

WORLDWIDE

MACHINING & WELDING, INC

MACHINING & WELDING, INC

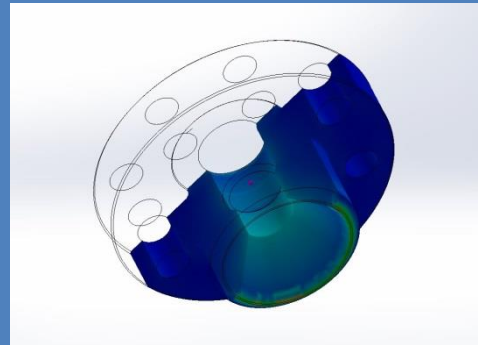
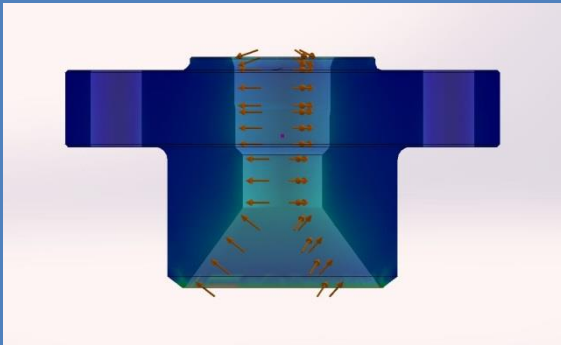
WORLDWIDE

FITTING CATALOG

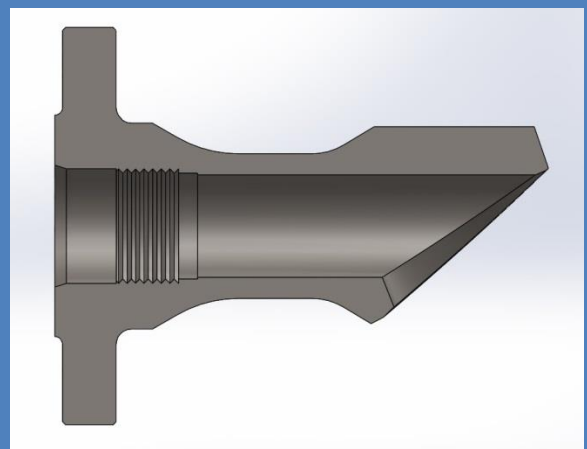
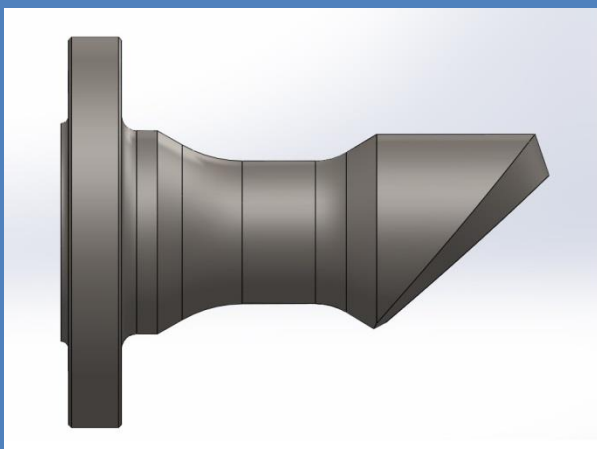


www.wmwinc.com

Worldwide Machining & Welding manufactures a complete line of fittings. Our fittings are held to stringent tolerances and hand assembled by select employees, to ensure perfect operation every time. All fittings are backed by FEA (Finite Element Analysis) Studies to ensure proper operation throughout the duration of use. We strive to provide the shortest lead time possible.



Worldwide Machining & Welding also produces custom fittings to order based upon customer specifications. These can be any of our standard fittings in a different configuration as well as completely custom.



Flanges and Specialty Fittings

Worldwide Machining & Welding has the ability to manufacture Spectacle Blinds, Flushing Rings, as well as Custom Spacer Rings to customer specifications.





FOL FITTINGS

(FLANGE-O-LET)

WorldWide Machining & Welding, Inc., has developed a single bodied FOL (Flange-O-Let) fitting with integral reinforcement.

This NEW single body design reduces the number of welds required during the manufacturing process. The elimination of the weld between the main body and the weld-o-let reduces manufacturing costs and increases the overall strength of the FOL.

FIELD APPLICATION

FOL fittings differ from a TORF (Thread-O-Ring, Flanged) fitting, as FOLs do not contain internal threading, an aluminum bronze plug, a Viton o-ring or a Teflon o-ring backer.

FOL fittings were developed with the intention that they be used in the place of a standard weld-o-let and flange combination, commonly used in the pipeline industry.

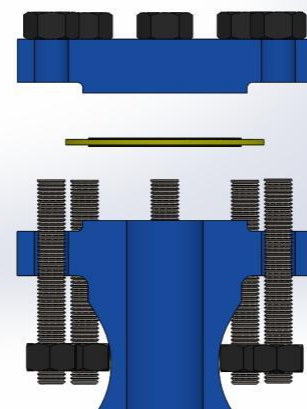
FOL fittings are fully compatible with current hot tapping machines.

FEATURES/SPECIFICATIONS

- Main body machined out of a solid piece of SA350 LF2 CL1 low temp or A105 material.
- CGI 304 gasket with an option for 316.
- Raised face blind flange machined out of SA350 LF2 CL1 low temp or A105 material.
- B7 studs and nuts with an option for L7.
- Material test reports provided for all fittings supplied.

PROCUREMENT

Price and lead time quotes available upon request.



MODELS

2.0"	ANSI	150
2.0"	ANSI	300
2.0"	ANSI	600
3.0"	ANSI	150
3.0"	ANSI	300
3.0"	ANSI	600
4.0"	ANSI	150
4.0"	ANSI	300
4.0"	ANSI	600

Custom sizes available upon request.

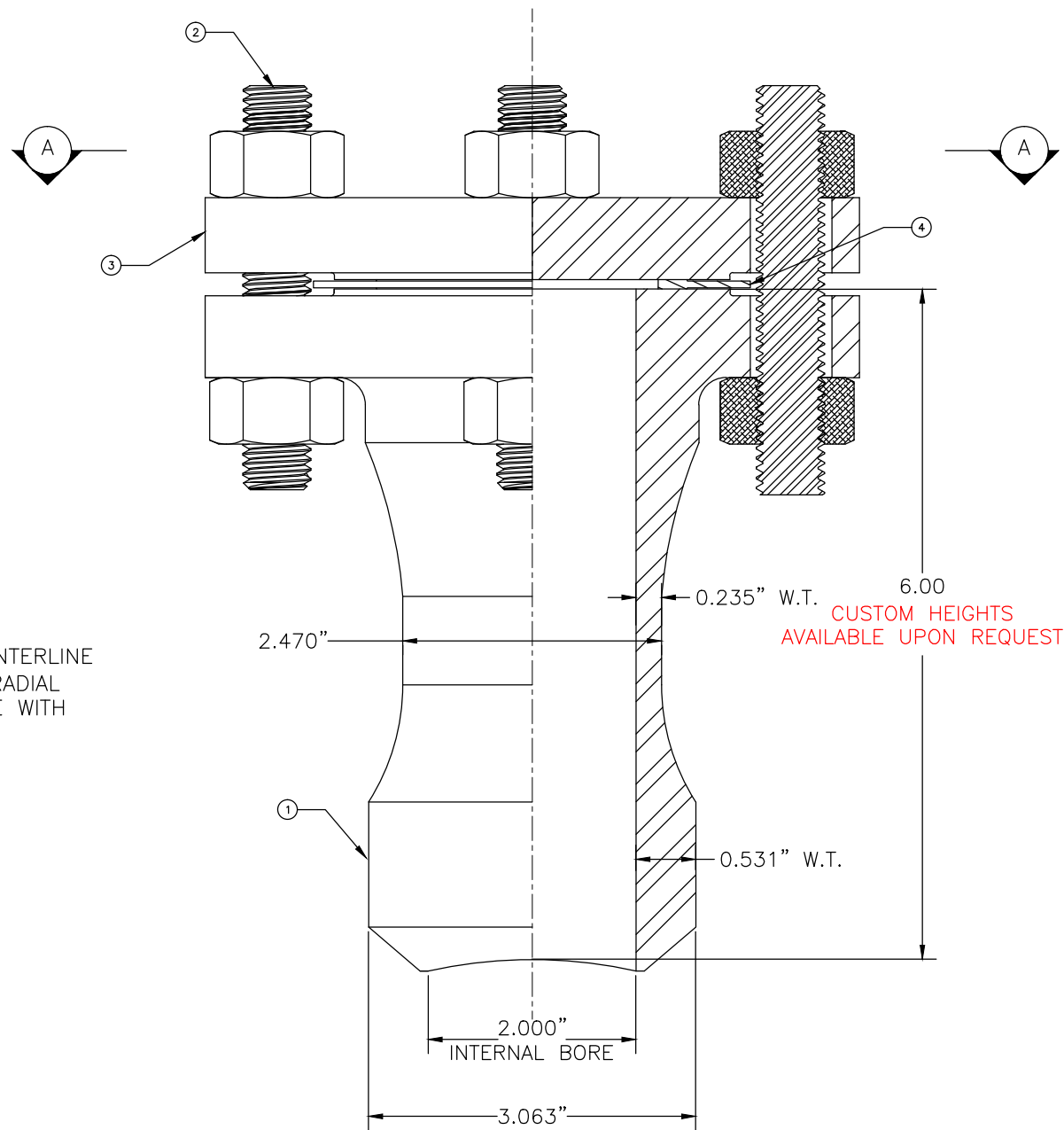
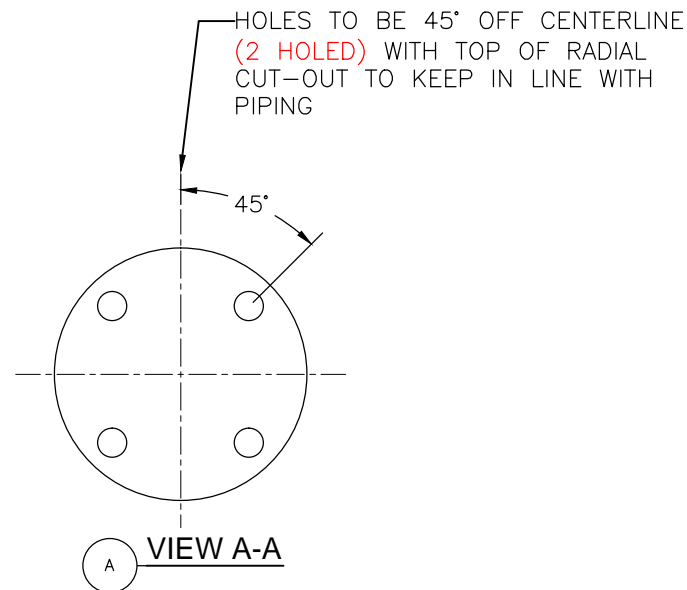
2.0-150FL-X-XX-6.00

SIZE RATING TYPE BLIND FLANGE OPTION RADIAL CUT-OUT OVERALL HEIGHT

CUSTOMER PLEASE SPECIFY

X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	6"
BB	8" (SHOWN)
CC	10"
DD	12"
EE	14"
FF	16" AND UP (NO RADIAL CUT OUT)



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	FLANGE-O-LET MAIN BODY	SA 350 LF2 CLASS 1 OR A105
2	4	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350 LF2 CLASS 1 OR A105
4	1	SPIRAL SEAL GASKET CGI	304 OR 316

CUSTOMER PLEASE SPECIFY WHEN ORDERING

1.) B7 OR L7 STUDS & NUTS

2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

2" 150# FOL DATA SPECIFICATIONS

- 1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
- 2.) MAOP:
ASME B31.4/.6: 285 PSI
CSA Z662 CAT I I / .6: 275 PSI
- 3.) FITTING IS DESIGNED TO -50°F
- 4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 428 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
- 5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	REVISED ORDER NUMBER	JA	4/10/14

DWG:	2.0-150FL-ASSEM
SHEET:	1 OF 1



2" 150# FOL		DRAWN - DATE	BF- 04-10-2014
PREPARED FOR:		CHECKED - DATE	TEG - 04-10-2014
WORLDWIDE MACHINING & WELDING		APPROVED - DATE	JA - 04-10-2014
PREPARED BY:		WORLDWIDE MACHINING & WELDING INC.	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com		FX: (715) 394-6007	

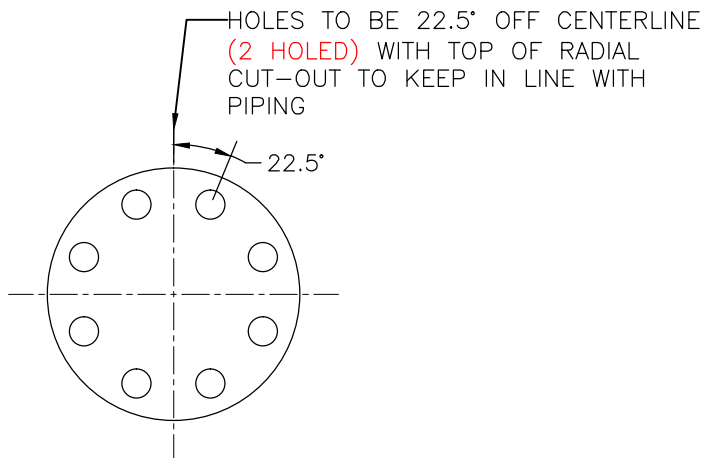
2.0-300FL-X-XX-6.00

SIZE RATING TYPE BLIND FLANGE OPTION RADIAL CUT-OUT OVERALL HEIGHT

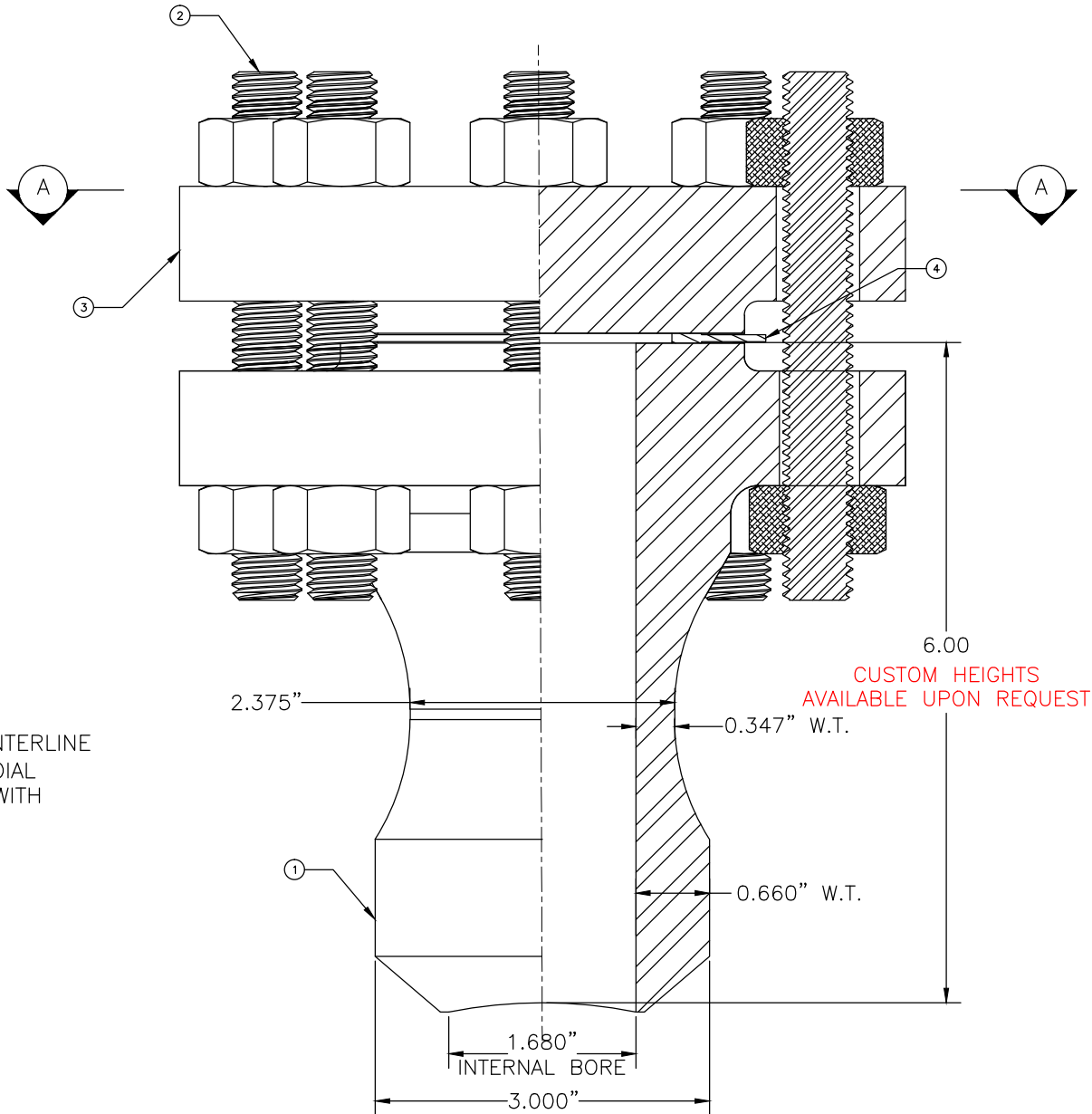
CUSTOMER PLEASE SPECIFY

X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	6"
BB	8" (SHOWN)
CC	10"
DD	12"
EE	14"
FF	16" AND UP (NO RADIAL CUT OUT)



A
VIEW A-A



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	FLANGE-O-LET MAIN BODY	SA 350 / A105
2	8	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350 / A105
4	1	SPIRAL SEAL GASKET CGI	304 OR 316

CUSTOMER PLEASE SPECIFY WHEN ORDERING

- 1.) B7 OR L7 STUDS & NUTS
- 2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

2" 300# FOL DATA SPECIFICATIONS

- 1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
- 2.) MAOP:
ASME B31.4/.6: 740 PSI
CSA Z662 CAT I I / .6: 720 PSI
- 3.) FITTING IS DESIGNED TO -50°F
- 4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 1110 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
- 5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	REVISED ORDER NUMBER	JA	4/10/14
B	ADDED STUD & GASKET MATERIAL OPTIONS	TEG	2/5/15

DWG:		2.0-300FL-ASSEM	
SHEET:		1 OF 1	



FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE		2" 300# FOL	
PREPARED FOR:		PREPARED BY:	
WORLDWIDE MACHINING & WELDING		WORLDWIDE MACHINING & WELDING INC.	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com FX: (715) 394-6007		DRAWN - DATE: BF - 04-10-2014 CHECKED - DATE: TEG - 04-11-2014 APPROVED - DATE: JA - 04-11-2014	

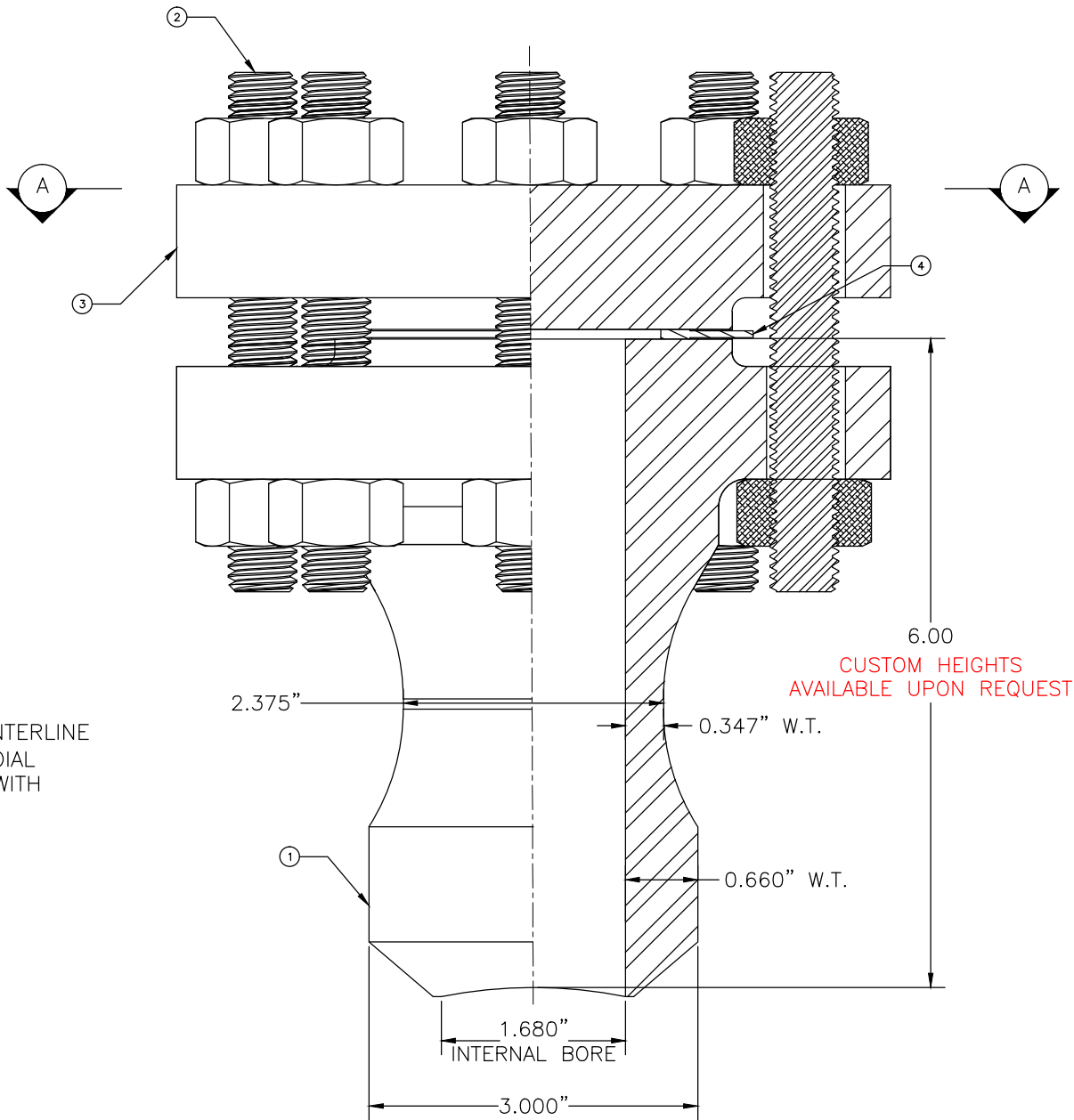
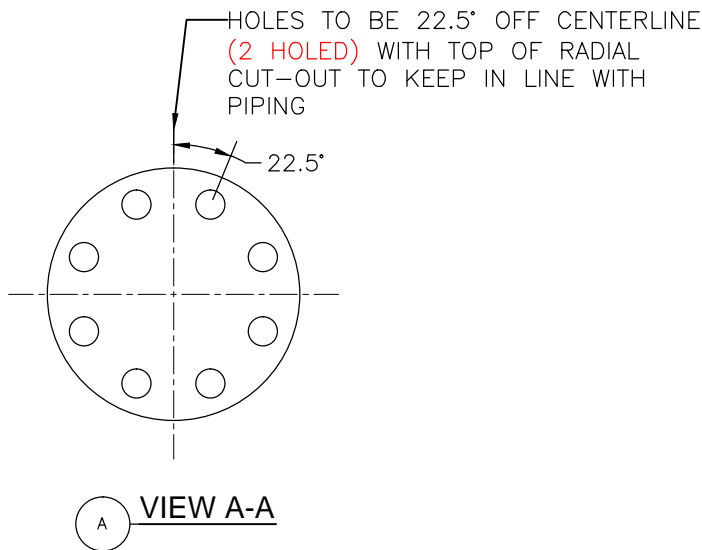
2.0-600FL-X-XX-6.00

SIZE RATING TYPE BLIND FLANGE OPTION RADIAL CUT-OUT OVERALL HEIGHT

CUSTOMER PLEASE SPECIFY

X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	6"
BB	8" (SHOWN)
CC	10"
DD	12"
EE	14"
FF	16" AND UP (NO RADIAL CUT OUT)



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	FLANGE-O-LET MAIN BODY	SA 350 / A105
2	8	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350 / A105
4	1	SPIRAL SEAL GASKET CGI	304 OR 316

CUSTOMER PLEASE SPECIFY WHEN ORDERING

- 1.) B7 OR L7 STUDS & NUTS
- 2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

2" 600# FOL DATA SPECIFICATIONS

- 1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
- 2.) MAOP:
ASME B31.4/.6: 1480 PSI
CSA Z662 CAT I I / .6: 1440 PSI
- 3.) FITTING IS DESIGNED TO -50°F
- 4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 2220 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
- 5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	REVISED ORDER NUMBER	JA	4/10/14
B	ADDED STUD & GASKET MATERIAL OPTIONS	TEG	2/5/15

DWG:	2.0-600FL-ASSEM
SHEET:	1 OF 1



FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE	
2" 600# FOL	
PREPARED FOR:	PREPARED BY:
WORLDWIDE MACHINING & WELDING	WORLDWIDE MACHINING & WELDING INC.
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com FX: (715) 394-6007	

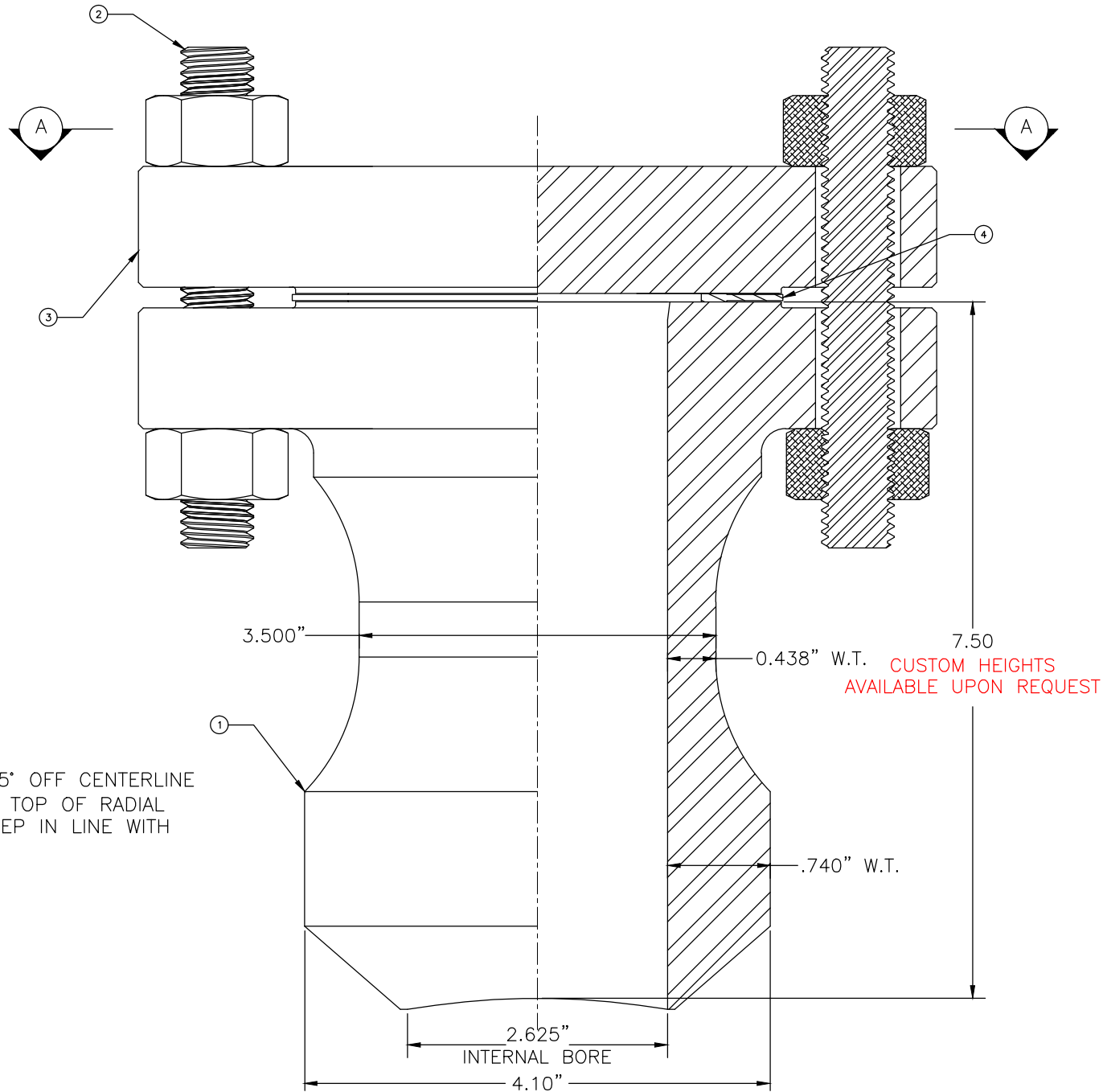
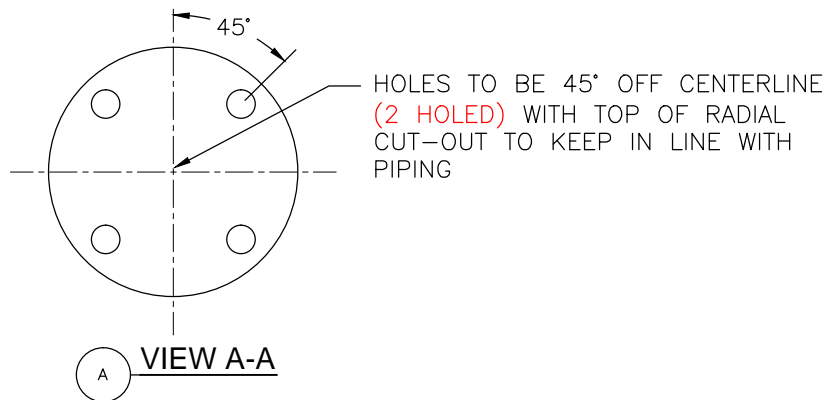
CUSTOMER PLEASE SPECIFY

3.0-150FL-X-XX-7.50

SIZE RATING TYPE RADIAL CUT-OUT OVERALL HEIGHT BLIND FLANGE OPTION

X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	14"
BB	16" (SHOWN)
CC	18"
DD	20"
EE	22"
FF	24" AND UP (NO RADIAL CUT OUT)



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	FOL MAIN BODY	SA 350 / A105
2	4	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350 / A105
4	1	SPIRAL SEAL GASKET CGI	304 OR 316

CUSTOMER PLEASE SPECIFY WHEN ORDERING

- 1.) B7 OR L7 STUDS & NUTS
- 2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

- 3" 150# FOL DATA SPECIFICATIONS**
- 1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
 - 2.) MAOP:
ASME B31.4/.6: 285 PSI
CSA Z662 CAT I I / .6: 275 PSI
 - 3.) FITTING IS DESIGNED TO -50°F
 - 4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 428 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
 - 5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	ADDED STUD & GASKET MATERIAL OPTIONS	TEG	2/5/15

DWG:	3.0-150FL-ASSEM
SHEET:	1 OF 1



PREPARED FOR:		PREPARED BY:	
WORLDWIDE MACHINING & WELDING Inc.		WORLDWIDE MACHINING & WELDING INC.	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com		405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com	

FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE

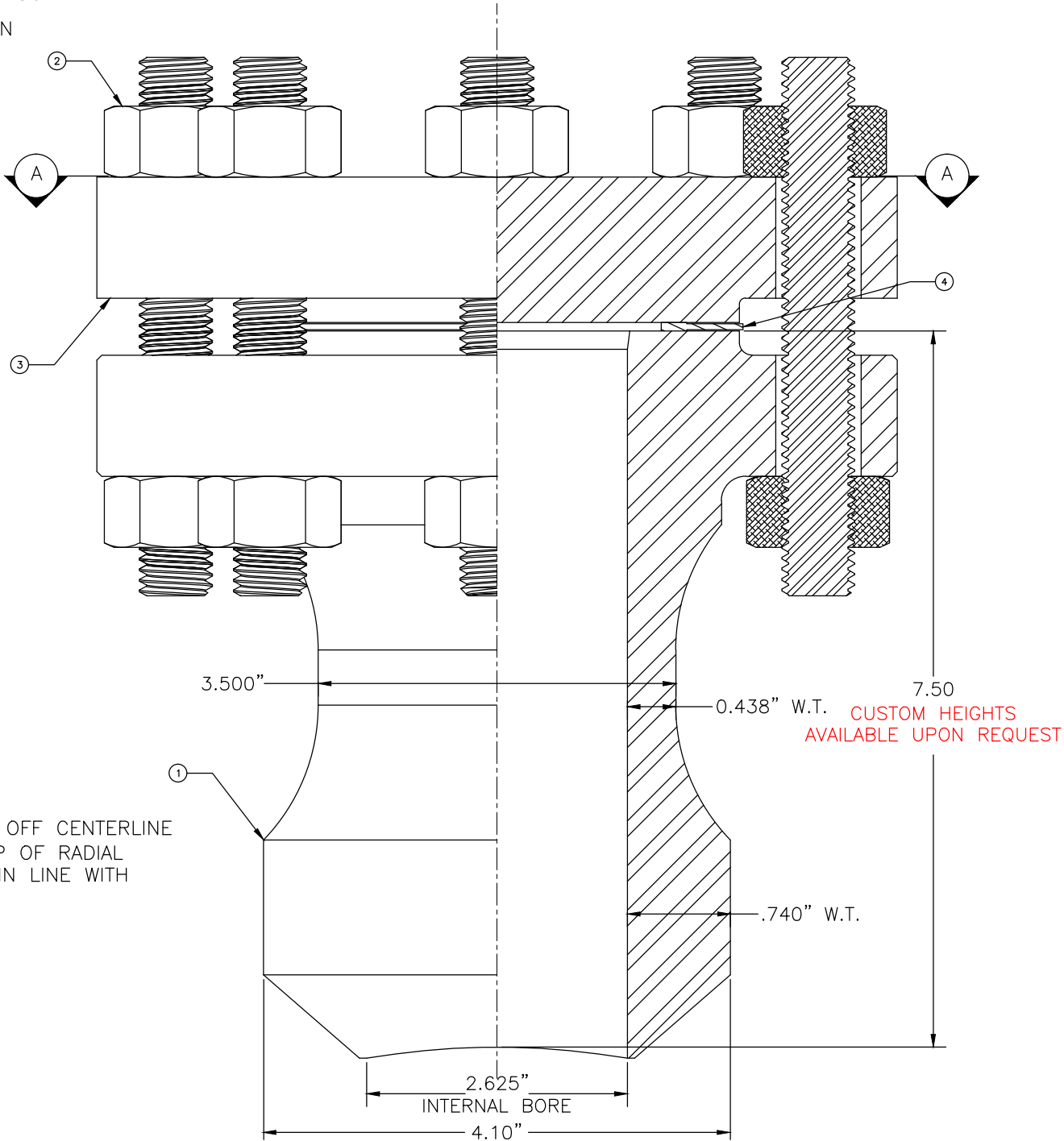
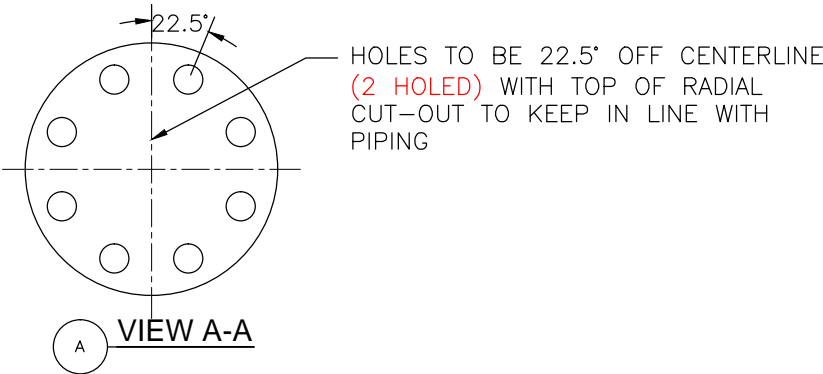
CUSTOMER PLEASE SPECIFY

3.0-600FL-X-XX-7.50

SIZE RATING TYPE RADIAL CUT-OUT OVERALL HEIGHT BLIND FLANGE OPTION

X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	14"
BB	16" (SHOWN)
CC	18"
DD	20"
EE	22"
FF	24" AND UP (NO RADIAL CUT OUT)



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	FOL MAIN BODY	SA 350 / A105
2	8	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350 / A105
4	1	SPIRAL SEAL GASKET CGI	304 OR 316

CUSTOMER PLEASE SPECIFY WHEN ORDERING

- 1.) B7 OR L7 STUDS & NUTS
- 2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

3" 600# FOL DATA SPECIFICATIONS

- 1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
- 2.) MAOP:
ASME B31.4/.6: 1480 PSI
CSA Z662 CAT I I / .6: 1440 PSI
- 3.) FITTING IS DESIGNED TO -50°F
- 4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 2220 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
- 5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	ADDED STUD & GASKET MATERIAL OPTIONS	TEG	2/5/15

DWG:	3.0-600FL-ASSEM
SHEET:	1 OF 1



3" 600# FOL		DRAWN - DATE TEG- 2-15-2015	
PREPARED FOR: WORLDWIDE MACHINING & WELDING Inc.		CHECKED - DATE JA- 2-15-2015	
PREPARED BY: WORLDWIDE MACHINING & WELDING INC.		APPROVED - DATE TEG- 2-15-2015	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com FX: (715) 394-6007			



TORF FITTINGS

(THREADED O-RING, FLANGED)

WorldWide Machining & Welding, Inc. has developed a single bodied TORF (Threaded O-Ring, Flanged) fitting with integral reinforcement.

This new single body design reduces the number of welds required during the manufacturing process. The elimination of the weld between the main body and the weld-o-let reduces manufacturing costs and increases the overall strength of the TORF.

FIELD APPLICATION

TORF fittings can be used in a variety of applications, such as for purge and equalization during drain-up operations. TORF fittings are fully compatible with current hot tapping machines, thermometer wells, gauge adapters and other probe instrumentation devices.

FEATURES/SPECIFICATIONS

- Main body machined out of a solid piece of SA350 LF2 CL1 low temp or A105 material.
- Aluminum bronze plug.
- Viton o-ring.
- Teflon o-ring backer.
- CGI 304 gasket with an option for 316.
- Raised face blind flange machined out of SA350 LF2 CL1 low temp or A105 material.
- B7 studs and nuts with an option for L7.
- Material test reports provided for all fittings supplied.

PROCUREMENT

Price and lead time quotes available upon request.



MODELS

2.0"	ANSI	150
2.0"	ANSI	300
2.0"	ANSI	600
2.0"	ANSI	900
3.0"	ANSI	150
3.0"	ANSI	600

Custom sizes available upon request

2.0-150TF-X-XX-6.00

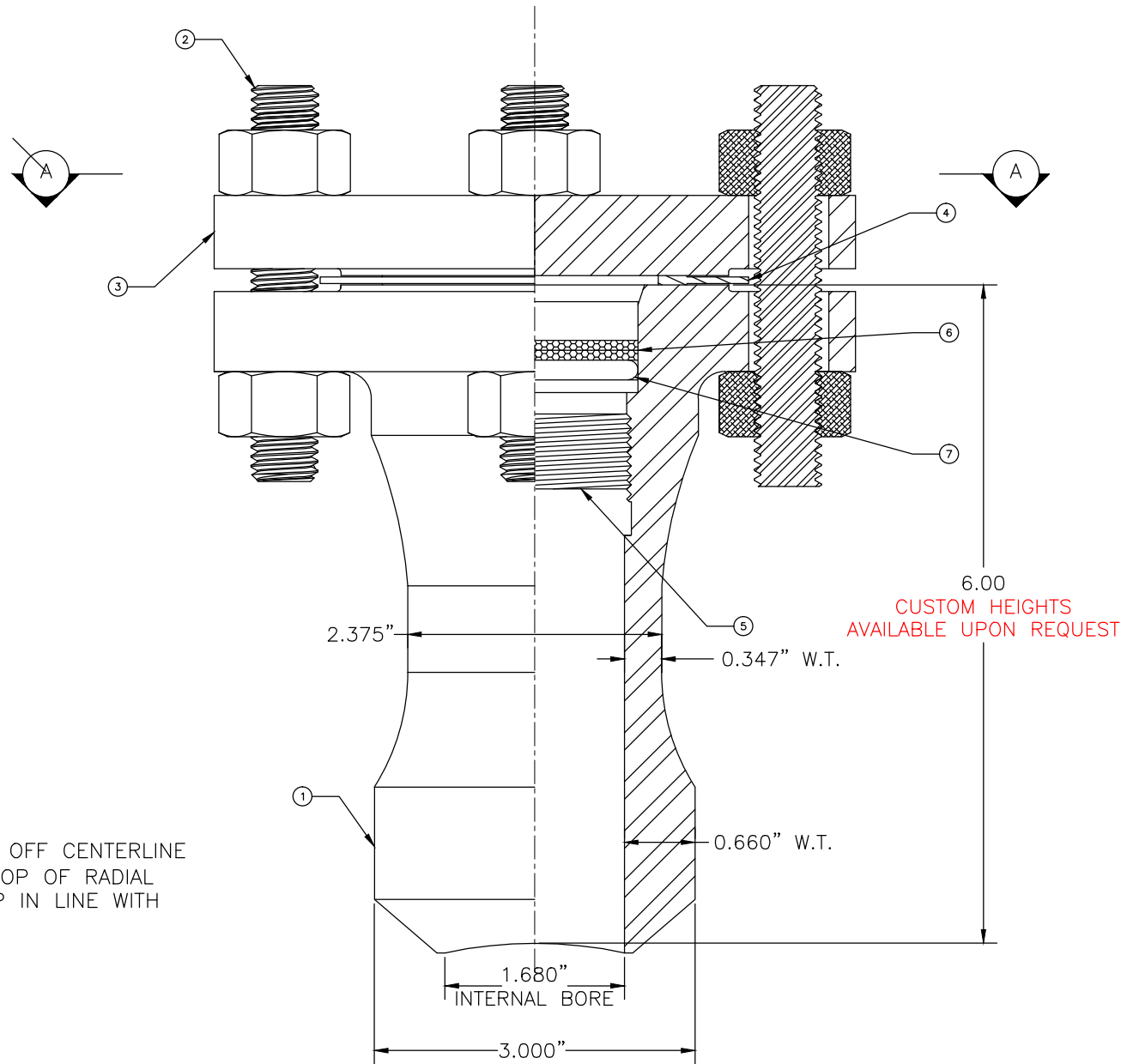
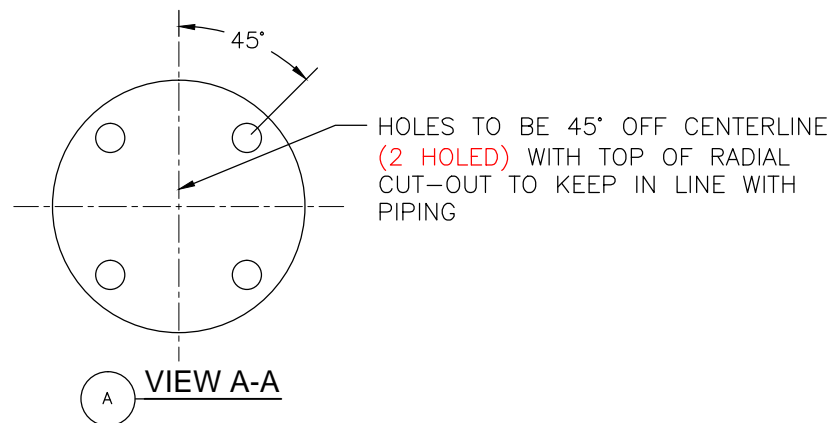
SIZE RATING TYPE RADIAL CUT-OUT OVERALL HEIGHT

BLIND FLANGE OPTION

X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	6"
BB	8" (SHOWN)
CC	10"
DD	12"
EE	14"
FF	16" AND UP (NO RADIAL CUT OUT)

COMPLETION PLUG	
COMPLETION PLUG AB954 STD. MATERIAL	
OPTIONAL COMPLETION PLUG SA350 LF2 / A105	
OPTIONAL COMPLETION PLUG 304SS	
OPTIONAL COMPLETION PLUG B16 BRASS	



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	TORF MAIN BODY	SA 350/ A105
2	4	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350 LF2 CLASS 1
4	1	SPIRAL SEAL GASKET CGI	304 OR 316
5	1	COMPLETION PLUG (STD. MATERIAL)	AB954/ BRASS
6	1	TEFLON O-RING BACK UP	PTFE
7	1	LOW TEMP O-RING	VITON

CUSTOMER PLEASE SPECIFY WHEN ORDERING

- 1.) B7 OR L7 STUDS & NUTS
- 2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

2" 150# TORF DATA SPECIFICATIONS

- 1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
- 2.) MAOP:
ASME B31.4/6: 285 PSI
CSA Z662 CAT I I / .6: 275 PSI
- 3.) FITTING IS DESIGNED TO -50°F
- 4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 428 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
- 5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	REVISED ORDER NUMBER	JA	4/10/14
B	ADDED OVERALL LENGTH OPTION	TEG	11/26/14
C	ADDED BRASS PLUG OPTION	TEG	09/21/18

DWG:	2.0-150TF-ASSEM
SHEET:	1 OF 1



PREPARED FOR:		PREPARED BY:	
WORLDWIDE MACHINING & WELDING INC.		WORLDWIDE MACHINING & WELDING INC.	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com		405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com	

2.0-300TF-X-XX-6.00

CUSTOMER PLEASE SPECIFY

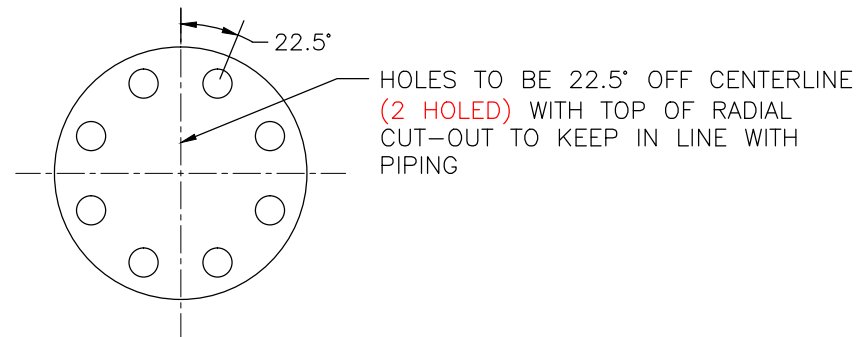
SIZE RATING TYPE RADIAL CUT-OUT OVERALL HEIGHT

BLIND FLANGE OPTION

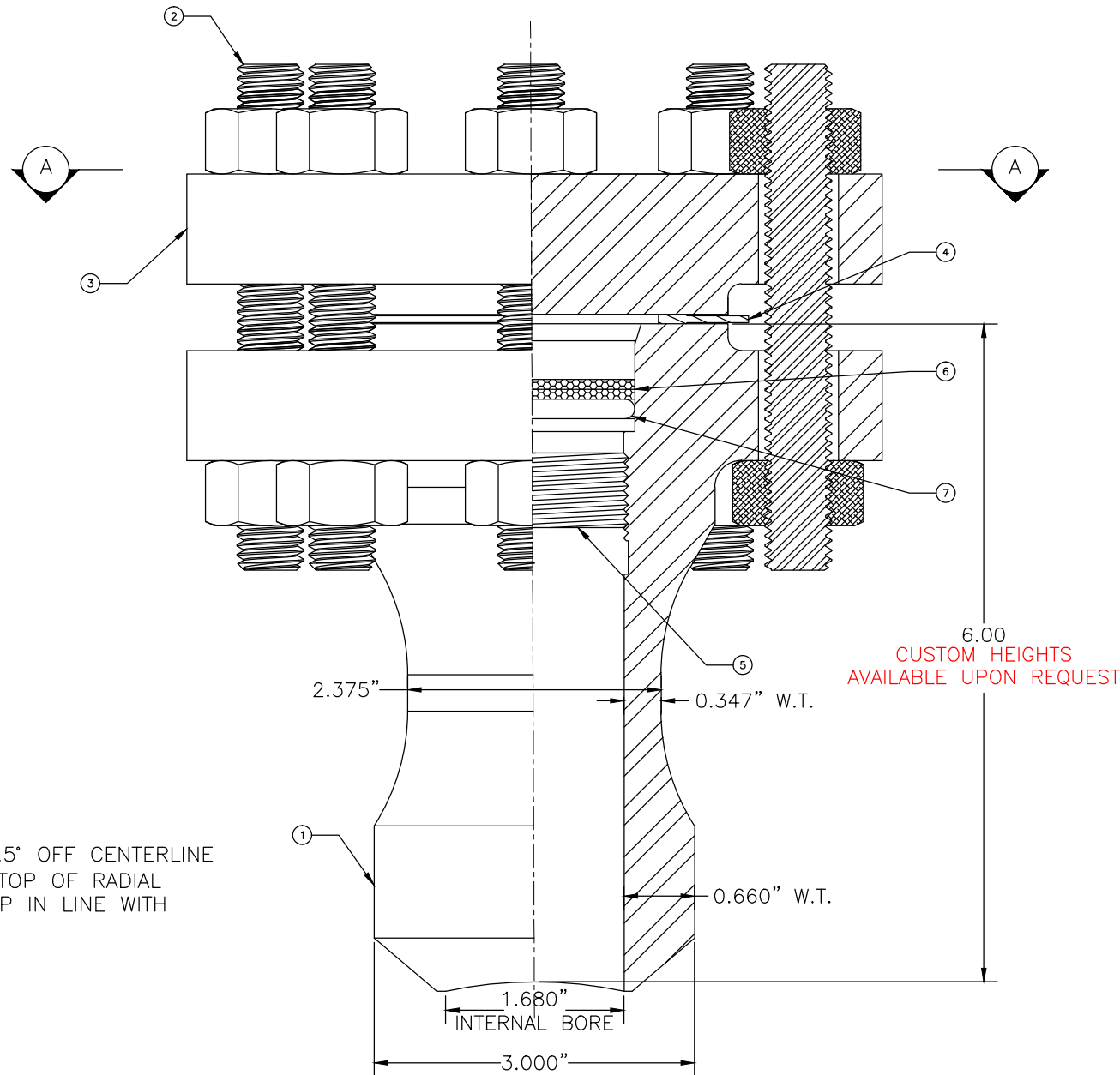
X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	6"
BB	8" (SHOWN)
CC	10"
DD	12"
EE	14"
FF	16" AND UP (NO RADIAL CUT OUT)

COMPLETION PLUG	
COMPLETION PLUG AB954 STD. MATERIAL	
OPTIONAL COMPLETION PLUG SA350 LF2 / A105	
OPTIONAL COMPLETION PLUG 304SS	
OPTIONAL COMPLETION PLUG B16 BRASS	



VIEW A-A



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	TORF MAIN BODY	SA 350 / A105
2	8	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350 LF2 CLASS 1
4	1	SPIRAL SEAL GASKET CGI	304 OR 316
5	1	COMPLETION PLUG (STD. MATERIAL)	AB954 / BRASS
6	1	TEFLON O-RING BACK UP	PTFE
7	1	LOW TEMP O-RING	VITON

CUSTOMER PLEASE SPECIFY WHEN ORDERING

- 1.) B7 OR L7 STUDS & NUTS
- 2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

2" 300# TORF DATA SPECIFICATIONS

- 1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
- 2.) MAOP:
ASME B31.4/.6: 740 PSI
CSA Z662 CAT I I / .6: 720 PSI
- 3.) FITTING IS DESIGNED TO -50°F
- 4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 1110 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
- 5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	ADDED B7 OR L7 OPTION	TEG	4/20/15
B	ADDED BRASS PLUG OPTION	TEG	9/21/18

DWG:	2.0-300TF-ASSEM
SHEET:	1 OF 1



2" 300# TORF		DRAWN - DATE	TEG- 09-23-2014
PREPARED FOR:		CHECKED - DATE	APX- 4-20-2015
WORLDWIDE MACHINING & WELDING Inc.		APPROVED - DATE	TEG- 4-20-2015
PREPARED BY:		WORLDWIDE MACHINING & WELDING INC.	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com		FX: (715) 394-6007	

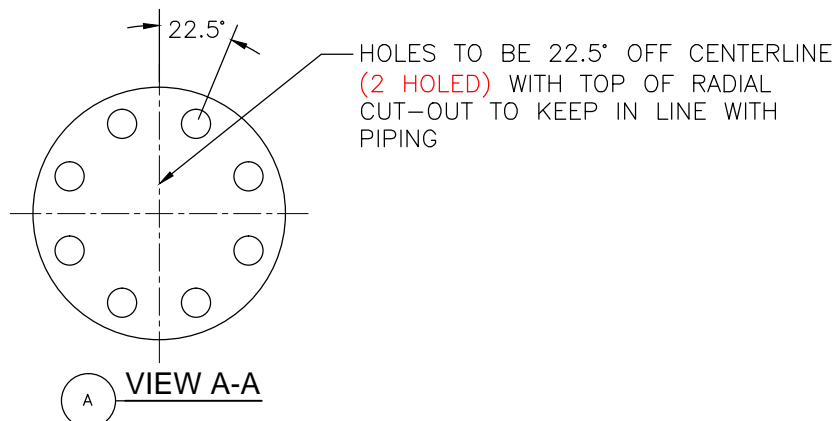
2.0-600TF-X-XX-6.00

SIZE RATING TYPE BLIND FLANGE OPTION RADIAL CUT-OUT OVERALL HEIGHT

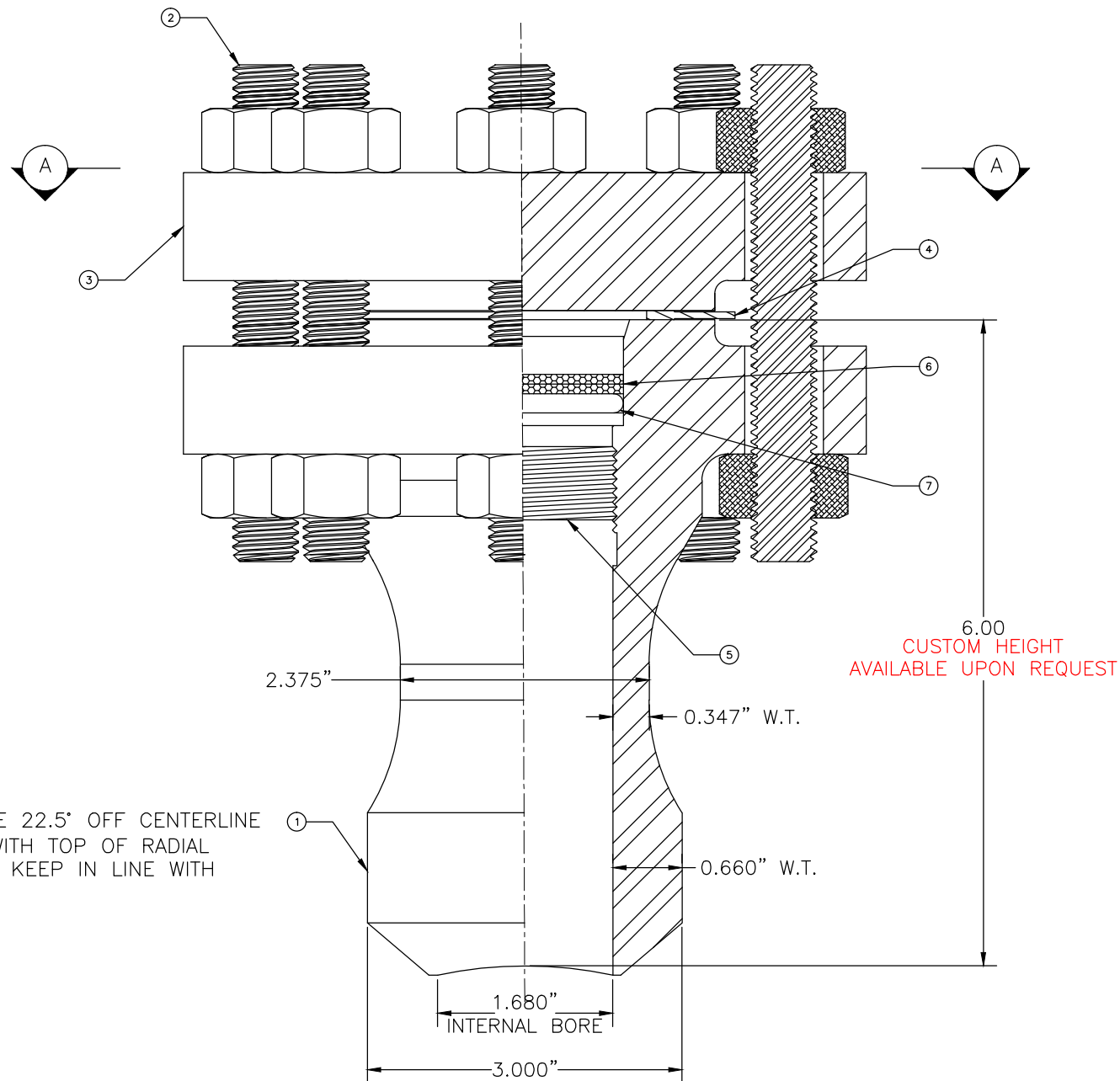
X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	6"
BB	8" (SHOWN)
CC	10"
DD	12"
EE	14"
FF	16" AND UP (NO RADIAL CUT OUT)

COMPLETION PLUG	
COMPLETION PLUG AB954 STD. MATERIAL	
OPTIONAL COMPLETION PLUG SA350 LF2 / A105	
OPTIONAL COMPLETION PLUG 304SS	
OPTIONAL COMPLETION PLUG B16 BRASS	



CUSTOMER PLEASE SPECIFY



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	TORF MAIN BODY	SA 350 / A105
2	8	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350 LF2 CLASS 1
4	1	SPIRAL SEAL GASKET CGI	304 OR 316
5	1	COMPLETION PLUG (STD. MATERIAL)	AB954/BRASS
6	1	TEFLON O-RING BACK UP	PTFE
7	1	LOW TEMP O-RING	VITON

CUSTOMER PLEASE SPECIFY WHEN ORDERING

1.) B7 OR L7 STUDS & NUTS

2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

2" 600# TORF DATA SPECIFICATIONS

1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)

2.) MAOP:
ASME B31.4/.6: 1480 PSI
CSA Z662 CAT I I / .6: 1440 PSI

3.) FITTING IS DESIGNED TO -50°F (SA350) OR -20°F (SA105)

4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 2220 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.

5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	ADDED OVERALL LENGTH OPTION	TEG	11/26/14
B	ADDED 4.00" OVERALL LENGTH OPTION	TEG	1/15/15
C	ADDED STUD & GASKET MATERIAL OPTIONS	TEG	2/5/15
D	ADDED BRASS PLUG OPTION	TEG	9/21/18

DWG:		2.0-600TF-ASSEM	
SHEET:		1 OF 1	



2" 600# TORF

PREPARED FOR:
WORLDWIDE MACHINING & WELDING Inc.

DRAWN - DATE	MJN- 09-23-2014
CHECKED - DATE	JA- 09-23-2014
APPROVED - DATE	TEG- 1-15-2015
PREPARED BY: WORLDWIDE MACHINING & WELDING INC. 405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com FX: (715) 394-6007	

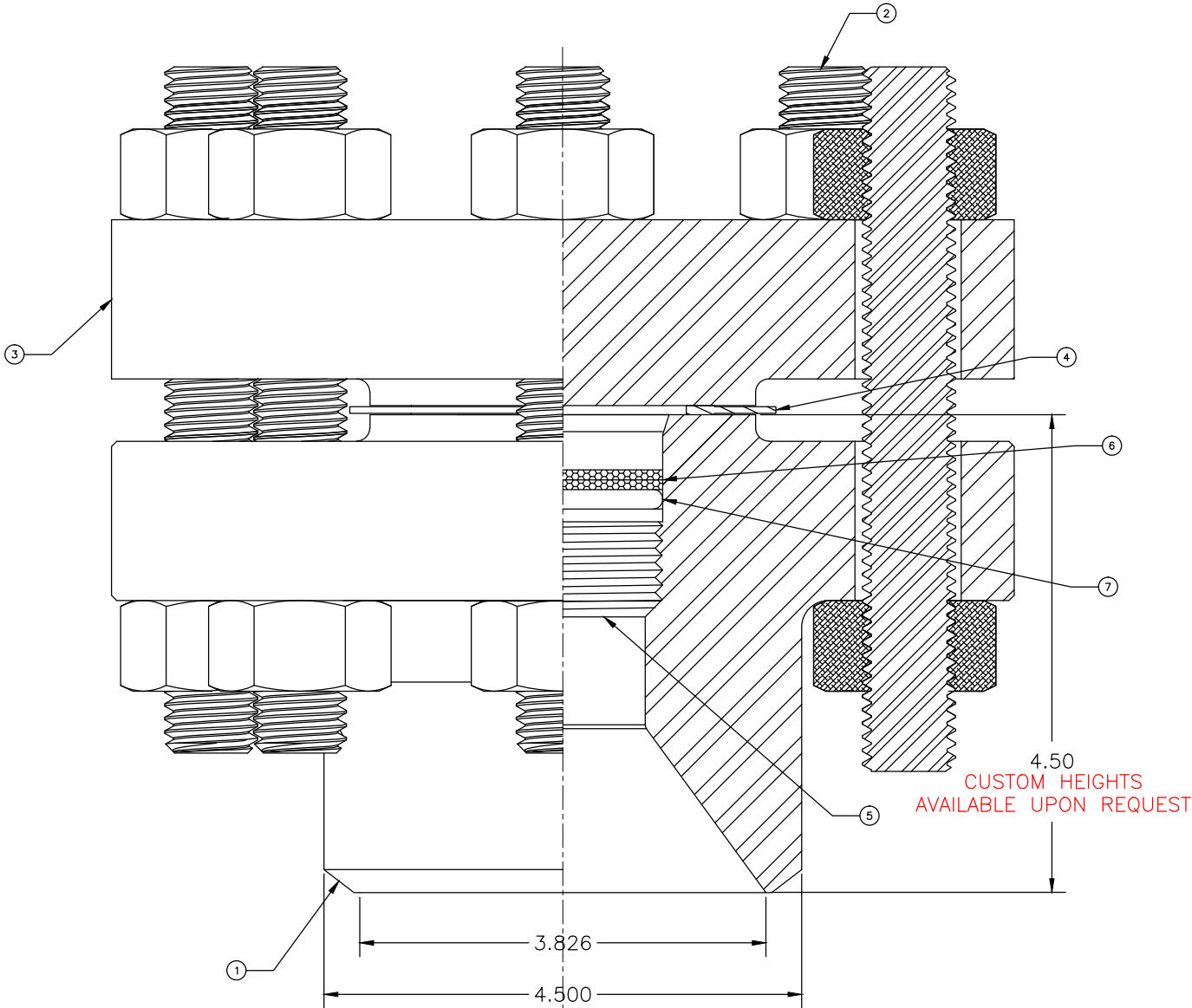
2.0-900TF-X-FF-4.50

CUSTOMER PLEASE SPECIFY

SIZE TYPE RATING BLIND FLANGE OPTION RADIAL CUT-OUT OVERALL HEIGHT

X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

COMPLETION PLUG	
COMPLETION PLUG AB954 STD. MATERIAL	
OPTIONAL COMPLETION PLUG SA350 LF2 / A105	
OPTIONAL COMPLETION PLUG 304SS	
OPTIONAL COMPLETION PLUG B16 BRASS	



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	TORF MAIN BODY	SA 350 / A105
2	8	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350 / A105
4	1	SPIRAL SEAL GASKET CGI	304 OR 316
5	1	COMPLETION PLUG (STD. MATERIAL)	AB954 OR BRASS
6	1	TEFLON O-RING BACK UP	PTFE
7	1	LOW TEMP O-RING	VITON

CUSTOMER PLEASE SPECIFY WHEN ORDERING

- 1.) B7 OR L7 STUDS & NUTS
- 2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

2" 900# TORF DATA SPECIFICATIONS

- 1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
- 2.) MAOP:
ASME B31.4/.6: 2220 PSI
CSA Z662 CAT I I / .6: 2160 PSI
- 3.) FITTING IS DESIGNED TO -50°F
- 4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 3330 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
- 5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE

DWG:	2.0-900TF-FLANGE-ASSEM
SHEET:	1 OF 1



2" 900# TORF FLANGE		DRAWN - DATE	BF- 05-28-2014
PREPARED FOR:		CHECKED - DATE	TEG- 05-28-2014
WORLDWIDE MACHINING & WELDING Inc.		APPROVED - DATE	APX- 5-1-2015
PREPARED BY:		WORLDWIDE MACHINING & WELDING INC.	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.worldwinc.com		FX: (715) 394-6007	

2.0-900TF-X-XX-7.00

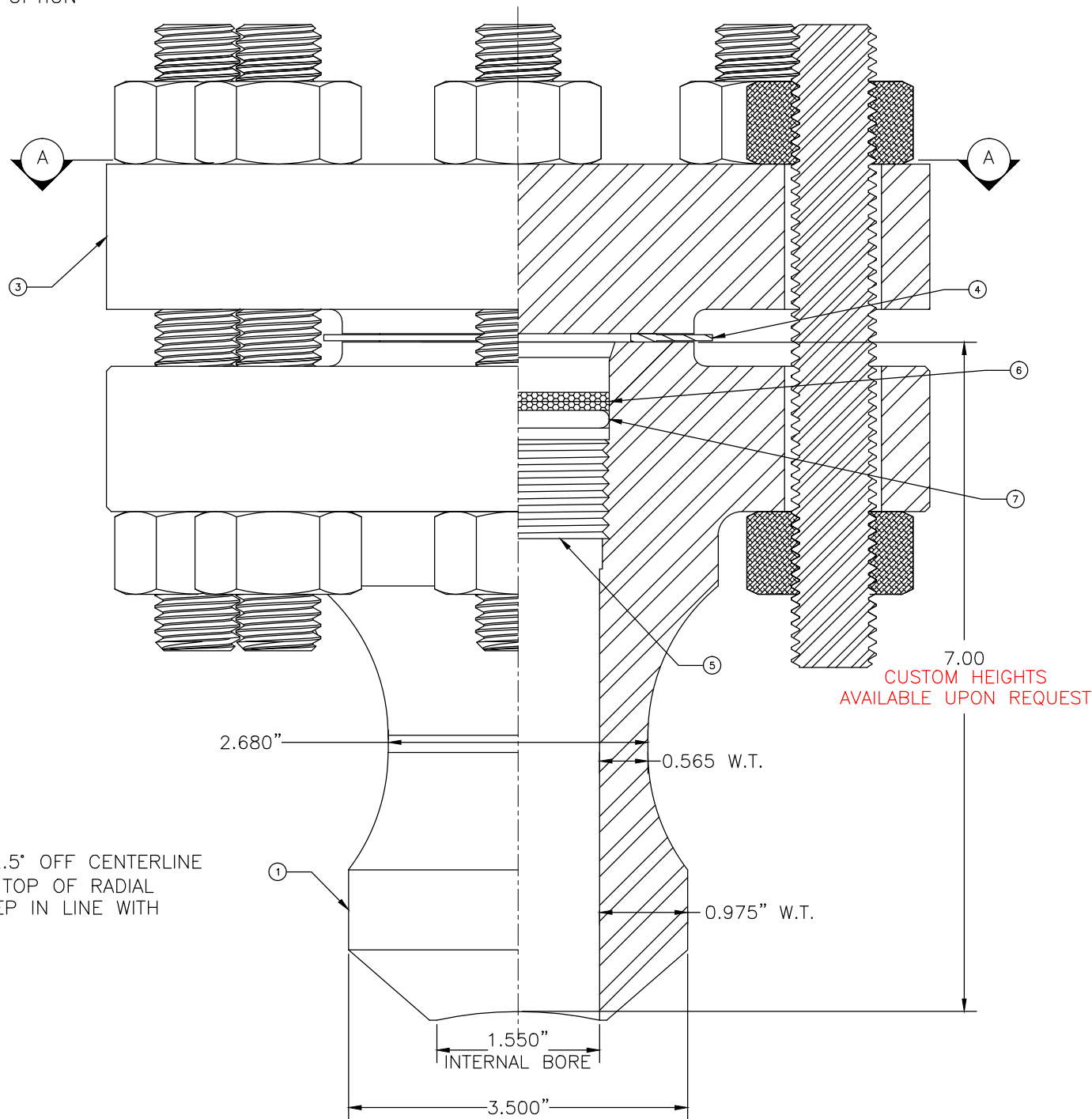
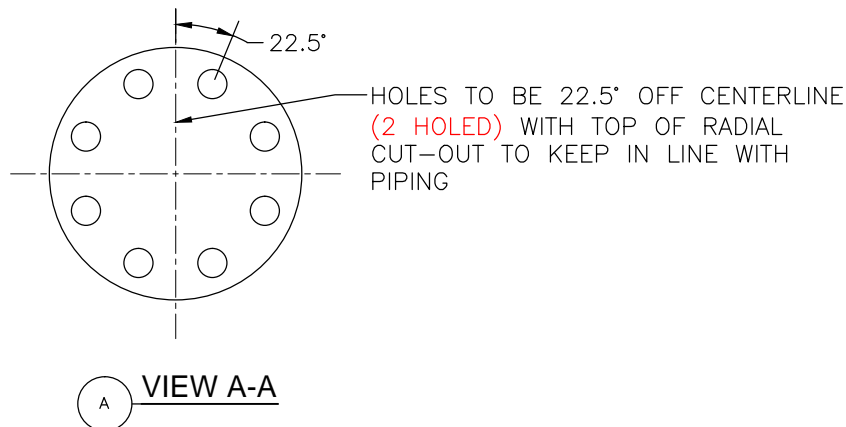
CUSTOMER PLEASE SPECIFY

SIZE TYPE RATING BLIND FLANGE OPTION RADIAL CUT-OUT OVERALL HEIGHT

X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	6"
BB	8" (SHOWN)
CC	10"
DD	12"
EE	14"
FF	16" AND UP (NO RADIAL CUT OUT)

COMPLETION PLUG	
COMPLETION PLUG AB954 STD. MATERIAL	
OPTIONAL COMPLETION PLUG SA350 LF2 / A105	
OPTIONAL COMPLETION PLUG 304SS	
OPTIONAL COMPLETION PLUG B16 BRASS	



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	TORF MAIN BODY	SA 350 / A105
2	8	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350 LF2 CLASS 1
4	1	SPIRAL SEAL GASKET CGI	304 OR 316
5	1	COMPLETION PLUG (STD. MATERIAL)	AB954 / BRASS
6	1	TEFLON O-RING BACK UP	PTFE
7	1	LOW TEMP O-RING	VITON

CUSTOMER PLEASE SPECIFY WHEN ORDERING

1.) B7 OR L7 STUDS & NUTS

2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

2" 900# TORF DATA SPECIFICATIONS

1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)

2.) MAOP:
ASME B31.4/.6: 2220 PSI
CSA Z662 CAT I I / .6: 2160 PSI

3.) FITTING IS DESIGNED TO -50°F

4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 3330 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.

5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	ADDED DATA SPECIFICATIONS	TEG	12/1/14
B	ADDED COMPLETION PLUG OPTIONS	TEG	9/21/18

DWG:	2.0-900TF-ASSEM
SHEET:	1 OF 1



PREPARED FOR:		PREPARED BY:	
WORLDWIDE MACHINING & WELDING Inc.		WORLDWIDE MACHINING & WELDING INC.	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com		405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com	

DRAWN - DATE	BF- 05-28-2014
CHECKED - DATE	TEG- 05-28-2014
APPROVED - DATE	APX- 5-1-2015

3.0-150TF-X-XX-7.00

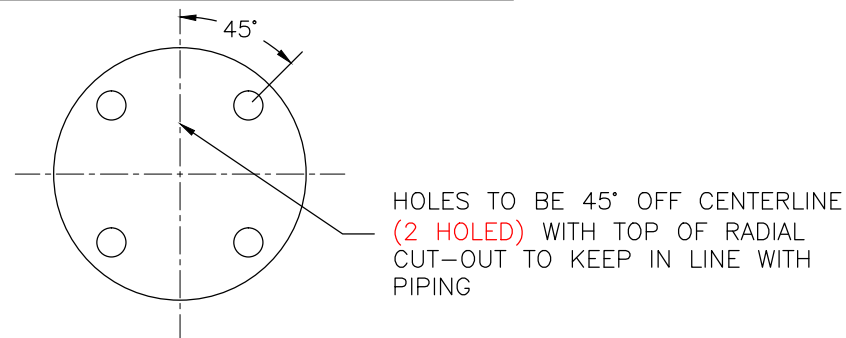
CUSTOMER PLEASE SPECIFY

SIZE RATING TYPE RADIAL CUT-OUT OVERALL HEIGHT BLIND FLANGE OPTION

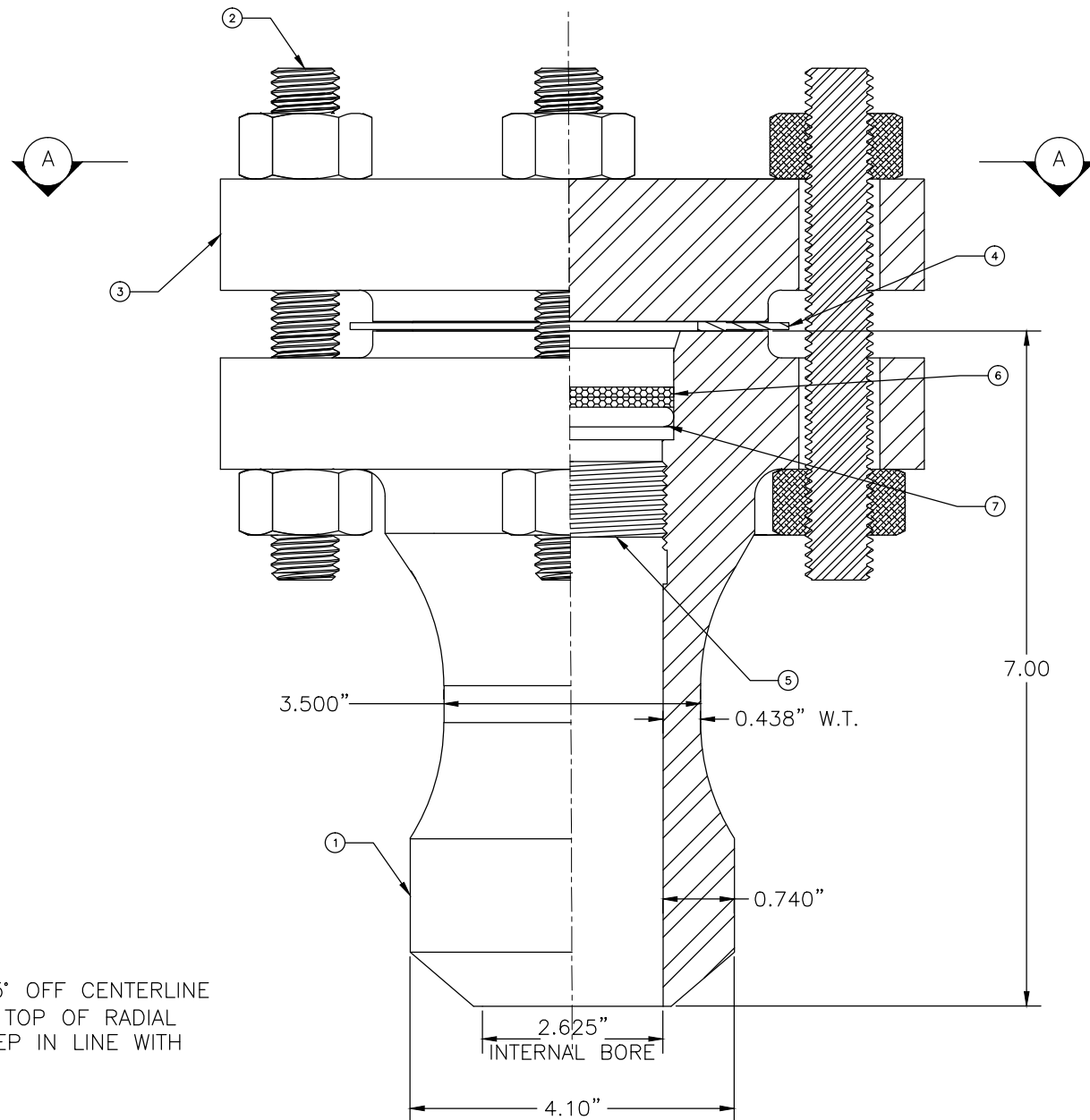
X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	12"
BB	14"
CC	16"
DD	18"
EE	20"
FF	24" AND UP (NO RADIAL CUT OUT, SHOWN)

COMPLETION PLUG
COMPLETION PLUG AB954 STD. MATERIAL
OPTIONAL COMPLETION PLUG SA350 LF2 / A105
OPTIONAL COMPLETION PLUG B16 BRASS



VIEW A-A



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	TORF MAIN BODY	SA 350/A105
2	4	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350/A105
4	1	SPIRAL SEAL GASKET CGI	304 OR 316
5	1	COMPLETION PLUG (STD. MATERIAL)	AB954/BRASS
6	1	TEFLON O-RING BACK UP	PTFE
7	1	LOW TEMP O-RING	VITON

CUSTOMER PLEASE SPECIFY WHEN ORDERING

1.) B7 OR L7 STUDS & NUTS

2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

3" 150# TORF DATA SPECIFICATIONS

1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS

2.) MAOP:
ASME B31.4/.6: 285 PSI
CSA Z662 CAT I I / .6: 275 PSI

3.) FITTING IS DESIGNED TO -50°F

4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 444 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.

5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE

DWG:	3.0-150TF-ASSEM
SHEET:	1 OF 1



3" 150# TORF		DRAWN - DATE	RDR- 11-18-2014
PREPARED FOR:		CHECKED - DATE	JA- 11-18-2014
WORLDWIDE MACHINING & WELDING Inc.		APPROVED - DATE	XX- XX-XX-XXXX
PREPARED BY:		WORLDWIDE MACHINING & WELDING INC.	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.worldwinc.com		FX: (715) 394-6007	

CUSTOMER PLEASE SPECIFY

3.0-600TF-X-XX-7.50-XXX

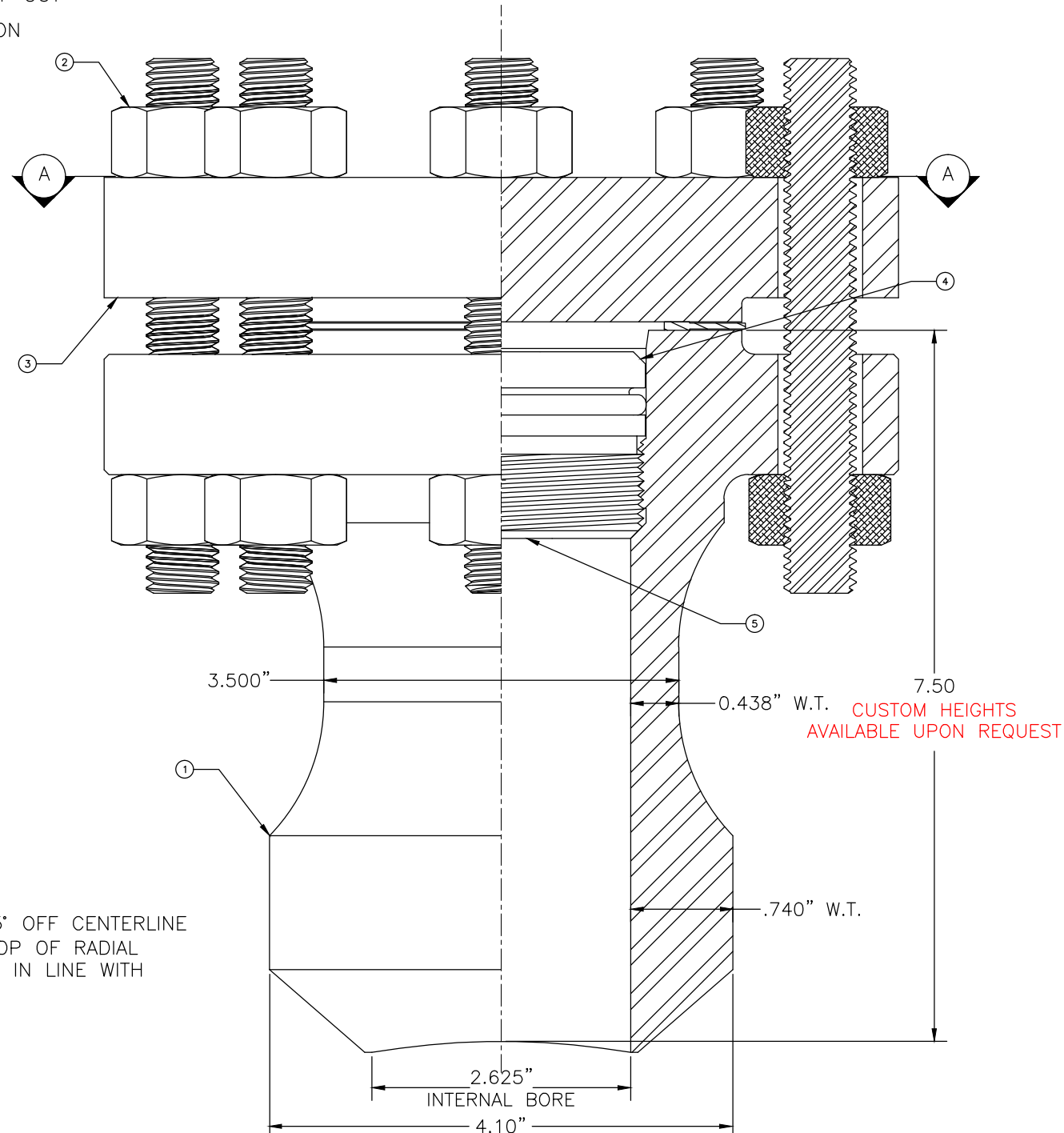
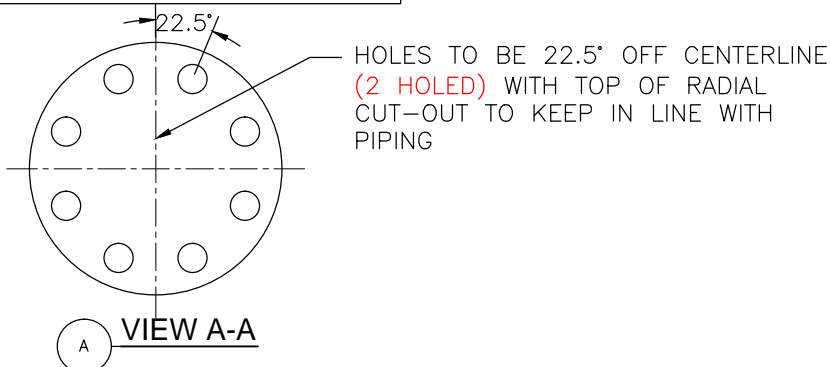
SIZE RATING TYPE RADIAL CUT-OUT OVERALL HEIGHT PLUG STYLE BLIND FLANGE OPTION

X - BLIND FLANGE SET OPTION	
1	WITH BLIND FLANGE SET OPTION. ITEMS 2, 3, & 4 FROM BOM
0	WITHOUT THE BLIND FLANGE SET

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	14"
BB	16" (SHOWN)
CC	18"
DD	20"
EE	22"
FF	24" AND UP (NO RADIAL CUT OUT)

XXX-PLUG STYLE	
101	PLUG COMPATIBLE WITH 101 MACHINE

COMPLETION PLUG	
COMPLETION PLUG AB954 STD. MATERIAL	
OPTIONAL COMPLETION PLUG SA350 LF2 / A105	
OPTIONAL COMPLETION PLUG 304SS	
OPTIONAL COMPLETION PLUG B16 BRASS	



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	TORF MAIN BODY	SA 350 / A105
2	8	STUD WITH 2 NUTS	B7 OR L7
3	1	BLIND FLANGE	SA 350 / A105
4	1	SPIRAL SEAL GASKET CGI	304 OR 316
5	1	COMPLETION PLUG (STD. MATERIAL)	AB954 / BRASS
6	1	LOW TEMP O-RING	VITON

CUSTOMER PLEASE SPECIFY WHEN ORDERING

1.) B7 OR L7 STUDS & NUTS

2.) 304 SS OR 316 SS SPIRAL SEAL GASKET

3" 600# TORF DATA SPECIFICATIONS

1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)

2.) MAOP:
ASME B31.4/.6: 1480 PSI
CSA Z662 CAT I I / .6: 1440 PSI

3.) FITTING IS DESIGNED TO -50°F

4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 2220 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.

5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	ADDED STUD & GASKET MATERIAL OPTIONS	TEG	2/5/15

DWG:	3.0-600TF-ASSEM
SHEET:	1 OF 1



3" 600# TORF		DRAWN - DATE	TEG- 2-15-2015
PREPARED FOR:		CHECKED - DATE	JA- 2-15-2015
WORLDWIDE MACHINING & WELDING Inc.		APPROVED - DATE	TEG- 2-15-2015
PREPARED BY:		WORLDWIDE MACHINING & WELDING INC.	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.worldwinc.com		FX: (715) 394-6007	



TORN FITTINGS

(THREADED O-RING, NIPPLE)

WorldWide Machining & Welding, Inc., has developed a single bodied TORN (Threaded O-Ring, Nipple) fitting with integral reinforcement.

This NEW single body design reduces the number of welds required during the manufacturing process. The elimination of the weld between the main body and the weld-o-let reduces manufacturing costs and increases the overall strength of the TORN.

FIELD APPLICATION

TORN fittings can be used in a variety of applications, such as for purge and equalization during drain-up operations. TORN fittings are fully compatible with current hot tapping machines, thermometer wells, gauge adapters and other probe instrumentation devices.

FEATURES/SPECIFICATIONS

- Main body with integral reinforcement machined out of a solid piece of SA350 LF2 CL1 low temp material.
- Aluminum bronze plug.
- Viton o-ring.
- Teflon o-ring backer.
- Threaded pipe cap.
- Fitting main bodies and threaded caps stamped with size, rating/class, material grade and heat number.
- Material test reports provided for all fittings supplied.

PROCUREMENT

Price and lead time quotes available upon request.



MODELS

2.0"	ANSI	600
3.0"	ANSI	600

Custom sizes available upon request. 200 unit on-hand inventory maintained for the following: 2" 600# TORNs. Please reference the order drawings to designate fitting size, class rating and additional specifications.

2.0-600TN-X-XX-5.00

SIZE RATING TYPE RADIAL CUT-OUT OVERALL HEIGHT

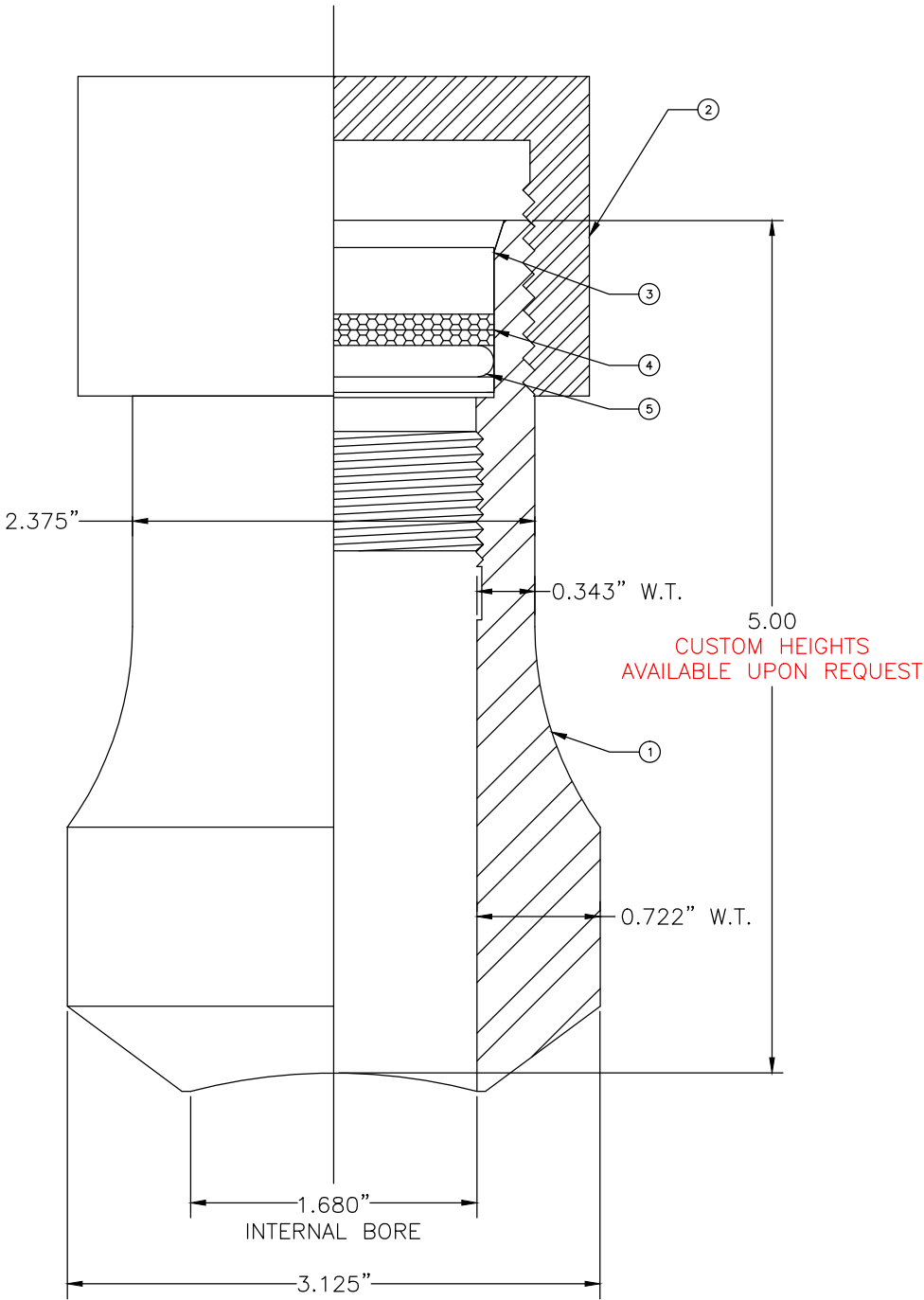
CUSTOMER PLEASE SPECIFY

CAP TYPE

X - CAP TYPE	
0	NO CAP
1	A105 2" 3000# STANDARD THREADED PIPE CAP (SHOWN)
2	SA350 2" 3000# OUT OF SERVICE CAP 3.50" HEIGHT
3	SA350 2" 3000# OUT OF SERVICE CAP 4.93" HEIGHT
4	SA350 2" 3000# STANDARD THREADED PIPE CAP

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	6"
BB	8" (SHOWN)
CC	10"
DD	12"
EE	14"
FF	16" AND UP (NO RADIAL CUT OUT)

COMPLETION PLUG
COMPLETION PLUG AB954 STD. MATERIAL
OPTIONAL COMPLETION PLUG SA350 LF2
OPTIONAL COMPLETION PLUG 304SS
OPTIONAL COMPLETION PLUG B16 BRASS



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	TORN MAIN BODY	SA 350 LF2 CLASS 1
2	1	2" 3000# CAP	A105/SA350
3	1	COMPLETION PLUG (STD. MATERIAL)	AB954 / BRASS
4	1	TEFLON O-RING BACK UP	PTFE
5	1	LOW TEMP O-RING	VITON

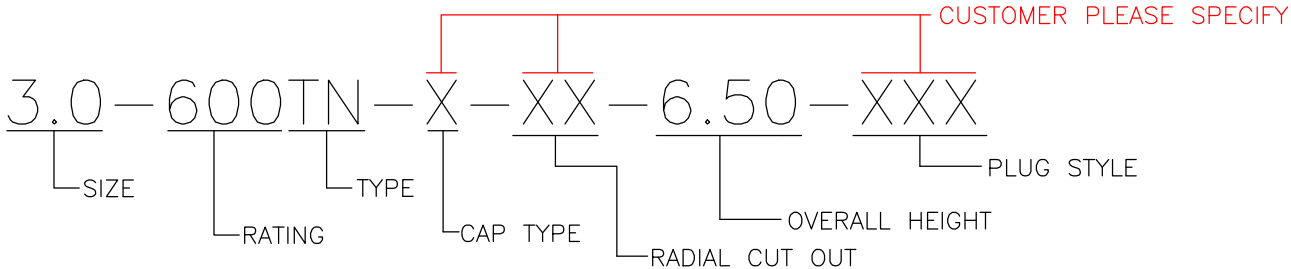
- 2" 600# TORN DATA SPECIFICATIONS**
- 1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
 - 2.) MAOP:
ASME B31.4/.6: 1480 PSI
CSA Z662 CAT I I / .6: 1440 PSI
 - 3.) FITTING IS DESIGNED TO -50°F
 - 4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 2220 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
 - 5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	ADDED CAP OPTION	TEG	4/7/15
B	ADDED STD SA350 CAP OPTION	TEG	7/11/16
C	ADDED COMPLETION PLUG OPTIONS	TEG	9/21/18

DWG:	2.0-600TN-ASSEM
SHEET:	1 OF 1



FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE	
2" 600# TORN	
PREPARED FOR:	PREPARED BY: WORLDWIDE MACHINING & WELDING INC
WORLDWIDE MACHINING & WELDING	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wmwinc.com FX: (715) 394-6007	

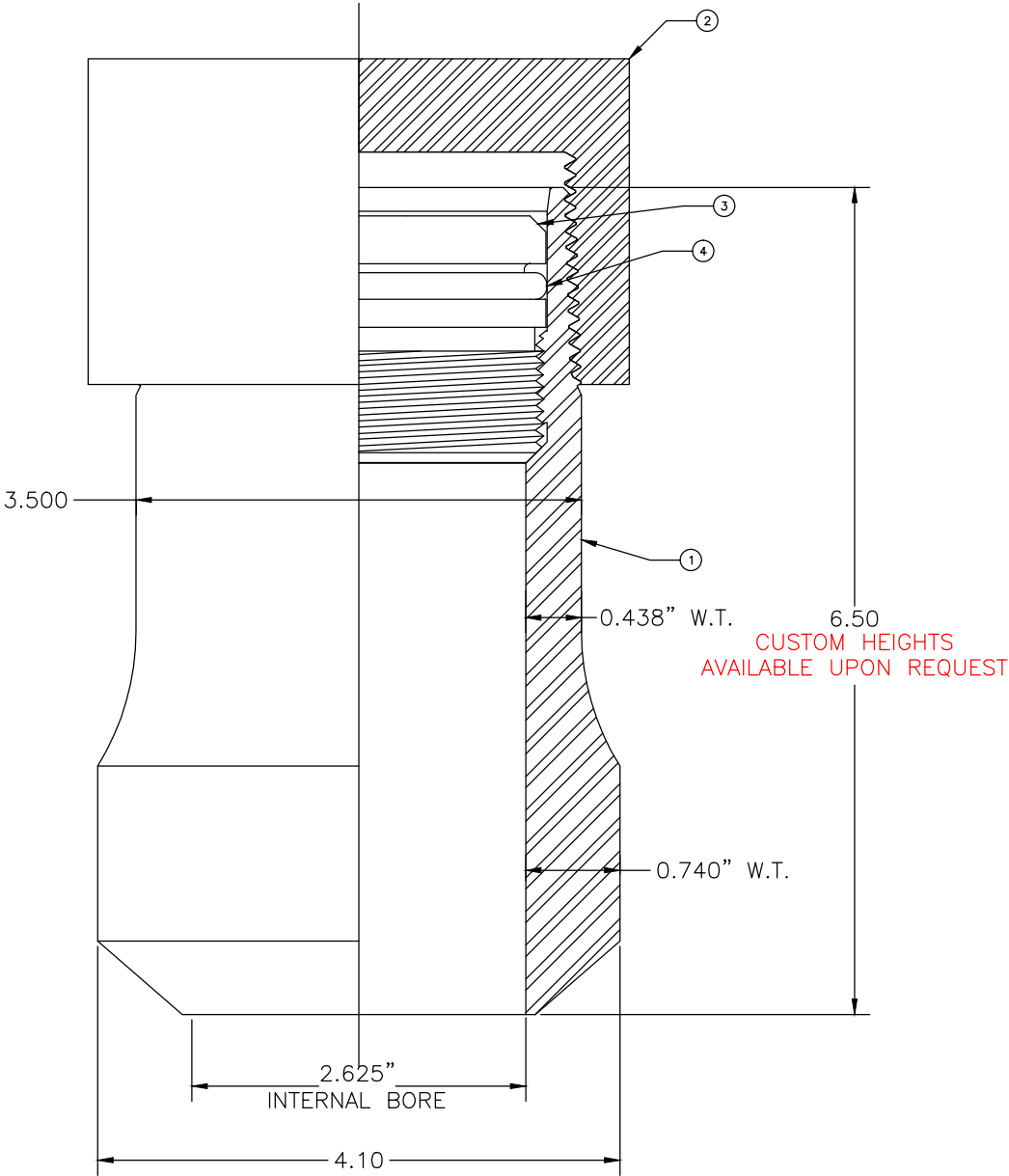


X - CAP TYPE	
0	NO CAP
1	A105 3" 3000# STANDARD THREADED PIPE CAP (SHOWN)

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	14"
BB	16"
CC	18"
DD	20"
EE	22"
FF	24" AND UP (NO RADIAL CUT OUT) (SHOWN)

XXX-PLUG STYLE	
101	PLUG COMPATIBLE WITH 101 MACHINE

COMPLETION PLUG	
COMPLETION PLUG AB954 STD. MATERIAL	
OPTIONAL COMPLETION PLUG SA350 LF2	
OPTIONAL COMPLETION PLUG 304SS	
OPTIONAL COMPLETION PLUG B16 BRASS	



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	TORN MAIN BODY	SA 350 LF2 CLASS 1
2	1	3" 3000# CAP	A105/SA350
3	1	COMPLETION PLUG ASSEMBLY (CUSTOMER PLEASE SPECIFY)	AB954/BRASS
4	1	LOW TEMP O-RING	VITON

3" 600# TORN DATA SPECIFICATIONS

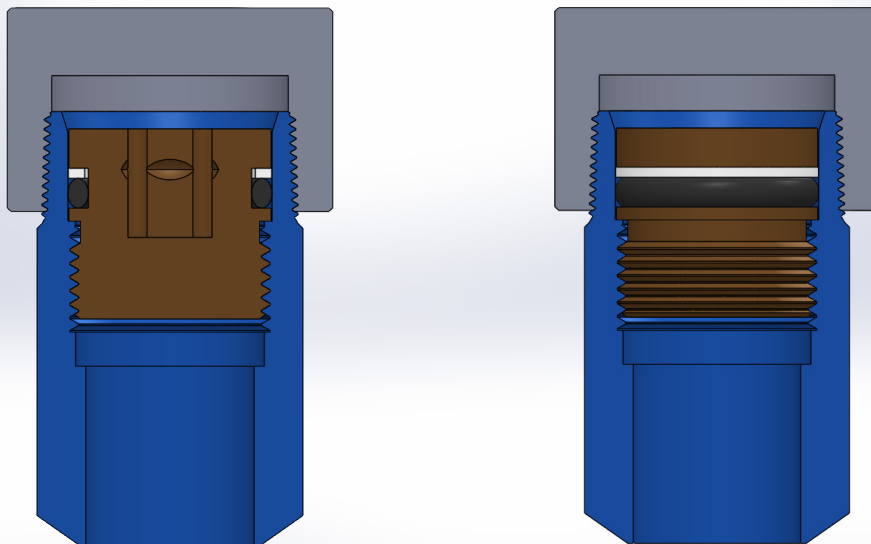
- CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
- MAOP:
ASME B31.4/.6: 1480 PSI
CSA Z662 CAT I I / .6: 1440 PSI
- FITTING IS DESIGNED TO -50°F
- A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 2220 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
- HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	INITIAL RELEASE	TEG	11/6/15
B	REVISED PROFILE	TEG	1/21/16
C	REVISED RADIAL CUTOUTS	TEG	10/13/16

DWG:	3.0-600TN-ASSEM
SHEET:	1 OF 1



FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE		DRAWN - DATE	TEG - 11/6/15
3" 600# TORN		CHECKED - DATE	APX - 11/6/15
PREPARED FOR:		APPROVED - DATE	TEG - 11/6/15
WORLDWIDE MACHINING & WELDING		PREPARED BY: WORLDWIDE MACHINING & WELDING INC	
		405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wwmwinc.com FX: (715) 394-6007	



STRAIGHT TORN FITTINGS

(THREADED O-RING, NIPPLE)

WorldWide Machining & Welding, Inc., is now manufacturing straight bodied TORN (Threaded O-Ring, Nipple) fittings.

FIELD APPLICATION

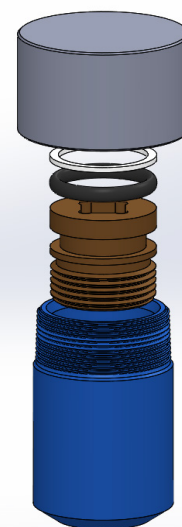
Straight TORN fittings can be used in a variety of applications, such as for purge and equalization during drain-up operations. TORN fittings are fully compatible with current hot tapping machines, thermometer wells, gauge adapters and other probe instrumentation devices.

FEATURES/SPECIFICATIONS

- Main body machined out of a solid piece of SA350 LF2 CL1 low temp material.
- Aluminum bronze plug.
- Viton o-ring.
- Teflon o-ring backer.
- Threaded pipe cap.
- Fitting main bodies and threaded caps stamped with size, rating/class, material grade and heat number.
- Fittings available in additional material types and grades upon request.
- Material test reports provided for all fittings supplied.

PROCUREMENT

Price and lead time quotes available upon request.



MODELS

2.0"	ANSI	600
3.0"	ANSI	600

Please reference the order drawings to designate fitting size, class rating and additional specifications.

CUSTOMER PLEASE SPECIFY

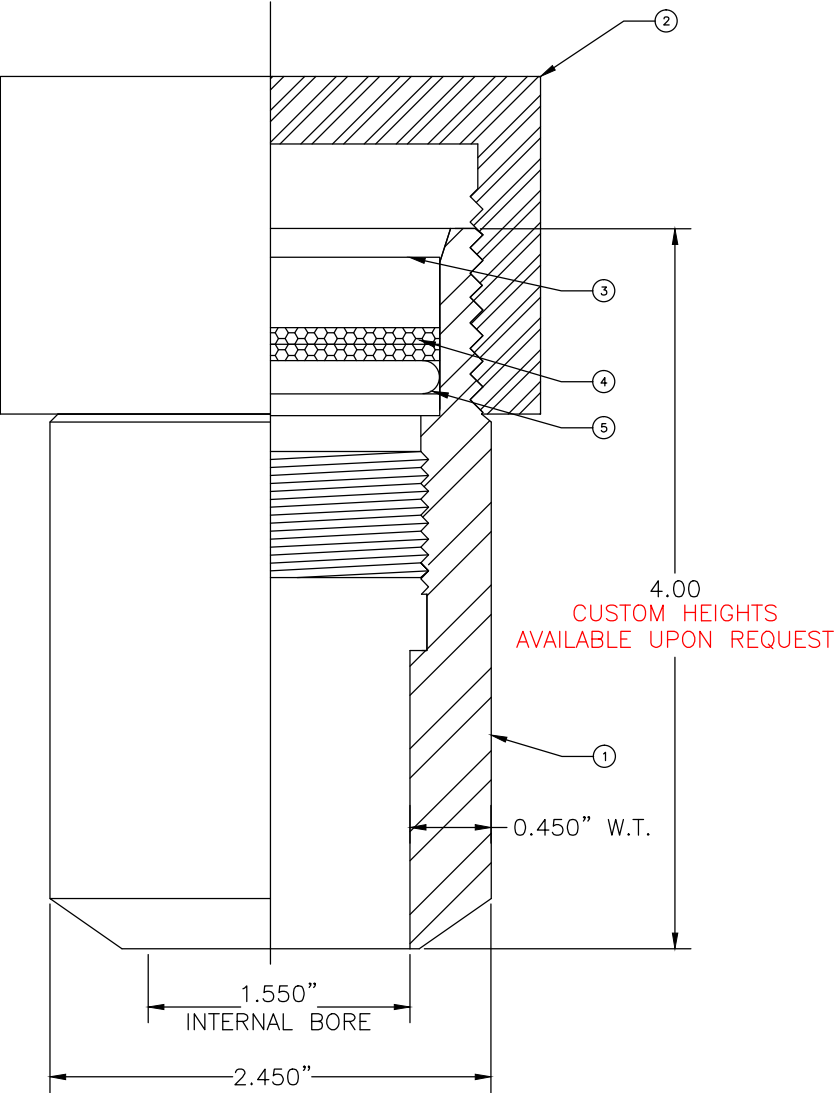
2.0-600STN-X-XX-4.00

SIZE RATING TYPE RADIAL CUT-OUT OVERALL HEIGHT CAP TYPE

X - CAP TYPE	
0	NO CAP
1	A105 2" 3000# STANDARD THREADED PIPE CAP (SHOWN)
2	SA350 2" 3000# OUT OF SERVICE CAP 3.50" HEIGHT
3	SA350 2" 3000# STANDARD THREADED PIPE CAP

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	6"
BB	8"
CC	10"
DD	12"
EE	14"
FF	16" AND UP (NO RADIAL CUT OUT) (SHOWN)

COMPLETION PLUG
COMPLETION PLUG AB954 STD. MATERIAL
OPTIONAL COMPLETION PLUG SA350 LF2 / A105
OPTIONAL COMPLETION PLUG 304SS
OPTIONAL COMPLETION PLUG B16 BRASS



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	TORN MAIN BODY	SA350 / A105
2	1	2" 3000# CAP	A105 OR SA350
3	1	COMPLETION PLUG (STD. MATERIAL)	AB954 / BRASS
4	1	TEFLON O-RING BACK UP	PTFE
5	1	LOW TEMP O-RING	VITON

2" 600# STRAIGHT TORN DATA SPECIFICATIONS

- 1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
- 2.) MAOP:
ASME B31.4/.6: 1480 PSI
CSA Z662 CAT I I / .6: 1440 PSI
- 3.) FITTING IS DESIGNED TO -50°F
- 4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 2220 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
- 5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	INITIAL RELEASE	TEG	10/8/15
B	ADDED COMPLETION PLUG OPTIONS	TEG	9/21/18

DWG:	2.0-600STN-ASSEM
SHEET:	1 OF 1



2" 600# STRAIGHT TORN	DRAWN - DATE	TEG - 10/8/15
	CHECKED - DATE	APX - 10/8/15
	APPROVED - DATE	TEG - 10/8/15
PREPARED FOR: <u>WORLDWIDE MACHINING & WELDING</u>	PREPARED BY: <u>WORLDWIDE MACHINING & WELDING INC</u> 405 JOHN AVE SUPERIOR, WI 54880 www.wmwinc.com PH: (715) 394-6006	FX: (715) 394-6007

3.0-600STN-X-XX-4.00-XXX

SIZE RATING TYPE CAP TYPE RADIAL CUT-OUT OVERALL HEIGHT PLUG STYLE

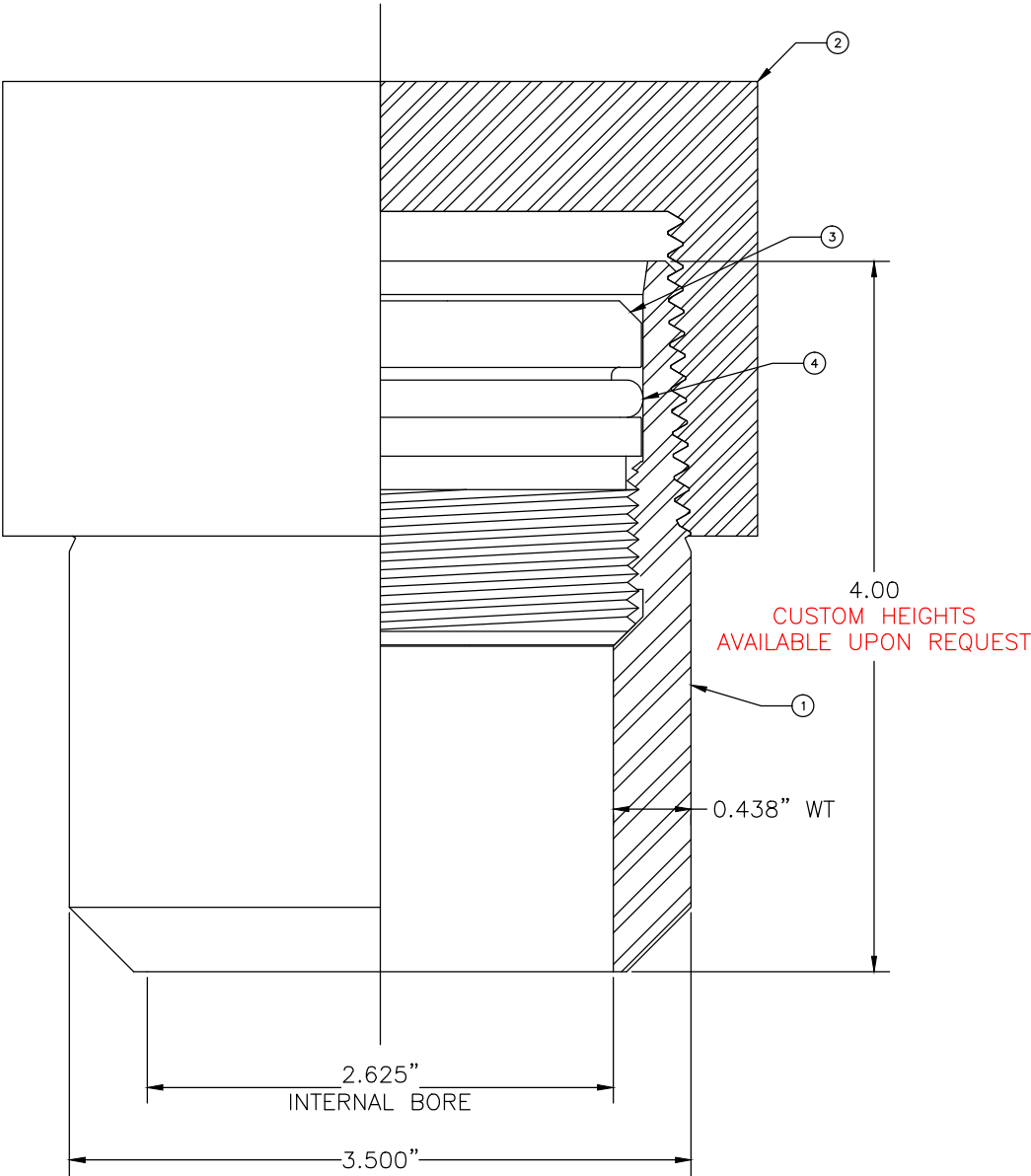
CUSTOMER PLEASE SPECIFY

X - CAP TYPE	
0	NO CAP
1	A105 3" 3000# STANDARD THREADED PIPE CAP (SHOWN)

XX - RADIAL CUT-OUT FOR PIPE LINE SIZE	
AA	14"
BB	16"
CC	18"
DD	20"
EE	22"
FF	24" AND UP (NO RADIAL CUT OUT) (SHOWN)

XXX-PLUG STYLE	
101	PLUG COMPATIBLE WITH 101 MACHINE

COMPLETION PLUG	
COMPLETION PLUG AB954 STD. MATERIAL	
OPTIONAL COMPLETION PLUG SA350 LF2 / A105	
OPTIONAL COMPLETION PLUG 304SS	
OPTIONAL COMPLETION PLUG B16 BRASS	



BILL OF MATERIAL

MK #	QTY	DESCRIPTION	MAT'L
1	1	TORN MAIN BODY	SA 350 LF2 CLASS 1
2	1	3" 3000# CAP	A105/ SA350
3	1	COMPLETION PLUG ASSEMBLY (CUSTOMER PLEASE SPECIFY)	AB954 / BRASS
4	1	LOW TEMP O-RING	VITON

3" 600# STRAIGHT TORN DATA SPECIFICATIONS

- 1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS (CUSTOM MATERIAL TYPES & GRADES AVAILABLE UPON REQUEST)
- 2.) MAOP:
ASME B31.4/.6: 1480 PSI
CSA Z662 CAT I I / .6: 1440 PSI
- 3.) FITTING IS DESIGNED TO -50°F
- 4.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 2220 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
- 5.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE
A	INITIAL RELEASE	TEG	11/5/15

DWG:	3.0-600STN-ASSEM
SHEET:	1 OF 1



FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE		DRAWN - DATE	TEG - 11/5/15
3" 600# STRAIGHT TORN		CHECKED - DATE	APX - 11/5/15
		APPROVED - DATE	TEG - 11/5/15
PREPARED FOR: <u>WORLDWIDE MACHINING & WELDING</u>		PREPARED BY: <u>WORLDWIDE MACHINING & WELDING INC</u> 405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wwmwinc.com FX: (715) 394-6007	



ADAPTER FITTINGS

WorldWide Machining & Welding, Inc., is now manufacturing adapter fittings.

FIELD APPLICATION

Adapter fittings can be used in a variety of applications to prevent thread damage and deformation of an existing, in-service threaded o-ring fitting.

Installation of an adapter fitting onto a threaded o-ring fitting, prior to installation of the valve, tapping machine or other attachment, will also ensure the ability to extract and insert the internal plug while preventing damage to the o-ring.

FEATURES/SPECIFICATIONS

Adapter fittings are made out of a solid piece of hot rolled 4140 alloy steel and then heat treated to a designated Rockwell hardness.

- Adapter fittings are reusable and are stamped with size, rating/class, material grade and heat number.
- Material test reports provided for all fittings supplied.

PROCUREMENT

Price and lead time quotes available upon request.



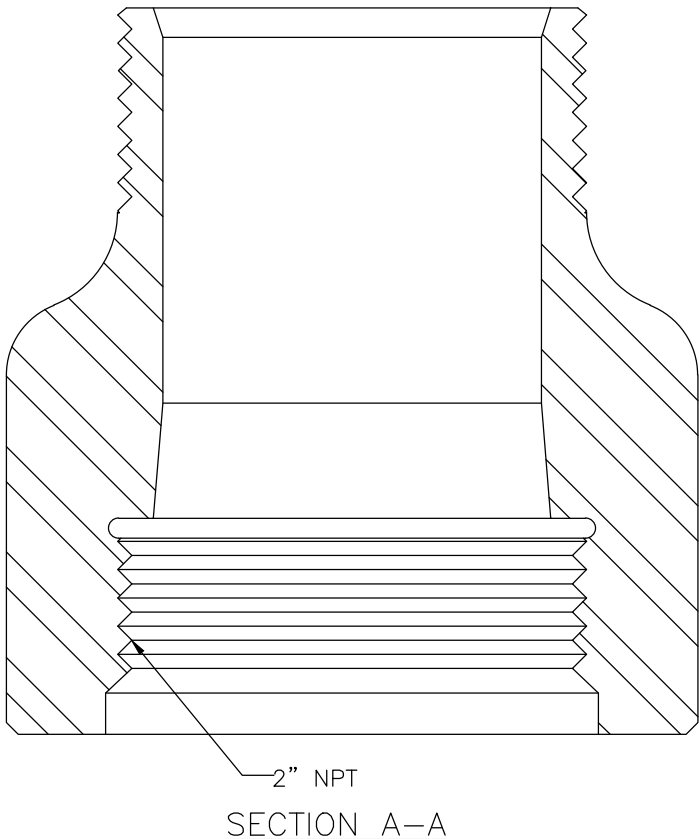
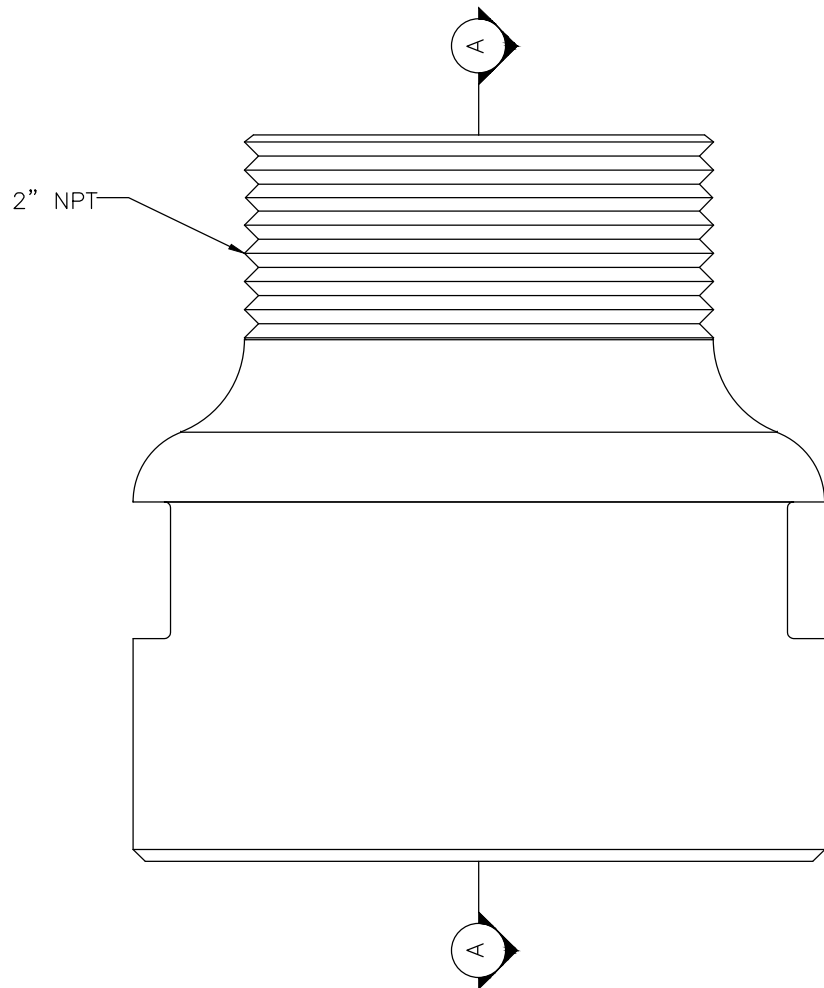
MODELS

2.0"	ANSI	600
3.0"	ANSI	600

Custom sizes available upon request. Please reference the order drawings to designate fitting size, class rating and additional specifications.

2.0-600AF

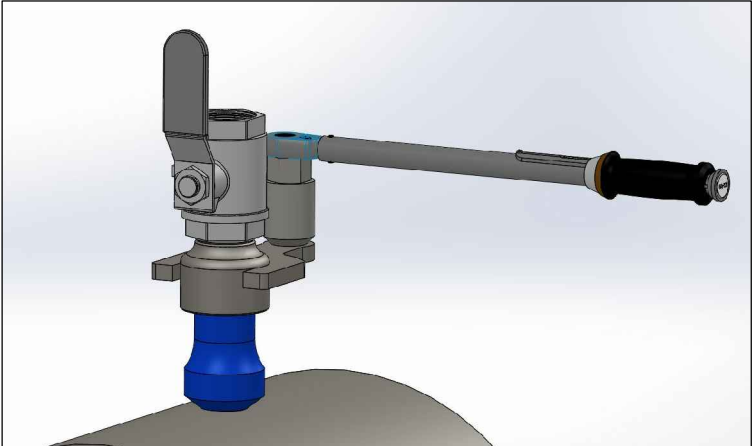
SIZE TYPE RATING



BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	2" 600# ADAPTER FITTING	4140

2" 600# ADAPTER FITTING

- 1.) MAOP:
ASME B31.4/.6: 1480 PSI
CSA Z662 CAT II / .6: 1440 PSI
- 2.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 2220 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.
- 3.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.
- 4.) WRENCH INCLUDED FOR TIGHTING WITH TORQUE WRENCH. (TORQUE WRENCH NOT INCLUDED).



REVISION HISTORY			
NO.	DESCRIPTION	BY	DATE

DWG:		2.0-600-ADAPTER FITTING	
SHEET:		1 OF 1	



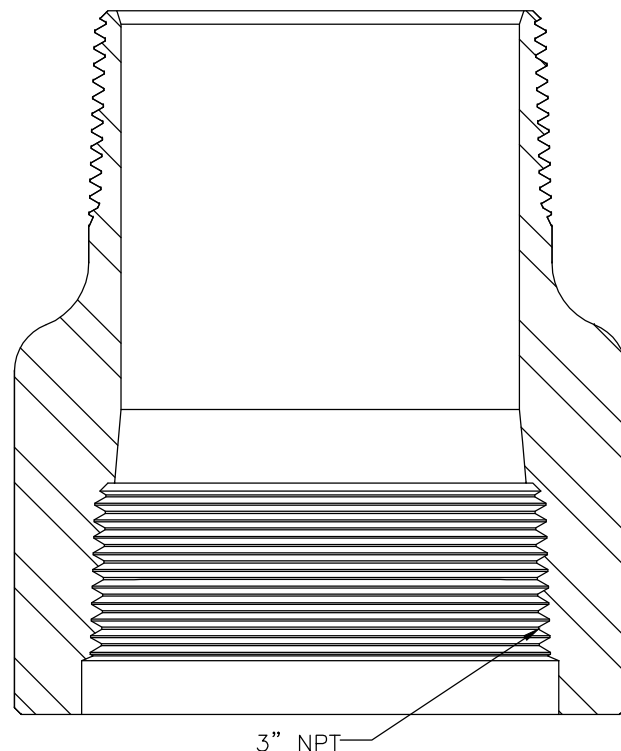
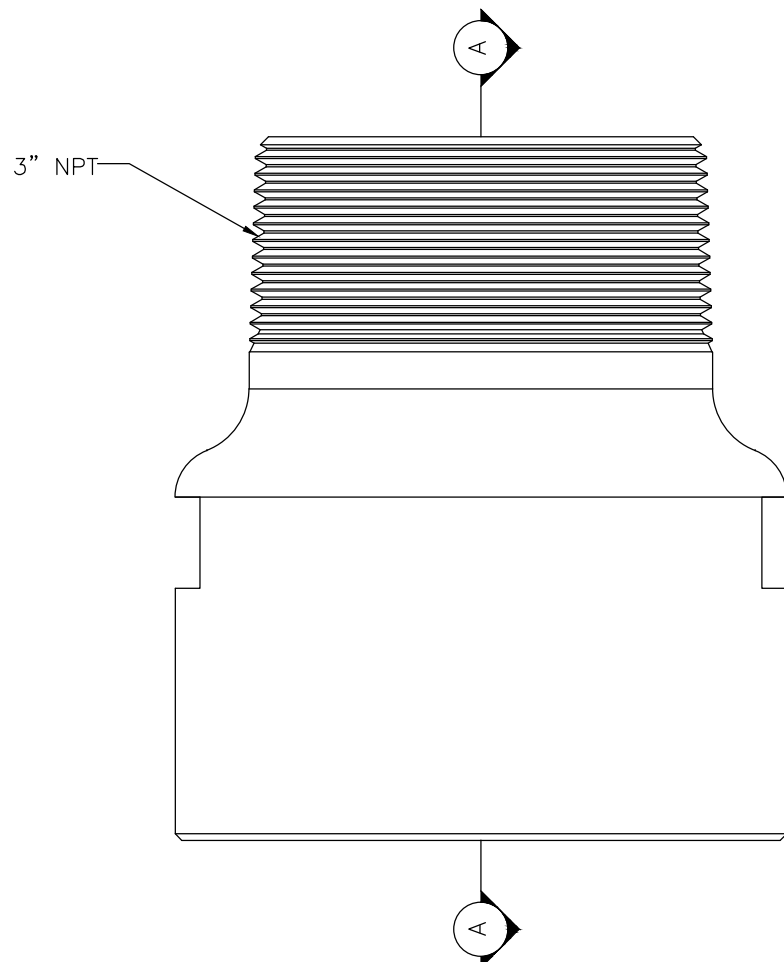
2" 600# ADAPTER FITTING

PREPARED FOR:
WORLDWIDE MACHINING & WELDING Inc.

DRAWN - DATE	TEG - 01-10-2020
CHECKED - DATE	TEG - 01-10-2020
APPROVED - DATE	JA - 01-13-2020
PREPARED BY: WORLDWIDE MACHINING & WELDING INC.	
405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wwmwin.com FX: (715) 394-6007	

3.0-600AF

SIZE TYPE RATING



SECTION A-A

BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	3" 600# ADAPTER FITTING	4140

3" 600# TORF DATA SPECIFICATIONS

1.) MAOP:
ASME B31.4/.6: 1480 PSI
CSA Z662 CAT II / .6: 1440 PSI

2.) A REPRESENTATIVE FITTING (EVERY 500TH UNIT PRODUCED) WILL BE HYDRO TESTED AT 2220 PSI FOR 4.25 HOURS. CERTIFIED CHARTS PROVIDED FOR PRESSURE AND TEMPERATURE. THE TEMPERATURE WILL BE RECORDED EVERY 15 MINUTES.

3.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.

4.) WRENCH INCLUDED FOR TIGHTENING WITH TORQUE WRENCH. (TORQUE WRENCH NOT INCLUDED.)



OUT OF SERVICE CAPS

WorldWide Machining & Welding, Inc., has developed and is now manufacturing out of service caps.

FIELD APPLICATION

Out of service caps can be used to effectively take a threaded o-ring fitting permanently out of service.

Once an out of service cap is installed on an in-service threaded o-ring fitting, a weld should be applied to the bottom lip of the cap and the main body of the fitting, which will effectively and permanently take the fitting out of service.

Out of service caps are engineered for weld placement to be a sufficient distance from plug sealing components to prevent distortion and/or heat damage.

FEATURES/SPECIFICATIONS

- Each out of service cap is machined out of a solid piece of SA350 LF2 CL1 low temp material.
- Out of service caps are stamped with size, rating/class, material grade and heat number.
- Material test reports are provided for all fittings and caps supplied.

PROCUREMENT

Price and lead time quotes available upon request.



MODELS

2.0" ANSI 3000 3.5" (Universal)

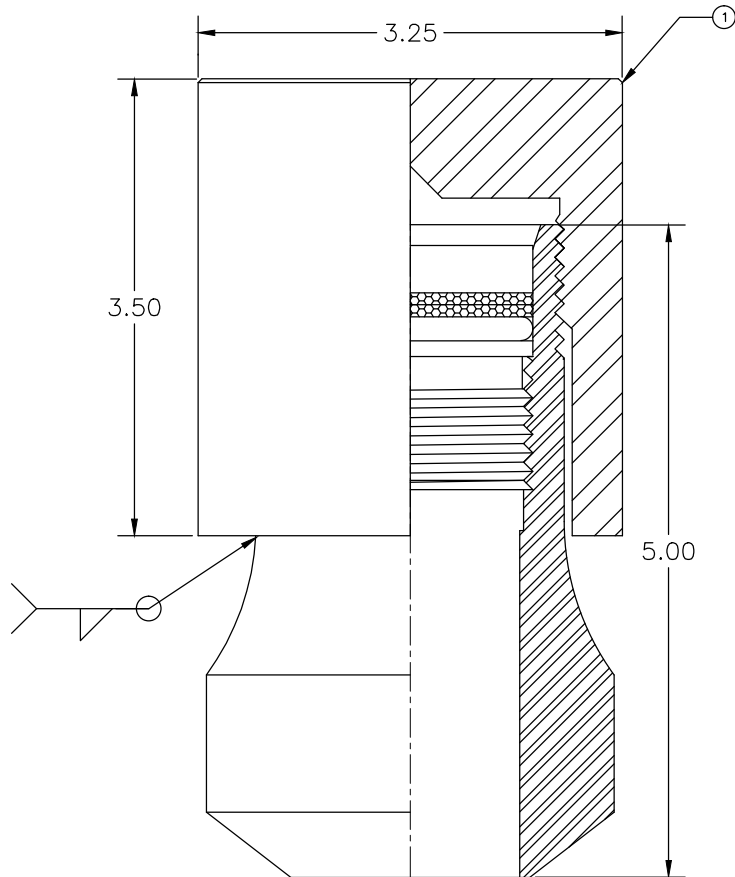
2.0" ANSI 3000 4.93" (TORN Specific)

Please reference the order drawings to designate fitting size, class rating and additional specifications.

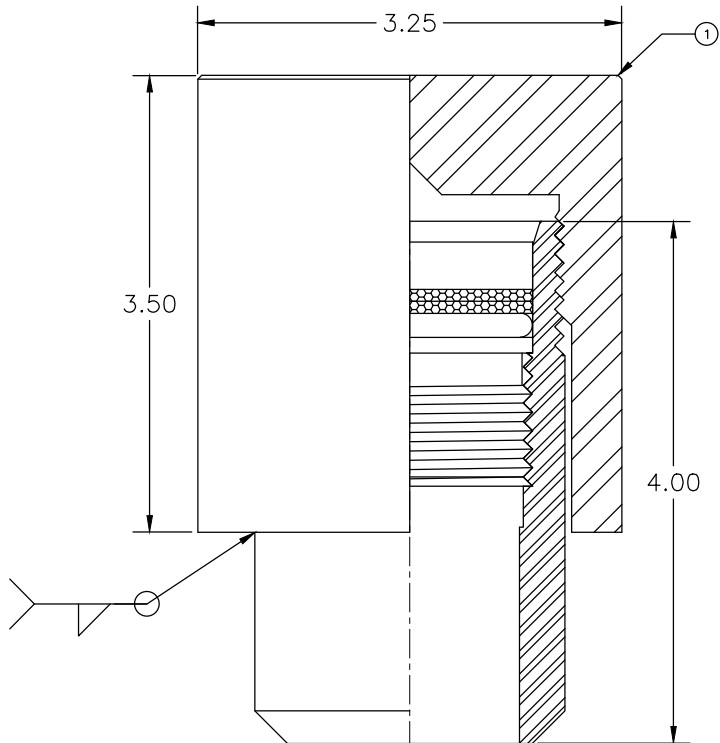
2.0-3000-00SCAP-3.50

CUSTOMER PLEASE SPECIFY

SIZE RATING TYPE HEIGHT



1 2" 3000# OUT OF SERVICE CAP
1 WWMW TORN



1 2" 3000# OUT OF SERVICE CAP
1 TDW TOR

WWMW TORN & TDW TOR FITTINGS SHOWN
FOR REFERENCE ONLY

BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	2" 3000# OUT OF SERVICE CAP	SA 350 LF2 CLASS 1
2" 3000# OUT OF SERVICE CAP DATA SPECIFICATIONS			
1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS			
2.) FITTING IS DESIGNED TO -50°F			
3.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.			

REVISION HISTORY				DWG:	8000004	SHEET:	1 OF 1	WORLDWIDE MACHINING & WELDING, INC	2" 3000# OUT OF SERVICE CAP (UNIVERSAL)	FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE	
NO.	DESCRIPTION	BY	DATE							DRAWN - DATE	TEG- 2-10-2015
A	INITIAL RELEASE	TEG	2/10/15							CHECKED - DATE	APX- 2-10-2015
										APPROVED - DATE	TEG- 2-10-2015
				PREPARED FOR:		PREPARED BY:		WORLDWIDE MACHINING & WELDING INC			
				WORLDWIDE MACHINING & WELDING		405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wwmwinc.com		FX: (715) 394-6007			

CUSTOMER PLEASE SPECIFY

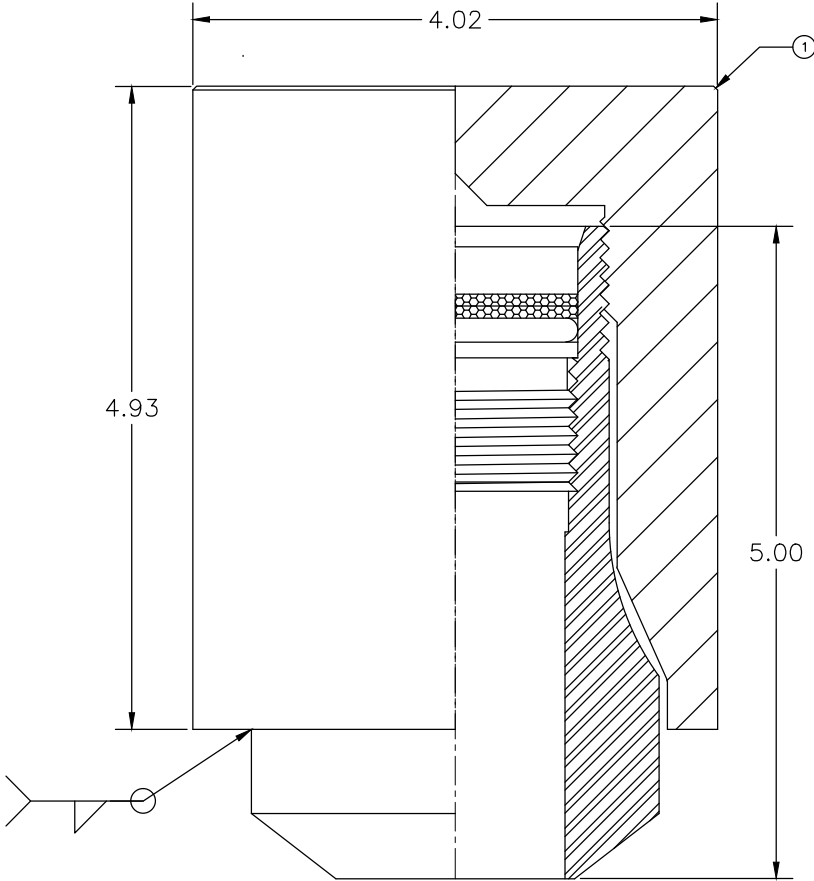
2.0-3000-00SCAP-4.93

SIZE

RATING

TYPE


HEIGHT



1 2" 3000# OUT OF SERVICE CAP
1 WWMW TORN

WWMW TORN FITTING SHOWN FOR
REFERENCE ONLY

BILL OF MATERIAL			
MK #	QTY	DESCRIPTION	MAT'L
1	1	2" 3000# OUT OF SERVICE CAP	SA 350 LF2 CLASS 1
2" 3000# OUT OF SERVICE CAP DATA SPECIFICATIONS			
1.) CARBON EQUIVALENT OF 0.43% MAXIMUM USING I I W AND CSA FORMULAS			
2.) FITTING IS DESIGNED TO -50°F			
3.) HARDNESS TESTING TO BE PREFORMED ON EACH FITTING.			

REVISION HISTORY				DWG:	9000014		2" 3000# OUT OF SERVICE CAP (TORN SPECIFIC)	FINISHED PRODUCT TO BE PAINTED WORLDWIDE BLUE	
NO.	DESCRIPTION	BY	DATE					DRAWN - DATE	TEG- 2-10-2015
A	INITIAL RELEASE	TEG	2/10/15					CHECKED - DATE	APX- 2-10-2015
								APPROVED - DATE	TEG- 2-10-2015
				SHEET: 1 OF 1		PREPARED FOR: WORLDWIDE MACHINING & WELDING		PREPARED BY: WORLDWIDE MACHINING & WELDING INC. 405 JOHN AVE SUPERIOR, WI 54880 PH: (715) 394-6006 www.wwmwinc.com FX: (715) 394-6007	