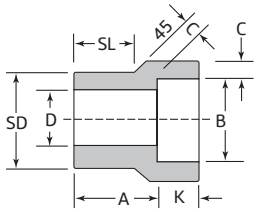
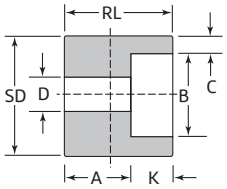
Fig. 2159 Type 1 – Reducer Insert
Fig. 2179 Type 2 – Reducer Insert



Type 1 – Reducer Insert
Fig. 2159



Type 2 – Reducer Insert
Fig. 2179

Class 3000

For use with Schedule 40 and 80 Pipe

Reducer inserts comply with MSS standard SP-79. They enable standard socket-weld fittings to be used for making any combination of pipe line reductions quickly and economically. Socket-weld reducer inserts serve SD D the same purpose as threaded reducing bushings with threaded fittings.

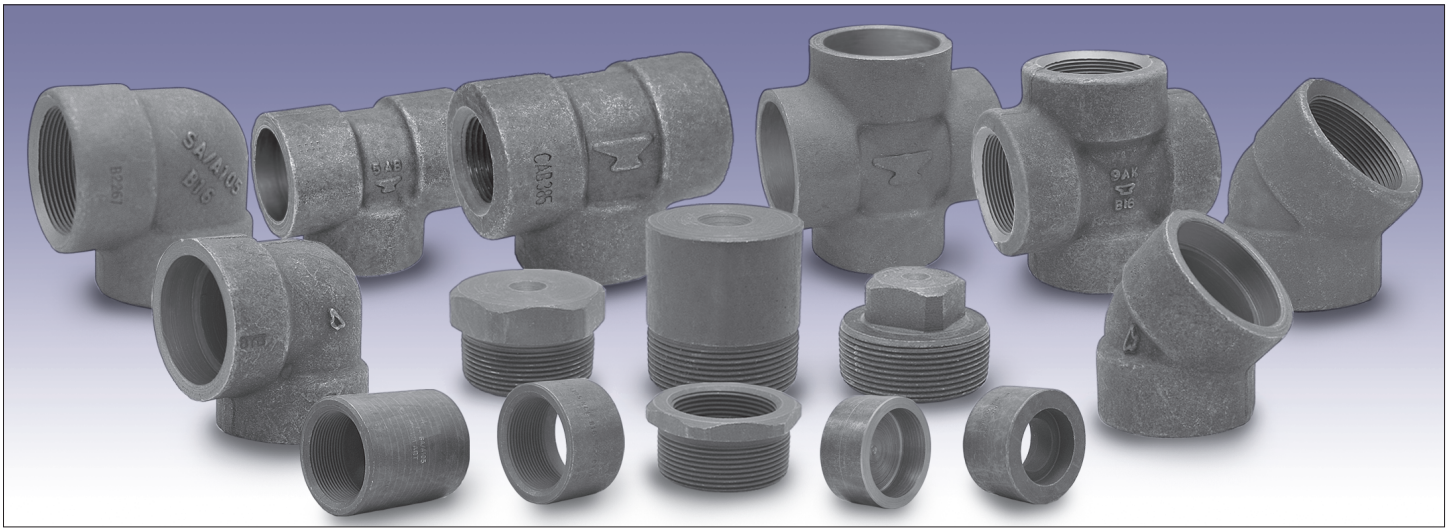
Size — **Class 3000 –** For use with Schedule 40 and 80 Pipe

SD		B		Type	A		D		C Min.		K		SL		RL Min.		Unit Weight	
NPS	DN	NPS	DN		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
½	15	¼	8	1	0.81	20.57	0.364	9.25	0.149	3.78	0.438	11.11	0.62	15.75	–	–	0.18	0.08
		⅜	10	1	0.81	20.57	0.493	12.52	0.158	4.00	0.438	11.11	0.62	15.75	–	–		
¾	20	¼	8	2	0.69	17.53	0.364	9.25	0.149	3.78	0.375	9.53	–	–	1.06	27	0.25	0.11
		⅜	10	2	0.62	15.75	0.493	12.52	0.158	4.00	0.438	11.11	–	–	1.06	27		
		½	15	1	0.88	22.35	0.622	15.80	0.184	4.67	0.438	11.11	0.69	17.53	–	–		
1	25	¼	8	2	0.75	19.05	0.364	9.25	0.149	3.78	0.375	9.53	–	–	1.12	28	0.35	0.16
		⅜	10	2	0.69	17.53	0.493	12.52	0.158	4.00	0.438	11.11	–	–	1.12	28		
		½	15	2	0.62	15.75	0.622	15.80	0.184	4.67	0.438	11.13	–	–	1.12	28		
		¾	20	1	0.94	23.88	0.824	20.93	0.193	4.90	0.563	14.29	0.75	19.05	–	–		
1¼	32	¼	8	2	0.88	22.35	0.364	9.25	0.149	3.78	0.375	9.53	–	–	1.25	32	0.35	0.25
		⅜	10	2	0.81	20.57	0.493	12.52	0.158	4.00	0.438	11.11	–	–	1.25	32		
		½	15	2	0.75	19.05	0.622	15.80	0.184	4.67	0.438	11.13	–	–	1.25	32		
		¾	20	2	0.69	17.53	0.824	20.93	0.193	4.90	0.563	14.29	–	–	1.25	32		
		1	25	1	1.00	25.40	1.049	26.65	0.224	5.69	0.563	14.29	0.81	20.57	–	–		
1½	40	⅜	10	2	0.88	22.35	0.493	12.52	0.158	4.00	0.438	11.11	–	–	1.31	33	0.62	0.28
		½	15	2	0.81	20.57	0.622	15.80	0.184	4.67	0.438	11.13	–	–	1.31	33		
		¾	20	2	0.75	19.05	0.824	20.93	0.193	4.90	0.563	14.29	–	–	1.31	33		
		1	25	2	0.69	17.53	1.049	26.65	0.224	5.69	0.500	12.70	–	–	1.31	33		
		1¼	32	1	1.12	28.45	1.380	35.05	0.239	6.00	0.563	14.29	0.88	22.35	–	–		
2	50	½	15	2	1.00	25.40	0.622	15.80	0.184	4.67	0.438	11.13	–	–	1.50	38	1.50	0.68
		¾	20	2	0.94	23.88	0.824	20.93	0.193	4.90	0.563	14.29	–	–	1.50	38		
		1	25	2	0.88	22.35	1.049	26.65	0.224	5.69	0.563	14.30	–	–	1.50	38		
		1¼	32	2	0.81	20.57	1.380	35.05	0.239	6.00	0.563	14.30	–	–	1.50	38		
		1½	40	1	1.25	31.75	1.610	40.64	0.250	6.35	0.563	14.29	1.00	25.40	–	–		
2½	65	¾	20	–	1.56	39.62	0.824	20.93	0.193	4.90	0.562	14.27	–	–	2.12	54	3.00	1.36
		1	25	–	1.50	38.10	1.049	26.65	0.224	5.69	0.562	14.27	–	–	2.12	54		
		1¼	32	–	1.44	36.58	1.380	35.05	0.239	6.00	0.562	14.27	–	–	2.12	54		
		1½	40	–	1.38	35.05	1.610	40.64	0.250	6.35	0.562	14.27	–	–	2.12	54		
		2	50	–	1.81	46.00	2.067	52.50	0.273	6.93	0.688	17.48	1.50	38.10	–	–		
3	80	1	25	–	1.25	31.75	1.049	26.65	0.224	5.69	0.562	14.27	–	–	1.87	47	4.40	2.00
		1¼	32	–	1.19	30.23	1.380	35.05	0.239	6.00	0.562	14.27	–	–	1.87	47		
		1½	40	–	1.12	28.45	1.610	40.64	0.250	6.35	0.562	14.27	–	–	1.87	47		
		2	50	–	1.00	25.40	2.067	52.50	0.273	6.93	0.688	17.48	–	–	1.87	47		
		2½	65	–	1.50	38.10	2.469	62.71	0.345	8.76	0.688	17.48	1.25	31.75	–	–		

Note: The larger size NPS is the insert size.
To minimize the possibility of cracking of the fillet welds, it is recommended that the shank portion of the reducer be withdrawn approximately .0625 in. (1.6 mm) away from the contact with the bottom of the socket before starting the weld. Likewise, the pipe is to be kept away from contacting the bottom of the reducer socket before welding.

PROJECT INFORMATION	APPROVAL STAMP
Project:	Approved
Address:	Approved as noted
Contractor:	Not approved
Engineer:	Remarks:
Submittal Date:	
Notes 1:	
Notes 2:	

Fig. 2159 Type 1 – Reducer Insert
Fig. 2179 Type 2 – Reducer Insert



Materials
The steel for Anvil Forged Carbon Steel Fittings consists of forging, bars, seamless pipe or tubes which conform to the requirements for melting process, chemical composition and mechanical properties of ASTM A105.

Design Basis
ASME B16.11 – Forged fittings, socket-weld and threaded

Dimensions
ASME B16.11, unless otherwise noted

Threads
ASME B1.20.1 NPT Threads

Forged Steel Fittings
In accordance with ASME standard B16.11 – "Forged Fittings, Socket-Welding and Threaded" this table shows the schedule of pipe corresponding to each class of fitting for rating purposes.

Pressure Ratings

Class	Schedule	
	N.P.T.	S.W.
2000	80	–
3000	160	80
6000	XXS/XXH	160

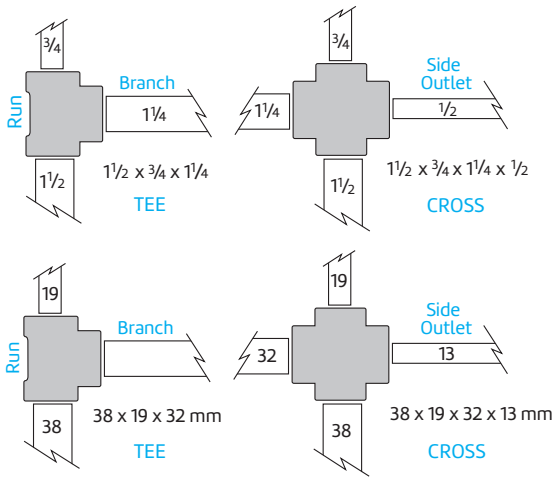
ASME B16.11 provides that the maximum allowable pressure of a fitting be computed in accordance with the applicable piping code or regulation for straight seamless pipe or for material of equivalent composition and mechanical properties to the fitting. Any corrosion or mechanical allowances and any reduction in allowable stress due to temperature or other service conditions must be applied to the pipe and fitting alike.

Standards and Specifications

	Dimensions	Material	Thread	Pressure Rating
Forged Steel Threaded Fittings				
Class 2000, 3000, 6000	ASME B16.11	ASTM A105, ASTM A182, ASTM A350	ASME B1.20.1	ASME B16.11

Reducing Fittings
Reducing elbows, tees and crosses are available in both threaded and socket-welding.

On reducing tees and crosses give the size of the largest run opening; then give the opposite opening. On a tee give the branch size last. On a cross give the largest side outlet third and the opposite opening last.



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