

"GFB-2" EQUALIZING CHECK VALVE
SIZES 1.78 / 1.81 / 1.87
(TOP NO-GO)



Equalizing Check Valves are sometimes called "Standing Valves" because they prevent fluid flow in one direction (downward) while allowing full fluid flow in the opposite direction (upward). The "GFB-2" seats on the top NoGo shoulder of a "GF" type profile which prevents downward movement. It is not locked into the profile, and has a built-in method of allowing equalizing before pulling.

To Run: C-1 Running Tool
 To Pull: SB or JDC Pulling Tool

SIZE	PART NO.	MATERIAL SELECTION
1.78 GFB-2	1127-00-178-000	4140/L80
1.81 GFB-2	1127-00-181-000	4140/P110
1.87 GFB-2	1127-00-187-000	9 CHROME 1 MOLY

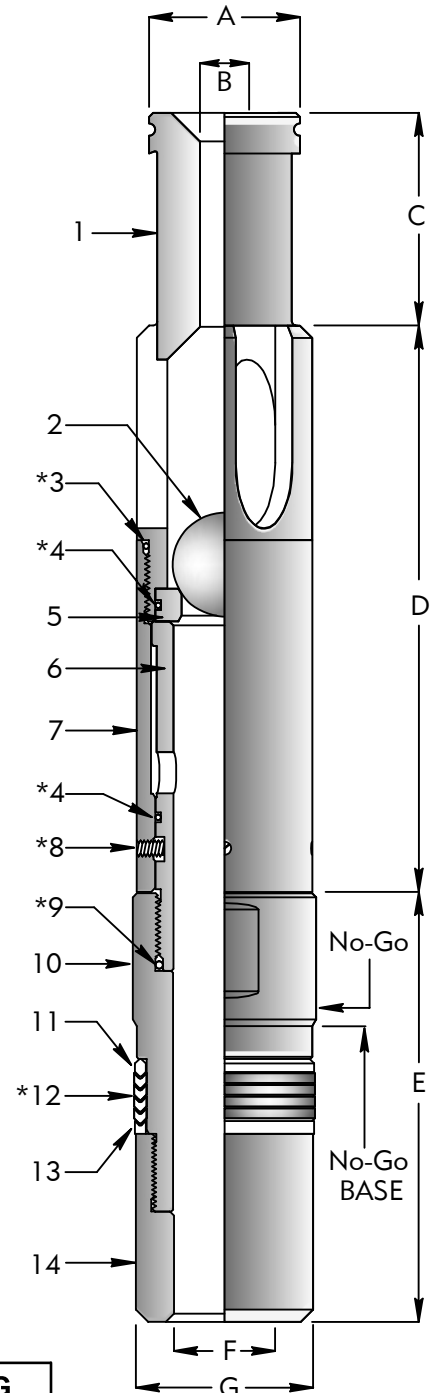
PARTS LIST

ITEM	PART NAME	NO. REQ.	PART NO.
1	Fishing Neck	1	2046-00-187-000
2	Stainless Steel Ball 1-1/4" O.D.	1	BWW-T218-000
*3	O-Ring #127	1	Part in Redress Kit
*4	O-Ring #124	2	Part in Redress Kit
5	Ball Seat	1	2047-00-187-000
6	By-Pass Mandrel	1	2048-00-187-000
7	Equalizing Sleeve	1	2049-00-187-000
*8	Brass Shear Screw 1/4"-20 UN	2	WW-GE18-08B
*9	O-Ring #218	1	Part in Redress Kit
10	Packing Mandrel, Size 1.78	1	2050-00-178-000
10	Packing Mandrel, Size 1.81	1	2050-00-181-000
10	Packing Mandrel, Size 1.87	1	2050-00-187-000
11	Male Steel Ring, Size 1.78	1	2056-00-178-000
11	Male Steel Ring, Size 1.81	1	2056-00-181-000
11	Male Steel Ring, Size 1.87	1	2056-00-187-000
*12	Packing Rings, Size 1.78/1.81/1.87	4	Part in Redress Kit
13	Female Steel Ring, Size 1.78	1	2055-00-178-00
13	Female Steel Ring, Size 1.81	1	2055-00-181-00
13	Female Steel Ring, Size 1.87	1	2055-00-187-00
14	Retaining Nut, Size 1.78	1	2051-00-178-000
14	Retaining Nut, Size 1.81 / 1.87	1	2051-00-187-000
*	GFB Redress Kit, Size 1.78	1	1159-00-178-000
*	GFB Redress Kit, Size 1.81	1	1159-00-181-000
*	GFB Redress Kit, Size 1.87	1	1159-00-187-000

* Part in Redress Kit

DIMENSIONAL DATA

SIZE	No-Go	A	B	C	D	E	F	G
1.78	1.802	1.375	.438	3.430	6.660	5.590	1.062	1.771
1.81	1.865							1.802
1.87	1.905							1.802



"GFB-2" EQUALIZING CHECK VALVE
SIZES 2.25 / 2.31
(TOP NO-GO)

Equalizing Check Valves are sometimes called "Standing Valves" because they prevent fluid flow in one direction (downward) while allowing full fluid flow in the opposite direction (upward). The "GFB-2" seats on the top NoGo shoulder of a "GF" type profile which prevents downward movement. It is not locked into the profile, and has a built-in method of allowing equalizing before pulling.

To Run: C-1 Running Tool
 To Pull: SB or JDC Pulling Tool



SIZE	PART NO.	MATERIAL SELECTION
2.25 GFB-2	1127-00-225-000	4140/L80
2.31 GFB-2	1127-00-231-000	4140/P110 9 CHROME 1 MOLY

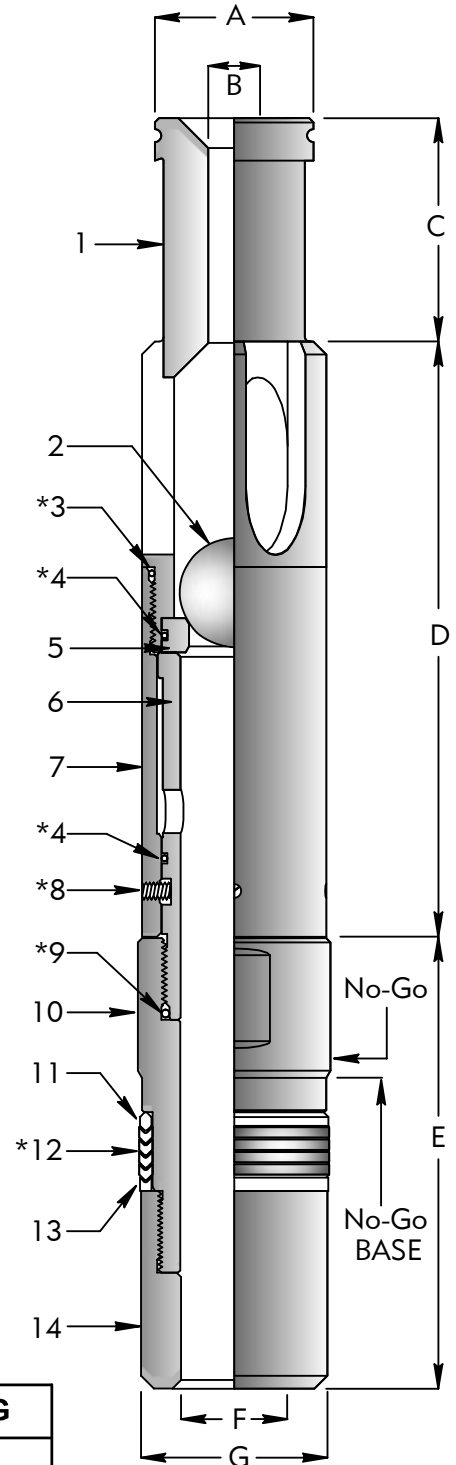
PARTS LIST

ITEM	PART NAME	NO. REQ.	PART NO.
1	Fishing Neck	1	2046-00-225-000
2	Stainless Steel Ball 1-1/2" O.D.	1	BWW-T21H-000
*3	O-Ring #133	1	Part in Redress Kit
*4	O-Ring #128	2	Part in Redress Kit
5	Ball Seat	1	2047-00-225-000
6	By-Pass Mandrel	1	2048-00-225-000
7	Equalizing Sleeve	1	2049-00-225-000
*8	Brass Shear Screw 1/4"-20 UN	2	WW-GE18-0DB
*9	O-Ring #222	1	Part in Redress Kit
10	Packing Mandrel, Size 2.25	1	2050-00-225-000
10	Packing Mandrel, Size 2.31	1	2050-00-231-000
11	Male Steel Ring, Size 2.25	1	2056-00-225-000
11	Male Steel Ring, Size 2.31	1	2056-00-231-000
*12	Packing Rings, Size 2.25 / 2.31	4	Part in Redress Kit
13	Female Steel Ring, Size 2.25	1	2055-00-225-00
13	Female Steel Ring, Size 2.31	1	2055-00-231-00
14	Retaining Nut, Size 2.25 / 2.31	1	2051-00-225-000
*	GFB Redress Kit, Size 2.25	1	1159-00-225-000
*	GFB Redress Kit, Size 2.31	1	1159-00-231-000

* Part in Redress Kit

DIMENSIONAL DATA

SIZE	No-Go	A	B	C	D	E	F	G
2.25	2.302	1.750	.438	3.310	8.310	5.750	1.250	2.240
2.31	2.365							



**"GFB-2" EQUALIZING CHECK VALVE
 SIZE 2.56
 (TOP NO-GO)**



Equalizing Check Valves are sometimes called "Standing Valves" because they prevent fluid flow in one direction (downward) while allowing full fluid flow in the opposite direction (upward). The "GFB-2" seats on the top NoGo shoulder of a "GF" type profile which prevents downward movement. It is not locked into the profile, and has a built-in method of allowing equalizing before pulling.

To Run: C-1 Running Tool
 To Pull: SB or JDC Pulling Tool

SIZE	PART NO.	MATERIAL SELECTION
2.56 GFB-2	1127-00-256-000	4140/L80 4140/P110 9 CHROME 1 MOLY

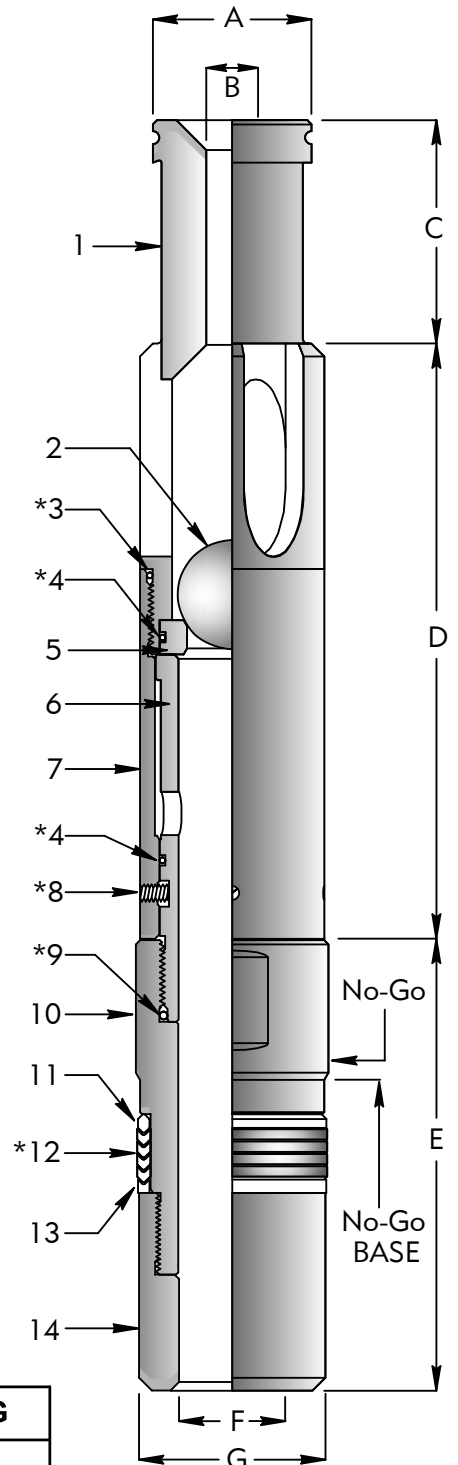
PARTS LIST

ITEM	PART NAME	NO. REQ.	PART NO.
1	Fishing Neck	1	2046-00-256-000
2	Stainless Steel Ball 1-1/2" O.D.	1	BWW-T21H-000
*3	O-Ring #133	1	Part in Redress Kit
*4	O-Ring #128	2	Part in Redress Kit
5	Ball Seat	1	2047-00-256-000
6	By-Pass Mandrel	1	2048-00-256-000
7	Equalizing Sleeve	1	2049-00-256-000
*8	Brass Shear Screw 1/4"-20 UN	2	WW-GE18-0DB
*9	O-Ring #222	1	Part in Redress Kit
10	Packing Mandrel, Size 2.56	1	2050-00-256-000
11	Male Steel Ring, Size 2.56	1	2056-00-256-000
*12	Packing Rings, Size 2.56	4	Part in Redress Kit
13	Female Steel Ring, Size 2.56	1	2055-00-256-000
14	Retaining Nut, Size 2.56	1	2051-00-256-000
*	GFB Redress Kit, Size 2.56	1	1159-00-256-000

* Part in Redress Kit

DIMENSIONAL DATA

SIZE	No-Go	A	B	C	D	E	F	G
2.56	2.625	1.750	.438	3.310	8.375	5.750	1.250	2.552



"GFB-2" EQUALIZING CHECK VALVE
SIZES 2.75 / 2.81
(TOP NO-GO)



Equalizing Check Valves are sometimes called "Standing Valves" because they prevent fluid flow in one direction (downward) while allowing full fluid flow in the opposite direction (upward). The "GFB-2" seats on the top NoGo shoulder of a "GF" type profile which prevents downward movement. It is not locked into the profile, and has a built-in method of allowing equalizing before pulling.

To Run: C-1 Running Tool
 To Pull: SB or JDC Pulling Tool

SIZE	PART NO.	MATERIAL SELECTION
2.75 GFB-2	1127-00-275-000	4140/L80
2.81 GFB-2	1127-00-281-000	4140/P110
		9 CHROME 1 MOLY

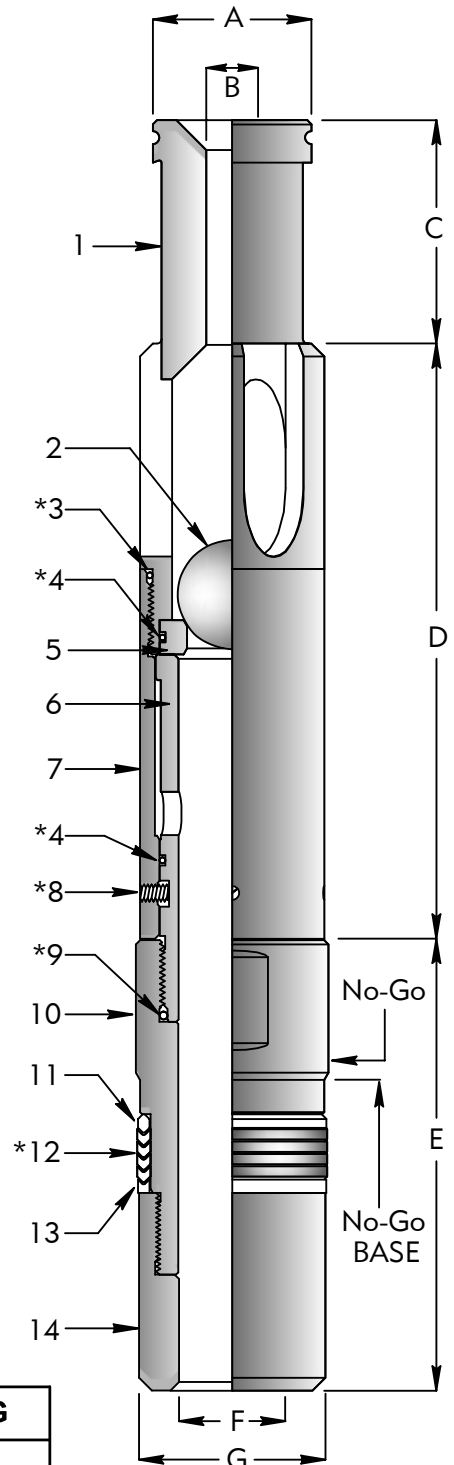
PARTS LIST

ITEM	PART NAME	NO. REQ.	PART NO.
1	Fishing Neck	1	2046-00-275-000
2	Stainless Steel Ball 1-11/16" O.D.	1	BWW-T21P-000
*3	O-Ring #141	1	Part in Redress Kit
*4	O-Ring #135	2	Part in Redress Kit
5	Ball Seat	1	2047-00-275-000
6	By-Pass Mandrel	1	2048-00-275-000
7	Equalizing Sleeve	1	2049-00-275-000
*8	Brass Shear Screw 1/4"-20 UN	4	WW-GE18-08B
*9	O-Ring #225	1	Part in Redress Kit
10	Packing Mandrel, Size 2.75	1	2050-00-275-000
10	Packing Mandrel, Size 2.81	1	2050-00-281-000
11	Male Steel Ring, Size 2.75	1	2056-00-275-000
11	Male Steel Ring, Size 2.81	1	2056-00-281-000
*12	Packing Rings, Size 2.75 / 2.81	4	Part in Redress Kit
13	Female Steel Ring, Size 2.75	1	2055-00-275-000
13	Female Steel Ring, Size 2.81	1	2055-00-281-000
14	Retaining Nut, Size 2.75 / 2.81	1	2051-00-275-000
*	GFB Redress Kit, Size 2.75	1	1159-00-275-000
*	GFB Redress Kit, Size 2.81	1	1159-00-281-000

* Part in Redress Kit

DIMENSIONAL DATA

SIZE	No-Go	A	B	C	D	E	F	G
2.75	2.802	2.313	.750	3.310	8.320	7.180	1.563	2.740
2.81	2.865							



"GRB-2" EQUALIZING CHECK VALVE
SIZES 1.78 / 1.81 / 1.87
(BOTTOM NO-GO)



Equalizing Check Valves are sometimes called "Standing Valves" because they prevent fluid flow in one direction (downward) while allowing full fluid flow in the opposite direction (upward). The "GRB-2" seats on the bottom NoGo shoulder of a "GR" type profile which prevents downward movement. It is not locked into the profile, and has a built-in method of allowing equalizing before pulling.

To Run: C-1 Running Tool
 To Pull: SB or JDC Pulling Tool

SIZE	PART NO.	MATERIAL SELECTION
1.78 GRB-2	1128-00-178-000	4140/L80
1.81 GRB-2	1128-00-181-000	4140/P110
1.87 GRB-2	1128-00-187-000	9 CHROME 1 MOLY

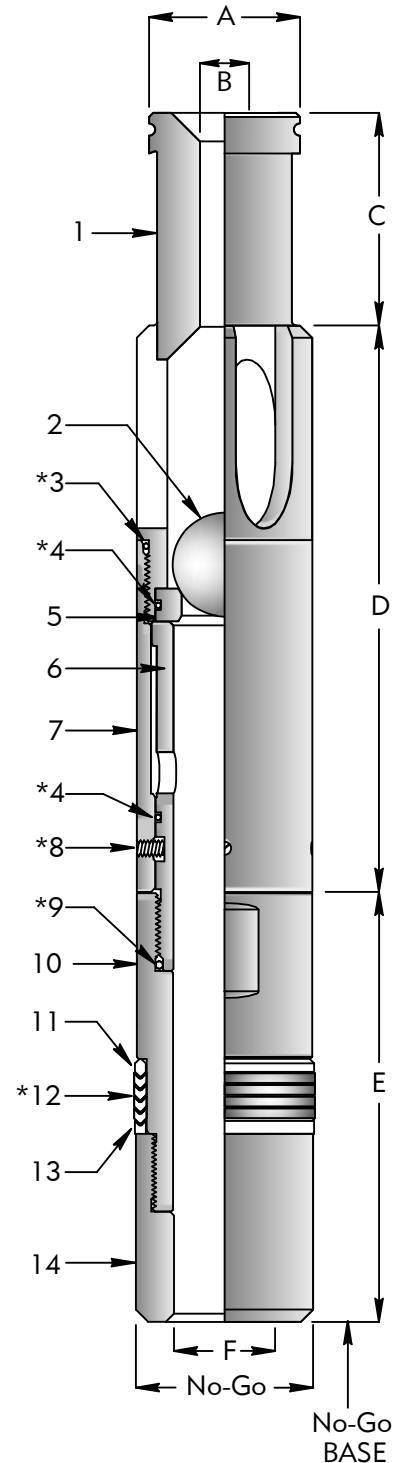
PARTS LIST

ITEM	PART NAME	NO. REQ.	PART NO.
1	Fishing Neck	1	2046-00-187-000
2	Stainless Steel Ball 1-1/4" O.D.	1	BWW-T218-000
*3	O-Ring #127	1	Part in Redress Kit
*4	O-Ring #124	2	Part in Redress Kit
5	Ball Seat	1	2047-00-187-000
6	By-Pass Mandrel	1	2048-00-187-000
7	Equalizing Sleeve	1	2049-00-187-000
*8	Brass Shear Screw 1/4"-20 UN	2	WW-GE18-08B
*9	O-Ring #218	1	Part in Redress Kit
10	Packing Mandrel 1.78/1.81/1.87	1	2052-00-187-000
11	Male Steel Ring, Size 1.78	1	2056-00-178-000
11	Male Steel Ring, Size 1.81	1	2056-00-181-000
11	Male Steel Ring, Size 1.87	1	2056-00-187-000
*12	Packing Rings, Size 1.78/1.81/1.87	4	Part in Redress Kit
13	Female Steel Ring, Size 1.78	1	2055-00-178-00
13	Female Steel Ring, Size 1.81	1	2055-00-181-00
13	Female Steel Ring, Size 1.87	1	2055-00-187-00
14	Retaining Nut, Size 1.78	1	2053-00-178-000
14	Retaining Nut, Size 1.81	1	2053-00-181-000
14	Retaining Nut, Size 1.87	1	2053-00-187-000
*	GRB Redress Kit, Size 1.78	1	1159-00-178-000
*	GRB Redress Kit, Size 1.81	1	1159-00-181-000
*	GRB Redress Kit, Size 1.87	1	1159-00-187-000

* Part in Redress Kit

DIMENSIONAL DATA

SIZE	No-Go	A	B	C	D	E	F
1.78	1.771	1.375	.438	3.430	6.660	5.590	1.062
1.81	1.802						
1.87	1.865						



"GRB-2" EQUALIZING CHECK VALVE
SIZES 2.25 / 2.31
(BOTTOM NO-GO)



Equalizing Check Valves are sometimes called "Standing Valves" because they prevent fluid flow in one direction (downward) while allowing full fluid flow in the opposite direction (upward). The "GRB-2" seats on the bottom NoGo shoulder of a "GR" type profile which prevents downward movement. It is not locked into the profile, and has a built-in method of allowing equalizing before pulling.

To Run: C-1 Running Tool
 To Pull: SB or JDC Pulling Tool

SIZE	PART NO.	MATERIAL SELECTION
2.25 GRB-2	1128-00-225-000	4140/L80
2.31 GRB-2	1128-00-231-000	4140/P110
		9 CHROME 1 MOLY

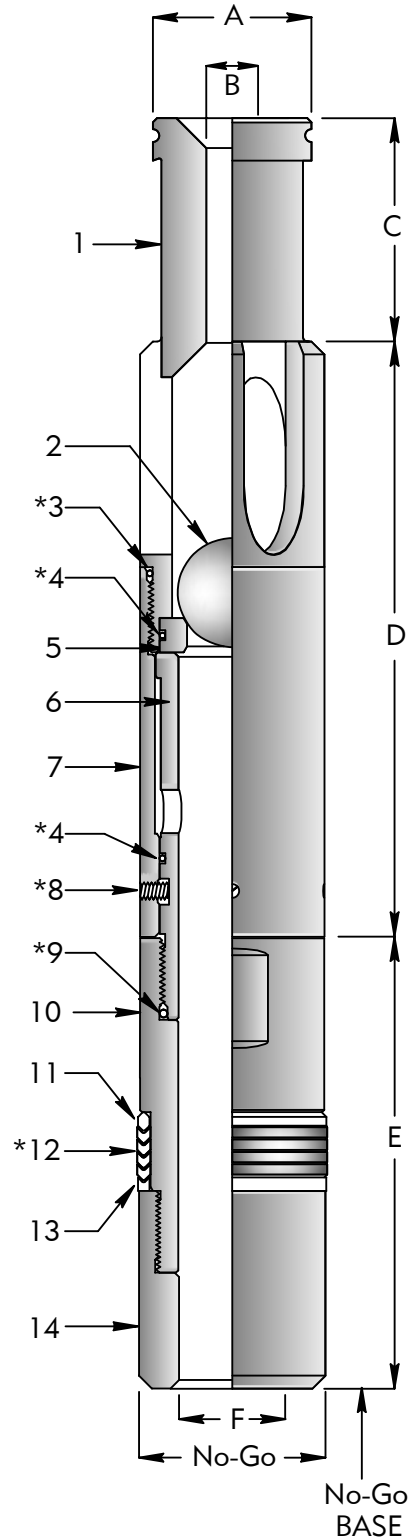
PARTS LIST

ITEM	PART NAME	NO. REQ.	PART NO.
1	Fishing Neck	1	2046-00-225-000
2	Stainless Steel Ball 1-1/2" O.D.	1	BWW-T21H-000
*3	O-Ring #133	1	Part in Redress Kit
*4	O-Ring #128	2	Part in Redress Kit
5	Ball Seat	1	2047-00-225-000
6	By-Pass Mandrel	1	2048-00-225-000
7	Equalizing Sleeve	1	2049-00-225-000
*8	Brass Shear Screw 1/4"-20 UN	2	WW-GE18-0DB
*9	O-Ring #222	1	Part in Redress Kit
10	Packing Mandrel, Size 2.25 / 2.31	1	2052-00-225-000
11	Male Steel Ring, Size 2.25	1	2056-00-225-000
11	Male Steel Ring, Size 2.31	1	2056-00-231-000
*12	Packing Rings, Size 2.25 / 2.31	4	Part in Redress Kit
13	Female Steel Ring, Size 2.25	1	2055-00-225-00
13	Female Steel Ring, Size 2.31	1	2055-00-231-00
14	Retaining Nut, Size 2.25	1	2053-00-225-000
14	Retaining Nut, Size 2.31	1	2053-00-231-000
*	GRB Redress Kit, Size 2.25	1	1159-00-225-000
*	GRB Redress Kit, Size 2.31	1	1159-00-231-000

* Part in Redress Kit

DIMENSIONAL DATA

SIZE	No-Go	A	B	C	D	E	F
2.25	2.240	1.750	.438	3.310	8.310	5.750	1.250
2.31	2.302						



**"GRB-2" EQUALIZING CHECK VALVE
 SIZE 2.56
 (BOTTOM NO-GO)**



Equalizing Check Valves are sometimes called "Standing Valves" because they prevent fluid flow in one direction (downward) while allowing full fluid flow in the opposite direction (upward). The "GRB-2" seats on the Bottom NoGo shoulder of a "GR" type profile which prevents downward movement. It is not locked into the profile, and has a built-in method of allowing equalizing before pulling.

To Run: C-1 Running Tool
 To Pull: SB or JDC Pulling Tool

SIZE	PART NO.	MATERIAL SELECTION
2.56 GRB-2	1128-00-256-000	4140/L80 4140/P110 9 CHROME 1 MOLY

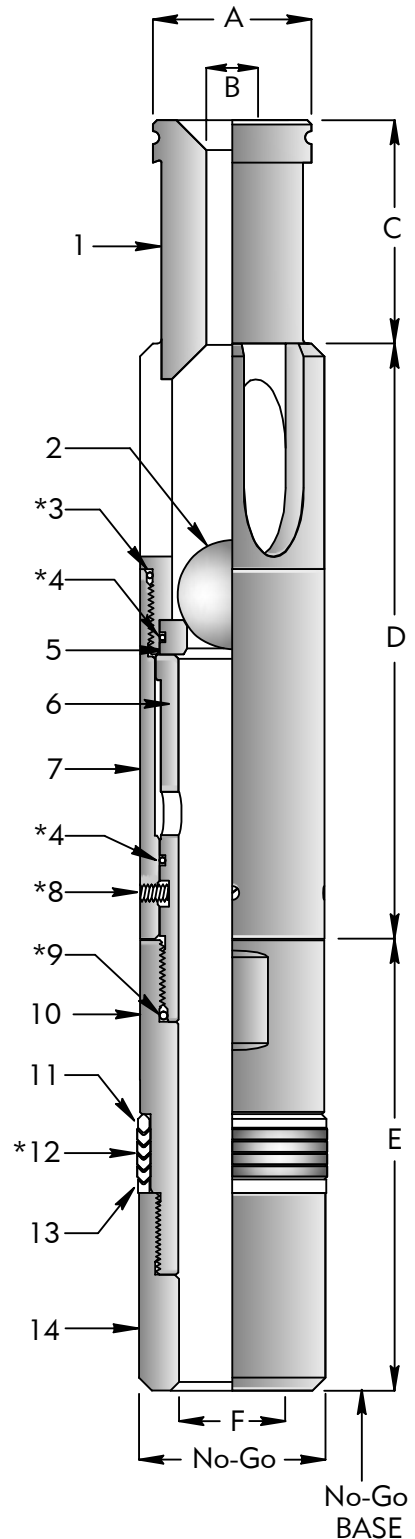
PARTS LIST

ITEM	PART NAME	NO. REQ.	PART NO.
1	Fishing Neck	1	2046-00-256-000
2	Stainless Steel Ball 1-1/2" O.D.	1	BWW-T21H-000
*3	O-Ring #133	1	Part in Redress Kit
*4	O-Ring #128	2	Part in Redress Kit
5	Ball Seat	1	2047-00-256-000
6	By-Pass Mandrel	1	2048-00-256-000
7	Equalizing Sleeve	1	2049-00-256-000
*8	Brass Shear Screw 1/4"-20 UN	2	WW-GE18-0DB
*9	O-Ring #222	1	Part in Redress Kit
10	Packing Mandrel, Size 2.56	1	2052-00-256-000
11	Male Steel Ring, Size 2.56	1	2056-00-256-000
*12	Packing Rings, Size 2.56	4	Part in Redress Kit
13	Female Steel Ring, Size 2.56	1	2055-00-256-000
14	Retaining Nut	1	2053-00-256-000
*	GRB Redress Kit, Size 2.56	1	1159-00-256-000

* Part in Redress Kit

DIMENSIONAL DATA

SIZE	No-Go	A	B	C	D	E	F
2.56	2.552	1.750	.438	3.310	8.375	5.750	1.250



**"GRB-2" EQUALIZING CHECK VALVE
SIZES 2.75 / 2.81
(BOTTOM NO-GO)**



Equalizing Check Valves are sometimes called "Standing Valves" because they prevent fluid flow in one direction (downward) while allowing full fluid flow in the opposite direction (upward). The "GRB-2" seats on the bottom NoGo shoulder of a "GR" type profile which prevents downward movement. It is not locked into the profile, and has a built-in method of allowing equalizing before pulling.

To Run: C-1 Running Tool
To Pull: SB or JDC Pulling Tool

SIZE	PART NO.	MATERIAL SELECTION
2.75 GRB-2	1128-00-275-000	4140/L80
		4140/P110
2.81 GRB-2	1128-00-281-000	9 CHROME 1 MOLY

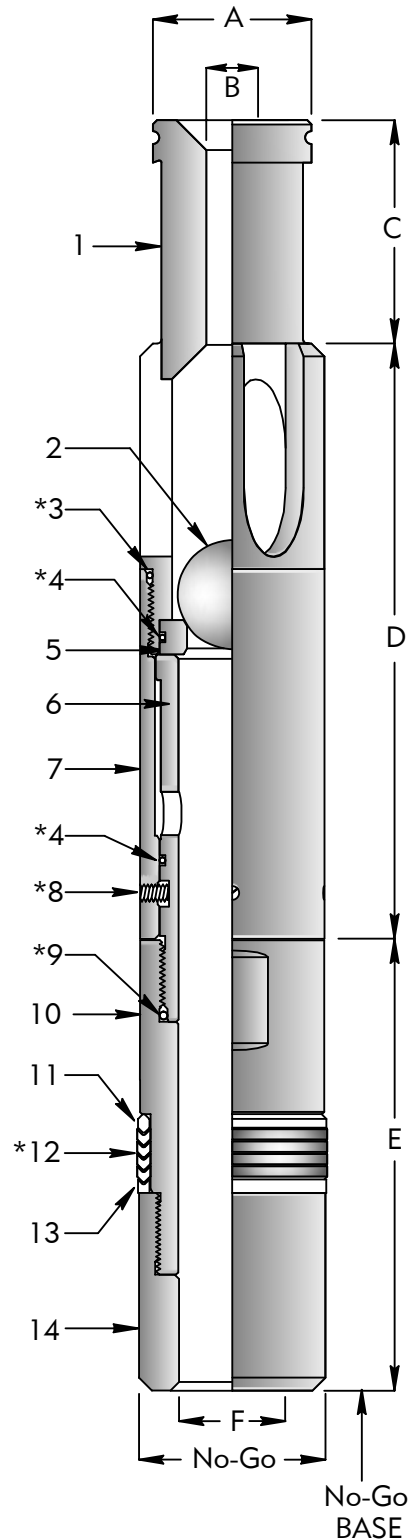
PARTS LIST

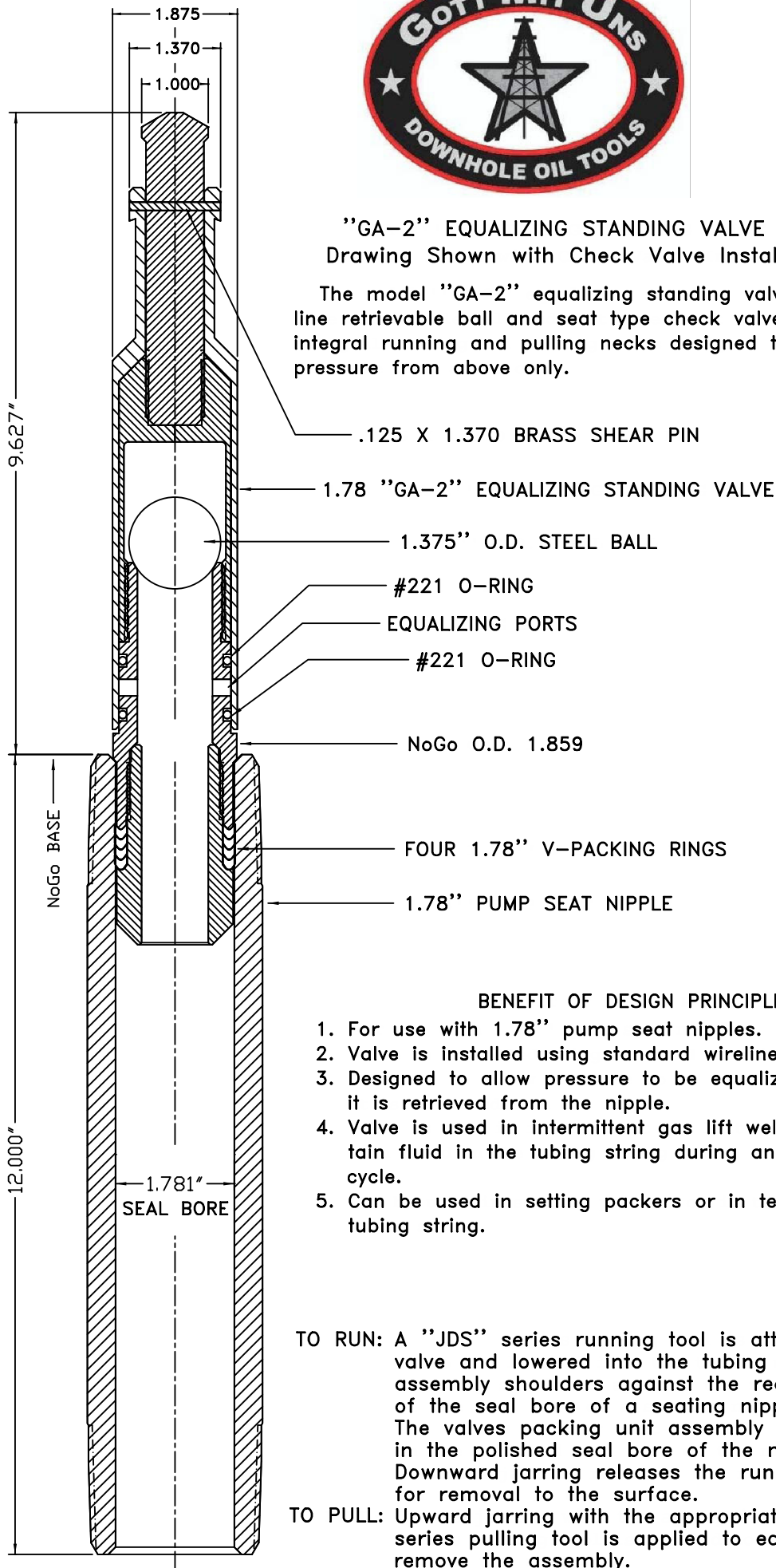
ITEM	PART NAME	NO. REQ.	PART NO.
1	Fishing Neck	1	2046-00-275-000
2	Stainless Steel Ball 1-11/16" O.D.	1	BWW-T21P-000
*3	O-Ring #141	1	Part in Redress Kit
*4	O-Ring #135	2	Part in Redress Kit
5	Ball Seat	1	2047-00-275-000
6	By-Pass Mandrel	1	2048-00-275-000
7	Equalizing Sleeve	1	2049-00-275-000
*8	Brass Shear Screw 1/4"-20 UN	4	WW-GE18-08B
*9	O-Ring #225	1	Part in Redress Kit
10	Packing Mandrel, Size 2.75 / 2.81	1	2052-00-275-000
11	Male Steel Ring, Size 2.75	1	2056-00-275-000
11	Male Steel Ring, Size 2.81	1	2056-00-281-000
*12	Packing Rings, Size 2.75 / 2.81	4	Part in Redress Kit
13	Female Steel Ring, Size 2.75	1	2055-00-275-000
13	Female Steel Ring, Size 2.81	1	2055-00-281-000
14	Retaining Nut, Size 2.75	1	2053-00-275-000
14	Retaining Nut, Size 2.81	1	2053-00-281-000
*	GRB Redress Kit, Size 2.75	1	1159-00-275-000
*	GRB Redress Kit, Size 2.81	1	1159-00-281-000

* Part in Redress Kit

DIMENSIONAL DATA

SIZE	No-Go	A	B	C	D	E	F
2.75	2.740	2.313	.750	3.310	8.320	7.180	1.563
2.81	2.802						





"GA-2" EQUALIZING STANDING VALVE
 Drawing Shown with Check Valve Installed

The model "GA-2" equalizing standing valve is wire-line retrievable ball and seat type check valve with integral running and pulling necks designed to hold pressure from above only.

.125 X 1.370 BRASS SHEAR PIN

1.78 "GA-2" EQUALIZING STANDING VALVE

1.375" O.D. STEEL BALL

#221 O-RING

EQUALIZING PORTS

#221 O-RING

NoGo O.D. 1.859

FOUR 1.78" V-PACKING RINGS

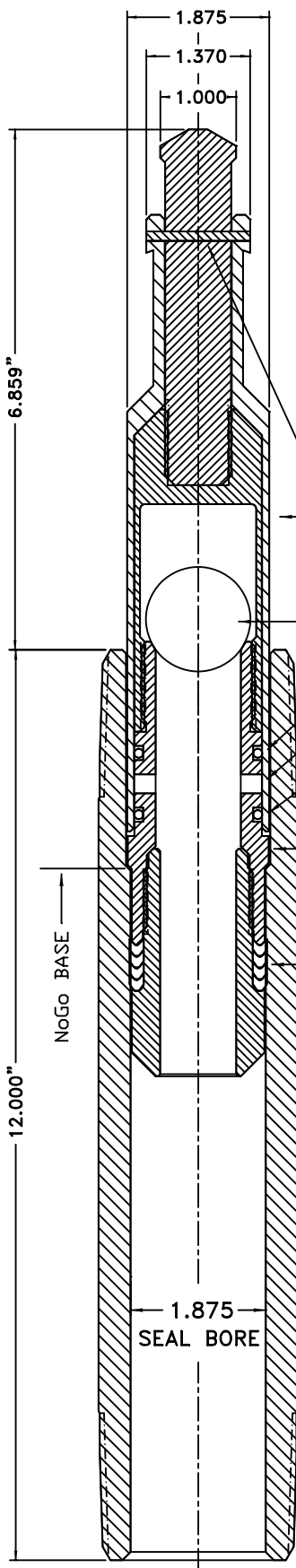
1.78" PUMP SEAT NIPPLE

BENEFIT OF DESIGN PRINCIPLE:

1. For use with 1.78" pump seat nipples.
2. Valve is installed using standard wireline methods.
3. Designed to allow pressure to be equalized before it is retrieved from the nipple.
4. Valve is used in intermittent gas lift wells to contain fluid in the tubing string during an injection cycle.
5. Can be used in setting packers or in testing the tubing string.

TO RUN: A "JDS" series running tool is attached to the valve and lowered into the tubing until the assembly shoulders against the reduced I.D. of the seal bore of a seating nipple. The valves packing unit assembly then seals in the polished seal bore of the nipple. Downward jarring releases the running tool for removal to the surface.

TO PULL: Upward jarring with the appropriate "JDS" series pulling tool is applied to equalize and remove the assembly.



"GA-2" EQUALIZING STANDING VALVE
 Drawing Shown with Check Valve Installed

The model "GA-2" equalizing standing valve is wire-line retrievable ball and seat type check valve with integral running and pulling necks designed to hold pressure from above only.

.125 X 1.370 BRASS SHEAR PIN

1.78 "GA-2" EQUALIZING STANDING VALVE

1.375" O.D. STEEL BALL

#221 O-RING

EQUALIZING PORTS

#221 O-RING

NoGo O.D. 1.905

1.87" PUMP SEAT NIPPLE

FOUR 1.87" V-PACKING RINGS

NoGo BASE

1.875
SEAL BORE

BENEFIT OF DESIGN PRINCIPLE:

1. For use with 1.87" pump seat nipples.
2. Valve is installed using standard wireline methods.
3. Designed to allow pressure to be equalized before it is retrieved from the nipple.
4. Valve is used in intermittent gas lift wells to contain fluid in the tubing string during an injection cycle.
5. Can be used in setting packers or in testing the tubing string.

TO RUN: A "JDS" series running tool is attached to the valve and lowered into the tubing until the assembly shoulders against the reduced I.D. of the seal bore of a seating nipple. The valve's packing unit assembly then seals in the polished seal bore of the nipple. Downward jarring releases the running tool for removal to the surface.

TO PULL: Upward jarring with the appropriate "JDS" series pulling tool is applied to equalize and remove the assembly.