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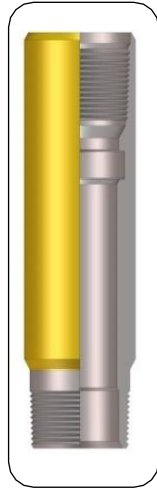
FLOW CONTROL
EQUIPMENT

MODEL "BF" SEATING NIPPLE

Product No.: BI 801-50

Model "BF" Seating Nipple is a Top No-Go or Selective Seating Nipple that provides for the location of various wire-line flow control devices in the production string. Its location should be carefully considered in the completion planning stages to allow maximum versatility in the positioning of various flow control accessories.

Model "BF" Seating Nipples are manufactured as per ANSI/NACE MR0175/ISO 15156 2009.



Model "BF" Seating Nipple
Product No.: BI 801-50

Applications:

Model "BF" Seating Nipples are used for the following operations:

- To land Blanking Plugs to shut in well or to test the Production Tubing.
- To land Velocity Type Safety Valves.
- To land equalizing Check Valves, Circulation Blanking Plugs & land chokes.

Features:

- Honed internal sealing bores for maximum sealing performance.
- Locking Groove / No-Go Shoulder combination above seal bore.
- Accepts Selective or Top No-Go locks.
- Any number of Model "BF" Nipples with the same seal bore can be run in the tubing when Selective Locks are required.

Specification Guide "BF" SEATING NIPPLE		
Tubing OD (Inch.)	Nipple	
	Seal Bore (Inch.)	Min OD (Inch.)
2-1/16	1.562	Coupling O.D.
	1.625	
2-3/8	1.781	
	1.812	
	1.875	
2-7/8	2.062	
2-7/8	2.250	
	2.312	
3-1/2	2.562	
	2.750	
	2.812	
4	3.125	
	3.250	
	3.312	
4-1/2	3.688	
	3.750	
	3.812	

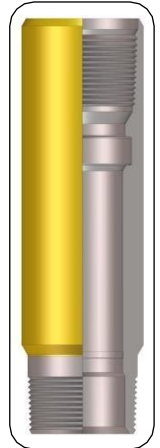
Smaller O.D's can be supplied on Request.

MODEL "BR" SEATING NIPPLE

Product No.: BI 801-55

The Model "BR" Seating Nipple is a Bottom No-Go Seating Nipple that provides for the location of various wire-line flow control devices in the production string. The location and number of Model "BR" Seating Nipples should be carefully considered in the completion planning stages.

Model "BR" Seating Nipples are manufactured as per ANSI/NACE MR0175/ISO 15156 2009.



Model "BR" Seating Nipple
Product No.: BI 801-55

Applications:

Model "BR" Seating Nipples are used for the following operations:

- To land Blanking Plugs to shut in well or to test the Production Tubing.
- To land Velocity Type Safety Valves.
- To land equalizing Check Valves, Circulation Blanking Plugs & land chokes.
- To prevent loss of wire-line work string in some cases.
- To land chokes.
- To land instrument hangers with geophysical devices

Features:

- Honed internal sealing bores for maximum sealing performance.
- Locking Groove/ Bottom No-Go shoulder combination accepts Bottom No-Go Locks.

Specification Guide "BR" SEATING NIPPLE			
Tubing OD (Inch.)	Seal Bore (Inch.)	No-Go ID (Inch.)	Min. OD (Inch.)
2-1/16	1.562	1.510	Coupling O.D.
2-3/8	1.781	1.728	
	1.812	1.760	
	1.875	1.822	
2-7/8	2.062	1.978	
	2.125	2.035	
	2.250	2.197	
	2.312	2.259	
3-1/2	2.562	2.442	
	2.750	2.697	
4	2.812	2.759	
	3.125	3.072	
	3.312	3.242	
4-1/2	3.688	3.625	
	3.750	3.700	
	3.812	3.75	

Smaller O.D's can be supplied on Request.

**MODEL "BFSG-21", "BFWG-21" & "BRZG-21"
BY-PASS BLANKING PLUGS WITH REMOVABLE
MANDREL**

Product No.: BI 806-87, BI 806-88, BI 806-89

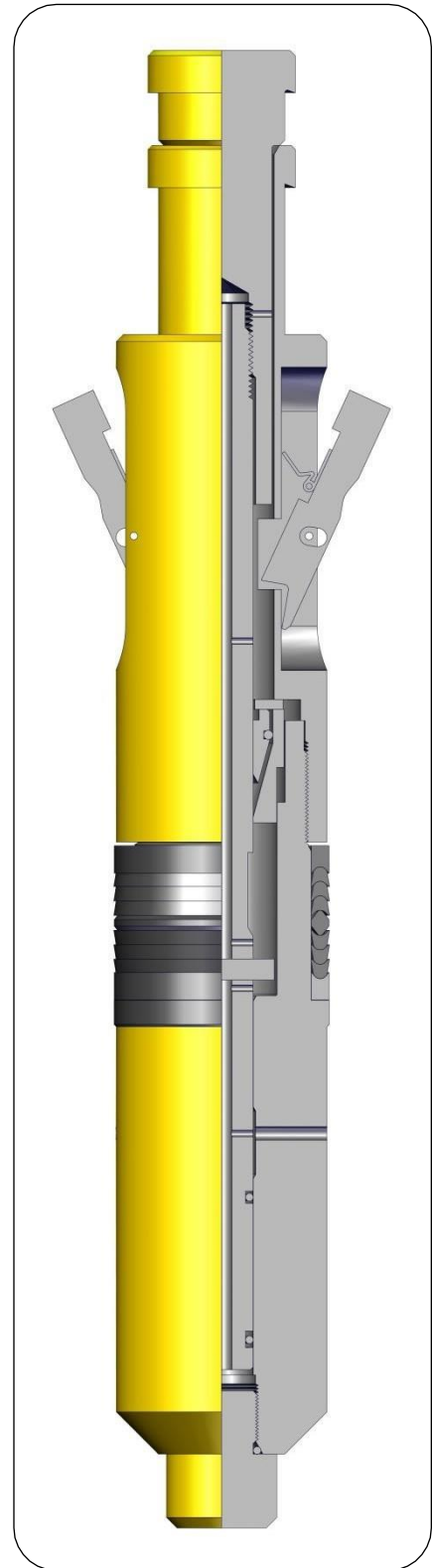
Models "BFSG", "BFWG" and "BRZG" Bypass Blanking Plugs with Removable Mandrel are positive blank-off devices designed to seal off pressure from above and below.

The Models "BFSG" and "BFWG" Blanking Plugs are equipped for Top No-Go landing in Model "F" Non-Ported Seating Nipples and upper bore of Model "L" Sliding Sleeves.

The Model "BRZG" Blanking Plug is equipped for Bottom No-Go landing in Model "R" Non-Ported Seating Nipples. The plugs are compatible with normal wire line equipment and procedures.

During running-in the Removable Mandrel is held in the by-pass position by the Running Tool, to allow fluid by-pass when landing in the Seating Nipple. When the Plug is locked into the desired Seating Nipple, the Removable Mandrel is shifted and locked to close the By-pass Ports.

To equalize, a standard Wire line Pulling Tool latches on to and retrieves the Removable Mandrel. After the pressures have been equalized through the By-pass Ports, the plug may be retrieved with a standard Pulling Tool.



Model "BFWG"
By-Pass Blanking Plug
Product No.: BI 806-88

Specification Guide MODEL "BFWG-21" & "BRZG-21" BY-PASS BLANKING PLUG						
Tubing OD (Inch.)	Seal Bore (Inch.)	Size (Inch.)	Max OD (Inch.)	To Run	To Pull	
				"BC-1" Running Tool Product No.: BI 811-06	Removable Mandrel	Plug
					Pulling Tool	"B" Probe Product No.: BI 812-07
2-1/16	1.562	1.56	1.615	1.900	JUC or JDC	1.900
2-3/8	1.781	1.78	1.865	2-3/8	JUC or JDC	2-3/8
	1.812	1.81				
	1.875	1.87				
2-7/8	2.250	2.25	2.302	2-7/8	JUC or JDC	2-7/8
	2.312	2.31				

Specification Guide MODEL "BFSG-21" BY-PASS BLANKING PLUG							
Tubing OD (Inch.)	Seal Bore (Inch.)	Size (Inch.)	Locating Ring OD (Inch.)	To Run		To Pull	
				"BC-1" Running Tool Product No.: BI 811-06	"BG" Running Tool Product No.: BI 811-08	Removable Mandrel	Plug
						Pulling Tool	"AC" Probe Product No.: BI 812-08
2-1/16	1.562	1.56	1.593	1.900		JUC or JDC	1.900
	1.625	1.62	1.656				
2-3/8	1.781	1.78	1.807	2-3/8		JUC or JDC	2-3/8
	1.812	1.81	1.843				
	1.875	1.87	1.906				
2-7/8	2.250	2.25	2.281	2-7/8		JUC or JDC	2-7/8
	2.312	2.31	2.343				
3-1/2	2.750	2.75	2.781	3-1/2		JUC or JDC	3-1/2
	2.810	2.81	2.843				
4-1/2	3.688	3.68	3.717	4-1/2		JUC or JDC	4-1/2
	3.812	3.81	3.835				

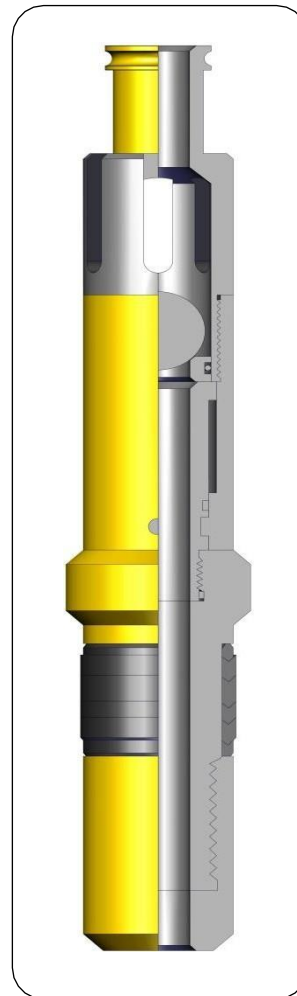
MODEL "BFB-2" EQUALIZING CHECK VALVE
Product No.: BI 809-35 (Top No-Go)

MODEL "BRB-2" EQUALIZING CHECK VALVE
Product No.: BI 809-36 (Bottom No-Go)

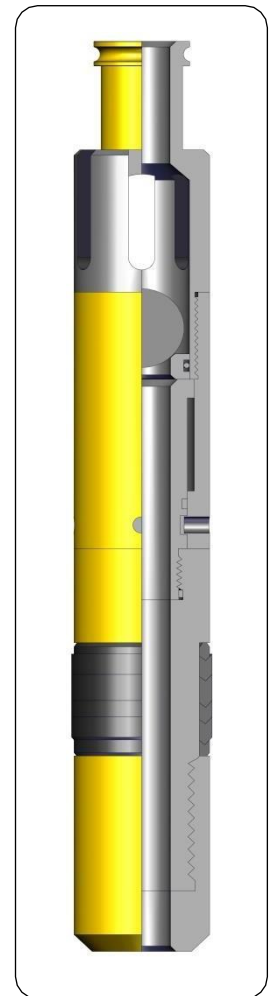
Equalizing Check Valves, sometimes called "Standing Valves", prevent downward flow while allowing upward flow. These wire-line retrievable check valves are run and landed in Seating Nipples or in Sliding Sleeves.

Features:

- Provide simple means for testing tubing and setting hydraulically actuated equipment.
- Run and retrieved with standard wire-line equipment or run in place with the tubing.
- Integral equalizing feature for quick and easy retrieval of Equalizing Check Valve.



Model "BFB-2"
Equalizing Check Valve
Product No.: BI 809-35
(Top No-Go)



Model "BRB-2"
Equalizing Check Valve
Product No.: BI 809-36
(Bottom No-Go)

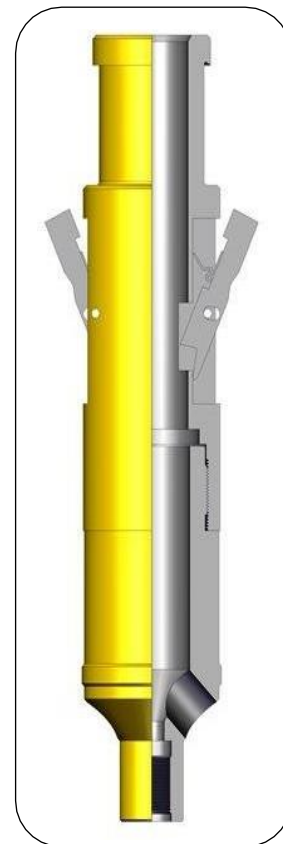
Specification Guide							
Tubing O.D. (Inch.)	Seal Bore (Inch.)	Size (Inch.)		Max O.D. (Inch.)		To Run	To Pull
		"BFB-2"	"BRB-2"	"BFB -2"	"BRB-2"	"BC-1" Running Tool Product No.: BI 811-06	Pulling Tool
2-1/16	1.562	1.56		1.615	1.552	1.900	JUC or JDC
	1.625	1.62		1.672	-		
2-3/8	1.781	1.78		1.803	1.771	2-3/8	JUC or JDC
	1.812	1.81		1.865	1.802		
	1.875	1.87		1.905	1.865		
2-7/8	2.062	2.06		2.115	2.052	2-7/8	JUC or JDC
	2.250	2.25		2.302	2.240		
	2.312	2.31		2.364	2.302		
3-1/2	2.562	2.56		2.625	2.552	3-1/2	JUC or JDC
	2.750	2.75		2.802	2.740		
4	2.812	2.81		2.865	-	3-1/2	JUC or JDC
	3.125	3.12		3.175	3.115		
	3.312	3.31		3.406	3.302		
4-1/2	3.688	3.68		3.740	3.678	4-1/2	JUC or JDC
	3.750	3.75		3.802	3.740		
	3.812	3.81		3.875	3.802		

MODEL "B-RZB" DOWNHOLE INSTRUMENT HANGER
Product No.: BI 803-25

The Model "B-RZB" Downhole Instrument Hanger is used to land and lock geophysical instruments in "BR" type profiles to allow recording of reservoir data.

Features:

- It allows the well's Safety System to remain in full Operation during the survey.
- It allows removal of wire-line from a corrosive environment to prevent damage of wire-line.
- Several wells may be surveyed with one wire-line unit.
- Model "BC-1" Running Tool is used to run.
- Model "B" Probe is used to release.
- Model "JDC" Pulling Tool is used to pull.



Model "B-RZB"
 Downhole Instrument Hanger
 Product No.: BI 803-25

Specification Guide		
Size (Inch.)	NO-GO	Bottom Thread
1.780	1.771	0.750" OD 16UNF
1.810	1.802	
1.870	1.865	
2.250	2.240	
2.310	2.302	
2.750	2.740	
2.813	2.802	

MODEL "JDC" PULLING TOOL

Product No.: BI 811-90

MODEL "JUC" PULLING TOOL

Product No.: BI 811-91

The model "JDC" or "JUC" Pulling Tool is a wire-line service tool designed to remove retrievable sub-surface devices with outside fishing necks from a well. The Model "JDC" or "JUC" Pulling Tool is available with different core length which permits the tool to retrieve subsurface devices with fishing neck of different lengths of reach.

Features:

The Model "JUC" Pulling Tool utilizes the "U" Sub which is made up to the core of the tool. The dogs which are mounted on the skirt are inserted into the vertical openings in the skirt. The dogs are spring loaded and have pawls located in the windows of the skirt. The "JUC" Pulling Tool can be released, in the event that the sub-surface device cannot be pulled, by continued upward jarring.



Model "JDC"
Pulling Tool
Product No.: BI 811-90

Specification Guide "JDC" PULLING TOOL								
Nominal Size	1-1/4"	1-3/8"	1-1/2"	1-5/8"	2"	2-1/2"	3"	4"
Max. O.D. (Inch.)	1.291	1.375	1.422	1.625	1.859	2.250	2.796	3.750
Fishing Neck O.D (Inch.)	1.187	1.187	1.187	1.187	1.375	1.375	1.750	2.313
Thread Connection	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN
Overall Length (Inch.)	13.00	12.94	13.00	13.00	14.50	14.77	14.94	19.06
Reach	1.937	1.875	1.094	1.094	1.437	1.313	1.437	2.313

Specification Guide "JUC" PULLING TOOL							
Nominal Size	1-1/2"	1-5/8"	2"	2-1/2"	3"	4"	
Max. O.D. (Inch.)	1.422	1.422	1.859	2.250	2.796	3.750	
Fishing Neck O.D (Inch.)	1.187	1.187	1.375	1.375	1.750	2.313	
Top Thread Connection	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN	
Overall Length (Inch.)	13.00	13.00	14.50	14.77	14.94	19.06	
Reach	1.094	1.094	1.437	1.313	1.437	2.313	
Bottom Thread Connection	1/2 13UNC	1/2 13UNC	1/2 13UNC	1/2 13UNC	5/8 11UN	1-1/4 12UN	

MODEL "BSB" PULLING TOOL

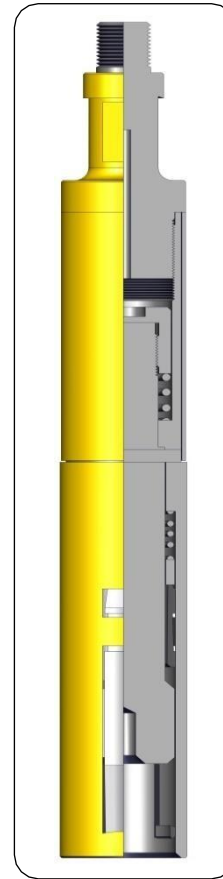
Product No.: BI 811-45

The "BSB" Pulling Tool is a basic wire-line device which establishes the connection between a Wire-line Tool and a subsurface device that is to be retrieved from its operating location in a well. The Pulling Tool is designed to engage an external type fishing neck and release by downward jarring.

MODEL "BRB" PULLING TOOL

Product No.: BI 811-46

The "BRB" Pulling Tool is a basic wire-line device which establishes the connection between a Wire-line Tool and a subsurface device that is to be retrieved from its operating location in a well. The Pulling Tool is designed to engage an external type fishing neck and release by upward jarring. The tool is offered in sizes according to the customer's choice.



Model "BSB"
Pulling Tool
Product No.: BI 811-45

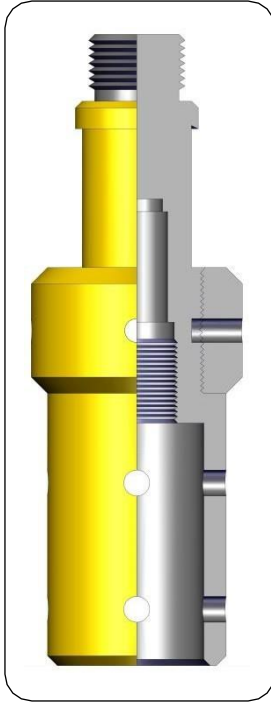
Specification Guide "BSB" PULLING TOOL					
Nominal Size	1-1/2"	2"	2-1/2"	3"	4"
Max. O.D. (Inch.)	1.422	1.766	2.188	2.844	3.670
Fishing Neck O.D (Inch.)	1.187	1.375	1.375	2.312	2.312
Top Thread Connection	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN
Overall Length (Inch.)	11.87	15.89	16.36	17.50	18.00
Reach	1.297	1.219	1.281	1.500	1.500
Bottom Thread Connection	3/8 16UNC	1/2 13UNC	1/2 13UNC	5/8 11UN	1-1/4 12UN

Specification Guide "BRB" PULLING TOOL					
Nominal Size	1-1/2"	2"	2-1/2"	3"	4"
Max. O.D. (Inch.)	1.430	1.770	2.180	2.840	3.670
Fishing Neck O.D (Inch.)	1.187	1.375	1.375	2.312	2.312
Top Thread Connection	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN	15/16 10UN
Overall Length (Inch.)	12.65	16.42	16.35	16.07	17.90
Reach	1.265	1.219	1.203	1.265	1.490
Bottom Thread Connection	3/8 16UNC	1/2 13UNC	1/2 13UNC	5/8 11UN	1-1/4 12UN

MODEL "BC-1" RUNNING TOOL

Product No.: BI 811-06

The Model 'BC-1' Running Tool runs Flow Control devices that have external fishing neck locks. A thread protector, which is the same OD as the tool body, makes possible selective setting. A Seal Bore Locating Ring provides Top No-Go setting. A box-down connection accepts the 'A' or 'N-1' Shank.

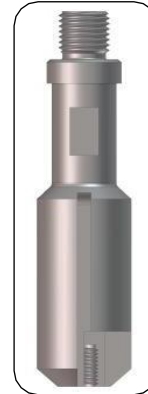


Model "BC-1"
Running Tool
Product No.: BI 811-06

MODEL "A" GUIDE

Product No.: BI 811-71

The Model "A" Guide is basically a Prong carrier. It centers and limits the Prong penetration during equalizing operations.



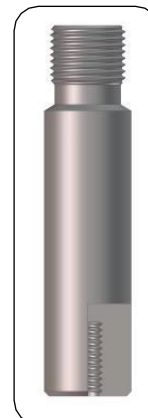
Model "A"
Guide
Product No.:
BI 811-71

MODEL "A" SHANK

Product No.: BI 811-80

The Model "A" Shank is used with the "BC-1" Running Tool to run "S", "W" and "Z" locks (retracted) during running and it can also be used as a Prong carrier when Prongs are required during running operations.

"A" prong is widely used in running and pulling operations. "B" Prong runs "R" type Blanking Plugs. "C" Prong equalizes "R" Blanking Plugs.

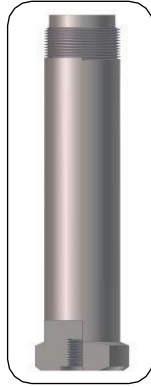


Model "A"
Shank
Product No.:
BI 811-80

Specification Guide		
Accessory Size (Inch.)	Running Tool Size (Inch.)	Locating Ring OD (Inch.)
1.43	1.900 To 2-1/16	1.468
1.50		1.520
1.56		1.593
1.62		1.656
1.78	2-3/8	1.807
1.81		1.843
1.87		1.906
2.25	2-7/8	2.281
2.31		2.343
2.75	3-1/2	2.781
2.81		2.843
3.68	4-1/2	3.802
3.81		-

MODEL "N-1" SHANK Product No.: BI 811-85

The Model "N-1" Shank is used in conjunction with the Model "BC-1" Running Tool to run and land Flow Control Equipment having "G" or "R" locks.



Model "N-1"
Shank
Product No.:
BI 811-85

MODEL "N-1" PROBE Product No.: BI 812-13

The Model "N-1" is used to retrieve "G" and "R" locks.



Model "N-1"
Probe
Product No.:
BI 812-13

MODEL "A" PRONG Product No.: BI 811-70

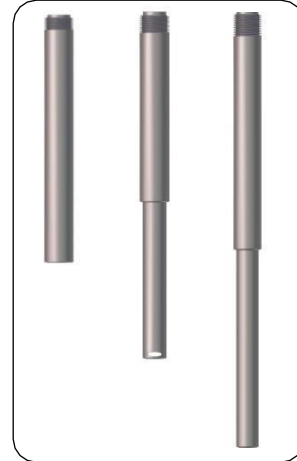
The Model "A" Prong is made up on the Model "A" Shank connected to a BOTIL Model "C-1" Running Tool or the plunger extension of a Model "E" Selective Running Tool to hold the circulating device of the BOTIL Flow Control Accessory open.

MODEL "B" PRONG Product No.: BI 811-72

The Model "B" Prong is used with BOTIL Running Tools only when running Flow Control Accessories that contain Type "R" Bypass Blanking Plug Sub-assemblies and also hold the Bypass Valve open while running. The Model "B" differs from the Model "A" in that it has a specific length of turned-down OD on the bottom end for passing through the Bypass Valve, plus a drill hole located near the bottom for pinning to the Valve.

MODEL "C" PRONG Product No.: BI 811-73

The Model "C" Prong differs from the Model "B" in that it is longer and does not contain a drilled hole. The Model "C" is run below the Model "A" Guide to actuate the equalizing device and allow the Accessory to be retrieved.

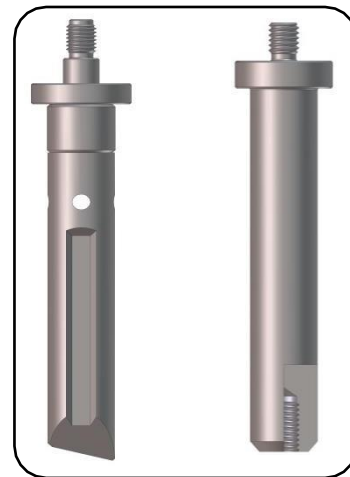


MODEL "A" PROBE Product No.: BI 812-06

The Model "A" is used to retrieve "S" locks.

MODEL "B" PROBE Product No.: BI 812-07

The Model "B" is used to retrieve "W" and "Z" locks.



MODEL "BX", "BXN", "BR" & "BRN" NON-PORTED SEATING NIPPLE

Product No.: BI 801-01, BI 801-02, BI 801-03 & BI 801-04

Model "BX" Non-Ported Seating Nipple is a Top no-go downhole tubing Nipple used to locate, seal, and retain "BX" Locks.

Model "BXN" Non-Ported Seating Nipple is a bottom no-go downhole tubing Nipple used to locate, seal, and retain "BXN" Locks.

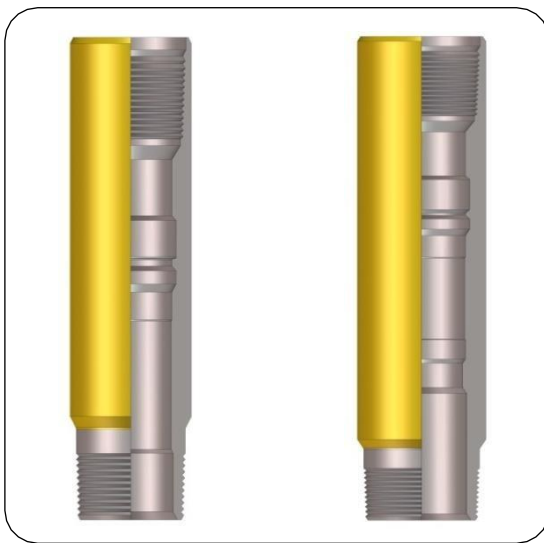
Model "BR" Non-Ported Seating Nipple is a Top no-go downhole tubing Nipple used to locate, seal, and retain "BR" Locks.

Model "BRN" Non-Ported Seating Nipple is a bottom no-go downhole tubing Nipple used to locate, seal, and retain "BRN" Locks. X and XN Landing Nipple are designed for use with standard tubing weights.

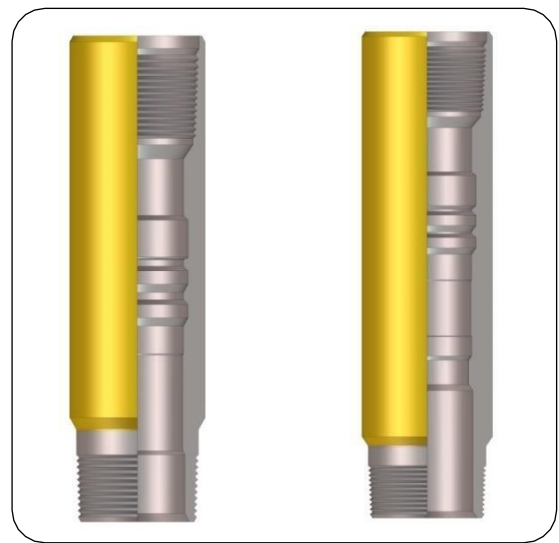
R and RN Landing Nipple are designed for use with heavy weight tubing. (The N designate no-go nipple).

Features:

- Large bore for minimum restriction.
- Universal Nipple with one internal profile.



Model "BX" & "BXN"
Seating Nipple
Product No.: BI 801-01 & BI 801-02



Model "BR" & "BRN"
Seating Nipple
Product No.: BI 801-03 & BI 801-04

Specification Guide							
OTIS TYPE "X" AND "XN" LANDING NIPPLES AND LOCK MANDRELS							
Tubing				For Standard Tubing Weights			Lock Mandrel ID (Inch.)
				"X" Profile	"XN" Profile		
Size (Inch.)	Weight (ppf)	ID (Inch.)	Draft (Inch.)	Packing Bore (Inch.)	Packing Bore (Inch.)	No- Go ID (Inch.)	
1.660	2.3	1.380	1.286	1.250	1.250	1.135	0.62
	2.4						
1.900	2.4	1.660	1.516	1.500	1.500	1.448	0.75
	2.76	1.610					
	2.9						
2.063	3.25	1.751	1.657	1.625	1.625	1.536	0.75
2-3/8	4.6	1.995	1.901	1.875	1.875	1.791	1.00
	4.7						
2-7/8	6.4	2.441	2.347	2.313	2.313	2.205	1.38
	6.5						
3-1/2	9.3	2.992	2.867	2.813	2.813	2.666	1.75
	10.2	2.922	2.797	2.750	2.750	2.635	
4	11	3.476	3.351	3.313	3.313	3.135	2.12
4-1/2	12.75	3.958	3.833	3.813	3.813	3.725	2.62
5	13	4.494	4.369	4.313	4.313	3.987	2.62
5-1/2	17	4.892	4.767	4.562	4.562	4.455	3.12

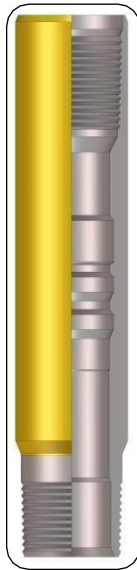
Specification Guide OTIS TYPE "R" AND "RN" LANDING NIPPLES AND LOCK MANDRELS							
Tubing				For Standard Tubing Weights			Lock Mandrel ID (Inch.)
				"R" Profile	"RN" Profile		
Size (Inch.)	Packing Bore (Inch.)	Packing Bore (Inch.)	Packing Bore (Inch.)	Packing Bore (Inch.)	Packing Bore (Inch.)	No- Go ID (Inch.)	
1.900	3.64	1.500	1.406	1.375	1.375	1.250	0.62
2 3/8	5.30	1.939	1.845	1.781	1.781	1.640	0.88
	5.95	1.867	1.773	1.710	1.710	1.560	0.75
	6.20	1.853	1.759				
	7.70	1.703	1.609	1.500	1.500	1.345	0.62
2 7/8	7.90	2.323	2.229	2.188	2.188	2.010	1.12
	8.70	2.259	2.165	2.125	2.125	1.937	0.88
	8.90	2.243	2.149				
	9.50	2.195	2.101	2.000	2.000	1.881	0.88
	10.40	2.151	2.057				
	11.00	2.065	1.971	1.875	1.875	1.716	0.88
11.65	1.995	1.901					
3 1/2	12.95	2.750	2.625	2.562	2.562	2.329	1.38
	15.80	2.548	2.423	2.313	2.313	2.131	1.12
	16.70	2.480	2.355				
	17.05	2.440	2.315	2.188	2.188	2.010	1.12
4	11.60	3.428	3.303	3.250	3.250	3.088	1.94
	13.40	3.340	3.215	3.125	3.125	2.907	1.94
4 1/2	12.80	3.958	3.833	3.813	3.813	3.725	2.12
	13.50	3.920	3.795	3.688	3.688	3.456	2.38
	15.50	3.826	3.701				
	16.90	3.754	3.629	3.437	3.437	3.260	1.94
	19.20	3.640	3.515				
15.00	4.408	4.283	4.125				
5	18.00	4.276	4.151	4.000	4.000	3.748	2.38
	5 1/2	17.00	4.892	4.767	4.562	4.562	4.445
20.00		4.778	4.653				
23.00		4.670	4.545	4.313	4.313	3.987	2.62
6	15.00	5.524	5.399	5.250	5.250	5.018	3.50
	18.00	5.424	5.299				
6 5/8	24.00	5.921	5.795	5.625	5.625	5.500	3.50
	28.00	5.791	5.666				
7	17.00	6.538	6.431	5.963	5.963	5.770	3.75
	20.00	6.456	6.331				
	23.00	6.366	6.241				
	26.00	6.276	6.151				
	29.00	6.184	6.059				
	32.00	6.094	5.969				
8 5/8	36.00	7.825	7.700	7.050	7.050	6.925	3.75
				7.250	7.250	7.125	
				7.450	7.450	7.325	

MODEL "BRT" NON-PORTED SEATING NIPPLE
Product No.: BI 801-05

BOTIL "BRT" NO-GO Landing Nipple system provides a means of running a series of positive location landing nipples in tubing string with minimum restriction. BOTIL "BRT" NO-GO Landing Nipples are designed to accept BOTIL "BRT" Lock Mandrels with a rated working pressure of 10,000 psi differential and greater from above and below.

The BOTIL "BRT" Lock Mandrels locates on top of the Nipple's polished bore, therefore, there are no secondary restrictions normally associated with bottom no-go profiles.

This feature makes BOTIL "BRT" systems well suited for high pressure, high volume, and large bore completions. BOTIL "BRT" Lock Mandrels in any given size range are designed to use the same running and pulling tool.



Model "BRT"
 Seating Nipple
 Product No.: BI 801-05

Specification Guide "BRT" Landing Nipples and Lock Mandrels			
Tubing (Inch.)	Nipple Profile	Lock Mandrel	
	Seal Bore Min. I.D (Inch.)	ID (Inch.)	OD (Inch.)
2-3/8	1.500	0.75	1.580
	1.625		1.685
	1.625		1.841
	1.781		1.935
	1.875		2.080
	2.000		2.185
2-7/8	2.125	1.12	2.060
	2.000		2.185
	2.188		2.248
	2.313		2.373
	2.482		2.542
3-1/2	2.562	1.50	2.622
	2.650		2.710
	2.750		2.810
	2.810		2.860
	2.875		2.935
4 to 4-1/2	3.000	1.75	3.060
	3.125	1.94	3.210
	3.250		3.335
	3.313		3.395
4-1/2 to 5	3.437	1.94	3.520
	3.562		3.650
	3.688		3.770
	3.750		3.807
	3.813		3.895
	4.000		4.090
5-1/2	4.125	2.75	4.207
	4.188		4.270
	4.250		4.332
	4.313		4.395
	4.437		4.520
	4.500		4.550
	4.562		4.650
	4.688	4.760	
	4.688	3.12	4.760
	4.750		4.825
4.813	4.890		
7	5.250	3.68	5.334
	5.500		5.585
	5.625		5.710
	5.750		5.840
	5.813		5.890
	5.875		5.940
	5.983		6.025
	6.125		6.180
	6.250		6.330

MODEL "BX", "BXN", "BR", & "BRN", LOCK MANDREL

Product No.: BI 804-04

The "BXN" & "BRN" Locking Mandrel is the "NO-GO" version of the usually selective locks.

The keys have an angled shoulder instead of the square shoulder of the selective locks. A "NO-GO" shoulder of an equalizing sub or a crossover sub made up the bottom of the lock must make contact with a bore restriction in the "NO-GO" nipple in order to lock this mandrel.

MODEL "BPR" PLUG

Product No.: BI 806-95

Model "BPR" Plug is a positive plug used in conjunction with the Type "BR" Landing Nipple. This Plug might be used to test tubing or to plug tubing to perform repairs or replacement of surface equipment.

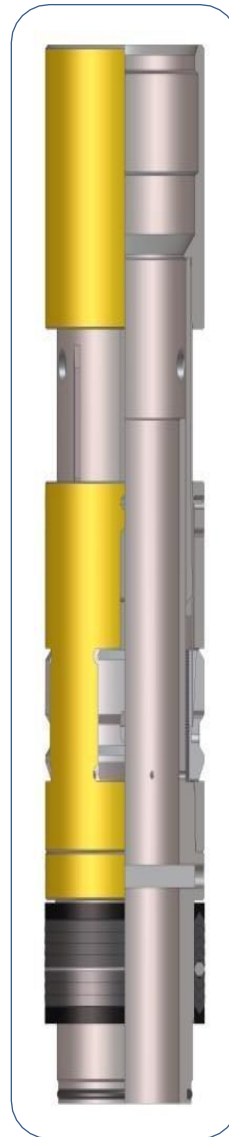
Equalization is achieved by pulling the equalizing prong from the plug assembly.

EQUALIZING CHECK VALVE

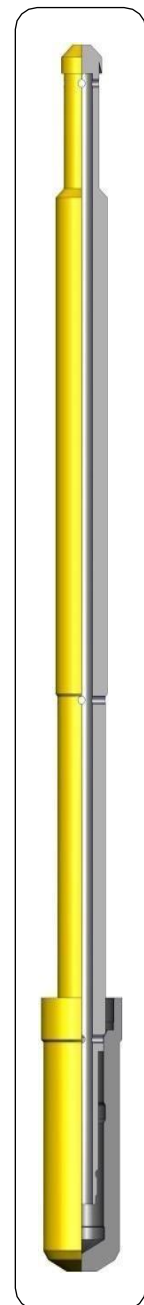
Product No.: BI 809-38

BOTIL one trip Equalizing Check Valves, they are sometimes called "Standing Valves" because they prevent fluid flow in one direction (downward) while allowing full fluid in the opposite direction (upward). This type has a built-in method of allowing equalizing before pulling.

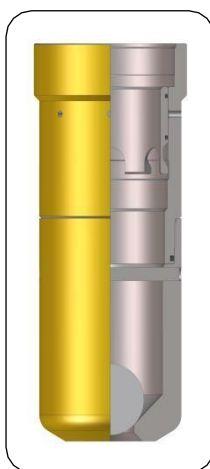
BOTIL one trip Equalizing check valve consist of a standing valve cap in conjunction with Equalizing sub assembly & Lock Mandrel.



Model "BX"
Lock Mandrel
Product No.: BI 804-04



Model "BPR"
Plug
Product No.: BI 806-95

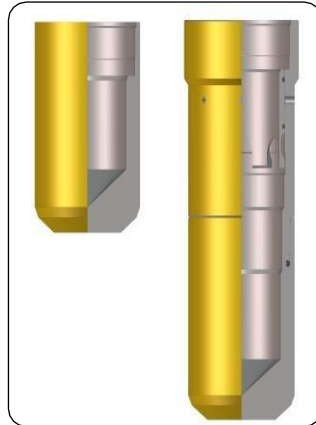


Equalizing
Check Valve
Product No.:
BI 809-38

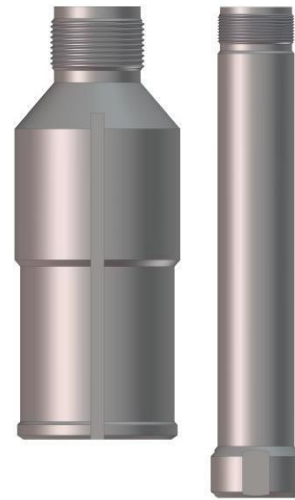
MODEL "R" VALVE CAP

Product No.: BI 806-92

The Model 'R' Valve cap conjugation with Model 'RN' Lock Mandrel and Model "BR" Equalizing Sub Assembly makes a Positive Plug to hold pressure from above and below, in a "BRN" Landing Nipple. This plug might be used to test tubing or to plug tubing to perform repairs or replacement of surface equipment. Equalization is achieved by shifting an equalizing valve into the open position before the mandrel is unlocked.



Model "R"
Valve Cap
Product No.: BI 806-92



Model "X" & "R"
Running & Pulling Prong
Product No.:
BI 811-74 & BI 811-75

MODEL "BR" RUNNING TOOL

Product No.: BI 811-08

The "BX" and "BR" Running Tools are used to run, locate, and set Type "BX", "BXN", "BR", and "BRN" Locks and subsurface safety equipment.

Model "GS" Running and Pulling Tool

Product No.: BI 811-90

The "GS" Running/Pulling Tool is a basic wire line device which connects a wire line tool string to a wire line retrievable flow control device that is to be run into or retrieved from a well. The "GS" Running/Pulling Tool is designed to engage an internal type fishing neck. The tool is offered in a wide range of sizes. The tools are supplied for standard or H2S service.

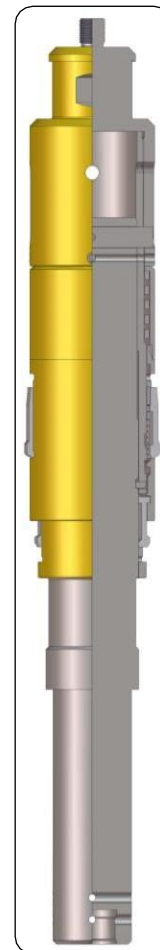
MODEL 'X' & 'R' RUNNING & PULLING PRONG

Product No.: BI 811-74 & 811-75

Model "X" Running Prong is used with Model "BX" and "BR" Running Tool. The thread connection is compatible with the box end of Core in the Running Tool. It is used to run the locks of locking devices in the retracted position to facilitate running of locking devices in the well bore until the locking devices not reach the desire depth.

Model "X" Pulling Prong is used with Model "GS" Pulling Tool. The thread connection is compatible with the box end of Core in the Pulling Tool. It is used to retract locks of locking devices to facilitate pulling of devices.

Running and Equalizing Prongs are commonly screwed into running and pulling tools to perform functions necessary in manipulating subsurface devices.



Model "BR"
Running Tool
Product No.: BI 811-08

MODEL "BL" SLIDING SLEEVE

Product No.: BI 810-04

The Model 'BL' Sliding Sleeve is a downhole flow control device mounted in the Production Tubing. It effectively controls flow between the tubing and casing annulus, by means of an internal sleeve that is opened or closed by standard wire-line methods.

Applications:

Sliding Sleeves may be used to establish Tubing to annulus communication for following operations:

- Displacing the Tubing or annulus fluid after X-mas tree installation.
- For testing, treating and production of individual zones in a multi- zone selective well.
- For producing more than one zone through a single Tubing String. For killing a well by circulation.
- For Gas Lift.
- For landing a Blanking Plug in Nipple profile to shut in well or when testing Tubing.
- For landing comingling chokes in nipple profile.
- For circulating Inhibitors for corrosion control.



Model "BL"
Sliding Sleeve
Product No.:
BI 810-04

Features:

- Simple, Positive Control - With a Model 'BL' Sliding Sleeve, establishing or closing off tubing-to-casing annulus communication is simple, dependable and quick. This type of product makes it possible to close the ports without leaving any obstruction in the Tubing once the shifting operation is completed.
- Protected Closing Sleeve - The closing sleeve is recessed so that there is no danger of opening or closing the sleeve by mistake while running Wire-line Tools through or while seating a Flow Control device in the Sliding Sleeve.
- Run in Tandem - Any number of Model "L" Sliding Sleeves may be run in tandem and still accept Wire-line Flow Control devices. Selective-type locks will pass through as many of the Sleeves as the operator chooses and seat in any sleeve he selects.
- Additional Seating Nipple - The Upper Sub of the Model 'BL' Sleeve has a Model "BF" Seating Nipple profile to land selective or Top No-Go Locking Flow Control devices.
- The lower seal sub has a honed bore that in combination with the upper seating nipple can be utilized to land Separation Sleeves, Chokes or Blanking Plugs.

Specification Guide			
Tubing O.D (Inch.)	Seal Bore (Inch.)	Size (Inch.)	Min O.D. (Inch.)
2-1/16	1.562	1.56	2.500
	1.625	1.62	
2-3/8	1.781	1.78	2.910
	1.812	1.81	
	1.875	1.87	
2-7/8	2.250	2.25	3.410
	2.312	2.31	
3-1/2	2.750	2.75	4.500
	2.812	2.81	
4	3.125	3.12	5.000
	3.250	3.25	
	3.312	3.31	
4-1/2	3.688	3.68	5.500
	3.750	3.75	
	3.812	3.81	
	4.000	4.00	
5	4.125	4.12	6.050
	4.312	4.31	
	4.562	4.56	
5-1/2	5.500	5.50	7.390
6-5/8			7.656
7			8.500
7-5/8			

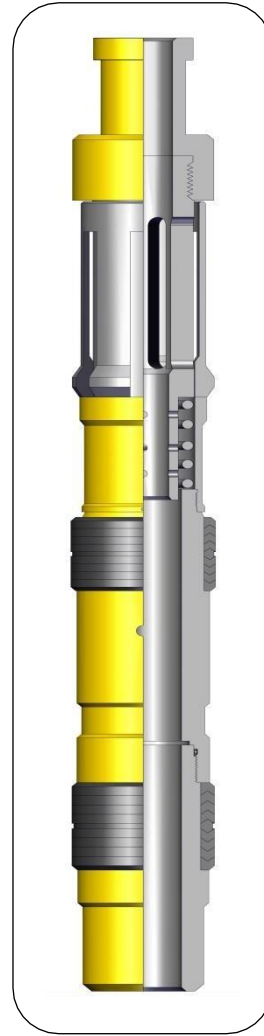
SEPARATION SLEEVES FOR MODEL "BL" SLIDING SLEEVE

"BLSE" Product No.: BI 805-41 (Selective)

"BLGE" Product No.: BI 805-50 (Top No-Go)

Separation Sleeve used in the Model 'BL' Sliding Sleeve is designed to SHUT off Tubing to annulus flow through the Sliding Sleeve should the Sliding Sleeve become inoperative. "Straight through Flow" through the Separation Sleeve is accomplished by a chevron packing system that will seal off in the upper and lower seal bores, isolating the ports of the Sliding Sleeve.

The Separation Sleeve is also designed with an internal equalizing plug to equalize pressure before retrieving.



Model "BLGE"
Separation Sleeve
Product No.: BI 805-50

Specification Guide "BLSE" SEPARATION SLEEVE									
Tubing OD (Inch.)	Seal Bore (Inch.)	Size (Inch.)	Max OD (Inch.)	To Run			To Equalize		To Pull
				"BC-1" Running Tool Product No.: BI 811-06	"N-1" Shank Product No.: BI 811-85	"A" Guide Product No.: BI 811-71	"A" Prong Product No.: BI 811-70	Pulling Tool	"N-1" Probe Product No.: BI 812-13
2-1/16	1.562	1.56	1.615	1.900	2-1/16	2-1/16	7/16 x 28	JUC	2-1/16
2-3/8	1.781	1.78	1.865	2-3/8	2-3/8	2-3/8	1/2 x 30	JUC or JDC	2-3/8
	1.812	1.81							
	1.875	1.87	1.928					JUC or JDC	2-7/8
2-7/8	2.250	2.25	2.302	2-7/8	2-7/8				
	2.312	2.31	2.365						

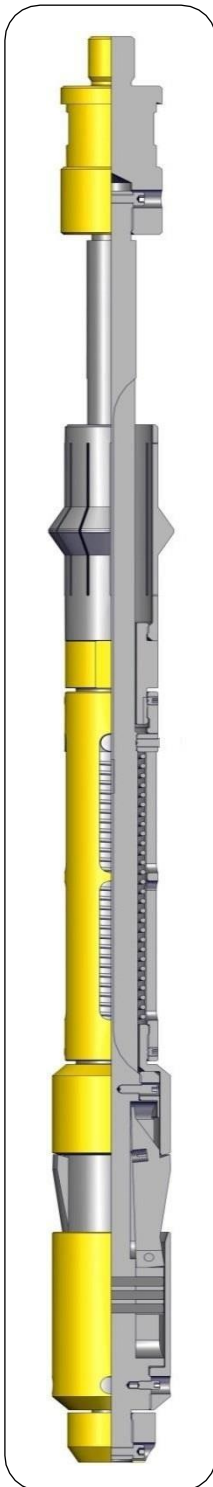
Specification Guide "BLGE" SEPARATION SLEEVE										
Tubing OD (Inch.)	Seal Bore (Inch.)	Size (Inch.)	To Run				To Equalize		To Pull	
			NO-GO				"A" Guide Product No.: BI 811-71	"A" Prong Product No.: BI 811-70	Pulling Tool	"A" Probe Product No.: BI 812-06
			Locating Ring OD (Inch.)	"BC-1" Running Tool Product No.: BI 811-06	"A" Shank Product No.: BI 811-80	"E" Selective Running Tool Product No.: BI 811-17				
2-1/16	1.562	1.56	1.593	1.900"	2-1/16" x 4-3/4"	1.900"	2-1/16"	7/16 x 28"	JUC or JDC	1.900"
	1.625	1.62	1.656							
2-3/8	1.781	1.78	1.807	2-3/8"	2-3/8 x 5"	2-3/8"	2-3/8"	1/2" x 27-1/2"	JUC or JDC	2-3/8"
	1.812	1.81	1.84							
	1.875	1.87	1.906							
2-7/8	2.250	2.25	2.281	2-7/8"	2-7/8" x 4-11/16"	2-7/8"	2-7/8"	5/8" x 28-9/16"	JUC or JDC	2-7/8"
	2.312	2.31	2.343							
3-1/2	2.750	2.75	2.781	3-1/2"	3-1/2" x 5-5/16"	3-1/2"	3-1/2"	5/8" x 35"	JUC or JDC	3-1/2"
	2.812	2.81	2.843							
4-1/2	3.688	3.68	3.802	4-1/2"	4-1/2" x 7"	4-1/2"	4-1/2"		JUC or JDC	4-1/2"
	3.812	3.81	3.843							

MODEL "BD-2" SHIFTING TOOL Product No.: BI 810-72

The Model "BD-2" Shifting Tool is a wire-line operated tool used to open and close the Model "BL" Sliding Sleeve. Any number of sleeves, of the same size, in a single Tubing String can be shifted in any combination or in any sequence.

Features:

- The Automatic Locating Collet: on the tool positively notifies the operator when the desired sleeve is reached. Running through two consecutive seal bores located two feet apart, indicates a sleeve. Running through only one seal bore indicates a Landing Nipple.
- Proof of Sleeve Shift: After completing of a shift, an attempt to repeat the operation will give a surface indication that the shift was performed.
- Safety Release: If the sleeve is opened in the presence of a differential pressure in favor of the annulus, the release mechanism is held inoperative by flow until the pressures equalize.
- Emergency Release: The Shifting Tool has a shear pin release mechanism below the shifting Dogs for emergency release.
- Deliberate Release: Even after the Shifting Tool is seated in a sleeve, it can be released without shifting the sleeve.
- Open/Close Sequence: Upward jarring opens the sleeve. This allows the use of Hydraulic or Mechanical Jars. Run in the inverted position, the tool will close the sleeve with downward jarring. At least 6 feet, without restrictions, should be provided below the sleeve.



Model "BD-2"
Shifting Tool
Product No.:
BI 810-72

NON-ELASTOMERIC SLIDING SLEEVE Product No.: BI 810-81

The BOTIL Non-Elastomeric Sliding Sleeve is available in XD/RD/BRT type. It is a full-opening device with an inner sleeve that can be opened or closed using standard slick line methods. This sleeve enables communication between the tubing/casing annulus. An Otis Type X, R, and BOTIL BRT nipple profile is featured in the top sub and a polished pack-off area below is an integral part of the assembly.

The Sliding Sleeve is available in two shifting versions: down-to-close and up-to-open or up-to-close and down to open. It is available for standard and heavy weight tubing and high temperature service. The ports flow area corresponds to tubing area.

Features:

- Otis type X, R, and BOTIL BRT nipple profiles are available on request.
- Durable Non-Elastomeric seals.
- Polished pack-off area
- Circulation/production area equals the tubing area
- Opens up and down
- Packing does not move when the sleeve is shifted.
- Three-position collet lock
- Repeatedly opened against 5,000 psi differential pressure.



Non-Elastomeric
Sliding Sleeve
Product No.: BI 810-81

Specification Guide		
Tubing Size (Inch.)	Seal Bore (Inch.)	Max. O.D (Inch.)
2-3/8	1.750	3.062
	1.875	
2-7/8	2.250	3.668
	2.312	
3-1/2	2.750	4.500
	2.813	
4	3.250	5.250
	3.313	
4-1/2	3.688	5.500
	3.750	
	3.813	
5-1/2	4.313	6.500
	4.462	

"BX" & "BR" SEPARATION SLEEVES FOR NON-ELASTOMERIC SLIDING SLEEVE
Product No.: BI 805-49

Separation Sleeve used in the Non-Elastomeric Sliding Sleeve, is designed to SHUT off Tubing to annulus flow through the Sliding Sleeve should the Sliding Sleeve become inoperative. "Straight through Flow" through the Separation Sleeve is accomplished by a chevron packing system that will seal off in the upper and lower seal bores, isolating the ports of the Sliding Sleeve.

The Separation Sleeve is also designed with an internal equalizing plug to equalize pressure before retrieving.

Features:

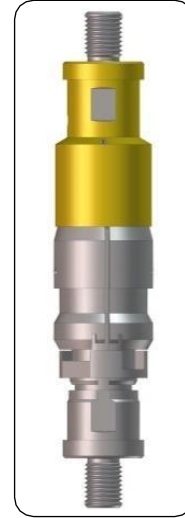
- Pressure can be equalized by the equalizing valve while running in and pulling out.
- "BX" & "BR" Running Tool is used with running prong to run.
- "GS" Pulling Tool is used with pulling prong to pull.
- Available in all seal bore sizes.



Model "BX"
 Separation Sleeve
 Product No.:
 BI 805-49

MODEL "B" SHIFTING TOOL
Product No.: BI 811-19

The Model "B" Shifting Tool is a wire line operated tool used to position the closing Sleeve or Sliding Side Doors to the open position or the closed position of the Model "Non-Elastomeric" Sliding Sleeve.



Model "B"
 Shifting Tool
 Product No.: BI 811-19

Specification guide MODEL "B" SHIFTING TOOL						
Sliding Side Door ID	Fish Neck Size	OD of Expanded Keys	OD of Retracted Keys	Threads	Overall length	
1.500	1.187	1.690	1.490	15/16 10UN	12.440	
1.625		1.890	1.620		12.750	
1.710		-	1.690		-	
1.781	1.375	2.070	1.750		12.500	
1.875		2.110	1.840		13.300	
2.125		2.350	1.970			
2.313	1.750	2.590	2.160		1-1/16 10UN	13.940
2.562		3.000	2.530			
2.750	2.313	2.900	2.730			14.190
2.813		3.010	2.720			
3.688	3.125	4.130	3.660	15.750		
3.813		4.090	3.120	13.880		