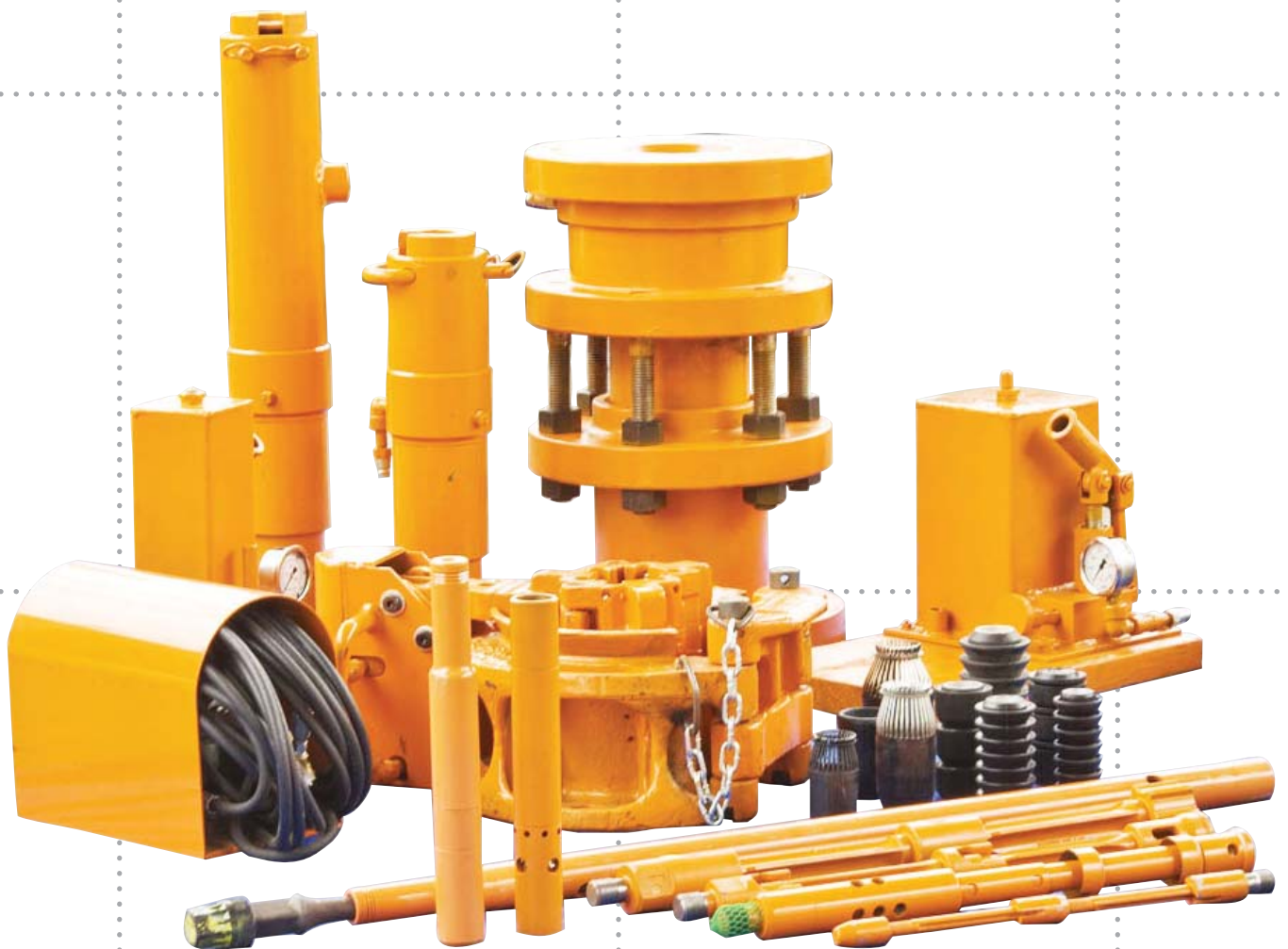


PRODUCT CATALOG

Guiberson Quality Products and Services



Swabbing Equipment

Tubing Swab Mandrel.....	2 - 6
Tubing Swab Cups.....	7 - 12
Casing Swab Cups.....	13 - 16
Casing Swab Mandrels.....	17 - 19

Swabbing Accessories

Rope Sockets.....	20
Bars and Jars.....	21
Safety Tools.....	22 - 24
Hydraulic Wireline Oil Savers.....	25 - 28

Rig Accessories

Tubing Spiders.....	29 - 33
Tubing Strippers.....	34 - 38
Pipe Wipers.....	39
Blow-Out Preventers.....	40 - 50

Unions

Seal-O-Matic Unions.....	51 - 53
--------------------------	---------

Down-Hole Accessories

GW Packers/Cups.....	54 - 58
----------------------	---------

Casing Packer Cup

Type CP Casing Packer Cup.....	59
--------------------------------	----

Tubing Swab Mandrels

Guiberson tubing swabs have set industry performance standards for well over half century. Today, Guiberson's wide selection of swabs and cups assures the right combination for every swabbing application, from light load, shallow well service to the heaviest loads and the deepest wells.

Knuckle Joint Swab

The original Guiberson Knuckle Joint Swab allows cups to be changed in just 10 seconds. To disassemble, the mandrel is lifted 90° and the two sections of the joint are separated. The old cup can then be removed rapidly and the new one dropped in place. There are no threads on the swab knuckles, no danger of damage and galling, and no tools needed to change cups.

Made of tough, cast, heat-treated steel, the Knuckle Joint Swab provides a large external bypass for fast falling and uses the cup itself as a valve. As many mandrels and cups as desired may be run with the Knuckle Joint. Upper mandrels are keyed to hold the joint sockets in line, and square shoulders reinforce the joint, preventing spreading under load. The rigidity of the joint absolutely prevents jackknifing and disassembly in the well. The lower mandrel allows a full 360° swivel action. Adapted as necessary, all Guiberson tubing swab cups may be run on this swab.

Standard Tubing Swab

A fast falling, threaded, internal bypass swab, the Guiberson Standard Swab uses two cups on its one-piece mandrel. Its large bypass area and full-opening check valve assure rapid running and smooth, trouble-free swabbing. The corrosion-resistant ball and steel seat seal perfectly under long, tough service. A no-go, machined as a part of the bottom retaining nut, prevents sticking in seating nipples and tight spots. This no-go may be machined off when additional clearance is desired. Adapted as necessary, all Guiberson tubing swab cups may be run on the Standard Swab.

Type 'UF' Tubing Swab

The 'UF' is a threaded joint, external bypass swab, similar to the Knuckle Joint, except that it is threaded. A forged, heat-treated steel assembly, the 2-3/8" and larger 'UF' swabs are ideal in applications where internal bypass is not suitable. The 2-1/16" and smaller sizes are ideal for swabbing in small diameter tubing. In sizes smaller than 2-3/8", 'UF', 'MV', and 'TA' cups are available for this application. In the larger tubing sizes, all Guiberson tubing swab cups (adapted as necessary) may be used.

Knuckle Joint with MV Cups



Standard with J Cups



UF with TUF Cups



Macaroni UF with UF Cups

Tubing Swab Mandrels

Table 3.1: KNUCKLE JOINT TUBING SWAB MANDRELS - ENGINEERING DATA AND PART NUMBERS

TUBING SIZE			PART #	MAXIMUM O.D. [in. / mm]	APPROXIMATE		FIELD THREAD SIZE
O.D.	WEIGHT (lb/ft)	I.D. [in. / mm]			WEIGHT [lb. / kg]	LENGTH [in. / mm]	
2-3/8 2-7/8 2-7/8	4.6-4.7 7.9 PH-6 10.4 DP 8.7 PH-6	1.995 / 50.67 2.323 / 59.00 2.151 / 54.64 2.259 / -	3E-33429	1.906 / 48.41	7 / 3.18	20-1/2 / 520.70	3/4 'SR'
2-7/8 3-1/2 3-1/2	6.4-6.5 9.3 13.3 DP	2.441 / 62.00 2.992 / 76.00 2.764 / 70.21	3E-34084	2.360 / 59.94	13 / 5.90	26 / 660.40	

Table 3.2: STANDARD TUBING SWAB MANDREL - ENGINEERING DATA AND PART NUMBERS

TUBING SIZE			PART #	MAXIMUM O.D. [in. / mm]			APPROXIMATE		FIELD THREAD SIZE
O.D.	WEIGHT (lb/ft)	I.D. [in. / mm]		WITH NO-GO	LESS NO-GO	THIMBLE	WEIGHT [lb. / kg]	LENGTH [in. / mm]	
2-3/8	4.6-4.7	1.995 / 50.67 2.323 / 59.00 2.151 / 54.64	3E-43040	1.906 / 48.41	1.750 / 44.45	1.875 / 47.63	8 / 3.63	24 / 609.60	3/4 'SR'
2- 7/8	10.4 DP 8.8 DP 6.45-6.5 15.5 DP 7.9 PH-6 8.7 PH-6	2.151 / 54.64 2.250 / 57.15 2.441 / 62.00 2.602 / - 2.323 / - 2.259 / -	3E-43045 3E-43045 3E-43045 3E-43041 3E-43045 3E-43045	1.906 / 48.41 1.906 / 48.41 2.375 / 62.00	1.750 / 44.45 1.750 / 44.45 1.875 / 47.63	1.875 / 47.63 1.875 / 47.63 2.250 / 57.15	11 / 4.99 11 / 4.99 12 / 5.44	28 / 711.20 28 / 711.20 29 / 736.60	3/4 'SR'
3-1/2	13.3 DP 8.5 -10.2	2.764 / 70.21 3.018 - 2.922 / 766.66 - 76.00	3E-43047 3E-43042	2.375 / 60.33	1.875 / 47.63	2.438 / 61.93 2.750 / 69.85	12 / 5.44 13 / 5.90	29 / 736.60	3/4 'SR'
4	9.5-11.6	3.548-3.428 / 90.12-87.07	3E-43043	3.250 / 82.55		3.250 / 82.55	23 / 10.43	37 / 939.80	7/8 'SR'

Table 3.3: TYPE 'UF' SWAB MANDREL ENGINEERING DATA AND PART NUMBERS

TUBING SIZE			PART #	MAXIMUM O.D. [in. / mm]	APPROXIMATE		FIELD THREAD SIZE
O.D.	WEIGHT (lb/ft)	I.D. [in. / mm]			WEIGHT [lb. / kg]	LENGTH [in. / mm]	
1.315	1.70-1.80	1.049 / 26.64	3E-41329	.875 / 22.23	1-1/2 / .57	17-1/2 / 444.50	3/8" NPT BOX
1.660	2.30-2.40	1.380 / 35.05	3E-42628	1.125 / 28.58	2-1/2 / 1.13	18-1/4 - 463.55	5/8 'SR'
1.900 2.000 2.063	2.75-2.90 3.40 2.40	1.610 / 40.89 1.670 / 40.89 1.750 / 44.45	3E-43539	1.375 / 34.9	4-1/2 / 2.04	23 / 584.20	5/8 'SR'
2-3/8 2-7/8 2-7/8	4.60-4.70 7.90 XLN 10.40 DP	1.995 / 50.67 2.323 / 59.00 2.151 / 54.64	3E-42856	1.906	8 / 3.63	22 / 558.80	3/4 'SR'
2-7/8 3-1/2 3-1/2	6.40-6.50 9.30 13.30 DP	2.441 / 62.00 2.992 / 76.00 2.764 / 70.21	3E-43007	2.360	10-1/4 / 4.65	27 / 685.80	3/4 'SR'

Table 3.4: SWAB MANDREL ACCESSORIES

OTHER PRODUCTS	
Knuckle Joint Sub Adapter (2 3/8 in. KJ Sub to 2-7/8 in. KJ Mandrel)	Part number 3E-85148
Wireline Flags (Package of 12 Bundles)	Part number 3E-85617

Tubing Swab Mandrels

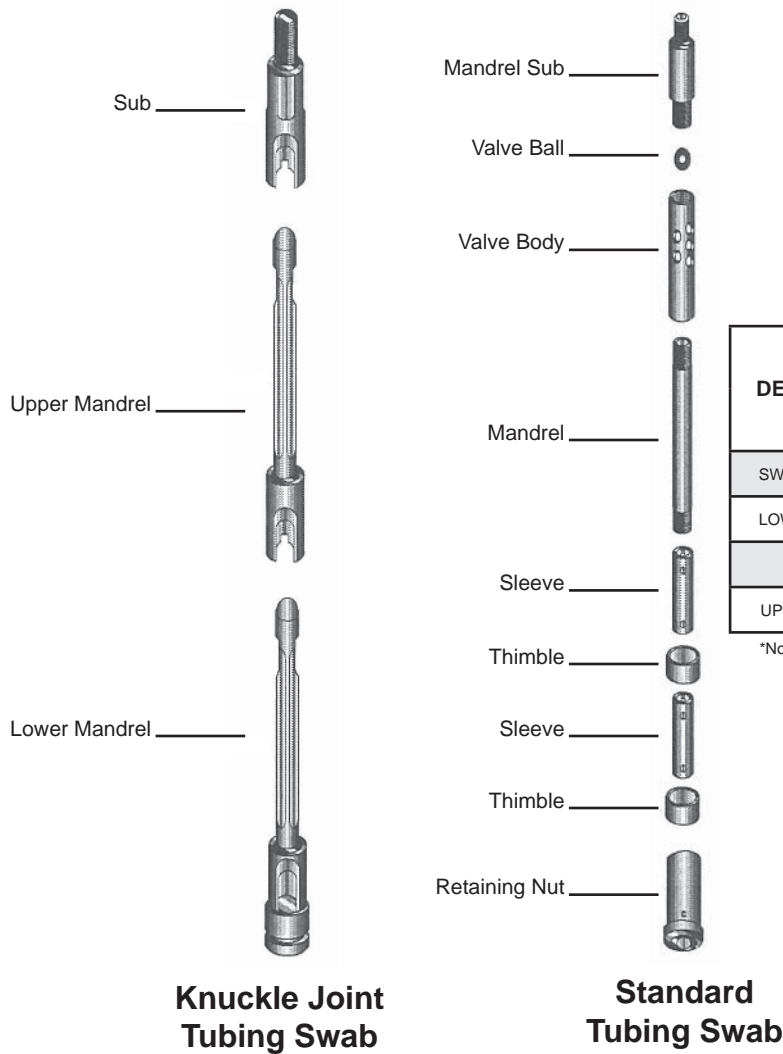


Table 4.1: KNUCKLE JOINT TUBING SWAB PARTS LIST

DESCRIPTION	QUANTITY REQUIRED	PART NUMBERS BY SIZE AND TYPE		
		2-3/8 in.	2-7/8 - 3-1/2 in.	3-1/2 in
SWAB LESS CUPS	--	3E-33429	3E-34084	3E-34085
LOWER MANDREL	1	3E-37207	3E-33913	3E-33914
SUB	1	3E-33816	3E-33911	3E-33911
UPPER MANDREL	1	3E-33817	3E-33912	3E-33912

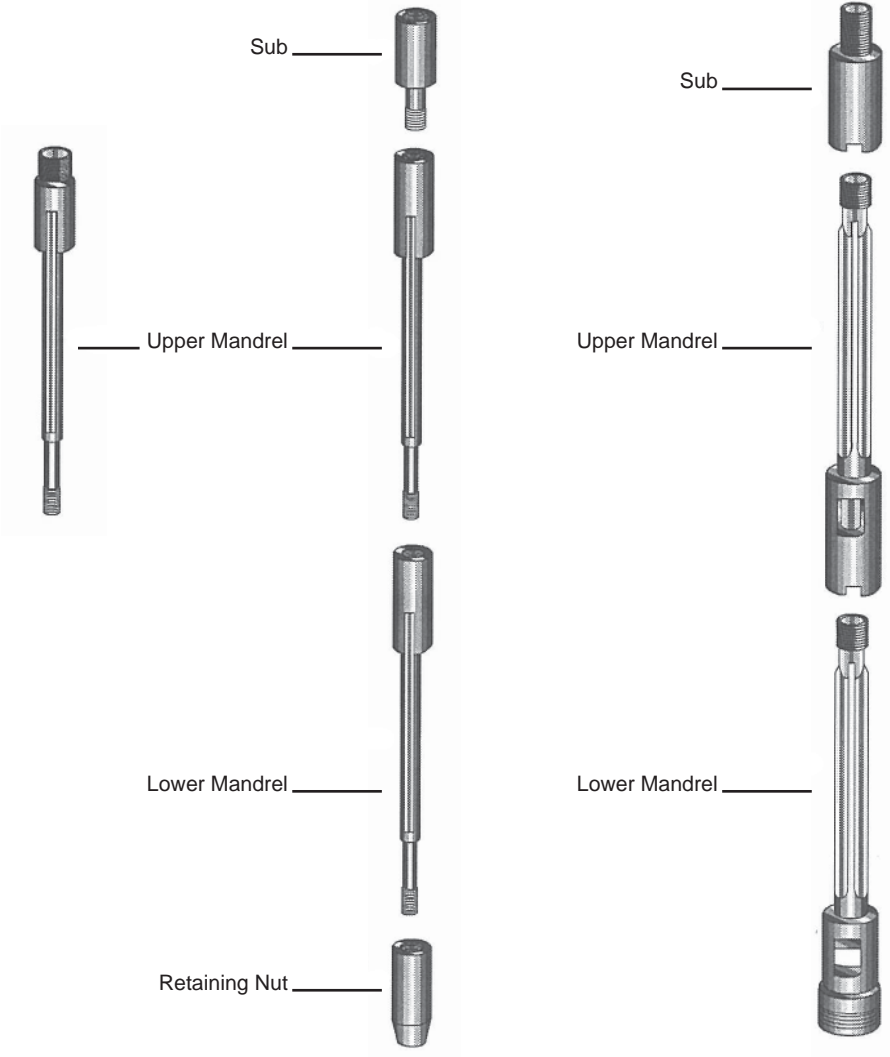
*Note: 3E-34085 has 2.875 Max. O.D.

Table 4.2: STANDARD TUBING SWAB - PARTS LIST

DESCRIPTION	QUANTITY REQUIRED	PART NUMBERS BY SIZE AND TYPE					
		2-3/8 In.	2-7/8 In. 6.4 - 6.5	2-7/8 In. 10.4 DP 8.8 DP, 7.9 PH-6, 8.7 PH- 6	3-1/2 In.	3-1/2 In. 13.3 DP	4 in.
SWAB LESS CUPS	--	3E-43040	3E-43041	3E-43045	3E-43042	3E-43047	3E-43043
MANDREL	1	3E-15439	3E-9550	3E-17413	3E-9550	3E-9550	3E-9637
RETAINING NUT	1	3E-55004	3E-55003	3E-55004	3E-55003	3E-55003	3E-58021
SLEEVE	2	3E-15440	3E-1506	3E-17414	3E-1506	3E-1506	3E-6692
SUB	1	3E-11224	3E-11224	3E-11224	3E-11224	3E-11224	3E-9634
THIMBLE	2	3E-6435	3E-6436	3E-6435	3E-6437	3E-14085	3E-6696
VALVE BALL	1	3E-14812	3E-14812	3E-14812	3E-14812	3E-14812	3E-14804
VALVE BODY	1	3E-9548	3E-9553	3E-9548	3E-9553	3E-9553	3E-9635

Table 5.1: TYPE 'UF' TUBING SWAB - PARTS LIST

DESCRIPTION	QUANTITY REQUIRED	PART NUMBERS BY SIZE AND TYPE				
		1.315 in.	1.660 in.	1.900 in. 2-1/16 in	2-3/8 in.	2-7/8 in.
SWAB LESS CUPS	--	3E-41329	3E-42628	3E-43539	3E-42856	3E-43007
LOWER MANDREL	1	3E-39298	3E-39286	3E-43541	3E-42375	3E-42506
RETAINING NUT	1	3E-39287	3E-40618	3E-43542	-	-
SUB	1	3E-40745	-	-	3E-42373	3E-43005
UPPER MANDREL	1	3E-39289	3E-39285	3E-43540	3E-42374	3E-42505



UF Tubing Swab

Guiberson Tubing Swab Cups ... The Original and Still the Best!!

Here's Guiberson's complete line of field-proven tubing swab cups. You'll find the type you need for any type of well servicing activity.

Type 'NUF'



The dictionary defines enough as: "sufficient; as much as necessary." That's the 'NUF'; it's sufficient for your swabbing job. The 'NUF' is a high performance, heavy-duty, all-rubber cup. The unique design of the 'NUF' provides long life, maximum lift capacity, even under heavy load and deep swabbing conditions, and a dynamic shape that falls easily. The 'NUF' is made from Guiberson's high strength, abrasion resistant, low friction rubber. The 'NUF' is offered in a steel or aluminum bushing. The 'NUF' is available for both standard and heavy wall tubing and may be run on any Guiberson swab.

Type 'HPR'



The 'HPR' combines three lifting rings for maximum lift capacity with a lip designed for maximum lift power and long life under heavy loads. The 'HPR' is an all-rubber cup, molded onto either a steel bushing for strength and durability or an aluminum bushing for use where neither acid nor strong caustic fluids are swabbed. The 'HPR' is available for standard tubing or with a slightly smaller O.D. for undersize tubing and faster falling.

Type 'TA'



The 'TA' is a medium-duty, all-rubber, variable lip cup. The 'TA' is made from a slightly softer rubber for greater flexibility under lighter loads. The 'TA' can be run on any Guiberson swab and is available with either a steel or an aluminum bushing in all popular sizes.

Type 'MV'



The 'MV' is a light-duty, all-rubber cup. The multiple upturned lips pass easily through tight spots and are especially suited for fluid with a high ratio of suspended sand because the lips will invert to dump an excessive load. The 'MV' is available with either a steel or an aluminum bushing and can be run on any Guiberson swab.

Type 'V'



The 'V' is a ring-type, single-lip, flexible, all-rubber cup molded on a steel bushing. The 'V' is ideal for lifting sand-laden fluids and for light-load swabbing. The flexible 'V' falls quickly and automatically dumps excess loads. The number of 'V' cups may be varied to meet the swabbing conditions and can be run on any Guiberson swab.

Type 'TUF'



The 'TUF' is a flexible cup using a patented method of attaching the spring steel reinforcing wires along with a molded-in valve ring. The 'TUF' is molded from a synthetic rubber for lifting medium to heavy loads. As the name implies, it's tough!

Type 'UF'



The 'UF' is an all-purpose cup containing strong, flexible spring steel reinforcing wires and a molded-in valve ring. The 'UF' is made from a very flexible rubber for lighter loads. The 'UF' can be run on any Guiberson swab and is available in the popular and special sizes.

Type 'J'



The 'J' is a very durable heavy duty cup with a long flexible lip to provide a perfect up-stroke seal. The strong steel reinforcing wires are secured by a Guiberson patented retaining ring, which keeps the wires from snagging, even in the roughest tubing. The 'J' is available in popular sizes, as well as heavy wall tubing and drill pipe sizes.

Type 'GW'



Introduced in 1940, the 'GW' seals so well it has become the industry standard for total fluid removal. The 'GW' is a single lip cup, reinforced by molded-in spring steel wires, in tubing size cups. The 'GW' is ideal for getting the last drop out of the well and may be run on any Guiberson swab.

Tubing Swab Cups

Table 7.1: ALL RUBBER CUPS- ENGINEERING DATA AND PART NUMBERS

TUBING DATA				TYPE 'NUF'			TYPE 'HPR'			TYPE 'TA'			SWAB CUP I.D. (in)
O.D.	WEIGHT (lb/ft)	TUBING I.D. (in)	MIN JT. I.D. ** (in)	PART NUMBER		CUP O.D. (in.)	PART NUMBER		CUP O.D. (in.)	PART NUMBER		CUP O.D. (in.)	
				STEEL BUSHING	ALUM. BUSHING		STEEL BUSHING	ALUM. BUSHING		STEEL BUSHING	ALUM. BUSHING		
1.315 (1)	1.70 -1.80	1.049	.970	-	-	-	-	-	-	-	3E-54510	1.000	0.430
1.660 (1-1/4)	2.30 -2.40	1.380	1.300	-	-	-	-	-	-	-	3E-54511	1.350	0.569
1.900 (1-1/2)	2.75 - 2.90	1.160	1.530	-	-	-	-	-	-	-	3E-53689 3E-59890*	1.600 1.560	0.759
2.00	3.40	1.670	--	-	-	-	-	-	-	-	3E-53690	1.660	
2.063 (1-3/4)	3.25 - 3.40	1.751	1.700	-	-	-	-	-	-	-	3E-53691 3E-53690*	1.710 1.660	
	4.50	1.613	1.550	-	-	-	-	-	-	-	3E-53690	1.660	
2-3/8 (2)	4.60 -4.70	1.995	1.945	-	3E-91066	1.935	3E-64713 3E-65530*	3E-64174 3E-65531*	1.940 1.923	3E-61024 3E-63612*	3E-53409 3E-54508*	1.990 1.950	1.084
	5.10 -5.30	1.939	1.890	-	3E-91066	1.935	S	S	-	S	S	-	
	5.80 -5.95 5.96 - 6.20 6.30 - 6.65	1.853 1.867 1.815	1.805 1.795 1.815	- - -	- S	1.785	3E-9667S	S	-	S	S	-	
2-7/8 (2-1/2)	6.40 - 6.50	2.441	2.371	-	3E-91067	2.370	3E-64176 3E-65532*	3E-64175 3E-65533*	2.355	3E-61025 3E-62930*	3E-53494 3E-54507	2.431 2.385	1.375
	7.70 - 7.90	2.323	2.265	-	S	2.245	3E-96680	S	-	S	S	-	
	8.60 - 8.70 8.90	2.259 2.243	2.200 2.181	- -	S	2.180	3E-96681	S	-	S	S	-	
	9.35 - 9.50 9.80 - 10.40	21.95 2.151	2.089 2.130	- -	-	-	-	-	-	S	3E-55235	2.111	1.084
11.54 - 11.65	1.995	-	-	3E- 91066	1.935	3E-64173	3E-64174	1.940	3E-61024	3E-53409	1.990		
3-1/2 (3)	9.20-9.50	2.992	2.920	-	-	-	-	-	-	3E-89689	3E-53692	2.940	1.375
	10.20 -10.30	2.992	2.870	-	-	-	-	-	-	S	S	-	

Table 7.2: ALL RUBBER CUPS- ENGINEERING DATA AND PART NUMBERS

TUBING DATA				TYPE 'MV'			TYPE 'V'	SWAB CUP I.D. (in)	
O.D.	WEIGHT (lb/ft)	TUBING I.D. (in)	MIN JT. I.D. ** (in)	PART NUMBER		CUP O.D. (in.)	PART NUMBER		CUP O.D. (in.)
				STEEL BUSHING	ALUM. BUSHING				
1.315	1.70 -1.80	1.049	.970	-	-	-	-	-	0.430
1.660 (1-1/4)	2.30 -2.40	1.380	1.300	-	-	-	-	-	0.569
1.900 (1-1/2)	2.75 - 2.90	1.160	1.530	-	-	-	3E-87422	1.605 (1D=0.915)	0.759
2.00	3.40	1.670	-	-	-	-	-	-	
2.063 (1-3/4)	3.25 -3.40	1.751	1.700	-	3E-57842	1.72	-	-	
	4.50	1.613	1.550	S	-	-	3E-87422	1.605	
2-3/8 (2)	4.60 - 4.70	1.995	1.945	3E-87791	3E-57468	1.992	3E-57835	1.992	1.084
	5.10 - 5.30	1.939	1.890	S	S	-	S	-	
	5.80 - 5.95 5.96 - 6.20 6.30 - 6.65	1.853 1.867 1.815	1.805 1.795 1.815	- - -	S	S	-	S	
2-7/8 (2-1/2)	6.40 - 6.50	2.441	2.371	3E-87792	3E-57469	2.431	3E-57836	2.431	1.375
	7.70 - 7.90	2.323	2.265	S	S	-	S	-	
	8.60 - 8.70 8.90	2.259 2.243	2.200 2.181	- -	S	S	-	S	-
	9.35 - 9.50 9.80 - 10.40	2.195 2.151	2.089 2.130	- -	-	-	-	-	1.084
11.54 - 11.65	1.995	-	3E-87791	3E-57468	1.992	3E-57835	1.992		
3-1/2 (3)	9.20 - 9.50	2.992	2.920	3E-89690	3E-57839	2.985	3E-57642	2.985	1.375
	10.20 - 10.30	2.992	2.870	S	S	-	S	-	

S Special order size - Contact Guberson sales representative.
 * Under size for easier falling; plastic lines or internal upset tubing.
 ** Bored joint I.D. of common internal upset tubing joint, such as CS Hydril

Tubing Swab Cups

Table 8.1: WIRE REINFORCED CUPS - ENGINEERING DATA AND PART NUMBERS

TUBING DATA				TYPE 'TUF'			TYPE 'UF'			TYPE 'J'		TYPE 'GW'		J' 'GW' CUP I.D. (in)	
O.D.	WEIGHT (lb/ft)	TUB- ING I.D. (in)	MIN JT. I.D. **(in)	PART NUMBER		TUF' CUP I.D. (in)	PART NUMBER		UF' CUP I.D. (in)	PART NUMBER		PART NUMBER			
				PART NUMBER	CUP O.D. (in)		PART NUMBER	CUP O.D. (in)		PART NUMBER	CUP O.D. (in)	PART NUMBER	CUP O.D. (in)		
1.315 (1)	1.70 - 1.80	1.049	0.970	-	-	-	3E-38831	0.970	0.437	-	-	-	-	-	
1.660 (1-1/4)	2.20 - 2.40	1.380	1.300	-	-	-	3E-38869	1.300	0.578	-	-	-	-	-	
1.900 (1-1/2)	2.75 - 2.90	1.610	1.530	-	-	-	3E-29641	1.520	0.688	-	-	-	-	-	
2.00	3.40	1.670	-	-	-	3E-45307	1.650	-		-	-	-	-	-	
2.063 (1-3/4)	3.25-3.40	1.751	1.700	-	-	-	3E-31594 3E-45307*	1.694 1.650		-	-	-	-	-	-
	4.50	1.613	1.550	-	-	-	3E-29641	1.520		-	-	-	-	-	-
2-3/8 (2)	4.60 - 4.70 5.10 - 5.30	1.995 1.939	1.945 1.890	3E-68333.000	1.910	1.078	-	-	-	3E-14669 -	1.985 -	3E-10716 -	2.000 -	1.094 -	
2-7/8 (2-1/2)	6.40 - 6.50	2.441	2.371	3E-69845 3E-86344***	2.360	1.350	-	-	-	3E-1472	2.420	3E-10047	2.490	1.344	
	8.60 - 8.70 8.90	2.259 2.243	2.200 2.245	-	-	-	-	-	-	3E-16711	2.215	-	-	1.094	
	9.35 - 9.50 9.80 - 10.40	2.151	2.151	-	-	-	-	-	1.078	3E-17643	2.125	-	-		
	11.54 - 11.65	1.995	-	3E-68333.000	1.190	1.078	-	-	-	3E-14669	1.985	3E-10716	2.000		
3-1/2 (3)	8.50 - 10.20§	2.922	2.979	-	-	-	-	-	1.35	-	-	3E-61943§	2.797		1.344
	9.20 - 9.50	2.992	2.920	-	-	-	3E-36353	2.890		3E-15684	2.972	3E-14960	3.020		
	10.20 - 10.30	2.992	2.870	-	-	-				-	-	-	-	-	
	12.80 - 13.30 12.70 - 12.95	2.764 2.750	- 2.687	-	-	-	3E-36357	2.720		-	-	3E-14082	2.770		
	14.90 - 15.50	2.602	-	-	-	-	-	-		-	3E-16781	2.552	-	-	
4.00	9.500	3.548	-	-	-	-	-	-	-	-	-	-	-	1.936	
	10.80 - 11.95	3.476	3.395	-	-	-	-	-	-	-	-	3E-14036	3.526		

* Undersize cup - For faster fall and plastic lined or internal upset tubing. § Trico special
 ** Bored joint I.D. of common internal upset tubing joint, such as CS Hydril KOBE special
 *** TUF - lite cup for lighter loads: blue color

Table 8.2: GENERAL FLUID LOADS FOR GUIBERSON TUBING SWAB CUPS

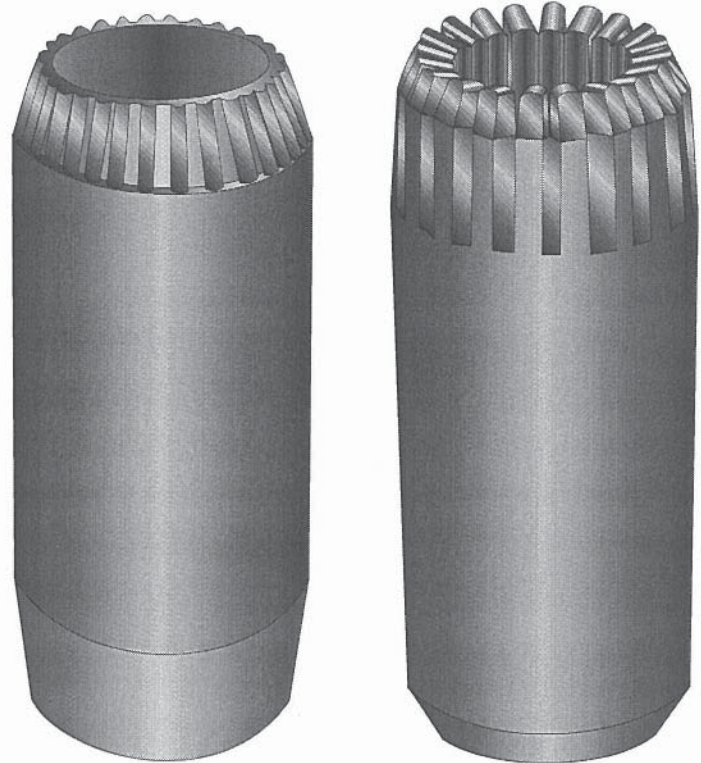
CUP TYPES	ALL RUBBER CUPS				WIRE CUPS			
	*V	MV	NUF or HPR	TA	*TUF	*GW	*J	*UF
FLUID LOAD (ft)								
Light 0-200	X	X		X		X	X	X
Medium 200-1,000	X	X	X	X	X	X	X	X
Heavy 800-2,000			X		X		X	X
CONDITION								
SAND	X	X						
SCALE	X	X			X			
PLASTIC LINED	X	X	X	X	X		X	X
UNDERSIZE	X	X	X	X	X		X	X

* Steel Bushing Only

Note: General loads are for 2-3/8 in. cups swabbing salt water, Load limit decreases with 2-7/8 in. and 3-1/2 in. cups.

Type ‘TUF’ Tubing Swab Cup

The Type ‘TUF’ is a flexible rubber cup with spring steel reinforcing wires. The wires are attached to a molded-in valve ring, making the ‘TUF’ very strong for heavy loads but flexible enough for light loads. The ‘TUF’ may be used in both regular and undersized tubing. As the name implies, it’s tough!



Type ‘UF’ Tubing Swab Cup

The Type ‘UF’ is a strong, flexible, synthetic-rubber cup containing a molded-in valve ring and strong, flexible spring steel reinforcing wires. Heavily reinforced for the high speeds and heavy loads common today, the ‘UF’ also retains great flexibility for handling light loads. Steel reinforcing wires take the wear, assuring long life, and its smooth internal surface lets it travel freely on the swab mandrel to give ample bypass while running in. Undersize ‘UF’ cups, slightly shorter and smaller in diameter than the standard, are available where greater clearance is desired.

Type ‘TUF’ Tubing Swab Cup

Type ‘UF’ Tubing Swab Cup

Table 9.1: TYPE ‘TUF’ AND ‘UF’ TUBING SWAB CUPS - ENGINEERING DATA AND PART NUMBERS

NORMAL CASING SIZE	WEIGHT (lb/ft)	I.D. (in. / mm)	MIN. JT. I.D. (in. / mm)	DRIFT DIA. (in. / mm)	CAPACITY (Bbl / m3) PER 1000	TYPE ‘TUF’			TYPE ‘UF’		
						Part #	O.D. (in. / mm)	I.D. (in. / mm)	Part #	O.D. (in. / mm)	I.D. (in. / mm)
1.315	1.800	1.049 / 26.64	0.970 / 24.64	.955 / 25.27	1.070 / .56	-	-	-	3E-38831	0.970 / 24.64	.437 / 11.10
1.660	2.400	1.380 / 35.05	1.300 / 33.02	1.286 / 32.66	1.850 / .96	-	-	-	3E-38869	1.300 / 33.02	.578 / 14.68
1.900	2.900	1.610 / 40.89	1.610 / 40.89	1.516 / 38.51	2.520 / 1.31	-	-	-	3E-29641	1.520 / 38.61	.688 / 17.48
2.000	3.400	1.670 / 42.42	1.670 / 42.42	1.576 / 40.03	2.710 / 1.41	-	-	-	3E-45307*	1.650 / 41.91	.688 / 17.48
2.063	3.400	1.750 / 44.45	1.700 / 43.18	1.656 / 42.06	2.980 / 1.55	-	-	-	3E-31594	1.694 / 43.03	.688 / 17.48
2-3/8	4.700	1.995 / 50.67	1.995 / 50.67	1.901 / 48.29	3.860 / 2.01	3E-68333	1.910 / 48.51	1.078 / 27.38	-	-	-
2-7/8	6.500	2.441 / 62.00	2.441 / 62.00	2.347 / 59.61	5.800 / 3.03	3E-69845	2.360 / 59.04	1.350 / 34.29	-	-	-
	6.500	2.441 / 62.00	2.441 / 62.00	2.347 / 59.61	5.800 / 3.03	3E-86344**	2.360 / 59.04	1.350 / 34.29	-	-	-
	10.4 DP	2.151 / 54.64	2.151 / 54.64	1.963 / 49.86	4.500 / 2.35	-	-	-	-	/53.09	/27.38
3-1/2	8.50-10.20	3.018 - 2.922 / 76.66 - 74.22	3.018 - 2.922 / 76.66 - 74.22	2.893 - 2.797 / 73.48 - 71.04	8.840 - 8.290 / 4.61 - 4.32	-	-	-	3E-36353	2.890 / 74.55	1.350 / 34.29
	13.3 DP	2.764 / 70.21	2.764 / 70.21	2.375 / 60.33	7.420 / 3.87	-	-	-	3E-36357	2.720 / 69.09	1.350 / 34.29

* May be used in internal upset 2.063" tubing, such as CS Hydril

** ‘TUF’ - Lite cup for lighter loads: blue color

Tubeing Swab Cups

Type 'TA' Tubing Swab Cup

The Type 'TA' is an all-rubber cup bonded to an aluminum bushing or steel. Its construction allows the bushing to be dissolved by acid or a strong caustic solution should sand stick the swab. The 'TA' can be run on any Guiberson swab and is available with steel bushings in popular sizes.



Type 'TA' Tubing Swab Cup

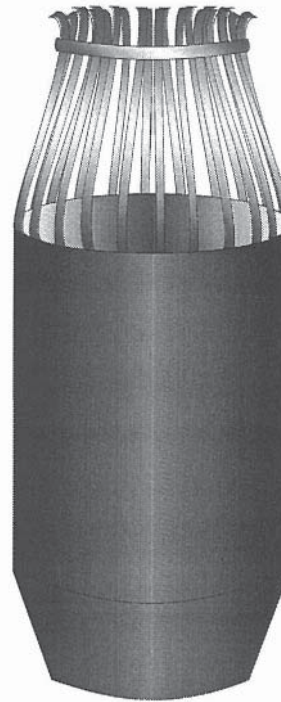
Table 10.1: TYPE 'TA' TUBING SWAB CUPS - ENGINEERING DATA AND PART NUMBERS

NORMAL CASING SIZE	WEIGHT (lb/ft)	I.D. (in. / mm)	MIN. JT. I.D. (in. / mm)	DRIFT DIA. (in. / mm)	CAPACITY (Bbl / m3) PER 1000	TYPE 'TA' : ALUM BUSHING			TYPE 'TA' : STEEL BUSHING		
						Part #	O.D. (in. / mm)	I.D. (in. / mm)	Part #	O.D. (in. / mm)	I.D. (in. / mm)
1.315	1.800	1.049 / 26.64	0.970 / 24.64	.955 / 25.27	1.070 / .56	3E-54510	1.000 / 25.40	.430 / 10.92	-	-	-
1.660	2.400	1.380 / 35.05	1.300 / 33.02	1.286 / 32.66	1.850 / .96	3E-54511	1.350 / 34.29	.569 / 14.45	-	-	-
1.900	2.900	1.610 / 40.89	1.610 / 40.89	1.516 / 38.51	2.520 / 1.31	3E-59890* 3E-53689	1.600 / 40.64	.759 / 19.28	-	-	-
2.000	3.400	1.670 / 42.42	1.670 / 42.42	1.516 / 40.03	2.710 / 1.41	3E-53690	1.560 / 42.16	.759 / 19.28	-	-	-
2.063	3.400	1.750 / 44.45	1.700 / 43.18	1.656 / 42.06	2.980 / 1.55	3E- 53691	1.742 / 44.25	.759 / 19.28	-	-	-
2-3/8	4.700	1.995 / 50.67	1.995 / 50.67	1.901 / 48.29	3.860 / 2.01	3E-53409	1.990 / 50.55	1.084 / 27.53	3E-61024	1.990 / 50.55	1.084 / 27.53
	4.700	1.995 / 50.67	1.945 / 49.40	1.901 / 48.29	3.880 / 2.01	3E-54508	1.950 / 49.53	1.084 / 27.53	3E-63812	1.950 / 49.53	1.084 / 27.53
2-7/8	6.500	2.441 / 62.00	2.441 / 62.00	2.347 / 59.61	5.800 / 3.03	3E-53494	2.431 / 61.75	1.375 / 34.93	3E-61025	2.431 / 61.75	1.375 / 34.93
	6.500	2.441 / 62.00	2.375 / 60.33	2.347 / 59.61	5.800 / 3.03	3E-54507	2.385 / 60.58	1.375 / 34.93	3E-62930	2.385 / 60.58	1.375 / 34.93
	10.4 DP	2.151 / 54.64	2.151 / 54.64	1.963 / 49.86	4.500 / 2.35	3E-55235	2.111 / 53.62	1.084 / 27.53	-	-	-
3-1/2	8.50 - 10.20	3.018 - 2.922 / 76.66 - 74.22	3.018 - 2.922 / 76.6 - 74.22	2.893 - 2.797 / 73.48 - 71.04	8.840 - 8.290 / 4.61 - 4.32	3E-53692	2.940 / 74.68	1.375 / 34.93	3E-89689	-	-
	9.300	2.992 / 74.22	2.992 / 74.22	2.867 / 72.82	8.700 / 4.54	3E- 53692	2.940 / 74.68	1.375 / 34.93	-	-	-

*Undersize - for plastic lined tubing or internal upset tubing, such as CS Hydril

Type 'J' Tubing Swab Cup

The Type 'J' is a durable, heavy-duty, wire reinforced cup designed to left heavy loads from any depth. Its long, flexible lip provides perfect upstroke seal and automatically compensates for wear. Strong steel reinforcing wires, secured by the patented Guiberson retaining ring, take the abrasive wear against the tubing. This reinforcement ensures easy swabbing, prevents hanging up, and makes the 'J' the toughest heavy-load cup available. With its special oil, gas, and abrasion resistant rubber compound, the 'J' stands up to the toughest swabbing service.



Type 'J' Tubing Swab Cup



Type 'GW' Tubing Swab Cup

Type 'GW' Tubing Swab Cup

The Type 'GW' is a heavy, flexible, oversized lip provides a perfect upstroke seal, even in rough or mixed tubing strings, making it ideal for lifting light loads. The 'GW' cup seals so well, it has become the industry standard for total fluid removal. Because the lip is flexible, the cup runs in smoothly; and because it is oversized, it automatically compensates for wear, ensuring lifting of all the fluid above it.

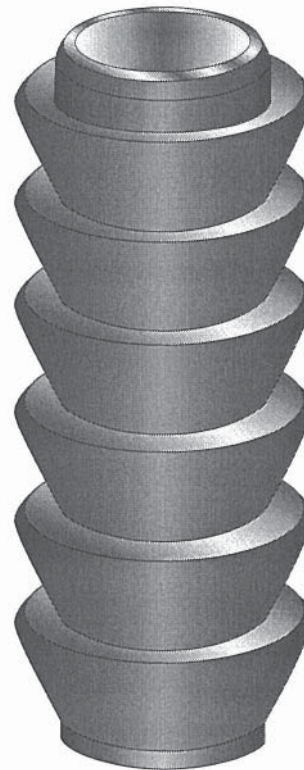
Table 11.1: TYPE 'J' AND 'GW' TUBING SWAB CUPS - ENGINEERING DATA AND PART NUMBERS

NORMAL CASING SIZE	WEIGHT (lb/ft)	I.D. (in. / mm)	MIN. JT. I.D. (in. / mm)	DRIFT DIA. (in. / mm)	CAPACITY (Bbl / m3) PER 1000	TYPE 'J'			TYPE 'GW'		
						Part #	O.D. (in. / mm)	I.D. (in. / mm)	Part #	O.D. (in. / mm)	I.D. (in. / mm)
2-3/8	4.700	1.995 / 50.67	1.995 / 50.67	1.901 / 48.29	3.860 / 2.01	3E-14669	1.985 / 50.42	1.094 / 27.79	3E-10716	2.000 / 50.80	1.094 / 27.79
2-7/8	6.500	2.441 / 62.00	2.441 / 62.00	2.374 / 59.61	5.800 / 3.03	3E-14772	2.420 / 61.47	1.344 / 34.14	3E-10047	2.490 / 63.25	1.344 / 34.14
2-7/8	8.8DP	2.250 / 57.15	2.250 / 57.15	2.156 / 54.76	4.920 / 2.57	3E-16711	2.215 / 56.26	1.094 / 27.79	-	- / 58.02	- / 27.79
2-7/8	10.4DP	2.151 / 54.64	2.151 / 54.64	1.963 / 49.86	4.500 / 2.35	3E-17643	-	-	-	-	-
3-1/2	8.50-10.20	3.018-2.922 / 76.66-74.22	3.018-2.922 / 76.66-74.22	2.893-2.797 / 73.48-71.04	8.840-8290 / 4.61-4.32	-	-	-	3E-14960	3.020 / 76.61	1.344 / 34.14
3-1/2	9.300	2.922 / 74.22	2.922 / 74.22	2.867 / 72.82	8.700 / 4.54	3E-15684	2.972 / 75.49	1.344 / 34.14	-	-	-
	13.3DP	2.764 / 70.21	2.764 / 70.21	2.375 / 60.33	7.420 / 3.87	-	-	-	3E-14082	2.770 / 70.36	1.344 / 34.14
	15.5DP	2.602 / 66.09	2.602 / 66.09	2.375 / 60.33	6.590 / 3.44	3E-16781	2.552 / 64.82	1.344 / 34.14	-	-	-
4	9.500	3.548 / 90.12	3.548 / 90.12	3.423 / 86.94	112.250 / 6.39	-	-	-	3E-14034	3.590 / 91.19	1.938 / 49.23
	11.0-11.60	3.476-3.428 / 88.29-87.07	3.395 / 86.23	3.303 / 83.90	11.40 / 5.95	-	-	-	3E-14036	3.526 / 89.56	1.938 / 49.23

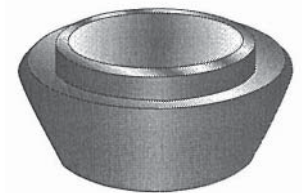
Tubing Swab Cups

Type 'MV' Tubing Swab Cup

The Type 'MV' is a wireless cup, tightly bonded to an aluminum or steel bushing. Its multiple upturned lips pass easily through tight spots and automatically control the amount of load lifted. The 'MV' cup is especially effective in fluid with a high ratio of suspended sand. The flexible lips automatically compensate for wear, allowing longer cup life, and the built-in relief feature assures fast falling for rapid swabbing.



Type 'MV' Tubing Swab Cup



Type 'V' Tubing Swab Cup

Type 'V' Tubing Swab Cup

The Type 'V' was specially designed to lift fluid containing a high ratio of suspended sand. It is also suitable for lifting ordinary light loads with minimum suction across the sand face. The number of cups used may be varied by operator to fit conditions.

Table 12.1: TYPE 'MV' AND 'V' TUBING SWAB CUPS - ENGINEERING DATA AND PART NUMBERS

NORMAL CASING SIZE	WEIGHT (lb/ft)	I.D. (in. / mm)	MIN. JT. I.D. (in. / mm)	DRIFT DIA. (in. / mm)	CAPACITY (Bbl / m3) PER 1000	TYPE 'MV'			TYPE 'V'		
						Part #	O.D. (in. / mm)	I.D. (in. / mm)	Part #	O.D. (in. / mm)	I.D. (in. / mm)
2.000	3.400	1.670 / 42.42	1.670 / 42.42	1.576 / 40.03	2.710 / 1.41	3E-57842	1.735 / 44.07	.759 / 19.28	-	-	-
2.063	3.400	1.750 / 44.45	1.700 / 43.18	1.656 / 42.06	2.980 / 1.55	3E-57842	1.735 / 44.07	.759 / 19.28	-	-	-
2-3/8	4.700	1.995 / 50.67	1.995 / 50.67	1.901 / 48.29	3.860 / 2.01	3E-57468	1.992 / 50.60	1.084 / -	3E-57835	1.992 / 50.59	1.094 / 27.78
2-3/8	4.700*	1.995 / 50.67	1.945 / 49.40	1.901 / 48.29	3.860 / 2.01	-	- / 27.53	-	3E-57835	1.992 / 50.59	1.094 / 27.78
2-7/8	6.500	2.441 / 62.00	2.441 / 62.00	2.347 / 59.61	5.800 / 3.03	3E-57469	2.431 / 61.75	1.344 / 34.93	3E-57836	2.431 / 61.81	1.344 / 33.13
2-7/8	6.500*	2.441 / 62.00	2.375 / 60.33	2.347 / 59.61	5.800 / 3.03	-	-	-	3E-57836	2.431 / 61.81	1.344 / 33.13
3-1/2	8.50 - 10.20	8.018-2.922 / 76.66-74.22	3.018-2.922 / 76.66-74.22	2.893-2.797 / 73.48-71.04	8.840-8.290 / 4.61-4.32	3E-57839	2.985 / 75.82	1.375 / 34.93	3E-57642	2.985 / 50.40	1.344 / 34.13
	9.300	2.922 / 74.22	2.922 / 74.22	2.867 / 72.82	8.700 / 4.54	-	-	-	3E-57642	2.985 / 50.40	1.344 / 34.13

* Undersize - for plastic lined tubing or internal upset tubing, such as CS Hydril.

Table 13.1: CASING SWAB CUPS- ENGINEERING DATA AND PART NUMBERS

CASING DATA			TYPE 'V'			TYPE 'J'	TYPE 'JS'	'J' & 'JS'		TYPE 'GW'		
O.D. (in.)	WEIGHT (lb/ft)	I.D. (in.)	Part Number	O.D. (in.)	I.D. (in.)	Part Number	Part Number	O.D. (in.)	I.D. (in.)	Part Number	O.D. (in.)	I.D. (in.)
4-1/2	9.50	4.090	3E-57467 3E-93480**	4.062	2.420	3E-45597	3E-61495	4.060	2.435	3E-19841	4.160	2.407
	11.60	4.000										
	12.60	3.958										
4-1/2 D.P.	13.75	3.958	3E-57467	4.062	2.420	3E-45597	3E-61495	4.060	2.435	3E-19841	4.160	2.407
	16.60	3.826	S	-	-	-	-	-	-	3E-19840	3.910	2.407
4-3/4	16.00	4.082	3E-57467	4.062	2.420	3E-45597	3E-61495	4.060	2.435	3E-19841	4.160	2.407
5	13.00	4.494	S	-	-	-	-	-	-	3E-19843	4.510	2.407
	15.00	4.408										
	18.00	4.276	S	-	-	-	-	-	-	3E-19842	4.300	2.407
	21.00	4.154										
5-1/2	13.00	5.044	3E-88884* 3E-57470	4.970	2.420	3E-45829	3E-61496	5.010	2.435	3E-19846	5.120	2.907
	14.00	5.012		4.970	2.920							
	15.00	4.974										
	15.50	4.950	3E-88884*	4.970	2.420	3E-45829	3E-61496	5.010	2.435	3E-56673	4.990	2.907
	17.00	4.892	S	-	-	3E-52384	-	4.838	2.435	3E-56673	4.990	2.907
	20.00	4.778	S	-	-	3E-52384	-	4.838	2.435	3E-19844	4.910	2.907
	23.00	4.670	3E-88884*	4.970	2.420	3E-45829	3E-61496	5.010	2.435	3E-19846	5.120	2.907
5-3/4	14.00	5.290	S	-	-	-	-	-	-	3E-19847	5.360	2.907
	17.00	5.190										
	22.50	4.990	3E-88884*	4.970	2.420	3E-45829	3E-61496	5.010	2.435	3E-19846	5.120	2.907
6	14.00	5.552	S	-	-	-	-	-	-	3E-19848	5.580	2.907
	20.00	5.352										
6-5/8	20.00	6.049	S	-	-	-	-	-	-	3E-19389	6.125	3.532
	22.00	5.989										
	24.00	5.921	S	-	-	-	-	-	-	3E-19849	6.125	3.532
	28.00	5.791										
7	17.00	6.538	3E-57471	6.475	3.545	3E-45831	-	6.520	2.435	3E-19853	6.562	3.532
	20.00	6.456										
	22.00	6.398	3E-57471	6.475	3.545	3E-52385	-	6.320	2.435	3E-19852	6.480	3.532
	23.00	6.366										
	24.00	6.336										
26.00	6.276	S	-	-	-	-	-	-	-	3E-19851	6.328	3.532
30.00	6.154											
32.00	6.094	S	-	-	-	-	-	-	-	-	-	3.532
35.00	6.004											
38.00	5.920	S	-	-	-	-	-	-	-	3E-19849	5.950	3.532
40.00	5.836											
7-5/8	26.40	6.969	-	-	-	-	-	-	-	3E-19855	7.050	3.532
	29.70	6.875	-	-	-	-	-	-	-	3E-19854	6.900	3.532
	33.70	6.765	-	-	-	-	-	-	-			

S Indicates that this size swab cup is available by special order
* Part number 88884 is an alternate swab cup which is made to run in 5-1/2 in. casing on a 4-1/2 in. size swab mandrel
** 93480 is a heavy duty alternate to 57467

Casing Swab Cups

Type 'GW' Tubing Swab Cup

Because type 'GW' is molded from highly abrasion-resistant rubber, with a stout flexible lip, this cup is recommended for lifting light loads. The 'GW' was designed for positive seal in rough or mixed casing strings. Use of the 'GW' is recommended for total removal of all fluid above the cup.



**Type 'GW'
Casing Swab Cup**

Table 14.1: TYPE 'GW' CASING SWAB CUPS- ENGINEERING DATA AND PART NUMBERS

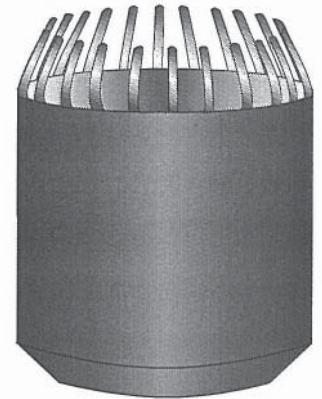
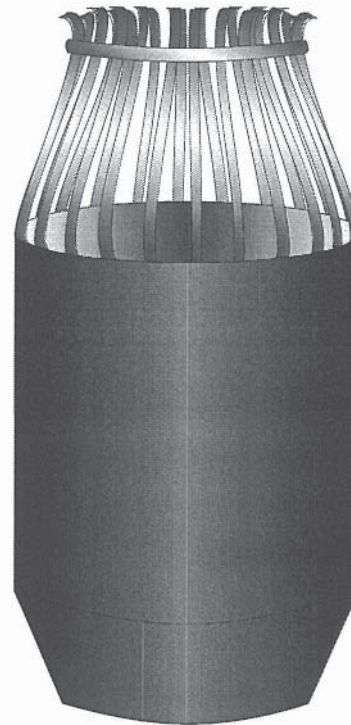
NORMAL CASING SIZE (in.)	WEIGHT (lb/ft)	I.D. [in. / mm]	CAPACITY [Bbl / m3] / 1000	TYPE 'GW'		
				Part #	O.D. [in. / mm]	I.D. [in. / mm]
4-1/2	9.5	4.090 / 103.87	16.2 / 8.45	3E-19841	4.160 / 105.66	2.407 / 61.14
	11.6	4.000 / 101.60	15.5 / 8.08	3E-19841	4.160 / 105.66	2.407 / 61.14
	12.6	3.958 / 103.53 - / 99.57	15.2 / 7.93	3E-19841	4.160 / 105.66	2.407 / 61.14
	-		- / 7.77	3E-19841	4.160 / 105.66	2.407 / 61.04
4-1/2 D.P.	15.3	3.826 / 97.18	14.2 / 7.41	3E-19840	3.910 / 99.31	2.407 / 61.14
	16.6	3.826 / 97.18	14.2 / 7.41	3E-19840	3.910 / 99.31	2.407 / 61.14
	18.1	3.754 / 95.35	13.7 / 7.15	3E-19840	3.910 / 99.31	4.407 / 61.14
4-3/4	16.0	4.082 / 103.68	16.2 / 8.45	3E-19841	4.160 / 105.66	2.407 / 61.14
5	13.0	4.494 / 114.15	19.96 / 10.22	3E-19843	4.510 / 114.55	2.407 / 61.14
	15.0	4.408 / 111.96	18.9 / 9.86	3E-19843	4.510 / 114.55	2.407 / 61.14
	18.0	4.276 / 108.61	17.8 / 9.28	3E-19842	4.300 / 109.22	2.407 / 61.14
	21.0	4.154 / 105.51	16.8 / 8.76	3E-19842	4.300 / 109.22	2.407 / 61.14
5-1/2	13.0	5.044 / 128.12	24.7 / 12.88	3E-19846	5.120 / 130.05	2.907 / 73.84
	14.0	5.012 / 127.30	24.4 / 12.73	3E-19846	5.120 / 130.05	2.907 / 73.84
	15.0	4.974 / 126.34	24.0 / 12.52	3E-19846	5.120 / 130.05	2.907 / 73.84
	15.5	4.950 / 125.73	23.8 / 12.41	3E-56673	4.990 / 126.75	2.907 / 73.84
	17.0	4.892 / 124.26	23.2 / 12.10	3E-56673	4.990 / 126.75	2.907 / 73.84
	20.0	4.778 / 121.36	22.2 / 11.58	3E-19844	4.910 / 124.71	2.907 / 73.84
23.0	4.670 / 118.62	21.1 / 11.01	3E-19644	4.910 / 124.71	2.907 / 73.84	
5-3/4	14.0	5.290 / 134.37	27.2 / 14.40	3E-19847	5.360 / 136.14	2.907 / 73.84
	17.0	5.190 / 131.83	26.2 / 13.67	3E-19847	5.360 / 136.14	2.907 / 73.84
	22.5	4.990 / 126.75	24.2 / 12.62	3E-19846	5.120 / 130.05	2.907 / 73.84
6	14.0	5.552 / 141.02	30.0 / 15.65	3E-19848	5.580 / 141.73	2.907 / 73.84
	15.0	5.524 / 140.31	29.6 / 15.44	3E-19848	5.580 / 141.73	2.907 / 73.84
	16.0	5.500 / 139.70	29.3 / 15.28	3E-19848	5.580 / 141.73	2.907 / 73.84
	17.0	5.450 / 138.43	28.8 / 15.02	3E-19848	5.580 / 141.73	2.907 / 73.84
	18.0	5.424 / 137.77	28.5 / 14.87	3E-19848	5.580 / 141.73	2.907 / 73.84
20.0	5.352 / 135.64	27.8 / 14.50	3E-19848	5.580 / 141.73	2.907 / 73.84	
6-5/8	20.0	6.049 / 153.64	35.5 / 18.52	3E-19389	6.125 / 155.58	3.532 / 89.71
	22.0	5.989 / 152.12	34.8 / 18.15	3E-19389	6.125 / 155.58	3.532 / 89.71
	24.0	5.921 / 150.39	34.1 / 17.79	3E-19849	5.950 / 151.13	3.532 / 89.71
	26.0	5.855 / 148.72	33.3 / 17.37	3E-19849	5.950 / 151.13	3.532 / 89.71
	28.0	5.791 / 147.09	32.6 / 17.00	3E-19849	5.950 / 151.13	3.532 / 89.71
7	17.0	6.538 / 166.07	41.5 / 21.65	3E-19853	6.562 / 166.67	3.532 / 89.71
	20.0	6.456 / 163.98	40.5 / 21.12	3E-19853	6.562 / 166.67	3.532 / 89.71
	22.0	6.398 / 162.51	39.8 / 20.76	3E-19852	6.480 / 164.59	3.532 / 89.71
	23.0	6.366 / 161.70	39.3 / 20.50	3E-19852	6.480 / 164.59	3.532 / 89.71
	24.0	6.336 / 160.93	39.0 / 20.34	3E-19852	6.480 / 164.59	3.532 / 89.71
	26.0	6.276 / 159.41	38.3 / 19.98	3E-19851	6.328 / 160.73	3.532 / 89.71
	28.0	6.214 / 157.84	37.5 / 19.56	3E-19851	6.328 / 160.73	3.532 / 89.71
	29.0	6.184 / 157.07	37.1 / 19.35	3E-19851	6.328 / 160.73	3.532 / 89.71
	30.0	6.154 / 156.31	36.8 / 19.19	3E-19851	6.328 / 160.73	3.532 / 89.71
	32.0	6.094 / 154.79	36.0 / 18.78	3E-19389	6.125 / 155.58	3.532 / 89.71
	34.0	6.040 / 153.42	35.4 / 18.46	3E-19389	6.125 / 155.58	3.532 / 89.71
	35.0	6.004 / 152.50	35.0 / 18.26	3E-19389	6.125 / 155.58	3.532 / 89.71
	38.0	5.920 / 150.37	34.0 / 17.73	3E-19349	5.950 / 151.13	3.532 / 89.71
7-5/8	26.4	6.969 / 177.01	47.2 / 24.62	3E-19855	7.050 / 179.07	3.532 / 89.71
	29.7	6.875 / 174.63	45.9 / 23.94	3E-19854	6.900 / 175.26	3.532 / 89.71
	33.7	6.765 / 171.83	44.5 / 23.21	3E-19854	6.900 / 175.26	3.532 / 89.71

Type 'J' Casing Swab Cup

The 'J' Casing Swab Cup is a heavy-duty cup, designed for lifting maximum loads from any depth. Its flexible lip provides a perfect up-stroke seal and automatically compensates for wear. This is the most dependable and durable heavy-load cup available.

Type 'JS' Casing Swab Cup

The 'JS' is a heavy-duty cup similar to the Type 'J' cup but with added flexibility to provide a seal when lifting lighter loads.



Type 'J' Casing Swab Cup

Type 'JS' Casing Swab Cup

Table 15.1: TYPE 'J' AND 'JS' CASING SWAB CUPS- ENGINEERING DATA AND PART NUMBERS

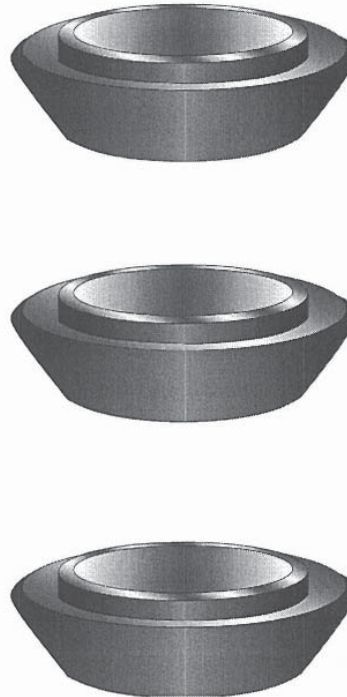
NORMAL CASING SIZE (in.)	WEIGHT (lb/ft)	I.D. [in. / mm]	CAPACITY [Bbl / m3] / 1000	TYPE 'J'			TYPE 'JS'		
				Part #	O.D. [in. / mm]	I.D. [in. / mm]	Part #	O.D. [in. / mm]	I.D. [in. / mm]
4-1/2	9.5	4.090 / 103.89	16.2 / 8.45	3E-45597	4.060 / 103.12	2.435 / 61.85	3E-61495	4.062 / 103.19	2.435 / 61.91
	11.6	4.000 / 101.60	15.5 / 8.08	3E-45597	4.060 / 103.12	2.435 / 61.85	3E-61495	4.062 / 103.19	2.435 / 61.91
	12.6	3.958 / 100.53	15.2 / 7.93	3E-45597	4.060 / 103.12	2.435 / 61.85	3E-61495	4.062 / 103.19	2.435 / 61.91
	13.5	3.920 / 99.57	14.9 / 7.77	-	- / -	- / -	-	- / -	- / -
4-3/4	16.0	4.082 / 103.68	16.2 / 8.45	3E-45597	4.060 / 103.12	2.435 / 61.85	-	-	-
5-1/2	13.0	5.044 / 128.12	24.7 / 12.88	3E-45829	5.010 / 127.25	2.435 / 61.85	3E-61496	5.010 / 127.25	2.435 / 61.91
	14.0	5.012 / 127.30	24.4 / 12.73	3E-45829	5.010 / 127.25	2.435 / 61.85	3E-61496	5.010 / 61.91	2.435 / 61.91
	15.0	4.974 / 126.34	24.0 / 12.52	3E-45829	5.010 / 127.25	2.435 / 61.85	3E-61496	5.010 / 127.25	2.435 / 61.91
	15.5	4.950 / 125.73	23.8 / 12.41	3E-45829	5.010 / 127.25	2.435 / 61.85	3E-61496	5.010 / 127.25	2.435 / 61.91
	17.0	4.892 / 124.26	23.2 / 12.10	3E-52384	4.838 / 122.89	2.435 / 61.85	-	-	-
	20.0	4.778 / 121.36	22.2 / 11.58	3E-52384	4.838 / 122.89	2.435 / 61.85	-	-	-
5-3/4	22.5	4.990 / 126.75	24.2 / 12.62	3E-45829	4.950 / 125.73	2.435 / 61.85	-	-	-
7	17.0	6.538 / 166.07	41.5 / 21.65	3E-45831	6.520 / 165.61	2.435 / 61.85	-	-	-
	20.0	6.456 / 163.98	40.5 / 21.12	3E-45831	6.520 / 165.61	2.435 / 61.85	-	-	-

* All sizes of 'J' and 'JS' cups may be run on 4-1/2 in. standard casing swab with adaptation. A sleeve, part number 45662 must be employed with 'J' or 'JS' cups on either Standard or Knuckle joint swabs.

Casing Swab Cups

Type 'V' Tubing Swab Cup

The type 'V' was specially designed to lift fluid containing a high ratio of suspended sand. It is also suitable for lifting ordinary light loads with minimum suction across the sand face. The number of cups used may be varied by operator to fit conditions.



**Type 'V'
Casing Swab Cup**

Table 16.1: TYPE 'V' CASING SWAB CUPS- ENGINEERING DATA AND PART NUMBERS

NORMAL CASING SIZE (in.)	WEIGHT (lb/ft)	I.D. [in. / mm]	CAPACITY [Bbl / m3] / 1000	TYPE 'V'		
				Part #	O.D. [in. / mm]	I.D. [in. / mm]
4-1/2	9.5	4.090 / 103.89	16.2 / 8.45	3E-57467 3E-*93480	4.062 / 103.17	2.420 / 61.47
	11.6	4.000 / 101.60	15.5 / 8.08		4.062 / 103.17	2.420 / 61.47
	12.6	3.958 / 100.53	15.2 / 7.93		4.062 / 103.17	2.420 / 61.47
	13.5	3.920 / 99.57	14.9 / 7.77		4.062 / 103.17	2.420 / 61.47
4-3/4	16.0	4.082 / 103.68	16.2 / 8.45	3E-57467	4.062 / 103.17	2.420 / 61.47
5-1/2	13.0	5.044 / 128.12	24.7 / 12.88	3E-57470	4.970 / 126.24	2.920 / 74.17
	14.0	5.012 / 127.30	24.4 / 12.73	3E-57470	4.970 / 126.24	2.920 / 74.17
	15.0	4.974 / 126.34	24.4 / 12.73	3E-57470	4.970 / 126.24	2.920 / 74.17
	15.5	4.950 / 125.73	24.0 / 12.52	3E-57470	4.970 / 126.24	2.920 / 74.17
	17.0	4.892 / 124.26	23.8 / 12.41	3E-57470	4.970 / 126.24	2.920 / 74.17
	20.0	4.778 / 121.36	23.2 / 12.10	3E-57470	4.970 / 126.24	2.920 / 74.17
	-	-	22.2 / 11.58	3E-**88884	-	**2.420 / 61.47
5-3/4	22.5	4.990 / 126.75	24.2 / 12.62	-	-	-
7	17.0	6.538 / 166.07	41.5 / 21.65	3E-57471	6.475 / 164.47	3.545 / 90.09
	20.0	6.458 / 163.98	40.5 / 21.12	3E-57571	6.475 / 164.47	3.545 / 90.04
	22.0	6.398 / 162.51	39.8 / 20.76	3E-57471	6.475 / 164.47	3.545 / 90.04
	23.0	6.366 / 161.70	39.3 / 20.50	3E-57471	6.475 / 164.47	3.545 / 90.04
	24.0	6.336 / 160.93	39.0 / 20.34	3E-57471	6.475 / 164.47	3.545 / 90.04
	26.0	6.276 / 159.41	38.3 / 19.98	3E-57471	6.475 / 164.47	3.545 / 90.04

*93480 is a heavy duty alternative to 57467

*88884 is 5-1/2" cup with 2.420" I.D. for running on 4-1/2" 'KJ' swab

Knuckle Joint Casing Swab

The Guiberson Knuckle Joint casing swab is of basically the same design as the knuckle joint tubing swab and offers the same advantages of quick change and versatility. The swab is made of high-strength, heat-treated steel and is individually tested to withstand the heaviest swabbing loads. It is designed for use with Types 'J' and 'JS' cups or (10) Type 'V' cups and two mandrels. Cups may be changed in a matter of seconds, with no tools required.



Knuckle Joint with 'J' Cups

Parts-Knuckle Joint Swab

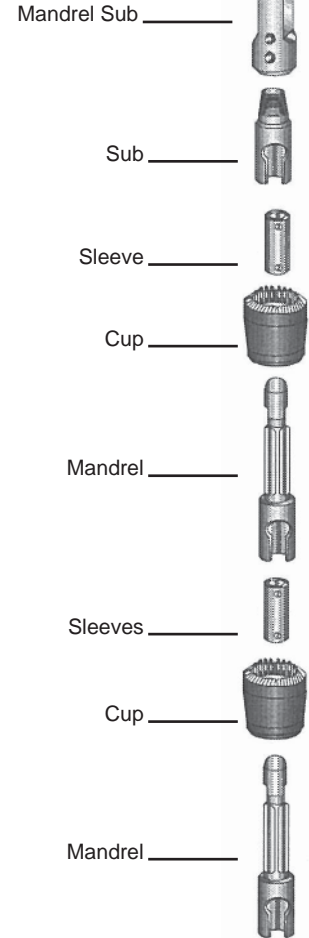


Table 17.1: KNUCKLE JOINT CASING SWAB MANDREL- ENGINEERING DATA AND PART NUMBERS

CASING O.D. (in.)	MAX. METAL O.D. [in. / mm]	CASING I.D. [in. / mm]	WEIGHT RANGE	PART NUMBER		APPROXIMATE		FIELD THREAD SIZE (in.)
				SWAB ASSM'Y.	SLEEVE **	WT [lb / kg]	LENGTH [in. / mm]	
4-1/2	3.500 / 88.90	4.090-3.920 / 13.89-99.57	9.5-13.5	3E-61667	3E-45662	80 / 36.29	50 / 1270.0	1-5/8 X 2-5/8-7
4-3/4	3.500 / 88.90	4.082 / 103.68	16.0	3E61667	3E-45662	80 / 36.29	50 / 1270.00	1-5/8 X 2-5/8-7
5-1/2	4.250 / 107.95	5.044-4.778 / 128.12-121.36	13.0-20.0	3E-61666	3E-45662	94 / 42.64	51 / 1295.4	2 X 3-7
7	4.250 / 107.95	6.538-6.276 / 166.07-159.41		3E-61666	3E-45662	94 / 42.64	51 / 1295.4	2 X 3-7

* For swab with 1-1/2 in. x 2-1/4 in.-8 Special Field Connection use part no. 80063
 ** Use only with 'J' or 'JS' swab cups.

Table 17.2: KNUCKLE JOINT CASING SWAB MANDREL- PART LIST

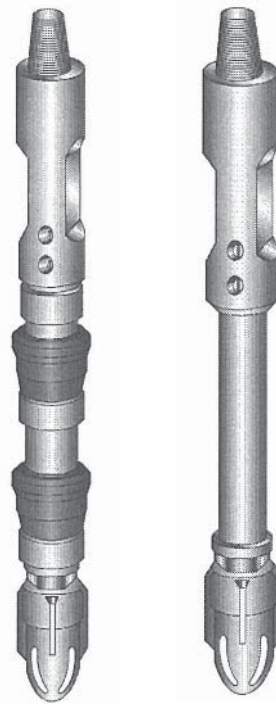
DESCRIPTION	QUANTITY REQUIRED	PART NUMBER by CASING SIZE and WEIGHT				
		4-1/2 in.	5-1/2 in.		7 in.	
		9.5-12.6	13-15.5	17-20	17-20	23-26
SWAB ASSEMBLY	1	3E-61667	3E-61666	3E-61666	3E-61666	3E-61666
MANDREL	2	3E-36132	3E-36132	3E-36132	3E-36132	3E-36132
MANDREL SUB	1	3E-14236	3E-14238	3E-14238	3E-14238	3E-14238
SUB	1	3E-37516	3E-38619	3E-38619	3E-38619	3E-38619
SLEEVE ('J' & 'JS')	2	3E-45662	3E-45662	3E-45662	3E-45662	3E-45662

* Parts of assembly listed above.

Casing Swab Mandrels

Standard Casing Swab Mandrel

The Guiberson standard casing swab has been field proven over decades of service. An internal bypass, two-cup swab, the standard will accommodate two Type 'J', 'JS', or 'GW' cups. Ample bypass through the valve and around the swab assures fast falling and reliable operation.



Standard Casing Swab

Table 18.1: STANDARD SWAB MANDRELS- ENGINEERING DATA AND PART NUMBERS

CASING O.D. (in.)	WT. RANGE (lb/ft)	CASING I.D. [in. / mm]	THIMBLE O.D. (in.)	MAX. METAL O.D. [in. / mm]	PART NUMBERS						APPROXIMATE		FIELD THREAD SIZE (in.)
					THIMBLE (C)	SLEEVE (G)	SWAB ASSM'Y. (H)	ADJ. RING (D)	ADJ. SLEEVE (D)	THD. ADPT. (A)	Weight [lb / kg]	Length [in. / mm]	
4-1/2*	9.5-13.5	4.090-3.920 / 103.89-99.57	3.687	2.375 / 60.33	3E-6452	3E-1483(B)	3E-61668(E)	3E-15489	3E-15488	-	60 / 27.22	41 / 1041.4	1-5/8 X 2-5/8-7
	15.3-18.1	3.826-3.754 / 97.18-95.35	3.500	2.375 / 60.33	3E-16297	3E-1483(B)	3E-61668(E)	3E-15489	3E-15488	-	60 / 27.22	41 / 1041.4	1-5/8 X 2-5/8-7
4-3/4*	16.0	4.082 / 103.68	3.500	2.375 / 60.33	3E-6452	3E-1485	3E-61668(E)	3E-15489	3E-15488	-	60 / 27.22	41 / 1041.4	1-5/8 X 2-5/8-7
5*	13.0-15.0	4.494-4.408 / 114.15-111.96	4.125	2.375 / 60.33	3E-6448	3E-1483	3E-61668(E)	3E-15489	3E-15488	-	60 / 27.22	41 / 1041.4	1-5/8 X 2-5/8-7
5*	18.0-21.0	4.276-4.154 / 108.61-105.51	4.000	2.375 / 60.33	3E-6754	3E-1483	3E-61668(E)	3E-15489	3E-15488	-	60 / 27.22	41 / 1041.4	1-5/8 X 2-5/8-7
5-1/2	13.0-20.0	5.044-4.778 / 128.12-121.36	4.625	2.875 / 73.03	3E-10254	3E-1414(B)	3E-61669	3E-15716	3E-15715	3E-53698	73 / 33.11	49 / 1244.6	2 X 3-7
5-1/2	23.0	4.670 / 118.62	4.500	2.875 / 73.03	3E-23230	3E-1414	3E-61669	3E-15716	3E-15715	3E-53698	73 / 33.11	49 / 1244.6	2 X 3-7
5-3/4	14.0-17.0	14.0-17.0 / 134.37-131.83	4.812	2.875 / 73.03	3E-12497	3E-1414	3E-61669	3E-15716	3E-15715	3E-53698	82 / 37.19	49 / 1244.6	2 X 3-7
6	14.0-18.0	5.552-5.424 / 141.02-137.77	5.125	2.875 / 73.03	3E-8160	3E-1414	3E-61669	3E-15716	3E-15715	3E-53698	88 / 39.92	49 / 1244.6	2 X 3-7
6-5/8	20.0-28.0	6.049-5.791 / 153.64-147.09	5.625	3.500 / 88.90	3E-18322	3E-1413	3E-61670	3E-15718	3E-15717	-	150 / 68.04	53 / 1346.2	2-3/4 X 3-3/4-7
7	17.0-26.0	6.538 6.276 / 166.07-159.41	6.000	3.500 / 88.90	3E-10258	3E-1413(B)	3E-61670	3E-15718	3E-15717	-	125 / 56.70	53 / 1346.2	2-3/4 X 3-3/4-7
7	28.0-30.0	6.214-6.154 / 157.84-156.31	5.875	3.500 / 88.90	3E-10255	3E-1413(B)	3E-61670	3E-15718	3E-15717	-	125 / 56.70	53 / 1346.2	2-3/4 X 3-3/4-7
7-5/8	26.4-33.7	6.969-6.875 / 177.01-174.63	6.375	3.500 / 88.90	3E-6366	3E-1413	3E-61670	3E-15718	3E-15717	-	160 / 72.57	53 / 1346.2	2-3/4 X 3-3/4-7
8-5/8	28.0-49.0	8.017-7.511 / 203.63-190.78	7.375	4.500 / 114.30	3E-10257	3E-1413	3E-61671	3E-19749	3E-19750	-	190 / 86.18	58 / 1473.2	2-3/4 X 3-3/4-7
9	40.0-45.0	8.150-8.032 / 207.01-204.01	7.375	4.500 / 114.30	3E-10257	3E-1448	3E-61671	3E-19749	3E-19750	-	190 / 86.18	58 / 1473.2	2-3/4 X 3-3/4-7
9-5/8	36.0-43.5	8.921-8.755 / 226.59-222.38	8.250	4.500 / 114.30	3E-6039	3E-1448	3E-61671	3E-19749	3E-19750	-	210 / 95.25	58 / 1473.2	2-3/4 X 3-3/4-7

(A) Use only with Type 'J' or 'JS' swab cups, (2 required). (B) Use sleeve no. 3E-45662 with Type 'J' or 'JS' swab cups, (2 required). (C) Use only with Type 'GW' swab cups (2 required).

(D) Use only with type 'GW' swab cups (1 required). (E) Use only with Types 'GW', 'J' and 'JS' swab cups.

(F) Use only with Types 'GW', 'J', 'JS', and 'UF' swab cups. (G) Use only with type 'GW' swab cups (1 required).

(H) Less cups, sleeves, thimbles, rings and adapters. Sleeves, thimbles, rings and adapters should be ordered separately to permit using the desired swab cup.

* For swab with 1-1/2 in. x 2-1/4 in. 8 Special Field Connectin use part no. 3E-80113.

Note: To use 5-1/2 in. 'J' cup on P/N 3E-61669 use P/N 3E-6472 and (2) each 3E-53698 - delete 3E-6364.

Note: Also available 900103-3/4 in. sucker rod pin-up x 1-5/8 in. x 2-5/8 in. 7TPI box-down 900104-3/4 in. sucker rod pin-up x 2 in. x 3 in. 7TPI box-down

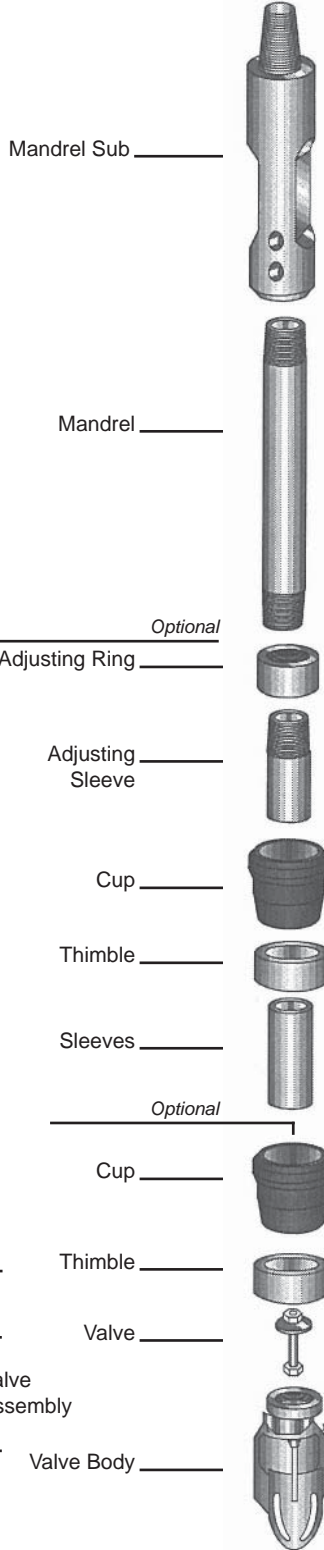
Casing Swab Mandrels

Table 19.1: STANDARD CASING SWAB PARTS LIST

DESCRIPTION	QTY. REQ'D	PART NUMBER by CASING SIZE and WEIGHT (lb/ft)							
		4-1/2 in.		5 in.		5-1/2 in.			
		9.5-12.6	15.3-18.1	13-15	18-21	13-15	15.5-17	17-20	23
SWAB ASSEMBLY	1	3E-61668	3E-61668	3E-61668	3E-61668	3E-62669	3E-61669	3E-61669	3E-61669
MANDREL	1*	3E-6472	3E-6472	3E-6472	3E-6472	3E-6364	3E-6364	3E-6364	3E-6364
MANDREL SUB	1*	3E-14236	3E-14236	3E-14236	3E-14236	3E-14238	3E-14238	3E-14238	3E-14238
VALVE SUB ASSM'Y	1*	3E-14807	3E-14807	3E-14807	3E-14807	3E-14844	3E-14844	3E-14844	3E-14844
VALVE BODY	1**	3E-6553	3E-6553	3E-6553	3E-6553	3E-6584	3E-6584	3E-6584	3E-6584
VALVE	1**	3E-6539	3E-6539	3E-6539	3E-6539	3E-6587	3E-6587	3E-6587	3E-6587
SLEEVE	1	3E-1483	3E-1483	3E-1483	3E-1483	3E-1414	3E-1414	3E-1414	3E-1414
THIMBLE	2	3E-6452	3E-16297	3E-6448	3E-6754	3E-10254	3E-10254	3E-10254	3E-10254
ADJ. RING	1	3E-15489	3E-15489	3E-15489	3E-15489	3E-15716	3E-15716	3E-15716	3E-15716
ADJ. SLEEVE	1	3E-15488	3E-15488	3E-15488	3E-15488	3E-15715	3E-15715	3E-15715	3E-15715

DESCRIPTION	QTY. REQ'D	PART NUMBER by CASING SIZE and WEIGHT (lb/ft)						
		5-3/4 in.	6 in.	6-5/8 in.		7 in.		
		14-17	14-18	20-22	24-28	17-20	22-24	26-30
SWAB ASSEMBLY	1	3E-61669	3E-61669	3E-61670	3E-61670	3E-61670	3E-61670	3E-61670
MANDREL	1*	3E-6364	3E-6364	3E-6469	3E-6469	3E-6469	3E-6469	3E-6469
MANDREL SUB	1*	3E-14238	3E-14238	3E-14243	3E-14243	3E-14243	3E-14243	3E-14243
VALVE SUB ASSM'Y	1*	3E-14844	3E-14844	3E-14844	3E-14844	3E-14844	3E-14844	3E-14844
VALVE BODY	1**	3E-6584	3E-6584	3E-6584	3E-6584	3E-6584	3E-6584	3E-6584
VALVE	1**	3E-6587	3E-6587	3E-6587	3E-6587	3E-6587	3E-6587	3E-6587
SLEEVE	1	3E-1414	3E-1414	3E-1413	3E-1413	3E-1413	3E-1413	3E-1413
THIMBLE	2	3E-12497	3E-8160	3E-18322	3E-18322	3E-10258	3E-10258	3E-10255
ADJ. RING	1	3E-15716	3E-15716	3E-15716	3E-15718	3E-15718	3E-15718	3E-15718
ADJ. SLEEVE	1	3E-15715	3E-15715	3E-15717	3E-15717	3E-15717	3E-15717	3E-15717

DESCRIPTION	QTY. REQ'D	PART NUMBER by CASING SIZE and WEIGHT (lb/ft)						
		7-5/8 in.		8-5/8 in.		9 in.	9-5/8 in.	
		26.4-29.7	29.7-33.7	28-36	36-40	40-49	40-45	36-43.5
SWAB ASSEMBLY	1	3E-61670	3E-61670	3E-61671	3E-61671	3E-61671	3E-61671	3E-61671
MANDREL	1*	3E-6469	3E-6469	3E-6361	3E-6161	3E-6361	3E-6361	3E-6361
MANDREL SUB	1*	3E-14243	3E-14243	3E-14244	3E-14244	3E-14244	3E-14244	3E-14244
VALVE SUB ASSM'Y	1*	3E-14844	3E-14844	3E-14846	3E-14846	3E-14846	3E-14846	3E-14846
VALVE BODY	1**	3E-6584	3E-6584	3E-15196	3E-15196	3E-15196	3E-15196	3E-15196
VALVE	1**	3E-6587	3E-6587	3E-6720	3E-6720	3E-6720	3E-6720	3E-6720
SLEEVE	1	3E-1413	3E-1413	3E-1448	3E-1448	3E-1448	3E-1448	3E-1448
THIMBLE	2	3E-6366	3E-6366	3E-10257	3E-10257	3E-10257	3E-10257	3E-6039
ADJ. RING	1	3E-15718	3E-15718	3E-19749	3E-19749	3E-19749	3E-19749	3E-19749
ADJ. SLEEVE	1	3E-15717	3E-15717	3E-19750	3E-19750	3E-19750	3E-19750	3E-19750



Standard Casing Swab

* Parts of assembly listed above
 ** Parts of subassembly listed above
 Special Sub Adapter P/N 3E-95938, 3-1/2 in. x 2-7/8 in. API SHARP 11-1/2, 6-5/8 in. --7-5/8 in. standard swab.

Rope Sockets

Rope Sockets

Guiberson steel rope sockets provide a strong, simple connection between the end of the wireline and the sinker bar. Available in plain or swivel types, the top half of the socket has fish neck grooves. Top halves of plain and swivel sockets are interchangeable. Rope sockets for line sizes other than those listed are available on special order.

Rope Socket Assembly



Swivel Rope Socket Assembly

OTHER PRODUCTS	Wireline Flags (Package of 12 bundles)	Part no. 3E-85617
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Note: Flags are available in yellow, orange or white.

Table 20.1: ROPE SOCKETS- ENGINEERING DATA AND PART NUMBERS

PART NAME	TUBING SIZE (in.)	MAX. O.D. [in. / mm]	PART NUMBERS								APPROXIMATE		
			1/8 in.	1/4 in.	3/8 in.	7/16 in.	1/2 in.	9/16 in.	5/8 in.	3/4 in.	Weight [lb / kg]	Length [in. / mm]	
ROPE SOCKET ASSY:													
3/8 NPT BOX*	1.315	7/8 / 22.23	-	-	-	-	-	3E-24362	-	-	1.00 / .23	7.00 / 177.80	
5/8 S.R. BOX*	1.660-2.063	1-1/8 / 28.58	3E-42660	-	-	3E-42663	3E-42664	3E-42665	-	-	2.00 / .79	11.25 / 285.75	
3/4 S.R. BOX*	1.900-3-1/2	1-3/8 / 34.93	-	-	3E-41867	3E-41868	3E-41869	3E-41870	3E-41871	-	3.00 / 1.25	9.25 / 234.95	
3/4 S.R. BOX	2-3/8-3-1/2	1-3/4 / 44.45	-	-	-	-	-	3E-20490	3E-20491	-	5.00 / 2.04	11.25 / 285.75	
ROPE SOCKET BODY	2-3/8-3-1/2	1-3/4 / 44.45	-	-	3E-13725	-	3E-13727	3E-13728	3E-13729	3E-13730	3.00 / 1.36	9.00 / 228.60	
SUB-3/4 S.R. BOX	2-3/8-3-1/2	1-3/4 / 44.45	-	-	3E-11254	3E-11254	3E-11254	3E-11254	3E-11254	3E-11254	2.00 / .68	4.00 / 98.43	
SWIVEL ROPE SOCKET ASSY:													
3/8 NPT BOX	1.315	7/8 / 22.23	-	-	-	-	3E-43724	3E-43725	-	-	2.00 / .91	13.00 / 330.20	
5/8 S.R. BOX	1.660-2.063	1-1/8 / 28.58	-	-	-	-	3E-42659	3E-42600	-	-	3.00 / 1.36	16.00 / 403.23	
5/8 S.R. BOX	1.900-3-1/2	1-3/8 / 34.931-	-	-	-	-	3E-41875	3E-41876	3E-41877	-	6.00 / 2.49	14.38 / 365.13	
3/4 S.R. BOX	1.900-3-1/2	3/8 / 34.93	-	-	-	3E-41880	3E-41881	3E-41882	3E-41883	-	6.00 / 2.49	14.38 / 365.13	
5/8 S.R. BOX	23/8-3-1/2	1-3/4 / 44.45	-	-	-	-	-	3E-20504	3E-20505	3E-20506	7.00 / 2.95	14.00 / 355.60	
3/4 S.R. BOX	2-3/8-3-1/2	1-3/4 / 44.45	-	-	3E-20508	-	3E-20510	3E-20511	3E-20512	3E-20513	7.00 / 2.95	14.00 / 355.60	
7/8 S.R. BOX	2-3/8-3-1/2	1-3/4 / 44.45	-	-	-	-	-	3E-20518	3E-20519	3E-20520	7.00 / 2.95	14.00 / 355.60	
ROPE SOCKET BODY:													
3/8 NPT BOX	1.315	7/8 / 22.23	-	-	-	3E-43711	3E-43710	3E-43708	-	-	1.25 / .57	9.00 / 228.80	
5/8 S.R. BOX	1.660-2.063	1-1/8 / 28.58	3E-42660	-	-	3E-42663	3E-42664	3E-42665	-	-	2.00 / .79	11.25 / 285.75	
3/4 S.R. BOX	1.900-3-1/2	1-3/8 / 34.93	-	-	3E-41867	3E-41868	3E-41869	3E-41870	3E-41871	-	3.00 / 1.25	9.25 / 234.95	
SUB-3/4 S.R. BOX	2-3/8-3-1/2	1-3/4 / 44.45	-	-	3E-13725	-	3E-13727	3E-13728	3E-13729	3E-13730	3.00 / 1.36	9.00 / 228.60	
SWIVEL SUB:													
3/8 NPT BOX	1.315	7/8 / 22.23	3E-43719	-	3E-43719	3E-43719	3E-43719	3E-43719	-	-	1.00 / .34	5.38 / 130.18	
5/8 S.R. BOX	1.660-2.063	1-1/8 / 28.58	3E-42666	-	3E-42666	3E-42666	3E-42666	3E-42666	-	-	1.25 / .57	6.00 / 142.88	
5/8 S.R. BOX	1.900-3-1/2	1-3/8 / 34.93	-	-	3E-41893	3E-41893	3E-41893	3E-41893	3E-41893	-	3.00 / 1.25	7.00 / 177.80	
3/4 S.R. BOX	1.900-3-1/2	1-3/8 / 34.93	-	-	3E-41894	3E-41894	3E-41894	3E-41894	3E-41894	-	3.00 / 1.25	7.00 / 177.80	
5/8 S.R. BOX	2-3/8-3-1/2	1-3/4 / 44.45	-	-	3E-20598	3E-20598	3E-20598	3E-20598	3E-20598	3E-20598	4.00 / 1.59	7.00 / 177.80	
3/4 S.R. BOX	2-3/8-3-1/2	1-3/4 / 44.45	-	-	3E-20599	3E-20599	3E-20599	3E-20599	3E-20599	3E-20599	4.00 / 1.59	7.00 / 177.80	
7/8 S.R. BOX	2-3/8-3-1/2	1-3/4 / 44.45	-	-	3E-20600	3E-20600	3E-20600	3E-20600	3E-20600	3E-20600	4.00 / 1.59	7.00 / 177.80	

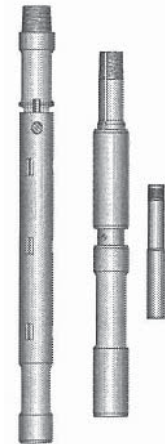
* Unitized construction

Table 20.2: ROPE SOCKET ASSEMBLY

Part Name	PART NUMBER	TUBING SIZE (in.)	MAXIMUM O.D. (in.)	APPROX. LENGTH (in.)
ROPE SOCKET ASSEMBLY	3E-84434	4-1/2	3-11/16	25-3/4
TOP SUB	3E-83953			
BOTTOM SUB	3E-83953			
COUPLING	3E-34310			
9/16 ROPE SOCKET BODY	3E-13728			

Table 20.3: TUBULAR JAR ASSEMBLY

DESCRIPTION	PART NUMBER	SWAB SIZE	MAXIMUM O.D. (in.)	APPROX. LENGTH (in.)	STROKE (in.)
4-1/2 TUBULAR JAR ASSEMBLY	3E-84435	4-1/2	3-5/8	51-5/8	18



4-1/2 in. Rope Socket Assembly

Sinker Bars

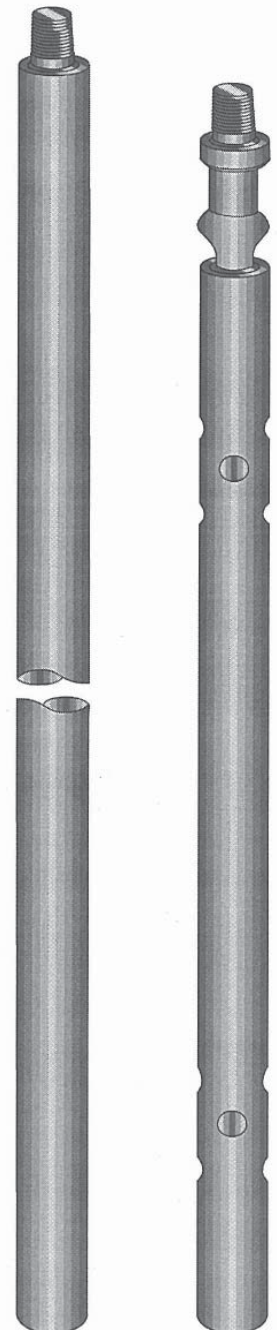
Guiberson steel sinker bars are available in 7/8 in., 1-1/8 in., 1-1/2 in., and 1-3/4 in. diameters and are stocked in lengths of five, ten and twenty feet. Other lengths are available on special order. High strength, heat-treated sinker bars of cold finished alloy steel are also available in 1-1/8 in. and 1-1/2 in. diameters on special order. Heat-treated sinker bars are stenciled with the letter 'H' for identification.

Tubular Jars

Guiberson tubular jars make swabbing safer by allowing a full 20 in. or 30 in. stroke to jar loose accidentally stuck swabs. These steel jars provide heavy hammer surface that will not kink or lock up due to twist. Their piston construction allows both swivel and knuckle action, ensuring trouble free operation and longer swab cup life. Large ports allow free circulation and eliminate sanding up.

**Table 21.1: SINKER BARS AND TUBULAR JARS-
ENGINEERING DATA AND PART NUMBERS**

DESCRIPTION	SWAB SIZE (in.)	MAX. O.D. [in. / mm]	PART NUMBER BY CONNECTION				APPROXIMATE	
			PIPE THREAD	SUCKER ROD THREAD			Weight [lb / kg]	Length [in. / mm]
				3/8-18 in.	5/8 in.	3/4 in.			7/8 in.
SINKER BAR: 7/8 in. O.D. X 5ft 1-1/8 in. O.D. X 5ft 1-1/8 in. O.D. X 10ft 1-1/2 in. O.D. X 5ft 1-1/2 in. O.D. X 10ft 1-1/2 in. O.D. X 20ft 1-3/4 in. O.D. X 5ft 1-3/4 in. O.D. X 10ft 1 3/4 in. O.D. X 20ft	1.315 1.660-2-1/16 1.660-2-1/16 1.900-3-1/2 1.900-3-1/2 1.900-3-1/2 2-3/8-3-1/2 2-3/8-3-1/2 2-3/8-3-1/2	7/8 / 22.23 1-1/8 / 28.58 1-1/8 / 28.58 1-1/2 / 38.10 1-1/2 / 38.10 1-1/2 / 38.10 1-3/4 / 44.45 1-3/4 / 44.45 1-3/4 / 44.45	3E-17739 - - - - - - - -	- 3E-43537 3E-42631 3E-11747 3E-20542 - - 3E-20548 3E-20551	- - - 3E-11714 3E-20543 3E-20546 3E-11898 3E-20549 3E20552	- - - 3E-11751 3E-20544 3E-20547 3E-11746 3E-20550 3E20553	10 / 4.54 16-1/2 / 7.48 33 / 14.97 30 / 13.61 60 / 27.22 120 / 54.43 41-1/4 / 18.71 82-1/2 / 37.42 165 / 74.84	60 / 1524.00 60 / 1524.00 120 / 3048.00 60 / 1524.00 120 / 3048.00 240 / 6096.00 60 / 1524.00 120 / 2048.00 240 / 6096.00
SINKER BAR HEAT TREATED: 1-1/8 in. O.D. X 5ft 1-1/8 in. O.D. X 10ft 1-1/2 in. O.D. X 5ft 1-1/2 in. O.D. X10ft 1-1/2 in. O.D. X 20ft	1.660-2-1/16 1.660-2-1/16 1.900-3-1/2 1.900-3-1/2 1.900-3-1/2	1-1/8 / 28.58 1-1/8 / 28.58 1-1/2 / 38.10 1-1/2 / 38.10 1-1/2 / 38.10	- - - - -	3E-57703 3E-57707 - - -	- - 3E-57705 3E-57704 3E-57706	- - - - -	16-1/2 / 7.48 33 / 14.97 30 / 13.61 60 / 27.22 120 / 54.43	60 / 1524.00 120 / 3048.00 60 / 1524.00 120 / 3048.00 240 / 6096.00
TUBULAR JAR: 30 in. STROKE 20 in. STROKE 30 in. STROKE	1.660 -2-1/16 2-3/8-3-1/2 2-3/8-3-1/2	1-1/8 / 28.58 1-3/4 / 44.45 1-3/4 / 44.45	- - -	3E-43240 - -	- 3E-21832 3E-21833	- - -	8 1/4 / 3.74 16 / 7.26 21-1/2 / 9.75	(collapsed) / - 43 / 1092.20 34-5/8 / 879.48 44-5/8 / 1133.48
SINKER BAR: 1-3/8 in. O.D. X 10ft	1.900-3-1/2	1-3/8 / -	-	3E-91276	-	-	47 / -	120 / -
TUBULAR JAR: 30 in. STROKE 18 in. STROKE	1.900-3-1/2 4-1/2-7	1-3/8 3-5/8	-	3E-91277	-	-	19 / - 107 / -	45 / - 51-5/8 / -
			PART NO. 3E-84435 (1-5/8 X 2-5/8 7 TPI THDS.)					



Sinker Bar Tubular Jar

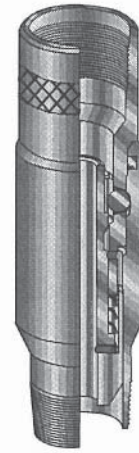
Safety Tools

Type 'C' Releasing Attachment

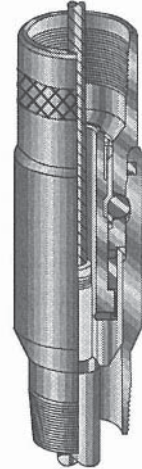
The Type 'C' releasing attachment provides a safe, simple automatic release for Guiberson Wireline Oil Savers. The Type 'C' locks the saver securely to the tubing, lubricator, or rotating circulation head while tools are in the hole and needs no adjustment in operation. It releases automatically when the rope socket contacts the locking dog. The Type 'C' will not trip under pressure, nor will it leak while pulling swabs, core barrels, or surveying instruments.



Type C



Engaged Releasing Attachment



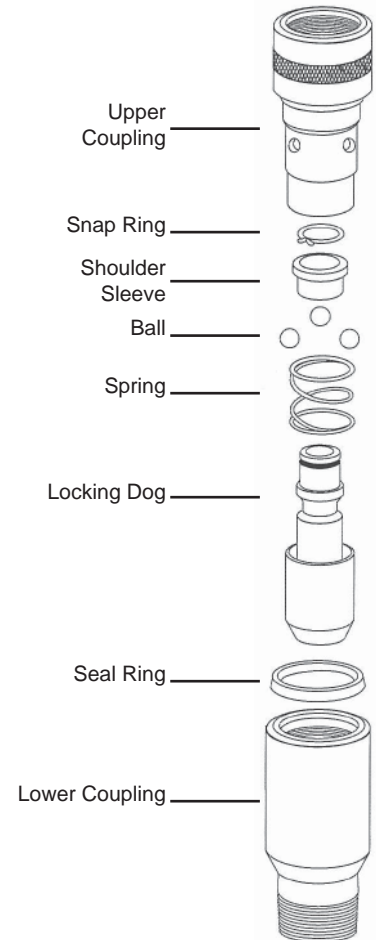
Disengaged

Table 22.1: TYPE 'C' RELEASING ATTACHMENT ENGINEERING DATA

PART NUMBER	3E-55834	3E-59218	3E-33276	3E-45272
TUBING TOP CONNECTION - BOX	2-3/8 in. O.D.	2-7/8 in. O.D.	2-7/8 in. O.D.	3-1/2 in. O.D.
THREAD TOP CONNECTION	8RD EUE	8RD EUE	8RD EUE	8V
BOTTOM CONNECTION - PIN	2-3/8 in. O.D.	4-1/2 in. O.D.	3-1/2 in. O.D.	3-1/2 in. O.D.
THREAD BOTTOM CONNECTION	8RD EUE	8V	8V	8V
LINE SIZE	1/4 in. - 1 in.	1/4 in. - 1 in.	1/4 in. - 1 in.	1/4 in. - 1 in.

Table 22.2: TYPE 'C' RELEASING ATTACHMENTS

FIELD CONNECTION	TOP	2-3/8 in. EUE 8 Rd.	2-3/8 in. EUE 8 Rd.	2-3/8 in. EUE 8 Rd.	3-1/2 in. 8V
	BOTTOM	2-3/8 in. EUE 8 Rd.	4-1/2 in. 8V	3-1/2 in. 8V	3-1/2 in. 8V
PART NAME	Qty. Req.	Part No.	Part No.	Part No.	Part No.
Assembly Complete	1	3E-55834	3E-59218	3E-33276	3E-45272
Ball	(6)	.....	3E-14800	.....	.....
*Ball	(3)	3E-14800	.....	3E-14800	3E-14800
Locking Dog	(1)	3E-62409	3E-62410	3E-62409	3E-62409
Lower Coupling	(1)	3E-57828	3E-59222	3E-33282	3E-33282
*Seal Ring	(1)	3E-33284	3E-59223	3E-33284	3E-33284
Shoulder Sleeve	(1)	3E-33280	3E-59224	3E-33280	3E-33280
*Snap Ring	(1)	3E-33283	3E-33283	3E-33283	3E-33283
*Spring	(1)	3E-49650	3E-49650	3E-49650	3E-49650
Upper Coupling	()	3E-62401	3E-62405	3E-62402	3E-62400
Top Adapter	(1)	.....	3E-59226	.....	.....
Repair Kit	.....	3E-54687	3E-54687	3E-54687	3E-54687



*Repair Kit No. 3E-54687 contains: 3 Balls, 1 each of the other expendable parts indicated.

Casing and Tubing Overload Relief Valves

(For Use On Standard Swabs Only)

For use in heavy-load swabbing, these valves act as bypass valves for maximum efficiency going in the hole. They also release excess fluid head, preventing overloading of swabs and cups when lifting heavy loads. Excess fluid relief takes place through an internal, spring-loaded, shim adjusted relief valve.

Settings may be adjusted by use of shims beneath the valve spring (see tables). These valves resist corrosion and abrasion to assure long, troublefree valve service.

The relief valve should be set to support a slightly greater fluid column than is normally pulled. The valve then serves as a regular bypass system and the relief feature is not used. Should the fluid column exceed the valve setting, the relief valve opens as the swab starts out of the hole, relieving the excess load. When desired fluid head has been attained, the relief valve closes and swabbing proceeds. The valve responds only to fluid pressure, not to line load. To keep line loads the same, relief valves on larger swabs must be adjusted to support a shorter fluid column than those on smaller swabs.

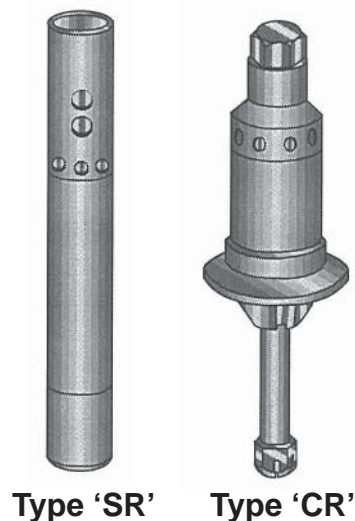


Table 23.1: CASING SWAB OVERLOAD RELIEF VALVE TYPE 'CR' AND 'CR' LARGE VOLUME- PART NUMBERS

CASING O.D. (in.)	4-1/2 - 5	5-1/2 - 6	6-5/8 - 7-5/8
VALVE COMPLETE	3E-61738	3E-22529-001	3E-24323
ADJ. SHIM, 1/32 in. (0.76mm)	3E-61772	3E-22532	3E-22532
ADJ. SHIM, 1/16 in. (1.52mm)	3E-28757	3E-22531	3E-22531

* Only available in Type CR Large Volume

Table 23.2: TUBING SWAB OVERLOAD RELIEF VALVE HEAVY-DUTY TYPE 'SR' AND 'SR' VALVE- PART #

TUBING O.D. (in.)	2-3/8	2-7/8	3-1/2
VALVE COMPLETE	3E-21709	3E-21710	3E-22367
ADAPTER	3E-21384	3E-21385	3E-21385
ADJ. SHIM, 1/32 in. (0.76mm)	3E-21106	3E-21106	3E-21106
ADJ. SHIM, 1/16 in. (1.52mm)	3E-21105	3E-21105	3E-21105

Table 23.3: VOLUME CHANGE PER SHIM ADDED

CASING O.D. (in.)	VALVE	STD. SETTING [bbl / m3]	CHANGE BY [1/32in / 0.76mm]	CHANGE BY [1/16in / 1.52mm]
4-1/2	3E-61738	10 / 1.59 m3	0.5 / .08 m3	1.0 / .16 m3
6-5/8	3E-24323	10.5 / 1.67 m3	1.5 / .24 m3	3.0 / .48 m3
7		12 / 1.91 m3	1.7 / .27 m3	3.4 / .54 m3
7-5/8		14 / 2.23 m3	2.0 / .32 m3	4.0 / .64 m3

Repair Kit 3E-54687 except 4-1/2 in. use 3E-59218

Note: Values shown above are for salt water at 400 PPB. More oil than salt water, for example, will be delivered with the same valve setting; however, the line load will remain the same for any fluid with a given setting. Relief valve should be set to support a column of fluid a little greater than the operator normally pulls. The valve serves only as a regular swab bypass and inner valve remains seated throughout operations.

Safety Tools

Table 24.1: TYPE 'SR' TUBING SWAB OVERLOAD RELIEF VALVES- PART #

DESCRIPTION	QTY REQUIRED	PARTS BY SIZE AND NUMBER		
		2-3/8 in.	2-7/8 in.	3-1/2 in.
VALVE COMPLETE	-	3E-21709	3E-21710	3E-22367
ADAPTER	1	3E-21384	3E-21385	3E-21385
ADJ SHIM, 1/16 in.	3	-	-	3E-21105
ADJ SHIM, 1/16 in.	4	-	3E21105	-
ADJ SHIM, 1/16 in.	6	3E-21105	-	-
ADJ SHIM, 1/32 in.	1	3E-21106	3E-21106	3E-21106
BALL	1	3E-21101	3E-21101	3E-21101
INNER VALVE	1	3E-21706	3E-21706	3E-21706
LOWER HOUSING	1	3E-21382	3E-21382	3E-21382
SPRING	1	3E-21102	3E-21102	3E-21102
UPPER HOUSING	1	3E-21707	3E-21707	3E-21707

Type 'SR'

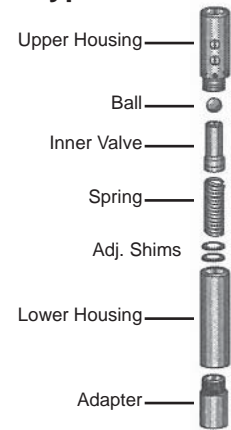


Table 24.2: TYPE 'CR' CASING SWAB OVERLOAD RELIEF VALVES- PART #

DESCRIPTION	QTY REQUIRED	PARTS BY SIZE AND NUMBER
		6-5/8 in. - 7-5/8 in.
VALVE COMPLETE	-	3E-24323
ADJ SHIM, 1/16 in.	2	3E-22531
ADJ SHIM, 1/32 in.	2	3E-22532
CAP	1	3E-22343
INNER VALVE	1	3E-22342
OUTER VALVE ASSEMBLY	1*	3E-28927
BASE	1*	3E-28928
COTTER PIN	1*	3E-13576
NUT	1*	3E-28930
BOLT	1*	3E-28929
SPRING	1	3E-16246

Type 'CR'

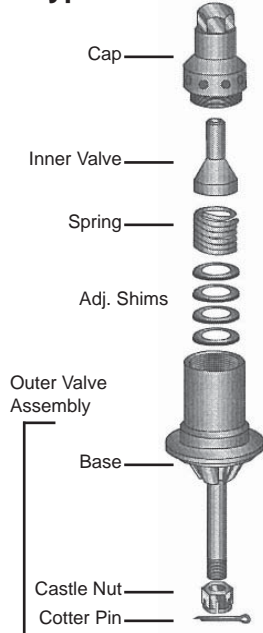
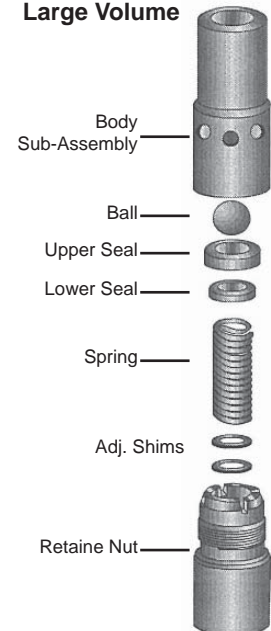


Table 24.3: TYPE 'CR' LARGE VOLUME CASING SWAB OVERLOAD RELIEF VALVES PART #

DESCRIPTION	QTY REQUIRED	PARTS BY SIZE AND NUMBER
		2-3/8 in.
VALVE COMPLETE	-	3E-61738
BODY	1	3E-28752
RETAINING NUT	1	3E-28759
UPPER SEAT	1	3E-61770
LOWER SEAT	1	3E-61771
BALL	1	3E-28753
SPRING	1	3E-28756
SHM 1/16"	4	3E-28757
SHM 1/32 in.	1	3E-61772

Type 'CR' Large Volume



Hydraulic Wireline Oil Savers

Guiberson hydraulic oil savers strip fluids from the wireline, cut costs by saving valuable oil, and promote safety by minimizing danger of explosion or fire at the well site. Hydraulic Oil Savers are available in several types to meet every stripping requirement. Guiberson hydraulic oil savers use a special oil, gas, and abrasion resistant, one piece rubber for efficient, low-cost oil removal.

Series 'H' savers are operated by the field-proven piston principle; there are no troublesome bladders or complicated mechanisms. All savers have an extra-large rubber and generous bushings for smooth, constant seal and maximum utilization of each rubber.

Series 'H' savers offer a 2-1/2 in. ram stroke with spring actuated return. All provide non-sparking alloy bushings, which are interchangeable between top and bottom assemblies and spring clipped together for easy installation and removal. Rubbers in Guiberson hydraulic savers can be changed quickly, with no lost motion. A simple yoke allows access to the rubber through the top of the housing. There are no threaded connections. A full fifty foot extension hose, provided with each unit (twenty-five foot hose available on special order), makes true remote control of Guiberson hydraulic savers possible. Remote operation keeps personnel away from the line, lowering the risk of a dangerous accident.

Series 'H' savers are available with 2-3/8 in. EUE, 2-7/8 in. EUE, or 3-1/2 in. O.D. LP 8V field connections, and all savers may be adapted from one connection to another simply by changing the base. Each complete saver includes a hydraulic-fluid-filled hose with quick change connections and a check valve at each end. A large capacity pump is also included. The accurate pressure gauge of this pump is carefully calibrated. The pump is also filled with fluid at the factory, making the entire oil saver assembly ready to operate as soon as it is installed.

Type 'H' Oil Saver

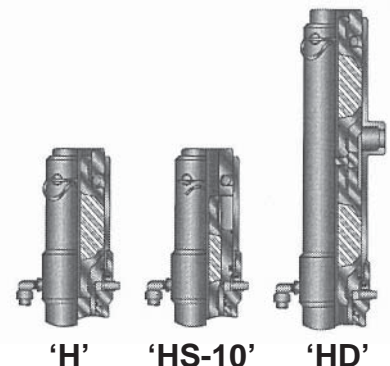
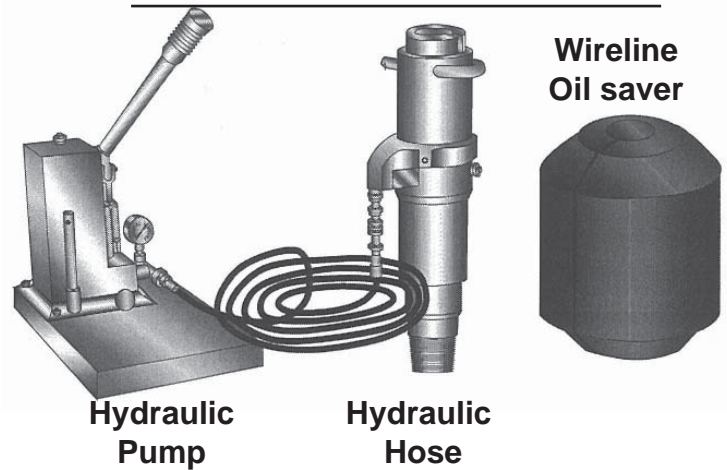
The Type 'H' is a 1,500 psi working version of Guiberson's single stripper hydraulic oil saver and has proven reliable in thousands of installations throughout the well servicing industry. Fabricated of machined steel components, with anti-spark bushings, the Type 'H' saver combines all the important advantages listed above. The Type 'H' saver is available for 2-3/8 in. and 2-7/8 in. O.D. tubing and 3-1/2 in. O.D. line pipe. An optional guard, to protect the hydraulic fitting on the saver, is available. The Type 'H' oil saver rubber is specially compounded of oil-resistant rubber and is designed to give a positive seal with long-wearing qualities.

Type 'HS5' and 'HS10' Oil Savers

These hydraulic oil savers are designed for the higher pressures now commonly found in wireline operations. The Type 'HS5' is rated at 2,500 psi working pressure, and the Type 'HS10' at 5,000 psi. With constructions similar to the Type 'H' saver, both units are fabricated of high strength components to meet the added demands of these higher pressures. Both combine all the advantages of other Guiberson hydraulic savers.

Type 'HD' Oil Saver

The Type 'HD' saver offers the added safety and convenience of double line stripping. Similar in design to the Type 'H', the longer body of the Type 'HD' accommodates two complete sets of stripper rubbers and bushings and provides a 1 in. NPT drain connection between the rubbers. Rated at 1,500 psi working pressure, the 'HD' combines its outstanding double stripping action with all the other important advantages of Guiberson hydraulic savers.



Hydraulic Wireline Oil Savers

Table 26.1: HYDRAULIC WIRELINE OIL SAVERS- ENGINEERING DATA

DESCRIPTION	TYPE AND SIZE			
	'H'	'HD'	'HS5'	'HS10'
	[20 in. / 508 mm]	[29 in. / 736.6 mm]	[20 in. / 508 mm]	[20 in. / 508 mm]
APPROXIMATE WEIGHT: SAVER COMPLETE SAVER ONLY PUMP AND HOSE	92 lb / 41.73 kg 48 lb / 21.77 kg 44 lb / 19.96 kg	117 lb / 53.07 kg 73 lb / 33.11 kg 44 lb / 19.96 kg	92 lb / 41.73 kg 48 lb / 21.77 kg 44 lb / 19.66 kg	96 lb / 43.54 kg 52 lb / 23.59 kg 44 lb / 9.96 kg
I.D. LESS RUBBER AND BUSHINGS FLUID CAPACITY	1-3/16 in. / 46.04 mm 6 PINTS / 2.4 L	1-13/16 in. / 46.04mm 6 PINTS	1-13/16 in. / 46.04mm 6 PINTS	1-7/16 in. / 36.51 mm 6 PINTS / 2.84 L
RUBBER CROSS-SECTIONAL AREA: BLANK-5/16 in. LINE SIZE 3/8 in.-5/8 in. LINE SIZE 3/4 in. - 1 in> LINE SIZE	9.35 sq. in. / 6032.3 mm2 - 9.14 sq. in. / 5896.8 mm2 8.63 sq. in. / 5567.7 mm2	9.35 sq. in. / 6032.3 mm2 - 9.14 sq. in. / 5896.8 mm2 8.63 sq. in. / 5567.7 mm2	9.35 sq. in. / 6032.3 mm2 - 9.14 sq. in. / 5896.8 mm2 8.63 sq. in. / 5567.7 mm2	2.98 sq. in. / 1922.6 mm2 2.98 sq. in. / 1871.0 mm2 - / - - / -
PIN THREAD CONNECTION: 2-3/8 in. O.D. 2-7/8 in. O.D. 3-1/2 in. O.D.	8RD EUE / - 8RD EUE / - L.P. 8V / -	8RD EUE / - 8RD EUE / - L.P. 8V / -	8RD EUE / - 8RD EUE / - L.P. 8V / -	8RD EUE / - 8RD EUE / - L.P. 8V / -
PUMP WORKING PRESSURE HOUSE LENGTH TEST PRESSURE	1500 psi / 10,350 kPa 50 ft / 15.24 m 1500 psi / 10,350 kPa	1500 psi / 10,350 kPa 50 ft / 15.24 m 1500 psi / 10,350 kPa	1500 psi / 10,350 kPa 50 ft / 15.24 m 1500 psi / 10,350 kPa	1500 psi / 10,350 kPa 50 ft / 15.24 m 1500 psi / 10,350 kPa

Table 26.2: HYDRAULIC WIRELINE OIL SAVERS- PART NUMBERS

DESCRIPTION	PARTS BY TYPE AND NUMBER			
	'H'	'HD'	'HS5'	'HS10'
OIL SAVER WITH PUMP AND 50 ft HOSE: 2-3/8 in. O.D. EUE 8RD PIN, BLANK - 5/16 in. LINE 2-7/8 in. O.D. EUE 8RD PIN, BLANK - 5/16 in. LINE 3-1/2 in. O.D. L.P. 8V PIN, BLANK - 5/16 in. LINE 2-3/8 in. EUE 8RD PIN, 3/8 in. - 7/16 in. LINE 2-7/8 in> EUE 8RD PIN, 3/8 in. - 7/16 in. LINE 3-1/2 in. O.D. L.P. 8V PIN, 3/8 in. - 7/16 in. LINE 2-3/8 in. O.D. EUE 8RD PIN, 3/8 in. - 5/8 in. LINE 2-7/8 in. O.D. EUE 8RD PIN, 3/8 in. - 5/8 in. LINE 3-1/2 IN. O.D. L.P. 8V PIN, 3/8 in. - 5/8 in. LINE 2-3/8 in. O.D. EUE 8RD PIN, 3/4 in. LINE 2-7/8 IN. O.D. EUE 8RD PIN, 3/4 in. LINE 3-1/2 in. O.D. L.P. 8V PIN, 3/4 in. LINER	3E-42887 3E-42888 3E-42889 - - - 3E-41427 3E-41428 3E-41429 3E-41570 3E-41569 3E-41568	3E-54715 3E-54718 3E-54720 - - - 3E-54716 3E-44371 3E-54721 - - -	- 3E-44320 3E-44321 - - - 3E-44623 3E-44625 3E-44626 - 3E-44628 3E-44629	- - ** 3E-44633 3E-44739 - - - - - - - -
OIL SAVER ONLY: 2-3/8 in. O.D. EUE 8RD PIN, BLANK - 5/16 in. LINE 2-7/8 in. O.D. EUE 8RD PIN, BLANK - 5/16 in. LINE 3-1/2 in. O.D. L.P. 8V PIN, BLANK - 5/16 in. LINE 2-3/8 in. EUE 8RD PIN, 3/8 in. - 7/16 in. LINE 2-7/8 in. EUE 8RD PIN, 3/8 in. - 7/16 in. LINE 3-1/2 in. O.D. L.P. 8V PIN, 3/8 in. - 7/16 in. LINE 2-3/8 in. O.D. EUE 8RD PIN, 3/8 in. - 5/8 in> LINE 2-7/8 in. O.D. EUE 8RD PIN, 3/8 in. - 5/8 in> LINE 3-1/2 in. O.D. L.P. 8V PIN, 3/8 in. - 5/8 in> LINE 2-3/8 in. O.D. EUE 8RD PIN, 3/4 in> LINE 2-7/8 in. O.D. EUE 8RD IN, 3/4 in. LINE 3-1/2 in. O.D. L.P. 8V PIN, 3/4 in. LINE	3E-42884 3E-42885 3E-42886 - - - 3E-40643 3E-41064 3E-41065 3E-41067 3E-41566 3E-41565	- 3E-54726 3E-54728 - - - 3E-54724 3E-44247 3E-54729 3E-54725 3E-54727 -	- 3E-44320 3E-44251 - - - 3E-44617 3E-44618 3E-44619 - - - -	- 3E-44310 ** 3E-44736 3E-44737 - - - - - - -
PUMP ONLY (STAR) PUMP REPAIR KIT, STAR SAVER REPAIR KIT	3E-68883 3E-68829 3E-53728	3E-68883 3E-68829 3E-53728	3E-68883 3E-68829 3E-53728	3E-68883** 3E-68829 3E-53728
RUBBER: BLANK - 5/16 in. 3/8 in. - 7/16 in. 3/8 in. - 5/8 in. LIGHT DUTY: BLUE 3/4 in.	3E-42883 - 3E-39675 3E-89659 3E-41572	3E-42883 - 3E-39675 3E-89659 3E-41572	3E-44272 - 3E-44615 - 3E-44616	3E-44270 3E-44734 - - -
ACCESSORIES, OPTIONAL 1/2 in. - 5/8 in. RUBBER TYPE 'R' FITTING GUARD HOSE ASSEMBLY, 25 ft HOSE ASSEMBLY, 50 ft HOSE CAP, TWO REQUIRED* HOSE PLUG, TWO REQUIRED*	3E-16207 3E-43738 3E-43516 3E-40631 3E-45268 3E-45269	3E-16207 3E-43738 3E-43516 3E-40631 3E-45268 3E-45269	3E-16207 3E-43738 3E-43516 3E-40631 3E-45268 3E-45269	** ** ** - ** **
BUSING WITH CLIPS CLIP ONLY BLANK - 5/16 in. 3/8 in. - 5/8 in. 7/16 in. 3/4 in. - 1 in.	3E-44811 3E-42878 3E-46176 - 3E-41571	3E-44811 3E-42878 3E-46176 - 3E-41571	3E-44811 3E-42878 3E-39671 - 3E-41571	3E-44811 3E-44241 - 3E-44733 -

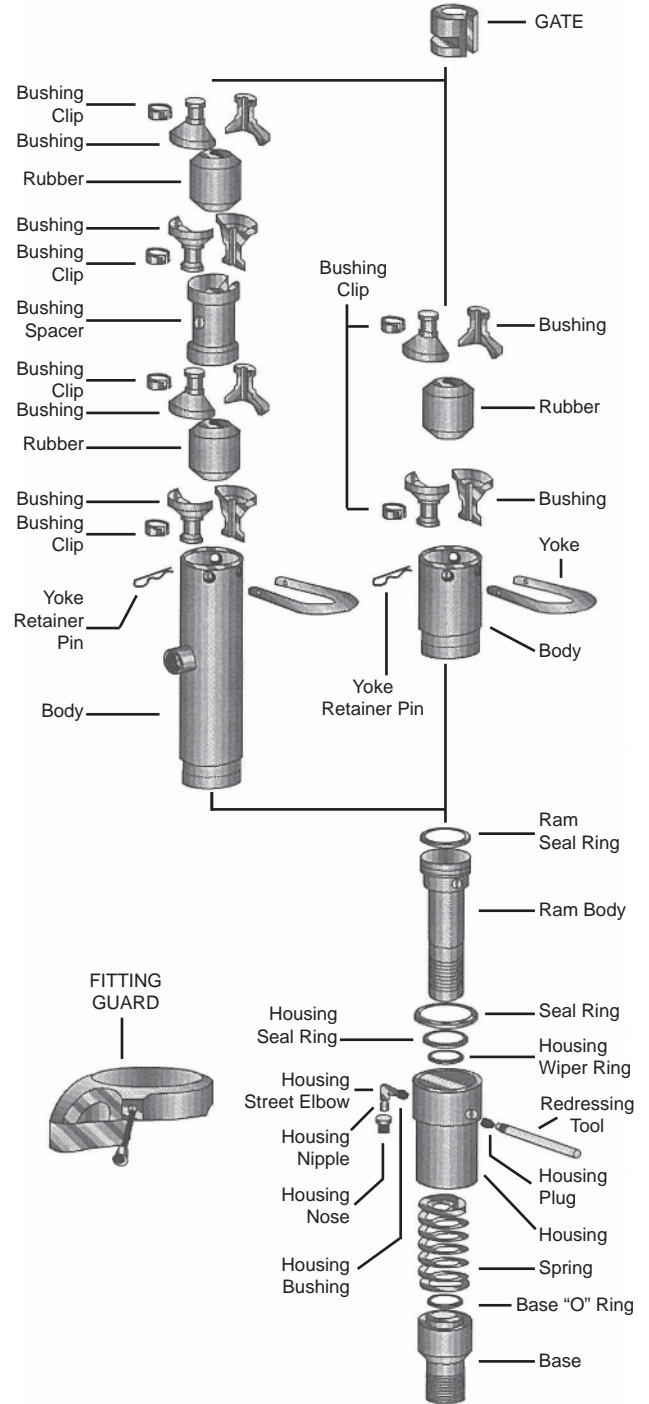
* Protect Disconnected Hose from Dust and Contamination
** Available on Request

Hydraulic Wireline Oil Savers

Table 27.1: TYPE 'H' AND 'HD' WIRELINE OIL SAVERS PART NUMBERS

DESCRIPTION	QTY REQ'D	PARTS BY TYPE & NUMBER	
		'H'	'HD'
BASE 2-3/8 in. 8RD EUE PIN	1 -	- 3E-40624	- 3E-40624
2-7/8 in. 8RD EUE PIN 3 IN. L.P. 8V PIN	- -	3E-40623 3E-40726	3E-40623 3E-40726
BODY	1	3E-39670	3E-40274
*BUSHING WITH CLIPS	2 SETS	-	-
BLANK - 5/16 in. 3/8 in. - 5/8 in.	- -	3E-42878 3E-46176	3E-42878 3E-46176
3/4 in. - 1 in. GATE	- 1	3E-41571 3E-39672	3E-41571 3E-39672
BUSHING SPACER HOUSING	1 1	... 3E-40617	3E-40275 3E-40617
HOUSING BUSHING HOUSING NIPPLE	1 1	3E-31742 3E-59064	3E-31742 3E-59064
HOUSING NOSE HOUSING PLUG	1 1	3E-40629 3E-13550	3E-40629 3E-13550
HOUSING STREET ELBOW RAM	1 1	3E-40639 3E-40622	3E-40639 3E-40622
REDRESSING TOOL **RUBBER	1 1	3E-40642 -	3E-40642 -
BLANK - 5/16 in. 3/8 in. - 5/8 in.	- -	3E-42883 3E-39675	3E-42883 3E-39675
3/4 in. SPRING	- 1	3E-41572 3E-39676	3E-41572 3E-39676
YOKE YOKE RETAINER PIN	1 1	3E-27484 3E-54509	3E-27484 3E-54509
HOSE ASSEMBLY - 50 ft MEA COUPLER	1 (2)	3E-40631 3E-40630	3E-40631 3E-40630
REPAIR KIT - MEA BASE O-RING	1 (1)	3E-53728 3E-16589	3E-53728 3E-16589
BODY O-RING HOUSING O-RING	(1) (1)	3E-25790 3E-17468	3E-25790 3E-17468
RAM O-RING HOUSING WIPER RING	(1) (1)	3E-88614 3E-39679	3E-88614 3E-39679
BRUNING COUPLING	(2)	3E-40630	3E-40630
50 ft. HOSE	(1)	3E-40631	3E-40631
TYPE 'R' OIL SAVER RUBBER 1/2 in. - 5/8 in. WIRELINE	(1 SET/2 HALVES)	3E-16207	3E-16207

* (2 Sets) for 'H' (4 sets) for 'HD'
 ** (1) for 'H' (2) for 'HD'
 () Parenthesis on number required indicate parts of assembly listed above

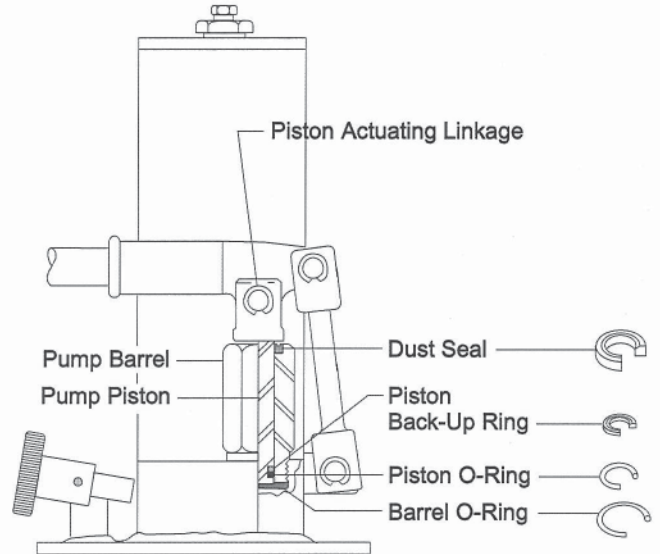
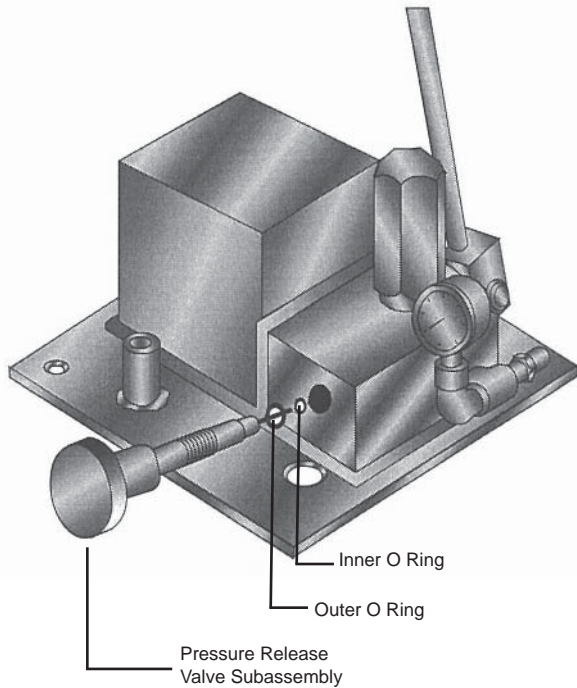
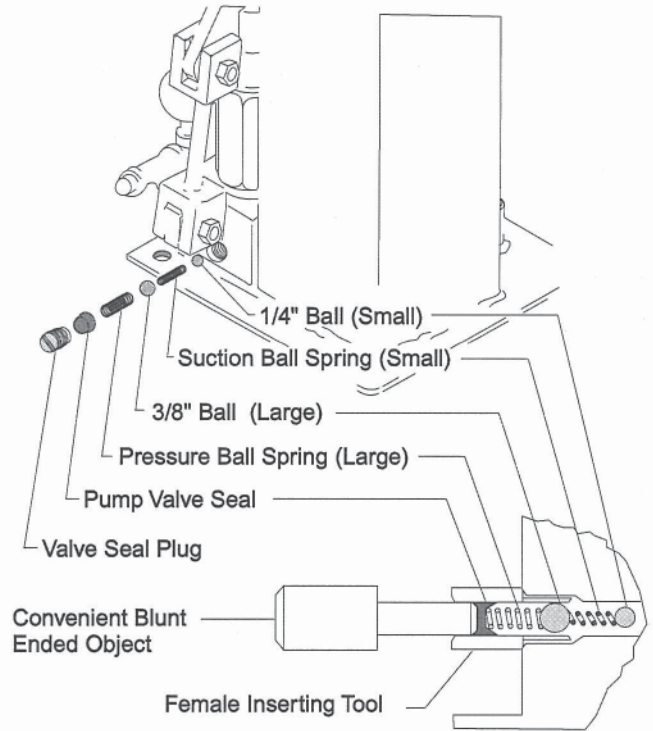


Hydraulic Wireline Oil Savers

Table 28.1: STAR PUMP - PART NUMBERS

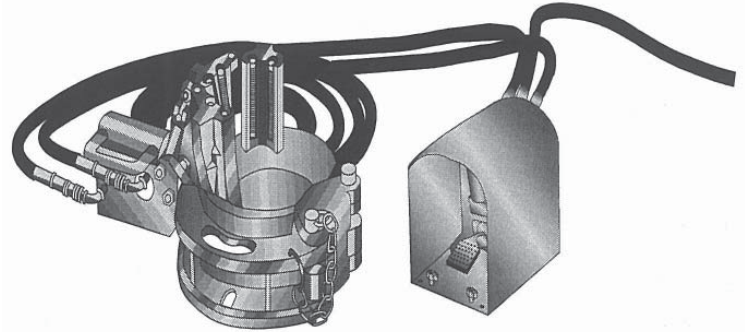
ITEM #	DESCRIPTION	QTY REQ'D	PART #
1	PUMP ASSEMBLY	1	3E-68883
2*	PLUG, FILL	1	3E-68860
3*	FITTING, RELIEF	1	3E-68863
4*	SOCKET	1	3E-68854
5*	HANDLE, LEVER	1	3E-68857
6*	PIN	3	3E-68861
7*	LINK	1	3E-68858
8*	PISTON	1	3E-68862
9*	BARREL	1	3E-68856
10*	RING RETAINER	6	3E-68855
11*	PRESSURE RELIEF VALVE S/A	1	3E-82589
12*	PLUG, PIPE	1	3E-68869
13*	FILTER	1	3E-82589
14	ASSEMBLY TOOL	1	3E-40652
15	NUT	4	3E-40655
16	BOLT	4	3E-40652
17	LOCK WASHER	4	3E-12758
18	PUMP BASE	1	3E-40662
19	GAGE	1	3E-40654
20	NOSE	1	3E-40629
21	SHORT NIPPLE	1	3E-59064
22	LONG NIPPLE	1	3E-27863
23	TEE	1	3E-40640
24	WASHER	4	3E-40653
25	ELBOW	1	3E-40639
26	REPAIR KIT	1	3E-68829

* Quantity required indicate part of assembly listed above.



Type 'T-40' (Formerly 'H-U')

- Rated at 40 tons
- Easily handles 17,000 feet of 2-3/8" O.D. tubing
- Fast, safe, dependable one-man operation
- Converts quickly from manual to air
- Accommodates all sizes of pipe from 1.315" to 4-1/2"
- Positive rotation grip provides automatic alignment, even load distribution, maximum holding power, and instant release
- Guard gate protects slips and linkage
- Plain gate minimizes any clearance problems



**Type 'T-40'
Tubing Spider**

Foot Valve

Table 29.1: TYPE 'T-40' TUBING SPIDER- ENGINEERING DATA

DESCRIPTION	TYPE 'T-40' [standard / metric]
TUBING LOAD RATING DIAMETER OF BOTTOM FLANGE	40 tons / 36,290 kg 15 / 381 mm
FLANG SLOTS FIT BOLT CIRCLE DIAMETERS GATE OPENING MINIMUM OPENING THROUGH BOWL	10-5/8 in. - 13 - 1/2 in. / 269.88-342.90 mm 4 in / 101.60 mm 5-7/8 in. / 149.23 mm
SPIDER HEIGHT WITH GUARD GATE SPIDER HEIGHT WITH PLAIN-PARALLEL GATE	14-1/2 in. / 368.30 mm 6-1/2 in. / 158.75 mm
APPROXIMATE WEIGHT SPIDER COMPLETE AIR WITH GUARD GATE AIR WITH PLAIN-PARALLEL GATE MANUAL WITH GUARD GATE MANUAL WITH PLAIN-PARALLEL GATE APPROXIMATE WEIGHT OF SLIP ASSEMBLY	200 lb / 91 kg 185 lb / 84 kg 150 lb / 68 kg 135 lb / 61 kg 28 lb / 13 kg
RECOMMENDED AIR PRESSURE RANGE	50-80 psi / 350-550

Table 29.2: TYPE 'T-40' ACCESSORY- PART NUMBERS

DESCRIPTION	PART NUMBER
AIR FOOT VALVE ASSEMBLY	3E-50687
CENTRALIZER ASSEMBLY ONLY 1.315 in. - 1.660 in. X 1.900 in. - 2.000 in. - 2.063 in. 2-3/8 in. X 2-7/8 in.	3E-56872
CENTRALIZER RUBBER 1.315 in. - 1.660 in. - 1.900 in. - 2.000 in. - 2.063 in. 2-3/8 in. - 2-7/8 in.	3E-56925 3E-56871
GUARD GATE PLAIN-PARALLEL GATE FILTER-LUBRICATOR	3E-27752 3E-43751 3E-28705

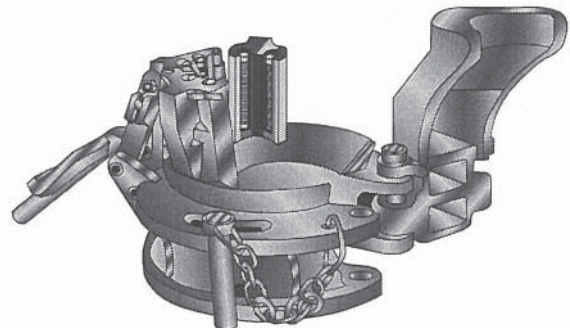


Table 29.3: TYPE 'T-40' TUBING SPIDER- PART NUMBERS

DESCRIPTION	PART NUMBER										SPIDER LESS SLIPS
	1.050	1.315	1.660	1.900	2.000	2.063	2-3/8 in.	2-7/8 in.	3-1/2 in.	4-1/2 in.	PART NUMBER
SLIP BODY SIZE	2-7/8 in.								3-1/2 in.	4-1/2 in.	
AIR SPIDER: WITH GUARD GATE LESS AIR VALVE AND HOSE	3E-62463 3E-67578								3E-62467 -	3E-83103 3E-83104	3E-53300
WITH PLAIN GATE LESS AIR VALVE AND HOSE	3E-62464 3E-67579								3E-62468 -	3E-83105 3E-83106	3E-53301
MANUAL SPIDER: WITH GUARD GATE WITH PLAIN GATE	3E-62465 3E-62466								3E-62469 3E-62470	3E-83107 3E-83108	3E-28918 3E-34092
INSERT KIT PART NUMBER	3E-62479	3E-62480	3E-62481	3E-62482	3E-62483	3E-62484	3E-42597	3E-42598	3E-42599	INTEGRAL	
SLIP BODY - LESS INSERTS	3E-62471								3E-62472	3E-58039	
BOWL ONLY	3E-27703										
BOWL WITH PIN & CHAINS	3E-28920										

Table 30.1: TYPE 'T -40' AIR ACTUATING ASSEMBLY PART NUMBERS

DESCRIPTION	QTY REQ'D	PART #
ASSEMBLY COMPLETE	-	3E-51454
AIR CYLINDER ASSEMBLY	1	3E-54589
AIR CYLINDER	1	3E-50644
CYLINDER END SCREW	3*	3E-92735
CYLINDER O-RING	1*	3E-18496
CYLINDER ROD	1*	3E-26894
PACKING	1*	3E-27860
PACKING O-RING	1*	3E-27861
ROD COTTER PIN	1*	3E-27859
ROD GUIDE	1*	3E-50648
ROD NUT	1*	3E-27858
ROD O-RING	2*	3E-19337
PIVOT WASHER	1*	3E-24223
PIVOT BOLT	1	3E-26353
CONTROL LINK	1	3E-51087
ELBOW	2	3E-27864
HOUSING	1	3E-37811
HOUSING BOLT	2	3E-26359
LOCK NUT	4	3E-24647
NIPPLE, LONG	1	3E-80549
NIPPLE, SHORT	1	3E-27863
LINK BOLT	1	3E-24212
AIR CYLINDER NIPPLE	2	3E-66172
PIVOT WASHER	4	3E-24223
LINK WASHER	2	3E-24235
PISTON ROD PIN	1	3E-52814
PLUG, ORIFICE	1	3E-80500
REPAIR KIT FOR AIR ACTUATING ASSEMBLY	1	3E-84052

* Parts of Assembly Listed Above

Table 30.2: TYPE 'T -40' AIR ATTACHMENT KIT PART NUMBERS

DESCRIPTION	QTY REQ'D	PART #
ASSEMBLY COMPLETE	1	3E-51453
AIR ACTUATING ASSEMBLY	1*	3E-51454
AIR VALVE WITH HOSES	1*	3E-50681
VALVE COUPLER	1*	-

Table 30.3: REPAIR KIT FOR AIR CYLINDER

DESCRIPTION	QTY REQ'D	PART #
ASSEMBLY COMPLETE	-	3E-92734
CYLINDER END SCREW	3	3E-92735
CYLINDER O-RING	1	3E-18496
PACKING	1	3E-27860
PACKING O-RING	1	3E-27861
ROD NUT	1	3E-27858
ROD O-RING	2	3E-19337
ROD CUTTER PIN	1	3E-27859
PIVOT WASHER	1	3E-24223

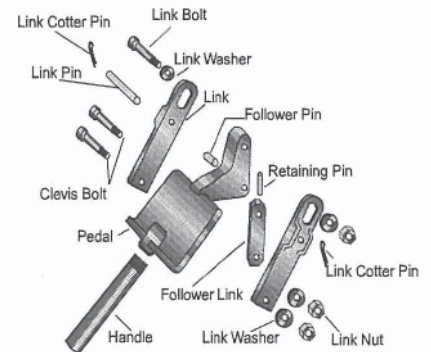
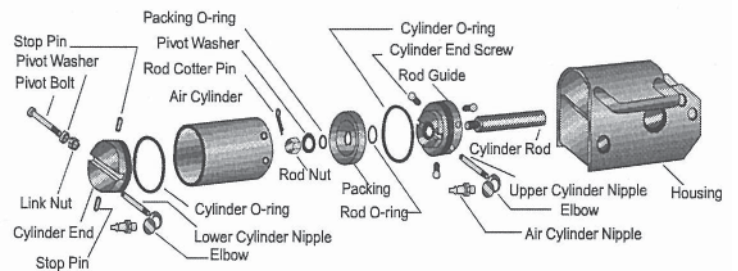
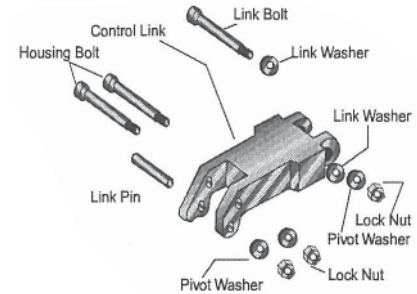


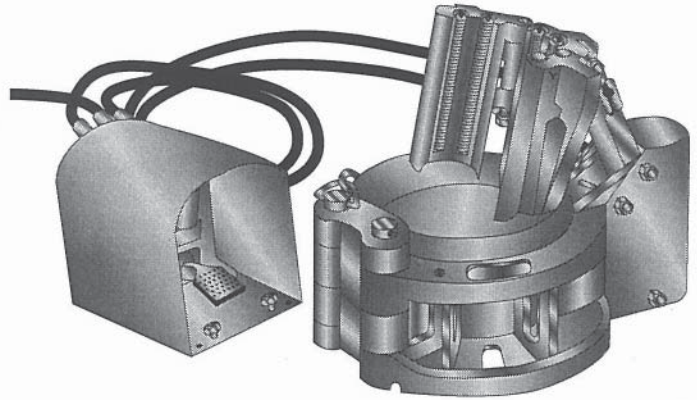
Table 30.4: TYPE 'T -40' HANDLE ASSEMBLY-MANUAL ONLY PART NUMBERS

DESCRIPTION	QTY REQ'D	PART #
ASSEMBLY COMPLETE	-	3E-28922
CLEVIS BOLT	2	3E-26073
COTTER PIN	2	3E-28410
FOLLOWER LINK	1	3E-28254
FOLLOWER PIN	1	3E-21786
HANDLE	1	3E-28255
LINK	2	3E-28253
LINK BOLT	1	3E-24212
LOCK NUT	3	3E-24647
LINK WASHER	2	3E-24235
PIVOT WASHER	2	3E-24223
LINK PIN	1	3E-21784
PEDAL SUB ASSEMBLY	1	3E-28240
RETAINING PIN	1	3E-28445
REPAIR KIT	1	3E-56810

Tubing Spiders

Type 'T-60' (Formerly 'FI-U')

- Rated at 60 tons
- Easily handles 25,000 feet of 2-3/8 in. O.D. tubing
- Fast, safe, dependable, one-man operation
- Converts quickly from manual to air
- Accommodates all sizes of pipe from 1.315 in. to 4-1/2 in.
- Positive rotation grip provides automatic alignment, even load distribution, maximum holding power, and instant release
- Guard gate protects slips and linkage
- Plain gate minimizes any clearance problems



Foot Valve

Type 'T-60'
Tubing Spider

Table 31.1: TYPE 'T-60' TUBING SPIDER- ENGINEERING DATA

DESCRIPTION	TYPE 'T-40' [standard / metric]
TUBING LOAD RATING	60 TONS / 54.430kg
DIAMETER OF BOTTOM FLANGE	15in / 381 mm
FLANGE SLOTS FIT BOLT CIRCLE DIAMETERS	10-5/8 in. - 13-1/2 in.
GATE OPENING	4-3/4 in. / 120.65 mm
MINIMUM OPENING THROUGH BOWL	5-7/8 in. / 149.23 mm
SPIDER HEIGHT WITH GUARD GATE	16-1/2 in. / 419.10 mm
SPIDER HEIGHT WITH PLAIN-PARALLEL GATE	9-3/8 in. / 238.13 mm
APPROXIMATE WEIGHT SPIDER COMPLETE	
AIR WITH GUARD GATE	290 lb / 132 kg
AIR WITH PLAIN-PARALLEL GATE	275 lb / 125 kg
MANUAL WITH GUARD GATE	175 lb / 79 kg
MANUAL WITH PLAIN PARALLEL GATE	160 lb / 73 kg
APPROXIMATE WEIGHT OF SLIP ASSEMBLY	45 lb / 20 kg
RECOMMENDED AIR PRESSURE RANGE	40-80 psi. / 280-550

Table 31.2: TYPE 'T-60' ACCESSORY- PART NUMBERS

DESCRIPTION	PART NUMBER
AIR FOOT VALVE ASSEMBLY	3E-50687
CENTRALIZER ASSEMBLY ONLY 1.315 in. - 1.660 in. X 1.900 in. - 2.000 in. - 2.063 2-3/8 in. X 2-7/8 in.	3E-56872
CENTRALIZER RUBBER 1.315 in. - 1.660 in. - 1.900 in. - 2.000 in. - 2.063 in. 2-3/8 in. - 2-7/8 in.	3E-56925 3E-56871
GUARD GATE	3E-42435
PLAIN PARALLEL GATE	3E-42440
FILTER - LUBRICATOR	3E-28705

Table 31.3: TYPE 'T-60' TUBING SPIDER- PART NUMBERS

DESCRIPTION	PART NUMBER											SPIDER LESS SLIPS
	1.050	1.315	1.660	1.900	2.000	2.063	2-3/8 in.	2-7/8 in.	3-1/2 in.	4 in.	4-1/2 in.		PART NUMBER
SLIP BODY SIZE	2-7/8 in.							3-1/2 in.	4-1/2 in.			
AIR SPIDER:												
WITH GUARD GATE	3E-62453						3E-62457	3E-83091	3E-83097	3E-50683		
LESS AIR VALVE AND HOSE	3E-67581						3E-62457	3E-83092	3E-83098	3E-50683		
WITH PLAIN GATE	3E-62454						3E-62458	3E-83093	3E-83099	3E-50684		
LESS AIR VALVE AND HOSE	3E-67580						3E-62458	3E-83094	3E-83100	-		
MANUAL SPIDER:												
WITH GUARD GATE	3E-62455						3E-62459	3E-83095	3E-83101	3E-41657		
WITH PLAIN GATE	3E-62456						3E-62460	3E-83096	3E-83102	3E-41658		
INSERT KIT PART NUMBER	3E-62473	3E-62474	3E-62475	3E-62476	3E-62477	3E-62478	3E-62586	3E-42587	3E-42588	INTEGRAL	INTEGRAL	-
SLIP BODY - LESS INSERTS	3E-62461						3E-62462	3E-49933	3E-34989	-		
T-60 SPIDER LESS FOOT VALVE, HOSES & LESS SLIPS	3E-50872											
INSERT KIT COTTER PIN	3E-24739											
BOWL	3E-42393											

Slip Repair Kit: Part Number 3E-56812 for 1 in. to 3-1/2 in. only; Slip Repair Kit: Part Number 3E-59891 for 4-1/2 in. only

**Table 33.1: AIR VALVE ASSEMBLY FOOT CONTROLLED
PART NUMBERS**

DESCRIPTION	QTY REQ'D	PART #
ASSEMBLY COMPLETE:	-	3E-50867
LESS HOSES	-	3E52976
WITH HOSE 1/4"	-	3E-50687
AIR VALVE	1	3E-26418 N
VALVE GUARD	1	3E-62724
COVER NUT	3	3E-13090
COVER SCREW	3	3E-26423
COVER WASHER	3	3E-26424
ELBOW	3	3E-50688
EXHAUST PLUG	1	3E-26602
HOSE 10'	1	3E-62611
HOSE 20'	1	3E-62613
NIPPLE	3	3E-26425
QUICK-CHANGE COUPLING	2	3E-66171
NIPPLE	1	3E-66172

**Table 33.2: REPAIR KIT AIR VALVE-
PART NUMBERS**

DESCRIPTION	QTY REQ'D	PART #
ASSEMBLY COMPLETE	-	3E-62643N

**Table 33.3: OPTIONAL HAND VALVE - PART NUMBERS
FOR TYPE 'T-40', 'T-60', AIR SPIDERS**

DESCRIPTION	QTY REQ'D	PART #
HAND VALVE ASSEMBLY (LESS HOSE)	1	3E-55297
HAND VALVE ASSEMBLY (WITH HOSE)	1	3E-52296

Additional part numbers for Air Valve Assembly to be updated. Please contact your Guiberson representative for updated information.

Strippers

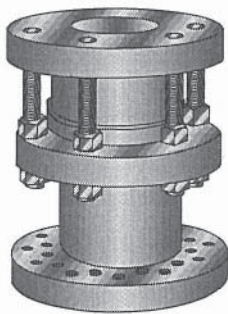
Type 'JU' and 'JU-H' High Pressure Tubing Stripper

This rugged stripper cleans oil and other materials from tubing as it is being pulled and prevents escape of oil or gas while running or pulling tubing under pressure. The stripper employs a heavy duty rubber that can be changed without removing the stripper from the wellhead. The unique, accordion-style design of this rubber allows easy passage of tubing couplings without leakage. The flexible, tight-gripping rubber works equally well on round, square, or hexagonal shapes. The major components are fabricated of tough cast steel for long, trouble-free service.

The housing of the Type 'JU' stripper is a single casting, with a flanged bottom connection for easy attachment of API flanges. Six 1-1/8 in. stud bolts transmit tubing load from the packing gland to the housing. These bolts also provide the means for adjusting the packing rubber, allowing three inches of travel for adjustment and take-up of wear. The rubber may also be adjusted easily by backing off the stud nuts and setting tubing weight on top of the stripper. The flat top provides a suitable base for any Guiberson tubing spider. The Type 'JU-H' features a hydraulic actuator which allows the stripper rubber to be compressed quickly and safely without stopping operations or going near the wellhead.

Also available is the Type 'H' actuator kit for installation on any Type 'JU' stripper for full hydraulic operation.

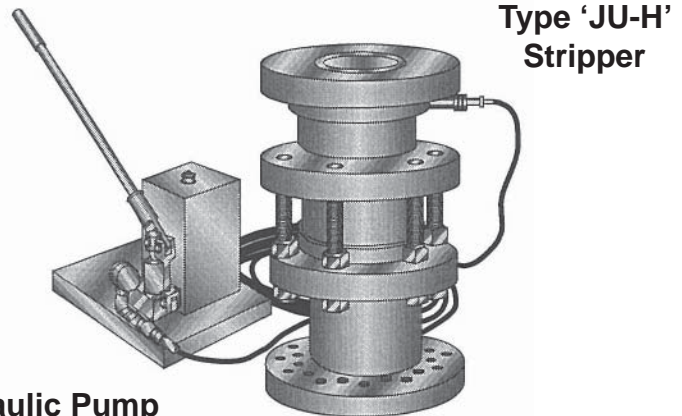
Type 'JU' Stripper



Rubber



Hydraulic Pump



Type 'JU-H' Stripper

Table 34.1: TYPE 'JU' AND 'JU-H' - ENGINEERING DATA

API NOMINAL FLANGE SIZE AND SERIES	TYPE 'JU'		TYPE 'JU-H'
	[6 in. 2000 psi / 152.4 13,800 kPa]	[6 in. 3000 psi / 152.4 13,800 kPa]	[6 in. 3000 psi / 152.4 13,800 kPa]
CASING SIZE	5-7 in. / 127-178 mm	5-7 in. / 127-178 mm	5-7 in. / 127-178 mm
APPROXIMATE WEIGHT	280 lb / 127 kg	280 lb / 127 kg	415 lb / 188 kg
OVERALL HEIGHT	17-1/8 in. / 435 mm	17-1/8 in. / 435 mm	23-1/4 in. / 590 mm
FLANGE O.D.	14 in. / 355.6 mm	15 in. / 381 mm	15 in. / 381 mm
FLANGE THICKNESS	1-7/8 in. / 47.6 mm	1-7/8 in. / 47.6 mm	1-7/8 in. / 47.6 mm
BOLT CIRCLE DIAMETER	11-1/2 in. / 292.1 mm	12-1/2 in. / 317.5 mm.	12-1/2 in. / 317.5 mm
BOLT SIZE (TWELVE REQUIRED)	1 in. / 25.4 mm	1-1/8 in. / 28.6 mm	1-1/8 in. / 28.6 mm
WORKING PRESSURE	1500 psi / 10300 kPa	1500 psi / 10300 kPa	1500 psi / 10300 kPa
TEST PRESSURE	3000 psi / 20700 kPa	3000 psi / 20700 kPa	3000 psi / 20700 kPa
MAXIMUM LOAD CAPACITY	40 tons / 36290 kg	40 tons / 36290 kg	40 tons / 36290 kg
OPENING THROUGH STRIPPER	6-1/8 in. / 155.58 mm	6-1/8 in. / 155.58 mm	4-3/4 in. / 120.7 mm
OPENING THROUGH HOUSING (WITHOUT HYDRAULIC ACTUATOR, BOTTOM SUPPORT PLATE, RUBBER, OR TOP SUPPORT PLATE IN PLACE)	-	-	6-1/8 in. / 155.58 mm
RING JOINT GASKET API NUMBER	R-45 / -	R-45 / -	R-45 / -
RING JOINT GASKET PITCH DIAMETER	8-5/16 in. / 211.14 mm	8-5/16 in. / 211.14 mm	8-5/16 in. / 211.14 mm

Table 34.2: TYPE 'H' HYDRAULIC ACTUATOR - ENGINEERING DATE

Description	[Standard / Metric]
O.D. OF HYDRAULIC ACTUATOR	14 in. / 355.6 mm
HEIGHT (WITHOUT STUD BOLTS MOUNTED ON IT)*	13 in. / 330.2 mm
HEIGHT (WITH STUD BOLTS MOUNTED ON IT)	16 in. / 406.4 mm
APPROXIMATE WEIGHT (WITHOUT STUD BOLTS OR NUTS)	2330 lb / 104.3 kg
APPROXIMATE WEIGHT (WITH STUD BOLTS AND NUTS)	257 lb / 116.6 kg
HYDRAULIC AREA	30.7 sq. in. / 196 cm ²
HYDRAULIC TRAVEL (USABLE)	3-1/2 in. / 88.9 mm
I.D. THROUGH HYDRAULIC ACTUATOR	4-3/4 in. / 120.7 mm
HYDRAULIC CONNECTION SIZE	1/4 in. npt / -
PUMP RESERVOIR SIZE	250 cu in. / 4098 CC/4.1L
RECOMMENDED	8-3/4 pts/1.gal / -
MAXIMUM PUMP PRESSURE RECOMMENDED ON ACTUATOR	3000 psi / 20700 kPa

* Stud bolts and nuts are not included in Type 'H' Hydraulic Actuator assembly. They are furnished on a Type 'JU-H' Tubing Stripper as follows: 6 - Stripper Stud number 3E-12598, Stripper Nut Number 3E-12710

Table 35.1: TYPE : 'JU' AND 'JU-H' STRIPPER - ENGINEERING DATA

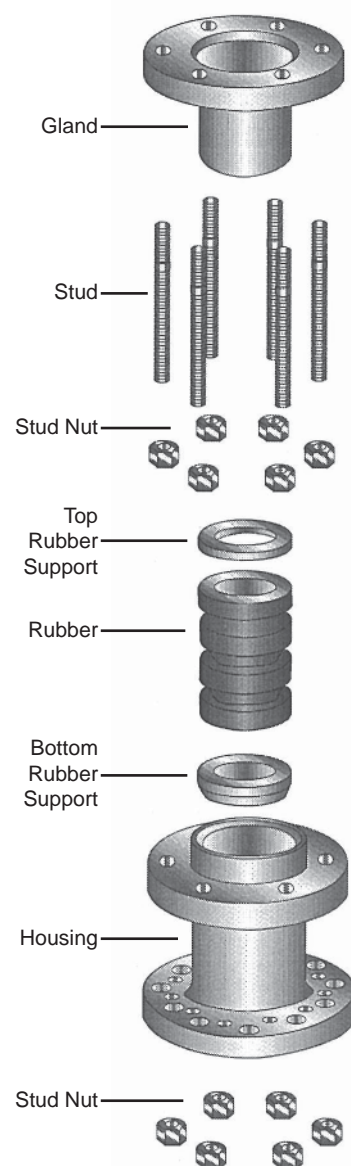
STRIPPER TYPE AND FLANGE SIZE	ASSEMBLY NUMBER BY PIPE SIZE (In.)				
	1.900	2.063	2-3/8	2-7/8	3-1/2
'JU'. 6 in. 600-900-2000-3000 psi	3E-12693	3E-12693	3E-12693	3E-12697	3E-17965
'JU-H' 6 in. 600-900-2000-3000-psi - complete with pump and hose	3E-80557	3E-80557	3E-80557	3E-80558	3E-80559
'JU-H' 6 in. 600-9000-2000-3000 psi-less pump and hose	3E-69516	3E-69516	3E-69516	3E-69517	3E-69518

Type 'H' actuator kit only, less pump and hose, part number 3E-69057; with pump and hose, part number 3E-80576
 Repair kits for Type 'JU-H' Tubing Stripper:
 3E-69524 Repair Kit for Hydraulic Actuator
 3E-68829 Repair Kit for Hydraulic Pump

Table 35.2: TYPE 'JU' STRIPPER - PART NUMBERS

DESCRIPTION	QTY REQ'D	PART NUMBER
GLAND LESS STUDS	1	3E-12668
STUD	6	3E-12598
STUD NUT	12	3E-12710
TOP RUBBER SUPPORT	1	
1.050 in. - 2-3/8 in.	-	3E-9568
2-7/8 in.	-	3E-9567
3 in.	-	3E-12037
RUBBER	1	*
1.050 in. 1.660 in. TUBING (RBR. I.D. = 1.660 in.)	-	3E-24077
1.900 in. - 2 3/8 in. TUBING (RBR. I.D. = 2-1/4 in.)	-	3E-9444
2-7/8 in. TUBING (RBR. I.D. = 2-3/4 in.)	-	3E-9447
2-7/8 in. DRILL PIPE (RBR. I.D. = 3 in.)	-	3E-15154
3-1/2 in. TUBING (RBR. I.D. = 3-3/4 in.)	-	3E-16562
BOTTOM RUBBER SUPPORT	1	3E-12455
'JU' 6-960-2000 psi	-	3E-12873
'JU'. 6-2000-3000 psi	-	3E-12875
RING JOINT GASKET (R-45)	1	3E-19683

* Rubber and top rubber support must correspond in size



Strippers

Table 36.1: DIMENSION DATA & RECOMMENDED PIPE SIZES TO SEAL OR PASS THROUGH TYPE JU AND JU-H STRIPPERS

SIZE DESIGNATION	PART NUMBER		NOMINAL I.D. (in.)		API PIPE RECOMMENDED*		MAXIMUM O.D. mm to Pass
	Rubber	Top Support	Rubber	Top Support	Pipe Size O.D. (in.) and Designation	Pipe Joint O.D. (in.)	
1.050 - 1.660	3E-24077	3E-9568	1.660	3.500	1.050 - 1.660 NUE 1.050 - 1.660 EUE 1.315 - 1.660	1.313 - 2.054 1.660 - 2.220 1.550 - 1.880	2.500
1.900 - 2 3/8	3E-9444	3E-9568	2.250	3.500	1.900 - 2 3/8 NUE 1.900 - 2 3/8 EUE 1.900 - 2.063 IJ 2 3/8 EU D.P.	2.00 - 2.875 2.500 - 3.063 2.110 - 2.325 2.656	3.375
2 7/8	3E-9447	3E-9567	2.750	4.125	2 7/8 NUE 2 7/8 EUE 2 7/8 IU D.P. 2 7/8 EU D.P.	3.500 3.460 - 3.668 2.875 3.219 - 3.250	3.750
3	3E-15154	3E-12037	3.000	4.750	2 7/8 NUE 2 7/8 EUE 2 7/8 EU D.P.	3.500 3.460 - 3.660 3.219 - 3.250	4.125
3 1/2	3E-16562	3E-12037	3.750	4.750	3 1/2 NUE 3 1/2 EUE 3 1/2 IU D.P. 3 1/2 EU D.P. 3 1/2 IEU D.P.	1.250 4.180 - 4.500 3.500 3.824 - 4.000 3.781	4.625

*Tubulars other than the API Tbg. and D.P. listed may be used if the pipe and joint o.d. fall within the dimensions shown in this chart.

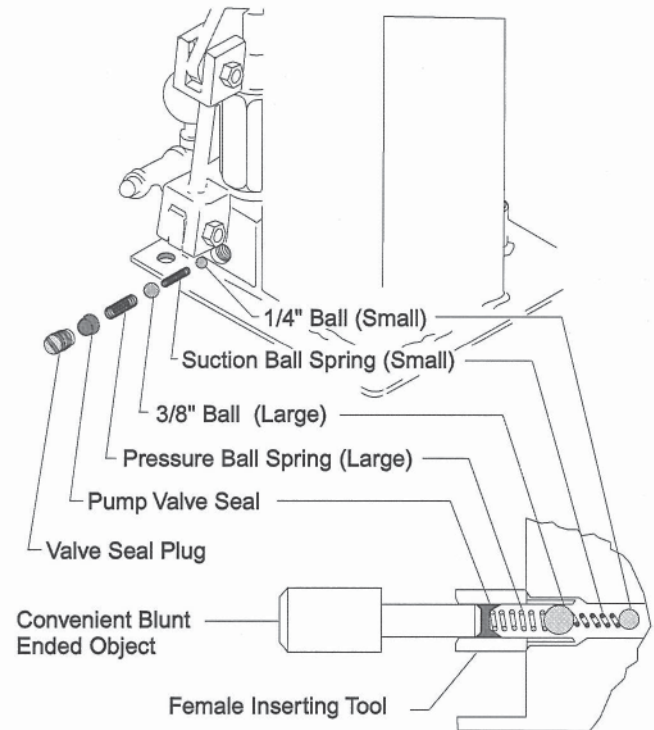
Table 36.2: REPAIR KIT FOR STAR HYDRAULIC PUMP FOR GUIBERSON TYPE JU-H TUBING STRIPPER (PART NUMBER 3E-68829)

DESCRIPTION	QTY REQ'D
RELEASE VALVE (NON-REVISED) PARTS	
RELEASE VALVE SEAL	1
9/32 in. RELEASE VALVE BALL (MEDIUM)	1
PUMP VALVE PARTS	
PUMP VALVE SEAL	
PRESSURE BALL SPRING (LARGE)	1
SUCTION BALL SPRING (SMALL)	1
1/4 - in. BALL (SMALL)	1
3/8 - in. BALL (LARGE)	1
FEMALE INSERTING TOOL	1
RELEASE VALVE (REV.C) PARTS*	
INNER O-RING (PARKER 2-106.)	1
OUTER O-RING (PARKER 2-109)	1
PUMP PISTON PARTS	
PISTON O-RING	1
PISTON BACK-UP RING	1
DUST SEAL (1 1/4 in. O.D. x 3/4 in. O.D.)	1
BARREL O-RING	1

* When repairing the release valve, look on the top of the pump oil reservoir tank. If "REV.C" is stenciled on the tank, use the REV.C repair parts. In either case there will be two extra parts in the kit to be discarded.

Pump Valve Repair Procedure

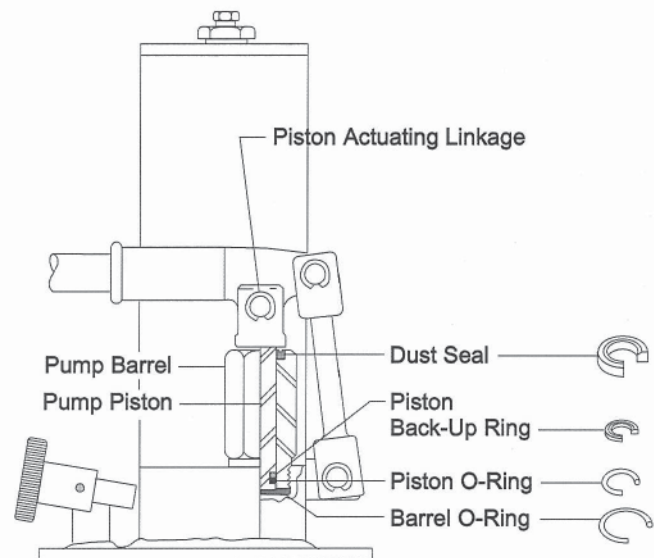
1. Stand pump upright then remove valve plug and valve seal.
2. Tilt pump to remove valve springs and balls. Allow oil to drain through these valve holes to wash debris from the valve chamber.
3. Lay pump on its side to inspect and clean valve chamber. Be careful not to scratch or nick ball seats.
4. Insert new balls and springs into valve chamber in the proper order (see illustration).
5. Insert pump valve seal, lip first into female inserting tool.
6. Place female inserting tool into valve chamber in the proper order (see illustration). Use a blunt ended object to push the pump valve seal all the way through the inserting tool. (Be sure the inserting tool remains shouldered firmly in the hole.)
7. Remove the inserting tool and screw in the valve seal plug.



Pump Piston Repair Procedure

Leakage of oil around the pump piston indicated worn or damaged packing.

1. Remove piston actuating linkage, piston, and barrel.
2. Remove and discard old packings and O-rings.
3. Clean all parts and dry with compressed air. Dip all parts in clean hydraulic oil (including repair parts).
4. Install new Barrel O-ring, Piston O-ring, Piston Back-Up Ring and Dust Seal. Be sure Piston Back-Up Ring and Dust Seal are oriented properly (see illustration).
5. Insert and tighten redressed barrel.
6. Open the release valve (to allow air to bleed out from the piston barrel) and insert the redressed piston.
7. Replace piston linkage and bleed air from pump (see procedure).



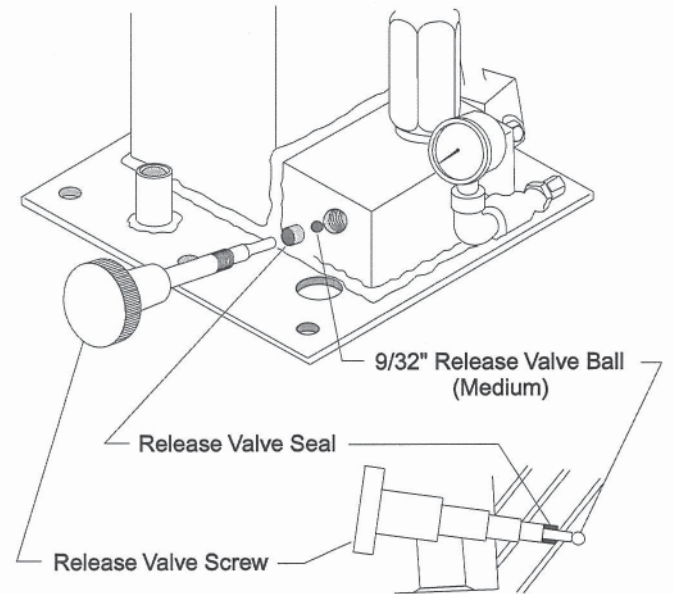
Strippers

Release Valve (non-revised)

Repair Procedure

Use these instructions IF the pump oil reservoir tank DOES NOT have "REV.C" stenciled on the top.

1. Remove the release valve screw, release valve seal, and release valve ball.
2. Clean and inspect the valve ball seat and release screw for excessive deformation. If the release screw has been severely damaged, it should be replaced.
3. Insert a new 9/32 in. release valve ball. This is the medium size ball in the repair kit. (See illustration.)
4. Insert a new release valve seal.
5. Re-install the release valve screw.

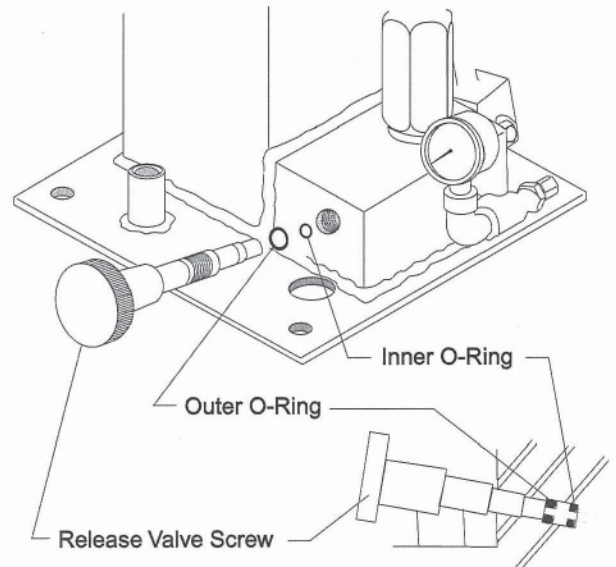


Release Valve (Revision C)

Repair Procedure

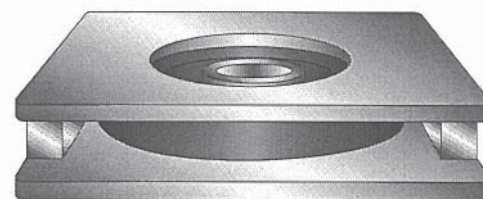
Use these instruction IF the pump oil reservoir tank DOES have "REVC." stenciled on the top.

1. Remove the release valve screw.
2. Remove the inner and outer o-rings from the release valve screw.
3. Clean and inspect the release valve chamber and screw.
4. Install a new outer o-ring and inner o-ring on the release valve screw (see illustration).
5. Re-install the release valve screw.

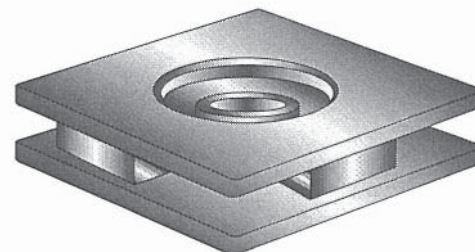


Pipe Wiper

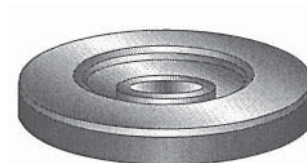
The Guiberson pipe wiper removes mud and debris from the pipe while it is being pulled or run. Its nine-inch rubber encircles the pipe tightly and covers the annulus to prevent foreign objects from falling into the well. The wiper is contained within a fabricated steel frame which mounts beneath the spider or rotary table. The assembly is conveniently sized, inexpensive, and available in 60 or 100 ton load capacities, making it ideal for workover operations.



60 Ton Pipe Wiper



100 Ton Pipe Wiper



Pipe Wiper Rubber

Table 39.1: PIPE WIPERS AND FRAMES- PART NUMBERS

DESCRIPTION		PART NUMBER BY SIZE AND LOAD LIMIT	
PIPE WIPERS COMPLETE		60 TON	100 TON
1.900 in O.D.		3E-58610	-
2-3/8 in. O.D.		3E-58608	-
2-7/8 in. O.D.		3E-58609	-
RUBBER	LOW PROFILE RUBBER		
1.900 in. O.D.	89600		3E-69680
2-3/8 in. O.D.	89601		3E-69681
2-7/8 in. O.D.	89602		3E-69682
3-1/2 in. O.D.	89602-001		
PIPE WIPER FRAME ONLY			3E-81750

Table 39.2: PIPE WIPERS - OTHER PRODUCTS

ROD WIPER RUBBER ROD SIZE	5/8 in. 3/4 in. 7/8 in.	(FITS BJ WIPER) PART NUMBER 90098 3E-90099 3E-91000
ROD STRIPPER RUBBER RUBBER I.D.	5/8 in.	(FITS EE STRIPPER) PART NUMBER 3E-91001

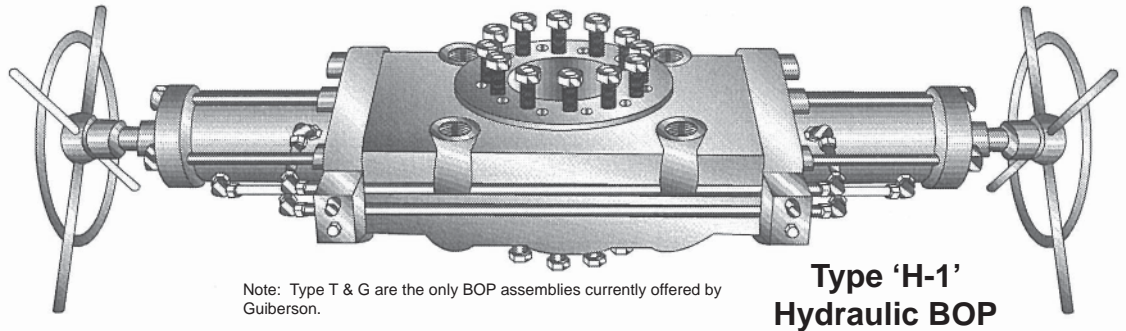
Table 39.3: WIPER FRAMES - ENGINEERING DATA

DESCRIPTION			LOAD LIMIT	
			60 TON	100 TON
FRAME [in. / mm]	I.D.		6 / 152.4	6 / 152.4
	LENGTH		12 / 304.8	12 / 304.8
	WIDTH		12 / 304.8	12 / 304.8
	HEIGHT		2-7/8 / 73.03	2-3/4 / 69.85
RUBBER [in. / mm]	I.D. BY SIZE	1.900	1.800 / 45.72	1.797 / 45.72
		2-3/8	2-1/4 / 57.15	2 - 1/4 / 57.15
		2-7/8	2 -3/4 / 69.85	2-3/4 / 69.85
	O.D.	9 / 228.60	9 / 228.60	
APPROXIMATE WEIGHT (Complete W. per) [lb. / Kg]			45 / 20	43 / 19
FRAME LOAD LIMITS [Tons / Metric Tons]			60 / 59.053	100 / 98.421

Blowout Preventers

Guiberson's compact blowout preventers are specifically designed for well servicing, workover, and light drilling. They seal tight against well pressure up to 3,000 psi and close and open easily and positively with either manual or hydraulic control. The ram assemblies in Guiberson preventers assure a positive, complete seal. The rams are designed to position the pipe at the center of the unit. The non-rising ram feed screws in Guiberson preventers are hollow for full pressure equalization. This important feature assures that preventers operate easily and positively, even under peak pressure. The heavy Acme threads on these screws feed smoothly and will not foul with residues or junk.

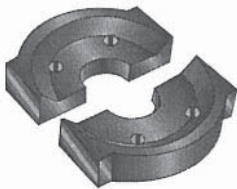
CAUTION: Do not open BOP under pressure!



Note: Type T & G are the only BOP assemblies currently offered by Guiberson.

**Type 'H-1'
Hydraulic BOP**

Packing Rubber



Quick Change Packing Rubber

Guiberson preventer rams can be changed quickly and easily, even while the pipe is in the hole. Only six nuts are unscrewed to remove either end plate. With end plates removed, both ram assemblies are accessible. The new packing rubber then slips easily into the ram assembly. No tools are required to install the new rubber. The packing rubber is strengthened by a molded-in plate.

Guiberson preventers are fabricated for high burst resistance of tough, heat-treated cast steel and are compact and easy to handle. Because the flange bosses are cast integrally with the preventer body, the extra space and weight of separate flange necks is eliminated. With this compact design, each Guiberson preventer stands only 11-1/2" high. Four cast-in lifting hooks on the body make lifting and moving easy.

Flexible, Economical Duals

Only Guiberson preventers provide the added safety of a double unit without the extra cost of integral double units or the waste of space caused by inter-connecting spools. The patented tie bolt system in these preventers allows them to be stacked directly, either parallel or at right angles to each other. This design gives the operator maximum flexibility in positioning the units for most convenient operation and most efficient use of space. Only four tie bolts are needed to stack the preventers. These tie bolts fit flush with the top and bottom of the housing, eliminating interference with wing valves and other equipment. Stacked Guiberson preventers provide the ultimate in compactness. Two units stacked and ready for service are less than 24 inches high.

Hydraulic Preventer

Guiberson's hydraulically operated blowout preventer combines all the features of the mechanical with virtually instantaneous hydraulic operation. With 2,000 psi hydraulic pressure, it closes in less than 2 seconds. Available with dual controls for both rig floor or remote operation, it can be operated from the rig's hydraulic system or, using a separate pump-accumulator system, from separate pneumatic, electric, gas, or diesel powered equipment. Hydraulic preventers are supplied with supplementary manual controls which allow the rams to be locked positively, once closed, and provide an alternate closing mechanism for added safety.

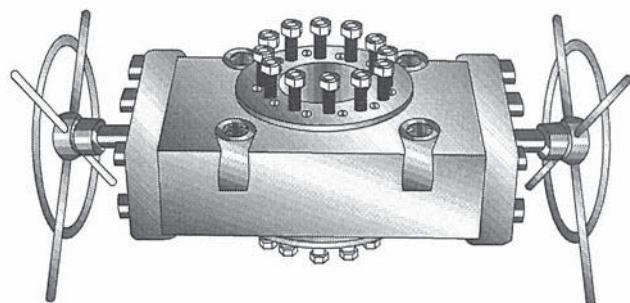
Hydraulic Conversion Units

By simply removing nuts at each end to exchange the end plates, any Guiberson preventer may be converted to hydraulic operation. Ram assemblies are not changed when converting from manual to hydraulic operation.

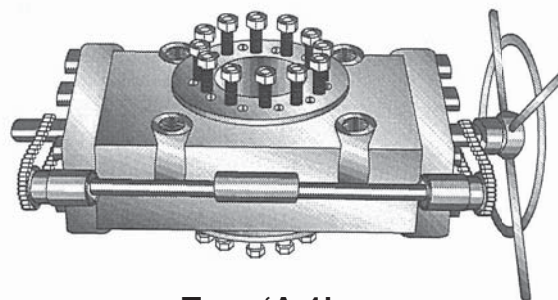
Table 40.1: HYDRAULIC UNIT-SPECIFICATIONS

SPECIFICATION	TO OPEN	TO CLOSE
MAXIMUM OPERATION PRESSURE, PSI	2,000	2,000
RATIO	1-1	6.5-1
VOLUME OF FLUID, U.S. GALLONS	.94	1.1
FLUID VOLUME PER INCH OF STROKE, CUBIC IN.	16.5	19.6
PISTON STROKE, INCHES	7.0	7.0
MAXIMUM OPERATING PRESSURE, kPa	13800	13800
RATIO	1-1	6.5-1
VOLUME OF FLUID, LITERS	3.56	4.16
FLUID VOLUME PER INCH OF STROKE, mm ³	10645	12645
PISTON STROKE, mm	177.8	177.8

Blowout Preventers



**Type 'A-1'
Manual BOP**



**Type 'A-1'
Chain Drive**

This is a mechanically operated version of the compact Guiberson preventer. The unit may be supplied with separate operating hand wheels or with a single chain drive handwheel that allows one man to close or open the unit quickly and positively.

Table 41.1: TYPES 'A-1', 'B-1' AND 'H-1', BLOWOUT PREVENTERS

NOMINAL FLANGE SIZE	Type 'A-1' Manual Drive	Type 'A-1' Chain Drive	Type 'H-1' Dual Hydraulic	Type 'H-1' Hydraulic	Type 'B-1' Chain Drive	Type 'B-1' Hydraulic	Type 'B-1' Dual Hydraulic	Type 'B-1' Chain Dual
	6 in.				8 in.			
FLANGE SERIES	400 - 600 600 - 900	400 - 600 600 - 900	400 - 600 600 - 900	400 - 600 600 - 900	400 - 600	400 - 600	400 - 600	400 - 600
CASING SIZE	5 - 7 in.	5 - 7 in.	5 - 7 in.	5 - 7 in.	7-5/8 - 8-5/8 in.	7-5/8 - 8-5/8 in.	7-5/8 - 8-5/8 in.	7-5/8 - 8-5/8 in.
APPROXIMATE WEIGHT	1500 lbs / 680 kg	1630 lbs / 740 kg	3400 lbs / 1540 kg	1650 lbs / 750 kg	1600 lbs / 730 kg	1700 lbs / 770 kg	3500 lbs / 1590 kg	3300 lbs / 1500 kg
OVERALL LENGTH, RAMS CLOSED	48 in. / 1219.20 mm	48 in. / 1219.20 mm	80-1/4 in. / 2038.35 mm	80-1/4 in. / 2038.35 mm	51 in. / 1295.40 mm	84 in. / 2133.60 mm	84 in. / 2133.60 mm	51 in. / 1295.40 mm
OVERALL HEIGHT LESS STUDS AND HANDWHEEL	11-1/2 in. / 292.10 mm	11-1/2 in. / 292.10 mm	24 in. / 609.60 mm	11-1/2 in. / 292.10 mm	11-1/2 in. / 292.10 mm	11-1/2 in. / 292.10 mm	24 in. / 609.90 mm	24 in. / 609.90 mm
OVERALL WIDTH LESS HANDWHEEL	24-1/2 in. / 622.30 mm	27 in. / 685.80 mm	24-1/2 in. / 622.30 mm	24-1/2 in. / 622.30 mm	27 in. / 685.80 mm	24-1/2 in. / 622.30 mm	24-1/2 in. / 622.30 mm	27 in. / 685.80 mm
OPENING THROUGH PREVENTER	7-3/8 in. / 187.33 mm	7-3/8 in. / 187.33 mm	7-3/8 in. / 187.33 mm	7-3/8 in. / 187.33 mm	9-1/16 in. / 230.19 mm	9-1/16 in. / 230.19 mm	9-1/16 in. / 230.19 mm	9-1/16 in. / 230.19 mm
WORKING PRESSURE*	3000 psi / 20700 kPa	3000 psi / 20700 kPa	3000 psi / 20700 kPa	3000 psi / 20700 kPa	3000 psi / 13800 kPa	2000 psi / 13800 kPa	2000 psi / 13800 kPa	2000 psi / 13800 kPa
TEST PRESSURE	6000 psi / 41400 kPa	6000 psi / 41400 kPa	6000 psi / 41400 kPa	6000 psi / 41400 kPa	4000 psi / 27600 kPa	4000 psi / 27600 kPa	4000 psi / 27600 kPa	4000 psi / 27600 kPa
HANDWHEEL DIAMETER	32 in. / 7212.8 mm	32 in. / 7212.8 mm	32 in. / 7212.8 mm	32 in. / 7212.8 mm	32 in. / 7212.8 mm	32 in. / 7212.8 mm	32 in. / 7212.8 mm	32 in. / 7212.8 mm
STUD CIRCLE DIAMETER								
400 SERIES	10-5/8 in. / 269.88 mm	10-5/8 in. / 269.88 mm	10-5/8 in. / 269.88 mm	10-5/8 in. / 269.88 mm	13 in. / 330.20 mm	13 in. / 330.20 mm	13 in. / 330.20 mm	13 in. / 330.20 mm
600 SERIES	11-1/2 in. / 292.10 mm	11-1/2 in. / 292.10 mm	11-1/2 in. / 292.10 mm	11-1/2 in. / 292.10 mm	13-3/4 in. / 349.25 mm	13-3/4 in. / 349.25 mm	13-3/4 in. / 349.25 mm	13-3/4 in. / 349.25 mm
900 SERIES	12-1/2 in. / 317.50 mm	12-1/2 in. / 317.50 mm	12-1/2 in. / 317.50 mm	12-1/2 in. / 317.50 mm	-	-	-	-
STUD DIAMETER								
400 SERIES	7/8 in. / 22.23 mm	7/8 in. / 22.23 mm	7/8 in. / 22.23 mm	7/8 in. / 22.23 mm	- / 25.40 mm	- / 25.40 mm	- / 25.40 mm	- / 25.40 mm
600 SERIES	1 in. / 25.40 mm	1 in. / 25.40 mm	1 in. / 25.40 mm	1 in. / 25.40 mm	1 in. / 28.58 mm	1 in. / 28.58 mm	1 in. / 28.58 mm	1 in. / 28.58 mm
900 SERIES	1-1/8 in. / 28.58 mm	1-1/8 in. / 28.58 mm	1-1/8 in. / 28.58 mm	1-1/8 in. / 28.58 mm	1-1/8 in. / -	1-1/8 in. / -	1-1/8 in. / -	1-1/8 in. / -
RING JOINT GASKET API NUMBER	R-45	R-45	R-45	R-45	R-45	R-45	R-45	R-45
RING JOINT GASKET PITCH DIAMETER	8-5/16 in. / 211.14 mm	8-5/16 in. / 211.14 mm	8-5/16 in. / 211.14 mm	8-5/16 in. / 211.14 mm	10-5/8 in. / 269.88 mm	10-5/8 in. / 269.88 mm	10-5/8 in. / 269.88 mm	10-5/8 in. / 269.88 mm

Blowout Preventers

Special Note: Tables for reference only. Assemblies are no longer available.

Table 42.1: TYPES 'A-1', 'B-1', 'H-1' PREVENTERS- PARTN NUMBERS

PREVENTER TYPE AND FLANGE SIZE	SINGLE ASSEMBLY #	DUAL ASSEMBLY #
* 'A-1' Manual, 6 in. 4000 - 6 in. 600	3E-62868	-
**'A-1' MANUAL, 6 in. 600- 6 in. 900	3E-62871	3E-67506
*'A-1' CHAIN, 6 in. 400 - 6 in. 600	3E-62874	-
*'A-1' CHAN 6 in. 600 - 6 in. 900	3E-62877	3E-67505
**'B-1' CHAIN, 8 in. 400 - 8 in. 600	3E-69963	3E-80361
**'H-1' HYDRAULIC, 6 in. 400 - 6 in. 600	3E-64322	-
**'H-1' HYDRAULIC, 6 in. 600 - 6 in. 900	3E-64324	3E-67507
**'B-1' HYDRAULIC, 8 in. 400 - 8 in. 600	3E-69962	3E-80265

NOTE: Standard studding for 6 in. 400 - 6 in. blowout preventer assemblies is 6 in. 600 studs both top and bottom. Standard studding for 6 in. 600 - 6 in. 900 blowout preventer assemblies is 6 in 900 studs both top and bottom. Specify different studding if desired. One handwheel furnished with chain single and dual preventers; two with manual single and dual preventers. Dual preventers are assembled parallel unless crisscross mounting is specified. (Size of rubbers and rubber retainers to be specified.)

Assemblies no longer available. For reference only.

- * Less rubbers and retainers.
- ** Less rubbers, retainers and slides

Table 42.2: BLOWOUT PREVENTER ACCESSORIES - PART NUMBERS

DESCRIPTION	PART NUMBER
FLANGE STUD AND NUT ASSEMBLY	**
6 in. 600-8 in. 400 (2 SETS REQUIRED)	3E-53295
6 in. 900-8 in. 600 (2 SETS REQUIRED)	3E-53296
TIE BOLT AND RING GASKET ASSEMBLY	***
6 in. 600-6 in. 900 (1 SET REQUIRED)	3E-59373
RING GASKET R-45 API	3E-19683
LONG BODY TUBE FOR HYDRAULIC CONVERSION UNIT	3E-64296

When ordering conversion kit, specify for long body, Type 'A', or short body, Type 'A-1'.
 * Drive tube not included. User must furnish 2-3/8" 8RD, EUE 'J-55" oilfield tubing or appropriate length.

THESE HANDWHEEL EXTENSIONS ARE REQUIRED FOR EVERY INSTALLATION!

- ** Two sets of twelve each furnished with each preventer.
- *** One set of 4 tie bolt assemblies, 4 top nuts and 1 ring gasket required with each dual preventer.

Table 42.3: RAM ASSEMBLIES- PART NUMBERS

SIZE O.D. (in.)	CONCENTRIC						OFFSET					
	Rubber Only EA	Rubber Retainer Set	Bottom Slide		RAM Assembly		Rubber Only	Rubber Retainer	Bottom Slide		RAM Assembly	
			Type A-B-B1-H	Type A-1 & H-1	Type A-B-H	Type A-1 & H-1			Type A-B-B1-H	Type A-1 & H-1	Type A-B-H	Type A-1 & H-1
BLANK	3E-18368	3E-18488	3E-21711	3E-62859	3E-53272	3E-62865	-	-	-	-	-	-
1.315	3E-80899	3E-80898	3E-21711	3E-62859	-	3E-62885	3E-37990	3E-38656	3E-34841	-	-	-
1.660	3E-28325	3E-28324	3E-21711	3E-62859	3E-53276	3E-62886	3E-34889	3E-34890	3E-34841	3E-62896	-	-
1.900	3E-32740	3E-32741	3E-21711	3E-62859	3E-53277	3E-62887	3E-32644	3E-32644	3E-34841	3E-62896	-	-
2.000	3E-37514	3E-37515	3E-21711	3E-62859	3E-53278	3E-62888	3E-54767	3E-54767	-	3E-62896	-	3E-62883
2.063	3E-34803	3E-34804	3E-21711	3E-62859	3E-53279	3E-62889	3E-34813	3E-34813	3E-34841	3E-62896	3E-53291	3E-62893
2-3/8	3E-61744	3E-18484	3E-21711	3E-62859	3E-61747	3E-62866	3E-29760	3E-29761	3E-29762	3E-62895	3E-53292	3E-62894
2-7/8	3E-61745	3E-18485	3E-21711	3E-62859	3E-61748	3E-62867	-	-	-	-	-	-
3-1/2	3E-61746	3E-18486	3E-21711	3E-62859	3E-61749	3E-62880	-	-	-	-	-	-
4	3E-24075	3E-24276	3E-21711	3E-62859	3E-53283	3E-62890	-	-	-	-	-	-
4-1/2	3E-18367	3E-18487	3E-21711	3E-62895	3E-53284	3E-62891	-	-	-	-	-	-
5	3E-22220**	3E-25010**	3E-25011**	3E-62860	3E-53285	3E-62892	-	-	-	-	-	-
5-1/2	3E-69951**	3E-20984**	3E-20989**	-	3E-53286**	-	-	-	-	-	-	-
7	3E69950**	3E-69953**	3E-69952*	-	3E-53287**	-	-	-	-	-	-	-

* Set of matched halves consisting of rubber, rubber retainers and bottom side.

** Type B and 'B-1' only.

Note: Assemblies no longer available. For reference only.

Blowout Preventers

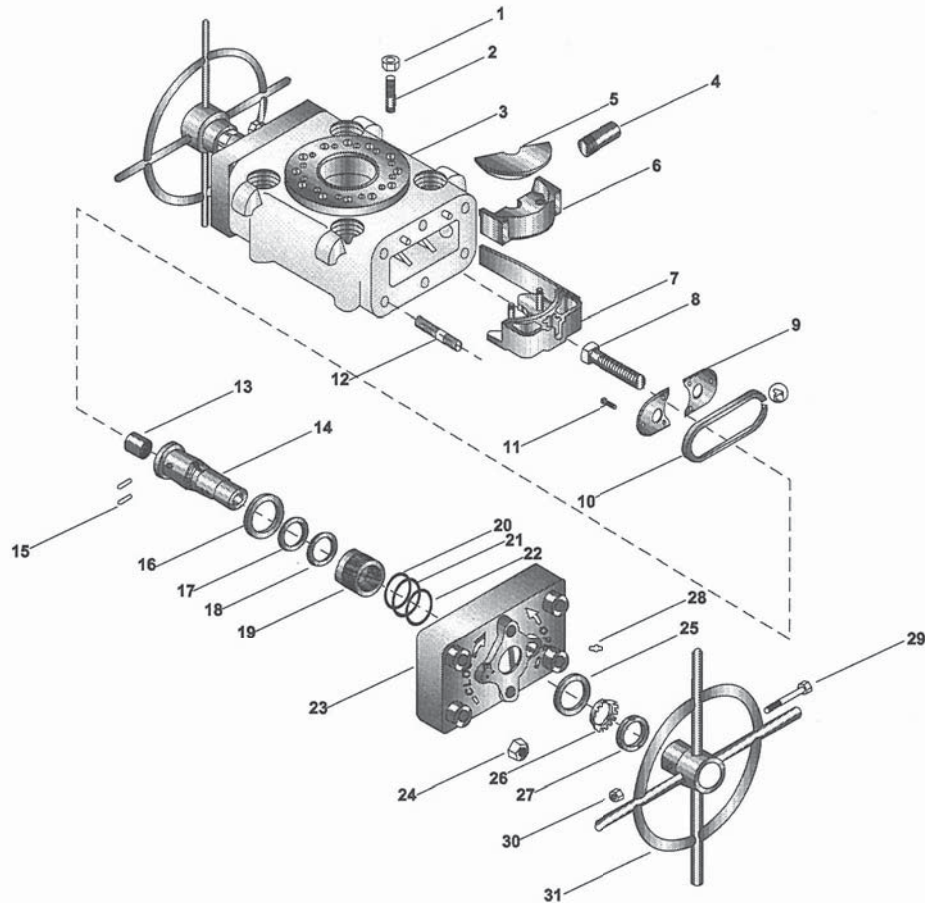


Table 43.1: TYPE 'A-1' MANUAL BLOWOUT PREVENTER - PART NUMBERS

ITEM	DESCRIPTION	QTY REQ'D	PART NUMBER
1	NUT STUD	24	3E-23594
2	STUD	24	3E-23593
3	BODY	1	N/A
4	BULL PLUG	2	3E-19451
5	TOP RUBBER RETAINER PLATE	1	-
6	RUBBER	2	-
7	BOTTOM SLIDE	1	-
8	FEED SCREW	2	3E-19477
9	RETAINER PLATE	4	3E-17728
10	SEAL RING	2	3E-17601
11	HEX HEAD SCREW	12	3E-85958
12	BODY STUD	12	3E-16746
13	THREADED BUSHING	2	3E-19475
14	FEED SCREW NUT BODY	2	3E-62558
15	DOWEL PIN	4	3E-17359
16	INSIDE THRUST WASHER	2	3E-62553
17	NOTCHED SPACER	2	3E-86589

ITEM	DESCRIPTION	QTY REQ'D	PART NUMBER
18	Z-SEAL PACKING	2	3E-86590
19	SEAL BODY	2	3E-69400
-	DRIVE LOK PIN	2	3E-69399
20	O-RING	2	3E-18223
21	O-RING	2	3E-26161
22	O-RING	2	3E-17452
23	END PLATE	2	N/A
24	NUT	12	3E-16747
25	OUTSIDE THRUST WASHER	2	3E-16748
26	LOCK WASHER	2	3E-20840
27	LOCK NUT	2	3E-20839
28	HYDRAULIC FITTING	2	3E-69275
29	BOLT	2	3E-17336
30	NUT	2	3E-13090
31	HAND WHEEL	2	N/A
32	(HAND WHEEL EXTENSION KIT)	(2-NEEDED)	(3E-19806)

Blowout Preventers

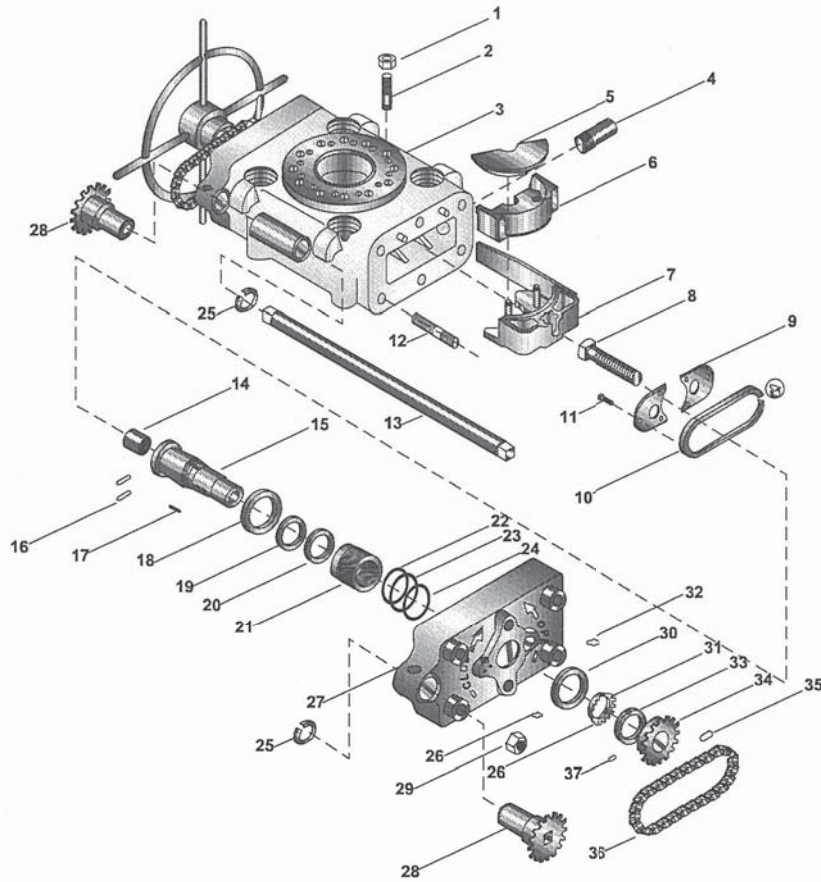


Table 44.1: TYPE 'A-1' CHAIN DRIVE BLOWOUT PREVENTER - PART NUMBERS

ITEM	DESCRIPTION	QTY REQ'D	PART NUMBER
1	NUT	24	3E-23594
2	STUD	24	3E-23953
3	BODY	1	N/A
4	BULL PLUG	2	3E-19451
5	TOP RUBBER RETAINER PLATE	1	-
6	RUBBER	2	-
7	BOTTOM SLIDE	1	-
8	R.H. FEED SCREW	1	3E-18476
-	L.H. FEED SCREW (OTHER END)	1	3E-19477
9	RETAINER PLATE	4	3E-17728
10	SEAL RING	2	3E-17601
11	HEX HEAD SCREW	12	3E-85958
12	BODY STUD	12	3E-16746
13	COUNTER SHAFT	1	3E-62856
14	R.H. THREADED BUSHING	1	3E-19474
-	L.H. THREADED BUSHING	1	3E-19475
15	R.H. FEED SCREW NUT BODY	1	3E-62562
-	L.H. FEED SCREW NUT BODY	1	3E-62558
16	DOWEL PIN	4	3E-17359
17	RAM SPROCKET KEY	2	3E-9626
18	INSIDE THRUST WASHER	2	3E-62553
+	+(HANDWHEEL EXTENSION KIT - NEEDED)	(1)	(3E-19806)

ITEM	DESCRIPTION	QTY REQ'D	PART NUMBER
19	NOTCHED SPACER	2	3E-86589
20	Z-SEAL PACKING	2	3E-86590
21	SEAL BODY	2	3E-69400
-	DRIVE LOK PIN	2	3E-69399
22	O-RING	2	3E-18223
23	O-RING	2	3E-26161
24	O-RING	2	3E-17452
25	SPROCKET RETAINER RING	2	3E-21508
26	GREASE FITTING	2	3E-14796
27	END PLATE	2	N/A
28	SPROCKET SUB ASSEMBLY	2	3E-20891
29	NUT	12	3E-16747
30	OUTSIDE THRUST WASHER	2	3E-16748
31	LOCK WASHER	2	3E-20840
32	HYDRAULIC FITTING	2	3E-69275
33	LOCK NUT	2	3E-20839
34	RAM SPROCKET	2	3E-20892
35	CHAIN CONNECTOR	2	3E-20930
36	CHAIN	2	3E-20899
37	SET SCREW	2	3E-12772
-	HAND WHEEL	1	N/A
-	BOLT (FOR HAND WHEEL)	1	N/A
-	NUT (FOR HAND WHEEL)	1	N/A

+ Drive Tube not included. User must furnish 2-3/8" 8RD EUE 'J-55' oilfield tubing of appropriate length. THESE HAND WHEEL EXTENSIONS ARE REQUIRED FOR EVERY INSTALLATION

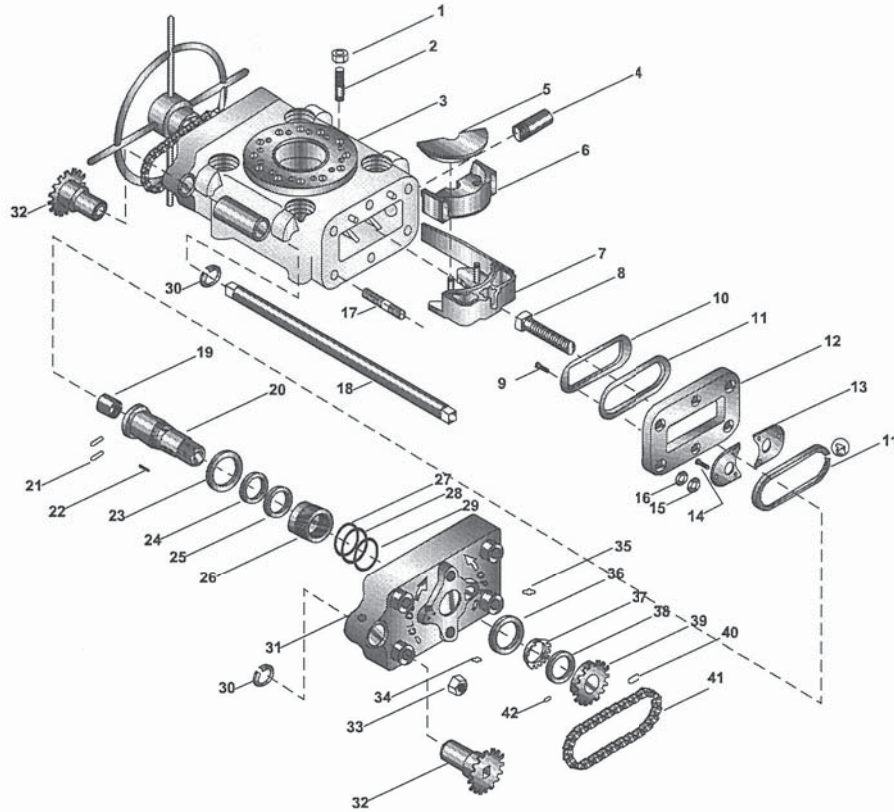


Table 45.1: TYPE 'B-1' CHAIN DRIVE BLOWOUT PREVENTER - PART NUMBERS

ITEM	DESCRIPTION	QTY REQ'D	PART NUMBER
1	NUT	24	3E-23594
2	STUD	24	3E-23593
3	BODY	1	N/A
4	BULL PLUG	2	3E-19451
5	TOP RUBBER RETAINER PLATE	1	-
6	RUBBER	2	-
7	BOTTOM SLIDE	1	-
8	R.H. FEED SCREW	1	3E-19476
-	L.H. FEED SCREW (OTHER END)	1	3E-19477
9	HEX HEAD SCREW	4	3E-85958
10	GASKET RETAINER	2	3E-69831
11	SEAL RING	4	3E-17601
12	SPACER	4	3E-69830
13	RETAINER PLATE	4	3E-17728
14	HEX HEAD SCREW	12	3E-85958
15	SPACER RETAINER	8	3E-69826
16	SPACER RUBBER	8	3E-69827
17	BODY STUD	12	3E-69829
18	COUNTER SHAFT	1	3E-21450
19	R.H. THREADED BUSHING	1	3E-19474
-	L.H. THREADED BUSHING	1	3E-19475
20	R.H. FEED SCREW NUT BODY	1	3E-62562
	L.H. FEED SCREW NUT BODY	1	3E-62558
+	+(HANDWHEEL EXTENSION KIT - NEEDED)		

ITEM	DESCRIPTION	QTY REQ'D	PART NUMBER
21	DOWEL PIN	4	3E-17359
22	RAM SPROCKET KEY	2	3E-9626
23	INSIDE THRUST WASHER	2	3E-62553
24	NOTCHED SPACER	2	3E-86589
25	Z-SEAL PACKING	2	3E-86590
26	SEAL BODY	2	3E-69400
-	DRIVE LOK PIN	2	3E-69399
27	O-RING	2	3E-18223
28	O-RING	2	3E-26161
29	O-RING	2	3E-17452
30	SPROCKET RETAINER RING	2	3E-21508
31	END PLATE	2	N/A
32	SPROCKET SUB ASSEMBLY	2	3E-20891
33	NUT	12	3E-16747
34	GREASE FITTING	2	3E-14796
35	HYDRAULIC FITTING	2	3E-69275
36	OUTSIDE THRUST WASHER	2	3E-16748
37	LOCK WASHER	2	3E-20840
38	LOCK NUT	2	3E-20839
39	RAM SPROCKET	2	3E-20892
40	CHAIN CONNECTOR	2	3E-20930
41	CHAIN	2	3E-20899
42	SET SCREW	2	3E-12772
-	HAND WHEEL	1	N/A
-	BOLT (FOR HAND WHEEL)	1	N/A
-	NUT (FOR HAND WHEEL)	1	N/A

+ Drive tube not included. User must furnish 2-3/8", 8RD EUE 'J-55" oilfield tubing of appropriate length. THESE HANDWHEEL EXTENSIONS ARE REQUIRED FOR EVERY INSTALLATION

Blowout Preventers

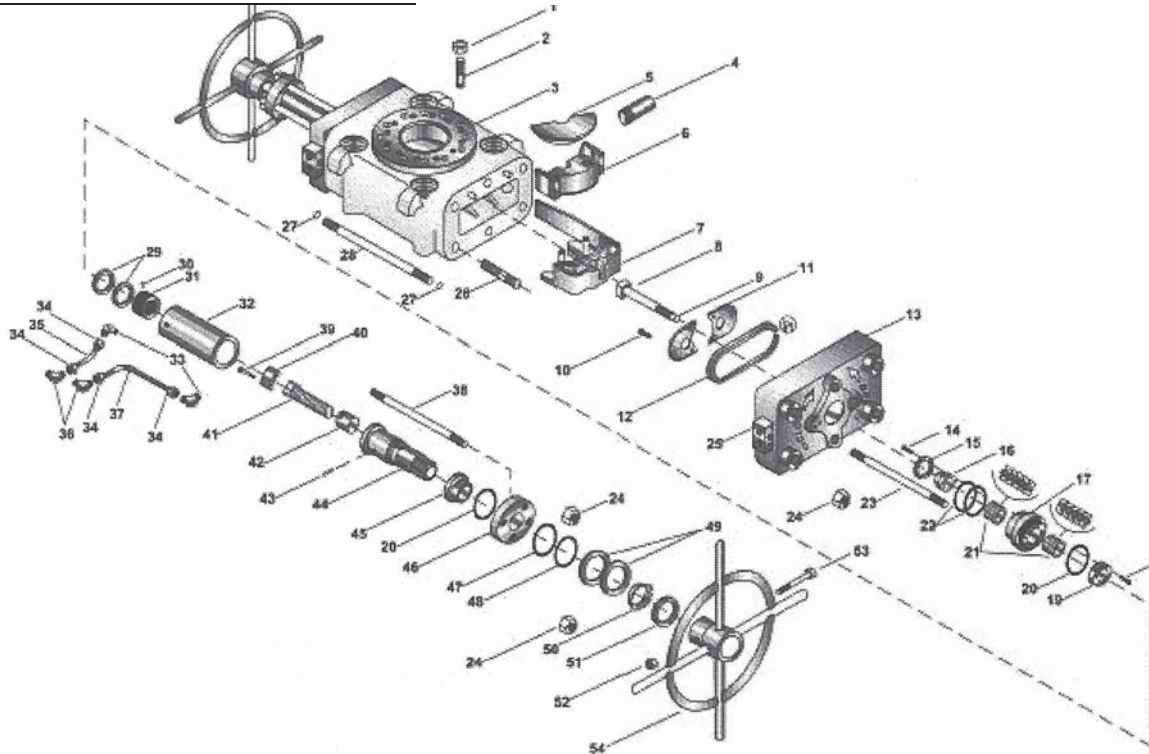


Table 46.1: TYPE 'H-1' HYDRAULIC BLOWOUT PREVENTER - PART NUMBERS

ITEM	DESCRIPTION	QTY REQ'D	PART NUMBER
1	NUT	24	3E-23594
2	STUD	24	3E-23593
3	BODY	1	N/A
4	BULL PLUG	2	3E-19451
5	TOP RUBBER RETAINER PLATE	1	-
6	RUBBER	2	-
7	BOTTOM SLIDE	1	-
8	PISTON ROD	2	3E-80518
9	O-RING	2	3E-18129
10	HEX HEAD SCREW	12	3E-85958
11	RETAINER PLATE	4	3E-17728
12	SEAL RING	2	3E-17601
13	END PLATE SUB ASSEMBLY (L.H.)	1	N/A
--	END PLATE SUB ASSEMBLY (R.H.)	1	N/A
14	CAP SCREW	6	3E-64327
15	BOTTOM RETAINER PLATE	2	3E-64272
16	RAM GUIDE	2	3E-64275
17	PACKING HOLDER	2	3E-64271
18	CAP SCREW	6	3E-28898
19	TOP RETAINER PLATE	2	3E-64273
20	O-RING	4	3E-23470
21	PACKING SET	4	3E-64318
22	O-RING	4	3E-26161
23	SHORT TIE ROD	4	3E-64270
24	NUT PIPE PLUG	16	3E-16747
25		4	3E-14692
26	BODY STUD	8	3E-16747
27	O-RING	4	3E-65260
28	BODY TUBING	2	3E-65260

ITEM	DESCRIPTION	QTY REQ'D	PART NUMBER
29	PACKING	4	3E-64280
30	SET SCREW	4	3E-31213
31	PISTON	2	3E-64274
32	CYLINDER	2	3E-64266
33	ELBOW BODY	4	3E-65223
34	NUT	8	3E-59341
--	SLEEVE	8	3E-69342
35	SHORT END TUBE	2	3E-64301
36	ELBOW BODY	4	3E-64317
37	LONG END TUBE	2	3E-64300
38	LONG TIE ROD	4	3E-64269
39	CAP SCREW	4	3E-43706
40	LOCKING KEY	2	3E-64419
41	FEED SCREW	2	3E-64290
42	THREADED BUSHING	2	3E-19475
43	DOWEL PIN	4	3E-17395
44	FEED SCREW NUT BODY	2	3E-62558
45	INSIDE THRUST WASHER	2	3E-68543
46	CYLINDER END PLATE	2	3E-64268
47	O-RING	2	3E-17468
48	BACK-UP RING	2	3E-68452
49	THRUST WASHER	4	3E-62553
50	LOCK WASHER	2	3E-20840
51	LOK NUT	2	3E-20839
52	NUT	2	3E-13090
53	BOLT	2	3E-17336
54	HANDWHEEL	2	N/A
55	PIPE PLUG (NIT SHOWN, LOCATED IN CYLINDER)	2	3E-24222
+	+(HANDWHEEL EXTENSIONS KIT - NEEDED)	(2)	N/A

+ Drive tube not included. User must furnish 2-3/8" 8RD EUE 'J-55' oilfield tubing of appropriate length. THESE HANDWHEEL EXTENSIONS ARE REQUIRED FOR EVERY INSTALLATION

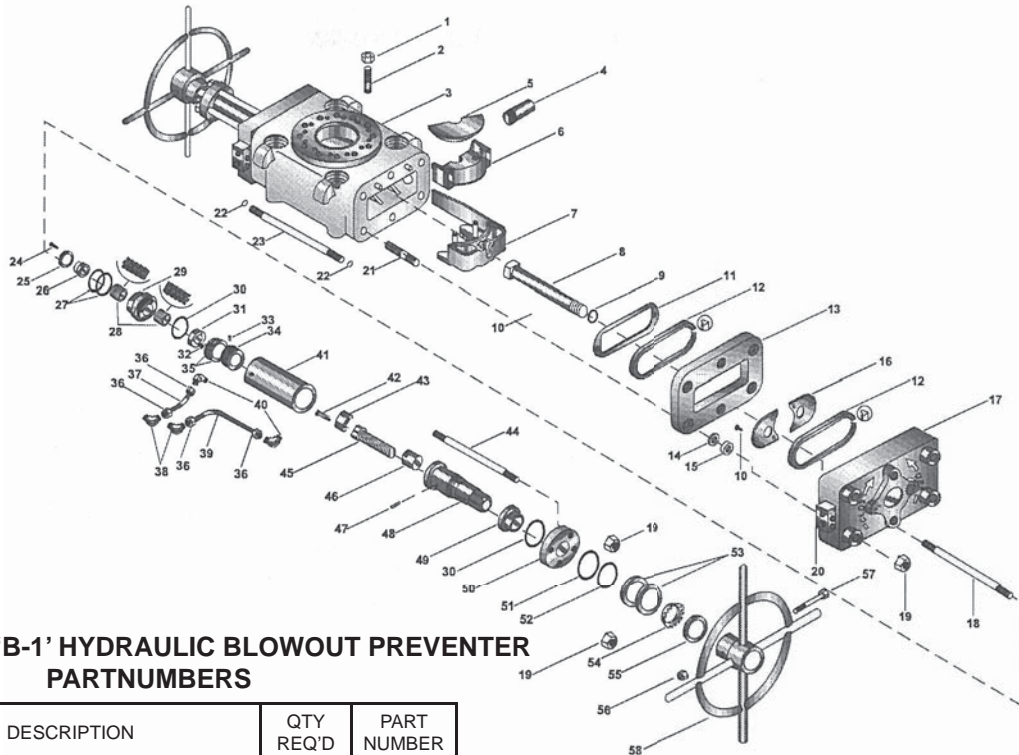


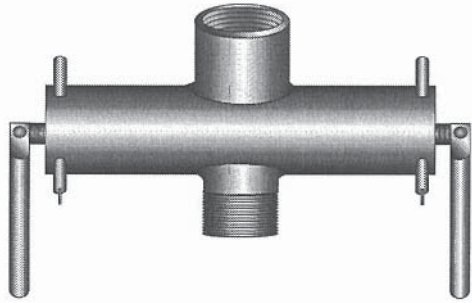
Table 47.1: TYPE 'B-1' HYDRAULIC BLOWOUT PREVENTER PARTNUMBERS

ITEM	DESCRIPTION	QTY REQ'D	PART NUMBER
1	NUT	24	3E-23594
2	STUD	24	3E-23593
3	BODY	1	N/A
4	BULL PLUG	2	3E-19451
5	TOP RUBBER RETAINER PLATE	1	-
6	RUBBER	2	-
7	BOTTOM SLIDE	1	-
8	PISTON ROD	2	3E-80518
9	O-RING	2	3E-18129
10	HEX HEAD SCREW	16	3E-85958
11	GASKET RETAINER	2	3E-69831
12	SEAL RING	4	3E-17601
13	SPACER	2	3E-69830
14	RUBBER SPACER	8	3E-69827
15	SPACER RETAINER	8	3E-69826
16	REAINER PLATE	4	3E-17728
17	END PLATE SUB ASSEMBLY (L.H.)	1	N/A
-	END PLATE SUB ASSEMBLY (R.H.)	1	N/A
18	SHORT TIE ROD	4	3E-64270
19	NUT	16	3E-16747
20	PIPE PLUG	4	3E-14692
21	BODY STUD	8	3E-69829
22	O-RING	4	3E-19337
23	BUDY TUBING	2	3E-64296
24	CAP SCREW	6	3E-64327
25	BOTTOM RETAINER PLATE	2	3E-64272
26	RAM GUIDE	2	3E-64275
27	O-RING	4	3E-26161
28	PACKING SET	4	3E-64318
29	PACKING HOLDER	2	3E-64271
30	O-RING	4	3E-23470

ITEM	DESCRIPTION	QTY REQ'D	PART NUMBER
31	TOP RETAINER PLATE	2	3E-64273
32	CAP SCREW	6	3E-28898
33	SET SCREW	4	3E-31213
34	PISTON	2	3E-64274
35	PACKING	4	3E-64280
36	NUT	8	3E-69341
-	SLEEVE	8	3E-69342
37	SHORT END TUBE	2	3E-64301
38	ELBOW BODY	4	3E-64317
39	LONG END TUBE	2	3E-64300
40	ELBOW BODY	4	3E-65223
41	CYLINDER	2	3E-64266
42	CAP SCREW	4	3E-43706
43	LOCKING KEY	2	3E-64419
44	LONG TIE ROD	4	3E-69828
45	FEED SCREW	2	3E-64290
46	THREADED BUSHING, L. "V"V'H.	2	3E-19475
47	DOWEL PIN	4	3E-17359
48	FEED SCREW NUT BODY	2	3E-62558
49	INSIDE THRUST WASHER	2	3E-68543
50	CYLINDER END PLATE	2	3E-64268
51	O-RING	2	3E-17468
52	BACK-UP RING	2	3E-68542
53	THRUST WASHER	4	3E-62553
54	LOCK WASHER	2	3E-20840
55	LOCK NUT	2	3E-20839
56	NUT	2	3E-13090
57	BOLT	2	3E-17336
58	HANDWHEEL	2	N/A
59	PIPE PLUG (NOT SHOWN, LOCATED IN CYLINDER)	2	3E-24222
+	+(HANDWHEEL EXTENSION KIT - NEEDED)	(2)	N/A

+ Drive tube not included. User must furnish 2-3/8", 8RD EUE 'J-55" oilfield tubing of appropriate length.
THESE HANDWHEEL EXTENSIONS ARE REQUIRED FOR EVERY INSTALLATION

Blowout Preventers



Type 'G' Blowout Preventer

Table 48.1: TYPE 'G' BOP - ENGINEERING DATA

TUBING O.D.	2-3/8 in.	2-7/8 in.	3-1/2 in.
Working Pressure	1500 psi / 10300 kPa	1500 psi / 10300 kPa	1500 psi / 10300 kPa
Test Pressure	3000 psi / 20700 kPa	3000 psi / 20700 kPa	3000 psi / 20700 kPa
Approximate Weight	30 lb / 14 kg	40 lb / 18 kg	50 lb / 23 kg
Overall Height	9-1/4 in. / 234.9 mm	9-3/4 in. / 247.65 mm	10-1/4 in. / 260.35 mm
Overall Width	3-1/4 in. / 82.55 mm	3-3/4 in. / 95.25 mm	4-1/4 in. / 107.95 mm
OVERALL LENGTH, RAMS CLOSED	18-1/2 in. / 469.90 mm	18-1/2 in. / 469.90 mm	20 in. / 508 mm
TUBING THREAD SIZE	EUE 8RD / 499.90 mm	EUE 8RD / 499.90 mm	LP 8V / 508 mm

Guiberson Tubing Blowout Preventers are designed to contain well pressure when swabbing or handling sucker rods or small diameter tubing. In swabbing applications the preventer can supplement the lubricator, allowing removal of the oil saver. A single unit may be employed above the master valve, or two preventers may be stacked and the lower one fitted with blind rams in place of the master valve. The Tubing Blowout Preventer uses a special rubber packing element, molded integrally to a steel slide for maximum safety and freedom from leakage. The chamfered tops of the rubber elements allow them to deform under pressure without fouling the housing, ensuring easy retractability. The drive screws of the preventer are located at the center of the sealing surface of the rubber, off-center of the rams, for maximum positive seal against the sinker bar, tubing, or rod. An O-ring seal around the rams prevents pressure bypass in any position.

Table 48.2: TYPE 'G' TUBING BLOWOUT PREVENTER COMPLETE - PARTS NUMBERS

PREVENTER I.D. [in. / mm]	TUBING O.D. (in.)	FIELD THREAD SIZE	FIELD CONNECTIONS			ASSEMBLY NUMBER BY RUBBER I.D.				BODY LESS RAMS
			BOX	PIN						
2 / 50.80	2-3/8	8RD EUE	BOX	PIN	3E-26278	3E-26281	3E-26284	-	-	3E-83913
2-1/2 / 63.50	2-7/8	8RD EUE	BOX	PIN	3E-26617	3E-26639	3E-26640	3E-26641	-	3E-83914
3 / 76.20	3-1/2	LP8V	BOX	PIN	3E-26728	-	3E-26730	3E-26731	3E-26166	3E-83915

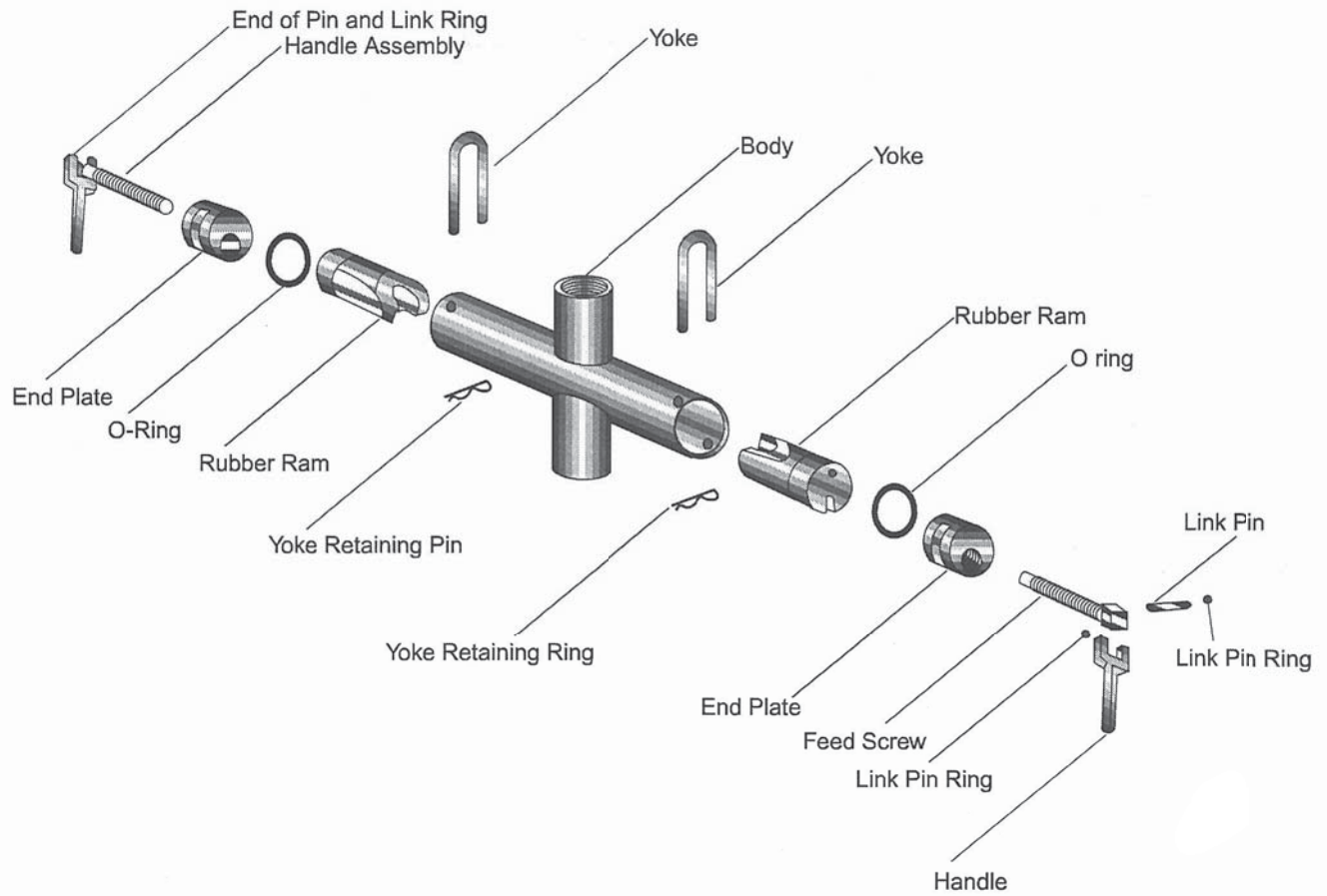


Table 49.1: TYPE 'G' TUBING BLOWOUT PREVENTERS PART NUMBERS

I.D. (in.)		2	2-1/2	3
O.D. (in.)		2-3/8	2-7/8	3-1/2
Description	Qty Req'D	Part #	Part #	Part #
BODY - MALE	1	3E-26246	3E-26619	3E-26733
RUBBER RAM (2 PCS)	(1 SET)	*	*	*
LINK PIN	2	3E-27010	3E-26146	3E-26146
LINK PIN RING	4	3E-13762	3E-13762	3E-13762
HANDLE	2	3E-26972	3E-26144	3E-26144
END PLATE	2	3E-26977	3E-26635	3E-27486
FEED SCREW	2	3E-26971	3E-26976	3E-26976
YOKE	2	3E-24571	3E-26634	3E-27484
YOKE RETAINING RING	2	3E-54509	3E-54509	3E-54509

* See preventer rams table for assembly numbers.

Table 49.2: TYPE 'G' BOP RUBBER RAM PART NUMBERS

RAM I.D. (in.)	PREVENTER I.D.		
	2-3/8	2-7/8	3-1/2
	Part #	Part #	Part #
BLANK	3E-28262	3E-28263	3E-28264
9/16	-	3E-45019	3E-59388
5/8	-	3E-44969	3E-59393
3/4	-	3E-66458	3E-59410
7/8	-	3E-54571	3E-59389
1	-	3E-59386	-
1.050	-	3E-41424	3E-45056
1-1/8	3E-28354	3E-28336	3E-28365
1-1/4	3E-28355	3E-28331	3E-28366
1.315	3E-45055	3E-44109	3E-44057
1-3/8	-	3E-59387	-
1-1/2	3E-28356	3E-28337	3E-28367
1-5/8	-	-	-
1.660	-	3E-43629	3E-44963
1-3/4	3E-28357	3E-28346	3E-28368
1.900	-	3E-43630	3E-45609
2.063	-	-	3E-59394

RAMS sold individually (2 per set)

Blowout Preventers

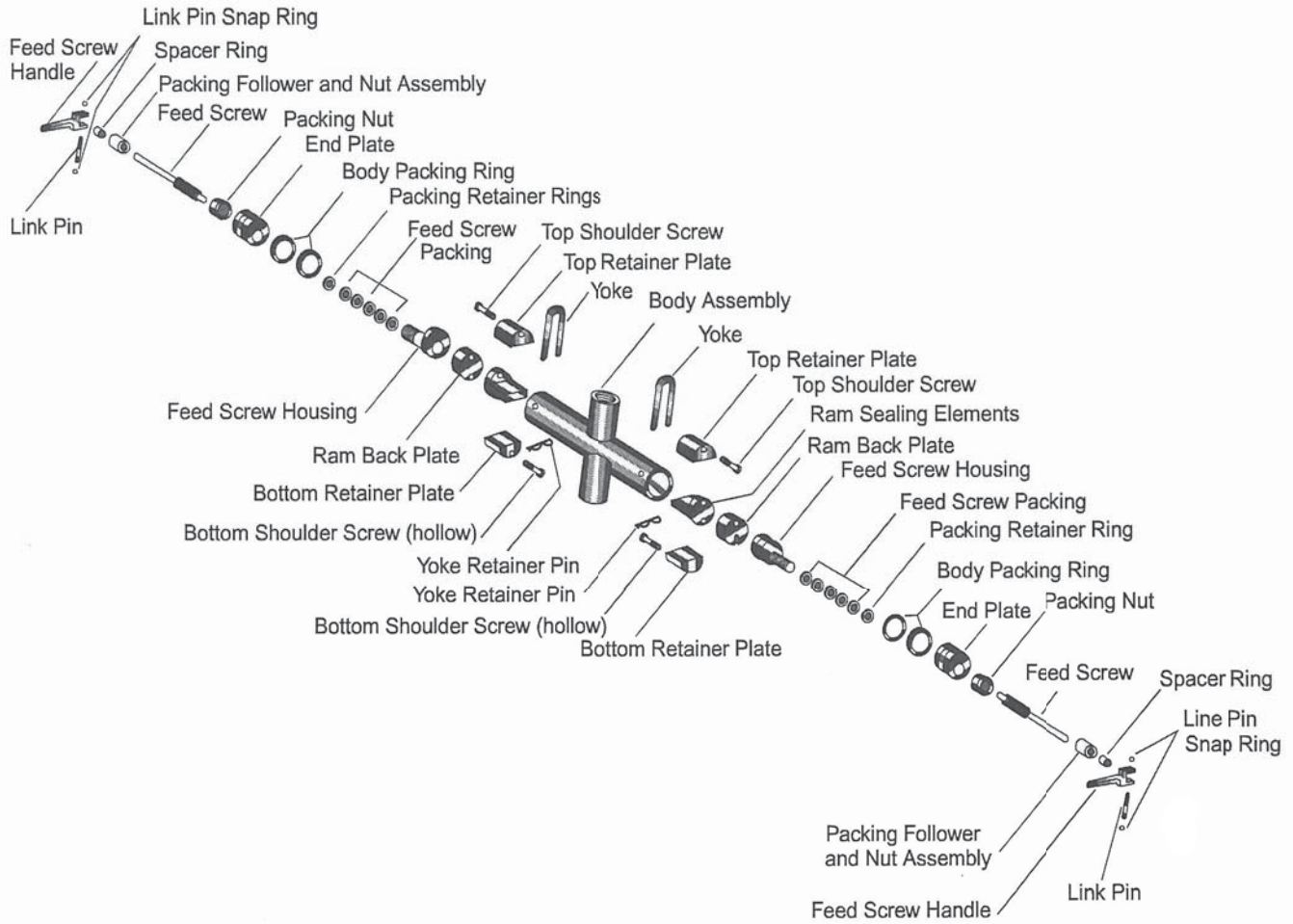
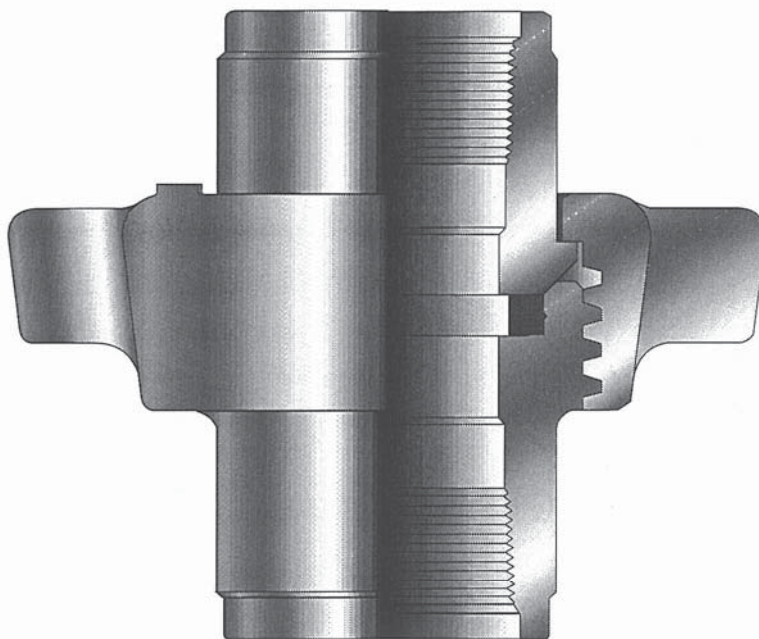


Table 50.1: TYPE 'T' HI-TEMP BLOWOUT PREVENTER

DESCRIPTION	QTY REQ'D	PART NUMBER
ASSEMBLY COMPLETE		
1-1/4 in.	-	3E-61955
BODY ASSEMBLY	1	3E-55765
BODY PACKAGE RING	4	3E-55221
END PLATE	2	3E-55770
FEED SCREW	2	3E-55771
FEED SCREW HOUSING	2	3E-55772
FEED SCREW PACKAGE	2 SETS	3E-55778
FEED SCREW HANDLE	2	3E-26144
LINK PIN	2	3E-26146
LINK PIN RING	4	3E-13762
PACKAGE FOLLOWER	2	3E-55773
PACKING NUT	2	3E-55776
PACKING RETAINER RING	4	3E-55777
RUBER RAM ASSEMBLY	2	-
SPACER RING	2	3E-55782
YOKE	2	3E-44253
YOKE RETAINER PIN	2	3E-54509

Table 50.2: TYPE 'T' BOP RUBBER RAM ASSEMBLY

RUBBER SIZE (in.)		BLANK	1-1/4	1-1/2
PART NAME	QTY REQ'D	PART #	PART #	PART #
ASSEMBLY COMPLETE	2	-	3E-58073	3E-58076
BOTTOM RETAINER PLATE	2	3E-55768	3E-58071	3E-58068
BOTTOM SHOULDER SCREW	2	3E-55769	3E-55769	3E-55769
RAM BACK PLATE	2	3E-55781	3E-55781	3E-55781
RAM SEAL ELEMENT	2	3E-55780	3E-58072	3E-80464
TOP RETAINER PLATE	2	3E-55783	3E-58070	3E-58066
TOP SHOULDER SCREW	2	3E-55784	3E-55784	3E-55784



Seal-O-Matic Union

Unions

Guiberson offers a complete line of unions, designed and built to provide the fastest, most convenient, and safest coupling available.

Available in a wide range of sizes, with tubing or line pipe threads, Guiberson unions are made of extra-strength alloy steel with durable rubber components developed in the Guiberson rubber laboratories. Maximum strength and ease in making and breaking connections is assured by use of heavy-duty Acme threads at the seal connection. Full thread profile is maintained throughout the connection to ensure easy starting and eliminate thread damage that occurs when the crest of the first thread diminishes.

Mating sealing surfaces are conical to provide a tight seal even when the two parts are not perfectly aligned. This important feature allows standard Guiberson unions to be used in many applications where special misalignment type unions would otherwise have to be employed. Tight sealing blanking plugs are available for all Guiberson unions. These plugs can be furnished in plain versions, or with 1/2 in. pipe connections for gauges, etc.

Seal-O-Matic Unions

Seal-O-Matic unions use a special rubber seal ring for positive sealing with minimum torque. This ring snap-fits into a detent within the hub to prevent its loss.

Seal-O-Matic unions are available in 1 in. to 4 in. line pipe sizes.

Unions

Table 52.1: TYPE 'V' SEAL-O-MATIC UNIONS - PART NUMBERS

COLD WORKING PRESSURE	4,000 CWP PSI 27,580 kPa	6,666 CWP PSI 45,962 kPa	10,000 CWP PSI 68,920 kPa
COLOR CODE	Yellow & Silver	Red & Silver	Green & Silver
PART NAME AND SIZE:	Part Number	Part Number	Part Number
1 in. 11-1/2 in. 'V' UNION: WITH WING NUT	N/A	N/A	3E-20707
1- 1/4 in. 11-1/2 in. 'V' UNION: WITH WING NUT	N/A	N/A	3E-20713
1-1/2 in. 11-1/2 in. 'V' UNION: WITH WING NUT	N/A	N/A	3E-20719
2 in. 11-1/2 in. 'V' UNION: WITH WING NUT	N/A	3E-12357	3E-20725
2-1/2 in. 8V UNION: WITH WING NUT	3E-17099	3E-12332	N/A
3 in. 8V UNION: WITH WING NUT	3E-17100	3E-12333	N/A
4 in. 8V UNION: WITH WING NUT	3E-17101	3E-12385	N/A
COLOR CODE 2-3/8 in EUE 8RD UNION COMPLETE WITH WING NUT 2-7/8 in. EUE 8RD UNION COMPLETE WITH WING NUT	N/A	RED AND BLUE 3E-56701 3E-56704	N/A

NOTE: When ordering specify part number, size, and type. Other threads available on special order at additional charge.

Table 52.2: BLANKING PLUGS FOR SEAL-O-MATIC UNIONS - PART NUMBERS

PART NAME	1 in. Part #	1-1/2 in. Part #	2 in. Part #	4 in. Part #
SOLID BLANKING PLUG	3E-17191	3E-17193	3E-17194	N/A
BLANKING PLUG WITH 1/2 in. NPT TAP	N/A	3E-17200	3E-10362	3E-13294

Table 52.3: SEAL RINGS FOR SEAL-O-MATIC UNIONS - PART NUMBERS

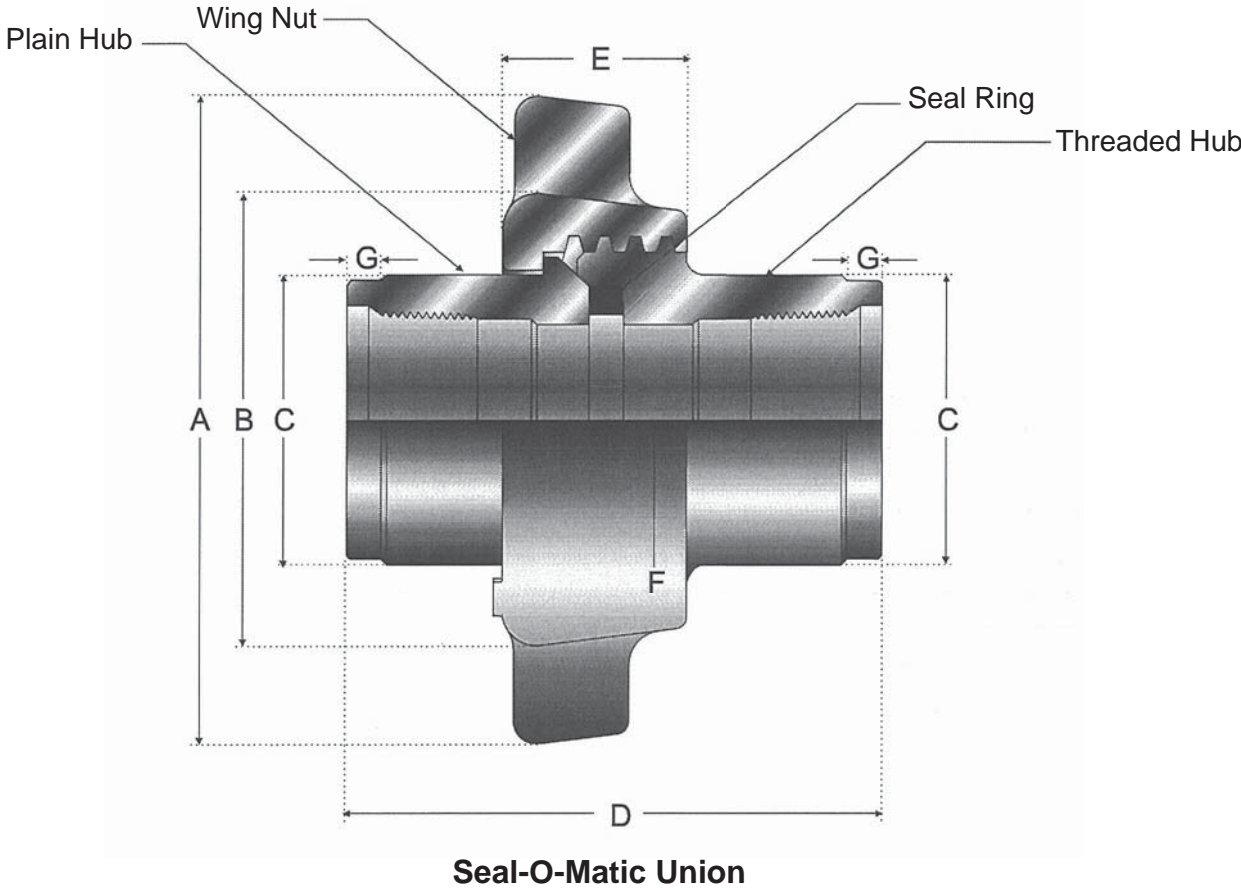
SIZE (In.)	PART NUMBER	4,000 PSI CWP UNION	6,666 PSI CWP UNION	10,000 PSI CWP UNION
1	3E-93533 3E-13172	N/A	N/A	*
1-1/4	3E-13143	N/A	N/A	*
1-1/2	3E-13180	N/A	N/A	*
2	3E-93539** 3E-10233	N/A	*	*
2-1/2	3E-93538* 3E-10175	*	*	N/A
3	3E-10176	*	*	N/A
4	3E-10178	*	*	N/A

* Viton Seal ring - temperature range - 15 °F (-26C) to 400° (204C). Not recommended for steam or high temperature acids. Other sizes available upon request.

** Artic Seal Rings - temperature range -55°F (-48c) to 225°F (107C). Remains flexible at low temperature above 100°F (37C). Ring will exhibit more swelling than other standard rings - other sizes available upon request.

Table 53.1: PIPE WIPERS AND FRAMES- PART NUMBERS

UNION SIZE API LINE PIPE (in.)	THREADS PER IN. API LINE PIPE	DIMENSIONS (in.)									
		WING NUT (Clearance Diameter)							HEX NUT		WEIGHT LB UNION COMPLETE
		A	B	C	D	E	F	G	Across Corners	Across Flats	
1 1-1/4	11-1/2 11-1/2	5.00 5.00	3.00 4.00	2.00 2.25	4.00 4.00	2.00 2.00	1.09 1.44	.25 .25	3.19 4.06	3.00 4.00	4 5
1-1/2 2	11-1/2 11-1/2	6.00 7.00	4.09 5.00	3.00 3.13	4.31 6.00	1.63 2.00	2.00 2.06	.25 .23	4.31 -	4.00 -	7 12-1/2
2-1/2 3	8 8	8.00 9.00	6.00 7.00	4.00 4.38	7.00 8.00	2.06 2.31	3.00 3.13	.48 .47	- -	- -	18 26-1/2
4	8	11.00	8.13	6.00	9.00	2.38	4.09	.48	-	-	40
DIMENSIONS, (mm)											
1 1-1/4	11-1/2 11-1/2	114.30 127.00	76.20 88.90	47.63 57.15	101.60 101.60	39.69 39.69	27.69 36.51	6.35 6.35	80.96 103.19	69.85 88.90	2.0 kg 2.3 kg
1-1/2 2	11-1/2 11-1/2	146/05 177.80	103.89 123.83	66.68 79.38	104.78 147.64	41.28 50.80	42.86 52.39	6.35 5.84	109.54 -	95.25 -	3.2 kg 5.7 kg
2-1/2 3	8 8	203.20 228.60	147.64 169.86	92.08 111.13	177.80 198.44	52.39 58.74	63.50 79.38	12.19 11.94	- -	- -	8.2 kg 12.0 kg
4	8	273.05	206.38	139.70	217.49	60.33	103.89	12.19	-	-	18.1 kg



GW Cup-Type Packers and Cups

Tubing and Casing Cup-Type



**Type 'GW'
Two-Cup Packer**

The GW packer is available in a full range of tubing or casing sizes, in two-cup or four-cup models, with either standard or special cups. In its simplest form, the two cup GW has a one-piece seamless steel mandrel with top and bottom box connections. It has no latch or locking mechanism to be fouled by sand, shale, or mud. It has no slips, does not require tubing weight to be set, and packs-off equally well at any point in the hole. Simplicity of design, rugged construction, and unusually low cost make the GW attractive to the operator for a wide variety of applications.

Standard GW Packer

The Standard GW packer has a seamless steel mandrel with an extra large opening. Standard GW, Standard Heavy-Duty GW and GWD Heavy-Duty cups fit this packer. The Standard GW packer is suitable for all applications involving normal pressures.

Special GW Packer

The Special GW Packer has a full-opening, thick wall, seamless steel mandrel, making it an excellent choice for rugged-duty, high pressure applications. The Special GW and Special Heavy-Duty GW cups fit this packer.

A Universal Packing Element Adaptable to a Variety of Tools

- Well Testing Tools
- Cementing Tools
- Sand Pump Pistons
- Perforation Cleaners
- Production Packers
- Liner Packers
- Junk Pushers
- Casing Testers
- Blowout Preventer Testers



**Type 'GW'
Packer Cup
And Thimble**

Powerful Type GW Packer Cups

The GW cups, used as a packing element on this packer, hold so well that the operator is cautioned to be sure means of by passing fluid is provided when using the GW packer. Where fluid circulation above the cups is required, a Guiberson circulation slide valve may be used. For anchoring the packer, a Guiberson mechanical tubing anchor or a Guiberson hydraulic anchor is recommended.

Choose From Five Varieties in a Wide Range of Sizes

There are five variations of GW packer cups; the Standard, the Standard Heavy Duty, the GWD Heavy-Duty, the Special and the Special Heavy-Duty. Each is available in a wide range of sizes. These cups, plus the two type of GW packers, give the operator virtually unlimited possible combinations from which to choose for the well service purpose. New applications for GW packers and cups are constantly being discovered and reported from the field. Consult your Guiberson representative if you have a particular problem that the GW might solve.

Typical GW Packer Applications

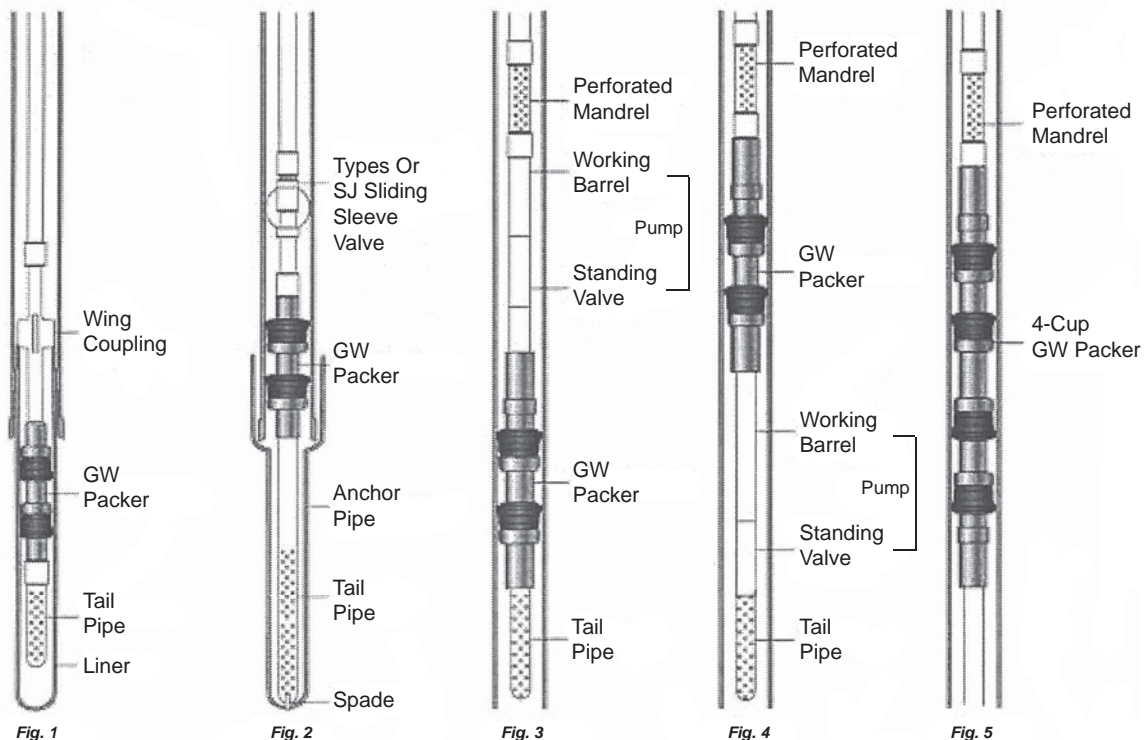
Figure One: The packer off liner -- the GW is run in below a wing or baffle coupling. The coupling serves to center the packer and supports the tubing on the liner. Tubing may also be spaced in liner with anchor-pipe below the packer. Circulation from casing to tubing may be established, if desired, by circulating down the casing past the cup lips and up the tubing. In this installation, cup lips are pointing down with ample fluid passage around the packer before entering liner.

Figure Two: To pack off mud or fluid in casing above packer, the GW is run in above an anchor pipe with a Type S or SJ slide valve above the packer. Valve is open while running in to allow fluid to bypass packer on which cups are assembled. With lips pointing up. With anchor pipe resting on bottom and valve closed, the GW will pack off mud or fluid in casing above the packer. Well may then be swabbed in through the tubing leaving the casing loaded with fluid.

Figure Three: To pack off casing and produce through casing on pumping well without tubing leaks, the GW is run in with a standing valve, working barrel, and perforated mandrel above the packer. in the order named and an anchor pipe below the packer on which the cup lips are pointing up. A double stuffing box is used at the wellhead. Tubing may be filled with fresh oil and the well pumped to produce through the casing. Fresh oil will stay in the tubing and keep the rods lubricated. If tubing should later leak, well could be produced through either casing or tubing without disturbing the installation.

Figure Four: To pack off casing in a pumping well with tubing leaks, the GW is run in with a working barrel, standing valve, and anchor pipe below the packer in the order named and a perforated mandrel above the packer on which the cup lips are pointing up. A double stuffing box is used at the wellhead. Tubing and casing may then be filled with oil or water and the well pumped to produce through either casing or tubing. If it is not possible to fill casing from the surface, the well may still be pumped and tubing and casing filled with well fluid, after which, the well will produce through either casing or tubing as desired.

Figure Five: To pack off in both directions, the GW four-cup packer is run in the well with two cups pointing up and two cups pointing down. Two or more packers may be run in series to isolate specific zones and for spotting operations when used in conjunction with perforated mandrels. The above applications are only a few of many for which this versatile packer may be used. Other possible uses to fit specific well requirements will suggest themselves to the production menu, service man, engineer, or drilling superintendent.



GW Cup-Type Packers and Cups

Type GW Packer Cups

Standard GW

Type GW Standard packer cup is a directional packing element that automatically seals, packing off and holding pressure on the side toward which the lip is pointed. The lip readily passes fluid in the opposite direction, acting as a casing check valve. Developed after many years of research experience and specialization in the manufacturing of flexible-lip, basket-type cups, this pressure seal packer cup is molded of a special oil and gas resistant compound. It has a strong, flexible-lip of oversize diameter, so that an immediate compression of the cup against the casing is obtained for instantaneous and positive sealing. The cup is reinforced with molded-in spring steel wires, interlocked in a metal bushing to seal and hold high pressures. The greater the differential across a GW cup, the tighter the cup seal. The Standard cup is used on the Standard GW packer.

Specials GW

The Special Type GW cup has an extra thick wall for extremely rugged well service, such as high pressure cementing and formation fracture processes. It fits the Special GW packer.

Standard Heavy-Duty GW and Special HeavyDutyGW

Heavy-duty cups are available in both the Standard and Special types. These cups have thicker lips, are more heavily reinforced, and are molded from compounds specifically formulated for heavy-duty applications. These cups work on the Standard and Special GW packers, respectively.

Heavy Duty GWD

The GWD is a heavy-duty packer cup that incorporates two rows of interlocking steel springs as molded-in reinforcement. This unique design makes the cup especially effective in high pressure, rugged applications such as testing and fracturing. This cup fits the Standard GW packer.

Table 56.1: SPECIAL GW PACKERS AND CUPS -- ENGINEERING DATA

CASING OR TUBING		TUBING O.D.	THIMBLE Max Metal O.D.	CUP		Mandrel I.D.	APPROXIMATE LENGTH		FIELD THREAD SIZE (in.)	
O.D.	Weight*			O.D.	I.D.		2 Cup	4 Cup		
Standard / Metric [in. / mm] *[lb.ft / kg/m]										
3 / 76.2 3 1/8 / 79.4 3 1/2 / 84.9	-	1.900 / 48.26	2.875 / 73.03 2.875 / 73.03 3.250 / 85.60	3.031 / 76.99 3.125 / 79.38 3.370 / 85.60	1.938 / 49.23	1.610 / 40.89	22	-	11 1/2V Pipe Thread	
5 1/2 / 140.0 5 1/2 / 140.0 5 1/2 / 140.0 5 1/2 / 140.0 6 / 152.0	13.0-15.0 / 19.34-2.32 15.5-17.0 / 23.06-25.30 17.0-20.0 / 25.30-29.76 23.0 / 34.22 14.0-18.0 / 20.83-26.78	2 3/8	4.625 / 177.48 4.625 / 177.48 4.625 / 177.48 4.625 / 177.48 5.125 / 130.18	5.120 / 130.05 4.990 / 126.75 4.910 / 124.71 4.910 / 124.71 5.580 / 141.73	2.406 / 61.11	2.000 / 50.80	24	46	8 RD EUE	
6 5/8 / 168.0 7 / 178.0	24.0-28.0 / 35.71-41.66 38.0 / 56.54		5.625 / 142.88	5.950 / 151.13						
6 5/8 / 168.0 7 / 178.0 7 / 178.0 7 / 178.0	32.0 / 47.62 17.0-20.0 / 25.32-29.76 22.0-24.0 / 32.74-35.71 26.0-30.0 / 38.69-44.64	2 7/8	5.375 / 136.53 6.000 / 152.40 6.000 / 152.40 5.875 / 149.23	5.755 / 146.18 6.562 / 166.67 6.480 / 164.59 6.290 / 159.77	2.906 / 73.81	25.00 / 63.50	26	50		
6 5/8 / 168.0 7 / 178.0	24.0-28.0 / 35.71-41.66 38.00 / 56.54		5.625 / 142.88	5.950 / 151.13						
6 5/8 / 168.0 7 / 178.0 7 / 178.0 7 / 178.0	32.0 / 47.62 17.0-20.0 / 25.32-29.76 22.0-24.0 / 32.74-35.71 26.0-30.0 / 38.69-44.64		5.375 / 136.53 6.000 / 152.40 6.000 / 152.40 5.875 / 149.23	5.755 / 146.18 6.562 / 166.67 6.480 / 164.59 6.290 / 159.77						
8 / 203.0 8 5/8 / 219.0 8 5/8 / 219.0 8 5/8 / 219.0 9 / 229.0 9 5/8 / 244.0	26.0 / 38.69 28.0-36.0 / 41.66-53.57 36.0-40.0 / 53.57-59.52 40.0-49.0 / 59.52-72.91 40.0-45.0 / 59.52-66.96 36.0-43.5 / 53.57-64.73		7.250 / 184.15 7.375 / 187.33 7.375 / 187.33 7.375 / 187.33 7.375 / 187.33 8.250 / 209.55	7.454 / 189.33 8.062 / 204.77 7.880 / 200.15 7.760 / 197.10 8.174 / 207.62 8.950 / 227.33	3.531 / 89.69	3.000 / 76.20	30	58		

GW Cup-Type Packers and Cups

Table 57.1: STANDARD GW PACKERS AND CUPS -- ENGINEERING DATA

CASING OR TUBING		TUBING SIZE	THIMBLE Max Metal O.D.	CUP		Mandrel I.D.	APPROXIMATE LENGTH		FIELD THREAD CONNECTIONS	
O.D.	Weight*			O.D.	I.D.		2 Cup	4 Cup		
Standard / Metric [in. / mm] *[lb.ft / kg/m]										
2 3/8 / 6.84 2 7/8 / 13.09	4.6 8.8	1.050 / 26.67	1.875 / 47.63 1.875 / 47.63	2.000 / 50.80 2.285 / 58.04	1.094 / 27.79	0.750 / 19.05	20	-		
2 7/8 / 9.52 3 1/2 / 12.65-15.18 3 1/2 D.P. / 19.79	6.4 8.5 - 10.2 13.3	1.315 / 33.4	2.250 / 57.15 2.750 / 57.15 2.438 / 61.93	2.490 / 63.25 3.020 / 76.71 2.770 / 70.36	1.440 / 34.14	0.870 / 22.10	22	-	11 1/2v Pipe Thread	
4 / 14.14 4 / 16.37-17.26	9.5 11.0-11.6	1.900 / 48.26	3.250 / 82.55 3.250 / 82.55	3.590 / 91.19 3.526 / 89.56	1.938 / 49.23	1.610 / 40.89	22	-	10 RD NUE	
4 1/2 / 1.4-18.75 4 3/4 / 23.81	9.5-12.6 16.0	2 3/8 / 60.33	3.688 / 93.68	4.160 / 105.66	2.406 / 61.11	2.000 / 50.80	24	46	8 RD EUE	
4 1/2 D.P. / 22.77-26.93 5 / 19.34-22.32 5 / 26.78-31.25	15.3-18.1 13.0-15.0 18.0-21.0		3.500 / 88.90 4.125 / 104.78 4.000 / 101.60	3.910 / 99.31 4.510 / 114.55 4.336 / 110.13						
5 1/2 / 19.34-22.32 5 1/2 / 23.06-25.30 5 1/2 / 25.30-29.76 5 1/2 / 34.22	13.0-15.0 15.5-17.0 17.0-20.0 23.0		4.625 / 117.48 4.625 / 117.48 4.625 / 177.48 4.500 / 114.30	5.120 / 130.05 4.990 / 126.75 4.910 / 124.71 4.910 / 124.71	2.906 / 73.81	2.500 / 63.50	26	50		
5 3/4 / 20.83-25.30 6 / 29.76	14.0-17.0 20.0		4.183 / 122.25	5.360 / 136.14						
6 / 20.83-26.78	14.0-18.0		5.125 / 130.18	5.580 / 141.73	3.531 / 89.69	3.000 / 76.20	30	58		
6 5/8 / 29.76-32.74 7 / 47.62-52.53	20.0-22.0 32.0-35.3		5.625 / 142.88	5.950 / 154.69						
6 5/8 / 35.71-41.66 7 / 56.54	24.0-28.0 38.0		5.625 / 142.88	5.950 / 151.13	2.906 / 73.81	2.500 / 63.50	26	50		
7 / 25.30-29.76 7 / 32.74-35.71 7 / 38.69-44.64	17.0-20.0 22.0-24.0 26.0-30.0		6.000 / 152.40 6.000 / 152.40 5.875 / 149.23	6.562 / 166.67 6.480 / 164.59 6.290 / 159.77						
5 1/2 / 19.34-22.32 5 1/2 / 23.06-25.30 5 1/2 / 25.30-29.76 5 1/2 / 34.22	13.0-15.0 15.5-17.0 17.0-20.0 23.0		2 7/8 / 73.03	4.625 / 117.48 4.625 / 117.48 4.625 / 177.48 4.500 / 114.30	6.562 / 130.05 4.990 / 126.75 4.910 / 124.71 4.910 / 124.71	3.531 / 89.69	3.000 / 76.20	30		58
5 3/4 / 20.83 6 / 29.76	14.0-17.0 20.0			4.813 / 122.25	5.360 / 136.14					
6 / 20.83-26.78	14.0-17.0 20.0	4.813 / 130.18		5.360 / 141.73	6.090 / 151.13	6.000 / 152.40 6.000 / 152.40 5.875 / 149.23 6.375 / 161.93 6.375 / 161.93 6.375 / 161.93	3.000 / 76.20	58		
6 5/8 / 35.71-41.66 7 / 56.54	20.0-22.0 32.0-35.3	5.625 / 142.88		6.090 / 151.13						
7 / 25.30-29.76 7 / 32.74-35.71 7 / 38.69-44.64 7 5/8 / 38.84-44.19 7 5/8 / 44.19-50.15 7 5/8 / 58.03	17.0-20.0 22.0-24.0 26.0-30.0 26.1-29.7 29.7-33.7 39.0	6.000 / 152.40 6.000 / 152.40 5.875 / 149.23 6.375 / 161.93 6.375 / 161.93 6.375 / 161.93		6.562 / 166.67 6.480 / 164.59 6.290 / 159.77 7.020 / 178.31 6.900 / 175.26 6.688 / 169.88	4.531 / 115.09	4.000 / 101.60	37	72		
8 5/8 / 41.66-53.57 8 5/8 / 53.57-59.52 8 5/8 / 59.52-72.91 9 / 59.52-66.96 9 5/8 / 53.57-64.73 9 5/8 / 69.94-79.61 10 3/4 / 48.73-82.58 11 3/4 / 56.54-89.28 13 3/8 / 71.42-107.14	28.00-36.0 36.00-40.0 40.00-49.0 40.00-45.0 36.00-43.5 47.00-53.5 32.75-55.5 38.00-60.0 48.00-72.0	7.375 / 187.33 7.375 / 187.33 7.375 / 187.33 7.375 / 187.33 8.250 / 209.55 8.250 / 209.55 9.500 / 241.30 10.375 / 263.53 11.875 / 301.63		8.062 / 204.77 7.885 / 200.28 7.760 / 197.10 8.174 / 207.62 8.950 / 227.33 8.781 / 223.04 10.210 / 259.33 11.170 / 283.72 12.739 / 323.57						

Type GW Packer Cups

Table 58.1: GW PACKER CUP

TBG / CASING		GW-SS (Std. Service)	GWD-HD (Hvy. Duty)	GWD-ST (Steam)	OBSOLETE (Spci-GW)	GWD-SP (Seal Pos.)	GWD-HD HNBR
O.D. (in.)	Weight (lb)						
2 3/8	4.60	3E-10716					
2 7/8	6.40 8.80	3E-10047		3E-10047 - 002 --			
3 1/8	-					3E-16370	
3 1/2	8.50 - 10.20 12.80 - 13.20	3E-14960 3E-14082		3E-14960 - 002 --		3E-16146	
4	9.50 10.80 - 11.90	3E-14036 3E-14036					
4 1/2	9.50 - 12.60 13.50 - 18.10	3E-30509 3E-10430	3E-54864 3E-54430	3E-30509 - 002 3E-10430 - 002			3E-54864-001 3E-54430-001
5	13.0 - 15.0 18.0 - 21.0	3E-25389 3E-17831	3E-54865 3E-54866				
5 1/2	13.0 - 15.0 15.5 - 17.0 17 - 23	3E-22624 3E-22626 3E-19710	3E-93989 3E-54752 3E-54760	3E-87318 3E-87317 3E-87316	3E-13654 3E-15277 3E-13657	3E-30848 3E-30847 3E-30846	3E-93989-001 3E-54752-001 3E-54760-001
5 3/4	14.0 - 17.0	3E-14714					
6	14.0 - 18.0 20.00	3E-14721 3E-14714	3E-54721 3E-54714	3E-14721-002 3E-14714-002	3E-16178		3E-54721-001 3E-54714-001
6 5/8	20.0 - 22.0 24.0 - 28.0 32.00	3E-19389 3E-19277 3E-19278	3E-54872 3E-54870 3E-54795	3E-87319 3E-54870-002 --	-- 3E-14962 3E-15490	-- 3E-30851 3E-30850	3E-19389-001 -- --
7	17.0 - 20.0 22.0 - 24.0 26.0 - 30.0	3E-17819 3E-17461 3E-17356	3E-54819 3E-54796 3E-54810	3E-87322 3E-87323 3E-87321	3E-14648 3E-14650 3E-14649	3E-30854 3E-30853 3E-30852	3E-54819-001 3E-54796-001 3E-54810-001
7 5/8	26.4 - 29.7 29.7 - 33.7 39.00	3E-19391 3E-21293 3E-23051	3E-54391 3E-54825 3E-54051				
8	26.00					3E- 93421	
8 5/8	28.0 - 36.0 36.0 - 40.0 40.0 49.0	3E-16111 3E-16113 3E-16115		3E-87326 3E-87325 3E-87327		3E-16110 3E-16112 3E-16114	
9	40.0 - 45.0	3E-15941	3E-54941	3E-15941-002		3E-15942	3E-54941-001
9 5/8	36.0 - 43.5 47.0 53.5	3E-10354 3E-33850	3E-54032 3E-33850-003	3E-90100 --		3E-14970 --	
10 3/4	32.5 - 55.5	3E-13197	3E-54034	3E-13197-002			3E-54034-001
11 3/4	38.0 - 60.0	3E-14246					
13 3/8	48.0 - 72.0	3E-16298	3E-54036	3E-16298-002			3E-54036-001

Type CP Casing Packer Cup



Type CP

The Type CP casing packer cup is a one-piece unit designed for use between casing strings. The CP is used as a liner and a means of sealing inner string, and for protecting low-pressure productive sands during cementing, acidizing and similar operations.

Made from oil-resistant compounds developed in the Guiberson Rubber Laboratories especially for oilfield use, the CP is reinforced with spring steel wires and a steel bushing, molded in as an integral part of the cup. The CP cup may be run facing up or down as required and is easily assembled by slipping it over a joint of inner casing and securing it with set screws or by welding. Many special applications for this cup will be apparent to the production specialists/production personnel.

Engineering Data

Casing Size		Pipe O.D. Cup Packs Around (in)	Cup O.D. (in)	Metal Heel O.D. (in)	Cup I.D. (in)	Cup Height (in)	O-Ring Part #	Set Screw Part #	Cup Part #
O.D. (in)	Wgt. (lb/ft)								
5 1/2"	14-17	3 1/2	5.13	4.62	3.50	6	3E-17469	3E-24890	3E-20601
7"	23-26	4 1/2	6.47	6.16	4.55	7	3E-18226	3E-24890	3E-17786

Type PN Tubing Packer Cup

A light-duty cup built for maximum flexibility, low pressure differentials and for use in live oil. Not a swab cup and should not be used as such. Cups are used primarily for lifting hydraulic pump units to the surface for servicing but are also suitable for other applications within the limitations mentioned above. Made from oil-resistant compounds developed in the Guiberson Rubber Laboratories especially for oilfield use, the PN is reinforced with spring steel wires and a steel bushing molded in as an integral part of the cup. GW packer cup thimbles may be used with this cup.



Type PN

Engineering Data & Price List

TUBING SIZE			CUP DIM.		CUP
Nominal Size	Wgt. (lb/ft)	I.D. (in)	O.D. (in)	I.D. (in)	Part #
2"	4.6 - 4.7	1.995	2.000	1.094	3E-23492
2 1/2"	6.4 - 6.5	2.441	2.490	1.344	3E-23493
3"	8.5 - 10.2	3.018 - 2.922	3.020	1.344	3E-26576

Note:

When ordering specify part number, type and tubing size. All prices subject to change without notice.



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