



RELEASING & CIRCULATING OVERSHOT

INTRODUCTION

The Pioneer range of releasing and circulating overshots provide the simple and effective answer to external engagement, packing-off and pulling of fish.

Manufactured from high quality alloy steels, these tools are designed to give maximum grip and strength while operating under the most arduous and rugged conditions.

Backed up by an extensive range of standard and customised accessories, Pioneer offers the complete package for your fishing needs.

Pioneer has comprehensive experience in the design and manufacture of various types of oil related tools. If your requirements are not contained within this catalogue, contact us. Our sales and design team are anxious to demonstrate our range of products and versatility, by solving your tooling problems.

“QUALITY & DELIVERY IS OUR PRIORITY”

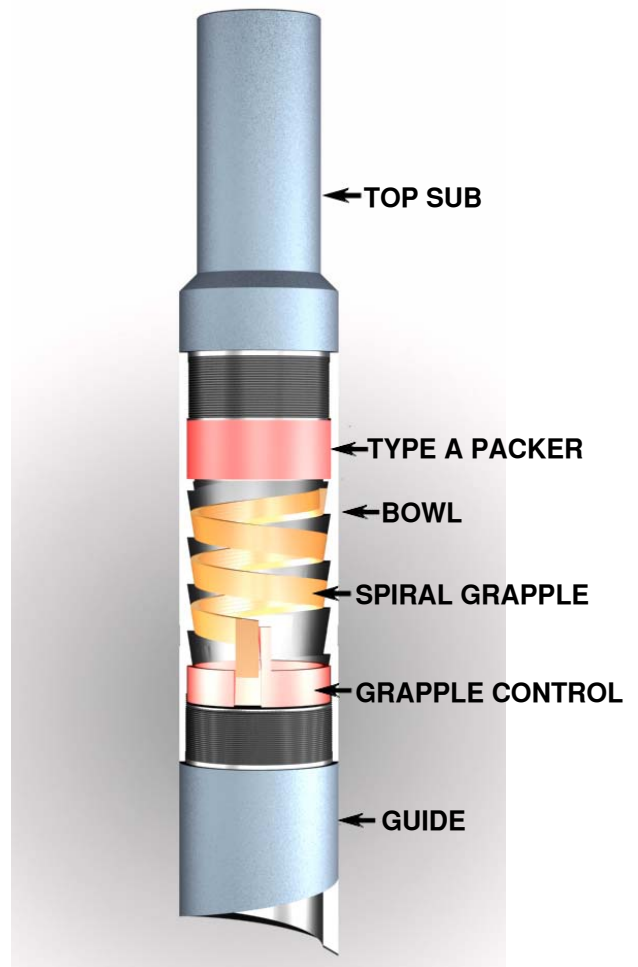
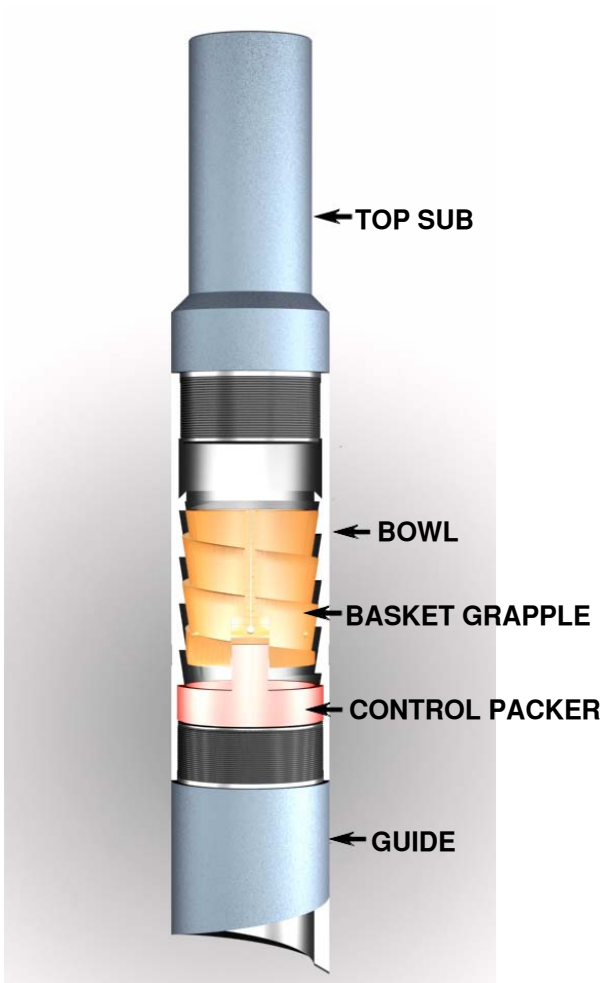
RELEASING & CIRCULATING OVERSHOT



GENERAL

This tool may be furnished with either of two catch mechanisms: a spiral grapple or a basket grapple, both of which operate in a common body. The body is an assembly of a top sub, bowl and guide, and determines the outside diameter of the tool.

Selection of the type of grapple is made by considering the clearance between the tool body and the hole, and the diameter of the fish. In general, a spiral grapple would be selected where the fish diameter is close to the hole diameter. Both types of grapple can pack-off and be used with circulating pumps to assist in pulling the fish.



BOWL

The bowl is a tubular section with a box thread at each end to receive the top sub and guide. The bore of the bowl has a strong left hand helical scroll of taper section, which operates both types of grapple. With the grapple in position and a fish engaged, an upward pull on the bowl moves the tapered section of the scroll up the mating taper of the grapple, causing the grapple to reduce in diameter. Since engagement is over the complete scroll length, the expansion forces created by gripping are transmitted evenly over the bowl. This allows tools to be manufactured which will operate with minimum body diameters without suffering damage to the bowl. A slot in the bore locates and operates the grapple controls.

RELEASING & CIRCULATING OVERSHOT

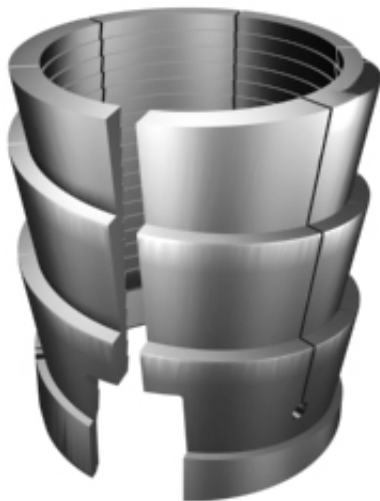
GRAPPLES

The **SPIRAL GRAPPLE** is similar to a left hand coil spring. Its outside diameter has a taper form which mates with the left hand scroll taper in the bowl. Left hand helical serrations in the bore provide the catch wickers and also enable the fish to be released from the overshot without reversing rotation.



Spiral Grapple

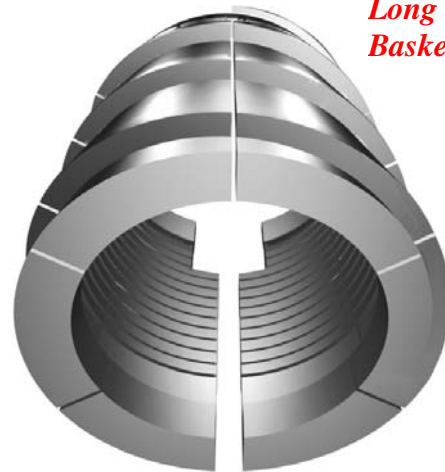
The **BASKET GRAPPLE**, available in three forms, is cylindrical with longitudinal slots through the wall and operates similar to a spring collet. The outside diameter has a left hand helical scroll of taper section which mates with the inside diameter of the bowl. Left hand helical serrations in the bore catch the fish. The left hand wickers permit the fish to be released without reversing rotation.



Plain Basket Grapple

The **PLAIN BASKET GRAPPLE** is wickered through the entire bore. Any plain diameter fish, of correct size, can be engaged and will pass through the grapple. This type of basket grapple is standard and will be supplied unless an alternative is specified.

The **LONG CATCH STOP BASKET GRAPPLE** is designed to engage an upset or coupling. A shoulder in the upper bore stops the fish from passing through the grapple and ensures the correct position for optimum catch and pack-off.



Long Catch Stop Basket Grapple

The **SHORT CATCH STOP BASKET GRAPPLE** is designed to engage a dual diameter fish; e.g., a coupling with a stub end of tubular protruding above it. The bore and wickers are formed in two diameters. The smaller upper diameter engages the stub end of pipe and also acts as a stop against the coupling, ensuring the correct position to catch and pack off the coupling.

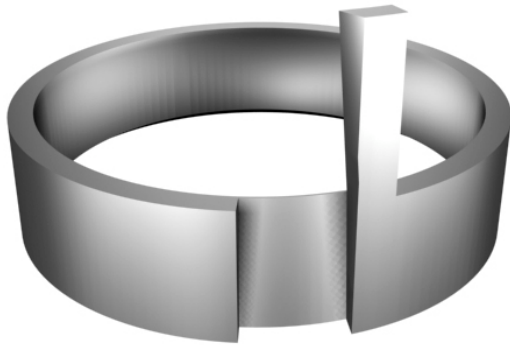
RELEASING & CIRCULATING OVERSHOT



GRAPPLE CONTROLS

Grapple Controls are required with each type of grapple, and act to key the grapple to the overshoot bowl, while allowing the grapple to move axially up and down to perform its catch function. A spiral grapple control is always fitted with a spiral grapple and one of three types of basket grapple control is fitted with a basket grapple.

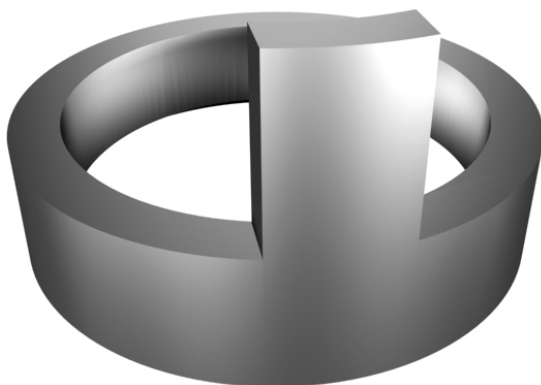
A **SPIRAL GRAPPLE CONTROL** acts solely as a control unit, and does not have either pack-off or mill tooth versions.



Spiral Grapple Control

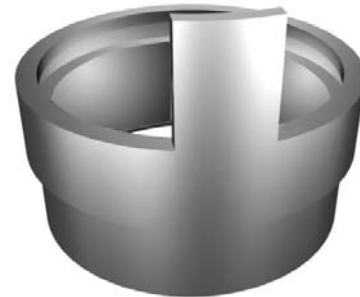
BASKET GRAPPLE CONTROLS can be supplied as plain, packer or mill packer.

A **BASKET GRAPPLE PLAIN CONTROL** acts solely as a control unit and is fitted when pack-off facilities are not required.



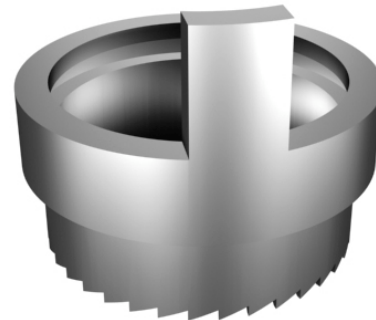
Basket Grapple Plain Control

A **BASKET GRAPPLE CONTROL PACKER** performs the dual function of control and pack-off.



Basket Grapple Control Packer

A **BASKET GRAPPLE MILL CONTROL PACKER** has mill teeth in addition to its control and pack-off facilities.



Basket Grapple Mill Control Packer

NOTE:- Control Packers are supplied complete with inner and outer seals.

GUIDES

Unless otherwise specified, the overshoot will be supplied with a standard cut lipped guide having the same outside diameter as the bowl.



Standard Guide

RELEASING & CIRCULATING OVERSHOT

PACK-OFF SYSTEMS

Two pack-off systems exist, and the type used depends on the grapple assembly selected i.e. spiral or basket.

A type 'A' Packer is always used with a spiral grapple assembly. This is a rubber bush which seals on the bore of the bowl with its outside diameter. The bore has a moulded lip which seals on the outside diameter of the fish and is energised by the circulating fluid. It is essential that the packer corresponds to the catch size when the pack-off system is to be utilised. Type 'A' Packers are easily replaced and it is advantageous to hold spares on site.

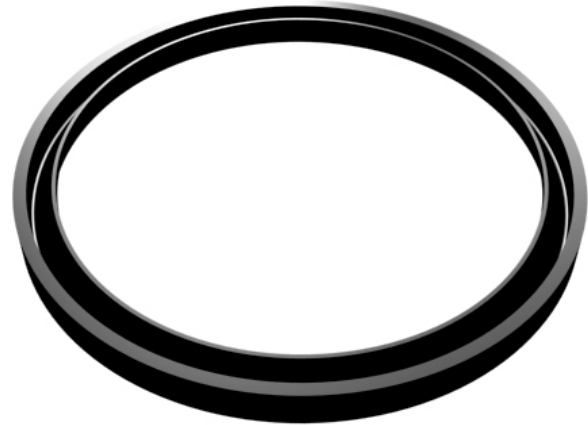


Type 'A' Packer

CONTROL PACKERS are fitted with a basket grapple assembly when pack-off is required, and consists of two independent seals. The inner seal is a chevron type, which when energised, seals the fish outside diameter and the control packer. The outer seal is an 'O' Ring which fits between the control packer and the bore of the bowl. The 'O' ring is slightly compressed by the pin end of the guide. Inner seals must be ordered and fitted to suit the required catch size.

Either a plain or a mill tooth packer may be fitted. The plain control packer is tapered to lead the fish through the seal and into the grapple. The mill tooth control packer has milling teeth on the taper to remove light rags and burrs prior to the fish passing through the seal and entering the grapple.

Inner and Outer seals are common to both types of control packer and are easily replaced on site. It is recommended that spare seals are kept with the overshot.



Control Packer Inner Seal

ADDITIONAL EQUIPMENT

Top Subs can be supplied with extra length fishing neck when technical reasons or operator preference dictate. These should be detailed at time of ordering, specifying the length required and size and type of connection.

Extension Subs may be required when the top of the fish is twisted or waisted some distance down from the break point. These enable the fish to pass completely through the overshot and into the extension, allowing the grapple and pack-off to engage on a good section of the outside diameter of the fish. The extension sub is fitted between the bowl and the top sub. When ordering, the length and outside diameter of the sub and assembly number of the overshot should be specified. Extension subs are available as standard in lengths of 36". However, lengths from 24" to 60" are available to special order.

RELEASING & CIRCULATING OVERSHOT



Extension Sub

An Oversize Guide may be required when the hole size is large enough to allow the overshoot to by-pass the fish. An oversize guide being larger than the overshoot body diameter, will locate the fish and lead it into the grapple. To order, specify the outside diameter required and the overshoot assembly number.

A Wall Hook Guide may be used when the fish is partially hidden in an undercut or recess in the hole, and cannot be encircled by a standard guide. A wall hook guide should be ordered by specifying the outside diameter and length required, and the overshoot assembly number.



Oversize Guide

OPERATING THE OVERSHOT

Run the overshoot on the end of the fishing string. As the overshoot approaches the fish, ensure that the circulating pumps are off. A slow right hand rotation will hold the grapple in its open position while the overshoot is slowly lowered to encase the fish. Full engagement will be accomplished when the fish contacts the lower end of the top sub in a spiral or plain basket grapple assembly, or the stop ring of a long or short catch basket grapple assembly. Any wind up in the fishing string should be released **before** pulling to engage the grapple. An upward pull on the string will close the grapple and ensure the wickers take a secure grip of the fish. No rotation should be employed unless the strain is maintained on the string. If the fish cannot be pulled, the circulating pumps may be started and pressure gradually increased down through the fish assist the pull.

To release the fish, the full weight of the string should be bumped down. This will disengage the tapers locking the grapple. A slow right hand rotation will hold the grapple in its open position while the overshoot is slowly withdrawn.

Pioneer Overshots are designed as standard to engage and release on right hand rotation only, thus avoiding any problems of string break-out.

Left hand overshoots are available to special order.



Wall Hook Guide



RELEASING & CIRCULATING OVERSHOT

CARE AND MAINTENANCE

Pioneer products are manufactured from the finest quality materials to give long and useful service. To obtain this service however, it is essential that tools are dismantled, thoroughly cleaned and inspected after use. Any damaged or excessively worn parts should be replaced. (Pioneer operates a complete spare parts service). If the tool is being returned to a warehouse or storage yard, internal parts should be well lubricated on assembly. Due to the detrimental effect of lubricants on rubber, it is recommended that seals be omitted for long term storage. These may be kept in sealed plastic bags inside the guide. A thread protector should be fitted to the top sub box connection and the outside painted or inhibited.

SELECTION

The numbering system used by Pioneer has been devised to enable the OD of each overshot and its component parts to be readily identified. The assembly numbers for Full Strength versions are the decimal equivalent of the OD and where a Slim Hole assembly is available, this is identified by the next consecutive number. The part number of each component identifies it to its assembly. Examples are as follows :-

7.7/8" OD Full Strength - Assembly No. 0787
7.7/8" OD Slim Hole - Assembly No. 0788
Spiral Grapple for 7.7/8" F.S. - Part No. 0787-4.

TO ORDER A STANDARD ASSEMBLY

Specify:

1. The O.D., type and assembly number from the tables.
2. Type of grapple catch size required.
3. Type of grapple control required.
4. Top Sub connection required.
5. Any additional equipment required, e.g. oversize guide, wall hook guide, extension sub, etc.

REPLACEMENT PARTS

Pioneer recommend that the following replacement parts be shipped with each overshot assembly :-

SPIRAL ASSEMBLIES

Two grapples and three packers for each catch size plus one grapple control.

BASKET ASSEMBLIES

Two grapples and two control packers for each catch size plus two inner and outer seals for control packers.

SPECIAL ORDERS

Pioneer will be pleased to quote for the design and manufacture of overshots to customers' specific requirements. Simply contact our sales office for further information.

Information on other styles of overshot available on request.

As the policy of Pioneer Oil Tools Limited is one of continual product improvement and rationalisation we reserve the right to change designs or specifications or discontinue models at any time without prior notice.

NOTES ON TABLES

1. Abbreviations

- F.S. Full Strength. Designed and manufactured to resist tensile, torsion and impact strains.
- S.F.S. Semi-Full Strength. Designed and manufactured to resist tensile and torsion strains.
- S.H. Slim Hole. Designed and manufactured to resist constant tensile strain only.
- X.S.H. Extra Slim Hole. Designed and manufactured to be used only for lifting

2. Yield loads given in Strength tables (pages 13 & 14 are theoretical and operators should apply a Factor of Safety in line with their normal working practices.

RELEASING & CIRCULATING OVERSHOT



Outside Diameters 3.1/2" – 4.1/8" inclusive

Complete Assembly with Spiral Parts	Ref.	0350 C4741	0357	0363 9270	0388 C1835	0400 C4736	0401 C5104	0413 9105
Type		FS	XSH	XSH	SH	FS	SH	SFS
Maximum Catch Size (Spiral)		2.3/8"	2.7/8"	2.7/8"	3.1/8"	2.7/8"	3.1/8"	3.1/8"
Maximum Catch Size (Basket)		1.7/8"	2.19/32"	2.1/2"	2.5/8"	2.3/8"	2.5/8"	2.5/8"
Assembly Weight (lbs.)		53	49	51	56	64	62	70
Overshot O/Dia.		3.1/2"	3.563"	3.5/8"	3.7/8"	4"	4"	4.1/8"
Top Sub		0350.1 B4742	0357.1	0363.1 9276	0388.1 A1842	0400.1 A4737	0401.1 A5105	0413.1 9106
Bowl		0350.2 B4743	0357.2	0363.2 9271	0388.2 B1836	0400.2 B4738	0401.2 B5106	0413.2 9107
Standard Guide		0350.3 A4745	0357.3	0363.3 9275	0388.3 A1841	0400.3 A4740	0401.3 A5111	0413.3 1746
Spiral Grapple		0350.4 B782	0363.4	0363.4 9272	0388.4 B1837	0400.4 M805	0401.4 B5109	0413.4 1741
Spiral Grapple Control		0350.5 B783	0363.5	0363.5 9273	0388.5 A1838	0400.5 M806	0401.5 A5110	0413.5 1747
'A' Type Packer		0350.6 L1453	0363.6	0363.6 8550	0388.6 B3594	0400.6 L809	0401.6 B5107	0413.6 809
Basket Grapple		0350.7 B782	0363.7	0363.7 9272	0388.7 B1837	0400.7 M805	0401.7 A5109	0413.7 1741
Basket Grapple Control		0350.8 B783	0363.8	0363.8 9273	0388.8 A1838	0400.8 M806	0401.8 B5110	0413.8 1747
Control Packer		0350.9 L1453R	0363.9	0363.9 8550R	0388.9 B1839R	0400.9 L809RS	0401.9 B5107R	0413.9 809R
Mill Control Packer		0350.10 L1453R	0363.10	0363.10 8550R	0388.10 B1839R	0400.10 L809RS	0401.10 B5107R	0413.10 809R

Outside Diameters 4.3/8" – 4.13/16" inclusive

Complete Assembly with Spiral Parts	Ref.	0437 9635	0438 C4619	0450 C5123	0451 C3793	0457 C5151	0463 C5129	0481 C4732
Type		FS	SH	FS	SH	SH	SH	FS
Maximum Catch Size (Spiral)		3.3/8"	3.1/2"	3.3/8"	3.1/2"	3.21/32"	3.3/4"	3.1/2"
Maximum Catch Size (Basket)		2.7/8"	2.7/8"	2.7/8"	2.7/8"	3.1/8"	3.7/32"	2.7/8"
Assembly Weight (lbs.)		67	72	86	86	77	82	99
Overshot O/Dia.		4.3/8"	4.3/8"	4.1/2"	4.1/2"	4.9/16"	4.5/8"	4.13/16"
Top Sub		0437.1 9636	0438.1 A4620	0450.1 A5124	0451.1 A3794	0457.1 A5152	0463.1 A5130	0481.1 A4733
Bowl		0437.2 9637	0438.2 B4621	0450.2 B5125	0451.2 A3795	0457.2 B5153	0463.2 B5131	0481.2 B4734
Standard Guide		0437.3 4197	0438.3 A4622	0450.3 A3361	0451.3 A3609	0457.3 A4341	0463.3 A5135	0481.3 A4735
Spiral Grapple		0437.4 4195	0438.4 B3607	0450.4 B3359	0451.4 B3607	0457.4 B4339	0463.4 B5133	0481.4 164
Spiral Grapple Control		0437.5 4196	0438.5 B3608	0450.5 B3360	0451.5 B3608	0457.5 B4340	0463.5 A5134	0481.5 M185
Packer		0437.6 4185	0438.6 L7065	0450.6 L6515	0451.6 L6515	0457.6 L6665	0463.6 B5538	0481.6 L168
Basket Grapple		0437.7 4195	0438.7 B3607	0450.7 B3359	0451.7 B3607	0457.7 B4339	0463.7 B5133	0481.7 164
Basket Grapple Control		0437.8 4196	0438.8 B3608	0450.8 B3360	0451.8 B3608	0457.8 B4340	0463.8 5134	0481.8 M185
Control Packer		0437.9 4185R	0438.9 L7065R	0450.9 L6515R	0451.9 L6515R	0457.9 L6665R	0463.9 B5538R	0481.9 L168R
Mill Control Packer		0437.10 4185R	0438.10 L7065R	0450.10 L6515R	0451.10 L6515R	0457.10 L6665R	0463.10 B5538R	0481.10 M168R



RELEASING & CIRCULATING OVERSHOT

Outside Diameters 4.7/8” – 5.5/16” inclusive.

Complete Assembly with Spiral Parts	Ref.	0488 C5154	0500 C5148	0502 9725	0503 C5428	0513 C5162	0525 9515	0531 C5142
Type		SH	FS	FS	SH	SH	FS	FS
Maximum Catch Size (Spiral)		4”	3.21/32”	3.3/4”	4.1/8”	4.1/4”	3.7/8”	4”
Maximum Catch Size (Basket)		3.1/2”	3.1/8”	3.1/8”	3.5/8”	3.3/4”	3.1/4”	3.3/8”
Assembly Weight (lbs.)		95	107	107	101	105	120	124
Overshot O/Dia.		4.7/8”	5”	5”	5”	5.1/8”	5.1/4”	5.5/16”

Top Sub	0488.1 A5155	0500.1 A5149	0502.1 9726	0503.1 A5429	0513.1 A5163	0525.1 9516	0531.1 A5143
Bowl	0488.2 B5156	0500.2 B5150	0502.2 9727	0503.2 B5430	0513.2 B5164	0525.2 9517	0531.2 B5144
Standard Guide	0488.3 A5161	0500.3 A4412	0502.3 816	0503.3 B4899	0513.3 A4676	0525.3 876	0531.3 A1507
Spiral Grapple	0488.4 B5159	0500.4 B4410	0502.4 814	0503.4 B4897	0513.4 B4674	0525.4 859	0531.4 B1505
Spiral Grapple Control	0488.5 B5160	0500.5 B4411	0502.5 815	0503.5 B4898	0513.5 B4675	0525.5 875	0531.5 A1506
Packer	0488.6 B5157	0500.6 B3219	0502.6 811	0503.6 B4895	0513.6 B4672	0525.6 856	0531.6 B1508
Basket Grapple	0488.7 B5159	0500.7 B4410	0502.7 814	0503.7 B4897	0513.7 B4674	0525.7 859	0531.7 B1505
Basket Grapple Control	0488.8 B5160	0500.8 B4411	0502.8 815	0503.8 B4898	0513.8 B4675	0525.8 875	0531.8 A1506
Control Packer	0488.9 B5157R	0500.9 B3219R	0502.9 811R	0503.9 B4895R	0513.9 B4672R	0525.9 856R	0531.9 A1508R
Mill Control Packer	0488.10 B5157R	0500.10 B3219R	0502.10 811R	0503.10 B4895R	0513.10 B4672R	0525.10 856R	0531.10 A1508R

Outside Diameters 5.3/8” – 5.13/16” inclusive.

Complete Assembly with Spiral Parts	Ref.	0538 C5165	0543 C5425	0556 C4819	0563 C5168	0575 8975	0576 C7096	0581 C4814
Type		SH	FS	FS	SH	FS	SH	FS
Maximum Catch Size (Spiral)		4.1/2”	4.1/8”	4.1/4”	4.3/4”	4.3/4”	4.7/8”	4.1/2”
Maximum Catch Size (Basket)		3.7/8”	3.1/2”	3.11/16”	4.1/4”	4.1/4”	4.1/4”	3.7/8”
Assembly Weight (lbs.)		113	130	131	133	138	135	142
Overshot O/Dia.		5.3/8”	5.7/16”	5.9/16”	5.5/8”	5.3/4”	5.3/4”	5.13/16”

Top Sub	0538.1 A5166	0543.1 A5426	0556.1 A4820	0563.1 A5169	0575.1 8976	0576.1 A7097	0581.1 A4815
Bowl	0538.2 B5167	0543.2 B5427	0556.2 B4821	0563.2 B5170	0575.2 8977	0576.2 B7098	0581.2 B4816
Standard Guide	0538.3 B2491	0543.3 B1999	0556.3 L187	0563.3 B2203	0575.3 6121	0576.3 A6391	0581.3 B1989
Spiral Grapple	0538.4 B2489	0543.4 B1997	0556.4 M165	0563.4 B2201	0575.4 6112	0576.4 B6389	0581.4 B1987
Spiral Grapple Control	0538.5 A2490	0543.5 A1998	0556.5 L186	0563.5 B2202	0575.5 6113	0576.5 A6390	0581.5 B1988
Packer	0538.6 B2487	0543.6 L1867	0556.6 L169	0563.6 B2199	0575.6 6114	0576.6 B6387	0581.6 B2199.1
Basket Grapple	0538.7 B2489	0543.7 B1997	0556.7 M165	0563.7 B2201	0575.7 6112	0576.7 B6389	0581.7 B1987
Basket Grapple Control	0538.8 A2490	0543.8 A1998	0556.8 L186	0563.8 B2202	0575.8 6113	0576.8 A6390	0581.8 B1988
Control Packer	0538.9 B2487R	0543.9 L1867R	0556.9 L169R	0563.9 B2199R	0575.9 6114R	0576.9 B6387R	0581.9 B2199.1R
Mill Control Packer	0538.10 B2487R	0543.10 L1867R	0556.10 L169R	0563.10 B2199R	0575.10 6114R	0576.10 B6387R	0581.10 B2199.1R

RELEASING & CIRCULATING OVERSHOT



Outside Diameters 5.7/8" – 6.7/8" inclusive.

Complete Assembly with Spiral Parts	Ref.	0588 C5171	0593 5737	0638 6655	0651 4773	0662 C4825	0663 8625	0687 C5174
Type		SH	FS	SH	SH	FS	SH	FS
Maximum Catch Size (Spiral)		5"	4.5/8"	5.1/4"	5.3/8"	5"	5.1/2"	5.1/4"
Maximum Catch Size (Basket)		4.1/2"	4"	4.5/8"	4.3/4"	4.1/4"	4.7/8"	4.1/2"
Assembly Weight (lbs.)		140	150	176	182	192	185	211
Overshot O/Dia.		5.7/8"	5.15/16"	6.3/8"	6.1/2"	6.5/8"	6.5/8"	6.7/8"

Top Sub		0588.1 A5172	0593.1 5738	0638.1 6656	0651.1 4774	0662.1 B4826	0663.1 8626	0687.1 A5175
Bowl		0588.2 B5173	0593.2 5735	0638.2 4503	0651.2 9205	0662.2 B4827	0663.2 8617	0687.2 B4519
Standard Guide		0588.3 B4371	0593.3 192	0638.3 4504	0651.3 4775	0662.3 L1074	0663.3 8621	0687.3 A4474
Spiral Grapple		0588.4 B4369	0593.4 196	0638.4 4498	0651.4 9207	0662.4 M1071	0663.4 8619	0687.4 B4472
Spiral Grapple Control		0588.5 B4370	0593.5 193	0638.5 4499	0651.5 9208	0662.5 M1072	0663.5 8620	0687.5 A4473
Packer		0588.6 L5950	0593.6 195	0638.6 4505	0651.6 9209	0662.6 L4505	0663.6 8618	0687.6 B4520
Basket Grapple		0588.7 B4369	0593.7 196	0638.7 4498	0651.7 9207	0662.7 M1071	0663.7 8619	0687.7 B4472
Basket Grapple Control		0588.8 B4370	0593.8 193	0638.8 4499	0651.8 9208	0662.8 M1072	0663.8 8620	0687.8 A4473
Control Packer		0588.9 L5950R	0593.9 195R	0638.9 4505R	0651.9 9209R	0662.9 M4505RS	0663.9 8618R	0687.9 B4520R
Mill Control Packer		0588.10 L5950R	0593.10 195R	0638.10 4505R	0651.10 9209R	0662.10 M4505RS	0663.10 8618R	0687.10 B4520R

Outside Diameters 7.1/8" – 7.3/4" inclusive

Complete Assembly with Spiral Parts	Ref.	0712 C5176	0713 C5196	0737 C4689	0738 9692	0762 7572	0763 9860	0776 9163
Type		FS	SH	FS	SH	FS	SH	SFS
Maximum Catch Size (Spiral)		5.1/2"	6"	5.3/4"	6.1/4"	6"	6.1/2"	6.3/8"
Maximum Catch Size (Basket)		4.3/4"	5.3/8"	5"	5.5/8"	5.1/4"	5.7/8"	5.5/8"
Assembly Weight (lbs.)		225	209	239	216	245	220	232
Overshot O/Dia.		7.1/8"	7.1/8"	7.3/8"	7.3/8"	7.5/8"	7.5/8"	7.3/4"

Top Sub		0712.1 A5177	0713.1 A5197	0737.1 A4690	0738.1 9693	0762.1 7573	0763.1 9861	0776.1 9165
Bowl		0712.2 B2791	0713.2 B5198	0737.2 B3522	0738.2 9694	0762.2 7574	0763.2 9862	0776.2 9164
Standard Guide		0712.3 A761	0713.3 A5203	0737.3 L120	0738.3 9691	0762.3 218	0763.3 9867	0776.3 5506
Spiral Grapple		0712.4 B759	0713.4 B5201	0737.4 M104	0738.4 9687	0762.4 220	0763.4 9863	0776.4 5503
Spiral Grapple Control		0712.5 B760	0713.5 B5202	0737.5 L130	0738.5 9688	0762.5 219	0763.5 9864	0776.5 5504
Packer		0712.6 A756	0713.6 B5199	0737.6 L110	0738.6 9689	0762.6 223	0763.6 9865	0776.6 5508
Basket Grapple		0712.7 B759	0713.7 B5201	0737.7 M104	0738.7 9687	0762.7 220	0763.7 9863	0776.7 5503
Basket Grapple Control		0712.8 B760	0713.8 B5202	0737.8 L130	0738.8 9688	0762.8 219	0763.8 9864	0776.8 5504
Control Packer		0712.9 A756R	0713.9 B5199R	0737.9 L110R	0738.9 9689R	0762.9 223R	0763.9 9865R	0776.9 5508R
Mill Control Packer		0712.10 A756R	0713.10 B5199R	0737.10 L110R	0738.10 9689R	0762.10 223R	0763.10 9865R	0776.10 5508R



RELEASING & CIRCULATING OVERSHOT

Outside Diameters 7.3/4" – 8.1/8" inclusive

Complete Assembly with Spiral Parts	Ref.	0777 4785	0787 C2108	0788 C5222	0801 8995	0812 C5342	0813 C3263	0814 9217
Type		SH	FS	SH	SH	FS	SH	SH
Maximum Catch Size (Spiral)		6.5/8"	6.1/4"	6.3/4"	6.7/8"	6.1/2"	7"	7"
Maximum Catch Size (Basket)		6"	5.1/2"	6.1/8"	6.1/4"	5.3/4"	6.1/4"	6.3/8"
Assembly Weight (lbs.)		235	261	243	245	274	253	251
Overshot O/Dia.		7.3/4"	7.7/8"	7.7/8"	8"	8.1/8"	8.1/8"	8.1/8"
Top Sub		0777.1 9133	0787.1 B2106	0788.1 A5223	0801.1 8996	0812.1 A5343	0813.1 A3033	0814.1 9218
Bowl		0777.2 9134	0787.2 B2109	0788.2 B5224	0801.2 8997	0812.2 B3711	0813.2 B3264	0814.2 9219
Standard Guide		0777.3 9139	0787.3 A2075	0788.3 A5229	0801.3 8989	0812.3 A2376	0813.3 A3269	0814.3 9226
Spiral Grapple		0777.4 9137	0787.4 B2073	0788.4 B5227	0801.4 8987	0812.4 B2374	0813.4 B3267	0814.4 9222
Spiral Grapple Control		0777.5 9138	0787.5 A2074	0788.5 A5228	0801.5 8988	0812.5 B2375	0813.5 B3268	0814.5 9223
Packer		0777.6 9136	0787.6 L1680	0788.6 B5225	0801.6 8985	0812.6 B2372	0813.6 L6310	0814.6 L9224
Basket Grapple		0777.7 9137	0787.7 B2073	0788.7 B5227	0801.7 8987	0812.7 B2374	0813.7 B3267	0814.7 9222
Basket Grapple Control		0777.8 9138	0787.8 A2074	0788.8 A5228	0801.8 8988	0812.8 B2375	0813.8 B3268	0814.8 9223
Control Packer		0777.9 9136R	0787.9 L1680R	0788.9 B5225R	0801.9 8985R	0812.9 L6635R	0813.9 L6310R	0814.9 9224R
Mill Control Packer		0777.10 9136R	0787.10 L1680R	0788.10 B5225R	0801.10 8985R	0812.10 L6635R	0813.10 L6310R	0814.10 9224R

Outside Diameters 8.1/4" – 8.7/8" inclusive.

Complete Assembly with Spiral Parts	Ref.	0825 C3032	0837 275	0838 C5354	0839	0851 4793	0862 7800	0887 C5352
Type		FS	FS	SH	XSH	SH	FS	FS
Maximum Catch Size (Spiral)		6.5/8"	6.3/4"	7.1/4"	7.1/2"	7.3/8"	7"	7.1/4"
Maximum Catch Size (Basket)		5.7/8"	6"	6.5/8"	----	6.3/4"	6.1/4"	6.1/2"
Assembly Weight (lbs.)		280	284	260	253	262	297	301
Overshot O/Dia.		8.1/4"	8.3/8"	8.3/8"	8.3/8"	8.1/2"	8.5/8"	8.7/8"
Top Sub		0825.1 A3033	0837.1 276	0838.1 A5355	0839.1	0851.1 4794	0862.1 7802	0887.1 A5353
Bowl		0825.2 B3034	0837.2 277	0838.2 B5356	0839.2	0851.2 9233	0862.2 7801	0887.2 M1026
Standard Guide		0825.3 A1818	0837.3 205	0838.3 A5361	0839.3	0851.3 4795	0862.3 121	0887.3 M1029
Spiral Grapple		0825.4 N84	0837.4 209	0838.4 B5359	0839.4	0851.4 9235	0862.4 105	0887.4 M1027
Spiral Grapple Control		0825.5 M89	0837.5 208	0838.5 B5360	0839.5	0851.5 9236	0862.5 131	0887.5 M1031
Packer		0825.6 A1814	0837.6 207	0838.6 B5357		0851.6 9237	0862.6 111	0887.6 L1025
Basket Grapple		0825.7 N84	0837.7 209	0838.7 B5359		0851.7 9235	0862.7 105	0887.7 M1027
Basket Grapple Control		0825.8 M89	0837.8 208	0838.8 B5360		0851.8 9236	0862.8 131	0887.8 M1031
Control Packer		0825.9 A1814R	0837.9 207R	0838.9 B5357R		0851.9 9237R	0862.9 111R	0887.9 L1025R
Mill Control Packer		0825.10 A1814R	0837.10 207R	0838.10 B5357R		0851.10 9237R	0862.10 111R	0887.10 L1025R

RELEASING & CIRCULATING OVERSHOT



Outside Diameters 9.1/8" – 10.1/2" inclusive.

Complete Assembly with Spiral Parts	Ref.	0913 C5265	0937 1665	0962 264	0963 C5284	1012 8960	1026 C5297	1050 C5305
Type		SH	FS	FS	SH	FS	SH	FS
Maximum Catch Size (Spiral)		8"	7.3/4"	8"	8.1/2"	8.1/2"	8.5/8"	8.7/8"
Maximum Catch Size (Basket)		7.1/4"	7"	7.1/4"	7.7/8"	7.3/4"	7.7/8"	8.1/8"
Assembly Weight (lbs.)		294	328	337	325	358	369	386
Overshot O/Dia.		9.1/8"	9.3/8"	9.5/8"	9.5/8"	10.1/8"	10.1/4"	10.1/2"
Top Sub		0913.1 A5266	0937.1 1666	0962.1 265	0963.1 A5285	1012.1 8961	1026.1 A5298	1050.1 A5306
Bowl		0913.2 B5267	0937.2 1283	0962.2 266	0963.2 B5286	1012.2 8962	1026.2 B5299	1050.2 B5307
Standard Guide		0913.3 A5272	0937.3 88	0962.3 240	0963.3 A5291	1012.3 8959	1026.3 A5304	1050.3 A5312
Spiral Grapple		0913.4 B5270	0937.4 85	0962.4 238	0963.4 B5289	1012.4 8957	1026.4 B5302	1050.4 B5310
Spiral Grapple Control		0913.5 B5271	0937.5 100	0962.5 239	0963.5 B5290	1012.5 8958	1026.5 B5303	1050.5 B5311
Packer		0913.6 B5268	0937.6 98	0962.6 235	0963.6 B5287	1012.6 8956	1026.6 B5300	1050.6 B5308
Basket Grapple		0913.7 B5270	0937.7 85	0962.7 238	0963.7 B5289	1012.7 8957	1026.7 B5302	1050.7 B5310
Basket Grapple Control		0913.8 B5271	0937.8 100	0962.8 239	0963.8 B5290	1012.8 8958	1026.8 B5303	1050.8 B5311
Control Packer		0913.9 B5268R	0937.9 98R	0962.9 235R	0963.9 B5287R	1012.9 8956R	1026.9 B5300R	1050.9 B5308R
Mill Control Packer		0913.10 B5268R	0937.10 98R	0962.10 235R	0963.10 B5287R	1012.10 8956R	1026.10 B5300R	1050.10 B5308R

Outside Diameters 10.5/8" – 16.3/4" inclusive.

Complete Assembly with Spiral Parts	Ref.	1062 C5321	1100 C5292	1125 C12822	1137 C5313	1175 5329	1275 15800	1675 64553
Type		FS	FS	FS	FS	FS	FS	---
Maximum Catch Size (Spiral)		9"	8.5/8"	9.5/8"	9"	10.1/8"	11.1/4"	14.3/4"
Maximum Catch Size (Basket)		8.1/4"	7.5/8"	8.7/8"	8"	9.3/8"	10.1/2"	14"
Assembly Weight (lbs.)		401	456	520	533	642	948	1200
Overshot O/Dia.		10.5/8"	11"	11.1/4"	11.3/8"	11.3/4"	12.3/4"	16.3/4"
Top Sub		1062.1 A5322	1100.1 A5293	1125.1 A12823	1137.1 A5314	1175.1 5330	1275.1 15801	1675.1 64554
Bowl		1062.2 B5323	1100.2 B5294	1125.2 B12824	1137.2 B5315	1175.2 5331	1275.2 15802	1675.2 64555
Standard Guide		1062.3 A5328	1100.3 A5296	1125.3 A12829	1137.3 A5320	1175.3 5336	1275.3 15806	1675.3 64560
Spiral Grapple		1062.4 B5326	1100.4 B1962	1125.4 B12827	1137.4 B5318	1175.4 5334	1275.4 15803	1675.4 64558
Spiral Grapple Control		1062.5 B5327	1100.5 B1963	1125.5 B12828	1137.5 B5319	1175.5 5335	1275.5 15804	1675.5 64559
Packer		1062.6 B5324	1100.6 A1966	1125.6 B12825	1137.6 B5316	1175.6 5332	1275.6 15805	1675.6 64556
Basket Grapple		1062.7 B5326	1100.7 B1962	1125.7 B12827	1137.7 B5318	1175.7 5334	1275.7 15803	1675.7 64558
Basket Grapple Control		1062.8 B5327	1100.8 B1963	1125.8 B12828	1137.8 B5319	1175.8 5335	1275.8 15804	1675.8 64559
Control Packer		1062.9 B5324R	1100.9 A1966R	1125.9 B12825R	1137.9 B5316R	1175.9 5332R	1275.9 15805R	1675.9 64556R
Mill Control Packer		1062.10 B5324R	1100.10 A1966R	1125.10 B12825R	1137.10 B5316R	1175.10 5332R	1275.10 15805R	1675.10 64556R



STRENGTH TABLES

ASSEMBLY NUMBER	MAXIMUM CATCH USING SPIRAL GRAPPLE	OUTSIDE DIAMETER	SPIRAL GRAPPLE YIELD LOAD	PLAIN BASKET GRAPPLE YIELD	ASSEMBLY NUMBER	MAXIMUM CATCH USING SPIRAL GRAPPLE	OUTSIDE DIAMETER	SPIRAL GRAPPLE YIELD LOAD	PLAIN BASKET GRAPPLE YIELD
0350	2.3/8"	3.1/2"	275400 lbs.	240000 lbs.	0531	4"	5.5/16"	427200 lbs.	370000 lbs.
0357	2.7/8"	3.9/16"	162500 lbs.	141400 lbs.	0538	4.1/2"	5.3/8"	245500 lbs.	213600 lbs.
0363	2.7/8"	3.5/8"	205500 lbs.	178800 lbs.	0543	4.1/8"	5.7/16"	482300 lbs.	419600 lbs.
0388	3.1/8"	3.7/8"	200600 lbs.	174500 lbs.	0556	4.1/4"	5.9/16"	435500 lbs.	379000 lbs.
0400	2.7/8"	4"	300800 lbs.	261700 lbs.	0563	4.3/4"	5.5/8"	245500 lbs.	213600 lbs.
0401	3.1/8"	4"	208000 lbs.	180960 lbs.	0575	4.3/4"	5.3/4"	421200 lbs.	367000 lbs.
0413	3.1/8"	4.1/8"	284400 lbs.	247400 lbs.	0576	4.7/8"	5.3/4"	282300 lbs.	245600 lbs.
0437	3.3/8"	4.3/8"	343500 lbs.	298800 lbs.	0581	4.1/2"	5.13/16"	435500 lbs.	379000 lbs.
0438	3.1/2"	4.3/8"	254100 lbs.	221100 lbs.	0588	5"	5.7/8"	245500 lbs.	213600 lbs.
0450	3.3/8"	4.1/2"	314200 lbs.	273400 lbs.	0593	4.5/8"	5.15/16"	442000 lbs.	384500 lbs.
0451	3.1/2"	4.1/2"	279300 lbs.	243000 lbs.	0638	5.1/4"	6.3/8"	417800 lbs.	363500 lbs.
0457	3.21/32"	4.9/16"	1895000 lbs.	165000 lbs.	0651	5.3/8"	6.1/2"	368900 lbs.	320900 lbs.
0463	3.3/4"	4.5/8"	254100 lbs.	220000 lbs.	0662	5"	6.5/8"	639800 lbs.	556600 lbs.
0481	3.1/2"	4.13/16"	435500 lbs.	379000 lbs.	0663	5.1/2"	6.5/8"	315600 lbs.	274600 lbs.
0488	4"	4.7/8"	254100 lbs.	221000 lbs.	0687	5.1/4"	6.7/8"	639800 lbs.	556600 lbs.
0500	3.21/32"	5"	427200 lbs.	371700 lbs.	0712	5.1/2"	7.1/8"	639800 lbs.	557000 lbs.
0502	3.3/4"	5"	427200 lbs.	371000 lbs.	0713	6"	7.1/8"	428500 lbs.	372800 lbs.
0503	4.1/8"	5"	3215000 lbs.	279700 lbs.	0737	5.3/4"	7.3/8"	651100 lbs.	566457 lbs.
0513	4.1/4"	5.1/8"	245500 lbs.	213600 lbs.	0738	6.1/4"	7.3/8"	450600 lbs.	392000 lbs.
0525	3.7/8"	5.1/4"	505300 lbs.	439611 lbs.	0762	6"	7.5/8"	637400 lbs.	554600 lbs.

RELEASING & CIRCULATING
OVERSHOT

STRENGTH TABLES

ASSEMBLY NUMBER	MAXIMUM CATCH USING SPIRAL GRAPPLE	OUTSIDE DIAMETER	SPIRAL GRAPPLE YIELD LOAD	PLAIN BASKET GRAPPLE YIELD	ASSEMBLY NUMBER	MAXIMUM CATCH USING SPIRAL GRAPPLE	OUTSIDE DIAMETER	SPIRAL GRAPPLE YIELD LOAD	PLAIN BASKET GRAPPLE YIELD
0763	6.1/2"	7.5/8"	451300 lbs.	392600 lbs.	1012	8.1/2"	10.1/8"	600000 lbs.	520000 lbs.
0776	6.3/8"	7.3/4"	524700 lbs.	456500 lbs.	1026	8.5/8"	10.1/4"	652900 lbs.	568000 lbs.
0777	6.5/8"	7.3/4"	451300 lbs.	393000 lbs.	1050	8.7/8"	10.1/2"	652800 lbs.	567900 lbs.
0787	6.1/4"	7.7/8"	675400 lbs.	587600 lbs.	1062	9"	10.5/8"	637400 lbs.	555000 lbs.
0788	6.3/4"	7.7/8"	428500 lbs.	372800 lbs.	1100	8.5/8"	11"	1264514 lbs.	1100200 lbs.
0801	6.7/8"	8"	424000 lbs.	369000 lbs.	1125	9.5/8"	11.1/4"	627200 lbs.	546000 lbs.
0812	6.1/2"	8.1/8"	637400 lbs.	554500 lbs.	1137	9"	11.3/8"	1340100 lbs.	1166000 lbs.
0813	7"	8.1/8"	394500 lbs.	343200 lbs.	1175	10.1/8"	11.3/4"	650700 lbs.	566100 lbs.
0814	7"	8.1/8"	463100 lbs.	402900 lbs.	1275	11.1/4"	12.3/4"	617400 lbs.	537200 lbs.
0825	6.5/8"	8.1/4"	652700 lbs.	568000 lbs.	1675	14.3/4"	16.3/4"	1396000 lbs.	121500 lbs.
0837	6.3/4"	8.3/8"	637400 lbs.	554500 lbs.					
0838	7.1/4"	8.3/8"	492900 lbs.	428800 lbs.					
0839	7.1/2"	8.3/8"	384900 lbs.						
0851	7.3/8"	8.1/2"	492900 lbs.	428800 lbs.					
0862	7"	8.5/8"	637400 lbs.	554000 lbs.					
0887	7.1/4"	8.7/8"	659700 lbs.	574000 lbs.					
0913	8"	9.1/8"	394500 lbs.	343200 lbs.					
0937	7.3/4"	9.3/8"	552800 lbs.	480900 lbs.					
0962	8"	9.5/8"	585800 lbs.	510000 lbs.					
0963	8.1/2"	9.5/8"	394500 lbs.	343200 lbs.					

