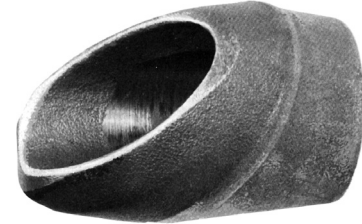
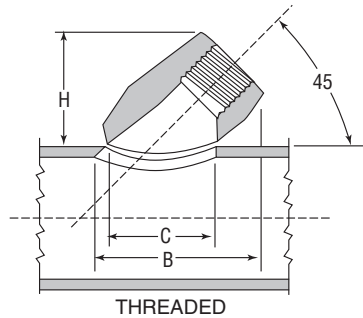
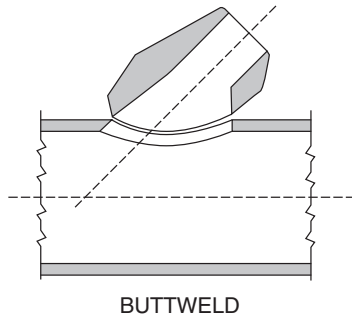


## Class 3000 Butt weld and Threaded Fig. Lateral Anvilets

Lateral Anvilets provide a strong, readily attached 45° lateral outlet connection.



### Class 3000 Standard / XS Butt weld

Outlet Size		Nominal Run Pipe Size		H		B		C		Unit Weight	
NPS	DN	NPS	DN	in	mm	in	mm	in	mm	lbs	kg
1/2	15	2 1/2 - 1 1/4 / 12 - 3	65 - 32 / 300 - 80	1 1/8	35	2 5/32	55	1 1/16	37	0.65	0.29
3/4	20	1 1/2 - 1 1/4 / 5 - 2 / 12 - 6	40 - 32 / 125 - 50 / 300 - 150	1 1/16	43	2 7/32	64	1 3/4	44	0.75	0.34
1	25	2 1/2 - 2 / 5 - 3 / 12 - 6	65 - 50 / 125 - 80 / 300 - 150	1 3/32	50	3	76	2 1/8	54	1.10	0.52
1 1/4	32	2 1/2 - 2 / 5 - 3 / 12 - 6	65 - 50 / 125 - 80 / 300 - 150	2 9/32	58	3 9/32	91	2 5/8	67	1.90	0.86
1 1/2	40	2 1/2 - 2 / 5 - 3 / 12 - 6	65 - 50 / 125 - 80 / 300 - 150	2 5/32	63	3 3/32	101	3 1/32	77	2.60	1.20
2	50	5 - 4 / 8 - 6 / 12 - 10	125 - 100 / 200 - 150 / 300 - 150	3 3/16	81	5 1/4	133	4 1/8	105	5.30	2.40

### Class 3000 Threaded / Standard

Outlet Size		Nominal Run Pipe Size		H		B		C		Unit Weight	
NPS	DN	NPS	DN	in	mm	in	mm	in	mm	lbs	kg
1/2	15	2 1/2 - 1 1/4 / 12 - 3	65 - 32 / 300 - 80	1 9/16	40	2 11/32	60	1 1/16	37	0.65	0.29
3/4	20	1 1/2 - 1 1/4 / 5 - 2 / 12 - 6	40 - 32 / 125 - 50 / 300 - 150	1 7/8	48	2 3/4	70	1 3/4	44	0.75	0.34
1	25	2 1/2 - 2 / 5 - 3 / 12 - 6	65 - 50 / 125 - 80 / 300 - 150	2 3/16	56	3 1/4	83	2 1/8	54	1.10	0.52
1 1/4	32	2 1/2 - 2 / 5 - 3 / 12 - 6	65 - 50 / 125 - 80 / 300 - 150	2 1/2	64	3 27/32	98	2 5/8	67	1.90	0.86
1 1/2	40	2 1/2 - 2 / 5 - 3 / 12 - 6	65 - 50 / 125 - 80 / 300 - 150	2 3/4	70	4 7/32	107	3 1/32	77	2.60	1.20
2	50	5 - 4 / 8 - 6 / 12 - 10	125 - 100 / 200 - 150 / 300 - 150	3 3/8	86	5 7/16	138	4 1/8	105	5.30	2.40

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

## Class 3000 Buttweld and Threaded Fig. Lateral Anvilets

Anvil Anvilets provide a strong branch pipe connection, considerably stronger than a welded pipe-to-pipe connection. Consequently, with good welding procedures, Anvil Anvilets offer greater resistance to distortion and bursting.

Anvil Anvilets readily and economically permit the adding of branch connectors to existing piping installations, eliminating the relatively higher cost of cutting or disassembly and re-assembly required for the installation of tees.

Anvil Anvilets of the same outlet size as a header or run pipe size (i.e. "Full Size" Anvilets) are so proportioned that the (elliptically shaped) hole in the header pipe has the minimum weakening or distortion effect, and yet provides good fluid flow characteristics.

### Specifications

Chemical and physical properties are rigidly controlled to ensure consistently high quality. Physical and chemical test reports are available on request. Traceability of individual Anvilets can be established through the heat code of each fitting.

Anvil Anvilets meet the requirements of MSS standard SP-97. They are forged from steel which complies with ASTM A105.

**Threaded Anvilets** – conform with ASME B1.20.1.

**Socket-Weld Anvilets** – dimensions conform with ASME B16.11.

**Buttweld Anvilets** – ends conform with ASME B16.25.

### Reinforcement Requirements

ASME B31.1 Power Piping Code

ASME B31.3 Refinery Code

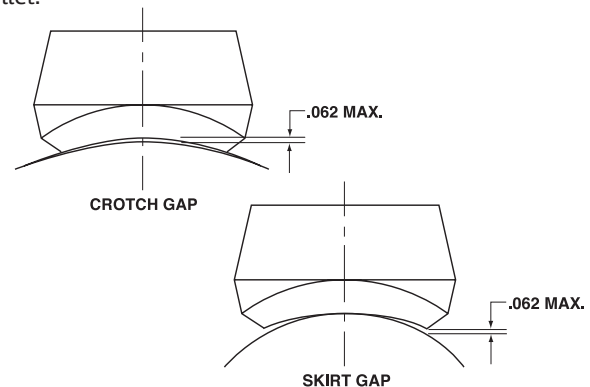
### Forging Markings

Anvil Anvilets are clearly marked with the following:

- Outlet size
- Range of run pipe sizes that the Anvilet will fit
- The weight, schedule number, or pressure class
- The material specification
- Steel heat code identification

### Installation Note

Anvil Anvilets are designed to have no more than a  $\frac{1}{16}$ " gap (1.6mm) between the base or skirt of the Anvilet when it is seated directly upon the appropriate run pipe. However, it is recommended that the skirt of Anvilets be held slightly above the run pipe and tack welded to provide a small continuous root gap between the skirt and run pipe before completing the all-around welding beads or fillet.



### Specials

Your local Anvil Branch will be more than happy to assist you with specially machined outlets and those made of alloy material.

### Pressure Temperature Ratings

MSS standard Practice SP-97 gives the following correlation between fitting pressure class and pipe schedule number/wall thickness designation for calculation of pressure-temperature ratings:

Branch Connection Type	Pressure Class of Fitting	Branch Connection Size		Pipe Wall for Rating Basis
		NPS	DN	
Buttweld	STD	1/8 - 24	6 - 600	STD
	XS/XH	1/8 - 24	6 - 600	XS/XH
	SCH 160	1/2 - 6	15 - 150	SCH 160
Threaded	3,000	1/4 - 4	8 - 100	XS/XH
	6,000	1/2 - 2	15 - 50	SCH 160
Socket-Welding	3,000	1/2 - 2	15 - 50	XS/XH
	6,000	1/2 - 2	15 - 50	SCH 160

The maximum allowable pressure of a fitting is computed in accordance with the applicable piping code or regulation for straight seamless header (run) 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.

## Class 3000 Buttweld and Threaded Fig. Lateral Anvilets

### Engineering Specifications

Universal Forged Steel Anvilets Run Size Combinations

		Outlet Size (in)											
		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	6
Buttweld Standard	1/4	1/4	1/2 - 3/8	1 - 1/2	2 - 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	6
	3/8	36 - 3/8	36 - 3/4	36 - 1 1/4	36 - 2 1/2	1 1/2 - 1 1/4	2 - 1 1/2	3 1/2 - 2	3 - 2 1/2	4 - 3	4 - 3 1/2	6 - 5	8
					36 - 2	6 - 2 1/2	36 - 4	6 - 3 1/2	10 - 5	6 - 5	10 - 8	10 - 8	10
						36 - 8		36 - 8	36 - 12	14 - 8	20 - 12	14 - 12	14 - 12
										36 - 16	36 - 22	18 - 16	24 - 20
													34 - 26
Buttweld Extra Strong	1/4	36 - 1/4	3/8	3/4 - 1/2	1 1/2 - 3/4	1	2 - 1 1/4	1 1/2	2	2 1/2	3	4	6
	3/8		36 - 1/2	36 - 1	36 - 2	1 1/2 - 1 1/4	5 - 2 1/2	3 1/2 - 2	3 - 2 1/2	4 - 3	4 - 3 1/2	6 - 5	8
					36 - 2	36 - 6	36 - 4	6 - 3 1/2	10 - 5	6 - 5	10 - 8	10 - 8	10
								36 - 8	36 - 12	14 - 8	20 - 12	14 - 12	14 - 12
										36 - 1	36 - 22	18 - 16	24 - 20
													34 - 26
Threaded Class 3000	1/4	3/8 - 1/4	1 - 3/8	1/2	1 1/4 - 3/4	1	1 1/2 - 1 1/4	1 1/2	2	2 1/2	3	4	4
	3/8	36 - 1/2	36 - 1 1/4	36 - 3/4	36 - 1 1/2	2 1/2 - 1 1/4	3 1/2 - 2	2 1/2 - 2	3 1/2 - 2 1/2	3 1/2 - 3	5 - 3 1/2	6 - 5	6 - 5
					36 - 3	36 - 4	5 - 3	6 - 4	6 - 4	14 - 6	10 - 8	10 - 8	10 - 8
							36 - 6	36 - 8	36 - 8	36 - 16	20 - 12	20 - 12	36 - 22
Threaded Class 6000	1/4	3/8 - 1/4	1 - 3/8	1/2	3/4	1	1 1/2 - 1 1/4	1 1/2	2	2 1/2	3	4	4
	3/8	36 - 1/2	36 - 1 1/4	36 - 3/4	1 1/4 - 1	2 1/2 - 1 1/4	3 1/2 - 2	2 1/2 - 2	3 1/2 - 2 1/2	3 1/2 - 3	3 1/2	5	5
				36 - 1 1/2	36 - 3	8 - 4	5 - 3	6 - 4	5 - 4	4	4	6	6
						36 - 10	36 - 6	36 - 8	10 - 6	6 - 5	10 - 8	10 - 8	10 - 8
									26 - 12	12 - 8	18 - 12	18 - 12	18 - 12
									36 - 28	36 - 14	36 - 20	36 - 20	36 - 20
Socket-Weld Class 3000	1/4	1/4	1/2 - 3/8	1/2	3/4	1	1 1/2 - 1 1/4	1 1/2	2	2 1/2	3	4	4
	3/8	36 - 3/8	36 - 3/4	36 - 3/4	36 - 1 1/2	2 1/2 - 1 1/4	3 1/2 - 2	2 1/2 - 2	3 1/2 - 2 1/2	3 1/2 - 3	5 - 3 1/2	6 - 5	6 - 5
					36 - 3	36 - 4	5 - 3	6 - 4	6 - 4	14 - 6	10 - 8	10 - 8	10 - 8
							36 - 6	36 - 8	36 - 8	36 - 16	20 - 12	20 - 12	36 - 22
Socket-Weld Class 6000	1/4	36 - 1/4	36 - 3/8	1/2	1 - 3/4	1	1 1/4	1 1/2	2	3 - 2 1/2	3 1/2 - 3	4	4
	3/8			36 - 3/4	36 - 1 1/4	2 1/2 - 1 1/4	4 - 1 1/2	2 1/2 - 2	3 1/2 - 2 1/2	5 - 3 1/2	5 - 4	5	5
					36 - 3	36 - 5	5 - 3	6 - 4	18 - 6	10 - 6	8 - 6	8 - 6	8 - 6
							36 - 6	36 - 8	36 - 20	26 - 12	14 - 10	14 - 10	14 - 10
										36 - 28	36 - 16	36 - 16	36 - 16