART NO.       | SIZE      | PART NO.    | SIZE       |
| AMS-1011       | 4 1/2" IF | AMS-2011    | 4 1/2" IF  |
| AMS-1012       | XT-39     | AMS-2012    | XT-39      |
| AMS-1013       | 4 1/2" XH | AMS-2013    | 4 1/2" XH  |
| AMS-1014       | 4" FH     | AMS-2014    | 4" FH      |
| AMS-1015       | 3 1/2" IF | AMS-2015    | 3 1/2" IF  |
| AMS-1016       | XT-50     | AMS-2016    | XT-50      |
| AMS-1017       | HT-55     | AMS-2017    | HT-55      |
| AMS-1018       | 5 1/2" IF | AMS-2018    | 5 1/2" IF  |
| AMS-1019       | 2 7/8" IF | AMS-2019    | 2 7/8" IF  |
|                |           | AMS-2020    | 6 5/8" REG |

\* TUBE IS MANUFACTURED FROM 304SS

\*\* RODS ARE MANUFACTURED FROM 316SS

RETRIEVABLE FISH NECK IS MANUFACTURED FROM 316SS

PIPE FLANGES ARE MANUFACTURED FROM 4140HT

STANDARD LENGTH = 24". ADDITIONAL LENGTHS SPECIFIED IN INCHES AFTER THE PART NO. (I.E. AMS-1011-12)

MUD SCREENS ARE POWDER COATED TO EXTEND USE AND PREVENT DETERIORATION

ROD TYPE MUD SCREENS HAVE BEVELS ON RINGS TO RESIST WEAR WHILE MUD PASSES THROUGH

# KET ROTATING MOUSEHOLE

The Rotating Mouse-hole allows the drilling crew to quickly and efficiently build stands simultaneously while drilling ahead with the top drive. By utilizing pre-assembled stands connection time is reduced by as much as 66%.

- ▶ Available in pneumatic or hydraulic
- ▶ Installs flush with the rig floor
- ▶ Rotates tubular below the rig floor

## ROTATING MOUSEHOLE

| PART NO.  | DESCRIPTION                                                                                                                                                                              |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMH-50010 | Rotating Mouse-Hole Complete w/Pneumatic Motor, #3 Bowl, #3 Bowl Puller, Retrieving Tool, Variable Speed Hand Control Valve, 3ea. 30' x 1" Air Hoses, and Mouse-hole Hanger Cap.         |
| RMH-50050 | Rotating Mouse-Hole Complete w/Hydraulic Motor, #3 Bowl, #3 Bowl Puller, Retrieving Tool, Variable Speed Hand Control Valve, 2ea. 30' x 1/2" Hydraulic Hoses, and Mouse-hole Hanger Cap. |



# ELEVATOR OVERVIEW

## CASTINGS

Keystone elevators are made in the USA and are built to meet or exceed API specification 8C requirements. All elevators are made using high-alloy heat treated steel.

## DOCUMENTATION

Every elevator comes with complete certification including an operations manual outlining safety instructions, operation, maintenance, critical area drawings and repair. A documentation package containing inspection of material specs, hardness, proof of load test, magnetic particle examination and dimensional inspection is also included.

## SAFETY FEATURES

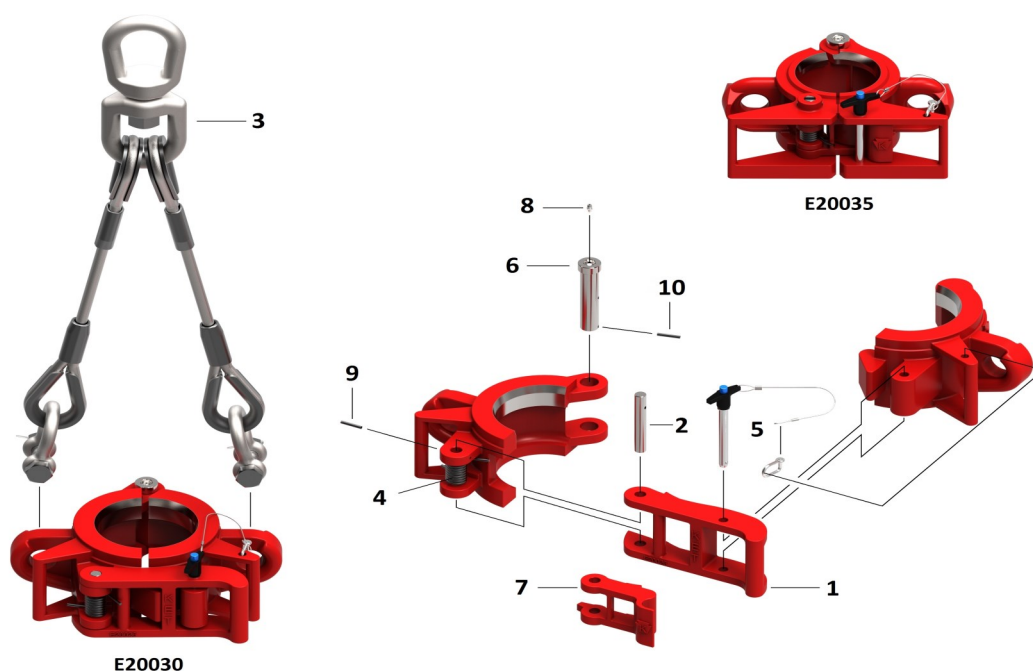
All Keystone elevators incorporate a safety latch lock mechanism to prevent accidental opening of the elevator. Keystone Safety Latches are readily available and can be replaced in the field without the inconvenience of having to send the whole elevator to the repair center.



bridge the gap.

## KET (7.5 TON) SINGLE JOINT ELEVATOR

| PART NO. | RANGE            | WEIGHT |
|----------|------------------|--------|
| E20035   | 2-3/8" - 4"      | 45.00  |
| E20030   | 4" - 5 7/8"      | 67.00  |
| E20040   | 5-1/2" - 8-5/8"  | 78.00  |
| E20050   | 9 5/8" - 10 3/4" | 93.00  |
| E20060   | 11 3/4" - 14"    | 114.00 |
| E20065   | 16" - 20"        | 130.00 |

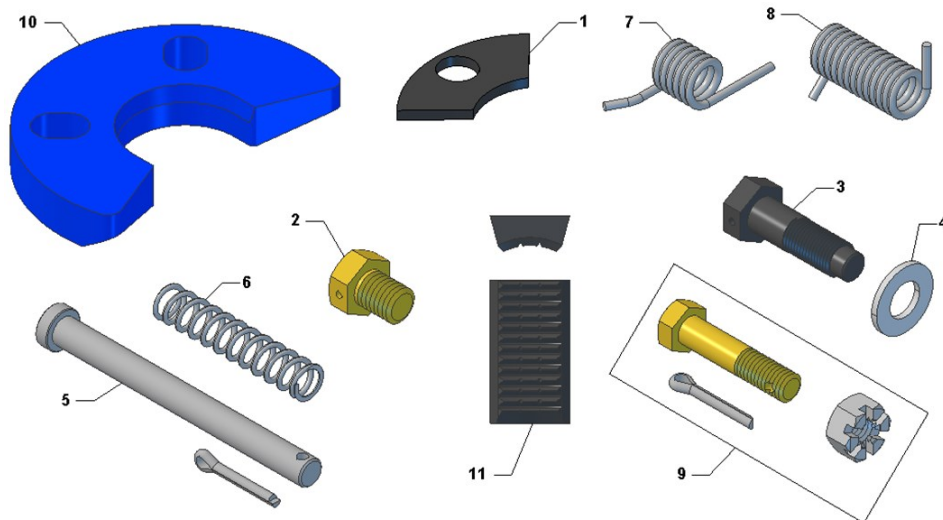


### REPLACEMENT PARTS FOR SINGLE JOINT ELEVATORS

| ITEM | QTY | PART NO.  | DESCRIPTION                                         | SPARES | WIEGHT (lbs.) |
|------|-----|-----------|-----------------------------------------------------|--------|---------------|
| 1    | 1   |           | LATCH-E20030, E20040, E20050, E20060, E20065        |        | 6.00          |
| 2    | 1   | E39-050   | LATCH PIN-E20030, E20040, E20050, E20060, E20065    | 1      | 0.37          |
| 2    | 1   | E39-050-1 | LATCH PIN-E20035                                    | 1      | 0.37          |
| 3    | 1   | E34568    | SJ SWIVEL SUSPENSION ASSEMBLY                       | 1      | 29.00         |
| 4    | 1   | E39-034   | LATCH SPRING-E20030, E20040, E20050, E20060, E20065 | 2      | 0.20          |
| 4    | 1   | E7829-1   | LATCH SPRING-E20035                                 | 2      | 0.20          |
| 5    | 1   | E39-051-8 | LATCH LOCK RETAINER PIN ASSY                        | 1      | 0.35          |
| 6    | 1   | E39-052   | HINGE PIN-BOTH                                      | 1      | 0.10          |
| 7    | 1   | E39-190   | LATCH-E20035                                        |        | 4.00          |
| 8    | 1   | E316-TI   | TAP IN GREASE FITTING—BOTH                          |        | 0.10          |
| 9    | 1   | E316RP    | LATCH PIN RETAINER—BOTH                             |        | 0.10          |
| 10   | 1   | P316RP    | HINGE PIN RETAINER—BOTH                             |        | 0.10          |

bridge the gap.

## KET LYT SLIP TYPE ELEVATOR PARTS



### REPLACEMENT PARTS FOR "LYT" SLIP TYPE ELEVATOR

| PART NO.   | ITEM# | DESCRIPTION           | #REQ. | WT. |
|------------|-------|-----------------------|-------|-----|
| E28786     | 1     | INSERT RETAINER PLATE | 4     | .13 |
| E28787     | 2     | INSERT RETAINER SCREW | 2     | .13 |
| E28785     | 3     | SETTING PLATE BOLT    | 2     | .25 |
| E339369-13 | 4     | SETTING PLATE WASHER  | 2     | .06 |
| E28760     | 5     | SLIP BOLT             | 4     | .25 |
| E28761     | 6     | SLIP SPRING           | 4     | .04 |
| E32486     | 7     | LATCH SPRING          | 1     | .08 |
| E28769     | 8     | LATCH LOCK SPRING     | 1     | .12 |
| E28764-1   | 9     | LINK BLOCK BOLT KIT   | 4     | .20 |

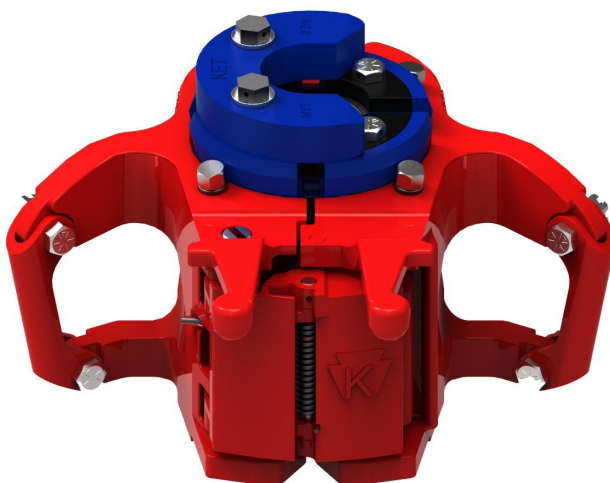
### SETTING PLATES AND INSERTS

| PART NO. | ITEM# | DESCRIPTION                   | #REQ. | WT.  |
|----------|-------|-------------------------------|-------|------|
| E28782   | 10    | 2 1/16" SETTING PLATE         | 1     | 2.25 |
| E28737   | 10    | 2" SETTING PLATE              | 1     | 2.35 |
| E28783   | 10    | 1 1/2" (1.900") SETTING PLATE | 1     | 3.00 |
| E28784   | 10    | 1 1/4" (1.660") SETTING PLATE | 1     | 3.10 |
| E28736   | 10    | 1" (1.315") SETTING PLATE     | 1     | 3.15 |
| E28735   | 10    | 3/4" (1.050") SETTING PLATE   | 1     | 3.20 |
| E28772   | 11    | 2 1/16" & 2" LYT INSERT       | 8     | .25  |
| E28775   | 11    | 1 1/2" (1.900") LYT INSERT    | 8     | .25  |
| E28778   | 11    | 1 1/4" (1.660") LYT INSERT    | 8     | .25  |
| E28749   | 11    | 1" (1.315") LYT INSERT        | 8     | .25  |
| E29370   | 11    | 3/4" (1.050") LYT INSERT      | 8     | .25  |

bridge the gap.

## KET MYT (40 TON) SLIP TYPE ELEVATOR

| PART NO. | RANGE         | SIZE OF LINKS   | WEIGHT |
|----------|---------------|-----------------|--------|
| E29328   | 3/4" - 2-7/8" | 1-1/4" - 2-3/4" | 148.00 |



### MYT SLIP ASSEMBLIES

| PART NO.  | DESCRIPTION                                     | WEIGHT (lbs.) |
|-----------|-------------------------------------------------|---------------|
| E29343-1  | 2-7/8" X 2-7/8" MYT SLIP ASSEMBLY               | 44.00         |
| E29343-2  | 2-7/8" X 2-3/8" MYT SLIP ASSEMBLY               | 46.00         |
| E29343-3  | 2-7/8" X 2-1/16" MYT SLIP ASSEMBLY              | 47.25         |
| E29343-4  | 2-7/8" X 2" MYT SLIP ASSEMBLY                   | 47.50         |
| E29343-5  | 2-7/8" X 1-1/2" (1.900") MYT SLIP ASSEMBLY      | 48.75         |
| E29343-6  | 2-7/8" X 1-1/4" (1.660") MYT SLIP ASSEMBLY      | 49.75         |
| E29343-7  | 2-7/8" X 1" (1.315") MYT SLIP ASSEMBLY          | 49.75         |
| E29343-8  | 2-7/8" X 3/4" (1.050") MYT SLIP ASSEMBLY        | 51.00         |
| E29343--S | 2-7/8" MYT SLIP SEGMENTS ONLY(MATCHED SET OF 4) | 31.00         |

### MYT SETTING RINGS

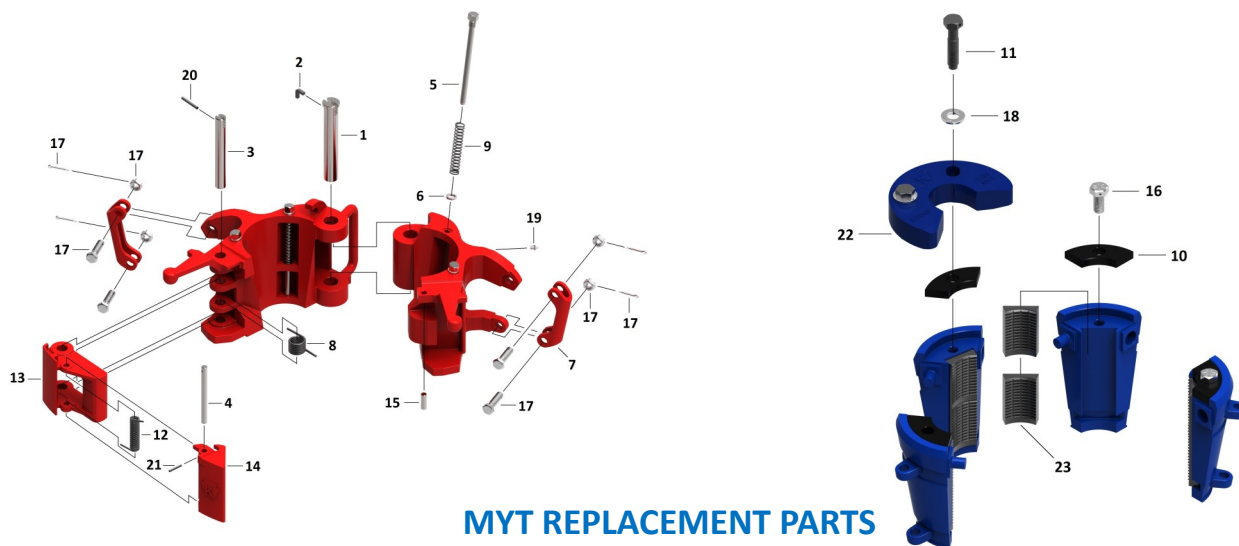
| ITEM | PART NO. | DESCRIPTION                     | WEIGHT (lbs.) |
|------|----------|---------------------------------|---------------|
| 22   | E29348   | 2-7/8" MYT SETTING RING         | 6.50          |
| 22   | E29345   | 2-3/8" MYT SETTING RING         | 6.63          |
| 22   | E29350   | 2-1/16" MYT SETTING RING        | 7.00          |
| 22   | E29351   | 2" MYT SETTING RING             | 7.10          |
| 22   | E29352   | 1-1/2" (1.900) MYT SETTING RING | 7.35          |
| 22   | E29353   | 1-1/4" (1.660) MYT SETTING RING | 7.50          |
| 22   | E29354   | 1" (1.315) MYT SETTING RING     | 7.90          |
| 22   | E29354-1 | 3/4" (1.050) MYT SETTING RING   | 8.05          |

Recommended spares include 2 sets of inserts and 2 setting rings for each pipe size to be run.



bridge the gap.

# KET MYT (40 TON) SLIP TYPE ELEVATOR



## MYT REPLACEMENT PARTS

| ITEM | QTY | PART NO.     | DESCRIPTION                  | SPARES | WEIGHT (lbs.) |
|------|-----|--------------|------------------------------|--------|---------------|
| 1    | 1   | E29333-R     | HINGE PIN                    |        | 4             |
| 2    | 1   | E29333-RE    | HINGE PIN RETAINER           |        | 10            |
| 3    | 1   | E29334       | LATCH PIN                    |        | 4             |
| 4    | 1   | E29335       | LATCH LOCK PIN               | 2      | 0.5           |
| 5    | 4   | E29336       | SLIP BOLT                    |        | 2             |
| 6    | 4   | E29336-W     | SLIP BOLT LOCK WASHER        | 2      | 0.5           |
| 7    | 2   | E29337       | LINK BLOCK                   | 2      | 0.25          |
| 8    | 1   | E29338       | LATCH SPRING                 |        | 0.5           |
| 9    | 4   | E29340       | SLIP SPRING                  | 2      | 1.5           |
| 10   | 4   | E29344       | INSERT RETAINER PLATE        | 2      | 0.5           |
| 11   | 2   | E29347       | SETTING RING BOLT            |        | 12.88         |
| 12   | 1   | E29349       | LATCH LOCK SPRING            |        | 1             |
| 13   | 1   | E30652       | LATCH                        | 4      | 0.45          |
| 14   | 1   | E30653       | LATCH LOCK                   | 4      | 0.75          |
| 15   | 1   | E30841       | DOOR LUG PIN                 | 8      | 0.25          |
| 16   | 2   | E939098-15   | INSERT RETAINER SCREW        | 4      | 0.25          |
| 17   | 4   | E939099-65-2 | LINK BLOCK BOLT, NUT, COTTER | 4      | 0.06          |
| 18   | 2   | E939370-13   | SETTING RING WASHER          | 4      | 0.13          |
| 19   | 1   | E940308-1    | GREASE FITTING               | 4      | 0.5           |
| 20   | 4   | E947128-120  | LATCH PIN RETAINER           | 4      | .25           |
| 21   | 1   | E947128-172  | LATCH LOCK PIN RETAINER      |        |               |

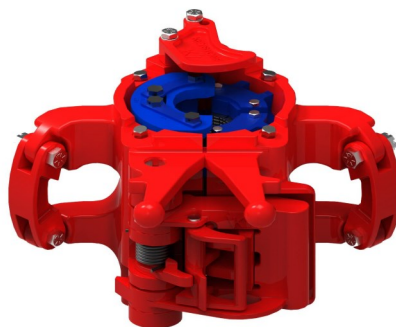
## MYT INSERTS

| ITEM | QTY | PART NO. | DESCRIPTION                     | WEIGHT (lbs.) |
|------|-----|----------|---------------------------------|---------------|
| 23   | 8   | E24773   | 2-7/8" X 2-7/8" INSERT          | 0.75          |
| 23   | 8   | E29255   | 2-7/8" X 2-3/8" INSERT          | 1.00          |
| 23   | 8   | E29256   | 2-7/8" X 2-1/16" & 2" INSERT    | 1.13          |
| 23   | 8   | E29257   | 2-7/8" X 1-1/2" (1.900") INSERT | 1.25          |
| 23   | 8   | E29258   | 2-7/8" X 1-1/4" (1.660") INSERT | 1.38          |
| 23   | 8   | E29259   | 2-7/8" X 1" (1.315") INSERT     | 1.44          |
| 23   | 8   | E29259-1 | 2-7/8" X 3/4" (1.050") INSERT   | 1.50          |

bridge the gap.

# KET YT (75 TON) SLIP TYPE ELEVATOR

| PART NO. | RANGE           | SIZE OF LINKS   | WEIGHT |
|----------|-----------------|-----------------|--------|
| E23105   | 1.315" - 3-1/2" | 2-1/4" - 2-3/4" | 355.00 |



## YT SLIP ASSEMBLIES

| PART NO.  | DESCRIPTION                                     | WEIGHT( lbs.) |
|-----------|-------------------------------------------------|---------------|
| E23108-5  | 3-1/2" X 3-1/2" YT SLIP ASSEMBLY                | 64.00         |
| E23108-3  | 3-1/2" X 2-7/8" YT SLIP ASSEMBLY                | 76.00         |
| E23108-23 | 3-1/2" X 2-3/8" YT SLIP ASSEMBLY                | 76.00         |
| E23108-4  | 2-7/8" X 2-7/8" YT SLIP ASSEMBLY                | 76.00         |
| E23108-6  | 2-7/8" X 2-3/8" YT SLIP ASSEMBLY                | 79.00         |
| E23108-7  | 2-7/8" X 2-1/16" YT SLIP ASSEMBLY               | 81.00         |
| E23108-8  | 2-7/8" X 2" YT SLIP ASSEMBLY                    | 82.00         |
| E23108-9  | 2-7/8" X 1-1/2" (1.900) YT SLIP ASSEMBLY        | 83.50         |
| E23108-10 | 2-7/8" X 1-1/4" (1.660) YT SLIP ASSEMBLY        | 85.50         |
| E23108-11 | 2-7/8" X 1" (1.315) YT SLIP ASSEMBLY            | 86.50         |
| E23108    | 3-1/2" YT SLIP SEGMENTS ONLY (MATCHED SET OF 4) | 51.00         |
| E23108-2  | 2-7/8" YT SLIP SEGMENTS ONLY (MATCHED SET OF 4) | 51.00         |

## YT SETTING RINGS

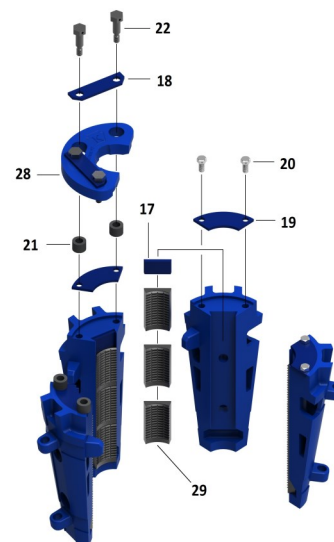
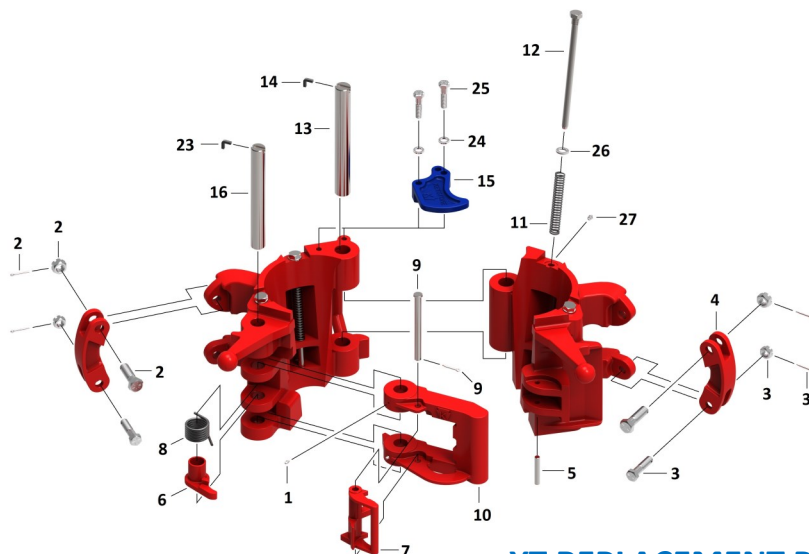
| ITEM | PART NO. | DESCRIPTION                    | WEIGHT (lbs.) |
|------|----------|--------------------------------|---------------|
| 28   | E27813   | 3-1/2" YT SETTING RING         | 3.13          |
| 28   | E27695   | 2-7/8" YT SETTING RING         | 3.56          |
| 28   | E27694   | 2-3/8" YT SETTING RING         | 4.00          |
| 28   | E27812   | 2-1/16" YT SETTING RING        | 4.25          |
| 28   | E28821   | 2" YT SETTING RING             | 4.25          |
| 28   | E27811   | 1-1/2" (1.900) YT SETTING RING | 4.31          |
| 28   | E27810   | 1-1/4" (1.660) YT SETTING RING | 4.38          |
| 28   | E29001   | 1" (1.315) YT SETTING RING     | 4.75          |

## YT SLIP INSERTS

| ITEM | QTY | PART NO.  | DESCRIPTION                     | WEIGHT (lbs.) |
|------|-----|-----------|---------------------------------|---------------|
| 29   | 24  | E24774    | 3-1/2" X 3-1/2" INSERT          | 0.50          |
| 29   | 24  | E30358    | 3-1/2" X 2-7/8" INSERT          | 0.75          |
| 29   | 24  | E30358-23 | 3-1/2" X 2-3/8" INSERT          | 0.85          |
| 29   | 12  | E24773    | 2-7/8" X 2-7/8" INSERT          | 0.75          |
| 29   | 12  | E29255    | 2-7/8" X 2-3/8" INSERT          | 0.75          |
| 29   | 12  | E29256    | 2-7/8" X 2-1/16" & 2" INSERT    | 1.00          |
| 29   | 12  | E29257    | 2-7/8" X 1-1/2" (1.900") INSERT | 1.20          |
| 29   | 12  | E29258    | 2-7/8" X 1-1/4" (1.660") INSERT | 1.38          |
| 29   | 12  | E29259    | 2-7/8" X 1" (1.315") INSERT     | 1.45          |

bridge the gap.

# KET YT (75 TON) SLIP TYPE ELEVATOR



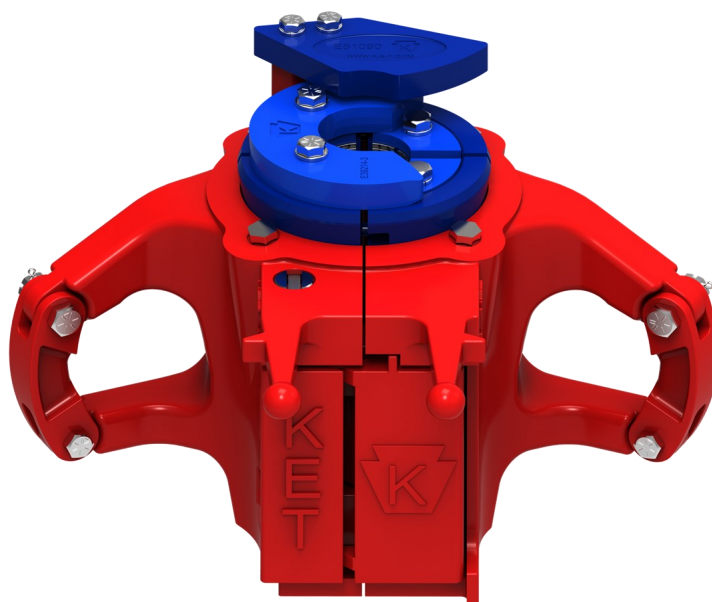
## YT REPLACEMENT PARTS

| ITEM | QTY | PART NO.    | DESCRIPTION                        | SPARES | WEIGHT (lbs.) |
|------|-----|-------------|------------------------------------|--------|---------------|
| 1    | 1   | E316-TI     | TAP IN GREASE FITTING              |        |               |
| 2    | 2   | E8145-1     | UPPER LINK BLOCK BOLT, NUT, COTTER | 1      | 1.00          |
| 3    | 2   | E8145-2     | LOWER LINK BLOCK BOLT, NUT, COTTER | 2      | 1.00          |
| 4    | 2   | E9519       | LINK BLOCK                         |        | 5.50          |
| 5    | 1   | E12529      | DOOR LUG PIN                       |        | 0.65          |
| 6    | 1   | E12946      | LATCH CAM                          |        | 1.50          |
| 7    | 1   | E12972      | LATCH LOCK                         |        | 3.50          |
| 8    | 1   | E12978      | LATCH SPRING                       | 2      | 0.63          |
| 9    | 1   | E13530      | LATCH LOCK PIN W/COTTER            | 2      | 0.63          |
| 10   | 1   | E15348      | LATCH                              |        | 27.00         |
| 11   | 4   | E23113      | SLIP SPRING                        | 8      | 0.25          |
| 12   | 4   | E23115      | SLIP BOLT                          | 4      | 1.25          |
| 13   | 1   | E23116-1    | HINGE PIN                          |        | 4.13          |
| 14   | 1   | E23116-1-R  | HINGE PIN RETAINER                 | 2      | 0.20          |
| 15   | 1   | E23630      | GUIDE PLATE                        |        | 4.00          |
| 16   | 1   | E24182      | LATCH PIN                          |        | 5.00          |
| 17   | 8   | E24507      | INSERT SPACER (3-1/2")             | 8      | 0.13          |
| 17   | 4   | E24508      | INSERT SPACER (2-7/8")             | 4      | 0.25          |
| 18   | 2   | E27507      | SETTING RING RETAINER (2-7/8")     |        | 0.13          |
| 18   | 2   | E27546      | SETTING RING RETAINER (3-1/2")     |        | 0.13          |
| 19   | 4   | E27530      | INSERT RETAINER PLATE (3-1/2")     | 4      | 0.13          |
| 19   | 4   | E27451      | INSERT RETAINER PLATE (2-7/8")     | 4      | 0.25          |
| 20   | 4   | E27532      | INSERT RETAINER SCREW              | 8      | 0.06          |
| 21   | 4   | E27696      | YT SETTING RING BUSHING            | 8      | 0.06          |
| 22   | 4   | E27697      | SETTING RING BOLT                  | 4      | 0.25          |
| 23   | 4   | E29464      | LATCH PIN RETAINER                 | 2      | 0.20          |
| 24   | 4   | E939098-634 | GUIDE PLATE LOCK WASHER            | 2      | 0.15          |
| 25   | 2   | E939098-75  | GUIDE PLATE SCREW                  | 2      | 0.25          |
| 26   | 4   | E939352-6   | SLIP BOLT LOCK WASHER              | 4      | 0.06          |
| 27   | 1   | E940308-1   | GREASE FITTING                     |        | 0.05          |
| 28   |     |             | SETTING RINGS                      |        |               |
| 29   |     | Page        | INSERTS                            |        |               |

bridge the gap.

# KET HYT (150 TON) SLIP TYPE ELEVATOR

| PART NO. | DESCRIPTION                   | RANGE           | SIZE OF LINKS   | WT. |
|----------|-------------------------------|-----------------|-----------------|-----|
| E39284   | HYT ELEVATOR COMPLETE L/SLIPS | 2 3/8" - 3 1/2" | 2 1/4" - 3 1/2" | 740 |



## HYT SLIP ASSEMBLIES

| PART NO. | DESCRIPTION                                      | WT. |
|----------|--------------------------------------------------|-----|
| E39258-2 | 3 1/2" X 3 1/2" HYT SLIP ASSY.                   | 170 |
| E39258-4 | 3 1/2" X 2 7/8" HYT SLIP ASSY.                   | 170 |
| E39258-5 | 3 1/2" X 2 3/8" HYT SLIP ASSY.                   | 170 |
| E39259-2 | 2 7/8" X 2 7/8" HYT SLIP ASSY.                   | 170 |
| E39259-4 | 2 7/8" X 2 3/8" HYT SLIP ASSY.                   | 170 |
| E39174   | 3 1/2" HYT SLIP SEGMENTS ONLY (MATCHED SET OF 4) | 150 |
| E39175   | 2 7/8" HYT SLIP SEGMENTS ONLY (MATCHED SET OF 4) | 150 |

## HYT SETTING RINGS

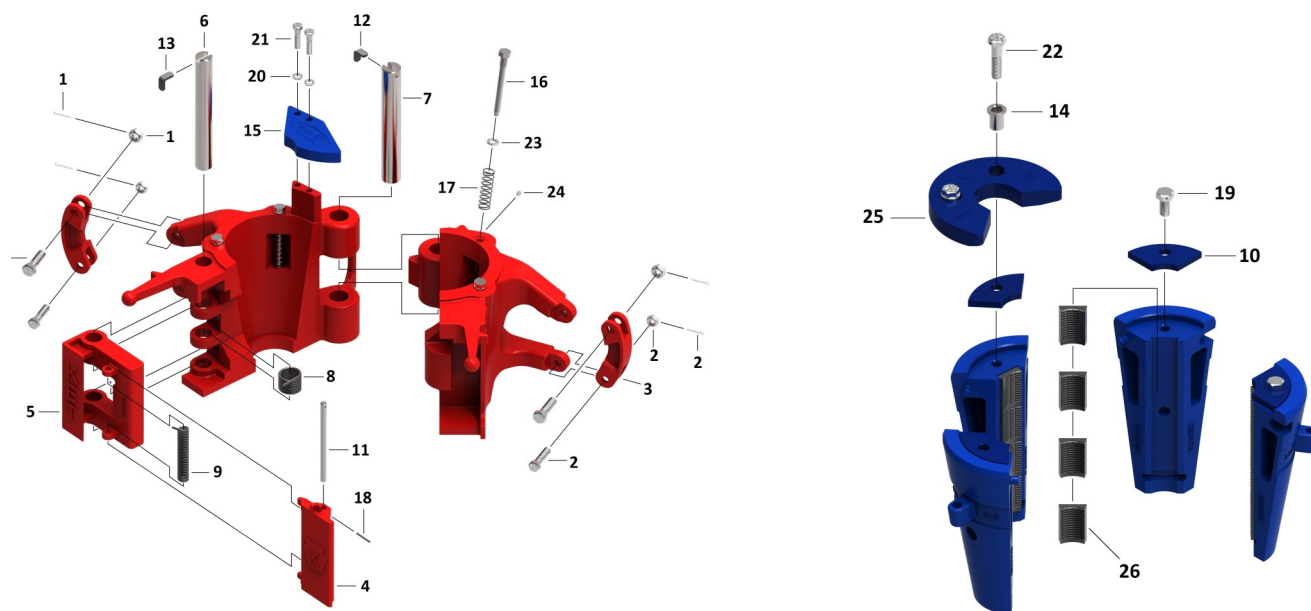
| PART NO. | DESCRIPTION             | #REQ. | WT.   |
|----------|-------------------------|-------|-------|
| E39214-3 | 3 1/2" HYT SETTING RING | 1     | 11.00 |
| E39214-2 | 2 7/8" HYT SETTING RING | 1     | 11.00 |
| E39214-1 | 2 3/8" HYT SETTING RING | 1     | 13.00 |

## HYT INSERTS

| PART NO.  | DESCRIPTION            | #REQ. | WT.  |
|-----------|------------------------|-------|------|
| E24774    | 3 1/2" X 3 1/2" INSERT | 32    | .50  |
| E30358    | 3 1/2" X 2 7/8" INSERT | 32    | .75  |
| E30358-23 | 3 1/2" X 2 3/8" INSERT | 32    | .80  |
| E24773    | 2 7/8" X 2 7/8" INSERT | 16    | .75  |
| E29255    | 2 7/8" X 2 3/8" INSERT | 16    | 1.00 |

bridge the gap.

# KET HYT (150 TON) SLIP TYPE ELEVATOR



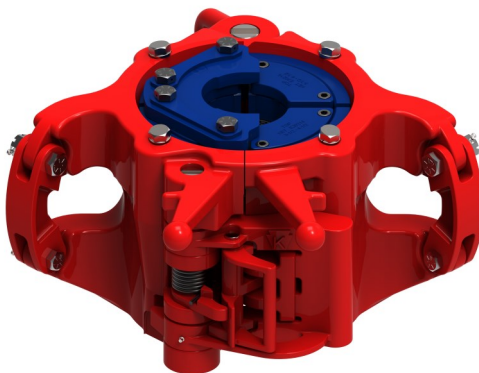
## HYT REPLACEMENT PARTS

| PART NO.    | ITEM | DESCRIPTION                                   | **SPARES | #REQ. | WT.   |
|-------------|------|-----------------------------------------------|----------|-------|-------|
| E8145-1     | 1    | UPPER LINK BLOCK BOLT, NUT, & COTTER          | 2        | 2     | 0.87  |
| E8145-2     | 2    | LOWER LINK BLOCK BOLT, NUT, & COTTER          | 2        | 2     | 0.57  |
| E9519       | 3    | LINK BLOCK                                    |          | 2     | 5.20  |
| E39161      | 4    | LATCH LOCK                                    |          | 1     | 7.82  |
| E39162      | 5    | LATCH                                         |          | 1     | 36.03 |
| E39238      | 6    | LATCH PIN                                     |          | 1     | 9.18  |
| E39239      | 7    | HINGE PIN                                     |          | 1     | 12.05 |
| E39240      | 8    | LATCH SPRING                                  | 2        | 1     | 0.69  |
| E39241      | 9    | LATCH LOCK SPRING                             | 2        | 1     | 0.69  |
| E39246      | 10   | 2.875 INSERT RETAINER PLATE                   |          | 4     | 1.09  |
| E39247      | 10   | 3.5 INSERT RETAINER PLATE                     |          | 4     |       |
| E39251      | 11   | LATCH LOCK PIN                                |          | 1     | 0.84  |
| E39253      | 12   | HINGE PIN RETAINER                            | 2        | 1     |       |
| E39254      | 13   | LATCH PIN RETAINER                            | 2        | 1     | 0.05  |
| E51089      | 14   | SETTING RING BUSHING                          | 2        | 2     | 0.18  |
| E51090      | 15   | GUIDE PLATE                                   | 1        | 1     | 9.28  |
| E52321      | 16   | SLIP BOLT                                     | 8        | 4     | 0.76  |
| E52539-1    | 17   | SLIP SPRING                                   | 8        | 4     |       |
|             | 18   | 3/16-1-1/4 SPRING PIN—LATCH LOCK PIN RETAINER | 2        | 1     |       |
| E939098-36  | 19   | INSERT RETAINER PIN                           | 4        | 2     | 0.26  |
| E939098-634 | 20   | GUIDE PLATE WASHER                            | 2        | 2     |       |
| E939098-75  | 21   | GUIDE PLATE SCREW                             | 2        | 2     | 0.26  |
| E939098-96  | 22   | SETTING RING BOLT                             | 4        | 2     | 0.46  |
| E939352-6   | 23   | SLIP BOLT WASHER                              | 4        | 4     | 0.05  |
| E940308-1   | 24   | GREASE FITTING                                | 4        | 2     | 0.08  |
|             | 25   | SETTING RINGS                                 | 2        | 1     |       |
|             | 26   | INSERTS                                       | 2 SETS   | A/R   |       |

bridge the gap.

## KET YC (75 TON) SLIP TYPE ELEVATOR

| PART NO. | RANGE       | SIZE OF LINKS   | WEIGHT |
|----------|-------------|-----------------|--------|
| E24140   | 3 1/2" - 7" | 2 1/4" - 2 3/4" | 380.00 |



### YC SLIP ASSEMBLIES

| PART NO. | DESCRIPTION                                     | WT.    |
|----------|-------------------------------------------------|--------|
| E34931   | 4 1/2" X 3 1/2" YC SLIP ASSY.                   | 150.00 |
| E26830   | 4 1/2" X 4" YC SLIP ASSY.                       | 150.00 |
| E24072-5 | 4 1/2" X 4 1/2" YC SLIP ASSY.                   | 150.00 |
| E24072-7 | 5 1/2" X 5" YC SLIP ASSY.                       | 150.00 |
| E24072-2 | 5 1/2" X 5 1/2" YC SLIP ASSY.                   | 150.00 |
| E24077-1 | 7" X 7" YC SLIP ASSY.                           | 150.00 |
| E24077-7 | 7" X 6 5/8" YC SLIP ASSY                        | 150.00 |
| E24072-4 | 4 1/2" YC SLIP SEGMENTS ONLY (MATCHED SET OF 4) | 130.00 |
| E24072   | 5 1/2" YC SLIP SEGMENTS ONLY (MATCHED SET OF 4) | 130.00 |
| E24077   | 7" YC SLIP SEGMENT ONLY (MATCHED SET OF 4)      | 130.00 |

### YC SETTING PLATES

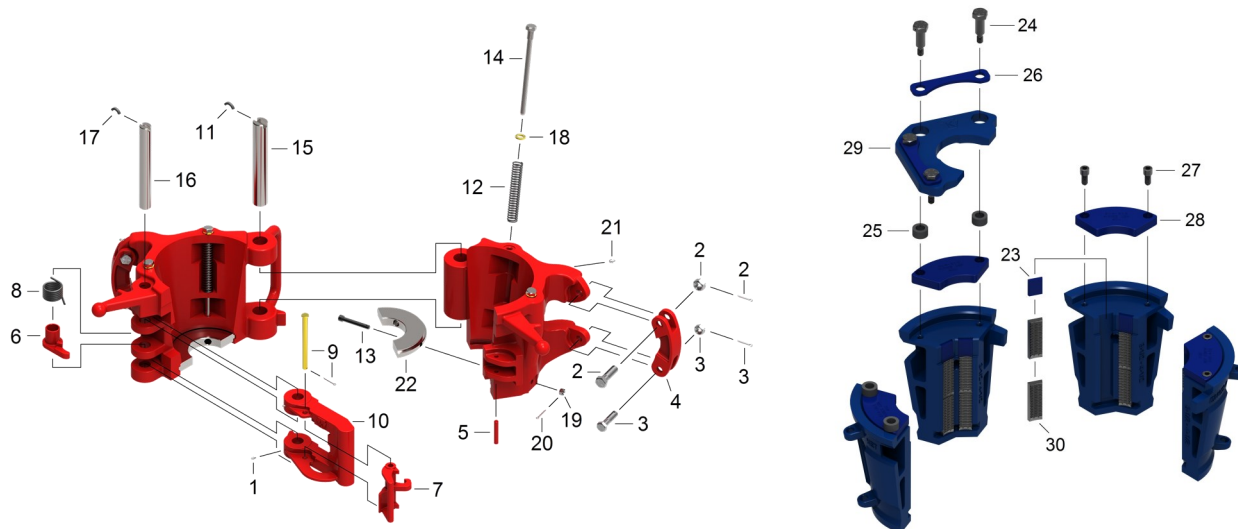
| PART NO. | DESCRIPTION          | #REQ. | WT.  |
|----------|----------------------|-------|------|
| E34932   | 3 1/2" SETTING PLATE | 1     | 8.00 |
| E30209   | 4" SETTING PLATE     | 1     | 8.00 |
| E30219   | 4 1/2" SETTING PLATE | 1     | 7.00 |
| E30220   | 5" SETTING PLATE     | 1     | 6.25 |
| E30223   | 5 1/2" SETTING PLATE | 1     | 6.13 |
| E30226   | 6 5/8" SETTING PLATE | 1     | 6.00 |
| E30229   | 7" SETTING PLATE     | 1     | 5.50 |

### YC BOTTOM GUIDE PLATES

| PART NO. | DESCRIPTION         | #REQ | WT   |
|----------|---------------------|------|------|
| E24071-2 | 7" BOTTOM GUIDE     | 1    | 3.75 |
| E24071-3 | 6 5/8" BOTTOM GUIDE | 1    | 4.50 |
| E24071-1 | 5 1/2" BOTTOM GUIDE | 1    | 5.50 |
| E24071   | 5" BOTTOM GUIDE     | 1    | 7.75 |
| E24071-4 | 4 1/2" BOTTOM GUIDE | 1    | 8.50 |
| E26827   | 4" BOTTOM GUIDE     | 1    | 8.50 |
| E26827-1 | 3 1/2" BOTTOM GUIDE | 1    | 8.00 |

bridge the gap.

# KET YC SLIP TYPE ELEVATOR PARTS



## YC REPLACEMENT PARTS

| ITEM | QTY | PART NO.   | DESCRIPTION                          | *SPARES | WT.   |
|------|-----|------------|--------------------------------------|---------|-------|
| 1    | 1   | E316-SI    | LATCH GREASE ZERT                    |         |       |
| 2    | 2   | E8145-1    | UPPER LINK BLOCK BOLT, NUT, & COTTER | 2       | 1.00  |
| 3    | 2   | E8145-2    | LOWER LINK BLOCK BOLT, NUT, & COTTER | 2       | 1.00  |
| 4    | 2   | E9519      | LINK BLOCK                           |         | 5.20  |
| 5    | 1   | E12529     | DOOR LUG PIN                         |         | .65   |
| 6    | 1   | E12946     | LATCH CAM                            |         | 1.50  |
| 7    | 1   | E12972     | LATCH LOCK                           |         | 3.50  |
| 8    | 1   | E12978     | LATCH SPRING                         | 2       | 0.63  |
| 9    | 1   | E13530     | LATCH LOCK PIN W/COTTER              | 2       | 0.69  |
| 10   | 1   | E15348     | LATCH                                |         | 27.00 |
| 11   | 1   | E23116-1-R | HINGE PIN RETANIER                   | 2       | 0.20  |
| 12   | 4   | E24049     | SLIP SPRING                          | 8       | 0.30  |
| 13   | 4   | E24075     | BOTTOM GUIDE PLATE SCREW W/ NUT      |         | 0.84  |
| 14   | 4   | E24076     | SLIP BOLT                            | 4       | 1.05  |
| 15   | 1   | E24181     | HINGE PIN                            |         | 12.05 |
| 16   | 1   | E24182     | LATCH PIN                            |         | 0.18  |
| 17   | 1   | E29464     | LATCH PIN RETAINER                   | 2       | 0.20  |
| 18   | 4   | E939352-6  | LOCK WASHER F/ SLIP BOLTS            | 2       | 0.06  |
| 19   | 4   | E939484-5  | BOTTOM GUIDE PLATE NUT               |         | .25   |
| 20   | 4   | E939672    | BOTTOM GUIDE PLATE/ COTTER           |         | 0.05  |
| 21   | 1   | E940308-1  | GREASE ZERT                          |         | 0.05  |
| 22   | 1   | E24071-    | BOTTOM GUIDE PLATE                   |         |       |
| 23   | 4   | E24506     | INSERT SPACER                        | 4       | 0.25  |
| 24   | 4   | E30211     | SETTING PLATE BOLT                   | 4       | 0.25  |
| 25   | 4   | E30213     | RUBBER BUSHING                       | 8       | 0.05  |
| 26   | 2   | E30216     | SETTING RING RETAINER                |         | 0.25  |
| 27   | 4   | E941271-73 | INSERT REATINER SCREW                | 8       | .13   |
| 28   | 4   | E30214     | INSERT RET. RING 3 1/2" - 4 1/2"     | 4       | 2.75  |
| 28   | 4   | E30224     | INSERT RET.RING 5" & 5 1/2"          | 4       | 2.13  |
| 28   | 4   | E30230     | INSERT RET. RING 6 5/8" & 7"         | 4       | 2.75  |
| 29   | 1   |            | SETTING PLATES                       |         |       |
| 30   |     |            | INSERTS                              | 2 SETS  |       |

bridge the gap.

# KET HYC SLIP TYPE ELEVATOR PARTS

## HYC SETTING RINGS

| PART NO. | DESCRIPTION             | #REQ. | WT.   |
|----------|-------------------------|-------|-------|
| E70012   | 7 5/8" HYC SETTING RING | 1     | 11.00 |
| E55522   | 7" HYC SETTING RING     | 1     | 11.50 |
| E55521   | 6 5/8" HYC SETTING RING | 1     | 12.00 |
| E55520   | 5 1/2" HYC SETTING RING | 1     | 13.00 |
| E55519   | 5" HYC SETTING RING     | 1     | 14.50 |
| E55518   | 4 1/2" HYC SETTING RING | 1     | 15.00 |
| E55517   | 4" HYC SETTING RING     | 1     | 16.50 |
| E55516   | 3 1/2" HYC SETTING RING | 1     | 18.00 |

## HYC BOTTOM GUIDE PLATES

| PART NO. | DESCRIPTION                          | #REQ. | WT.  |
|----------|--------------------------------------|-------|------|
| E24071-6 | 7 5/8" HYC BOTTOM GUIDE PLATES (SET) | 1     | 5.02 |
| E24071-2 | 7" BOTTOM GUIDE                      | 1     | 3.75 |
| E24071-3 | 6 5/8" BOTTOM GUIDE                  | 1     | 4.50 |
| E24071-1 | 5 1/2" BOTTOM GUIDE                  | 1     | 5.50 |
| E24071   | 5" BOTTOM GUIDE                      | 1     | 7.75 |
| E24071-4 | 4 1/2" BOTTOM GUIDE                  | 1     | 8.50 |
| E26827   | 4" BOTTOM GUIDE                      | 1     | 8.50 |
| E26827-1 | 3 1/2" BOTTOM GUIDE                  | 1     | 8.00 |

RECOMMENDED SPARES INCLUDE 1 SET BOTTOM GUIDES FOR EACH PIPE SIZE TO BE RUN



bridge the gap.

# KET HYC 200 TON SLIP TYPE ELEVATOR PARTS

## HYC REPLACEMENT PARTS

| PART NO.   | DESCRIPTION                          | **SPARES | #REQ. | WT.   |
|------------|--------------------------------------|----------|-------|-------|
| E55311     | HINGE PIN                            |          | 1     | 25.00 |
| E55312     | LATCH PIN                            |          | 1     | 9.00  |
| E34909     | LATCH SPRING                         | 2        | 1     | 1.50  |
| E13185     | LATCH SPRING STOP                    |          | 1     | .25   |
| E13152     | LATCH LOCK                           | 1        | 1     | 4.00  |
| E15101     | LATCH LOCK BOLT                      | 1        | 1     | .75   |
| E13188     | LATCH LOCK SPRING                    | 2        | 1     | .25   |
| E8150      | LATCH LOCK BOLT NUT                  | 1        | 1     | .25   |
| E939672-19 | COTTER PIN                           | 3        | 3     | .10   |
| E13190     | DOOR LUG PIN                         |          | 1     | .65   |
| E55504     | HINGE PIN RETAINER                   |          | 1     | .35   |
| E55505     | LATCH PIN RETAINER                   |          | 1     | .20   |
| E940308-1  | GREASE FITTING                       |          | 1     | .10   |
| E9519      | LINK BLOCK                           |          | 2     | 5.50  |
| E8145-1    | UPPER LINK BLOCK BOLT, NUT, & COTTER | 2        | 2     | .50   |
| E8145-2    | LOWER LINK BLOCK BOLT, NUT, & COTTER | 2        | 2     | .50   |
| E24076     | SLIP BOLT                            | 4        | 4     | 1.00  |
| E939354-6  | LOCKWASHER                           | 4        | 4     | .25   |
| E945044-2  | SLIP SPRING                          | 8        | 4     | .35   |
| E55508     | GUIDE PLATE SCREW                    | 8        | 4     | .26   |
| E939484-5  | GUIDE PLATE NUT                      | 8        | 4     | .03   |
| E939672-17 | COTTER PIN                           | 8        | 4     | .10   |
| E30216     | SETTING RING RETAINER (3 1/2" - 7")  | 2        | 2     | .25   |
| E70147     | SETTING RING RETAINER ( 7 5/8")      | 2        | 2     | .30   |
| E55501     | SHOULDER SCREW                       | 8        | 4     | .41   |
| E55502     | RUBBER BUSHING                       | 8        | 4     | .04   |
| E941271-73 | INSERT RETAINER SCREW                | 4        | 4     | .08   |
| E947879    | LOCK WIRE                            |          | A/R   | .01   |
| E70011     | 7 5/8" INSERT RETAINER               |          | 4     | 1.85  |
| E30230     | 7" INSERT RETAINER                   |          | 4     | 2.00  |
| E30224     | 5 1/2" INSERT RETAINER               |          | 4     | 2.50  |
| E30214     | 4 1/2" - 3 1/2" INSERT RETAINER      |          | 4     | 2.50  |

## HYC INSERTS

| PART NO. | DESCRIPTION            | #REQ. | WT.  |
|----------|------------------------|-------|------|
| E70010   | 7 5/8" X 7 5/8" INSERT | 48    | .50  |
| E16407   | 7" X 7" INSERT         | 48    | .50  |
| E24748   | 7" X 6 5/8" INSERT     | 48    | .75  |
| E16407   | 5 1/2" X 5 1/2" INSERT | 36    | .50  |
| E24783   | 5 1/2" X 5" INSERT     | 36    | .80  |
| E24785   | 5 1/2" X 4 1/2" INSERT | 36    | 1.05 |
| E16408   | 4 1/2" X 4 1/2" INSERT | 24    | .50  |
| E24781   | 4 1/2" X 4" INSERT     | 24    | .80  |
| E24779   | 4 1/2" X 3 1/2" INSERT | 24    | 1.00 |

bridge the gap.

## BASIC TYPE INSERTS FOR BJ™ ELEVATORS YC THROUGH 1000 TON

| PART NO.   | SLIP SIZE | PIPE SIZE (OD) | YC | NUMBER OF INSERTS REQUIRED |         |         |         |          | WT. (EA) |
|------------|-----------|----------------|----|----------------------------|---------|---------|---------|----------|----------|
|            |           |                |    | 7 5/8"                     | 13 3/8" | 13 3/8" | 10 3/4" | 14"      |          |
|            |           |                |    | 175 TON                    | 350 TON | 350 TON | 500 TON | 1000 TON |          |
| E16441     | 3 1/2"    | 3 1/2"         |    | 18                         |         |         |         |          | .50      |
| E16442     | 4"        | 4"             | 16 |                            |         |         |         |          | .50      |
| E16408     | 4 1/2"    | 4 1/2"         | 16 | 27                         |         |         |         |          | .50      |
| E16407     | 5 1/2"    | 5 1/2"         | 16 | 27                         | 36      | 45      | 45      |          | .50      |
| E16407     | 7"        | 7"             | 24 |                            | 48      | 60      | 60      |          | .50      |
| E16407-HYC | 7 5/8"    | 7 5/8"         |    | 45                         | 60      | 75      | 75      |          | .50      |
| E15660     | 8 5/8"    | 8 5/8"         |    |                            | 60      |         | 75      |          | .50      |
| E15660     | 8 7/8"    | 8 7/8"         |    |                            |         |         |         | 108      | .50      |
| E15660     | 9 5/8"    | 9 5/8"         |    |                            | 72      | 90      | 90      |          | .50      |
| E15660     | 10 3/4"   | 10 3/4"        |    |                            | 72      |         | 90      |          | .50      |
| E15660     | 10 7/8"   | 10 7/8"        |    |                            |         |         |         | 126      | .50      |
| E15660     | 11 3/4"   | 11 3/4"        |    |                            | 72      | 105     |         |          | .50      |
| E15660     | 12 1/2"   | 12 1/2"        |    |                            |         |         |         | 144      | .50      |
| E15660     | 13 3/8"   | 13 3/8"        |    |                            | 84      | 135     |         |          | .50      |
| E15660     | 14"       | 14"            |    |                            |         |         |         | 162      | .50      |

## REDUCING INSERTS FOR BJ® ELEVATORS YC THROUGH 1000 TON

| PART NO.   | SLIP SIZE | PIPE SIZE (OD) | YC | NUMBER OF INSERTS REQUIRED |         |         |         |          | WT. (EA) |
|------------|-----------|----------------|----|----------------------------|---------|---------|---------|----------|----------|
|            |           |                |    | 7 5/8"                     | 13 3/8" | 13 3/8" | 10 3/4" | 14"      |          |
|            |           |                |    | 175 TON                    | 350 TON | 500 TON | 500 TON | 1000 TON |          |
| E25780     | E25780    | 2 7/8"         |    | 18                         |         |         |         |          | .85      |
| E24777     | 3 1/2"    | 2 3/8"         |    | 18                         |         |         |         |          | 1.20     |
| E24781     | 4 1/2"    | 4"             | 16 | 27                         |         |         |         |          | .80      |
| E24779     | 4 1/2"    | 3 1/2"         | 16 | 27                         |         |         |         |          | 1.00     |
| E24783     | 5 1/2"    | 5"             | 16 | 27                         | 36      | 45      | 45      |          | .80      |
| E24785     | 5 1/2"    | 4 1/2"         | 16 | 27                         | 36      | 45      | 45      |          | 1.05     |
| E24748     | 7"        | 6 5/8"         | 24 |                            | 48      | 60      | 60      |          | .75      |
| E25474     | 7 5/8"    | 6 5/8"         |    | 45                         | 60      | 75      | 75      |          | 1.05     |
| E26750     | 7 5/8"    | 7"             |    | 45                         | 60      | 75      | 75      |          | .90      |
| E26750-HYC | 7 5/8"    | 7"             |    | 45                         | 60      | 75      | 75      |          | .90      |
| E25474     | 8 5/8"    | 7 5/8"         |    | 45                         | 60      |         | 75      |          | 1.05     |
| E39290     | 8 7/8"    | 7 5/8"         |    |                            |         |         |         | 108      | 1.20     |
| E39286     | 8 7/8"    | 8 5/8"         |    |                            |         |         |         | 108      | .65      |
| E25474     | 9 5/8"    | 8 5/8"         |    |                            | 72      | 90      | 90      |          | 1.05     |
| E33249     | 10 3/4"   | 9 5/8"         |    |                            | 72      |         | 90      |          | 1.15     |
| E39290     | 10 7/8"   | 9 5/8"         |    |                            |         |         |         | 126      | 1.30     |
| E39285     | 10 7/8"   | 10 3/4"        |    |                            |         |         |         | 126      | .60      |
| E25474     | 11 3/4"   | 10 3/4"        |    |                            | 72      | 105     |         | 126      | 1.05     |
| E39289     | 12 1/2"   | 11 3/4"        |    |                            |         |         |         | 144      | .90      |
| E32700     | 14"       | 13 3/8"        |    |                            |         |         |         | 162      | .90      |

bridge the gap.

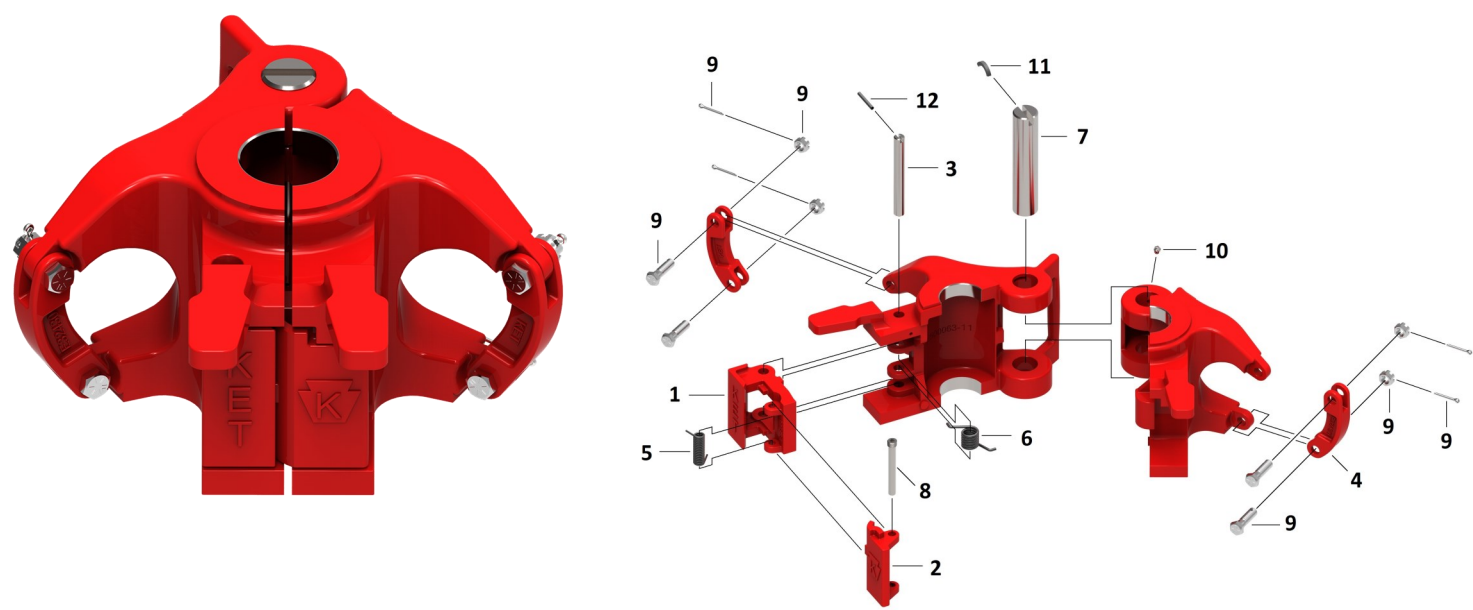
# INSERTS FOR VARCO™ ELEVATORS/SPIDERS

| PART NO. | DESC.   | REF#  | SLIP SIZE | PIPE SIZE (OD)<br>7 5/8" | NUMBER OF INSERTS REQUIRED |                |                |                |                 |                |                | WT (EA) |
|----------|---------|-------|-----------|--------------------------|----------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|---------|
|          |         |       |           |                          | 200 TON<br>14"             | 350 TON<br>14" | 500 TON<br>14" | 750 TON<br>24" | 1000 TON<br>24" | 500 TON<br>24" | 750 TON<br>24" |         |
| A23-157  | REDUCER | 2160  | 3 1/2"    | 2 3/8"                   | 12/12B                     |                |                |                |                 |                |                | .87     |
| A23-156  | REDUCER | 2161  | 3 1/2"    | 2 7/8"                   | 12/12B                     |                |                |                |                 |                |                | .64     |
| A23-155  | BASIC   | 2162  | 3 1/2"    | 3 1/2"                   | 24                         |                |                |                |                 |                |                | .42     |
| A23-160  | REDUCER | 2163  | 4 1/2"    | 3 1/2"                   | 16/16B                     |                |                |                |                 |                |                | .81     |
| A23-159  | REDUCER | 2164  | 4 1/2"    | 4"                       | 16/16B                     |                |                |                |                 |                |                | .61     |
| A23-158  | BASIC   | 2165  | 4 1/2"    | 4 1/2"                   | 32                         |                |                |                |                 |                |                | .42     |
| A23-163  | REDUCER | 2168  | 5 1/2"    | 4 1/2"                   | 16/16B                     | 24/16B         | 32/16B         |                |                 |                |                | .81     |
| A23-165  | REDUCER | 2169  | 5 1/2"    | 5"                       | 16/16B                     | 24/16B         | 32/16B         |                |                 |                |                | .61     |
| A23-164  | BASIC   | 2170  | 5 1/2"    | 5 1/2"                   | 32                         | 40             | 48             |                |                 |                |                | .42     |
| A23-168  | REDUCER | 2632  | 7 5/8"    | 6 5/8"                   | 24/24B                     | 36/24B         | 48/24B         | 60/24B         |                 |                |                | .81     |
| A23-169  | REDUCER | 2623  | 7 5/8"    | 7"                       | 24/24B                     | 36/24B         | 48/24B         | 60/24B         |                 |                |                | .64     |
| A23-170  | BASIC   | 2633  | 7 5/8"    | 7 5/8"                   | 48                         | 60             | 72             | 84             |                 |                |                | .42     |
| A23-171  | REDUCER | 2640  | 9 5/8"    | 8 5/8"                   |                            | 48/32B         | 64/32B         | 80/32B         | 96/24B          |                |                | .81     |
| A23-170  | BASIC   | 2633  | 9 5/8"    | 9 5/8"                   |                            | 48/32B         | 64/32B         | 80/32B         | 96/24B          |                |                | .81     |
| A23-171  | REDUCER | 2640  | 11 3/4"   | 10 3/4"                  |                            | 60/40B         | 80/40B         | 100/40B        | 144/36B         |                |                | .81     |
| A23-172  | BASIC   | 2637  | 11 3/4"   | 11 3/4"                  |                            | 100            | 120            | 140            | 180             |                |                | .42     |
| A23-172  | BASIC   | 2637  | 13 3/8"   | 13 3/8"                  |                            | 100            | 120            | 140            |                 |                |                | .42     |
| A23-173  | REDUCER | 2636  | 14"       | 13 3/8"                  |                            | 60/40B         | 80/40B         | 100/40B        | 144/36B         |                |                | .64     |
| A23-174  | BASIC   | 2635  | 14"       | 14"                      |                            | 100            | 120            | 140            | 180             |                |                | .42     |
| A23-174  | BASIC   | 2635  | 16"       | 16"                      |                            |                |                |                | 240             | 180            | 210            | .42     |
| A23-175  | REDUCER | 13868 | 20"       | 18 5/8"                  |                            |                |                |                | 720             | 420            | 510            | .52     |
| A23-174  | BASIC   | 2635  | 20"       | 20"                      |                            |                |                |                | 300             | 180            | 210            | .42     |
| A23-174  | BASIC   | 2635  | 24"       | 24"                      |                            |                |                |                |                 | 180            | 210            | .42     |

bridge the gap.

# KET TMA (100 TON) ELEVATOR

| PART NO. | RANGE       | SIZE OF LINKS | WEIGHT |
|----------|-------------|---------------|--------|
| E500063  | 2-3/8" - 5" | 1-3/4"-2-3/4" | 132.00 |



## REPLACEMENT PARTS FOR TMA ELEVATORS

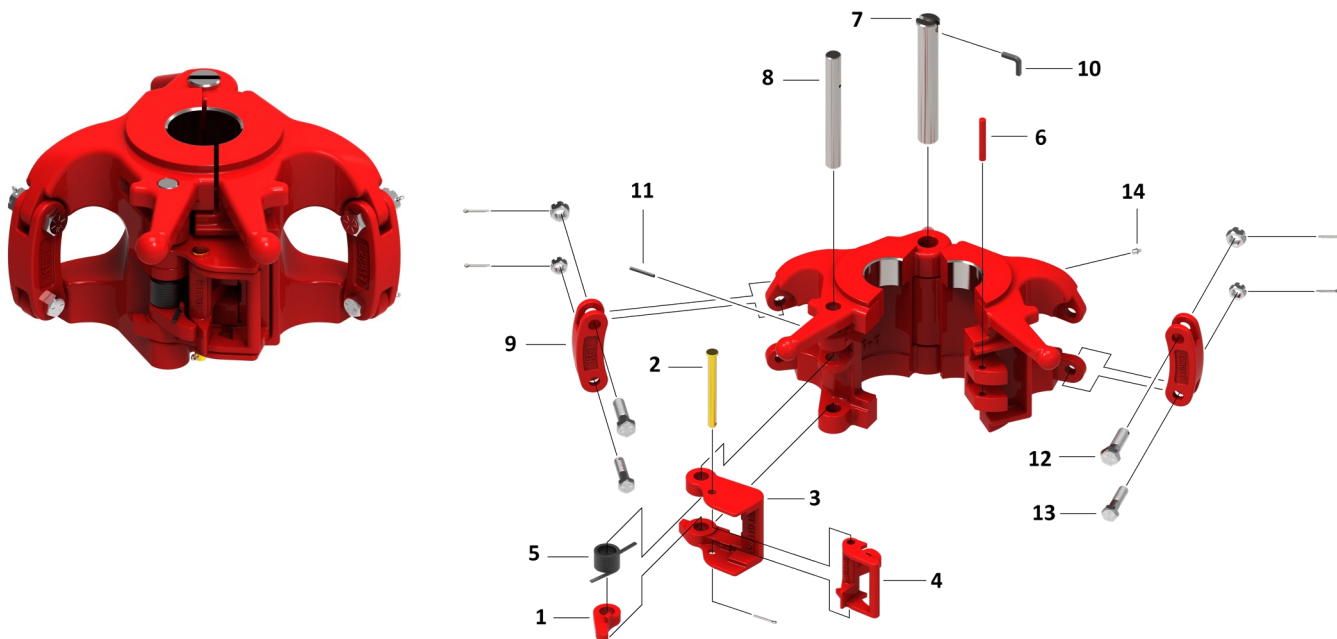
| ITEM | QTY | PART NO.     | DESCRIPTION                      | SPARES | WEIGHT |
|------|-----|--------------|----------------------------------|--------|--------|
| 1    | 1   | E32380       | LATCH                            |        | 6.36   |
| 2    | 1   | E32381-1     | LATCH LOCK                       |        | 2.38   |
| 3    | 1   | E32424-1     | LATCH PIN                        |        | 0.78   |
| 4    | 2   | E32430       | LINK BLOCK                       |        | 2.25   |
| 5    | 1   | E32758       | LATCH LOCK SPRING                | 2      | .125   |
| 6    | 1   | E32760       | LATCH SPRING                     | 2      | .180   |
| 7    | 1   | E32915       | HINGE PIN                        |        | 5.48   |
| 8    | 1   | E36208       | LATCH LOCK PIN                   | 1      | .240   |
| 9    | 4   | E939099-65-2 | LINK BLOCK BOLT, NUT, AND COTTER | 4      | 0.12   |
| 10   | 1   | E940308-1    | GREASE FITTING                   | 2      | 0.02   |
| 11   | 1   | E32916-R     | HINGE PIN RETAINER               | 2      | 0.12   |
| 12   | 1   | E32424-1-R   | LATCH PIN RETAINER               | 2      | 0.12   |

1 YEAR SPARES, FOR 2 YEAR SPARES ADD 1 EA. OF \* THESE ITEMS

bridge the gap.

# KET MRA(175 TON) CENTER LATCH ELEVATOR

| PART NO. | RANGE         | SIZE OF LINKS | WEIGHT |
|----------|---------------|---------------|--------|
| E30158   | 2-3/8"-5-1/2" | 1-3/4"-2-3/4" | 210.00 |



## REPLACEMENT PARTS FOR MRA ELEVATORS

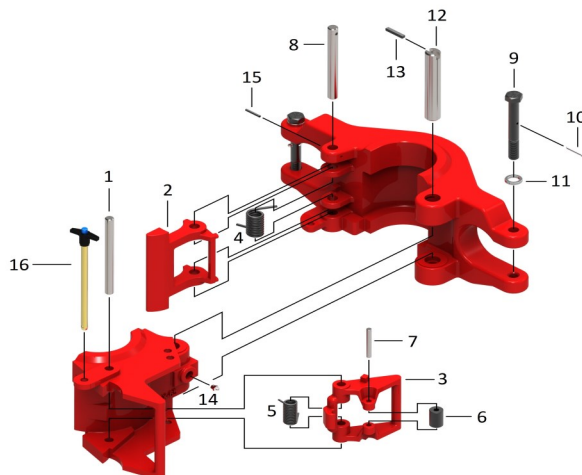
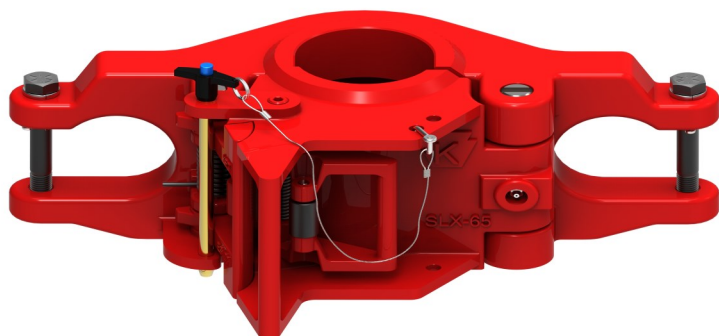
| ITEM | QTY | PART NO.   | DESCRIPTION                          | SPARES | WEIGHT |
|------|-----|------------|--------------------------------------|--------|--------|
| 1    | 1   | E11581     | LATCH CAM                            | 1      | 0.12   |
| 2    | 1   | E11759     | LATCH LOCK PIN                       | 1      | 2.09   |
| 3    | 1   | E11763     | LATCH                                |        | 9.04   |
| 4    | 1   | E11764     | LATCH LOCK                           | *      | 3.00   |
| 5    | 1   | E11766     | LATCH SPRING                         | 2      | 0.10   |
| 6    | 1   | E12529     | LATCH LUG PIN                        |        | 0.03   |
| 7    | 1   | E26813-2   | HINGE PIN                            | *      | 4.09   |
| 8    | 1   | E26814     | LATCH PIN                            | *      | 2.09   |
| 9    | 1   | E26817     | LINK BLOCK                           |        | 3.08   |
| 10   | 1   | E26813-2-R | HINGE PIN RETAINER                   | 2      | 0.12   |
| 11   | 1   | E8156      | LATCH PIN RETAINER                   | 2      | 0.12   |
| 12   | 2   | E8145-1    | UPPER LINK BLOCK BOLT, NUT, & COTTER | 2      | 0.12   |
| 13   | 2   | E8145-2    | LOWER LINK BLOCK BOLT, NUT, & COTTER | 2      | 0.12   |
| 14   | 1   | E940308-1  | GREASE ZERT                          | 2      | 0.02   |

1 YEAR SPARES, FOR 2 YEAR SPARES ADD 1 EA. OF \* THESE ITEMS

bridge the gap.

## KET SLX—65 (65 TON) SIDE DOOR ELEVATOR

| KET NO. | RANGE           | WT.    |
|---------|-----------------|--------|
| E38-045 | 3 1/2" - 5 "    | 160.00 |
| E38-067 | 5 1/2" - 8 5/8" | 190.00 |
| E38-809 | 9" - 10 3/4"    | 218.00 |
| E38-137 | 11" - 14 1/4"   | 275.00 |



### KET REPLACEMENT PARTS FOR SLX-65 ELEVATOR

| KET #       | ITEM # | DESCRIPTION                                     | SPARES | # REQ | WT.  |
|-------------|--------|-------------------------------------------------|--------|-------|------|
| E29980-4    | 1      | LATCH LOCK PIN                                  |        | 1     | 0.50 |
| E31331      | 2      | LATCH                                           |        | 1     | 4.50 |
| E31332      | 3      | LATCH LOCK                                      |        | 1     | 3.50 |
| E31383      | 4      | LATCH SPRING                                    | 2      | 1     | 0.45 |
| E31404      | 5      | LATCH LOCK SPRING                               | 2      | 1     | 0.19 |
| E31407      | 6      | LATCH LOCK ROLLER                               |        | 1     | 0.38 |
| E31584      | 7      | LATCH LOCK ROLLER PIN                           |        | 1     | 0.13 |
| E32424-3    | 8      | LATCH PIN                                       |        | 1     | 0.83 |
| E34X6       | 9      | LINK BLOCK BOLT (E38-045 FRAME)                 | 2      | 2     | 0.75 |
| E34X7       | 9      | LINK BLOCK BOLT (E38-067, 38-137, 38-809 FRAME) | 2      | 2     | 0.75 |
| E34X7-C     | 10     | LINK BLOCK BOLT COTTER                          |        | 1     | 0.04 |
| E34X7-W     | 11     | LINK BLOCK BOLT LOCK WASHER                     |        | 1     | 0.07 |
| E34611      | 12     | HINGE PIN (E38-137, 38-809 FRAME)               |        | 1     | 2.00 |
| E34612      | 12     | HINGE PIN (E38-045, 38-067 FRAME)               |        | 1     | 2.00 |
| E34611-R    | 13     | HINGE PIN RETAINER (E38-137, 38-809 FRAME)      |        | 1     | 0.06 |
| E34614      | 13     | HINGE PIN RETAINER (E38-045, 38-067 FRAME)      |        | 1     | 0.06 |
| E940308-1   | 14     | 1/8 NPT GREASE ZERT                             | 1      | 1     | 0.08 |
| E947128-120 | 15     | LATCH PIN RETAINER                              | 1      | 1     | 0.08 |
| E38-051-5   | 16     | SAFETY LATCH LOCK PIN                           | 2      | 1     | 0.50 |

bridge the gap.

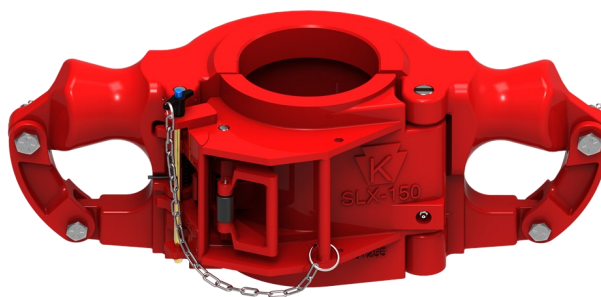
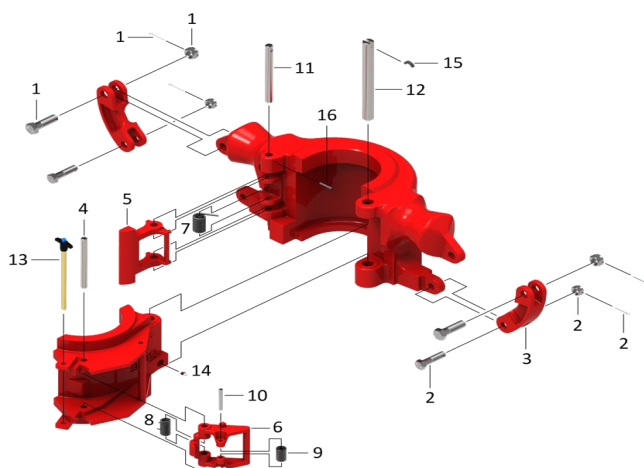
# KET SLX (150– 250 TON) SIDE DOOR ELEVATOR

## (150 Ton)

| KET NO. | 150 TON RANGE    | WT.    |
|---------|------------------|--------|
| E31239  | 5" - 8 5/8"      | 300.00 |
| E33950  | 9 5/8" - 10 3/4" | 420.00 |
| E33982  | 11 3/4" - 14"    | 475.00 |

## (250 Ton)

| KET NO. | 250 TON RANGE    | WT.    |
|---------|------------------|--------|
| E31250  | 5 1/2" - 8 5/8"  | 300.00 |
| E33650  | 9 5/8" - 10 3/4" | 420.00 |
| E33850  | 11 3/4" - 14"    | 475.00 |



## KET REPLACEMENT PARTS FOR SLX-150 & 250 ELEVATORS

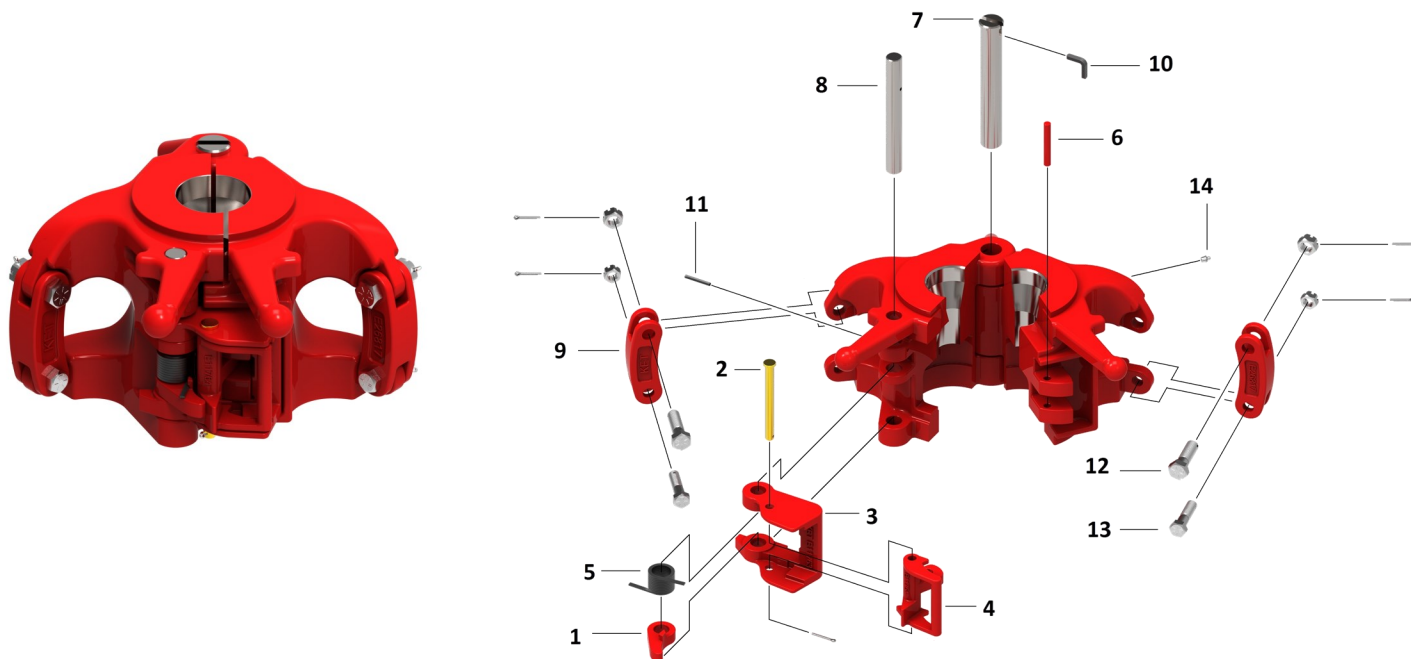
| KET #       | ITEM # | DESCRIPTION                                      | SPARES | # REQ | WT.  |
|-------------|--------|--------------------------------------------------|--------|-------|------|
| E8145-1     | 1      | UPPER LINK BLOCK BOLT, NUT, CUTTER               | 2      | 2     | 1.13 |
| E8145-2     | 2      | LOWER LINK BLOCK BOLT, NUT, CUTTER               | 2      | 2     | 1.13 |
| E9519       | 3      | LINK BLOCK                                       |        | 2     | 5.50 |
| E29980-4    | 4      | LATCH LOCK PIN                                   | 1      | 1     | 0.50 |
| E31331      | 5      | LATCH                                            |        | 1     | 4.50 |
| E31332      | 6      | LATCH LOCK                                       |        | 1     | 3.50 |
| E31383      | 7      | LATCH SPRING                                     | 2      | 1     | 0.44 |
| E31404      | 8      | LATCH LOCK SPRING                                | 2      | 2     | 0.19 |
| E31407      | 9      | LATCH LOCK ROLLER                                |        | 1     | 0.38 |
| E31584      | 10     | LATCH LOCK ROLLER PIN                            |        | 1     | 0.13 |
| E32424-5    | 11     | LATCH PIN                                        | 1      | 1     | 0.75 |
| E34611      | 12     | HINGE PIN (E31239 FRAME) (E31250 FRAME)          |        | 1     | 4.44 |
| E33953      | 12     | HINGE PIN (E33950 FRAME) (E33650 FRAME)          |        | 1     | 6.25 |
| E33985      | 12     | HINGE PIN (E33982 FRAME) (E33850 FRAME)          |        | 1     | 8.50 |
| E39-051-5   | 13     | SAFETY LATCH LOCK PIN                            | 2      | 1     | 0.50 |
| E940308-1   | 14     | 1/8 NPT GREASE ZERT                              | 1      | 1     | 0.80 |
| E34614      | 15     | HINGE PIN RETAINER (E31239 FRAME) (E31250 FRAME) |        | 1     | 0.09 |
| E32918      | 15     | HINGE PIN RETAINER (E33950 FRAME) (E33650 FRAME) |        | 1     | 0.06 |
| E32892      | 15     | HINGE PIN RETAINER (E33982 FRAME) (E33850 FRAME) |        | 1     | 0.04 |
| E947128-120 | 16     | LATCH PIN RETAINER (SPRING PIN)                  | 1      | 1     | 0.08 |

1 YEAR SPARES, FOR 2 YEAR SPARES ADD 1 EA. OF \* THESE ITEMS

bridge the gap.

# KET MG (100 TON) BOTTLENECK ELEVATOR

| PART NO. | RANGE       | SIZE OF LINKS  | WEIGHT |
|----------|-------------|----------------|--------|
| E30157   | 2-3/8" - 5" | 1-3/4"- 2-3/4" | 240.00 |



## REPLACEMENT PARTS FOR MG ELEVATORS

| ITEM | QTY | PART NO.   | DESCRIPTION                          | SPARES | WEIGHT |
|------|-----|------------|--------------------------------------|--------|--------|
| 1    | 1   | E11581     | LATCH CAM                            | 1      | 0.12   |
| 2    | 1   | E11759     | LATCH LOCK PIN                       | 1      | 2.09   |
| 3    | 1   | E11763     | LATCH                                |        | 9.04   |
| 4    | 1   | E11764     | LATCH LOCK                           | *      | 3.00   |
| 5    | 1   | E11766     | LATCH SPRING                         | 2      | 0.05   |
| 6    | 1   | E12529     | LATCH LUG PIN                        |        | 0.03   |
| 7    | 1   | E26813-2   | HINGE PIN                            | *      | 4.09   |
| 8    | 1   | E26814     | LATCH PIN                            | *      | 2.09   |
| 9    | 1   | E26817     | LINK BLOCK                           |        | 3.08   |
| 10   | 1   | E26813-2-R | HINGE PIN RETAINER                   | 2      | 0.12   |
| 11   | 1   | E8156      | LATCH PIN RETAINER                   | 2      | 0.12   |
| 12   | 2   | E8145-1    | UPPER LINK BLOCK BOLT, NUT, & COTTER | 2      | 0.12   |
| 13   | 2   | E8145-2    | LOWER LINK BLOCK BOLT, NUT, & COTTER | 2      | 0.12   |
| 14   | 1   | E940308-1  | GREASE ZERT                          | 2      | 0.02   |

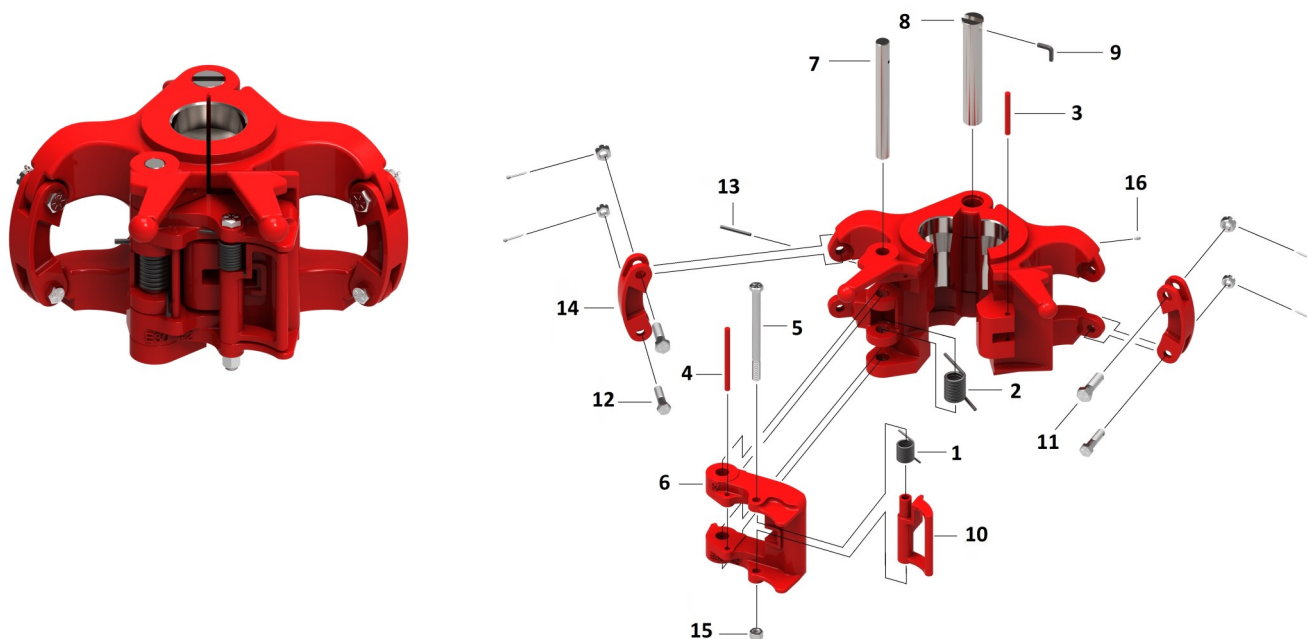
1 YEAR SPARES, FOR 2 YEAR SPARES ADD 1 EA. OF \* THESE ITEMS



bridge the gap.

# KET RG (150 TON) BOTTLENECK ELEVATOR

| PART NO. | RANGE         | SIZE OF LINKS | WEIGHT |
|----------|---------------|---------------|--------|
| E30155   | 2-3/8"-4-1/2" | 1-3/4"-2-3/4" | 320.00 |



## REPLACEMENT PARTS FOR RG ELEVATORS

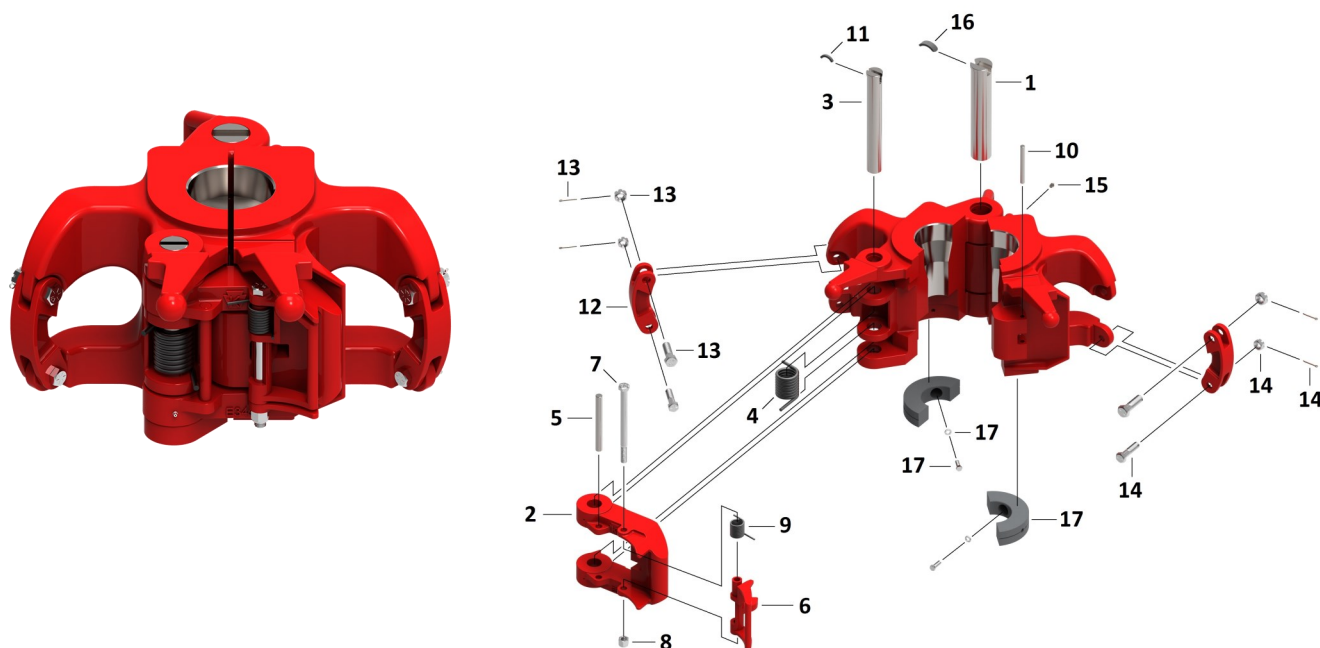
| ITEM | QTY | PART NO.  | DESCRIPTION                          | SPARES | WEIGHT |
|------|-----|-----------|--------------------------------------|--------|--------|
| 1    | 1   | E13188    | LATCH LOCK SPRING                    | 2      | 0.30   |
| 2    | 1   | E23546    | LATCH SPRING                         | 2      | 1.00   |
| 3    | 1   | E23547    | LATCH LUG PIN                        |        | 0.32   |
| 4    | 1   | E23548    | SPRING STOP PIN                      | 1      | 0.94   |
| 5    | 1   | E23553    | LATCH LOCK BOLT & NUT                | 2      | 1.30   |
| 6    | 1   | E30142    | LATCH                                |        | 44.00  |
| 7    | 1   | E30148    | LATCH PIN                            | *      | 4.00   |
| 8    | 1   | E30149    | HINGE PIN                            | *      | 7.00   |
| 9    | 1   | E30149-1  | HINGE PIN RETAINER                   | 2      | 0.13   |
| 10   | 1   | E30150    | LATCH LOCK                           | *      | 4.00   |
| 11   | 2   | E8145-1   | UPPER LINK BLOCK BOLT, NUT, & COTTER |        | 0.50   |
| 12   | 2   | E8145-2   | LOWER LINK BLOCK BOLT, NUT, & COTTER |        | 0.75   |
| 13   | 1   | E8156     | LATCH PIN RETAINER                   | 2      | 0.10   |
| 14   | 2   | E9519-1   | LINK BLOCK                           |        | 5.50   |
| 15   | 1   | E939484-8 | LATCH LOCK NUT                       |        | 0.20   |
| 16   | 1   | E940308-1 | GREASE ZERT                          | 2      | 0.10   |

1 YEAR SPARES, FOR 2 YEAR SPARES ADD 1 EA. OF \* THESE ITEMS

bridge the gap.

# KET MGG (250 TON) BOTTLENECK ELEVATOR

| PART NO. | RANGE         | SIZE OF LINKS | WEIGHT |
|----------|---------------|---------------|--------|
| E35005   | 3-1/2"-5-1/2" | 2-1/4"-3-1/2" | 600.00 |



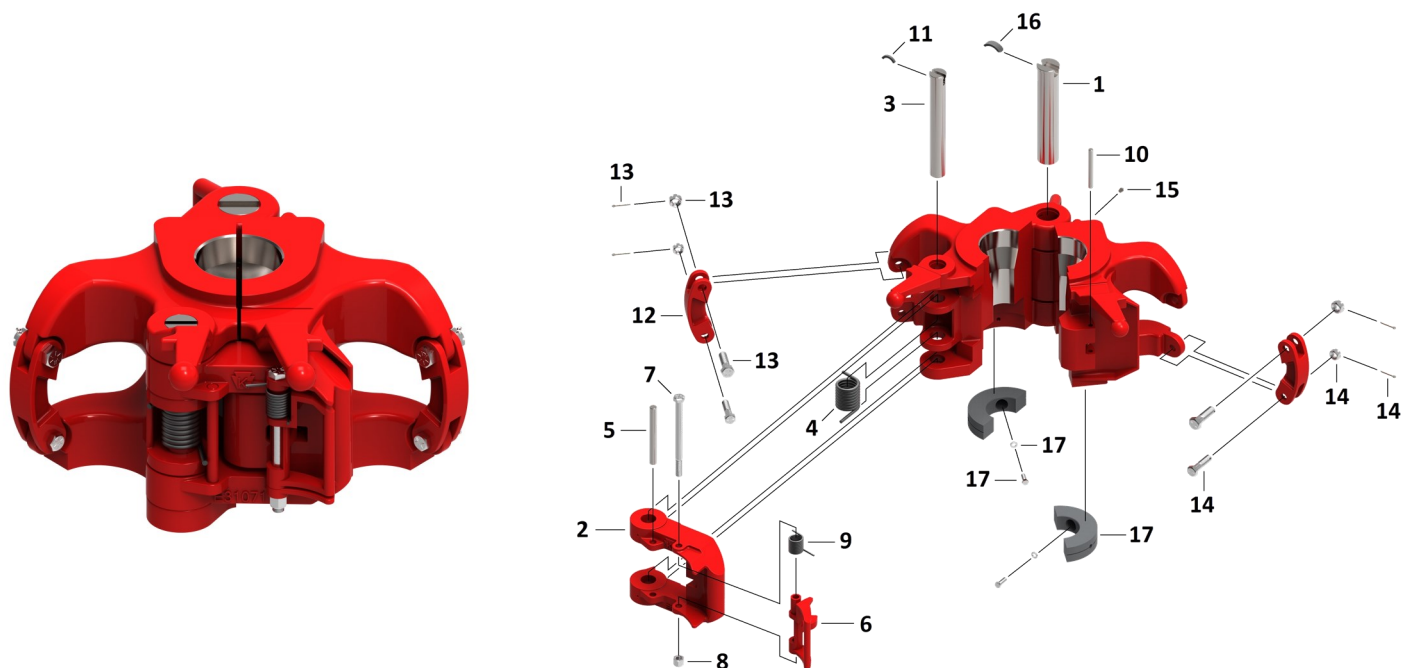
## REPLACEMENT PARTS FOR MGG ELEVATORS

| ITEM                                                        | QTY | PART NO.  | DESCRIPTION                                     | SPARES | WEIGHT |
|-------------------------------------------------------------|-----|-----------|-------------------------------------------------|--------|--------|
| 1                                                           | 1   | E34908    | HINGE PIN                                       | *      | 15.50  |
| 2                                                           | 1   | E34906    | LATCH                                           |        | 57.00  |
| 3                                                           | 1   | E34907    | LATCH PIN                                       | *      | 7.31   |
| 4                                                           | 1   | E34909    | LATCH SPRING                                    | 2      | 2.50   |
| 5                                                           | 1   | E13185    | SPRING STOP PIN                                 | 1      | 0.94   |
| 6                                                           | 1   | E13152    | LATCH LOCK                                      | *      | 4.00   |
| 7                                                           | 1   | E15101    | LATCH LOCK BOLT & NUT                           | 2      | 1.30   |
| 8                                                           | 1   | E939484-8 | LATCH LOCK BOLT NUT                             | 2      | 0.20   |
| 9                                                           | 1   | E13188    | LATCH LOCK SPRING                               | 2      | 0.30   |
| 10                                                          | 1   | E13190    | DOOR LUG PIN                                    |        | 0.32   |
| 11                                                          | 1   | E34911    | LATCH PIN RETAINER                              | 2      | 0.13   |
| 12                                                          | 2   | E9519     | LINK BLOCK                                      |        | 5.50   |
| 13                                                          | 2   | E8145-1   | UPPER LINK BLOCK BOLT, NUT, & COTTER            | 2      | 0.50   |
| 14                                                          | 2   | E8145-2   | LOWER LINK BLOCK BOLT, NUT, & COTTER            | 2      | 0.75   |
| 15                                                          | 1   | E940308-1 | GREASE FITTING                                  |        | 0.10   |
| 16                                                          | 1   | E34910    | HINGE PIN RETAINER                              |        | 0.19   |
| 17                                                          | 1   | E200275-  | 3-1/2"-5-1/2" WEAR BUSHING F/MGG & GG ELEVATORS | 2      | 2.75   |
| 1 YEAR SPARES, FOR 2 YEAR SPARES ADD 1 EA. OF * THESE ITEMS |     |           |                                                 |        |        |

bridge the gap.

# KET GG (350 TON) BOTTLENECK ELEVATOR

| PART NO. | RANGE         | SIZE OF LINKS | WEIGHT |
|----------|---------------|---------------|--------|
| E31068   | 3-1/2"-5-7/8" | 2-1/4"-3-1/2" | 700.00 |



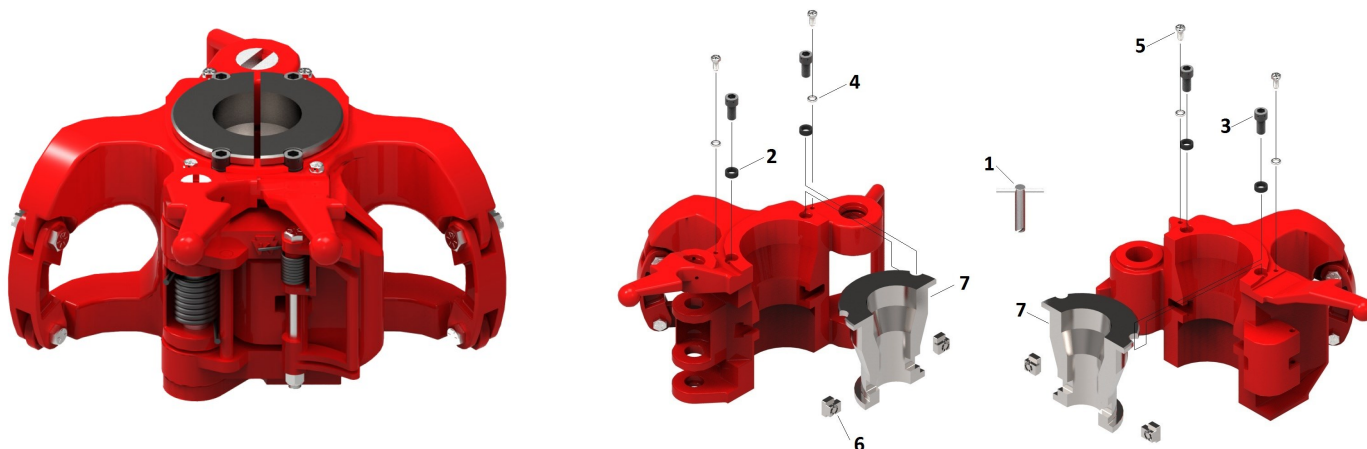
## REPLACEMENT PARTS FOR GG ELEVATORS

| ITEM                                                        | QTY | PART NO.  | DESCRIPTION                                       | SPARES | WEIGHT |
|-------------------------------------------------------------|-----|-----------|---------------------------------------------------|--------|--------|
| 1                                                           | 1   | E33998    | HINGE PIN                                         | *      | 15.50  |
| 2                                                           | 1   | E31071    | LATCH                                             |        | 57.00  |
| 3                                                           | 1   | E33999    | LATCH PIN                                         | *      | 7.31   |
| 4                                                           | 1   | E18416    | LATCH SPRING                                      | 2      | 2.50   |
| 5                                                           | 1   | E13185    | SPRING STOP PIN                                   | 1      | 0.94   |
| 6                                                           | 1   | E13152    | LATCH LOCK                                        | *      | 4.00   |
| 7                                                           | 1   | E15101    | LATCH LOCK BOLT                                   | 2      | 1.30   |
| 8                                                           | 1   | E939484-8 | LATCH LOCK BOLT NUT                               | 2      | 0.20   |
| 9                                                           | 1   | E13188    | LATCH LOCK SPRING                                 | 2      | 0.30   |
| 10                                                          | 1   | E13190    | DOOR LUG PIN                                      |        | 0.32   |
| 11                                                          | 1   | E32892    | LATCH PIN RETAINER                                | 2      | 0.13   |
| 12                                                          | 2   | E9519     | LINK BLOCK                                        |        | 5.50   |
| 13                                                          | 2   | E8145-1   | UPPER LINK BLOCK BOLT, NUT, & COTTER              | 2      | 0.50   |
| 14                                                          | 2   | E8145-2   | LOWER LINK BLOCK BOLT, NUT, & COTTER              | 2      | 0.75   |
| 15                                                          | 1   | E940308-1 | GREASE FITTING                                    |        | 0.10   |
| 16                                                          | 1   | E31074    | HINGE PIN RETAINER                                |        | 0.19   |
| 17                                                          | 1   | E200275-  | 3-1/2" - 5-1/2" WEAR BUSHING F/MGG & GG ELEVATORS | 2      | 2.75   |
| 1 YEAR SPARES, FOR 2 YEAR SPARES ADD 1 EA. OF * THESE ITEMS |     |           |                                                   |        |        |

bridge the gap.

## KET BUSHING TYPE ELEVATOR (MGG-GG)

| PART NO.        | RANGE     | SIZE OF LINKS | WEIGHT (LBS.) |
|-----------------|-----------|---------------|---------------|
| E35005-IB (MGG) | 2-7/8"-5" | 2-1/4"-3-1/2" | 600.00        |
| E31068-IB (GG)  | 2-7/8"-5" | 2-1/4"-3-1/2" | 750.00        |



### REPLACEMENT PARTS FOR BUSHING TYPE ELEVATORS

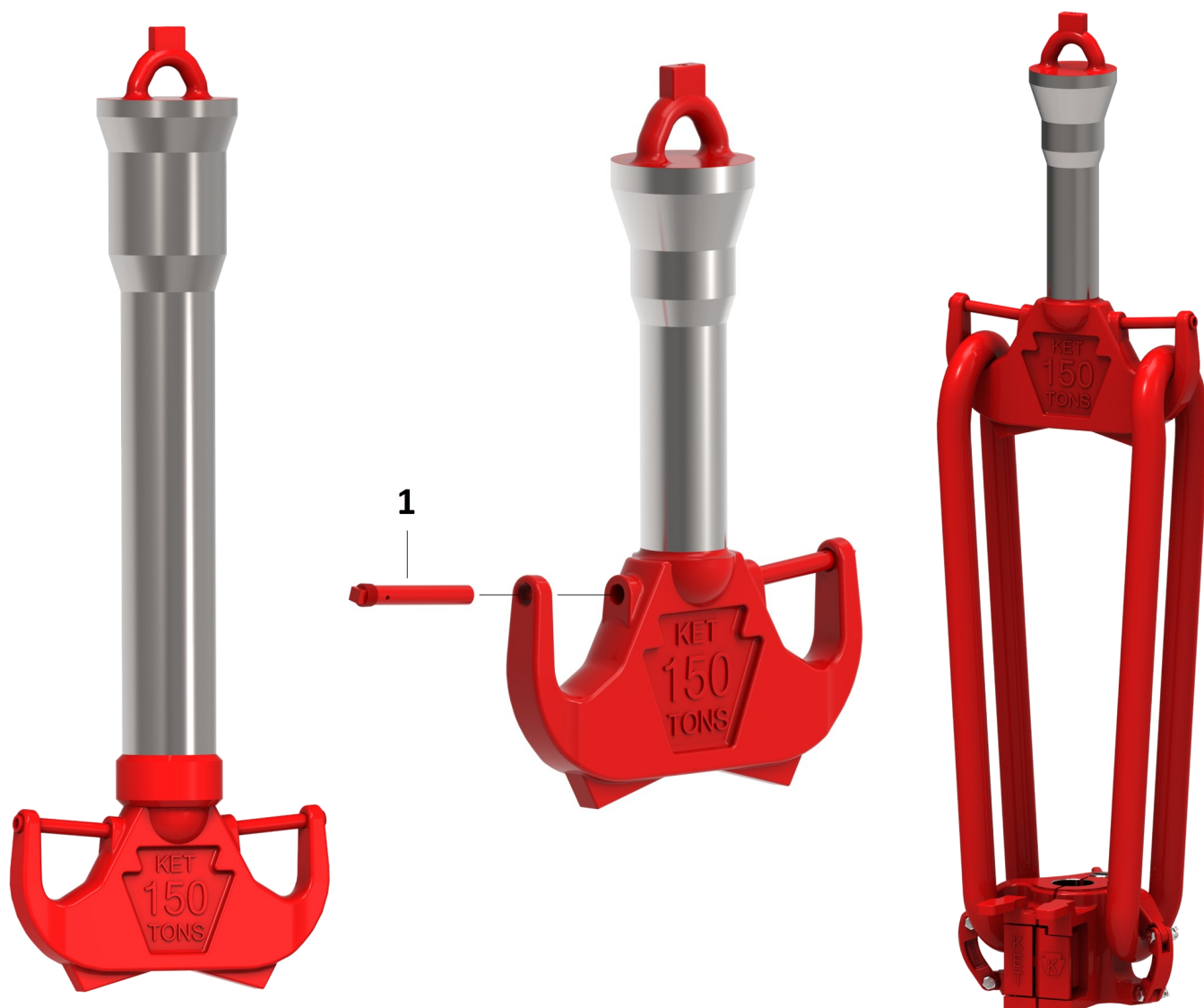
| ITEM | QTY | PART NO.    | DESCRIPTION                                           | SPARES | WEIGHT (LBS.) |
|------|-----|-------------|-------------------------------------------------------|--------|---------------|
| 1    | 1   | E35002-T    | LOCK-BLOCK TOOL                                       | 1      | 0.755         |
| 2    | 4   | E35001-S    | RETAINER BUSHING                                      | 4      | 0.065         |
| 3    | 4   | E35001      | RETAINER BOLT                                         | 4      | 0.300         |
| 4    | 4   | E35007      | LOCK WASHER                                           | 4      | 0.015         |
| 5    | 4   | E35006      | SAFETY WIRE SCREW                                     | 4      | 0.075         |
| 6    | 4   | E35002-ASSY | LOCK-BLOCK-ASSY.                                      | 4      | 0.335         |
| 7    | 1   | E35000-     | MGG BUSHING SET (SEE CHARTS BELOW FOR SPECIFIC SIZES) | 1      | SEE BELOW     |
| 7    | 1   | E31000-     | GG BUSHING SET (SEE CHARTS BELOW FOR SPECIFIC SIZES)  | 1      | SEE BELOW     |
|      | 1   | E35000-118  | 2-7/8"-BUSHING F/MGG                                  | 1      | 68.00         |
|      | 1   | E35000-120  | 3-1/2"-BUSHING F/MGG                                  | 1      | 66.00         |
|      | 1   | E35000-121  | 4" FH BUSHING F/MGG                                   | 1      | 64.00         |
|      | 1   | E35000-220  | 4" SH BUSHING F/MGG                                   | 1      | 65.00         |
|      | 1   | E35000-122  | 4-1/2" BUSHING F/MGG                                  | 1      | 62.00         |
|      | 1   | E35000-123  | 5" BUSHING F/MGG                                      | 1      | 59.00         |
|      | 1   | E31000-120  | 3-1/2" BUSHING F/GG                                   | 1      | 70.00         |
|      | 1   | E31000-121  | 4" FH BUSHING F/GG                                    | 1      | 68.00         |
|      | 1   | E31000-220  | 4" SH BUSHING F/GG                                    | 1      | 69.00         |
|      | 1   | E31000-122  | 4-1/2" BUSHING F/GG                                   | 1      | 66.00         |
|      | 1   | E31000-123  | 5" BUSHING F/GG                                       | 1      | 64.00         |

1 YEAR SPARES. FOR 2 YEARS SPARES ADD 1 EA. OF \* THESE ITEMS.

bridge the gap.

## KET BECKETS AND BAILS

| ITEM | PART NO.          | DESCRIPTION                                              | WEIGHT |
|------|-------------------|----------------------------------------------------------|--------|
|      | E31189-120-124    | KET 150 TON "DC" BECKET FOR 120 THRU 124 BORE CODES      | 176.00 |
|      | E31189-120-124-XL | KET XL 150 "DC" TON BECKET 120 THRU 124 BORE CODES       | 371.00 |
|      | E31189-123-740-XL | KET XL 150 TON "DC" BECKET FOR 123 THRU 740 BORE CODES   | 425.00 |
|      | E70508-1036       | 2" x 36" 100 TON PERFECTION LINK BAILS                   | 125.00 |
|      | E70508-1042       | 2" X 42" 100 TON PERFECTION LINK BAILS                   | 150.00 |
|      | E70508-1542       | 2-1/2" X 42" 150 TON PERFECTION LINK BAILS               | 175.00 |
| 1    | E31189-1          | ONE PIECE THREADED LINK RETAINER PIN W/ COTTER F/ BECKET | .1.18  |



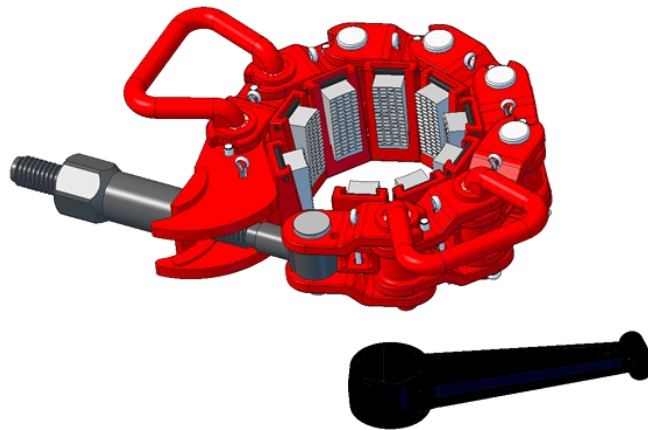
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## KET TYPE “MP” SAFETY CLAMPS

The KET Type “MP” Safety Clamp is ideal to help safeguard against dropping strings of flush joint tubing while making up or breaking out the string. The multi-link design provides uniform pressure around the pipe reducing the risk of crushing or damaging the pipe. Each assembly is provided with its own aluminum box as a standard option.



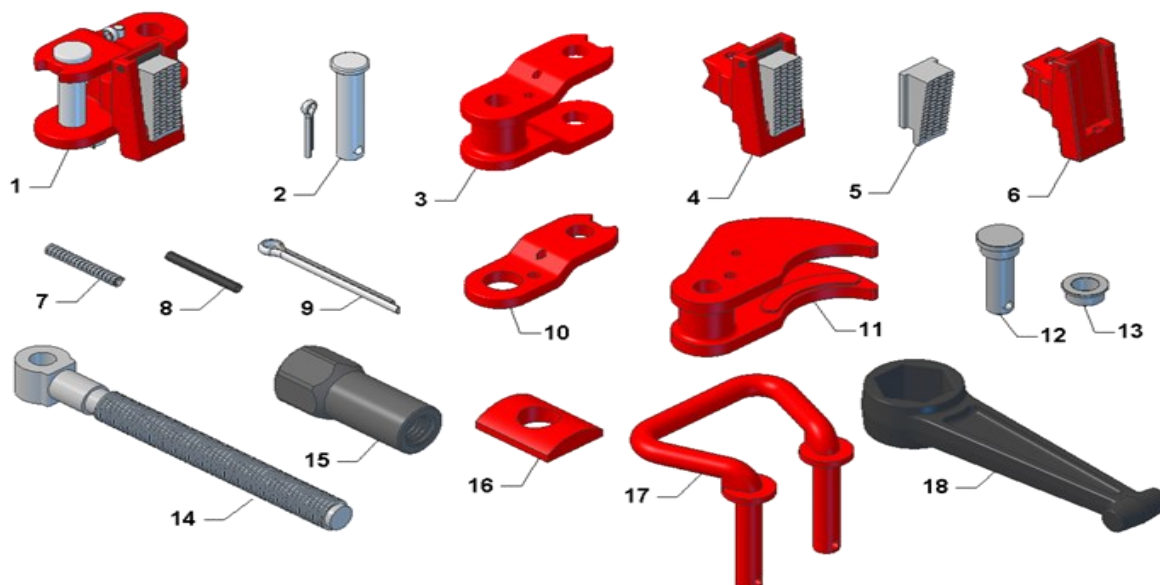
### KET TYPE “MP” SAFETY CLAMP ASSEMBLIES COMPLETE

| PART NO.     | RANGE             | REF#  | # LINKS | GRIPPING DIES | WT.    |
|--------------|-------------------|-------|---------|---------------|--------|
| <b>MP-S</b>  |                   |       |         |               |        |
| A31-009      | 2 7/8" - 4 1/8"   | 33030 | 7       | 8             | 128.00 |
| A31-010      | 4" - 5"           | 33031 | 8       | 9             | 133.00 |
| <b>MP-R</b>  |                   |       |         |               |        |
| A31-011      | 4 1/2" - 5 5/8"   | 33011 | 7       | 8             | 120.00 |
| A31-012      | 5 1/2" - 7"       | 33012 | 8       | 9             | 130.00 |
| A31-013      | 6 3/4" - 8 1/4"   | 33013 | 9       | 10            | 138.00 |
| A31-014      | 8" - 9 1/4"       | 33014 | 10      | 11            | 147.00 |
| A31-015      | 9 1/4" - 10 1/2"  | 33015 | 11      | 12            | 155.00 |
| <b>MP-M</b>  |                   |       |         |               |        |
| A31-016      | 10 1/2" - 11 1/2" | 33016 | 12      | 13            | 163.00 |
| A31-017      | 11 1/2" - 12 1/2" | 33017 | 13      | 14            | 171.00 |
| A31-018      | 12 1/2" - 13 5/8" | 33018 | 14      | 15            | 179.00 |
| A31-019      | 13 5/8" - 14 3/4" | 33019 | 15      | 16            | 187.00 |
| A31-020      | 14 3/4" - 15 7/8" | 31020 | 16      | 17            | 195.00 |
| <b>MP-L</b>  |                   |       |         |               |        |
| A31-021      | 15 7/8" - 17"     | 33021 | 17      | 18            | 215.00 |
| A31-022      | 17" - 18 1/2"     | 33022 | 18      | 19            | 223.00 |
| A31-023      | 18 1/8" - 19 3/8" | 33023 | 19      | 20            | 231.00 |
| <b>MP-XL</b> |                   |       |         |               |        |
| A31-024      | 19 3/8" - 20 3/8" | 33024 | 19      | 20            | 280.00 |
| A31-025      | 20 3/8" - 21 1/2" | 33025 | 20      | 21            | 288.00 |
| A31-032      | 21" - 22 5/8"     | 33032 | 21      | 22            | 296.00 |
| A31-033      | 22 5/8" - 23 3/4" | 33033 | 22      | 23            | 304.00 |
| A31-034      | 23 3/4" - 24 7/8" | 33034 | 23      | 24            | 312.00 |
| A31-035      | 24 7/8" - 26"     | 33035 | 24      | 25            | 320.00 |
| A31-036      | 26" - 27 1/8"     | 33036 | 25      | 26            | 328.00 |
| A31-039      | 29 3/8" - 30 1/2" | 33039 | 28      | 29            | 336.00 |



bridge the gap.

## KET TYPE “MP” SAFETY CLAMPS



### REPLACEMENT PARTS FOR KET “MP” TYPE SAFETY CLAMPS

| PART NO. | ITEM# | DESCRIPTION               | CLAMP TYPE         | REF.#    | QTY. | WT.   |
|----------|-------|---------------------------|--------------------|----------|------|-------|
| A31-335  | 1     | LINK COMPLETE             | MP-S ONLY          | 3335     | AR   | 9.00  |
| A31-319  | 1     | LINK COMPLETE             | ALL EXCEPT MP-S    | 3319     | AR   | 8.75  |
| A31-307  | 2     | PIN, FOR LINK (w/COTTER)  | ALL                | 3307     | AR   | .75   |
| A31-306  | 3     | LINK (W/COTTER)           | ALL                | 3306     | AR   | 4.50  |
| A31-325  | 4     | CARRIER ASSY. (w/DIE)     | MP-S ONLY          | 3325     | AR   | 3.00  |
| A31-324  | 4     | CARRIER ASSY. (w/DIE)     | ALL EXCEPT MP-S    | 3324     | AR   | 2.50  |
| A31-333  | 5     | DIE (w/COTTER)            | MP-S ONLY          | 3333     | AR   | 1.50  |
| A31-310  | 5     | DIE (w/COTTER)            | ALL EXCEPT MP-S    | 3310     | AR   | 1.00  |
| A31-309  | 6     | CARRIER (LESS DIE)        | ALL                | 3309     | AR   | 2.50  |
| A31-311  | 7     | SPRING                    | ALL                | 3311     | AR   | .10   |
| A31-418  | 8     | ROLL PIN (DIE KEEPER)     | ALL                | 51604-18 | AR   | .10   |
| A31-528  | 9     | COTTER PIN (f/CARRIER)    | ALL                | 51405-28 | AR   | .18   |
| A31-318  | 10    | SIDE BAR LINKS (PAIR)     | ALL                | 3318     | AR   | 2.50  |
| A31-304  | 11    | LATCH LINK                | ALL EXCEPT MP-XL   | 3304     | 1    | 7.00  |
| A31-321  | 11    | LATCH LINK                | MP-XL ONLY         | 3321     | 1    | 14.00 |
| A31-308  | 12    | PIN FOR SCREW, (w/COTTER) | ALL                | 3308     | 1    | .50   |
| A31-315  | 13    | BUSHING F/SCREW PIN       | ALL                | 3315     | 1    | .33   |
| A31-510  |       | COTTER F/LINK PIN         | ALL                | 51405-10 | AR   | .08   |
| A31-302  | 14    | SCREW                     | ALL                | 3302     | 1    | 5.25  |
| A31-303  | 15    | NUT F/ SCREW              | ALL                | 2714     | 1    | 1.00  |
| A31-714  | 16    | THRUST WASHER             | ALL                | 3303     | 1    | 3.50  |
| A31-305  | 17    | HANDLE                    | MP-S, MP-R, & MP-M | 3305     | 2    | 4.50  |
| A31-305  | 17    | HANDLE                    | MP-L & MP-XL       | 3305     | 4    | 4.50  |
| A31-316  | N/P   | HOLD DOWN LUG             | ALL                | 3316     | OPT. | 5.75  |
| A31-317  | N/P   | LIFTING EYE               | ALL                | 3317     | OPT. | 4.75  |
| A31-320  | 18    | NUT WRENCH                | ALL                | 3320     | 1    | 5.00  |



bridge the gap.

## KET TYPE “MP” SAFETY CLAMPS

### RECOMMENDED SPARE PARTS FOR 1 YEAR FOR “MP” TYPE CLAMPS

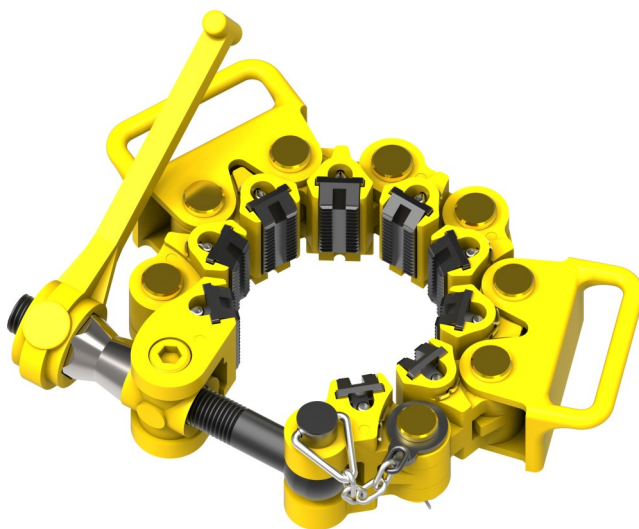
| PART NO. | DESCRIPTION  | MP -S | MP -R | MP -M | MP -L | MP -XL |
|----------|--------------|-------|-------|-------|-------|--------|
| A31-333  | DIE W/COTTER | 4     |       |       |       |        |
| A31-310  | DIE W/COTTER |       | 6     | 8     | 10    | 13     |
| A31-311  | SPRING       | 9     | 12    | 17    | 20    | 26     |
| A31-528  | PIN W/COTTER | 4     | 6     | 8     | 10    | 13     |
| A31-418  | ROLL PIN     | 9     | 12    | 17    | 20    | 26     |

bridge the gap.

## KET TYPE “C” SAFETY CLAMP

The KET Type “C” Safety Clamp is one of the most valuable tools on the Rig Floor. It helps guard against dropping flush-joint pipe, streamlined drill collars, etc. into the hole while making-up or breaking-out the string. Literally, it has dozens of money and time-saving applications in oilfield work, in addition to giving increased protection against fishing jobs.

The Safety Clamp consists of individual links, flexibly hinged together. Each link has a separate tapered slip which acts as a gripping member, much like a tapered rotary slip, and each slip is held in a retracted position on the taper by spring tension. When the clamp is tightened, each small slip takes a firm initial grip on the surface of the pipe. Should the pipe start to fall, or should load increase occur against the slips, the taper mounting causes each slip to wedge tighter against the surface of the pipe to increase the grip or lock the pipe against further movement.



### CLAMPS WITH HANDLES & WRENCH

#### TYPE “CR” (SINGLE SCREW)

| PART NO. | RANGE O.D. SIZE  | REFERENCE | LINKS REQUIRED | WT.   |
|----------|------------------|-----------|----------------|-------|
| A12-127  | 3 3/4" - 4 5/8"  | 7624-5007 | 7              | 46.00 |
| A12-128  | 4 1/2" - 5 5/8"  | 7624-5008 | 8              | 55.00 |
| A12-129  | 5 1/2" - 6 5/8"  | 7624-5009 | 9              | 60.00 |
| A12-130  | 6 1/2" - 7 5/8"  | 7624-5010 | 10             | 64.00 |
| A12-131  | 7 1/2" - 8 5/8"  | 7624-5011 | 11             | 69.00 |
| A12-132  | 8 1/2" - 9 5/8"  | 7624-5012 | 12             | 73.00 |
| A12-133  | 9 1/2" - 10 5/8" | 7624-5013 | 13             | 78.00 |

#### TYPE “CL” (SINGLE SCREW)

| PART NO. | RANGE O.D. SIZE   | LINKS REQUIRED | WT.   |
|----------|-------------------|----------------|-------|
| A12-134  | 10 1/2" - 11 5/8" | 14             | 72.00 |
| A12-135  | 11 1/2" - 12 5/8" | 15             | 77.00 |
| A12-136  | 12 1/2" - 13 5/8" | 16             | 82.00 |
| A12-137  | 13 1/2" - 14 5/8" | 17             | 87.00 |
| A12-138  | 14 1/2" - 15 5/8" | 18             | 92.00 |

bridge the gap.

## KET TYPE "C" SAFETY CLAMP

### TYPE "CXL" (DOUBLE SCREW)

| PART NO. | RANGE O.D. SIZE | LINKS REQUIRED | WT.    |
|----------|-----------------|----------------|--------|
| A12-145  | 15 1/2" - 17"   | 18             | 114.00 |
| A12-146  | 16 1/2" - 18"   | 19             | 119.00 |
| A12-147  | 17 1/2" - 19"   | 20             | 124.00 |
| A12-148  | 18 1/2" - 20"   | 21             | 129.00 |

### CLAMPS WITH LIFTING CLEVIS- TYPE "CL" (SINGLE SCREW)

| PART NO. | RANGE O.D. SIZE   | LINKS REQUIRED | WT.    |
|----------|-------------------|----------------|--------|
| A12-150  | 10 1/2" - 11 5/8" | 14             | 83.00  |
| A12-151  | 11 1/2" - 12 5/8" | 15             | 88.00  |
| A12-152  | 12 1/2" - 13 5/8" | 16             | 93.00  |
| A12-153  | 13 1/2" - 14 5/8" | 17             | 98.00  |
| A12-154  | 14 1/2" - 15 5/8" | 18             | 102.00 |

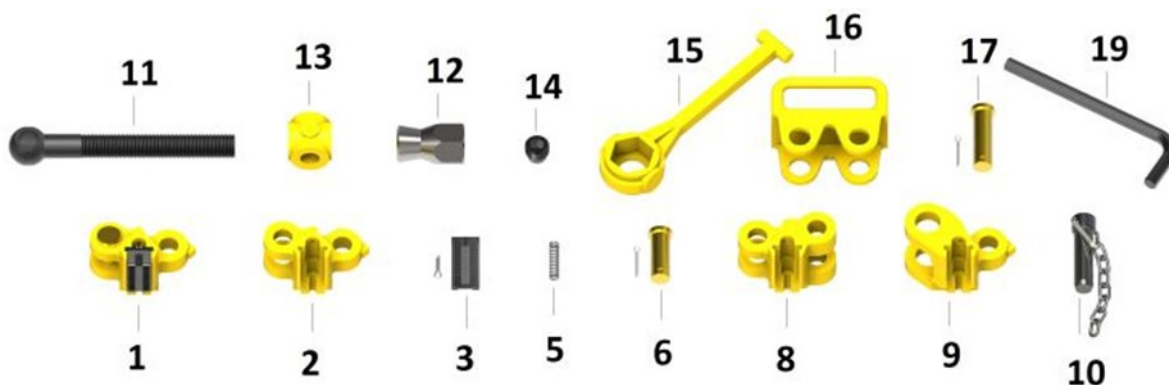
### CLAMPS WITH LIFTING CLEVIS- TYPE "C X L" (DOUBLE SCREW)

| PART NO. | RANGE O.D. SIZE | LINKS REQUIRED | WT.    |
|----------|-----------------|----------------|--------|
| A12-155  | 15 1/2" - 17"   | 18             | 117.00 |
| A12-156  | 16 1/2" - 18"   | 19             | 121.00 |
| A12-157  | 17 1/2" - 19"   | 20             | 126.00 |
| A12-158  | 18 1/2" - 20"   | 21             | 131.00 |
| A12-159  | 19 1/2" - 21"   | 22             | 133.00 |
| A12-160  | 21 1/8" - 23"   | 24             | 136.00 |
| A12-161  | 24 1/8" - 26"   | 27             | 140.00 |
| A12-162  | 29 1/2" - 31"   | 32             | 152.00 |
| A12-163  | 35 1/2" - 37"   | 38             | 164.00 |
| A12-164  | 41 1/2" - 47"   | 44             | 181.00 |

ADD -"B" TO END OF PART # TO INCLUDE BOX

bridge the gap.

## KET TYPE "C" SAFETY CLAMP



### REPLACEMENT PARTS FOR TYPE "C" SAFETY CLAMPS

| PART NO.  | ITEM | DESCRIPTION                           | REF#        | **SPARES | WT.   |
|-----------|------|---------------------------------------|-------------|----------|-------|
| A12-101   | 1    | LINK ASSY. COMPLETE                   | 7624-A-7    |          | 5.00  |
| A12-102   | 2    | LINK INTERMEDIATE                     | 7624-A-1    | 6        | 3.75  |
| A12-103   | 3    | INSERT w/COTTER                       | 7624-A-4    | 1 SET    | .50   |
| A12-104   |      | COTTER f/INSERT                       | 900620-36   |          | .06   |
| A12-105   | 5    | SPRING f/INSERT                       | 7624-E-5    | 1 SET    | .06   |
| A11-106   | 6    | LINK PIN w/COTTER                     | 7624-C-5    | 6        | .75   |
| A11-107   |      | COTTER f/LINK PIN                     | 900620-36   |          | .06   |
| A12-108   | 8    | END LINK (SCREW)                      | 7624-A-3    |          | 4.50  |
| A12-109   | 9    | END LINK (PIVOT BLOCK)                | 7624-A-24   |          | 3.50  |
| A11-110-1 | 10   | END LINK PIN w/CHAIN AND RETAINER PIN | 7624-F-5    | 1        | 1.25  |
| A11-111   | 11   | SCREW                                 | 7624-A-5    |          | 4.00  |
| A11-112   | 12   | NUT                                   | 7624-B-5    |          | 1.50  |
| A11-113   | 13   | PIVOT BLOCK                           | 7624-A-5000 |          | 1.50  |
| A11-114   | 14   | PIVOT BLOCK PIN                       | 7624-D-5    |          | .25   |
| A11-115   | 15   | NUT WRENCH                            | 7624-A-25   |          | 3.50  |
| A12-116   | 16   | HANDLE (CAST STEEL)                   |             |          | 3.00  |
| A11-117   | 17   | HANDLE LINK PIN w/COTTER              | 7624-G-5    |          | .75   |
| A12-118   | N/P  | HANDLE KIT                            |             |          | 4.00  |
| A11-119   | 19   | PIVOT BLOCK PIN WRENCH                | 900533-12   |          | .25   |
| A11-120   | N/P  | SAFETY CLAMP BOX                      |             |          | 20.00 |
| A12-119   | N/P  | LIFTING CLEVIS COMPLETE               |             |          | 15.00 |
| A12-120   | N/P  | LIFTING CLEVIS ONLY                   |             |          | 9.00  |
| A12-121   | N/P  | BOLTS W/NUTS AND COTTERS              |             |          | 2.50  |

ALL PARTS ARE INTERCHANGEABLE WITH CORRESPONDING DESIGN TYPE "C" SAFETY CLAMPS

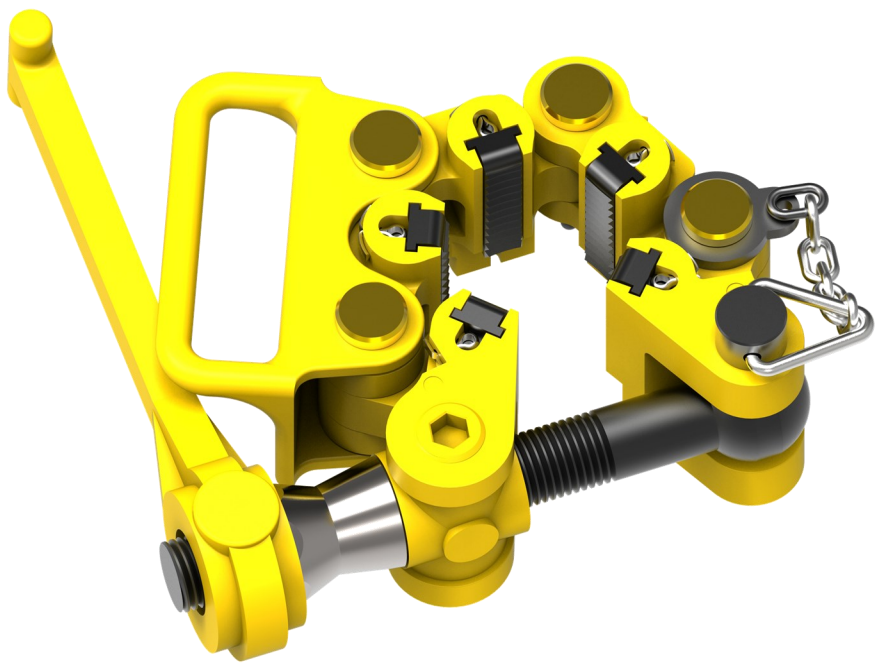
\*\* RECOMMENDED SPARE PARTS FOR 1 YEARS SERVICE

bridge the gap.

# KET TYPE “T” SAFETY CLAMP

The KET Type “T” Safety Clamp is designed for small diameter pipe 1 1/8” - 4 1/2” O.D. Each link changes the effective working range approximately 1” in diameter. For sizes larger than 4 1/2” O.D., the Type “C” Safety Clamp should be used.

The same positive automatic gripping principle is used as in the Type “C” Safety Clamp. It is ideal to help safeguard against dropping strings of flush joint tubing, to provide a shoulder to position strings of flush line pipe for welding, and many other Applications.



## SAFETY CLAMP ASSEMBLIES COMPLETE - TYPE “T”

| PART NO. | RANGE O.D. SIZE | REFERENCE | LINKS REQUIRED | WT.   |
|----------|-----------------|-----------|----------------|-------|
| A11-125  | 1 1/8” - 2”     | 7624-5103 | 4              | 36.00 |
| A11-126  | 2 1/8” - 3 1/4” | 7624-5104 | 5              | 40.00 |
| A11-127  | 3 1/2” - 4 1/2” | 7624-5105 | 6              | 44.00 |

ADD –“B” TO END OF PART NO. TO INCLUDE BOX

bridge the gap.

## KET TYPE "T" REPLACEMENT PARTS



### REPLACEMENT PARTS FOR TYPE "T" SAFETY CLAMP

| PART NO.  | ITEM | DESCRIPTION                           | REFERENCE#  | **SPARES | WT.   |
|-----------|------|---------------------------------------|-------------|----------|-------|
| A11-101   | 1    | LINK ASSY. COMPLETE                   | 7624-B-7    |          | 4.25  |
| A11-102   | 2    | LINK INTERMEDIATE                     | 7624-A-18   | 3        | 3.25  |
| A11-103   | 3    | INSERT w/COTTER                       | 7624-A-21   | 6        | 0.25  |
| A11-104   |      | COTTER f/INSERT                       | 900620-52   |          | 0.06  |
| A11-105   | 5    | SPRING f/INSERT                       | 7624-B-21   | 6        | 0.06  |
| A11-106   | 6    | LINK PIN w/COTTER                     | 7624-C-5    | 3        | 0.75  |
| A11-107   | 7    | COTTER f/LINK PIN                     | 900620-36   |          | 0.06  |
| A11-108   | 8    | END LINK (SCREW)                      | 7624-A-20   |          | 4.50  |
| A11-109   | 9    | END LINK (PIVOT BLOCK)                | 7624-A-19   |          | 3.50  |
| A11-110-1 | 10   | END LINK PIN w/CHAIN AND RETAINER PIN | 7624-F-5    | 1        | 1.25  |
| A11-111   | 11   | SCREW                                 | 7624-A-5    |          | 4.00  |
| A11-112   | 12   | NUT                                   | 7624-B-5    |          | 1.50  |
| A11-113   | 13   | PIVOT BLOCK                           | 7624-A-5000 |          | 1.50  |
| A11-114   | 14   | PIVOT BLOCK PIN                       | 7624-D-5    |          | 0.25  |
| A11-115   | 15   | NUT WRENCH                            | 7624-A-25   |          | 4.00  |
| A11-116   | 16   | HANDLE (CAST STEEL)                   | 7624-A-22   |          | 3.00  |
| A11-117   | 17   | HANDLE LINK PIN w/COTTER              | 7624-G-5    |          | 0.75  |
| A11-118   | N/P  | HANDLE KIT                            | 7624-A-5138 |          | 4.00  |
| A11-119   | 19   | PIVOT BLOCK PIN WRENCH                | 900533-12   |          | 0.12  |
| A11-120   | N/P  | SAFETY CLAMP BOX                      | 7624-A-9    |          | 45.00 |
| A11-121   | N/P  | 1 YEAR SPARE PARTS KIT                | N/A         | 1        | 13.00 |

ALL PARTS ARE INTERCHANGEABLE WITH BAASH-ROSS® TYPE "T" SAFETY CLAMPS  
 \*\* RECOMMENDED SPARE PARTS FOR 1 YEARS SERVICE

**bridge the gap.**

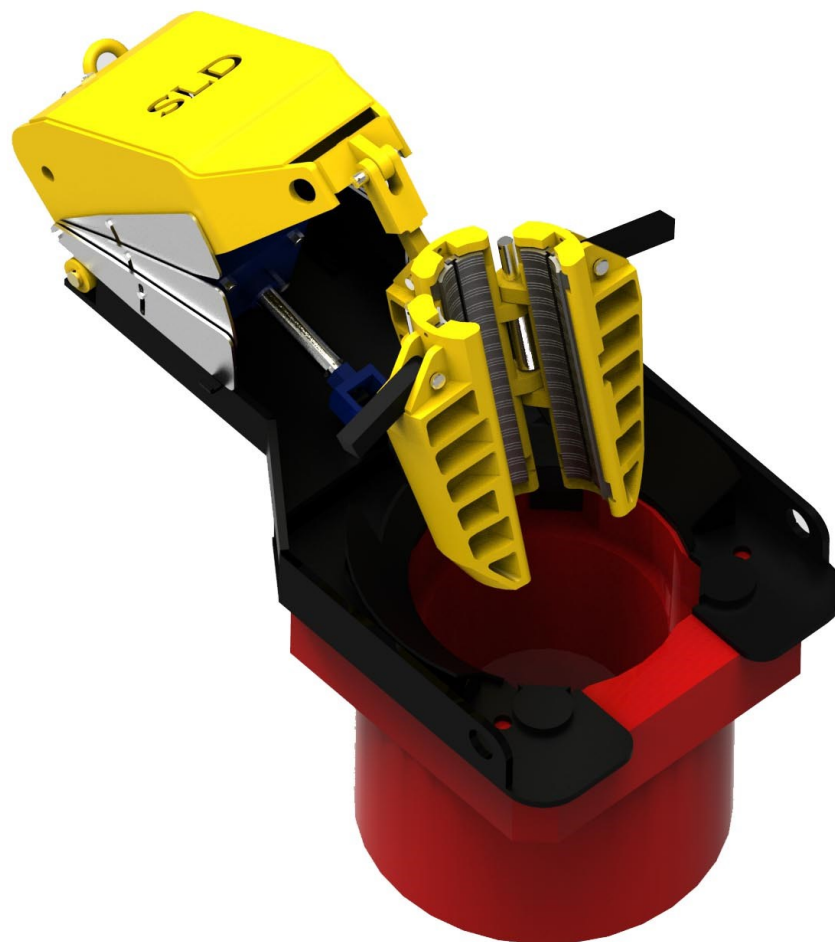
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## KET SLIP LIFTING DEVICE (“SLD”)

Keystone’s slip lifting device comes in pneumatic configuration. It is designed to be used while tripping in or out of the hole to help reduce fatigue and prevent injuries.

- ▶ Available for pin-drive or square-drive master bushings
- ▶ Can be used with conventional rotary, drill collar, or casing slips

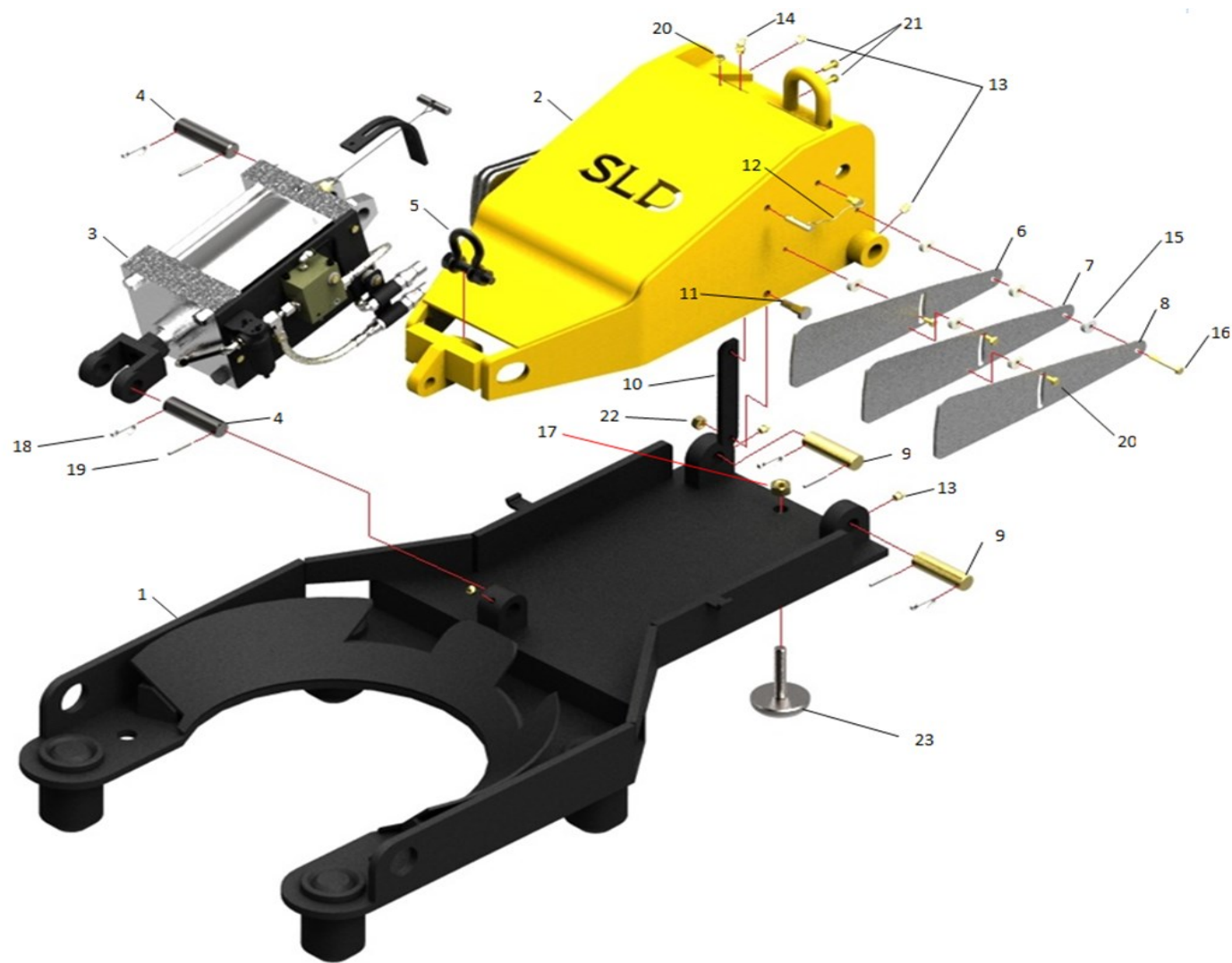
| PART NO.   | DESCRIPTION                          |
|------------|--------------------------------------|
| A26-100-PD | KET “SLD AIR ACTUATOR – PIN DRIVE    |
| A26-100-SD | KET “SLD AIR ACTUATOR – SQUARE DRIVE |





bridge the gap.

# KET SLIP LIFTING DEVICE (“SLD”)



| SPECIFICATIONS             |                                                                                                                          |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------|
| PROPERTY                   | DESCRIPTION                                                                                                              |
| MATERIAL                   | MILD STEEL                                                                                                               |
| WEIGHT                     | 260 LBS. (118KG) “SLD” ONLY W/O SLIP<br>525 LBS. (238 KG) WITH STORAGE STAND, CONTROL VALVE, AIR SUPPLY PLATE, AND HOSES |
| HEIGHT                     | RAISED 23.5” (597MM) - LOWERED (13.5” (343MM)                                                                            |
| BASE DIMENSIONS            | 23.5” X 43.5” (600MM X 1105MM)                                                                                           |
| BASE OPENING               | 12.75” (327MM)                                                                                                           |
| MINIMUM OPERATING PRESSURE | 85 PSI                                                                                                                   |

bridge the gap.

# KET SLIP LIFTING DEVICE (“SLD”)

## SLD PARTS LIST

| PART NO.     | ITEM# | DESCRIPTION                                     | QTY |
|--------------|-------|-------------------------------------------------|-----|
| A26-145-PD   | 1     | BASE PLATE FOR AIR OPERATED PIN DRIVE “SLD”     | 1   |
| A26-145-SD   | 1     | BASE PLATE FOR AIR OPERATED SQUARE DRIVE “SLD”  | 1   |
| A26-165      | 2     | LIFT ARM FOR AIR OPERATED “SLD”                 | 1   |
| A26-115      | 3     | CYLINDER ASSEMBLY FOR AIR OPERATED “SLD”        | 1   |
| A26-515-P    | 4     | CYLINDER PIN FOR AIR OPERATED “SLD”             | 2   |
| AZSHK-08-07  | 5     | SHACKLE                                         | 1   |
| A26-165-S-I  | 6     | INNER SIDE SHIELD FOR AIR OPERATED “SLD”        | 2   |
| A26-165-S-C  | 7     | CENTER SIDE SHIELD FOR AIR OPERATED “SLD”       | 2   |
| A26-165-S-O  | 8     | OUTER SIDE SHIELD FOR AIR OPERATED “SLD”        | 2   |
| A11-117      | 9     | LIFT ARM PIN                                    | 2   |
| A26-165-K    | 10    | KICKSTAND FOR AIR OPERATED “SLD”                | 1   |
| A26-167      | 11    | KICKSTAND BOLT FOR AIR OPERATED “SLD”           | 1   |
| A26-165-M    | 12    | KICKSTAND LOCK PIN WITH CABLE AND TIE DOWN BOLT | 1   |
| AZF-GZN-02-1 | 13    | 1/8" NPT GREASE ZERT, STRAIGHT                  | 5   |
| AZF-GZN-02-2 | 14    | 1/8" NPT GREASE ZERT, 45 DEG.                   | 1   |
| A26-829-NW-1 | 15    | NYLON WASHER                                    | 12  |
|              | 16    | 1/4" X 2" GRADE 8 HEX HD CAP SCREW, ZINC        | 1   |
|              | 17    | 5/8" GRADE 8 HEX NUT, ZINC                      | 1   |
|              | 18    | 3/16" X 1 1/2" COTTER PIN                       | 4   |
|              | 19    | 3/16" X 1 ROLL PIN                              | 4   |
|              | 20    | 1/4" X 1/2" GRADE 8 HEX HD CAP SCREW, ZINC      | 7   |
|              | 21    | 1/4" X 3/8" GRADE 8 HEX HD CAP SCREW, ZINC      | 2   |
|              | 22    | 5/8" GRADE 8 HEX NUT, ZINC                      | 1   |
| A26-641-1    | 23    | SUPPORT PAD ONLY FOR “SLD”                      | 1   |

## DU SLIP ADAPTER KIT

|                  | 4 1/2" DU (26-507-B) | 5 1/2" DU(26-507-J) | 5 1/2" SDU(26-507-D) | 7" SDU & LD(26-507-E) | QTY REQ'D |
|------------------|----------------------|---------------------|----------------------|-----------------------|-----------|
| LIFTING LINK     | A26-510-B            | A26-510-K           | A26-510-C            | A26-510-B             | 1         |
| TORQUE BLOCK (L) | A26-511-C            | A26-511-D-L         | A26-511-A-L          | A26-511-B             | 1         |
| TORQUE BLOCK (R) | A26-511-C            | A26-511-D-R         | A26-511-A-R          | A26-511-B             | 1         |
| HINGE PIN        | A26-505              | A26-505-B           | A26-505-B            | A26-505-B             | 2         |
| SPRING           | A26-518              | A26-518             | A26-518              | A26-518               | 2         |
| HANDLE PINS      | A03-107              | A03-107             | A03-107              | A03-107               | 4         |

## SD SLIP ADAPTER KIT

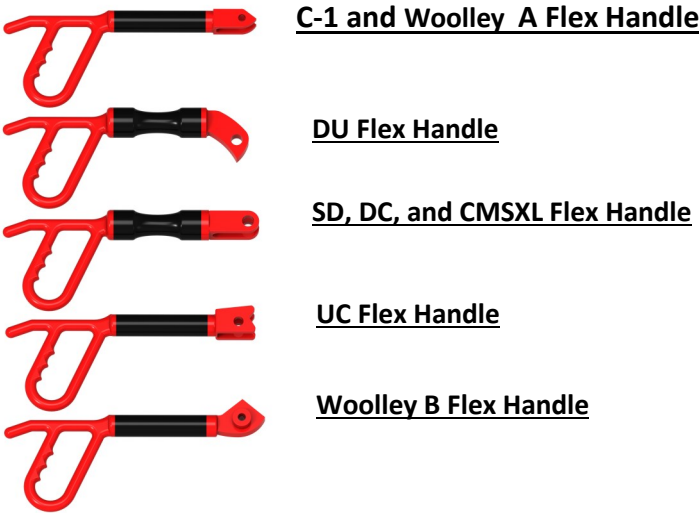
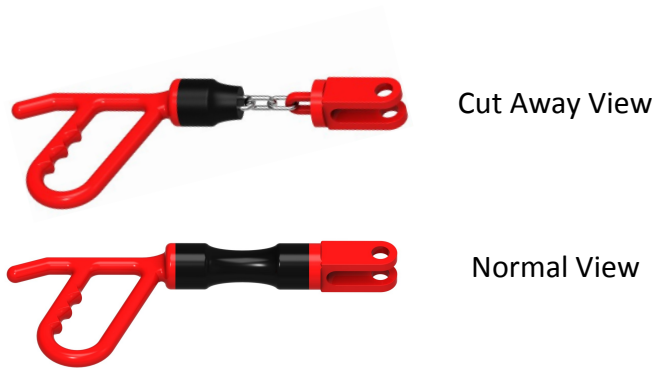
|                  | ALL SDXL(26-507-A) | 4 1/2" SDML(26-507-I) | 5" SDML(26-507-H) | QTY REQ'D |
|------------------|--------------------|-----------------------|-------------------|-----------|
| LIFTING LINK     | A26-510-A          | A26-510-J             | A26-510-G         | 1         |
| TORQUE BLOCK (L) | A26-513-B          | A26-513-G             | A26-513-E         | 1         |
| TORQUE BLOCK (R) | A26-513-B          | A26-513-G             | A26-513-E         | 1         |
| HINGE PIN        | A26-505-A          | A26-505-A             | A26-505-A         | 2         |
| SPRING           | A26-518            | A26-518-REG           | A26-518-REG       | 2         |
| HANDLE PINS      | A03-107            | A03-107               | A03-107           | 4         |

bridge the gap.

# KET SLIP SAFETY FLEX HANDLES

Keystone Slip Safety Flex Handles incorporate investment cast slip connectors and handles with thumb guards. They are joined together with high strength chain which is then covered with nitrile rubber to prevent corrosion. All slip safety flex handles are pull tested prior to shipment.

- ▶ Eliminates cuts from frayed cables
- ▶ Reduces back injuries
- ▶ Improves ergonomics



C-1 and Woolley A Flex Handle

DU Flex Handle

SD, DC, and CMSXL Flex Handle

UC Flex Handle

Woolley B Flex Handle

## SLIP SAFETY FLEX HANDLES

| PART NO. | DESCRIPTION                                           | WEIGHT (LBS.) |
|----------|-------------------------------------------------------|---------------|
| 100300   | C-1 /WOOLLEY A STYLE SAFETY FLEX HANDLE W/THUMB GUARD | 4             |
| 102200-F | DU FRONT EXTREME SERVICE SAFETY FLEX HANDLE           | 4.47          |
| 102200-R | DU REAR EXTREME SERVICE SAFETY FLEX HANDLE            | 5.44          |
| 102100   | SD, DC, & CMSXL EXTREME SERVICE SAFETY FLEX HANDLE    | 5.5           |
| 100350   | UC SAFETY FLEX HANDLE W/ THUMB GAURD                  | 4.47          |
| 100050   | WOOLLEY B STYLE SAFETY FLEX HANDLE W/ THUMB GAURD     | 4.47          |

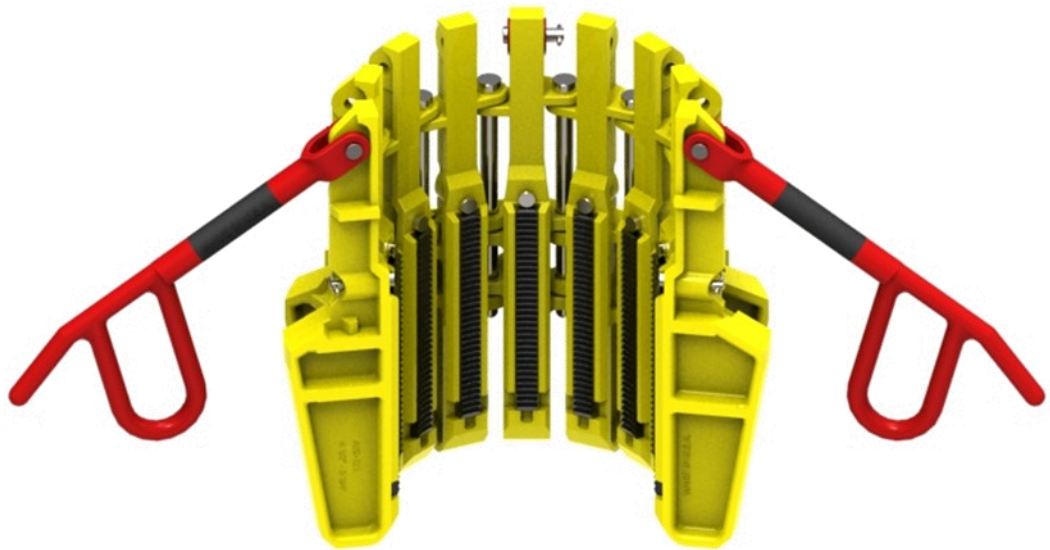


Extreme Service Safety Handle

bridge the gap.

# TYPE “A” DRILL COLLAR SLIP

The KET Type “A” Drill Collar Slip has a multi-segment design that allows it to hinge so that it fits all drill collars within the slip’s size range. The slip segments are made of alloy steel which are heat-treated for strength and wear resistance. All slip assemblies are supplied with safety flex handles.



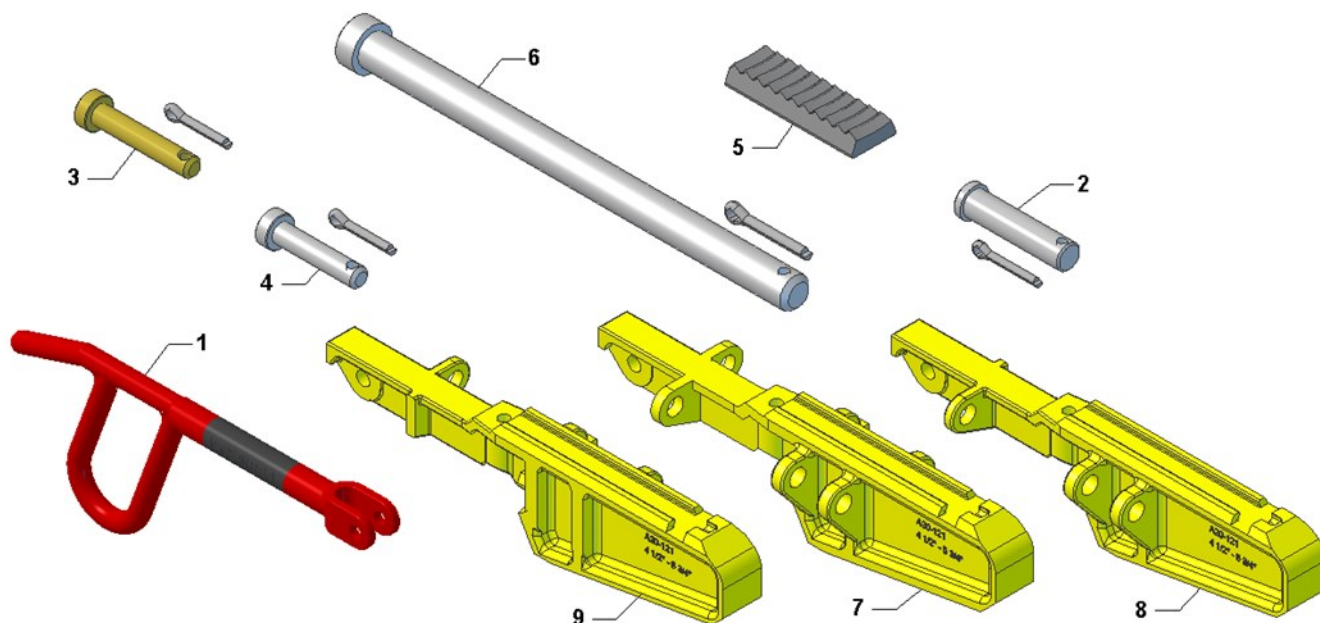
## KET TYPE “A” DRILL COLLAR SLIPS COMPLETE

| PART NO.    | DRILL COLLAR SIZE/SLIP RECESS | # OF SEGMENTS | WT. |
|-------------|-------------------------------|---------------|-----|
| A20-111-F   | 3" - 4 1/4"                   | 7             | 136 |
| A20-111-1-F | 3 1/4" - 4 3/4"               | 8             | 128 |
| A20-112-F   | 4 1/2" - 5 3/4"               | 9             | 112 |
| A20-113-F   | 5 1/2" - 7"                   | 10            | 117 |
| A20-114-F   | 6 3/4" - 8 1/4"               | 11            | 118 |
| A20-115-F   | 8 1/4" - 10"                  | 12            | 120 |

ALL PARTS ARE INTERCHANGEABLE WITH CORRESPONDING DESIGN TYPE “A” DRILL COLLAR SLIPS

bridge the gap.

## KET TYPE "A" DRILL COLLAR SLIP



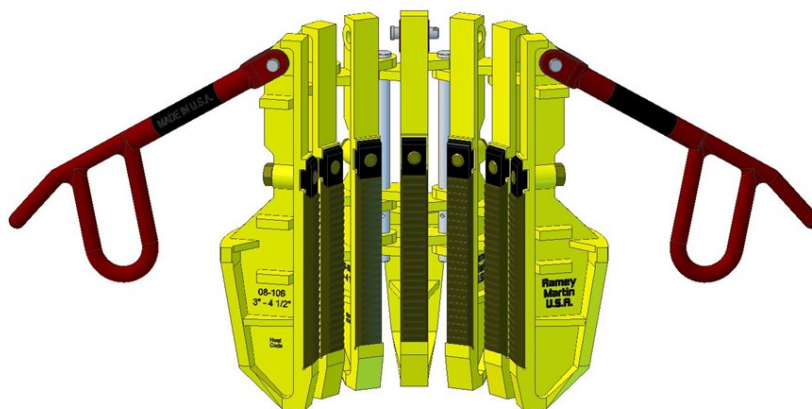
### REPLACEMENT PARTS FOR KET TYPE "A" DRILL COLLAR SLIPS

| PART NO. | ITEM# | DESCRIPTION                    | REF.#        | #REQ. | WT.   |
|----------|-------|--------------------------------|--------------|-------|-------|
| 100300   | 1     | FLEX HANDLE                    |              | 3     | 4.00  |
| A08-103  | 2     | HANDLE PIN                     | 707-000-0300 | 3     | .12   |
| A20-102  | 3     | INSERT RET. PIN (3" - 8 1/4")  | 707-000-0600 |       | .08   |
| A20-104  | 4     | INSERT RET. PIN (8 1/4" - 10") | 707-000-0700 | 12    | .07   |
| A20-103  | 5     | INSERT                         | 797-000-0000 |       | .25   |
| A20-101  | 6     | HINGE PIN                      | 707-000-0100 |       | .86   |
| A20-109  | 7     | INT. SEG. 3" - 4 1/4"          | 707-300-0100 | 5     | 15.00 |
| A20-108  | 8     | R.H. SEG. 3" - 4 1/4"          | 707-300-0400 | 1     | 15.00 |
| A20-110  | 9     | L.H. SEG. 3" - 4 1/4"          | 707-300-0300 | 1     | 15.00 |
| A20-138  | 7     | INT. SEG. 3 1/4" - 4 3/4"      | 707-320-0100 | 6     | 14.00 |
| A20-137  | 8     | R.H. SEG. 3 1/4" - 4 3/4"      | 707-320-0400 | 1     | 14.00 |
| A20-139  | 9     | L.H. SEG. 3 1/4" - 4 3/4"      | 707-320-0300 | 1     | 14.00 |
| A20-121  | 7     | INT. SEG. 4 1/2" - 5 3/4"      | 707-420-0100 | 7     | 13.00 |
| A20-120  | 8     | R.H. SEG. 4 1/2" - 5 3/4"      | 707-420-0400 | 1     | 13.00 |
| A20-122  | 9     | L.H. SEG. 4 1/2" - 5 3/4"      | 707-420-0300 | 1     | 13.00 |
| A20-125  | 7     | INT. SEG. 5 1/2" - 7"          | 707-540-0100 | 8     | 11.00 |
| A20-124  | 8     | R.H. SEG. 5 1/2" - 7"          | 707-540-0400 | 1     | 11.00 |
| A20-126  | 9     | L.H. SEG. 5 1/2" - 7"          | 707-540-0300 | 1     | 11.00 |
| A20-130  | 7     | INT. SEG. 6 3/4" - 8 1/4"      | 707-660-0100 | 9     | 8.50  |
| A20-129  | 8     | R.H. SEG. 6 3/4" - 8 1/4"      | 707-660-0400 | 1     | 8.50  |
| A20-131  | 9     | L.H. SEG. 6 3/4" - 8 1/4"      | 770-660-0300 | 1     | 8.50  |
| A20-134  | 7     | INT. SEG. 8 1/4" - 10"         | 707-820-0100 | 10    | 6.00  |
| A20-133  | 8     | R.H. SEG. 8 1/4" - 10"         | 707-820-0400 | 1     | 6.00  |
| A20-135  | 9     | L.H. SEG. 8 1/4" - 10"         | 707-820-0300 | 1     | 6.00  |

bridge the gap.

## KET TYPE “C-1” DRILL COLLAR SLIPS

The KET “C-1” Drill Collar Slip has a multi-segment design that allows it to hinge so that it fits all drill collars within the slip’s size range. The slip segments are made of alloy steel which are heat-treated for strength and wear resistance. The inserts are a continuous one piece design with approximately 7 1/2” of contact length. For added safety, the KET “C-1” Drill Collar Slip is also provided with safety flex handles as a standard option.



### KET “C-1” DRILL COLLAR SLIPS COMPLETE

| PART NO.    | DRILL COLLAR SIZE/ SLIP RECESS | SEGMENT PART# | REF.#     | TOTAL SEGMENTS | WT. |
|-------------|--------------------------------|---------------|-----------|----------------|-----|
| A08-111-F   | 3” - 4 1/2”                    | A08-108       | 7636-5104 | 8              | 112 |
| A08-112-F   | 4 1/4” - 5 3/4”                | A08-121       | 7636-5105 | 10             | 122 |
| A08-113-F   | 5 1/2” - 7”                    | A08-125       | 7636-5106 | 12             | 134 |
| A08-114-F   | 6 3/4” - 8 1/4”                | A08-130       | 7636-5107 | 12             | 118 |
| A08-115-F   | 8 1/2” - 10”                   | A08-134       | 7636-5108 | 12             | 198 |
| A08-116-F*  | 10” - 11 1/4”                  | A08-130       | 7636-5109 | 17             | 150 |
| A08-117-F** | 11 1/4” - 12 3/4”              | A08-125       | 7636-5110 | 19             | 210 |

ALL “C-1” TYPE SLIPS ARE AVAILABLE WITH STEEL HANDLES UPON REQUEST

ALL PARTS ARE INTERCHANGEABLE WITH CORRESPONDING DESIGN “C-1” DRILL COLLAR SLIPS

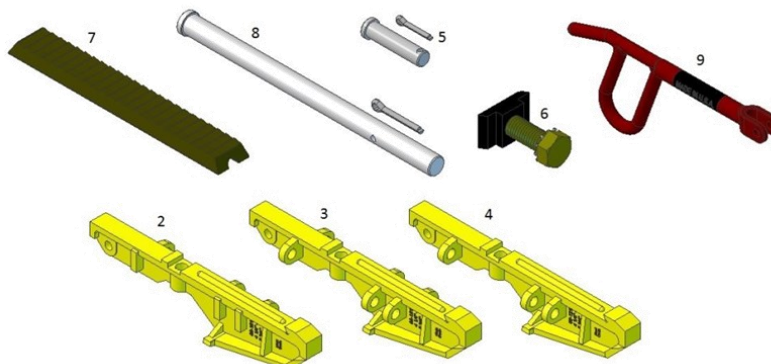
\* FITS NO. 2 INSERT BOWL

\*\* FITS NO. 1 INSERT BOWL



bridge the gap.

## KET TYPE "C-1" DRILL COLLAR SLIP



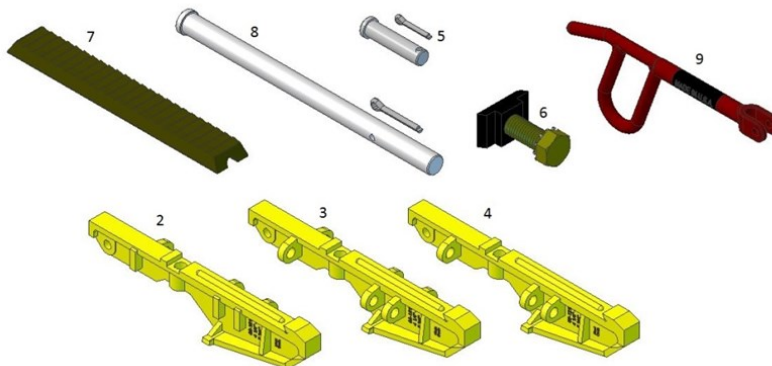
### REPLACEMENT PARTS FOR KET "C-1" DRILL COLLAR SLIPS

| PART #  | ITEM# | DESCRIPTION                  | *SPARES | SIZE              | #REQ. | REF.#        | WT.   |
|---------|-------|------------------------------|---------|-------------------|-------|--------------|-------|
| A08-102 | N/P   | HANDLE                       | 3       | 3" - 10"          | 3     | 7638-A-78    | 2.50  |
| A08-102 | N/P   | HANDLE                       | 4       | 10" - 12 3/4"     | 4     | 7638-A-78    | 2.50  |
| A08-107 | 2     | BODY SEGMENT (RIGHT HAND)    |         | 3" - 4 1/2"       | 1     | 7638-5099-11 | 10.75 |
| A08-120 | 2     | BODY SEGMENT (RIGHT HAND)    |         | 4 1/4" - 5 3/4"   | 1     | 7638-5100-11 | 9.25  |
| A08-124 | 2     | BODY SEGMENT (RIGHT HAND)    |         | 5 1/2" - 7"       | 1     | 7638-5101-11 | 8.25  |
| A08-129 | 2     | BODY SEGMENT (RIGHT HAND)    |         | 6 3/4" - 8 1/4"   | 1     | 7638-5102-11 | 7.00  |
| A08-133 | 2     | BODY SEGMENT (RIGHT HAND)    |         | 8 1/2" - 10"      | 1     | 7638-5103-11 | 5.75  |
| A08-129 | 2     | BODY SEGMENT (RIGHT HAND)    |         | 10" - 11 1/4"     | 1     | 7638-5102-11 | 7.00  |
| A08-124 | 2     | BODY SEGMENT (RIGHT HAND)    |         | 11 1/4" - 12 3/4" | 1     | 7638-5101-11 | 8.25  |
| A08-108 | 3     | BODY SEGMENT (INTERMEDIATE)  |         | 3" - 4 1/2"       | 6     | 7638-5099-10 | 10.75 |
| A08-121 | 3     | BODY SEGMENT (INTERMEDIATE)  |         | 4 1/4" - 5 3/4"   | 8     | 7638-5100-10 | 9.25  |
| A08-125 | 3     | BODY SEGMENT (INTERMEDIATE)  |         | 5 1/2" - 7"       | 10    | 7638-5101-10 | 8.25  |
| A08-130 | 3     | BODY SEGMENT (INTERMEDIATE)  |         | 6 3/4" - 8 1/4"   | 10    | 7638-5102-10 | 7.00  |
| A08-134 | 3     | BODY SEGMENT (INTERMEDIATE)  |         | 8 1/2" - 10"      | 10    | 7638-5103-10 | 5.75  |
| A08-130 | 3     | BODY SEGMENT (INTERMEDIATE)  |         | 10" - 11 1/4"     | 15    | 7638-5102-10 | 7.00  |
| A08-125 | 3     | BODY SEGMENT (INTERMEDIATE)  |         | 11 1/4" - 12 3/4" | 17    | 7638-5101-10 | 8.25  |
| A08-109 | 4     | BODY SEGMENT (LEFT HAND)     |         | 3" - 4 1/2"       | 1     | 7638-5099-12 | 10.75 |
| A08-122 | 4     | BODY SEGMENT (LEFT HAND)     |         | 4 1/4" - 5 3/4"   | 1     | 7638-5100-12 | 9.25  |
| A08-126 | 4     | BODY SEGMENT (LEFT HAND)     |         | 5 1/2" - 7"       | 1     | 7638-5101-12 | 8.25  |
| A08-131 | 4     | BODY SEGMENT (LEFT HAND)     |         | 6 3/4" - 8 1/4"   | 1     | 7638-5102-12 | 7.00  |
| A08-135 | 4     | BODY SEGMENT (LEFT HAND)     |         | 8 1/2" - 10"      | 1     | 7638-5103-12 | 5.75  |
| A08-131 | 4     | BODY SEGMENT (LEFT HAND)     |         | 10" - 11 1/4"     | 1     | 7638-5102-12 | 7.00  |
| A08-126 | 4     | BODY SEGMENT (LEFT HAND)     |         | 11 1/4" - 12 3/4" | 1     | 7638-5101-12 | 8.25  |
| A08-103 | 5     | HANDLE PIN w/COTTER          | 1       | 3" - 10"          | 3     | 7638-E-2     | .15   |
| A08-103 | 5     | HANDLE PIN w/COTTER          | 2       | 10" - 12 3/4"     | 4     | 7638-E-2     | .15   |
| A08-104 | 6     | LINER KEEPER w/BOLT & WASHER | 4       | 3" - 4 1/2"       | 8     | 7638-5113    | 1.00  |
| A08-104 | 6     | LINER KEEPER w/BOLT & WASHER | 5       | 4 1/4" - 5 3/4"   | 10    | 7638-5113    | 1.00  |
| A08-104 | 6     | LINER KEEPER w/BOLT & WASHER | 6       | 5 1/2" - 10"      | 12    | 7638-5113    | 1.00  |
| A08-104 | 6     | LINER KEEPER w/BOLT & WASHER | 8       | 10" - 11 1/4"     | 17    | 7638-5113    | 1.00  |
| A08-104 | 6     | LINER KEEPER w/BOLT & WASHER | 9       | 11 1/4" - 12 3/4" | 19    | 7638-5113    | 1.00  |

REPLACEMENT PARTS CONTINUED ON NEXT PAGE

bridge the gap.

## KET TYPE “C-1” DRILL COLLAR SLIP



### REPLACEMENT PARTS FOR KET “C-1” DRILL COLLAR SLIPS

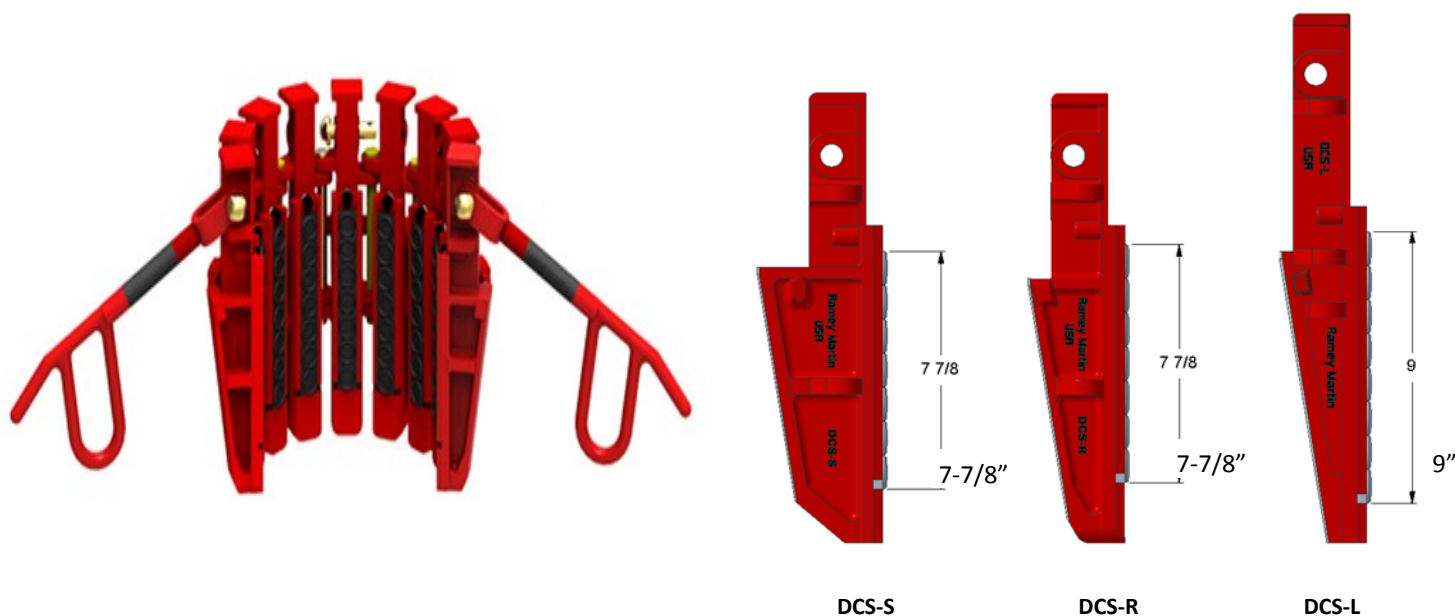
| PART #  | ITEM# | DESCRIPTION        | *SPARES | SIZE              | #REQ. | REF.#     | WT.  |
|---------|-------|--------------------|---------|-------------------|-------|-----------|------|
| A08-105 | 7     | RENEWABLE LINER    |         | 3" - 12 3/4"      |       | 7638-116  | 1.00 |
| A08-101 | 8     | HINGE PIN w/COTTER | 3       | 3" - 4 1/2"       | 7     | 7638-B-59 | 1.15 |
| A08-101 | 8     | HINGE PIN w/COTTER | 3       | 4 1/4" - 5 3/4"   | 9     | 7638-B-59 | 1.15 |
| A08-101 | 8     | HINGE PIN w/COTTER | 3       | 5 1/2" - 8 1/4"   | 11    | 7638-B-59 | 1.15 |
| A08-106 | 8     | HINGE PIN w/COTTER | 3       | 8 1/2" - 10"      | 11    | 7638-B-59 | .85  |
| A08-101 | 8     | HINGE PIN w/COTTER | 4       | 10" - 11 1/4"     | 16    | 7638-B-59 | 1.15 |
| A08-101 | 8     | HINGE PIN w/COTTER | 4       | 11 1/4" - 12 3/4" | 18    | 7638-B-59 | 1.15 |
| 100300  | 9     | SAFETY FLEX HANDLE |         | ALL               | 3     | N/A       | 4.00 |



bridge the gap.

## KET TYPE “DCS” DRILL COLLAR SLIPS

The KET “DCS” Type Drill Collar Slip has a multi-segment design to give a full wrap-around to insure a proper slip setting. The slips are made of alloy steel and heat-treated for strength and long life.



### KET “DCS” DRILL COLLAR SLIPS COMPLETE

| PART NO.  | DRILL COLLAR SIZE/ SLIP RECESS | TYPE SLIP | REF.#   | TOTAL SEGMENTS | WT. |
|-----------|--------------------------------|-----------|---------|----------------|-----|
| A16-120-F | 3" - 4"                        | DCS-S     | (2572)  | 7              | 112 |
| A16-121-F | 4" - 4 7/8"                    | DCS-S     | (2573)  | 7              | 103 |
| A16-122-F | 4 1/2" - 6"                    | DCS-R     | (2552)  | 9              | 120 |
| A16-123-F | 5 1/2" - 7"                    | DCS-R     | (2550)  | 9              | 112 |
| A16-125-F | 5 1/2" - 7"                    | DCS-L     | (2501)  | 11             | 172 |
| A16-126-F | 6 3/4" - 8 1/4"                | DCS-L     | (2503)  | 11             | 154 |
| A16-127-F | 8" - 9 1/2"                    | DCS-L     | (2507)  | 12             | 173 |
| A16-128-F | 8 1/2" - 10"                   | DCS-L     | (2530)  | 13             | 185 |
| A16-129-F | 9 1/4" - 11 1/4"               | DCS-L     | (2508)  | 14             | 198 |
| A16-130-F | 11" - 12 3/4"                  | DCS-L     | (2534)  | 17             | 213 |
| A16-131-F | 12" - 14"                      | DCS-L     | (V2536) | 17             | 207 |

NOTE: SLIP SIZES 3" - 9 1/2" FOR USE IN API OR #3 BOWL

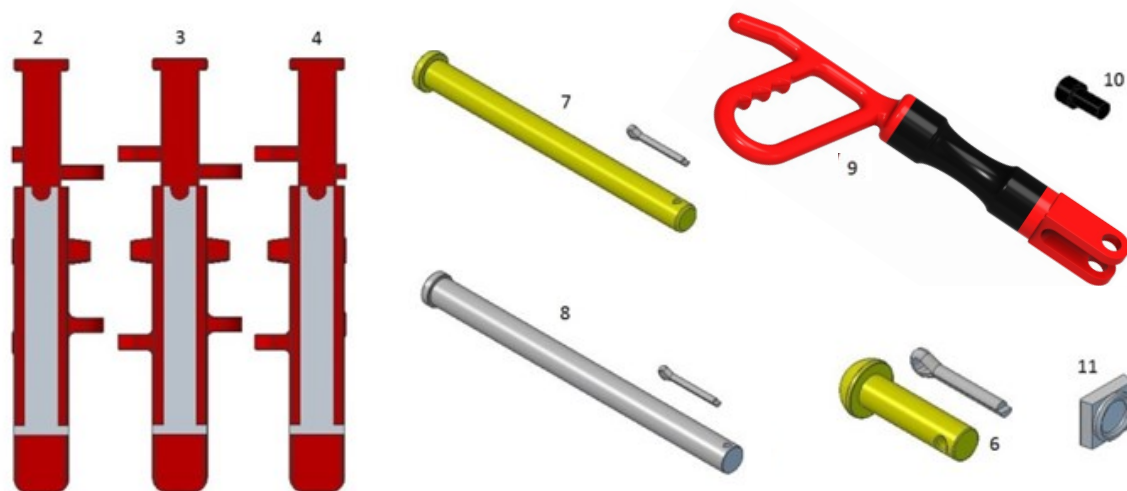
SLIP SIZES 8 1/2" - 11 1/4" FOR USE IN #2 BOWL

SLIP SIZES 11" - 14" FOR USE IN #1 BOWL

ALL PARTS ARE INTERCHANGEABLE WITH CORRESPONDING DESIGN “DCS” TYPE  
DRILL COLLAR SLIPS

bridge the gap.

## KET TYPE “DCS” DRILL COLLAR SLIPS



### REPLACEMENT PARTS FOR KET “DCS” DRILL COLLAR SLIPS

| PART NO. | ITEM # | DESCRIPTION                  | *SPARES | SIZE         | #REQ | REF.# | WT.   |
|----------|--------|------------------------------|---------|--------------|------|-------|-------|
| A16-102  | 2      | LEFT HAND SEGMENT f/DCS-S    |         | 3" - 4 7/8"  | 1    | 2569  | 11.00 |
| A16-105  | 2      | LEFT HAND SEGMENT f/DCS-R    |         | 4 1/2" - 7"  | 1    | 2555  | 10.00 |
| A16-108  | 2      | LEFT HAND SEGMENT f/DCS-L    |         | 5 1/2" - 14" | 1    | 2511  | 12.00 |
| A16-103  | 3      | INTERMEDIATE SEGMENT f/DCS-S |         | 3" - 4 7/8"  | 5    | 2570  | 11.00 |
| A16-106  | 3      | INTERMEDIATE SEGMENT f/DCS-R |         | 4 1/2" - 7"  | 7    | 2556  | 10.00 |
| A16-109  | 3      | INTERMEDIATE SEGMENT f/DCS-L |         | 5 1/2" - 14" | **   | 2512  | 12.00 |
| A16-104  | 4      | RIGHT HAND SEGMENT f/DCS-S   |         | 3" - 4 7/8"  | 1    | 2568  | 11.00 |
| A16-107  | 4      | RIGHT HAND SEGMENT f/DCS-R   |         | 4 1/2" - 7"  | 1    | 2554  | 10.00 |
| A16-110  | 4      | RIGHT HAND SEGMENT f/DCS-L   |         | 5 1/2" - 14" | 1    | 2510  | 12.00 |
| A14-105  | 6      | HANDLE PIN                   | 3       | 3" - 10"     | 3    | 3769  | .50   |
| A14-105  | 6      | HANDLE PIN                   | 3       | 9 1/4" - 14" | 4    | 3769  | .50   |
| A14-106  | 7      | HINGE PIN f/DCS-S            | 4       | 3" - 4 7/8"  | 6    | 2525  | .70   |
| A14-106  | 7      | HINGE PIN f/DCS-R            | 4       | 4 1/2" - 7"  | 8    | 2525  | .70   |
| A16-112  | 8      | HINGE PIN f/DCS-L            | 4       | 5 1/2" - 14" | **   | 2520  | .70   |
| 102100   | 9      | SAFETY FLEX HANDLE           | 3       | 3"-10"       | 3    | N/A   | 4.00  |
| 102100   | 9      | SAFETY FLEX HANDLE           | 4       | 9-1/4"-14"   | 4    | N/A   | 5.00  |
| A14-091  | 10     | DIE RETAINER BOLT            |         |              |      |       |       |

\* RECOMMENDED SPARE PARTS FOR 1 YEAR OF OPERATION

\*\* VARIES DEPENDING ON SLIP SIZE

bridge the gap.

## KET TYPE “DCS” DRILL COLLAR SLIPS

### BUTTON AND CROSS REF. INSERTS FOR KET “DCS” DRILL COLLAR SLIPS

| PART NO.<br>(BUTTON) | REF#   | SLIP TYPE | SIZE             | QTY | WT./SET | PART NO.<br>(INSERT) | REF#   | QTY | WT./SET |
|----------------------|--------|-----------|------------------|-----|---------|----------------------|--------|-----|---------|
| A14-628              | (2628) | DCS-S     | 3" - 4"          | 49  | 13.00   | A23-168              | (2632) | 21  | 7       |
| A14-620              | (2620) | DCS-S     | 4" - 4 7/8"      | 49  | 8.00    | A23-175              | (2634) | 21  | 4       |
| A14-628              | (2628) | DCS-R     | 4 1/2" - 6"      | 63  | 16.00   | A23-168              | (2632) | 27  | 9       |
| A14-620              | (2620) | DCS-R     | 5 1/2" - 7"      | 63  | 11.00   | A23-175              | (2634) | 27  | 5       |
| A14-513              | (2513) | DCS-L     | 5 1/2" - 7"      | 88  | 19.00   | A23-180              | (2521) | 33  | 7       |
| A14-630              | (2630) | DCS-L     | 6 3/4" - 8 1/4"  | 88  | 15.00   | A23-170              | (2633) | 33  | 5       |
| A14-630              | (2630) | DCS-L     | 8" - 9 1/2"      | 96  | 16.00   | A23-170              | (2633) | 36  | 5       |
| A14-627              | (2627) | DCS-L     | 8 1/2" - 10"     | 104 | 26.00   | A23-172              | (2637) | 39  | 11      |
| A14-630              | (2630) | DCS-L     | 9 1/4" - 11 1/4" | 112 | 19.00   | A23-170              | (2633) | 42  | 5       |
| A14-625              | (2625) | DCS-L     | 11" - 12 3/4"    | 136 | 20.00   | A23-185              | (2639) | 51  | 11      |
| A14-630              | (2630) | DCS-L     | 12" - 14"        | 136 | 22.00   | A23-170              | (2633) | 51  | 5       |

## KET TYPE “SD” ROTARY SLIPS

All KET “SDML” and “SDXL” Slips are made of alloy steel and heat-treated for strength and long life. These slips are then machined by strict quality control procedures for use in API standard bowls. Another time saving change is the use of roll pins for retaining the hinge pins and a larger knock out hole beneath the hinge pins. Lastly, we have added SLD spring grooves, which allow our slip to easily be retrofitted for the Keystone Energy Tools SLD.

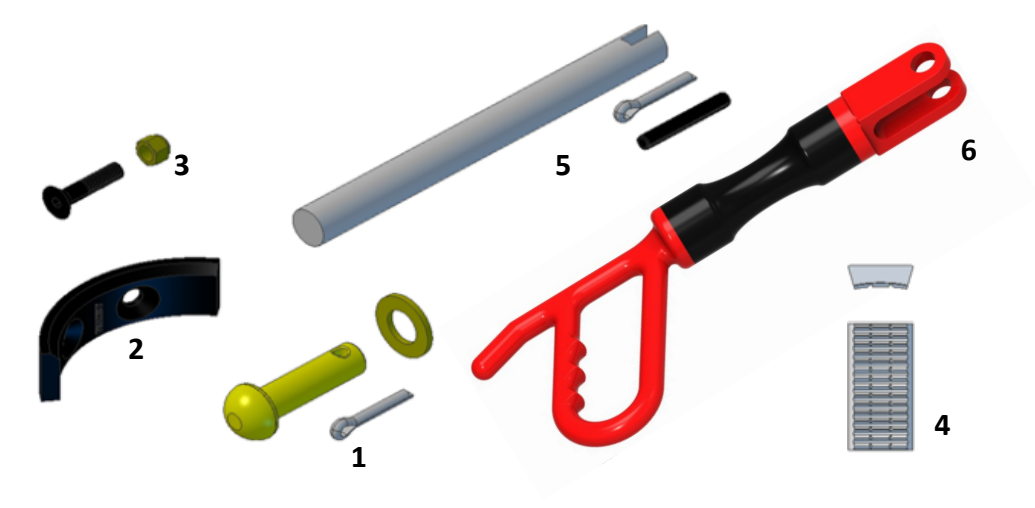


### KET “SD” TYPE ROTARY SLIPS COMPLETE

| PART NO.  | SLIP BODY SIZE   | TYPE | REF     | WT.    |
|-----------|------------------|------|---------|--------|
| A23-100-F | 3 1/2" BODY ONLY | SDML | 15522-1 | 153.00 |
| A24-200-F | 4 1/2" BODY ONLY | SDXL | 15562   | 182.00 |
| A24-100-F | 5" BODY ONLY     | SDXL | 15566   | 193.00 |
| A24-300-F | 5 1/2" BODY ONLY | SDXL | 15570   | 190.00 |
| A23-135-F | 3 1/2" x 3 1/2"  | SDML | 15522   | 180.00 |
| A23-127-F | 3 1/2" x 2 7/8"  | SDML | 15523   | 188.00 |
| A23-123-F | 3 1/2" x 2 3/8"  | SDML | 15524   | 193.00 |
| A24-245-F | 4 1/2" x 4 1/2"  | SDXL | 15513   | 205.00 |
| A24-240-F | 4 1/2" x 4"      | SDXL | 15514   | 219.00 |
| A24-235-F | 4 1/2" x 3 1/2"  | SDXL | 15515   | 229.00 |
| A24-150-F | 5" x 5"          | SDXL | 15516   | 213.00 |
| A24-145-F | 5" x 4 1/2"      | SDXL | 15517   | 227.00 |
| A24-140-F | 5" x 4"          | SDXL | 15518   | 237.00 |
| A24-355-F | 5 1/2" X 5 1/2"  | SDXL | 15519   | 210.00 |
| A24-350-F | 5 1/2" X 5"      | SDXL | 15520   | 224.00 |
| A24-345-F | 5 1/2" X 4 1/2"  | SDXL | 15521   | 234.00 |

bridge the gap.

# KET “SD” TYPE ROTARY SLIPS



## REPLACEMENT PARTS FOR “SD” TYPE ROTARY SLIPS

| PART NO. | ITEM# | DESCRIPTION                  | SIZE                        | #REQ. | REF.# | WT.  | *SPARES |
|----------|-------|------------------------------|-----------------------------|-------|-------|------|---------|
| A14-105  | 1     | HANDLE PIN w/WASHER & COTTER | ALL                         | 3     | 3769  | .50  | 3       |
| A23-104  | 2     | INSERT RETAINER RING         | 3 1/2"                      | 3     | 3738  | 1.00 | 3       |
| A23-105  | 2     | INSERT RETAINER RING         | 4 1/2"                      | 3     | 3739  | 1.00 | 3       |
| A23-106  | 2     | INSERT RETAINER RING         | 5"                          | 3     | 3741  | 1.00 | 3       |
| A23-107  | 2     | INSERT RETAINER RING         | 5 1/2"                      | 3     | 3740  | 1.00 | 3       |
| A23-108  | 2     | INSERT RETAINER RING         | 7"                          | 3     | 3742  | 1.00 | 3       |
| A23-109  | 3     | INSERT RETAINER SCREW & NUT  | ALL                         | 6     | 3737  | .02  | 12      |
| A23-110  | 4     | INSERT                       | SEE CHART<br>(NEXT PAGE 76) |       |       |      |         |
| A23-111  | 5     | HINGE PIN w/COTTER           | ALL                         | 2     | 2192  | 1.20 | 2       |
| 102100   | 6     | SAFETY FLEX HANDLE           | ALL                         | 3     | N/A   | 4.00 | 3       |

\*RECOMMENDED SPARE PARTS FOR 1 YEAR SERVICE

bridge the gap.

## KET “SD” TYPE ROTARY SLIPS

### INSERTS FOR “SDML” AND “SDXL” SLIPS

| PART NO. | SIZE            | TYPE    | REF.# | WT./SET (SDML/SDXL) |
|----------|-----------------|---------|-------|---------------------|
| A23-155  | 3 1/2" x 3 1/2" | BASIC   | 2162  | 10.00               |
| A23-156  | 3 1/2" x 2 7/8" | REDUCER | 2161  | 15.00               |
| A23-157  | 3 1/2" x 2 3/8" | REDUCER | 2160  | 20.00               |
| A23-158  | 4 1/2" x 4 1/2" | BASIC   | 2165  | 15.00 / 18.00       |
| A23-159  | 4 1/2" x 4"     | REDUCER | 2164  | 23.00 / 27.00       |
| A23-160  | 4 1/2" x 3 1/2" | REDUCER | 2163  | 30.00 / 36.00       |
| A23-161  | 5" x 5"         | BASIC   | 2167  | 15.00 / 18.00       |
| A23-162  | 5" x 4 1/2"     | REDUCER | 2166  | 23.00 / 27.00       |
| A23-163  | 5" x 4"         | REDUCER | 2168  | 30.00 / 36.00       |
| A23-164  | 5 1/2" x 5 1/2" | BASIC   | 2170  | 15.00 / 18.00       |
| A23-165  | 5 1/2" x 5"     | REDUCER | 2169  | 23.00 / 27.00       |
| A23-163  | 5 1/2" x 4 1/2" | REDUCER | 2168  | 30.00 / 36.00       |
| A23-166  | 7" x 7"         | BASIC   | 2173  | 20.00 / 26.00       |
| A23-167  | 7" x 6 5/8"     | REDUCER | 2172  | 25.00 / 41.00       |

**“SDXL” SLIPS EXCEPT 7” TAKE 54 INSERTS**

**3 1/2” “SDML” SLIPS TAKE 30 INSERTS**

**ALL OTHER “SDML” SLIPS EXCEPT 7” TAKE 45 INSERTS**

**7” “SDXL” SLIPS TAKE 72 INSERTS**

**7” “SDML” SLIPS TAKE 60 INSERTS**

bridge the gap.

## KET “DU” TYPE ROTARY SLIPS

The KET “DU” Rotary Slips are designed for long trouble free service. They are made of alloy steel and heat-treated for strength and resistance to wear. Both slips are for use in API tapered bowls. The “DU” Long has a 16” long gripping surface and is designed for deeper wells and heavier drill strings.

### KET “DU” TYPE ROTARY SLIPS

| PART NO.  | SLIP BODY SIZE | TYPE     | WT.    |
|-----------|----------------|----------|--------|
| A03-114-F | 4 1/2”         | DU/REG   | 130.00 |
| A03-115-F | 4 1/2”         | DU/LONG  | 150.00 |
| A03-117-F | 5 1/2”         | DU/LONG  | 162.00 |
| A03-119-F | 7”             | SDU/LONG | 192.00 |



### REPLACEMENT PARTS FOR KET “DU” ROTARY SLIPS

| PART NO. | ITEM# | DESCRIPTION                | *SPARES | #REQ | REF.#     | WT.  |
|----------|-------|----------------------------|---------|------|-----------|------|
| A03-105  | 1     | HINGE PIN                  | 2       | 2    | 7613-A-12 | 1.25 |
| A03-103  | 2     | DU LONG LINER KEY          | 3       | 3    | 7613-A-67 | 1.75 |
| A03-104  | 3     | DU REG. LINER KEY          | 3       | 3    | 7613-A-52 | 1.50 |
| A03-106  | 4     | FRONT HANDLE PIN           | 2       | 2    | 7613-B-12 | .25  |
| A03-107  | 5     | REAR HANDLE PIN            | 1       | 1    | 7613-C-12 | .38  |
| A03-108  | 6     | HINGE SPRING ASSY.         | 2       | 2    | 7613-211  | 1.25 |
| 100200-R | 7     | SAFETY FLEX HANDLE (REAR)  | 1       | 1    | 7613-5190 | 5.00 |
| 100200-F | 7     | SAFETY FLEX HANDLE (FRONT) | 2       | 2    | 7613-5190 | 5.00 |

bridge the gap.

## KET “DU” TYPE ROTARY SLIPS

### INSERTS FOR 4-1/2” “DU” ROTARY TYPE SLIPS AND 4-1/2” “TS-100” SPIDER SLIPS

| PART NO. | DESCRIPTION      | REF.#      | WT.  | PART NO. (FULL FACE INSERTS) |
|----------|------------------|------------|------|------------------------------|
| A03-120  | 4 1/2” X 4 1/2”  | 7613-A-81  | .75  | A03-210                      |
|          | 4 1/2” X 4 3/8”  | N/A        | .80  | A03-213                      |
|          | 4 1/2” X 4 1/4”  | N/A        | .85  | A03-216                      |
|          | 4 1/2” X 4 1/8”  | N/A        | .90  | A03-219                      |
| A03-121  | 4 1/2” X 4”      | 7613-FF-81 | 1.00 | A03-221                      |
|          | 4 1/2” X 3 3/4”  | N/A        | 1.75 | A03-224                      |
| A03-122  | 4 1/2” X 3 1/2”  | 7613-C-82  | 1.50 | A03-227                      |
|          | 4 1/2” X 3 3/8”  | N/A        | 1.65 | A03-229                      |
|          | 4 1/2” X 3 1/4”  | N/A        | 1.75 | A03-228                      |
|          | 4 1/2” X 3 1/8”  | N/A        | 1.85 | A03-230                      |
|          | 4 1/2” X 3”      | N/A        | 1.90 | A03-231                      |
| A03-123  | 4 1/2” X 2 7/8”  | 7613-B-82  | 2.00 | A03-233                      |
| A03-124  | 4 1/2” X 2 3/8”  | 7613-A-82  | 2.25 | A03-236                      |
| A03-125  | 4 1/2” X 2 1/16” | 7613-M-82  | 2.50 | A03-237                      |
| A03-126  | 4 1/2” X 1.900”  | 7613-H-82  | 2.75 | A03-238                      |
| A03-127  | 4 1/2” X 1.660”  | N/A        | 2.80 | A03-239                      |

### INSERTS FOR 5-1/2” “DU” ROTARY TYPE SLIPS AND 5-1/2” “TS-100” SPIDER SLIPS

| PART NO. | DESCRIPTION     | REF.#     | WT.  | PART NO. (FULL FACE INSERTS) |
|----------|-----------------|-----------|------|------------------------------|
|          | 5 1/2” X 5 3/4” | N/A       | .85  | A03-241                      |
| A03-130  | 5 1/2” X 5 1/2” | 7613-H-81 | 1.00 | A03-240                      |
| A03-131  | 5 1/2” X 5”     | 7613-G-81 | 1.50 | A03-243                      |
|          | 5 1/2” X 4 3/4” | N/A       | 1.75 | A03-246                      |
| A03-132  | 5 1/2” X 4 1/2” | 7613-E-81 | 2.00 | A03-249                      |
|          | 5 1/2” X 4 3/8” | N/A       | 2.10 | A03-247                      |
|          | 5 1/2” X 4 1/4” | N/A       | 2.15 | A03-252                      |
|          | 5 1/2” X 4 1/8” | N/A       | 2.20 | A03-255                      |
| A03-133  | 5 1/2” X 4”     | N/A       | 2.25 | A03-258                      |
|          | 5 1/2” X 3 3/4” | N/A       | 2.28 | A03-261                      |
| A03-134  | 5 1/2” X 3 1/2” | 7613-E-82 | 2.31 | A03-264                      |
|          | 5 1/2” X 3 1/4” | N/A       | 2.38 | A03-266                      |
|          | 5 1/2” X 3 1/8” | N/A       | 2.45 | A03-268                      |
|          | 5 1/2” X 3”     | N/A       | 2.52 | A03-270                      |
|          | 5 1/2” X 2 7/8” | N/A       | 2.60 | A03-275                      |
|          | 5 1/2” X 2 3/8” | N/A       | 2.80 | A03-277                      |

### INSERTS FOR 7” “SDU” ROTARY TYPE SLIPS

| PART NO. | DESCRIPTION | REF.#      | WT.  |
|----------|-------------|------------|------|
| A03-140  | 7” X 7”     | 7613-EE-81 | 1.25 |
| A03-141  | 7” X 6 5/8” | 7613-DD-81 | 1.75 |
| A03-146  | 7” X 5 7/8” | N/A        | 3.00 |
| A03-142  | 7” X 5 1/2” | 7613-Z-81  | 3.25 |
| A03-143  | 7” X 5”     | 7613-Y-81  | 3.75 |
| A03-144  | 7” X 4 1/2” | 7613-W-81  | 4.00 |

**NOTE:** “DU” REGULAR REQUIRES 18 INSERTS PER SET. “DU” LONG REQUIRES 24 INSERTS PER SET

4 1/2” & 5 1/2” “TS-100” SLIPS REQUIRE 12 INSERTS PER SET

\* 1 SET INSERTS PER PIPE SIZE RECOMMENDED FOR 1 YEAR SPARES



bridge the gap.

## KET TYPE “B” ROTARY SLIPS

The KET Type “B” Rotary Slip is designed for light to medium well drilling operations. They are made of alloy steel and heat-treated for strength and resistance to wear. It’s standard size ranges from 2 1/16” to 4 1/2” and is used in API tapered bowls.

| PART NO.  | DESCRIPTION                                              | WT.    |
|-----------|----------------------------------------------------------|--------|
| A19-450-F | KET 4-1/2” TYPE “B” ROTARY SLIP COMPLETE W/ FLEX HANDLES | 134.00 |



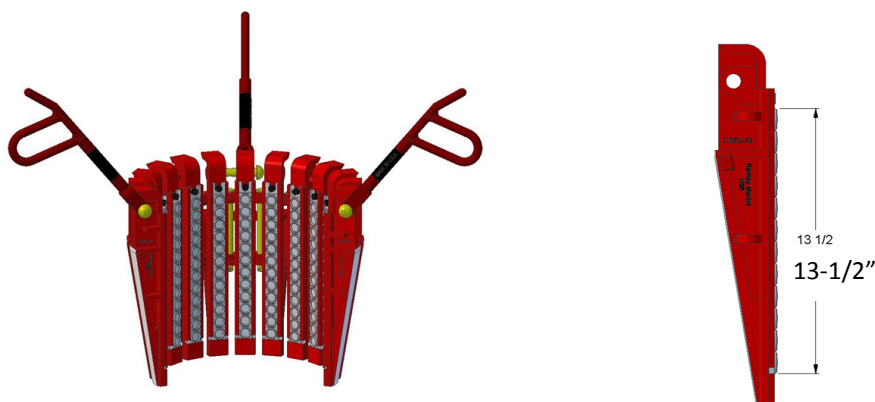
### REPLACEMENT PARTS FOR KET TYPE “B” ROTARY SLIPS

| PART NO. | ITEM# | DESCRIPTION      | REF#         | #REQ. | WT.  |
|----------|-------|------------------|--------------|-------|------|
| A19-101  | 1     | HINGE PIN        | 737-000-0500 | 2     | 1.12 |
| A19-103  | 2     | HANDLE PIN       | 737-000-0400 | 3     | .25  |
| A19-106  | 3     | INSERT RET. PIN  | 737-000-0600 | 3     | .30  |
| 100050   | 4     | FLEX HANDLE      | N/A          | 3     | 5.00 |
| A19-250  | 5     | 4-1/2” X 4-1/2”  | 757-044-0144 | 18/24 | .85  |
| A19-251  | 5     | 4-1/2” X 4”      | 757-044-0140 | 18/24 | 1.20 |
| A19-252  | 5     | 4-1/2” X 3-1/2”  | 757-044-0134 | 18/24 | 1.75 |
| A19-253  | 5     | 4-1/2” X 2-7/8”  | 757-044-0127 | 18/24 | 2.00 |
| A19-254  | 5     | 4-1/2” X 2-3/8”  | 757-044-0123 | 18/24 | 2.15 |
| A19-255  | 5     | 4-1/2” X 2-1/16” | N/A          | 18/24 | 2.45 |

bridge the gap.

## KET TYPE “CMSXL” & “CMS-3” CASING SLIPS

The KET “CMSXL” and “CMS-3” Casing Slips have a multi-segment design which gives a full wrap-around to help prevent damage to casing. By adding or subtracting segments & inserts the slip can accommodate 6 5/8” - 30” O.D. casing. The segments are made of alloy steel and are heat-treated for strength and wear resistance, then machined to strict quality controlled standards.



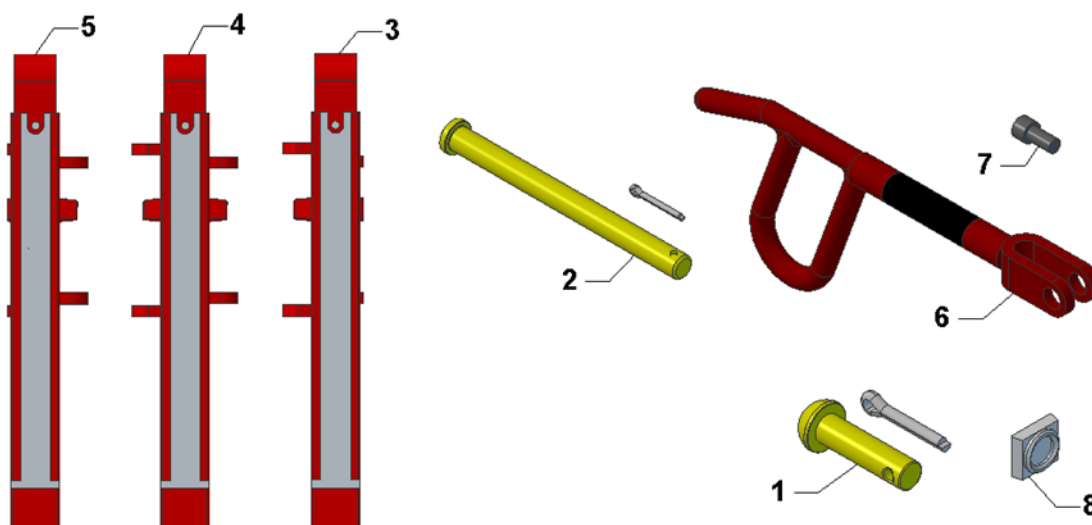
**KET “CMSXL” AND “CMS-3” CASING SLIPS COMPLETE**

| PART NO.  | TYPE  | REF # | CASING O.D. | WT. COMP. | TOTAL SEG. | HINGE PINS | BUTTON# - QTY |
|-----------|-------|-------|-------------|-----------|------------|------------|---------------|
| A14-111-F | CMSXL | 5315  | 6 5/8"      | 196       | 12         | 11         | A14-628-144   |
| A14-112-F | CMSXL | 5301  | 7"          | 184       | 12         | 11         | A14-619-144   |
| A14-113-F | CMSXL | 5303  | 7 5/8"      | 166       | 12         | 11         | A14-630-144   |
| A14-114-F | CMSXL | 5305  | 8 5/8"      | 181       | 13         | 12         | A14-630-156   |
| A14-115-F | CMSXL | 5307  | 9 5/8"      | 192       | 14         | 13         | A14-630-168   |
| A14-116-F | CMSXL | 5309  | 10 3/4"     | 209       | 15         | 14         | A14-630-180   |
| A14-117-F | CMSXL | 5311  | 11 3/4"     | 260       | 17         | 16         | A14-627-204   |
| A14-118-F | CMSXL | 5313  | 13 3/8"     | 247       | 18         | 17         | A14-630-216   |
| A14-119-F | CMSXL | 5325  | 16"         | 308       | 21         | 20         | A14-631-252   |
| A14-120-F | CMSXL | 5333  | 18 5/8"     | 367       | 25         | 24         | A14-626-300   |
| A14-121-F | CMSXL | 5329  | 20"         | 383       | 26         | 25         | A14-631-312   |
| A14-122-F | CMSXL | 5331  | 24"         | 443       | 30         | 29         | A14-631-360   |
| A14-123-F | CMSXL | 5346  | 26"         | 486       | 33         | 32         | A14-631-396   |
| A14-124-F | CMSXL | 5342  | 30"         | 546       | 37         | 36         | A14-631-444   |
| A14-134-F | CMS-3 |       | 9-5/8"      | 178       | 14         | 13         | A14-513-168   |
| A14-135-F | CMS-3 |       | 10-3/4"     | 194       | 15         | 14         | A14-630-180   |
| A14-136-F | CMS-3 |       | 11-3/4"     | 243       | 17         | 16         | A14-627-204   |
| A14-137-F | CMS-3 |       | 13-3/8"     | 229       | 18         | 17         | A14-630-216   |
| A14-138-F | CMS-3 |       | 16"         | 287       | 21         | 20         | A14-631-252   |
| A14-139-F | CMS-3 |       | 18-5/8"     | 342       | 25         | 24         | A14-626-300   |
| A14-140-F | CMS-3 |       | 20"         | 357       | 26         | 25         | A14-631-312   |
| A14-141-F | CMS-3 |       | 24"         | 413       | 30         | 29         | A14-631-360   |
| A14-142-F | CMS-3 |       | 26"         | 453       | 33         | 32         | A14-631-396   |
| A14-143-F | CMS-3 |       | 30"         | 509       | 37         | 36         | A14-631-444   |

NOTE: ALL SLIPS 9 5/8" AND LARGER ARE FURNISHED WITH 4 OR MORE HANDLES.  
 ALL PARTS ARE INTERCHANGEABLE WITH CORRESPONDING DESIGN TYPE "CMSXL" CASING SLIPS.  
 ALL PARTS ARE INTERCHANGEABLE W/"CMSXL" EXCEPT SEGMENTS

bridge the gap.

## KET TYPE “CMS” CASING SLIPS



### REPLACEMENT PARTS FOR “CMS” & “CPS” SLIPS

| PART NO. | ITEM# | DESCRIPTION                            | REF.# | **SPARES | WT.    |
|----------|-------|----------------------------------------|-------|----------|--------|
| A14-105  | 1     | HANDLE PIN w/WASHER & COTTER           | 3769  | 3        | .50    |
| A14-106  | 2     | HINGE PIN w/COTTER                     | 2525  | 2        | .60    |
| A14-100  | 3     | RIGHT HAND SEGMENT f/CMSXL SLIP        | 5320  |          | 12.00  |
| A14-148  | 3     | RIGHT HAND SEGMENT f/CMS-3” SLIP       | N/A   |          | 11.00  |
| A14-107  | 4     | INTERMEDIATE SEGMENT f/CMSXL SLIP      | 5322  |          | 12.00  |
| A14-149  | 4     | INTERMEDIATE SEGMENT f/CMS-3” SLIP N/A | N/A   |          | 11.00  |
| A14-101  | 5     | LEFT HAND SEGMENT f/CMSXL SLIP         | 5321  |          | 12.00  |
| A14-150  | 5     | LEFT HAND SEGMENT f/CMS-3” SLIP        | N/A   |          | 11.00  |
| 102100   | 6     | SAFETY FLEX HANDLE                     | N/A   | 3        | 4.00   |
| A14-090  | 7     | BUTTON RETAINER SCREW                  | N/A   |          | .05    |
|          | 8     | BUTTON INSERTS (SEE TABLE ABOVE)       | N/A   |          | VARIES |

ALL PARTS ARE INTERCHANGEABLE WITH CORRESPONDING DESIGN TYPE “CMSXL” SLIPS

\*\*RECOMMENDED SPARE PARTS FOR 1 YEAR OPERATION

\*FOR RECOMMENDED SPARES INCLUDE 1 SET OF INSERTS FOR EACH PIPE SIZE

### KET “CPS” CONDUCTOR PIPE SLIPS

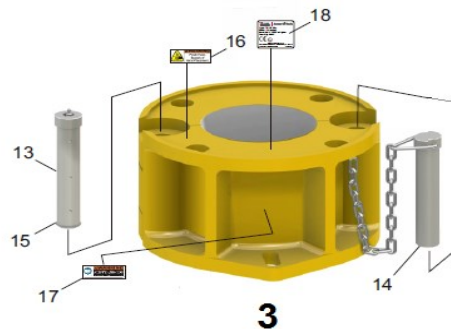
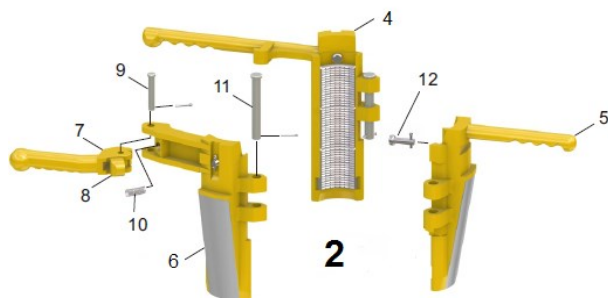
| PART NO. | PIPE O.D. | WT. COMPLETE | TOTAL SEGMENTS | HINGE SPACERS | INSERTS  |
|----------|-----------|--------------|----------------|---------------|----------|
| A14-244  | 24”       | 276          | 13             | 12            | 2631-156 |
| A14-266  | 26”       | 296          | 14             | 13            | 2631-168 |
| A14-330  | 30”       | 319          | 16             | 15            | 2631-192 |

NOTE: ALL PARTS ARE INTERCHANGEABLE WITH “CMSXL” SLIP

bridge the gap.

## KET 3 1/2" "TS-100" MANUAL TUBING SPIDER

The 3-1/2" TS-100 tubing spider and slip assembly can handle tubing sizes 3/4" thru 3-1/2" O.D. by changing 9 removable inserts. The spider and slip are made of alloy steel and heat treated for strength. All come with full certification and data books which are available upon request. This spider is rated for 100 ton capacity.



| PART NO. | ITEM# | DESCRIPTION                | REF.#      | **SPARES | #REQ. | WT.    |
|----------|-------|----------------------------|------------|----------|-------|--------|
| A17-301  | 2     | SLIP ASSY. LESS INSERTS    | 7502-104   |          | 1     | 51.00  |
| A17-302  | 3     | 3 1/2" TS-100 BOWL ONLY    | 7502-100   |          | 1     | 187.00 |
| A17-101  | 4     | RIGHT HAND SEGMENT         | 7502-C-217 |          | 1     | 13.00  |
| A17-102  | 5     | CENTER SEGMENT             | 7502-B-217 |          | 1     | 13.00  |
| A17-103  | 6     | LEFT HAND SEGMENT          | 7502-A-217 |          | 1     | 13.00  |
| A17-104  | 7     | LATCH HANDLE               | 7502-A-214 |          | 1     | 3.00   |
| A17-105  | 8     | LATCH                      | 7502-A-207 |          | 1     | .50    |
| A17-108  | 9     | LATCH PIN W/ COTTER        | 7502-B-207 | 2        | 1     | .12    |
| A17-109  | 10    | LATCH SPRING               | 7502-C-207 | 2        | 1     | .12    |
| A17-110  | 11    | HINGE PIN F/SLIP W/ COTTER | 7502-A-216 |          | 2     | .25    |
| A17-111  | 12    | LINE KEEPER W/COTTER       | 7502-B-216 | 6        | 3     | .12    |
| A17-112  | 13    | HINGE PIN F/BOWL           | 7502-A-202 |          | 1     | 4.50   |
| A17-113  | 14    | LOCK PIN W/BAIL & CHAIN    | 7502-D-203 |          | 1     | 5.00   |
| A17-114  | 15    | SNAP RING                  | 7502-103-X | 1        | 1     | .08    |

**\*\*RECOMMENDED SPARE PARTS FOR 1 YEAR OPERATION**

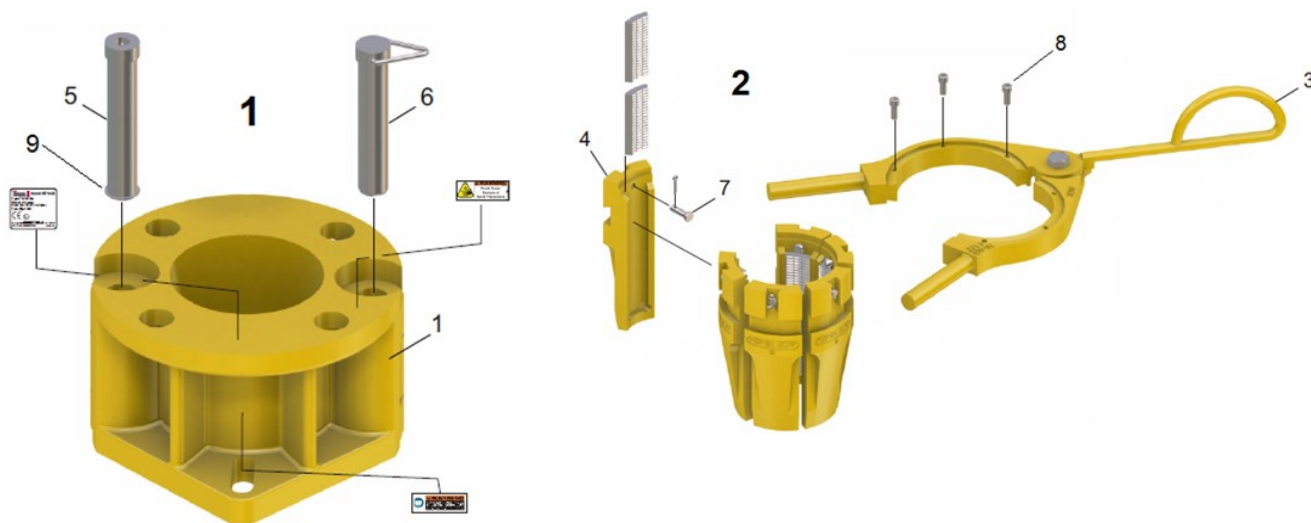
### INSERTS FOR 3 1/2" "TS-100" SPIDER

| PART NO. | DESCRIPTION       | REF#        | #REQ. | WT   |
|----------|-------------------|-------------|-------|------|
| A21-101  | 3 1/2" X 3 1/2"   | 7502-A-5069 | 9     | 1.25 |
| A21-110  | 3 1/2" X 3 3/8"   | N/A         | 9     | 1.25 |
| A21-102  | 3 1/2" X 3 1/8"   | N/A         | 9     | 1.30 |
| A21-103  | 3 1/2" X 2 7/8"   | 7502-A-5070 | 9     | 1.50 |
| A21-104  | 3 1/2" X 2 3/8"   | 7502-A-5071 | 9     | 1.75 |
| A21-105  | 3 1/2" X 2 -1/16" | 7502-A-5072 | 9     | 2.00 |
| A21-111  | 3 1/2" X 2"       | N/A         | 9     | 2.10 |
| A21-106  | 3 1/2" X 1-1/2"   | 7502-A-5074 | 9     | 2.25 |
| A21-107  | 3 1/2" X 1-1/4"   | 7502-A-5075 | 9     | 2.50 |
| A21-108  | 3 1/2" X 1"       | 7502-A-5076 | 9     | 2.75 |
| A21-109  | 3 1/2" X 3/4"     | 7502-A-5077 | 9     | 2.87 |

bridge the gap.

## KET 4 1/2" & 5 1/2" "TS-100 MANUAL SPIDER

The 4-1/2" spider and slip uses the 4-1/2" "DU" rotary slip insert and has a range of 1.660" thru 4-1/2" O.D. by changing the 12 inserts. The 5-1/2" spider and slip uses the 5-1/2" "DU" rotary slip insert and has a range of 2-7/8" thru 5-1/2" O.D. by changing the 12 inserts. The 5-1/2" spider is specifically designed to run the Reda or Kobe cable. Both spiders and slip assemblies are designed for heavy duty use. Both are made of alloy steel and heat treated for strength and wear resistance.



### REPLACEMENT PARTS FOR 4 1/2" & 5 1/2" "TS-100 MANUAL SPIDER

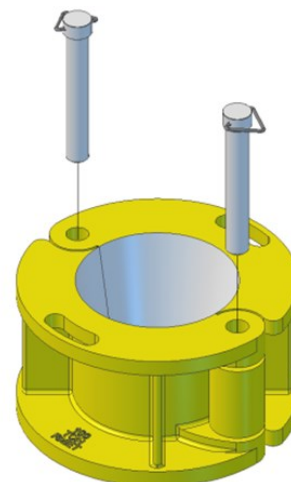
| PART NO. | ITEM# | DESCRIPTION                             | *SPARES | #REQ. | WT.    |
|----------|-------|-----------------------------------------|---------|-------|--------|
| A18-451  | 1     | 4-1/2" BOWL ONLY                        |         | 1     | 155.00 |
| A18-452  | 2     | 4-1/2" SLIP ASSY. COMPLETE LESS INSERTS |         | 1     | 60.00  |
| A18-453  | 3     | 4-1/2" SLIP HANDLES ONLY (SET)          |         | 1     | 20.00  |
| A18-454  | 4     | 4-1/2" SLIP SEGMENTS EACH               |         | 1     | 6.80   |
| A18-457  | 5     | 4-1/2" HINGE PIN                        |         | 1     | 3.50   |
| A18-458  | 6     | 4-1/2" REMOVEABLE HINGE PIN             |         | 1     | 3.75   |
| A18-455  | 7     | 4-1/2" & 5-1/2" INSERT RETAINER PIN     | 12      | 1     | .20    |
| A18-456  | 8     | 4-1/2" & 5-1/2" SEGMENT RETAINER PIN    | 6       | 1     | .25    |
| A18-551  | 1     | 5-1/2" BOWL ONLY                        |         | 1     | 213.00 |
| A18-552  | 2     | 5-1/2" SLIP ASSY. COMPLETE LESS INSERTS |         | 1     | 70.00  |
| A18-553  | 3     | 5-1/2" SLIP HANDLES ONLY (SET)          |         | 1     | 21.00  |
| A18-554  | 4     | 5-1/2" SLIP SEGMENTS EACH               |         | 2     | 8.00   |
| A18-557  | 5     | 5-1/2" HINGE PIN                        |         | 3     | 4.00   |
| A18-558  | 6     | 5-1/2" REMOVABLE HINGE PIN              |         | 1     | 4.25   |
| A18-559  | 9     | HINGE PIN RETAINER                      |         | 1     |        |

\* RECOMMENDED SPARE PARTS F/1 YEAR OPERATION  
INSERTS FOR 4-1/2" - 5-1/2" SPIDER ON PAGE 78

bridge the gap.

## KET 8 5/8" "API" BOWL

The KET API BOWL has the same bore and taper (4" per ft.) as the API #3 split bowl. All API drill collar, drill pipe & casing slips can be used in this bowl. It has a range of 2-1/16" thru 10" T.J. and is rated for 125 tons.



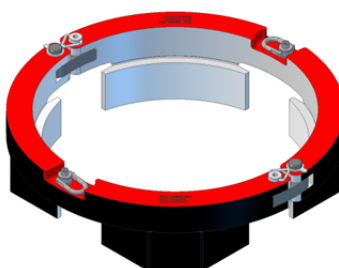
| PART NO. | DESCRIPTION                  | #REQ. | WT.   |
|----------|------------------------------|-------|-------|
| A17-850  | 8 5/8" API BOWL              | 1     | 600.0 |
| A17-851  | REMOVABLE HINGE PIN W/ CHAIN | 2     | 8.0   |

## KET FALSE ROTARY



| PART NO.   | DESCRIPTION                                              | WT.  |
|------------|----------------------------------------------------------|------|
| A51-500-GA | FALSE ROTARY TABLE FOR 18 5/8", 20", 24", AND 30" CASING | 2300 |

## KET ADAPTER RING



| PART NO. | DESCRIPTION                                                   | WT.  |
|----------|---------------------------------------------------------------|------|
| A52-100  | 37 1/2" OILWELL TO 37 1/2" NATIONAL ROTARY TABLE ADAPTER RING | 1118 |

bridge the gap.

# KET MAKE UP STANDS AND TONG DIE DRIVERS



The KET Safety Make-Up Stand is used to support stabilizers, subs, and other drilling tools during bottom hole make-up. It is located on the side of the rotary table, away from the slips and safety clamps.

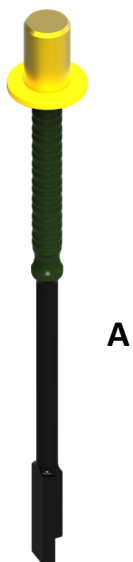
## KET SAFETY MAKE-UP STAND

| PART NO. | DESCRIPTION              | PIN DIA. | RATING     | HEIGHT | WT. |
|----------|--------------------------|----------|------------|--------|-----|
| A26-900  | KET SAFETY MAKE-UP STAND | 2"       | 10,000 LBS | 24"    | 140 |

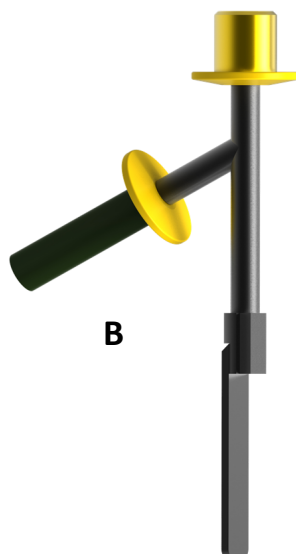
## KET TONG DIE DRIVERS

| PART NO. | ITEM | DESCRIPTION                                                    | WT.   |
|----------|------|----------------------------------------------------------------|-------|
| A26-300  | A    | KET 1 1/4" STRAIGHT TONG DIE DRIVER                            | 7.25  |
| A26-310  | A    | KET 1" STRAIGHT TONG DIE DRIVER                                | 7.25  |
| A26-350  | B    | KET 1 1/4" ANGLE TONG DIE DRIVER                               | 9.25  |
| A26-360  | B    | KET 1" ANGLE TONG DIE DRIVER                                   | 9.25  |
| A26-425  | C    | KET HAMMERLESS TONG DIE DRIVER /COMPLETE W/ 1 1/4" DRIVER HEAD | 12.25 |
| A26-426  | C    | KET HAMMERLESS TONG DIE DRIVER /COMPLETE W/ 1" DRIVER HEAD     | 11.30 |
| A26-400  | D    | 1 1/4" DRIVER HEAD ONLY F/ HAMMERLESS TONG DIE DRIVER          |       |
| A26-401  | D    | 1" DRIVER HEAD ONLY F/ HAMMERLESS TONG DIE DRIVER              |       |

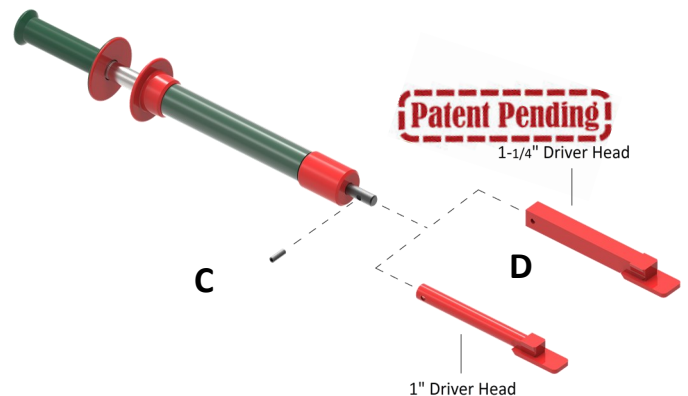
### Straight Tong Die Driver



### Angled Tong Die Driver



### Hammerless Tong Die Driver



bridge the gap.

# KET TONG SAFETY HANDLES AND BUMPERS



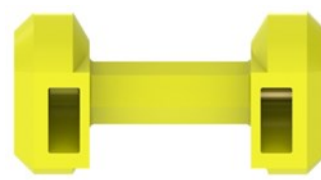
A



B



C



D

## TONG SAFETY HANDLES

| PART NO.    | ITEM | DESCRIPTION                                                                   | WT.  |
|-------------|------|-------------------------------------------------------------------------------|------|
| T20000-SH-1 | A    | 2 PC TONG SAFETY HANDLE KIT F/ TONGS MODIFIED WITH 3/8" HOLES                 | 1.25 |
| T20000-SH-2 | A    | 2 PC TONG SAFETY HANDLE KIT F/ TONGS WITH STEEL HANDLES                       | 1.25 |
| T20000-SH-3 | B    | 2 PC TONG SAFETY HANDLE F/ TYPE "C" LONG JAW                                  | 1.10 |
| T20000-SH-4 | C    | 2 PC TONG SAFETY HANDLE F/ TONG MODIFIED W/ 1 3/4" WIDE HANDLES W/ 3/4" HOLES | 1.18 |
| T20000-DB   | D    | DUMBBELL TONG SAFETY HANDLE                                                   | 2.16 |



## SAFETY CAP ASSEMBLY FOR VARCO® TONGS

| PART NO. | ITEM | DESCRIPTION                         | QTY | WT.  |
|----------|------|-------------------------------------|-----|------|
| T250369  | N/A  | SAFETY CAP ASSEMBLY FOR VARCO TONGS | N/A | 2.66 |



The KET Safety Bumpers are used on the ST-80, Mud Buckets, and other miscellaneous rig equipment where hand protection is required. The two piece design allows for easy installation with the size molded into each rubber for easy recognition.

## SAFETY BUMPERS

| PART NO.      | DESCRIPTION              | WT./SET |
|---------------|--------------------------|---------|
| T20000-SH-7-4 | 1/2" SAFETY BUMPER (SET) | 1.90    |
| T20000-SH-7-6 | 3/4" SAFETY BUMPER (SET) | 1.90    |
| T20000-SH-7-7 | 7/8" SAFETY BUMPER (SET) | 1.90    |
| T20000-SH-7-8 | 1" SAFETY BUMPER (SET)   | 1.90    |

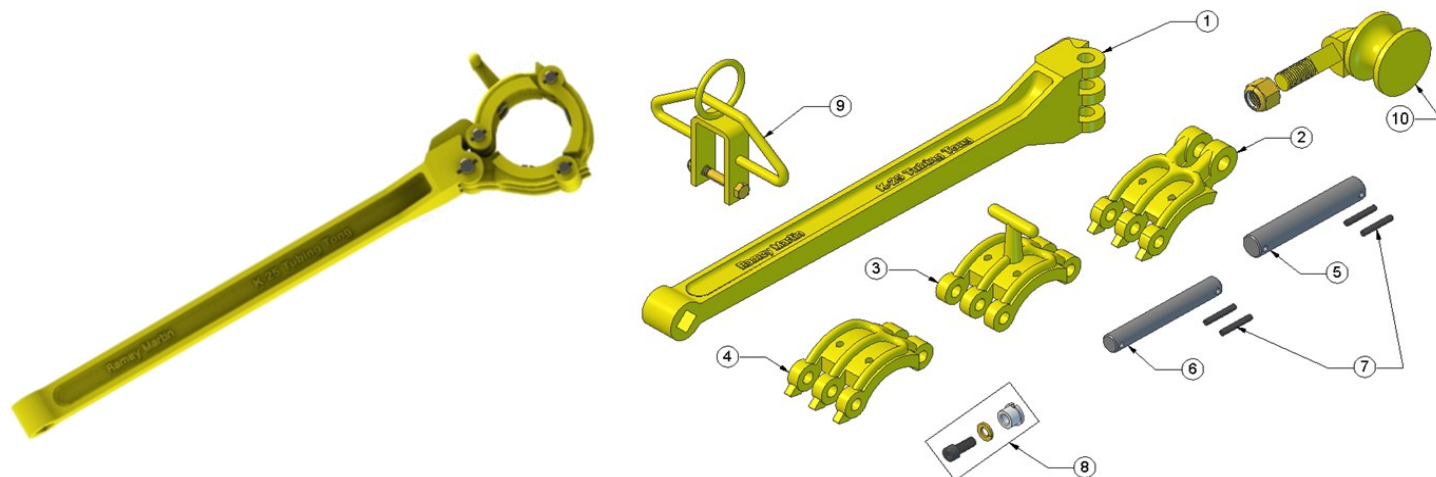


bridge the gap.

## KET “K-25” LIGHT WEIGHT TUBING TONG

The KET K-25 Tubing Tong has a wide range from 1.050 thru 2 7/8”, and is light-weight with a wrap-around design providing approximately 300 deg. die contact. This prevents crushing or cutting of thin wall tubing. The tong can be used by hand or with a rope block and cat line, when making-up or breaking-out tubing. They are made of high alloy steel, heat-treated for strength and wear, and then tested. The KET K-25 light-weight tubing tong has a 2,000 ft.-lb maximum torque rating. All tongs are pull-tested and complete documentation is available with each tong.

| PART NO. | DESCRIPTION                                        | WT.   |
|----------|----------------------------------------------------|-------|
| A05-101  | K-25 TONG COMPLETE LESS DIES, ROPE GUIDE & HANGER  | 16.50 |
| A05-102  | K-25 TONG COMPLETE LESS DIES w/ROPE GUIDE & HANGER | 21.00 |



### REPLACEMENT PARTS FOR K-20 & K-25 TUBING TONG

| PART NO. | ITEM# | DESCRIPTION                        | #REQ. | *SPARES | WT.  |
|----------|-------|------------------------------------|-------|---------|------|
| A05-114  | 1     | TONG LEVER F/ K25 TONG             | 1     |         | 9.75 |
| A05-106  | 2     | K-25 LEVER JAW                     | 1     |         | 2.12 |
| A05-108  | 3     | K-25 CENTER JAW                    | 1     |         | 2.75 |
| A05-107  | 4     | K-25 LATCH JAW                     | 1     |         | 2.12 |
| A05-104  | 5     | TONG LEVER PIN                     | 1     | 1       | .37  |
| A05-103  | 6     | TONG HEAD PIN                      | 3     | 3       | .12  |
| A05-117  | 7     | RETAINER PINS                      | 8     | 8       | .03  |
| A05-105  | 8     | TONG DIE BUSHING & SCREW           | 6     | 24      | .06  |
| A05-113  | 9     | ROLLOVER HANGER WITH SCREW AND NUT | 1     |         | 1.75 |
| A05-109  | 10    | K-20 OR K-25 ROPE GUIDE WITH NUT   | 1     |         | 2.75 |

DIES FOR K-20 AND K-25 REFER TO PAGE 91

\*RECOMMENDED SPARE PARTS FOR ONE YEAR

RECOMMENDED DIES FOR ONE YEAR ORDER 3 FOR EACH SIZE REQUIRED

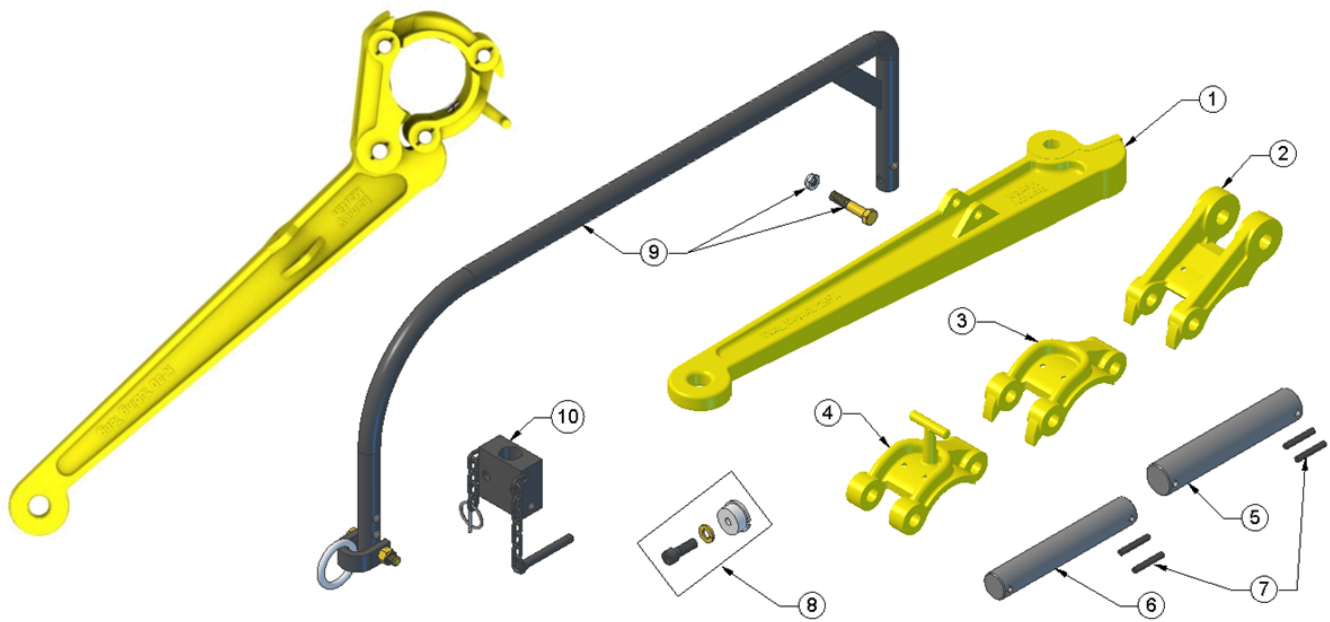
ALL PARTS ARE INTERCHANGEABLE WITH KELCO\*\* K-20 & K-25 TUBING TONGS

bridge the gap.

## KET “K-30” MANUAL TUBING TONG

KET K-Series Tubing Tongs are designed for heavy duty service of tubing 1.660” to 3.875” OD. They have a wrap-around design with approximately a 300 deg. die contact. This prevents cutting or crushing of thin wall tubing. All tongs are pulled tested and complete documentation is available with each tong.

| PART NO. | DESCRIPTION                                              | RANGE         | RATING        | WT.   |
|----------|----------------------------------------------------------|---------------|---------------|-------|
| A06-101  | K-30 TONG ASSEMBLY COMPLETE LESS HANGER AND DIES         | 1.660”-3.875” | 5,000 FT. LBS | 48.00 |
| A06-102  | K-30 TONG ASSEMBLY COMPLETE LESS DIES W/ STANDARD HANGER | 1.660”-3.875” | 5,000 FT. LBS | 61.00 |
| A06-103  | K-30 TONG ASSEMBLY COMPLETE LESS DIES W/ ROLLOVER HANGER | 1.660”-3.875” | 5,000 FT. LBS | 64.00 |



### REPLACEMENT PARTS FOR K-30 TUBING TONG

| PART NO# | ITEM# | DESCRIPTION                       | #REQ. | *SPARES | WT.   |
|----------|-------|-----------------------------------|-------|---------|-------|
| A06-104  | 1     | TONG LEVER                        | 1     |         | 24.00 |
| A06-105  | 2     | LEVER JAW                         | 1     |         | 8.00  |
| A06-106  | 3     | CENTER JAW                        | 1     |         | 5.50  |
| A06-107  | 4     | LATCH JAW                         | 1     |         | 5.75  |
| A06-509  | 5     | TONG LEVER PIN                    | 1     | 1       | .75   |
| A06-109  | 6     | TONG HEAD PIN                     | 3     | 3       | .50   |
| A06-157  | 7     | RETAINER PINS                     | 8     | 8       | .03   |
| A06-110  | 8     | TONG DIE BUSHING W/ SCREW         | 6     | 24      | .10   |
| A06-113  | 9     | TONG HANGER W/ HANGER SCREW & NUT | 1     |         | 13.00 |
| A06-114  | 10    | ROLLOVER BLOCK                    | 1     |         | 2.50  |

bridge the gap.

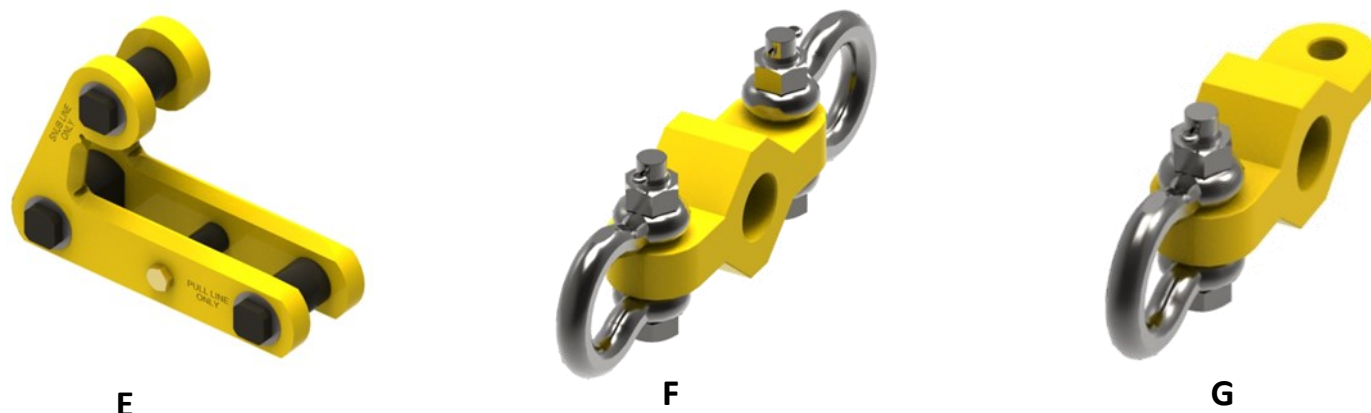
## DIES FOR TUBING TONGS

| PART NO. | DESCRIPTION            | # SET | WT.   |
|----------|------------------------|-------|-------|
| A04-119  | K-20 - 3/4" (1.050")   | 3     | 1.13  |
| A04-120  | K-20 - 1" (1.315")     | 3     | 1.07  |
| A04-121  | K-20 - 1-1/4" (1.660") | 3     | .94   |
| A04-122  | K-20 - 1-1/2" (1.900") | 3     | .75   |
| A04-123  | K-20 - 2-1/16"         | 3     | .63   |
| A04-124  | K-20 - 2-3/8"          | 3     | .41   |
| A05-129  | K-25 - 3/4" (1.050")   | 3     | 1.75  |
| A05-120  | K-25 - 1" (1.315")     | 3     | 1.63  |
| A05-121  | K-25 - 1-1/4" (1.660") | 3     | 1.50  |
| A05-122  | K-25 - 1-1/2" (1.900") | 3     | 1.32  |
| A05-123  | K-25 - 2-1/16"         | 3     | 1.30  |
| A05-124  | K-25 - 2-3/8"          | 3     | 1.25  |
| A05-125  | K-25 - 2-1/2"          | 3     | .95   |
| A05-126  | K-25 - 2.697"          | 3     | .63   |
| A05-127  | K-25 - 2.776"          | 3     | .55   |
| A05-128  | K-25 - 2-7/8"          | 3     | .58   |
| A06-133  | K-30 - 1-1/4" (1.660") | 3     | 5.00  |
| A06-134  | K-30 - 1-1/2" (1.900") | 3     | 4.60  |
| A06-119  | K-30 - 2-1/16"         | 3     | 4.10  |
| A06-120  | K-30 - 2-3/8"          | 3     | 3.80  |
| A06-121  | K-30 - 2-7/8"          | 3     | 3.10  |
| A06-135  | K-30 - 3"              | 3     | 3.00  |
| A06-122  | K-30 - 3-1/16"         | 3     | 2.80  |
| A06-123  | K-30 - 3-1/8"          | 3     | 2.75  |
| A06-124  | K-30 - 3-1/4"          | 3     | 2.50  |
| A06-130  | K-30 - 3-3/8"          | 3     | 2.40  |
| A06-125  | K-30 - 3-1/2"          | 3     | 2.10  |
| A06-126  | K-30 - 3.668"          | 3     | 1.70  |
| A06-127  | K-30 - 3-3/4"          | 3     | 1.50  |
| A06-131  | K-30 - 3-7/8"          | 3     | 1.40  |
| A06-573  | K-50 & K-50HT - 2 3/8" | 3     | 7.50  |
| A06-575  | K-50 & K-50HT - 2-7/8" | 3     | 6.33  |
| A06-576  | K-50 & K-50HT - 3-1/2" | 3     | 5.33  |
| A06-577  | K-50 & K-50HT - 3-3/4" | 3     | 4.74  |
| A06-578  | K-50 & K-50HT - 4"     | 3     | 4.15  |
| A06-579  | K-50 & K-50HT - 4-1/8" | 3     | 4.05  |
| A06-580  | K-50 & K-50HT - 4-1/2" | 3     | 3.50  |
| A06-581  | K-50 & K-50HT - 4-3/4" | 3     | 2.92  |
| A06-582  | K-50 & K-50HT - 5"     | 3     | 2.33  |
| A06-773  | K-70 - 2 7/8"          | 3     | 14.50 |
| A06-758  | K-70 - 3 1/2"          | 3     | 13.25 |
| A06-757  | K-70 - 4"              | 3     | 12.00 |
| A06-756  | K-70 - 4 1/2"          | 3     | 10.50 |
| A06-755  | K-70 - 4 3/4"          | 3     | 10.25 |
| A06-754  | K-70 - 5"              | 3     | 9.50  |
| A06-753  | K-70 - 5 1/2"          | 3     | 8.00  |
| A06-759  | K-70 - 5 3/4"          | 3     | 7.25  |
| A06-752  | K-70 - 6"              | 3     | 6.25  |
| A06-751  | K-70 - 6 5/8"          | 3     | 4.75  |

bridge the gap.

## KET TONG LINE BLOCKS

The Keystone 12.5-ton Tong Block is designed to fit the line attachment of the tong and to provide a mechanical advantage of 2:1 when making or breaking out connections. The sheave is grooved for 1/2" through 7/8" wire line and incorporates a sleeve-type grease-able bearing for longevity.

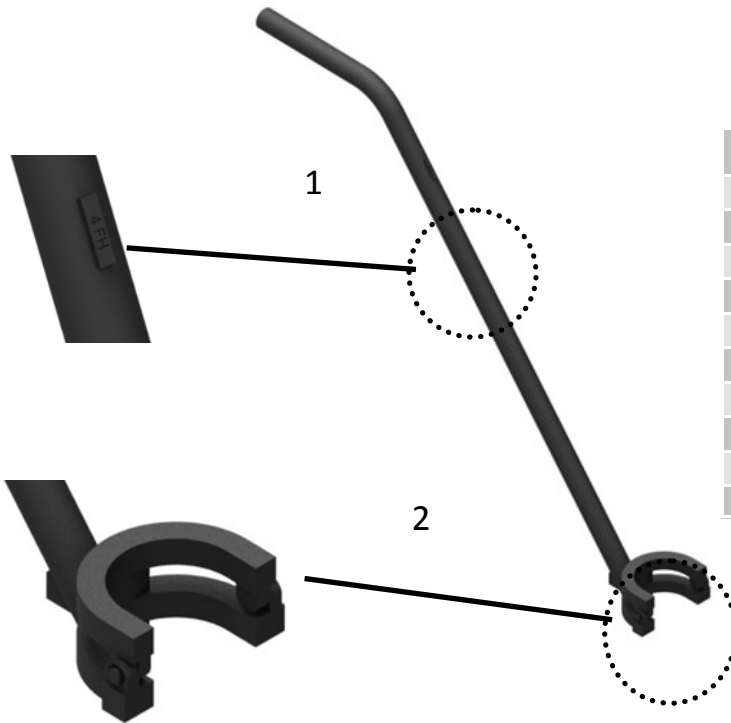


| PART NO.     |   | DESCRIPTION                                            | WT.   |
|--------------|---|--------------------------------------------------------|-------|
| TB-16500     | A | TONG BLOCK ASSEMBLY W/BJ B & C ADAPTER                 | 20.00 |
| TB-16700     | B | TONG BLOCK ASSEMBLY W/BJ DB & SDD ADAPTER              | 25.50 |
| TB-16600     | C | TONG BLOCK ASSEMBLY W/WW AAX & ST-60 ADAPTER           | 23.00 |
| TB-70616     | D | TRIANGLE TONG BLOCK ASSEMBLY W/DB/SDD ADAPTER          | 27.00 |
| T24529-TLB   | E | KET TYPE DB/SDD TONG LINE BLOCK ASSEMBLY(HT-65/HT-100) | 42.00 |
| T9574-TLB    | F | TYPE "B" TONG LINE BLOCK ASSEMBLY                      | 28.50 |
| T9574-TLB-01 | G | TYPE "B" TONG LINE BLOCK ASSEMBLY FOR USE WITH SHEAVE  | 20.75 |

bridge the gap.

# KET PIPE JACKS AND ROLLERS

## PIPE JACKS



| PART NO.                             | DESCRIPTION                        | WT.   |
|--------------------------------------|------------------------------------|-------|
| A09-501                              | PIPE JACK FOR XT-39 CONNECTION     | 19.75 |
| A09-502                              | PIPE JACK FOR 4" FH CONNECTION     | 19.85 |
| A09-503                              | PIPE JACK FOR 4 1/2" IF CONNECTION | 20.65 |
| A09-504                              | PIPE JACK FOR 3 1/2" IF CONNECTION | 18.50 |
| A09-505                              | PIPE JACK FOR VX-39 CONNECTION     | 19.00 |
| A09-506                              | PIPE JACK FOR HT-38 CONNECTION     | 19.50 |
| A09-507                              | PIPE JACK FOR XTM-39 CONNECTION    | 20.00 |
| A09-508                              | PIPE JACK FOR XT-43 CONNECTION     | 19.70 |
| A09-509                              | PIPE JACK FOR 4 1/2" XH CONNECTION | 20.30 |
| SPECIAL SIZES AVAILABLE UPON REQUEST |                                    |       |

- 1) SIZE SPECIFICATON STAMP ON EACH PRODUCT
- 2) HEAVY DUTY HINGE DESIGN FOR STRONGER SUPPORT

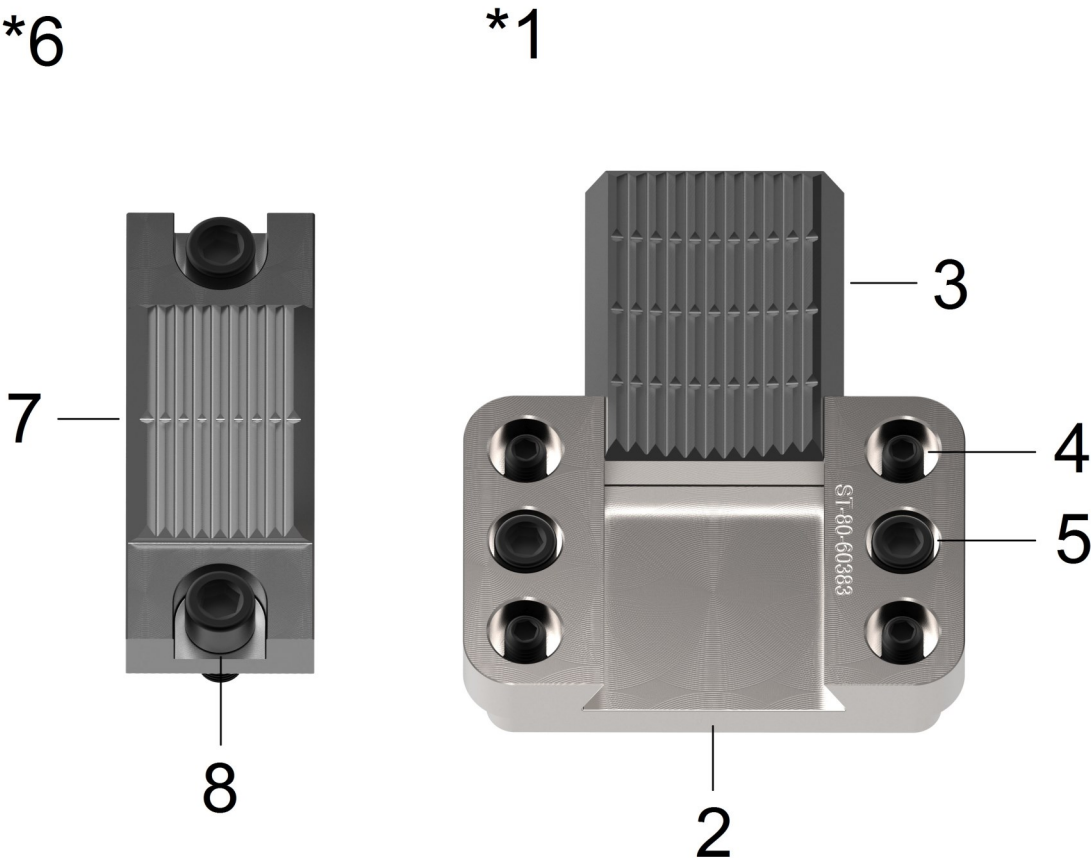
## PIPE ROLLERS



| PART NO. | DESCRIPTION     | WT.  |
|----------|-----------------|------|
| A26-950  | KET PIPE ROLLER | 6.50 |

bridge the gap.

KET ST-80 IRONROUGHNECK DIES & DIE HOLDERS



| PART NO.       |    | DESCRIPTION                                      | REF#         | WT.  |
|----------------|----|--------------------------------------------------|--------------|------|
| AST-80-LD-ASSY | *1 | ST-80 DIE HOLDER ASSEMBLY WITH BOLTS             | 30172029     | 7.16 |
| AST-80-HOL     | 2  | ST-80 LOWER DIE HOLDER ONLY                      | 30160383     | 7.16 |
| AST-80-LD      | 3  | ST-80 LOWER DIE EACH (NOTE :IT TAKES 2 PER SET)  | 30160382     | 2.19 |
| AST-80-LD CSH  | 4  | ST-80 LOWER DIE HOLDER CORNER SOCKET HEAD SCREW  | 50708-12-OC  |      |
| AST-80-LD MSH  | 5  | ST-80 LOWER DIE HOLDER MIDDLE SOCKET HEAD SCREW  | 50108-14-C   |      |
| AST-80-UD-SET  | *6 | ST-80 UPPER DIE KIT W/ 2 DIES, BOTLS & SOCKETS   | 3017422      | 6.02 |
| AST-80-UD      | 7  | ST-80 UPPER DIE EACH (NOTE : IT TAKES 2 PER SET) | 30160380-500 | 2.96 |
| AST-U-B        | 8  | ST-80 UPPER DIE BOLT ONLY                        | 55109-8-C    | .87  |

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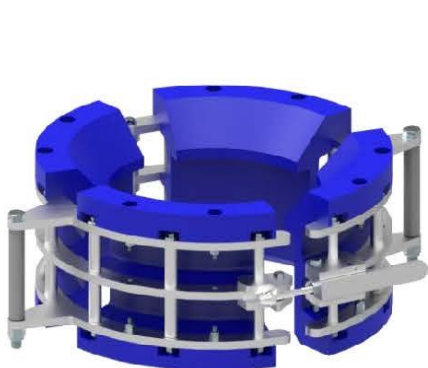
bridge the gap.

## KET HEAVY DUTY CASING STABBING GUIDES

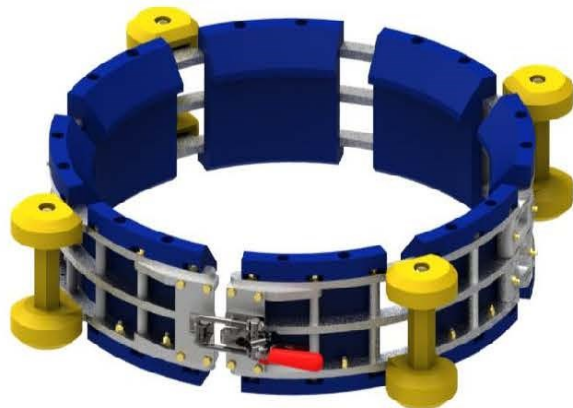
Keystone Heavy-Duty Stabbing Guides help to reduce damages to connections while making up connections.

Features include

- ▶ Polyurethane Inserts
- ▶ Light weight Aluminum construction
- ▶ Corrosion Resistant Hardware
- ▶ Zinc Plated Steel hardware
- ▶ SS Latch (400 & 500 frames only)



100, 200, & 300 FRAME (SINGLE HINGE DESIGN)



400 & 500 FRAME (DOUBLE HINGE DESIGN)

### REPLACEMENT PARTS FOR CASING STABBING GUIDES

| PART NO.      | DESCRIPTION                                                   | QTY |
|---------------|---------------------------------------------------------------|-----|
| A02C-P100     | FRAME ASSEMBLY F/ 9 7/8" CASING STABBING GUIDE                | 1   |
| A02C-P200     | FRAME ASSEMBLY F/ 12 7/8" CASING STABBING GUIDE               | 1   |
| A02C-P300     | FRAME ASSEMBLY F/ 16" CASING STABBING GUIDE                   | 1   |
| A02C-P400     | FRAME ASSEMBLY F/ 20" CASING STABBING GUIDE                   | 1   |
| A02C-P500     | FRAME ASSEMBLY F/ 24 1/2" CASING STABBING GUIDE               | 1   |
| A02C-XXXXXX-P | 100 POLY INSERTS (PART NO VARIES DEPENDING ON SIZE OF CASING) | 4   |
| A02C-XXXXXX-P | 200 POLY INSERTS (PART NO VARIES DEPENDING ON SIZE OF CASING) | 4   |
| A02C-XXXXXX-P | 300 POLY INSERTS (PART NO VARIES DEPENDING ON SIZE OF CASING) | 6   |
| A02C-XXXXXX-P | 400 POLY INSERTS (PART NO VARIES DEPENDING ON SIZE OF CASING) | 8   |
| A02C-XXXXXX-P | 500 POLY INSERTS (PART NO VARIES DEPENDING ON SIZE OF CASING) | 8   |



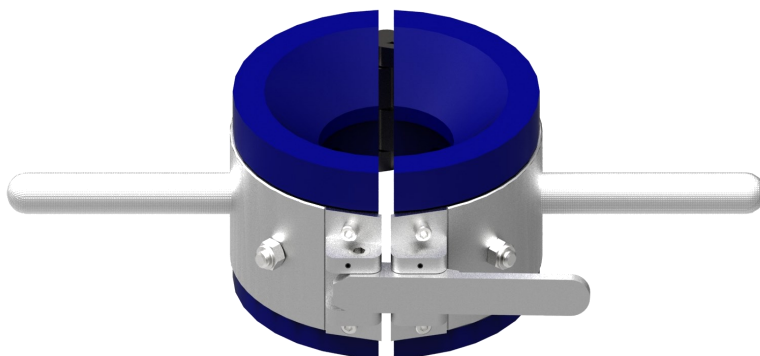
bridge the gap.

# KET HEAVY DUTY STABBING GUIDES

Keystone Heavy-Duty Stabbing Guides help to reduce damages to connections while making up connections.

Features include

- ▶ Polyurethane Inserts
- ▶ Light weight Aluminum construction
- ▶ Corrosion Resistant Hardware
- ▶ Adjustable Latch Cam
- ▶ Range = 1" thru 8 1/2" Tool joint OD

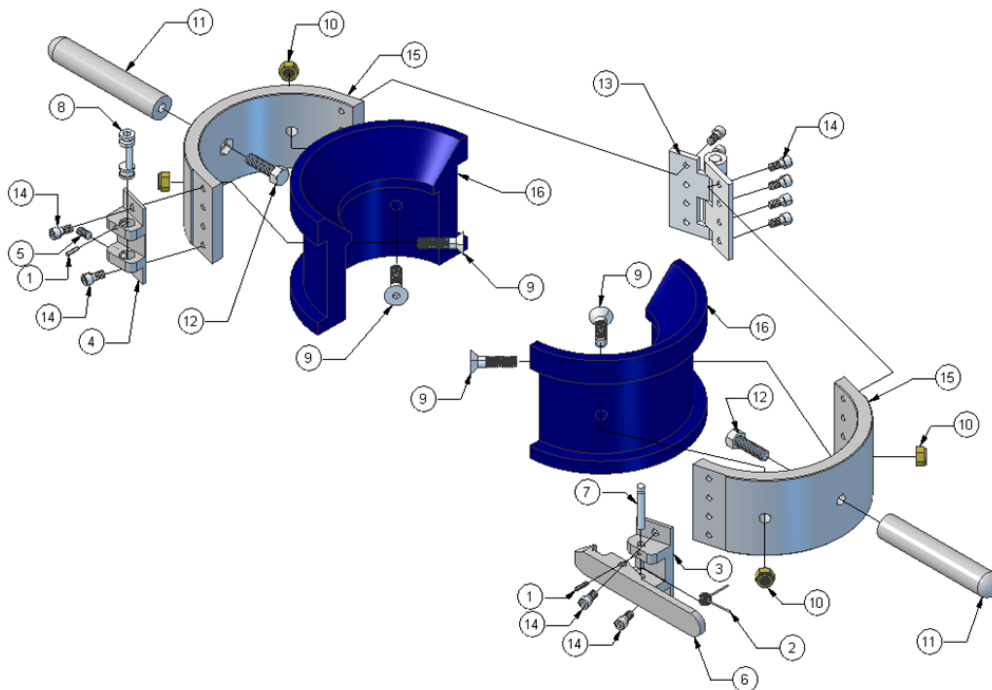


## STABBING GUIDES

| PART NO.  | INSERT ONLY/SET | DESCRIPTION             | WEIGHT (LBS.) INSERT SET | WIEGHT(LBS) ASSEMBLY |
|-----------|-----------------|-------------------------|--------------------------|----------------------|
| A02-502   | A02-521         | 1" CS                   | 1.36                     | 4.60                 |
| A02-503   | A02-522         | 1-1/4" CS               | 1.22                     | 4.45                 |
| A02-504   | A02-523         | 1-1/2" CS               | 1.15                     | 4.40                 |
| A02-505   | A02-524         | 2-1/16" CS              | .93                      | 4.15                 |
| A02-506   | A02-525         | 2 3/8" CS 4.70#         | 4.20                     | 8.45                 |
| A02-507   | A02-526         | 2 3/8" PH-6 5.95#       | 4.10                     | 8.35                 |
| A02-508   | A02-527         | 2 7/8" CS               | 3.75                     | 7.95                 |
| A02-509   | A02-528         | 2 7/8" PH-6 7.90#       | 3.60                     | 7.80                 |
| A02-510   | A02-529         | 2 7/8" PH-6 8.70#       | 3.55                     | 7.80                 |
| A02-512   | A02-531         | 2 7/8" 8RD 6.5#         | 3.45                     | 7.70                 |
| A02-514   | A02-533         | 3 1/2" CS 9.3# - 10.3#  | 3.06                     | 7.30                 |
| A02-515   | A02-534         | 3 1/2" PH-6 12.95#      | 2.70                     | 6.95                 |
| A02-517   | A02-536         | 3 1/2" IF F/ 4 3/4" TJ  | 2.18                     | 6.45                 |
| A02-517-2 | A02-536-2       | 3 1/2" IF f/ 4 7/8" TJ  | 2.06                     | 6.30                 |
| A02-517-1 | A02-536-1       | 4" Full Hole            | 1.60                     | 5.85                 |
| A02-5306  | A02-5356        | XT-39 f/ 4 7/8" TJ      | 2.06                     | 6.30                 |
| A02-5308  | A02-5358        | XT-39 f/ 4 15/16 TJ     | 2.03                     | 6.25                 |
| A02-5309  | A02-5359        | XT-43 f/ 5 3/8" TJ      | 13.10                    | 19.90                |
| A02-519   | A02-538         | 4 1/2" PH-6 15.50#      | 1.70                     | 5.95                 |
| A02-517-4 | A02-536-1       | 4-1/2" FH F/5-1/4" TJ   | 10.00                    | 18.00                |
| A02-543   | A02-539         | 4 1/2" XH               | 11.45                    | 18.25                |
| A02-5310  | A02-5360        | DRILL PIPE f/ 6 1/2" TJ | 10.70                    | 17.50                |
| A02-5311  | A02-5361        | DRILL PIPE f/ 7" TJ     | 9.30                     | 16.10                |
| A02-5312  | A02-5362        | DRILL PIPE f/ 7 1/4" TJ | 8.80                     | 15.60                |
| A02-5313  | A02-5363        | DRILL PIPE f/ 8 1/4" TJ | 5.95                     | 12.75                |
| A02-5314  | A02-5364        | DRILL PIPE f/ 8 1/2" TJ | 5.45                     | 12.25                |
| A02-547   | A02-540         | 4 1/2" IF 6 5/8" TJ     | 10.55                    | 17.35                |
| A02-545   | A02-541         | 5" PH-6 20.3#           | 11.70                    | 18.50                |
| A02-546   | A02-542         | 5 1/2" PH-6 23#         | 10.80                    | 17.60                |

bridge the gap.

# KET HEAVY DUTY STABBING GUIDES



## REPLACEMENT PARTS FOR HEAVY DUTY STABBING GUIDES

| PART NO.   | ITEM # | DESCRIPTION    | QTY | WIEGHT(LBS) |
|------------|--------|----------------|-----|-------------|
| A02-550    | 1      | RETAINER PIN   | 2   | .01         |
| A02-551    | 2      | SPRING         | 1   | .01         |
| A02-552    | 3      | HINGE BLOCK    | 1   | .10         |
| A02-553    | 4      | CATCH BLOCK    | 1   | .10         |
| A02-553-S  | 5      | SET SCREW      | 1   | .01         |
| A02-554    | 6      | LATCH          | 1   | .15         |
| A02-555    | 7      | LATCH PIN      | 1   | .02         |
| A02-556    | 8      | LATCH CAM      | 1   | .05         |
| A02-557-10 | 9      | 1-1/4" SCREW   | 4   | .04         |
| A02-557-12 | 9      | 1-1/2" SCREW   | 4   | .05         |
| A02-557-14 | 9      | 1-3/4" SCREW   | 4   | .05         |
| A02-557-16 | 9      | 2" SCREW       | 4   | .06         |
| A02-557-18 | 9      | 2-1/4" SCREW   | 4   | .06         |
| A02-557-20 | 9      | 2-1/2" SCREW   | 4   | .07         |
| A02-557-22 | 9      | 2-3/4" SCREW   | 4   | .07         |
| A02-557-24 | 9      | 3" SCREW       | 4   | .08         |
| A02-557-N  | 10     | NUT            | 4   | .02         |
| A02-558    | 11     | HANDLE         | 2   | .27         |
| A02-558-S  | 12     | HANDLE SCREW   | 2   | .05         |
| A02-559    | 13     | HINGE          | 1   | .40         |
| A02-559-S  | 14     | HARDWARE SCREW | 12  | .01         |
| A02-560    | 15     | 4" RING        | 2   | .83         |
| A02-561    | 15     | 6" RING        | 2   | 1.34        |
| A02-562    | 15     | 9-1/2" RING    | 2   | 2.00        |

bridge the gap.

# KET STANDARD RUBBER STABBING GUIDES

Keystone Standard Rubber Stabbing Guides help to reduce damages to connections while making up connections.

- Range = 3/4" thru 6-5/8" Tool joint OD

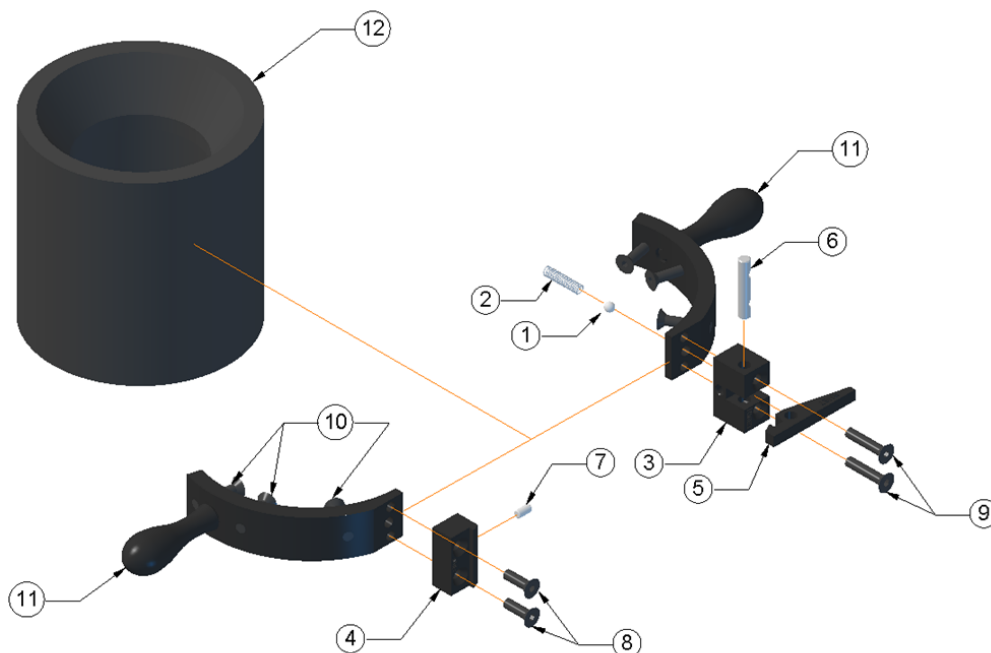


## STABBING GUIDES

| P/N COMPLETE | P/N RUBBER ONLY | DESCRIPTION                                    | WT.   |
|--------------|-----------------|------------------------------------------------|-------|
| A02-101      | A02-120         | 3/4" CS® STABBING GUIDE                        | 5.00  |
| A02-102      | A02-121         | 1" CS® STABBING GUIDE                          | 4.50  |
| A02-103      | A02-122         | 1 1/4" CS® STABBING GUIDE                      | 5.50  |
| A02-104      | A02-123         | 1 1/2" CS® STABBING GUIDE                      | 5.50  |
| A02-105      | A02-124         | 2 1/16" CS® STABBING GUIDE                     | 6.50  |
| A02-106      | A02-125         | 2 3/8" CS® STABBING GUIDE                      | 6.00  |
| A02-107      | A02-126         | 2 3/8" PH-6™ STABBING GUIDE                    | 6.00  |
| A02-108      | A02-127         | 2 7/8" CS® STABBING GUIDE                      | 7.00  |
| A02-109      | A02-128         | 2 7/8" PH-6™ 7.90# STABBING GUIDE              | 6.50  |
| A02-110      | A02-129         | 2 7/8" PH-6™ 8.70# STABBING GUIDE (SMALL BODY) | 6.50  |
| A02-111      | A02-130         | 2 7/8" PH-6™ 8.70# STABBING GUIDE (LARGE BODY) | 11.00 |
| A02-112      | A02-131         | 2 7/8" 8RD 6.50# STABBING GUIDE (SMALL BODY)   | 6.50  |
| A02-113      | A02-132         | 2 7/8" 8RD 6.50# STABBING GUIDE (LARGE BODY)   | 10.50 |
| A02-114      | A02-133         | 3 1/2" CS® 9.30# - 10.30# STABBING GUIDE       | 10.00 |
| A02-115      | A02-134         | 3 1/2" PH-6™ 12.95# STABBING GUIDE             | 9.50  |
| A02-117      | A02-136         | 3 1/2" IF STABBING GUIDE FOR 4 3/4" T.J.       | 12.00 |
| A02-117-3    | A02-357         | 3 1/2" IF STABBING GUIDE FOR 4 7/8" T.J.       | 12.00 |
| A02-117-1    | A02-136-1       | 4" F.H. STABBING GUIDE FOR 5 1/4" T.J.         | 12.00 |
| A02-306      | A02-356         | XT-39 STABBING GUIDE FOR 4 7/8" T.J.           | 12.00 |
| A02-308      | A02-358         | XT-39 STABBING GUIDE FOR 4 15/16" T.J.         | 12.00 |
| A02-309      | A02-359         | XT-43 STABBING GUIDE FOR 5 3/8" T.J.           | 11.50 |
| A02-119      | A02-138         | 4 1/2" PH-6™ 15.50# STABBING GUIDE             | 11.50 |
| A02-143      | A02-139         | 4 1/2" XH STABBING GUIDE FOR 6 1/4" T.J.       | 14.50 |
| A02-144      | A02-148         | 4 1/2" IF STABBING GUIDE FOR 6 3/8" T.J.       | 14.25 |
| A02-145      | A02-141         | 5" PH-6™ 20.30# STABBING GUIDE                 | 13.00 |
| A02-146      | A02-142         | 5 1/2" PH-6™ 23.00# STABBING GUIDE             | 13.00 |
| A02-147      | A02-140         | 4 1/2" IF STABBING GUIDE FOR 6 5/8" T.J.       | 14.00 |

bridge the gap.

# KET STANDARD RUBBER STABBING GUIDES



## REPLACEMENT PARTS FOR STANDARD RUBBER STABBING GUIDES

| PART NO.   | ITEM | DESCRIPTION                      | QTY | WT.  |
|------------|------|----------------------------------|-----|------|
| A02-150    | 1    | BEARING                          | 1   | .05  |
| A02-151    | 2    | SPRING                           | 1   | .10  |
| A02-152    | 3    | HINGE                            | 1   | .5   |
| A02-153    | 4    | CATCH                            | 1   | .45  |
| A02-154    | 5    | LATCH                            | 1   | .12  |
| A02-155    | 6    | HINGE PIN                        | 1   | .13  |
| A02-156    | 7    | GUIDE PIN                        | 1   | .05  |
| A02-157-9  | 8    | CATCH SCREW                      | 2   | .09  |
| A02-157-13 | 9    | HINGE SCREW                      | 2   | .11  |
| A02-157-10 | 10   | 1 1/4" CAP SCREW                 | 4+  | .13  |
| A02-157-12 | 10   | 1 1/2" CAP SCREW                 | 4+  | .15  |
| A02-157-14 | 10   | 1 3/4" CAP SCREW                 | 4+  | .55  |
| A02-175    | 11   | 3" RING ONLY                     | 2   | .75  |
| A02-176    | 11   | 3 3/4" RING ONLY                 | 2   | .85  |
| A02-177    | 11   | 4 7/16" RING ONLY                | 2   | .95  |
| A02-178    | 11   | 5" RING ONLY                     | 2   | 1.10 |
| A02-179    | 11   | 6 1/8" RING ONLY                 | 2   | 1.25 |
| A02-181    | 11   | 7" RING ONLY                     | 2   | 1.35 |
| A02-182    | 11   | 8" RING ONLY                     | 2   | 1.45 |
| A02-183    | 11   | 9" RING ONLY                     | 2   | 1.60 |
| N/A        | 12   | RUBBER ONLY ( SEE TABLE, PAGE 5) | 1   | N/A  |

bridge the gap.

# MISCELLANEOUS DIES AND INSERTS

## FC INSERTS

| PART NO. | DESCRIPTION                                 | WT.   |
|----------|---------------------------------------------|-------|
| A34-205  | 3 1/2" X 3 1/2" INSERTS (SET OF 4)          | 9.00  |
| A34-206  | 3 1/2" X 2 7/8" INSERTS (SET OF 4)          | 14.00 |
| A34-207  | 3 1/2" X 2 3/8" INSERTS (SET OF 4)          | 17.00 |
| A34-228  | 3 1/2" X 2 1/16" INSERTS (SET OF 4)         | 18.50 |
| A34-229  | 3 1/2" X 1 1/2" (1.900") INSERTS (SET OF 4) | 19.00 |
| A34-230  | 3 1/2" X 1 1/4" (1.660") INSERTS (SET OF 4) | 19.50 |
| A34-231  | 3 1/2" X 1" (1.315") INSERTS (SET OF 4)     | 20.00 |
| A34-209  | 4 1/2" X 4 1/2" INSERTS (SET OF 4)          | 10.00 |
| A34-210  | 4 1/2" X 4" INSERTS (SET OF 4)              | 12.00 |
| A34-211  | 4 1/2" X 3 1/2" INSERTS (SET OF 4)          | 14.00 |

\*AVAILABLE IN FINE TOOTH FOR CHROME

## COIL TUBING INSERTS

| PART NO. | DESCRIPTION                              | WT.  |
|----------|------------------------------------------|------|
| A29259-2 | 2 7/8" X 1.00" MYT/YT COIL TUBING INSERT | 1.75 |
| A29259-3 | 2 7/8" X 1.25" MYT/YT COIL TUBING INSERT | 1.70 |
| A29259-4 | 2 7/8" X 1.50" MYT/YT COIL TUBING INSERT | 1.50 |
| A29259-5 | 2 7/8" X 1.75" MYT/YT COIL TUBING INSERT | 1.38 |
| A29259-6 | 2 7/8" X 2.00" MYT/YT COIL TUBING INSERT | 1.25 |
| A21-121  | 3 1/2" X 1.00 TS-100 COIL TUBING INSERT  | 2.60 |
| A21-120  | 3 1/2" X 1.25 TS-100 COIL TUBING INSERT  | 2.50 |
| A21-119  | 3 1/2" X 1.50 TS-100 COIL TUBING INSERT  | 2.40 |
| A21-117  | 3 1/2" X 1.75 TS-100 COIL TUBING INSERT  | 2.25 |
| A21-111  | 3 1/2" X 2" TS-100 COIL TUBING INSERT    | 2.05 |

## IRON ROUGHNECK® TONG DIES

| PART NO.     | DESCRIPTION                             | WT.  |
|--------------|-----------------------------------------|------|
| AST-80LD-SET | ST-80 LOWER DIE SET W/BOLTS AND SOCKETS | 6.00 |
| AST-80UD-SET | ST-80 UPPER DIE SET W/BOLTS AND SOCKET  | 7.00 |
| AC01-01-03   | MODEL 3080 IRON ROUGHNECK DIE           | 2.25 |

## POWER TONG DIES

| PART NO. | DESCRIPTION                            | WT.  |
|----------|----------------------------------------|------|
| A27494-1 | 2 3/8" X 2 3/8" POWER TONG DIE         | 1.06 |
| A27498-1 | 2 7/8" X 2 7/8" POWER TONG DIE         | 1.06 |
| A75-2327 | 2 7/8" X 2 3/8" POWER TONG REDUCER DIE | 1.62 |

bridge the gap.

# MISCELLANEOUS DIES AND INSERTS

## DRILL PIPE TONG DIES

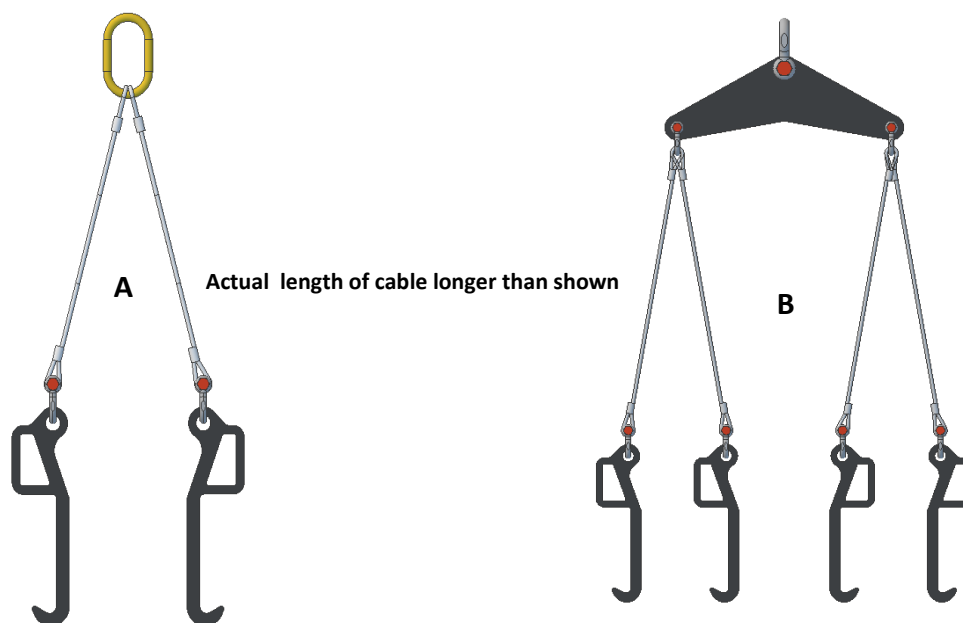
| PART NO.  | DESCRIPTION                                   | WT.  |
|-----------|-----------------------------------------------|------|
| T6472     | 3/8" X 5/8" X 1 15/16" TONG DIE               | .10  |
| T061624   | 3/8" X 1" X 2 1/2" TONG DIE                   | .21  |
| T6473     | 3/8" X 1" X 3 7/8" TONG DIE                   | .32  |
| T6473-BD  | 3/8" X 1" X 3 7/8" BLUE DIAMOND TONG DIE      | .32  |
| T4321     | 3/8" X 1" X 4 1/4" TONG DIE                   | .35  |
| T4516     | 3/8" X 1" X 5 3/4" TONG DIE                   | .47  |
| T1614     | 3/8" X 1 1/4" X 3 7/8" TONG DIE               | .39  |
| T76-51250 | 3/8" X 1 1/4" X 5" TONG DIE                   | .50  |
| T1612     | 7/16" X 1 1/4" X 3 7/8" TONG DIE              | .46  |
| T1612-BD  | 7/16" X 1 1/4" X 3 7/8" BLUE DIAMOND TONG DIE | .46  |
| T24768-3  | 1/2" X 1 1/4" X 3 1/2" TONG DIE               | .50  |
| T6485     | 1/2" X 1" X 3 7/8" TONG DIE                   | .50  |
| T24768-2  | 1/2" X 1 1/4" X 3 7/8" TONG DIE               | .54  |
| T24768-6  | 1/2" X 1 1/4" X 3 7/8" BLUE DIAMOND TONG DIE  | .54  |
| T16401-2  | 1/2" X 1 1/4" X 5" TONG DIE                   | .69  |
| T16401-6  | 1/2" X 1 1/4" X 5" BLUE DIAMOND TONG DIE      | .69  |
| T16402-2  | 1/2" X 1 1/4" X 5 7/8" TONG DIE               | .82  |
| T16402-6  | 1/2" X 1 1/4" X 5 7/8" BLUE DIAMOND TONG DIE  | .82  |
| T16-22    | 9/16" X 1 1/4" X 3 7/8" TONG DIE              | .61  |
| T76-51235 | 9/16" X 1 1/4" X 5" TONG DIE                  | .78  |
| T102037   | 5/8" X 1 1/4" X 3 7/8" TONG DIE               | .68  |
| T102050   | 5/8" X 1 1/4" X 5" TONG DIE                   | .87  |
| T76-51257 | 5/8" X 1 1/4" X 5 7/8" TONG DIE               | 1.02 |
| T1161255  | 11/16" X 1 1/4" X 5" TONG DIE                 | .96  |
| T6416446  | 11/16" X 1 1/4" X 5 7/8" TONG DIE             | 1.13 |
| T122034   | 3/4" X 1 1/4" X 3 1/2" TONG DIE               | .75  |
| T122037   | 3/4" X 1 1/4" X 3 7/8" TONG DIE               | .81  |
| T76-61250 | 3/4" X 1 1/4" X 5" TONG DIE                   | 1.05 |
| T76-61257 | 3/4" X 1 1/4" X 5 7/8" TONG DIE               | 1.23 |
| T132037   | 13/16" X 1 1/4" X 3 7/8" TONG DIE             | .88  |
| T142037   | 7/8" X 1 1/4" X 3 7/8" TONG DIE               | .95  |
| T142050   | 7/8" X 1 1/4" X 5" TONG DIE                   | 1.23 |
| T142057   | 7/8" X 1 1/4" X 5 7/8" TONG DIE               | 1.45 |
| T162037   | 1" X 1 1/4" X 3 7/8" TONG DIE                 | 1.25 |
| T162050   | 1" X 1 1/4" X 5" TONG DIE                     | 1.61 |
| T162057   | 1" X 1 1/4" X 5 7/8" TONG DIE                 | 1.80 |

bridge the gap.

# KET INSERT BOWLS AND ACCESSORIES

## ACCESSORIES

| PART NO.    | ITEM# | DESCRIPTION                                      | REF.#    | WT. |
|-------------|-------|--------------------------------------------------|----------|-----|
| A34-315     | A     | 2 HOOK CHAIN LIFTING SLING (4,000 LBS CAPACITY)  | 1021     | 40  |
| A34-315-CAB | A     | 2 HOOK CABLE LIFTING SLING (4,000 LBS CAPACITY)  | 1021-CAB | 35  |
| A34-316     | B     | 4 HOOK CHAIN LIFTING SLING (12,000 LBS CAPACITY) | 6699     | 150 |
| A34-316-CAB | B     | 4 HOOK CABLE LIFTING SLING (12,000 LBS CAPACITY) | 6699-CAB | 140 |



INSERT BOWL 1

INSERT BOWL 2

INSERT BOWL 3

| PART NO. | DESCRIPTION                                                                        | REF.# | WT. |
|----------|------------------------------------------------------------------------------------|-------|-----|
| A34-101  | INSERT BOWL NO. 1 FOR 13 3/8" - 11 3/4" CASING (23" - 27 1/2" Master Bushings)     | 1903  | 326 |
| A34-102  | INSERT BOWL NO. 2 FOR 10 3/4" - 9 5/8" CASING (23" - 27" Master Bushings)          | 1904  | 460 |
| A34-103  | INSERT BOWL NO. 3 FOR 8 5/8" & SMALLER CASING (23" - 27 1/2" Master Bushings)      | 1810  | 664 |
| A34-301  | INSERT BOWL NO. 1 FOR 13 3/8" - 11 3/4" CASING (37 1/2" - 49 1/2" Master Bushings) | 6610  | 335 |
| A34-302  | INSERT BOWL NO. 2 FOR 10 3/4" - 9 5/8" CASING (37 1/2" - 49 1/2" Master Bushings)  | 6609  | 470 |
| A34-303  | INSERT BOWL NO. 3 FOR 8 5/8" & SMALLER CASING (37 1/2" - 49 1/2" Master Bushings)  | 6608  | 625 |



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**Keystone Energy Tools**

8404 Hwy. 90 West

New Iberia, LA 70560

Sales Inquiries: [Sales@k-e-t.com](mailto:Sales@k-e-t.com)

[www.k-e-t.com](http://www.k-e-t.com)

**Office:** 1-337-365-4411

**Fax:** 1-337-365-4456

