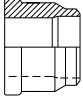
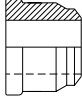
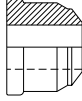
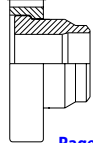
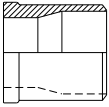
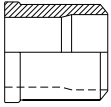
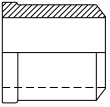
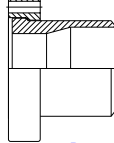
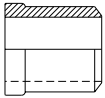
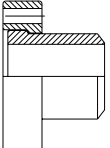


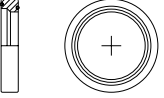
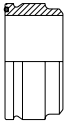
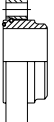
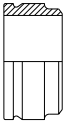
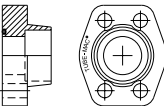
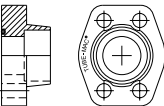
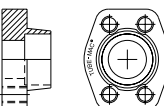
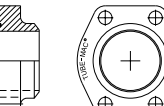
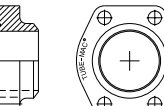
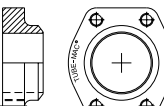




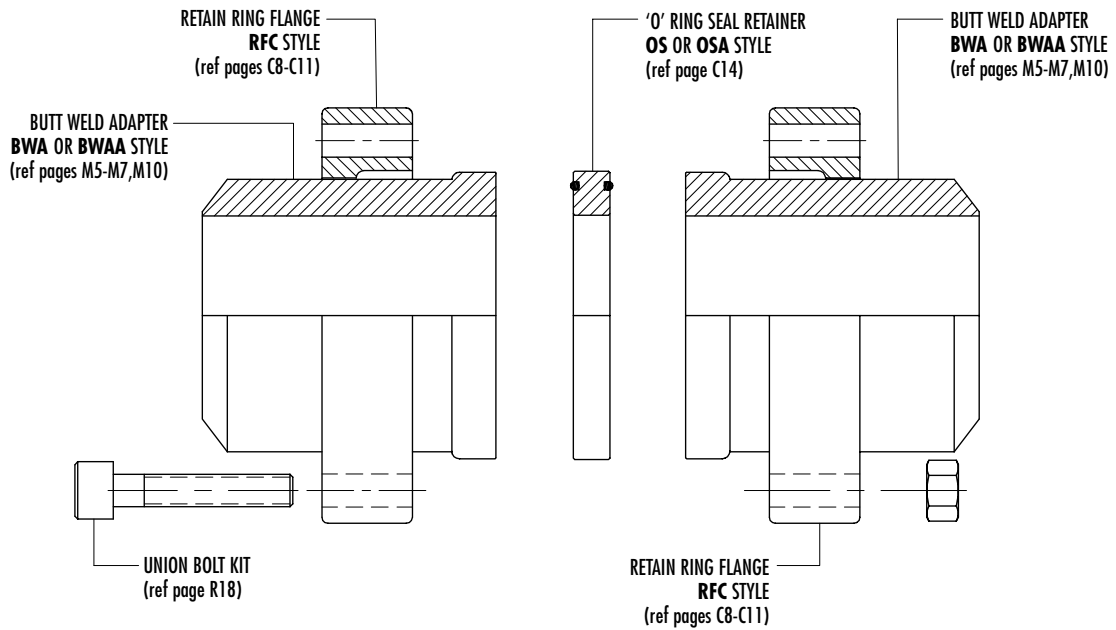
Weld Adapters - Visual Index

BUTT WELD RETAIN RING FLANGE STYLE (ANSI pipe connection)	BWA-SCH80 SCHEDULE 80 BODY ONLY  $\frac{1}{2}$ " - 4" Page M5	BWA-SCH160 SCHEDULE 160 BODY ONLY  $\frac{1}{2}$ " - 4" Page M6	BWA-SCHXXS SCHEDULE XXS BODY ONLY  $\frac{1}{2}$ " - 4" Page M7	A/BWA ANSI PIPE ASSEMBLY  $\frac{1}{2}$ " - 4" Page M8-M9
	BWAA-SCH80 SCHEDULE 80 BODY ONLY  5" - 8" Page M5	BWAA-SCH160 SCHEDULE 160 BODY ONLY  5" - 8" Page M6	BWAA-SCHXXS SCHEDULE XXS BODY ONLY  5" - 8" Page M7	A/BWAA ANSI PIPE ASSEMBLY  5" - 8" Page M8-M9
BUTT WELD RETAIN RING FLANGE STYLE (metric heavy wall pipe connection)	BWA METRIC PIPE BODY ONLY  $\frac{1}{2}$ " - 4" Page M10	A/BWA METRIC PIPE ASSEMBLY  $\frac{1}{2}$ " - 4" Page M11		
	'O' RING SEAL RETAINERS	OS  $\frac{1}{2}$ " - 4" Page M12	OSA  5" - 8" Page M12	OSS  4" Page M12
LOW PRESSURE BUTT WELD RETAIN RING FLANGE STYLE		LBWAO 'O' RING FACE BODY ONLY  $2\frac{1}{2}$ " - 8" Page M14	A/LBWAO 'O' RING FACE ASSEMBLY  $2\frac{1}{2}$ " - 8" Page M15	LBWAF FLAT FACE BODY ONLY  $2\frac{1}{2}$ " - 8" Page M16
	SOCKET WELD FLANGES	SWF034 SAE CODE 61 WITH 'O' RING FACE  $\frac{1}{2}$ " - 4" Page M18	SWF064 SAE CODE 62 WITH 'O' RING FACE  $\frac{1}{2}$ " - 2" Page M18	SWFF34 SAE CODE 61 WITH FLAT FACE  $\frac{1}{2}$ " - 4" Page M19
BUTT WELD FLANGES		BWF034 SAE CODE 61 WITH 'O' RING FACE  $\frac{1}{2}$ " - 4" Page M20	BWF064 SAE CODE 62 WITH 'O' RING FACE  $\frac{1}{2}$ " - 2" Page M20	BWFF34 SAE CODE 61 WITH FLAT FACE  $\frac{1}{2}$ " - 4" Page M21

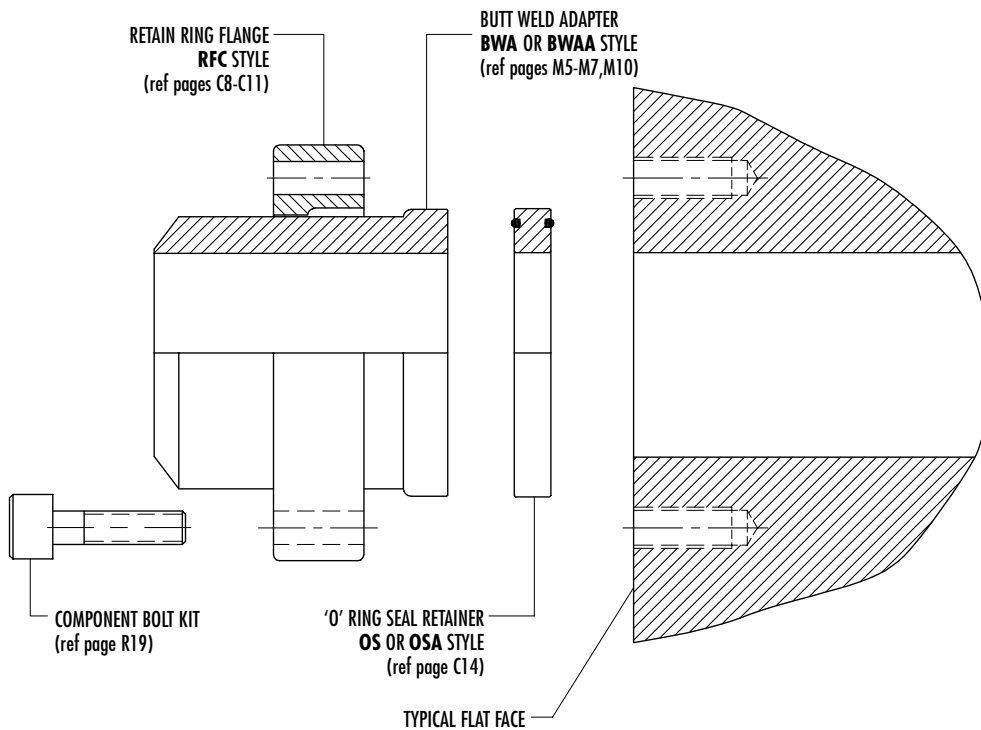


Butt Weld Adapter Connections

Typical Butt Weld Adapter Union Connection



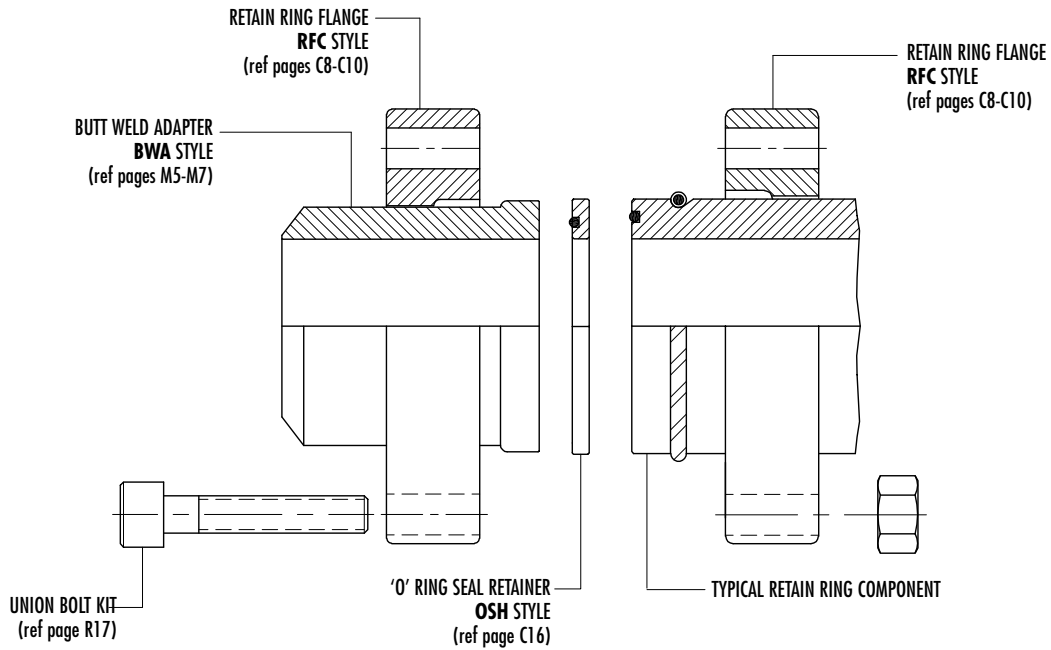
Typical Butt Weld Adapter to Flat Face Connection



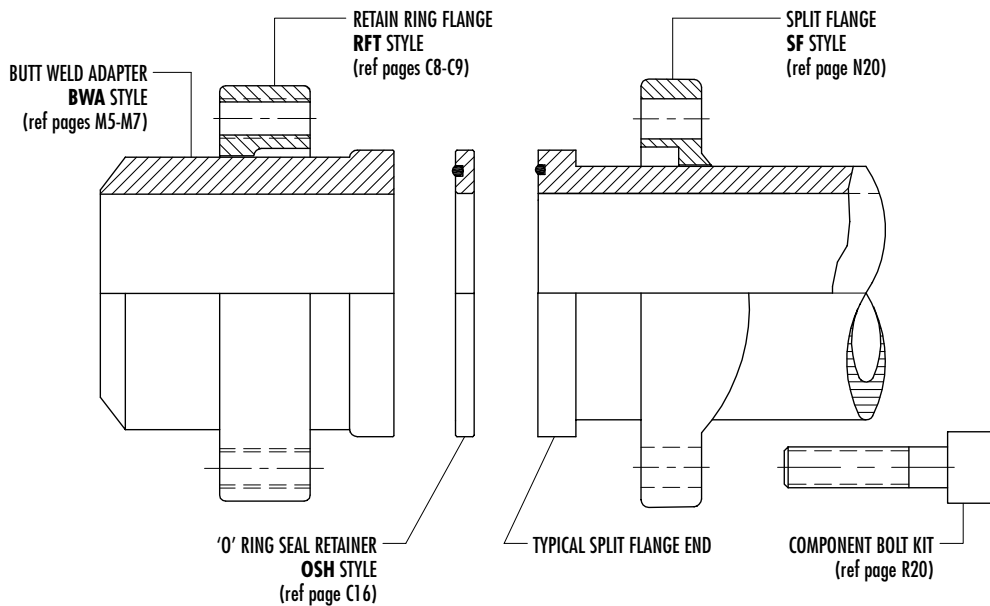


Butt Weld Adapter Connections

Typical Butt Weld Adapter to 'O' Ring Face Retain Ring Component Connection



Typical Butt Weld Adapter to SAE Split Flange Connection

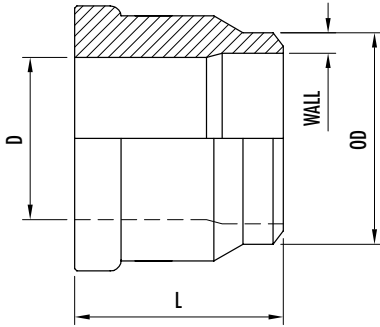




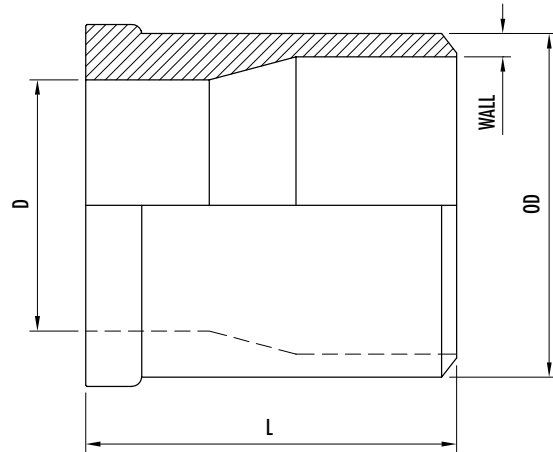
Butt Weld Adapter Body

Retain Ring Flange Style - Schedule 80 ANSI Pipe

BWA-SCH80 - 1/2"-4"



BWAA-SCH80 - 5"-8"



BWA-SCH80 Butt Weld Adapter Body - 1/2"-4" Schedule 80 ANSI Pipe Retain Ring Flange Style

Nominal Size	Adapter Part No.	Dimensions (in)		OD x Wall (in)	WT. lbs/pc	Working Pressure PSI (bar)
		D	L			
1/2"	BWA-SCH80-050	0.55	1.50	0.840 x 0.147	0.25	Note 1.
3/4"	BWA-SCH80-075	0.79	1.75	1.050 x 0.154	0.44	
1"	BWA-SCH80-100	0.91	1.75	1.315 x 0.179	0.47	
1 1/4"	BWA-SCH80-125	1.18	2.00	1.660 x 0.191	0.75	
1 1/2"	BWA-SCH80-150	1.54	2.25	1.900 x 0.200	0.96	
2"	BWA-SCH80-200	1.93	2.50	2.375 x 0.218	1.20	
2 1/2"	BWA-SCH80-250	2.36	2.50	2.875 x 0.276	1.70	
3"	BWA-SCH80-300	2.88	2.75	3.500 x 0.300	3.00	
4"	BWA-SCH80-400	3.35	4.00	4.500 x 0.337	5.80	

To be used with 'O' Ring Seal Retainer Ref. pages M12-M13

BWAA-SCH80 Butt Weld Adapter Body - 5"-8" Schedule 80 ANSI Pipe Retain Ring Flange Style

Nominal Size	Adapter Part No.	Dimensions (in)		OD x Wall (in)	WT. lbs/pc	Working Pressure PSI (bar)
		D	L			
5"	BWAA-SCH80-500	4.06	6.00	5.563 x 0.375	15.00	Note 1.
6"	BWAA-SCH80-600	4.90	6.00	6.625 x 0.432	20.50	
8"	BWAA-SCH80-800	6.81	6.00	8.625 x 0.500	30.20	

To be used with 'O' Ring Seal Retainer Ref. pages M12-M13

Note: 1) WORKING PRESSURE RATING IS DEPENDANT ON THE PIPE THAT THE ADAPTER IS WELDED TO

- TO ORDER COMPLETE ASSEMBLY REFERENCE PAGES M8-M9
- JUMP SIZES ARE AVAILABLE

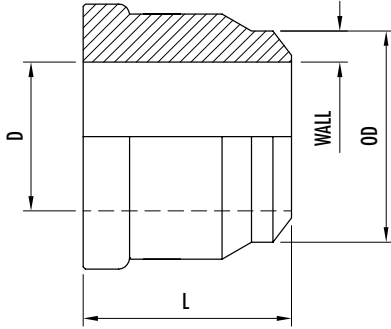
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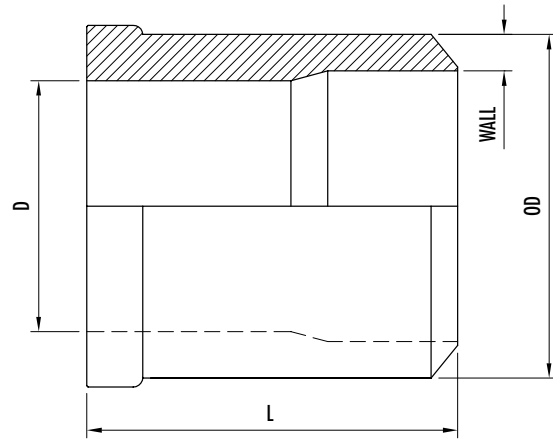
Butt Weld Adapter Body

Retain Ring Flange Style - Schedule 160 ANSI Pipe

BWA-SCH160 - 1/2"-4"



BWAA-SCH160 - 5"-8"



BWA-SCH160 Butt Weld Adapter Body - 1/2"-4" Schedule 160 ANSI Pipe

Retain Ring Flange Style

Nominal Size	Adapter Part No.	Dimensions (in)		OD x Wall (in)	WT. lbs/pc	Working Pressure PSI (bar)
		D	L			
1/2"	BWA-SCH160-050	0.47	1.50	0.840 x 0.187	0.27	Note 1.
3/4"	BWA-SCH160-075	0.61	1.75	1.050 x 0.218	0.49	
1"	BWA-SCH160-100	0.82	1.75	1.315 x 0.250	0.55	
1 1/4"	BWA-SCH160-125	1.16	2.00	1.660 x 0.250	0.79	
1 1/2"	BWA-SCH160-150	1.34	2.25	1.900 x 0.281	1.20	
2"	BWA-SCH160-200	1.69	2.50	2.375 x 0.343	1.50	
2 1/2"	BWA-SCH160-250	2.13	2.50	2.875 x 0.375	2.00	
3"	BWA-SCH160-300	2.62	2.75	3.500 x 0.438	3.60	
4"	BWA-SCH160-400	3.44	4.00	4.500 x 0.531	6.70	

To be used with 'O' Ring Seal Retainer Ref. pages M12-M13

BWAA-SCH160 Butt Weld Adapter Body - 5"-8" Schedule 160 ANSI Pipe

Retain Ring Flange Style

Nominal Size	Adapter Part No.	Dimensions (in)		OD x Wall (in)	WT. lbs/pc	Working Pressure PSI (bar)
		D	L			
5"	BWAA-SCH160-500	4.06	6.00	5.563 x 0.625	18.20	Note 1.
6"	BWAA-SCH160-600	4.90	6.00	6.625 x 0.718	24.20	
8"	BWAA-SCH160-800	6.81	6.00	8.625 x 0.906	37.20	

To be used with 'O' Ring Seal Retainer Ref. pages M12-M13

Note: 1) WORKING PRESSURE RATING IS DEPENDANT ON THE PIPE THAT THE ADAPTER IS WELDED TO

- TO ORDER COMPLETE ASSEMBLY REFERENCE PAGES M8-M9
- JUMP SIZES ARE AVAILABLE

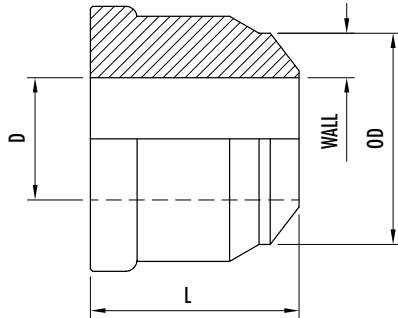
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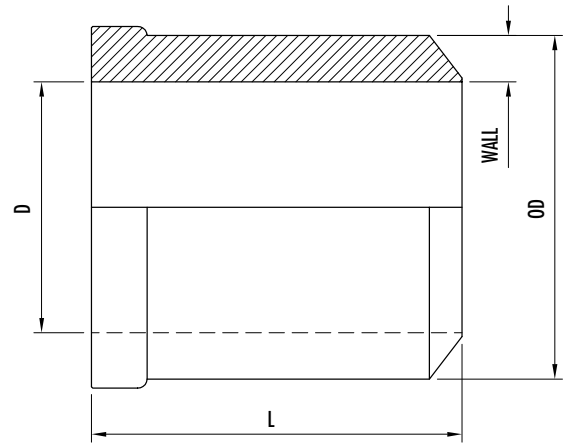
Butt Weld Adapter Body

Retain Ring Flange Style - Schedule XXS ANSI Pipe

BWA-SCHXXS - 1/2"-4"



BWAA-SCHXXS - 5"-8"



BWA-SCHXXS Butt Weld Adapter Body - 1/2"-4" Schedule XXS ANSI Pipe

Retain Ring Flange Style

Nominal Size	Adapter Part No.	Dimensions (in)		OD x Wall (in)	WT. lbs/pc	Working Pressure PSI (bar)
		D	L			
1/2"	BWA-SCHXXS-050	0.25	1.50	0.840 x 0.294	0.31	Note 1.
3/4"	BWA-SCHXXS-075	0.43	1.75	1.050 x 0.308	0.54	
1"	BWA-SCHXXS-100	0.60	1.75	1.315 x 0.358	0.63	
1 1/4"	BWA-SCHXXS-125	0.90	2.00	1.660 x 0.382	0.97	
1 1/2"	BWA-SCHXXS-150	1.10	2.25	1.900 x 0.400	1.36	
2"	BWA-SCHXXS-200	1.50	2.50	2.375 x 0.436	1.70	
2 1/2"	BWA-SCHXXS-250	1.77	2.50	2.875 x 0.552	2.40	
3"	BWA-SCHXXS-300	2.30	2.75	3.500 x 0.600	4.20	
4"	BWA-SCHXXS-400	3.15	4.00	4.500 x 0.674	8.00	

To be used with 'O' Ring Seal Retainer Ref. pages M12-M13

BWAA-SCHXXS Butt Weld Adapter Body - 5"-8" Schedule XXS ANSI Pipe

Retain Ring Flange Style

Nominal Size	Adapter Part No.	Dimensions (in)		OD x Wall (in)	WT. lbs/pc	Working Pressure PSI (bar)
		D	L			
5"	BWAA-SCHXXS-500	4.06	6.00	5.563 x 0.750	19.40	Note 1.
6"	BWAA-SCHXXS-600	4.90	6.00	6.625 x 0.864	26.00	
8"	BWAA-SCHXXS-800	6.81	6.00	8.625 x 0.875	36.70	

To be used with 'O' Ring Seal Retainer Ref. pages M12-M13

Note: 1) WORKING PRESSURE RATING IS DEPENDANT ON THE PIPE THAT THE ADAPTER IS WELDED TO

- TO ORDER COMPLETE ASSEMBLY REFERENCE PAGES M8-M9
- JUMP SIZES ARE AVAILABLE

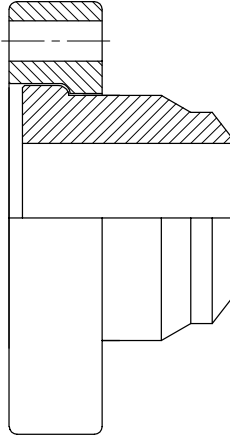
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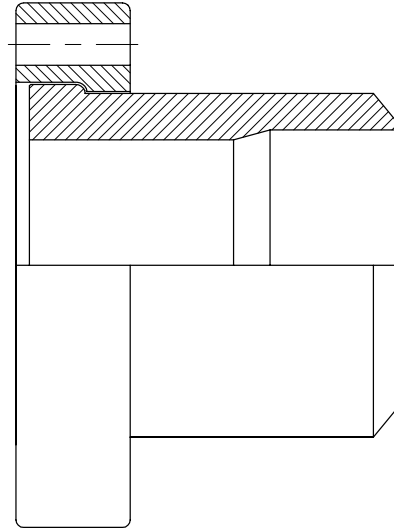
Butt Weld Adapter Assembly

1/2"-8" ANSI Pipe Connection

Typical A/BWA Assembly - 1/2"-4"



Typical A/BWAA Assembly - 5"-8"



COMPLETE ASSEMBLY CONSISTS OF:

- ONE (1) BUTT WELD ADAPTER BODY (REF. PAGES M5-M7)
- ONE (1) RETAIN RING FLANGE (REF. PAGES C8-C12)

TO BE ORDERED SEPARATELY:

- 'O' RING SEAL RETAINER (REF. PAGES M2-M3)



Butt Weld Adapter Assembly

Complete Assembly Part Number - ANSI Pipe Connection

		Code	A	Body	Body Material	Pipe Schedule	Adapter Size	Flange	Option
Assembly			A						
Butt Weld Adapter Body <small>Ref. page (M8)</small>	1/2"-4"	BWA							
	5"-8"	BWAA							
Body Material <small>Carbon Steel (Standard)</small>	No Designation Required								
Body Material <small>Stainless Steel (Optional)</small>	TMP304SS	304							
	TMP316SS	316							
Pipe Schedule	Schedule 80	SCH80							
	Schedule 160	SCH160							
	Schedule XXS	SCHXXS							
Adapter Size	1/2"	050							
	3/4"	075							
	1"	100							
	1 1/4"	125							
	1 1/2"	150							
	2"	200							
	2 1/2"	250							
	3"	300							
	4"	400							
	5"	500							
Flange Type <small>Carbon Steel Yellow Zinc Dicromate Plated Ref. pages (C8-C12)</small>	RFC34 <small>SAE Code 61 W/Clearance Holes</small>	FC34							
	*RFT34 <small>SAE Code 61 W/Tapped Holes</small>	FT34							
	RFC64 <small>SAE Code 62 W/Clearance Holes</small>	FC64							
	*RFT64 <small>SAE Code 62 W/Tapped Holes</small>	FT64							
	RFC74 <small>ISO 6164 W/Clearance Holes</small>	FC74							
	RFAC48 <small>TMI® 8-Bolt W/Clearance Holes</small>	FAC48							
	**RFC49 <small>TMI® 9-Bolt W/Clearance Holes</small>	FC49							
	**RFAC49 <small>TMI® 9-Bolt W/Clearance Holes</small>	FAC49							
Options	Complete Stainless Steel Assembly: (including flange)	SS							

To be used with 'O' Ring Seal Retainer Ref. pages M12-M13

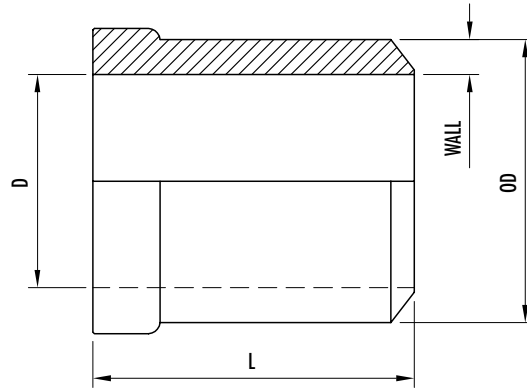
* NORMALLY USED FOR CONNECTION TO SPLIT FLANGE TYPE ENDS
 **FOR USE WITH 9-BOLT BALL VALVE CONNECTION (REF. PAGE P10)
PART NO. (EXAMPLE): A/BWA - SCH80 - 050 - FC34

- ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR BODY RATINGS
- SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS
- FOR BOLT KIT - REFERENCE SECTION R



Butt Weld Adapter Body

Retain Ring Flange Style - Metric Heavy Wall Pipe



BWA Butt Weld Adapter Body - Metric Heavy Wall Pipe

Retain Ring Flange Style

Nominal Size	Adapter Part No.	Dimensions (in)		OD x Wall (mm)	WT. lbs/pc	Working Pressure PSI (bar)
		D	L			
1 1/2"	BWA-56 x 8.5	1.54	2.31	56 x 8.5	1.29	6000 (420)
2"	BWA-66 x 8.5	1.93	3.00	66 x 8.5	2.03	6000 (420)
2 1/2"	BWA-80 x 10	2.36	3.50	80 x 10	3.39	5800 (400)
3"	BWA-97 x 12	2.88	4.25	97 x 12	6.00	5800 (400)
4"	BWA-115 X 15	3.35	5.50	115 x 15	11.41	5800 (400)

To be used with 'O' Ring Seal Retainer Ref. pages M12-M13

- TO ORDER COMPLETE ASSEMBLY REFERENCE PAGE M11
- JUMP SIZES ARE AVAILABLE

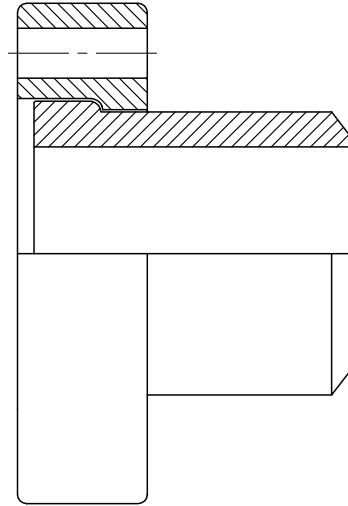
MATERIAL: CARBON STEEL, (STAINLESS STEEL STANDARD-316 AVAILABLE) OTHER MATERIALS ARE AVAILABLE



Butt Weld Adapter Assembly

Complete Assembly Part Number - Metric Heavy Wall Pipe Connection

Typical A/BWA Assembly



COMPLETE ASSEMBLY CONSISTS OF:

- ONE (1) BUTT WELD ADAPTER BODY (REF. PAGE M10)
- ONE (1) RETAIN RING FLANGE (REF. PAGES C8-C12)

TO BE ORDERED SEPARATELY:

- 'O' RING SEAL RETAINER (REF. PAGES M2-M3)

		Code	A	/	BWA	-	Body Material	-	Adapter Size	-	Flange	-	Option
Assembly		A											
Butt Weld Adapter		BWA											
Body Material Carbon Steel (Standard)	No Designation Required												
Body Material Stainless Steel (Optional)	TMP304SS	304											
	TMP316SS	316											
Adapter Size	1 1/2"	56x8.5											
	2"	66x8.5											
	2 1/2"	80x10											
	3"	97x12											
	4"	115x15											
Flange Type Carbon Steel Yellow Zinc Dicromate Plated Ref. pages (C8-C10)	RFC34 SAE Code 61 W/Clearance Holes	FC34											
	*RFT34 SAE Code 61 W/Tapped Holes	FT34											
	RFC64 SAE Code 62 W/Clearance Holes	FC64											
	*RFT64 SAE Code 62 W/Tapped Holes	FT64											
	RFC74 ISO 6164 W/Clearance Holes	FC74											
	**RFC49 TMI® 9-Bolt W/Clearance Holes	FC49											
Options	Complete Stainless Steel Assembly: (including flange)	SS											

To be used with 'O' Ring Seal Retainer Ref. pages M12-M13

* NORMALLY USED FOR CONNECTION TO SPLIT FLANGE TYPE ENDS

** FOR USE WITH 9-BOLT BALL VALVE CONNECTION (REF. PAGE P10)

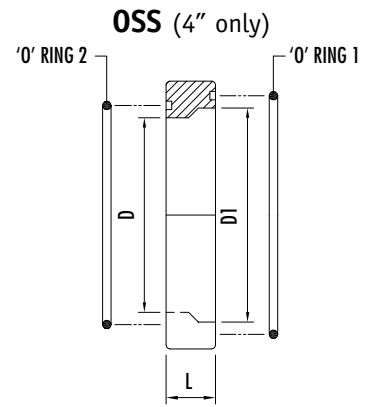
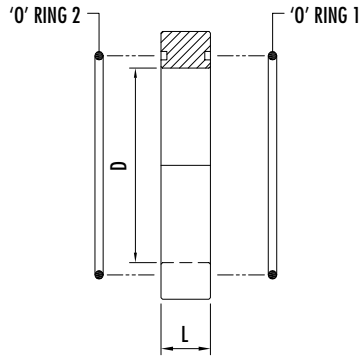
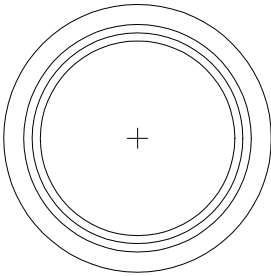
PART NO. (EXAMPLE):
A/BWA - 56x8.5 - FC34

- ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR BODY RATINGS
- SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS
- FOR BOLT KIT - REFERENCE SECTION R



'O' Ring Seal Retainer

OS/OSA



OS 'O' Ring Seal Retainer for Retain Ring Pipe - 1/2" - 4"

Complete with Buna 'O' Rings (Standard)

OSA 'O' Ring Seal Retainer for Retain Ring Pipe - 5" - 8"

Complete with Buna 'O' Rings (Standard)

Size	Retainer Part No.	Dimensions (in)		'O' Rings 1&2 (Buna) Part No.	WT. lbs/pc
		D	L		
1/2"	OS-050-*	0.55	0.50	OR*-3-909	0.08
3/4"	OS-075-*	0.79	0.50	OR*-3-913	0.13
1"	OS-100-*	0.91	0.50	OR*-3-916	0.15
1 1/4"	OS-125-*	1.18	0.50	OR*-3-918	0.19
1 1/2"	OS-150-*	1.54	0.50	OR*-3-924	0.24
2"	OS-200-*	1.93	0.50	OR*-3-928	0.29
2 1/2"	OS-250-*	2.36	1.00	OR*-2-232	0.53
3"	OS-300-*	2.88	1.00	OR*-2-237	0.78
4"	OS-400-*	3.35	1.00	OR*-2-241	1.22
5"	OSA-500-*	4.06	1.50	OR*-2-353	5.73
6"	OSA-600-*	4.90	1.50	OR*-2-359	6.80
8"	OSA-800-*	6.81	1.50	OR*-2-368	10.34

• FOR SIZES 10" OR LARGER CONSULT FACTORY

* INSERT ' V ' TO INDICATE OPTIONAL VITON 'O' RINGS

♦ CANNOT BE USED FOR CONNECTION TO STAUFF BALL VALVE (BBVG27), REFERENCE OSS-400 (SEE BELOW)

OSS 'O' Ring Seal Retainer for Retain Ring Pipe - 4"

For use with Retain Ring Connection to 9-Bolt Ball Valve BBVG27 (reference page P10)

Complete with Buna 'O' Rings (Standard)

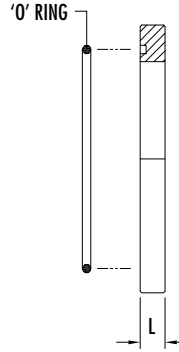
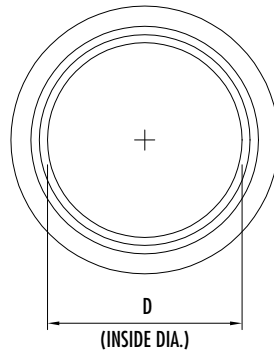
Size	Retainer Part No.	Dimensions (in)			'O' Ring 1 (Buna) Part No.	'O' Ring 2 (Buna) Part No.	WT. lbs/pc
		D	D1	L			
4"	OSS-400-*	3.35	3.80	1.00	OR*-2-243	OR*-2-241	1.22

* INSERT ' V ' TO INDICATE OPTIONAL VITON 'O' RINGS

MATERIAL: CARBON STEEL, YELLOW ZINC DICHROMATE PLATED, (STAINLESS STEEL AVAILABLE)



'O' Ring Seal Retainer



OSH 'O' Ring Seal Retainer for Retain Ring Pipe Complete with Buna 'O' Ring (Standard)

Size	Retainer Part No.	Dimensions (in)		'O' Ring (Buna) Part No.	WT. lbs/pc
		D	L		
1/2"	OSH-050-*	0.55	0.25	OR*-3-909	0.04
3/4"	OSH-075-*	0.79	0.25	OR*-3-913	0.07
1"	OSH-100-*	0.91	0.25	OR*-3-916	0.08
1 1/4"	OSH-125-*	1.18	0.25	OR*-3-918	0.09
1 1/2"	OSH-150-*	1.54	0.25	OR*-3-924	0.12
2"	OSH-200-*	1.93	0.25	OR*-3-928	0.15
2 1/2"	OSH-250-*	2.36	0.50	OR*-2-232	0.26
3"	OSH-300-*	2.88	0.50	OR*-2-237	0.39
4"	OSH-400-*	3.35	0.50	OR*-2-241	0.60

* INSERT ' V ' TO INDICATE OPTIONAL VITON 'O' RING

♦ CANNOT BE USED FOR CONNECTION TO STAUFF BALL VALVE (BBVG27), REFERENCE OSHS-400 (SEE BELOW)

MATERIAL: CARBON STEEL, YELLOW ZINC DICHROMATE PLATED, (STAINLESS STEEL AVAILABLE)

OSHS 'O' Ring Seal Retainer for Retain Ring Component - 4" For use with Retain Ring Component Connection to 9-Bolt Ball Valve BBVG27 (reference page P10) Complete with Buna 'O' Ring (Standard)

Size	Retainer Part No.	Dimensions (in)		'O' Ring (Buna) Part No.	WT. lbs/pc
		D	L		
4"	OSHS-400-*	3.80	0.50	OR*-2-243	0.60

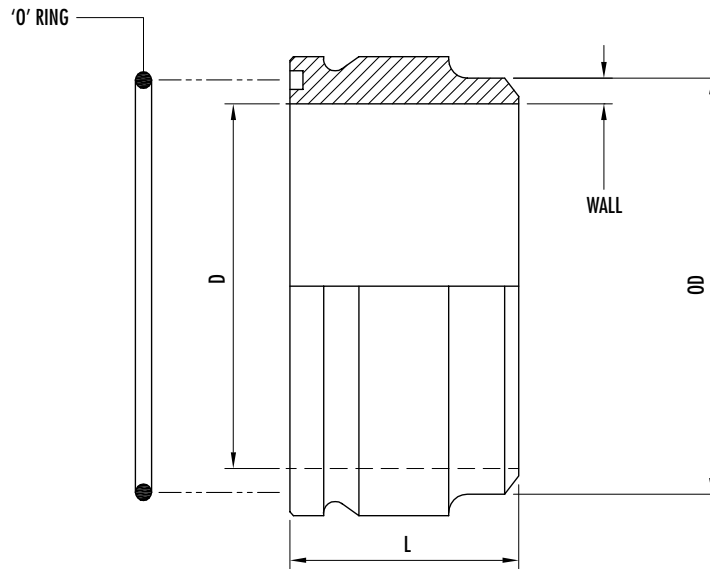
* INSERT ' V ' TO INDICATE OPTIONAL VITON 'O' RINGS

MATERIAL: CARBON STEEL, YELLOW ZINC DICHROMATE PLATED, (STAINLESS STEEL AVAILABLE)



Low Pressure Butt Weld Retain Ring Adapter Body

'O' Ring Face



LBWAO Low Pressure Butt Weld Retain Ring Adapter Body - 'O' Ring Face Complete With Buna 'O' Ring (Standard)

Schedule 40

Nominal Size	Adapter Part No.	Dimensions (in)		OD x Wall (in)	'O' Ring (Buna) Part No.	WT. lbs/pc	Working Pressure PSI (bar)
		D	L				
2 1/2"	LBWAO-SCH40-250-*	2.47	1.38	2.875 x 0.203	OR*-2-232	1.02	750 (52)
3"	LBWAO-SCH40-300-*	3.07	1.57	3.500 x 0.216	OR*-2-237	1.43	750 (52)
4"	LBWAO-SCH40-400-*	4.03	1.58	4.500 x 0.237	OR*-2-245	2.12	750 (52)
5"	LBWAO-SCH40-500-*	5.05	1.77	5.563 x 0.258	OR*-2-353	3.32	750 (52)
6"	LBWAO-SCH40-600-*	6.07	1.97	6.625 x 0.280	OR*-2-359	5.44	700 (48)
8"	LBWAO-SCH40-800-*	7.98	2.36	8.625 x 0.322	OR*-2-372	9.98	600 (40)

* INSERT ' V ' TO INDICATE OPTIONAL VITON 'O' RING

• FOR COMPLETE ASSEMBLY REFERENCE PAGE M15

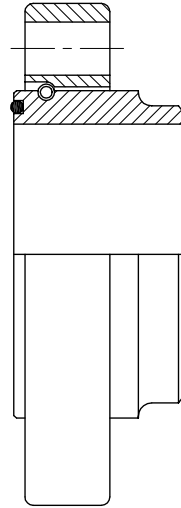
MATERIAL: CARBON STEEL, (STAINLESS STEEL STANDARD-316 AVAILABLE)



Low Pressure Butt Weld Retain Ring Adapter Assembly

'O' Ring Face

Typical A/LBWA0 Assembly:



COMPLETE ASSEMBLY CONSISTS OF:

- ONE (1) LOW PRESSURE 'O' RING FACE BUTT WELD ADAPTER
- ONE (1) LOW PRESSURE RETAIN RING FLANGE (REF. PAGES D8-D9)
- ONE (1) LOW PRESSURE RETAIN RING
- ONE (1) BUNA 'O' RING (STANDARD)

A/LBWA0 Low Pressure Butt Weld Retain Ring Adapter Assembly - 'O' Ring Face Complete With Buna 'O' Ring (Standard)

Nominal Size	Assembly Part No.	WT. lbs/pc	Working Pressure PSI (bar)
2 1/2"	A/LBWA0-250-*	3.19	750 (52)
3"	A/LBWA0-300-*	5.22	750 (52)
4"	A/LBWA0-400-*	8.73	750 (52)
5"	A/LBWA0-500-*	11.93	750 (52)
6"	A/LBWA0-600-*	15.23	700 (48)
8"	A/LBWA0-800-*	29.23	600 (40)

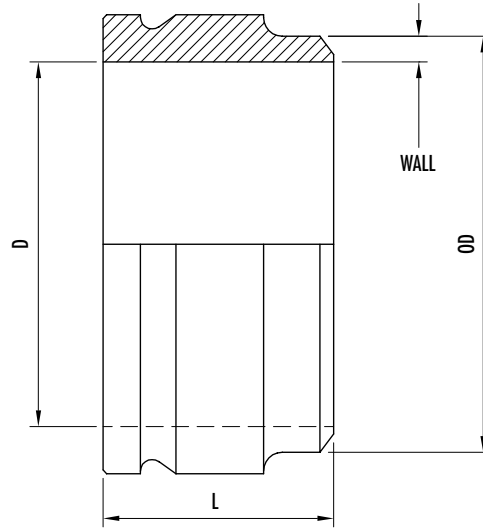
* INSERT ' V ' TO INDICATE OPTIONAL VITON 'O' RING

MATERIAL: CARBON STEEL, (STAINLESS STEEL STANDARD-316 AVAILABLE)



Low Pressure Butt Weld Retain Ring Adapter Body

Flat Face



LBWAF Low Pressure Butt Weld Retain Ring Adapter Body - Flat Face

Schedule 40

Nominal Size	Adapter Part No.	Dimensions (in)		OD x Wall (in)	WT. lbs/pc	Working Pressure PSI (bar)
		D	L			
2 1/2"	LBWAF-SCH40-250	2.47	1.38	2.875 x 0.203	1.07	750 (52)
3"	LBWAF-SCH40-300	3.07	1.57	3.500 x 0.216	1.48	750 (52)
4"	LBWAF-SCH40-400	4.03	1.58	4.500 x 0.237	2.14	750 (52)
5"	LBWAF-SCH40-500	5.05	1.77	5.563 x 0.258	3.36	750 (52)
6"	LBWAF-SCH40-600	6.07	1.97	6.625 x 0.280	5.49	700 (48)
8"	LBWAF-SCH40-800	7.98	2.36	8.625 x 0.322	10.55	600 (40)

• FOR COMPLETE ASSEMBLY REFERENCE PAGE M17

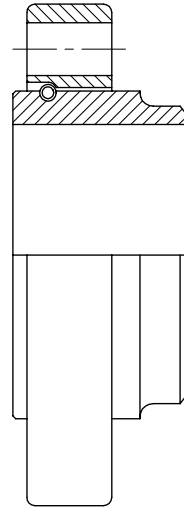
MATERIAL: CARBON STEEL, (STAINLESS STEEL STANDARD-316 AVAILABLE)



Low Pressure Butt Weld Retain Ring Adapter Assembly

Flat Face

Typical A/LBWAF Assembly:



COMPLETE ASSEMBLY CONSISTS OF:

- ONE (1) LOW PRESSURE FLAT FACE BUTT WELD ADAPTER
- ONE (1) LOW PRESSURE RETAIN RING FLANGE (REF. PAGES D8-D9)
- ONE (1) LOW PRESSURE RETAIN RING

A/LBWAF Low Pressure Butt Weld Retain Ring Adapter Assembly - Flat Face

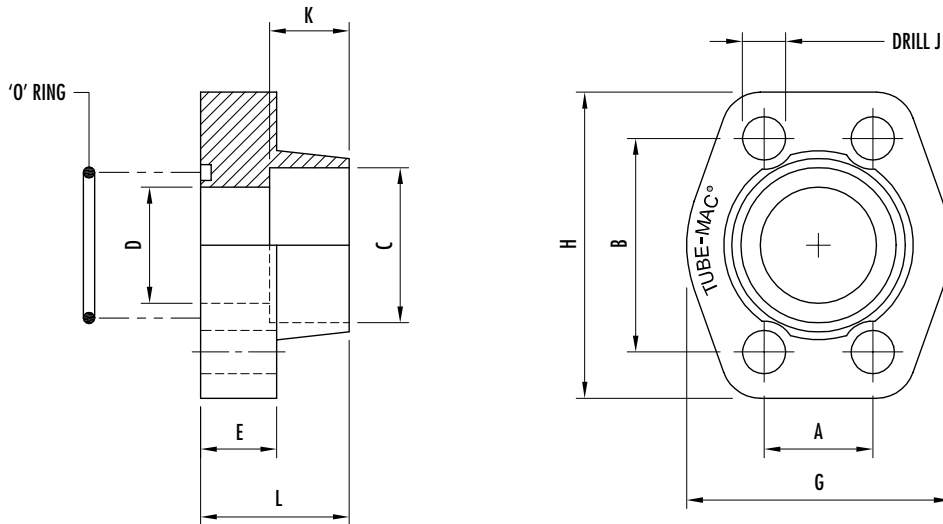
Nominal Size	Assembly Part No.	WT. lbs/pc	Working Pressure PSI (bar)
2 1/2"	A/LBWAF-250	3.24	750 (52)
3"	A/LBWAF-300	5.27	750 (52)
4"	A/LBWAF-400	8.75	750 (52)
5"	A/LBWAF-500	11.97	750 (52)
6"	A/LBWAF-600	15.29	700 (48)
8"	A/LBWAF-800	29.80	600 (40)

MATERIAL: CARBON STEEL, (STAINLESS STEEL STANDARD-316 AVAILABLE)



Socket Weld Flanges

SAE Flanges - 'O' Ring Face



SWF034 Socket Weld Flange - SAE Code 61 'O' Ring Face With Clearance Holes for ANSI Pipe Complete With Buna 'O' Ring (Standard)

Size	Flange Part No.	Dimensions (in)									Drill Dia.(in) J	Bolt Min. Grade 5 UNC	'O' Ring (Buna) Part No.	WT. lbs/pc	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	C	D	E	G	H	K	L						
1/2"	SWF034-050-*	0.69	1.50	0.85	0.51	0.63	1.81	2.16	0.75	1.42	0.35	5/16"	OR*-2-210	0.59	5000 (350)	15-18
3/4"	SWF034-075-*	0.88	1.88	1.07	0.75	0.71	2.06	2.56	0.75	1.42	0.43	3/8"	OR*-2-214	0.82	5000 (350)	20-30
1"	SWF034-100-*	1.03	2.06	1.34	0.98	0.71	2.31	2.76	0.75	1.50	0.43	3/8"	OR*-2-219	0.99	5000 (350)	20-30
1 1/4"	SWF034-125-*	1.19	2.31	1.69	1.26	0.83	2.88	3.11	0.87	1.61	0.45	7/16"	OR*-2-222	1.48	4000 (275)	40-50
1 1/2"	SWF034-150-*	1.41	2.75	1.91	1.50	0.98	3.25	3.66	0.95	1.77	0.53	1/2"	OR*-2-225	2.29	3000 (210)	80-90
2"	SWF034-200-*	1.69	3.06	2.40	2.01	0.98	3.81	4.02	1.02	1.77	0.53	1/2"	OR*-2-228	2.60	3000 (210)	80-90
2 1/2"	SWF034-250-*	2.00	3.50	3.02	2.48	0.98	4.28	4.49	1.18	1.97	0.53	1/2"	OR*-2-232	3.37	2500 (170)	80-90
3"	SWF034-300-*	2.44	4.19	3.56	2.87	1.06	5.16	5.28	1.34	1.97	0.69	5/8"	OR*-2-237	4.69	2000 (140)	110-120
4"	SWF034-400-*	3.06	5.13	4.55	3.90	1.06	6.00	6.38	1.34	1.89	0.69	5/8"	OR*-2-245	5.70	500 (35)	110-120

SWF064 Socket Weld Flange - SAE Code 62 'O' Ring Face With Clearance Holes for ANSI Pipe Complete With Buna 'O' Ring (Standard)

Size	Flange Part No.	Dimensions (in)									Drill Dia.(in) J	Bolt Min. Grade 5 UNC	'O' Ring (Buna) Part No.	WT. lbs/pc	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	C	D	E	G	H	K	L						
1/2"	SWF064-050-*	0.72	1.59	0.85	0.51	0.63	1.88	2.22	0.75	1.42	0.35	5/16"	OR*-2-210	0.59	6000 (420)	15-18
3/4"	SWF064-075-*	0.94	2.00	1.07	0.75	0.83	2.38	2.81	0.87	1.38	0.43	3/8"	OR*-2-214	1.16	6000 (420)	20-30
1"	SWF064-100-*	1.09	2.25	1.34	0.98	0.98	2.75	3.19	0.87	1.65	0.51	7/16"	OR*-2-219	1.73	6000 (420)	40-50
1 1/4"	SWF064-125-*	1.25	2.63	1.69	1.26	1.06	3.06	3.75	0.98	1.77	0.53	1/2"	OR*-2-222	2.61	6000 (420)	80-90
1 1/2"	SWF064-150-*	1.44	3.13	1.91	1.50	1.18	3.75	4.44	1.10	1.97	0.67	5/8"	OR*-2-225	3.92	6000 (420)	110-120
2"	SWF064-200-*	1.75	3.81	2.40	2.01	1.46	4.50	5.25	0.95	2.56	0.83	3/4"	OR*-2-228	7.23	6000 (420)	110-120

* INSERT ' V ' TO INDICATE OPTIONAL VITON 'O' RING

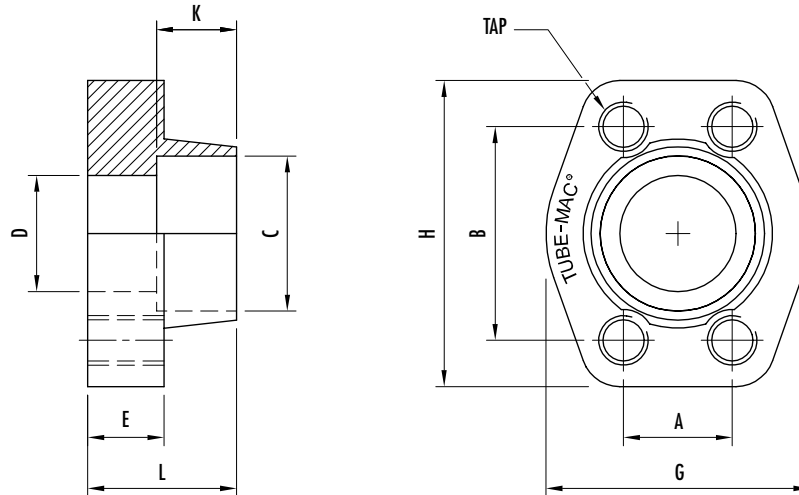
• FOR BOLT KIT - REFERENCE SECTION R

MATERIAL: CARBON STEEL, (STAINLESS STEEL AVAILABLE)



Socket Weld Flanges

SAE Flanges - Flat Face



SWFF34 Socket Weld Flange - SAE Code 61 Flat Face With UNC Tapped Holes for ANSI Pipe

Size	Flange Part No.	Dimensions (in)									Tap UNC-2B	WT. lbs/pc	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	C	D	E	G	H	K	L				
1/2"	SWFF34-050	0.69	1.50	0.85	0.51	0.63	1.81	2.16	0.75	1.42	5/16"-18	0.59	5000 (350)	15-18
3/4"	SWFF34-075	0.88	1.88	1.07	0.75	0.71	2.06	2.56	0.75	1.42	3/8"-16	0.90	5000 (350)	20-30
1"	SWFF34-100	1.03	2.06	1.34	0.98	0.71	2.31	2.76	0.75	1.50	3/8"-16	1.07	5000 (350)	20-30
1 1/4"	SWFF34-125	1.19	2.31	1.69	1.26	0.83	2.88	3.11	0.87	1.61	7/16"-14	1.58	4000 (275)	40-50
1 1/2"	SWFF34-150	1.41	2.75	1.91	1.50	0.98	3.25	3.66	0.95	1.77	1/2"-13	2.35	3000 (210)	80-90
2"	SWFF34-200	1.69	3.06	2.40	2.01	0.98	3.81	4.02	1.02	1.77	1/2"-13	3.47	3000 (210)	80-90
2 1/2"	SWFF34-250	2.00	3.50	3.02	2.48	0.98	4.28	4.49	1.18	1.97	1/2"-13	3.49	2500 (175)	80-90
3"	SWFF34-300	2.44	4.19	3.56	2.87	1.06	5.16	5.28	1.34	1.97	5/8"-11	4.76	2000 (140)	110-120
4"	SWFF34-400	3.06	5.13	4.55	3.90	1.06	6.00	6.38	1.34	1.89	5/8"-11	5.94	500 (35)	110-120

SWFF64 Socket Weld Flange - SAE Code 62 Flat Face With UNC Tapped Holes for ANSI Pipe

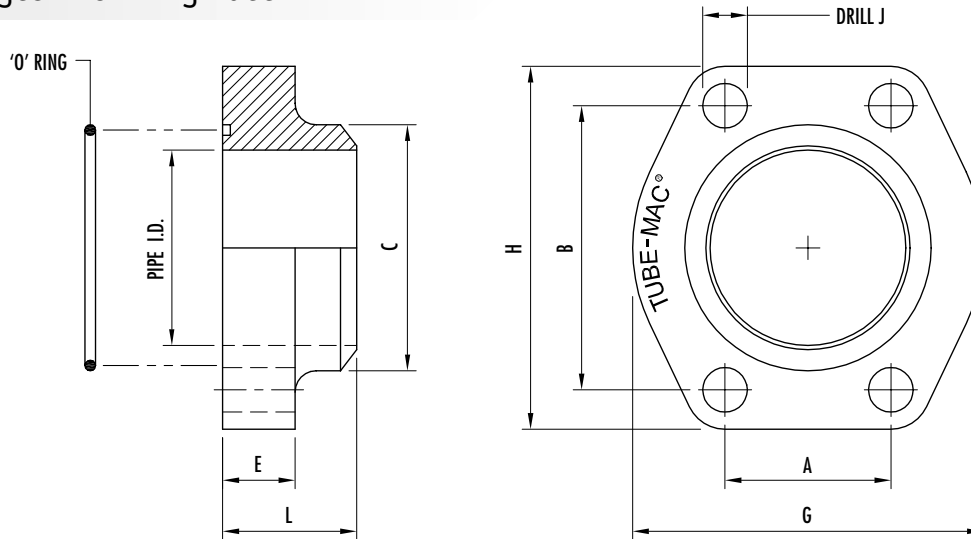
Size	Flange Part No.	Dimensions (in)									Tap UNC-2B	WT. lbs/pc	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	C	D	E	G	H	K	L				
1/2"	SWFF64-050	0.72	1.59	0.85	0.51	0.63	1.88	2.22	0.75	1.42	5/16"-18	0.59	6000 (420)	15-18
3/4"	SWFF64-075	0.94	2.00	1.07	0.75	0.83	2.38	2.81	0.87	1.38	3/8"-16	1.23	6000 (420)	20-30
1"	SWFF64-100	1.09	2.25	1.34	0.98	0.98	2.75	3.19	0.87	1.65	7/16"-14	1.83	6000 (420)	40-50
1 1/4"	SWFF64-125	1.25	2.63	1.69	1.26	1.06	3.06	3.75	0.98	1.77	1/2"-13	2.70	6000 (420)	80-90
1 1/2"	SWFF64-150	1.44	3.13	1.91	1.50	1.18	3.75	4.44	1.10	1.97	5/8"-11	4.25	6000 (420)	110-120
2"	SWFF64-200	1.75	3.81	2.40	2.01	1.46	4.50	5.25	0.95	2.56	3/4"-10	7.49	6000 (420)	120-130

MATERIAL: CARBON STEEL, (STAINLESS STEEL AVAILABLE)



Butt Weld Flanges

SAE Flanges - 'O' Ring Face



BWF034 Butt Weld Flange - SAE Code 61 'O' Ring Face With Clearance Holes Complete With Buna 'O' Ring (Standard)

Size	Flange Part No.	Dimensions (in)							Drill Dia.(in) J	Bolt Minimum Grade 5	'O' Ring (Buna) Part No.	WT. lbs/pc	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	C	E	L	G	H						
1/2"	BWF034-**-050-*	0.69	1.50	0.85	0.63	1.42	1.81	2.16	0.35	5/16" UNC	OR*-2-210	0.62	5000 (350)	15-18
3/4"	BWF034-**-075-*	0.88	1.88	1.10	0.71	1.42	2.06	2.56	0.43	3/8" UNC	OR*-2-214	0.86	5000 (350)	20-30
1"	BWF034-**-100-*	1.03	2.06	1.34	0.71	1.50	2.31	2.76	0.43	3/8" UNC	OR*-2-219	1.01	5000 (350)	20-30
1 1/4"	BWF034-**-125-*	1.19	2.31	1.69	0.83	1.61	2.88	3.11	0.45	7/16" UNC	OR*-2-222	1.46	4000 (275)	40-50
1 1/2"	BWF034-**-150-*	1.41	2.75	1.91	0.98	1.73	3.25	3.66	0.53	1/2" UNC	OR*-2-225	2.31	3000 (210)	80-90
2"	BWF034-**-200-*	1.69	3.06	2.40	0.98	1.77	3.81	4.02	0.53	1/2" UNC	OR*-2-228	2.62	3000 (210)	80-90
2 1/2"	BWF034-**-250-*	2.00	3.50	3.03	0.98	1.97	4.28	4.49	0.53	1/2" UNC	OR*-2-232	3.09	2500 (175)	80-90
3"	BWF034-**-300-*	2.44	4.19	3.62	1.06	1.97	5.16	5.28	0.69	5/8" UNC	OR*-2-237	4.74	2000 (140)	110-120
4"	BWF034-**-400-*	3.06	5.13	4.55	1.06	1.89	6.00	6.38	0.69	5/8" UNC	OR*-2-245	6.28	500 (35)	110-120

** - INDICATE SCHEDULE REQUIRED - SCH40, SCH80, SCH160

* INSERT ' V ' TO INDICATE OPTIONAL VITON 'O' RING

BWF064 Butt Weld Flange - SAE Code 62 'O' Ring Face With Clearance Holes Complete With Buna 'O' Ring (Standard)

Size	Flange Part No.	Dimensions (in)							Drill Dia.(in) J	Bolt Minimum Grade 5	'O' Ring (Buna) Part No.	WT. lbs/pc	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	C	E	L	G	H						
1/2"	BWF064-**-050-*	0.72	1.59	0.85	0.63	1.42	1.88	2.22	0.35	5/16" UNC	OR*-2-210	0.64	6000 (420)	15-18
3/4"	BWF064-**-075-*	0.94	2.00	1.10	0.83	1.38	2.38	2.81	0.43	3/8" UNC	OR*-2-214	1.10	6000 (420)	20-30
1"	BWF064-**-100-*	1.09	2.25	1.34	0.83	1.61	2.75	3.19	0.51	7/16" UNC	OR*-2-219	1.68	6000 (420)	40-50
1 1/4"	BWF064-**-125-*	1.25	2.63	1.69	0.98	1.73	3.06	3.75	0.53	1/2" UNC	OR*-2-222	2.65	6000 (420)	80-90
1 1/2"	BWF064-**-150-*	1.44	3.13	1.91	1.18	2.17	3.75	4.44	0.67	5/8" UNC	OR*-2-225	3.64	6000 (420)	110-120
2"	BWF064-**-200-*	1.75	3.81	2.40	1.46	2.56	4.50	5.25	0.83	3/4" UNC	OR*-2-228	5.40	6000 (420)	120-130

** - INDICATE SCHEDULE REQUIRED - SCH80, SCH160, SCHXXS

* INSERT ' V ' TO INDICATE OPTIONAL VITON 'O' RING

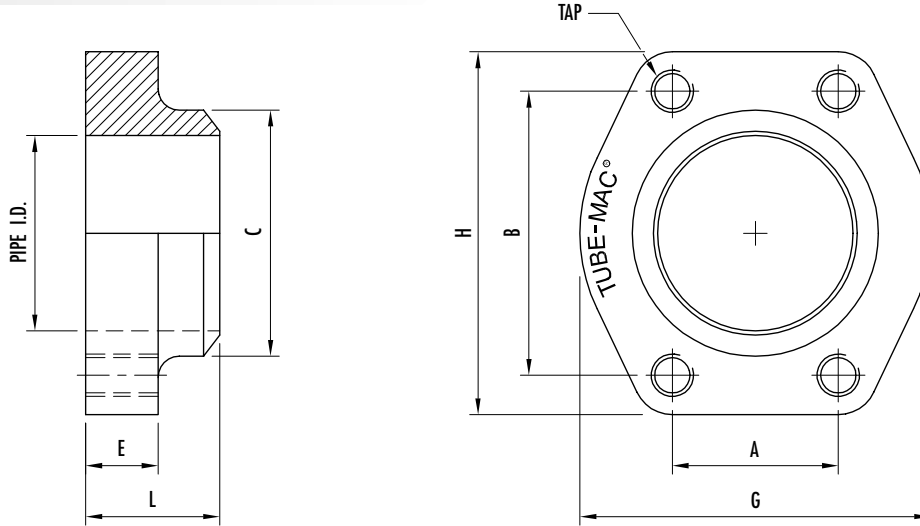
• FOR BOLT KIT - REFERENCE SECTION R

MATERIAL: CARBON STEEL, (STAINLESS STEEL AVAILABLE)



Butt Weld Flanges

SAE Flanges - Flat Face



BWFF34 Butt Weld Flange - SAE Code 61 Flat Face With UNC Tapped Holes

Size	Flange Part No.	Dimensions (in)							Tap UNC-2B	WT. lbs/pc	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	C	E	L	G	H				
1/2"	BWFF34-**-050	0.69	1.50	0.85	0.63	1.42	1.81	2.16	5/16"-18	0.55	5000 (350)	15-18
3/4"	BWFF34-**-075	0.88	1.88	1.10	0.71	1.42	2.06	2.56	3/8"-16	0.86	5000 (350)	20-30
1"	BWFF34-**-100	1.03	2.06	1.34	0.71	1.50	2.31	2.76	3/8"-16	1.01	5000 (350)	20-30
1 1/4"	BWFF34-**-125	1.19	2.31	1.69	0.83	1.61	2.88	3.11	7/16"-14	1.46	4000 (275)	40-50
1 1/2"	BWFF34-**-150	1.41	2.75	1.91	0.98	1.73	3.25	3.66	1/2"-13	2.31	3000 (210)	80-90
2"	BWFF34-**-200	1.69	3.06	2.40	0.98	1.77	3.81	4.02	1/2"-13	2.62	3000 (210)	80-90
2 1/2"	BWFF34-**-250	2.00	3.50	3.03	0.98	1.97	4.28	4.49	1/2"-13	3.09	2500 (175)	80-90
3"	BWFF34-**-300	2.44	4.19	3.62	1.06	1.97	5.16	5.28	5/8"-11	4.74	2000 (140)	110-120
4"	BWFF34-**-400	3.06	5.13	4.55	1.06	1.89	6.00	6.38	5/8"-11	6.28	500 (35)	110-120

** - INDICATE SCHEDULE REQUIRED - SCH40, SCH80, SCH160

* INSERT ' V ' TO INDICATE OPTIONAL VITON 'O' RING

BWFF64 Butt Weld Flange - SAE Code 62 Flat Face With UNC Tapped Holes

Size	Flange Part No.	Dimensions (in)							Tap UNC-2B	WT. lbs/pc	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	C	E	L	G	H				
1/2"	BWFF64-**-050	0.72	1.59	0.85	0.63	1.42	1.88	2.22	5/16"-18	0.57	6000 (420)	15-18
3/4"	BWFF64-**-075	0.94	2.00	1.10	0.83	1.38	2.38	2.81	3/8"-16	1.10	6000 (420)	20-30
1"	BWFF64-**-100	1.09	2.25	1.34	0.83	1.61	2.75	3.19	7/16"-14	1.68	6000 (420)	40-50
1 1/4"	BWFF64-**-125	1.25	2.63	1.69	0.98	1.73	3.06	3.75	1/2"-13	2.65	6000 (420)	80-90
1 1/2"	BWFF64-**-150	1.44	3.13	1.91	1.18	2.17	3.75	4.44	5/8"-11	3.64	6000 (420)	110-120
2"	BWFF64-**-200	1.75	3.81	2.40	1.46	2.56	4.50	5.25	3/4"-10	5.40	6000 (420)	120-130

** - INDICATE SCHEDULE REQUIRED - SCH80, SCH160, SCHXXS

MATERIAL: CARBON STEEL, (STAINLESS STEEL AVAILABLE)



