**Style:**

002-Short Pattern 90 Degree Elbow

003-45 Degree Elbow

004-Short Pattern Equal Tee

010-Short Pattern Equal Cross

011- Short Pattern Reducing Tee (Grooved Branch)

012-Short Pattern Reducing Tee (Threaded Branch)

Size: DN50-DN200(2''-8'')-Short Pattern**Max Work Pressure:** 2.5MPa(350psi)**Approvals:** FM,UL**Material Specifications****Fittings:**

Ductile iron conforming to ASTM A536, Grade 65-45-12, other material also available, please consult VISION.

Coating:

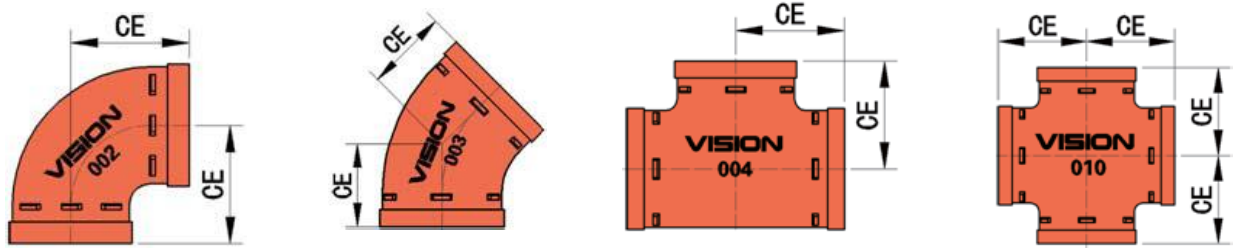
Orange-Standard

Red- Optional

Hot-Dipped, Zinc Galvanized-Optional

Short Pattern Grooved Fittings Style 002 004 010

VISION



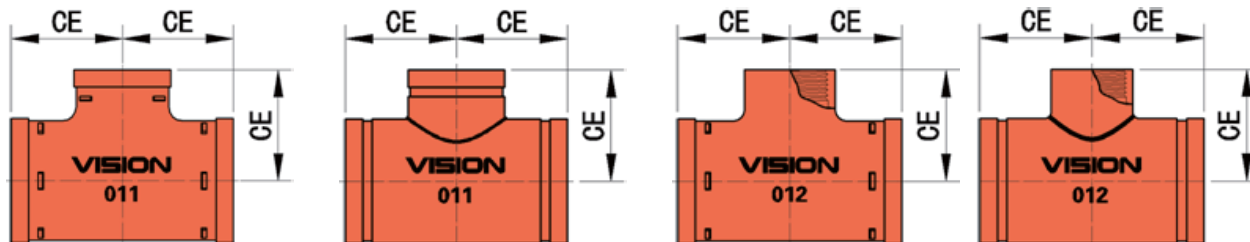
SIZE		002		003		004		010		005	
Nominal	Actual O.D.	CE	Approx Wgt.each	CE	Approx Wgt.each	CE	Approx Wgt.each	CE	Approx Wgt.each	CE	Approx. Weight
mm	mm	mm	kg	mm	kg	mm	kg	mm	kg	mm	kg
Inches	Inches	Inches	Lbs.ft	Inches	Lbs.ft	Inches	Lbs.ft	Inches	Lbs.ft	Inches	Lbs.ft
32*	42.4	70	0.5	44	0.3	70	0.7	70	0.9	23	0.1
1¼*	1.66	2.75	1.1	1.75	0.7	2.75	1.5	2.75	2.0	0.90	0.2
40*	48.3	70	0.6	44	0.4	70	0.8	70	1.1	23	0.2
1½*	1.9	2.75	1.3	1.75	0.9	2.75	1.8	2.75	2.4	0.90	0.4
50	60.3	70	0.7	51	0.6	70	1.0	70	1.3	25	0.2
2	2.375	2.75	1.5	2.00	1.3	2.75	2.2	2.75	2.9	1.00	0.4
65	73.0	76	1.1	57	0.9	76	1.5	76	1.9	25	0.3
2½	2.875	3.00	2.4	2.25	2.0	3.00	3.3	3.00	4.2	1.00	0.7
65	76.1	76	1.1	57	0.9	76	1.5	76	2.0	25	0.3
3OD	3.000	3.00	2.4	2.25	2.0	3.00	3.3	3.00	4.4	1.00	0.7
80	88.9	86	1.3	64	1.0	86	1.8	86	2.4	25	0.4
3	3.500	3.38	2.9	2.75	2.2	3.38	4.0	3.38	5.3	1.00	0.9
100	114.3	102	2.4	76	1.7	102	3.2	102	3.7	25	0.5
4	4.500	4.00	5.3	3.00	3.7	4.00	7.1	4.00	8.2	1.00	1.1
125	139.7	124	3.6	83	2.6	124	4.8	124	5.6	25	0.9
5½OD	5.500	4.88	7.9	3.25	5.7	4.88	10.6	4.88	12.3	1.00	2.0
125	141.3	124	3.6	83	2.6	124	4.8	124	5.6	25	0.9
5	5.563	4.88	7.9	3.25	5.7	4.88	10.6	4.88	12.3	1.00	2.0
150	165.1	140	5.2	89	3.9	140	7.0	140	8.1	25	1.4
6½OD	6.500	5.50	11.5	3.50	8.6	5.50	15.4	5.50	17.9	1.00	3.1
150	168.3	140	5.3	89	4.0	140	7.2	140	8.2	25	1.4
6	6.625	5.50	11.7	3.50	8.8	5.50	15.9	5.50	18.1	1.00	3.1
200A	216.3	173	9.0	108	7.1	173	12.8	173	17.0	31	3.7
8	8.500	6.81	19.8	4.25	15.7	6.81	28.2	6.81	37.5	1.22	8.2
200	219.1	173	9.1	108	7.2	173	13.6	173	17.2	31	3.8
8	8.625	6.81	20.1	4.25	15.9	6.81	30.0	6.81	37.9	1.22	8.4
250*	273.0	229	20.0	121	14.3	229	28.0	229	52.5	31	6.4
10*	10.750	9.00	44.1	4.75	31.5	9.00	58.6	9.00	115.7	1.22	14.1
300*	323.9	254	29.0	133	22.0	254	40.0	254	77.0	31	9
12*	12.750	10.00	63.9	5.25	48.5	10.00	85.0	10	169.8	1.22	19.8

- The max. pipe end separation and deflection is for cut grooved standard weight pipe. Values for roll grooved pipe will be half of the cut grooved.
- Working Pressure and end load are total, from internal and external loads based on standard weight steel pipe.



Short Pattern Grooved Fittings Style 011 012

VISION



Actual O.D.			011		012	
			CE	Approx Wgt.eac h	CE	Approx Wgt.eac h
mm		mm	mm	kg	mm	kg
Inches		Inches	Inches	Lbs.ft	Inches	Lbs.ft
42.4	×	26.7	70	0.7	70	0.7
1½		¾	2.75	1.5	2.75	1.5
		33.4	70	0.7	70	0.8
		1	2.75	1.5	2.75	1.8
48.3	×	26.7	70	0.8	70	0.7
1½		¾	2.75	1.8	2.75	1.5
		33.4	70	0.8	70	0.8
		1	2.75	1.8	2.75	1.8
		42.4	70	0.8	70	0.9
		1¼	2.75	1.8	2.75	2
60.3	×	33.4	76 ^{SW}	1.0	70	0.8
2		1	3.00	2.2	2.75	1.8
		42.4	70	0.8	70	0.9
		1¼	2.75	1.8	2.75	2.0
		48.3	70	0.9	70	1.0
		1½	2.75	2.0	2.75	2.2
73.0	×	33.4	76 ^{SW}	1.5	76	1.2
2½		1	3.00	3.3	3.00	2.6
		42.4	76	1.2	76	1.3
		1¼	3.00	2.6	3.00	2.9
		48.3	76	1.3	76	1.4
		1½	3.00	2.9	3.00	3.1
		60.3	76	1.4	76	1.5
		2	3.00	3.1	3.00	3.3
76.1	×	33.4	76 ^{SW}	1.5	76	1.2
3OD		1	3.00	3.3	3.00	2.6
		42.4	76	1.2	76	1.3
		1¼	3.00	2.6	3.00	2.9
		48.3	76	1.3	76	1.4
		1½	3.00	2.9	3.00	3.1
		60.3	76	1.4	76	1.5
		2	3.00	3.1	3.00	3.3
88.9	×	33.4	86 ^{SW}	2.1	86	1.5
3		1	3.38	4.6	3.38	3.3
		42.4	86	1.6	86	1.5
		1¼	3.38	3.5	3.38	3.3
		48.3	86	1.6	86	1.7
		1½	3.38	3.5	3.38	3.7
		60.3	86	1.8	86	1.7
		2	3.38	4.0	3.38	3.7
		73.0	86	1.8	86 ^{SW}	1.8
		2½	3.38	4.0	3.38	4.0
		76.1	86	1.8	86	1.8
		3OD	3.38	4.0	3.38	4.0
114.3	×	33.4	102 ^{SW}	3.5	102	3.4
4		1	4.00	7.7	4.00	7.5
		42.4	102	3.0	102	3.4
		1¼	4.00	6.6	4.00	7.5
		48.3	102	3.0	102	3.4
		1½	4.00	6.6	4.00	7.5

Actual O.D.			011		012	
			CE	Approx Wgt.eac h	CE	Approx Wgt.eac h
mm		mm	mm	kg	mm	kg
Inches		Inches	Inches	Lbs.ft	Inches	Lbs.ft
114.3	×	60.3	102	3.2	102	3.3
4		2	4.00	7.1	4.00	7.3
		73.0	102	3.2	102	3.3
		2½	4.00	7.1	4.00	7.3
		76.1	102	3.2	102	3.3
		3OD	4.00	7.1	4.00	7.3
		88.9	102	3.0	102	3.2
		3	4.00	6.6	4.00	7.1
139.7	×	33.4	124 ^{SW}	5.4	124 ^{SW}	5.6
5½OD		1	4.88	11.9	4.88	12.3
		42.4	124 ^{SW}	5.6	124 ^{SW}	5.8
		1¼	4.88	12.3	4.88	12.8
		48.3	124 ^{SW}	5.8	124 ^{SW}	6.0
		1½	4.88	12.8	4.88	13.2
		60.3	124 ^{SW}	6.0	124 ^{SW}	6.4
		2	4.88	13.2	4.88	14.1
		76.1	124 ^{SW}	6.3	124 ^{SW}	6.4
		3OD	4.88	13.9	4.88	14.1
		88.9	124 ^{SW}	6.4	124 ^{SW}	6.8
		3	4.88	14.1	4.88	15.0
		114.3	124	5.4	-	-
		4	4.88	11.9	-	-
141.3	×	33.4	124 ^{SW}	5.4	124 ^{SW}	5.6
5		1	4.88	11.9	4.88	12.3
		42.4	124 ^{SW}	5.6	124 ^{SW}	5.8
		1¼	4.88	12.3	4.88	12.8
		48.3	124 ^{SW}	5.8	124 ^{SW}	6.0
		1½	4.88	12.8	4.88	13.2
		60.3	124 ^{SW}	6.0	124 ^{SW}	6.3
		2	4.88	13.2	4.88	13.9
		73.0	124 ^{SW}	6.3	124 ^{SW}	6.4
		2½	4.88	13.9	4.88	14.1
		88.9	124 ^{SW}	6.4	124 ^{SW}	6.8
		3	4.88	14.1	4.88	15.0
		114.3	124	6.7	-	-
		4	4.88	14.8	-	-
165.1	×	33.4	○		140	7.2
6½OD		1	○		5.50	15.9
		42.4	○		140	7.2
		1¼	○		5.50	15.9
		48.3	○		140	7.2
		1½	○		5.50	15.9
		60.3	140 ^{SW}	9.0	140	7.2
		2	5.50	19.8	5.50	15.9
		76.1	140	6.8	140	7.5
		3OD	5.50	15.0	5.50	16.5
		88.9	140	6.8	140	7.6
		3	5.50	15.0	5.50	16.8
		114.3	140	6.8	-	-
		4	5.50	15.0	-	-
		139.7	140	7.4	-	-
		5½OD	5.50	16.3	-	-



Short Pattern Grooved Fittings Style 011 012

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Actual O.D.			011		012	
			CE	Approx Wgt.each	CE	Approx Wgt.each
mm		mm	mm	kg	mm	kg
Inches		Inches	Inches	Lbs.ft	Inches	Lbs.ft
168.3	×	33.4	140 ^{sw}	9.0	140 ^{sw}	9.0
6		1	5.50	19.8	5.50	19.8
		42.4	140 ^{sw}	9.0	140 ^{sw}	9.0
		1½	5.50	19.8	5.50	19.8
		48.3	140 ^{sw}	9.0	140 ^{sw}	9.0
		1½	5.50	19.8	5.50	19.8
		60.3	140 ^{sw}	9.0	140 ^{sw}	9.0
		2	5.50	19.8	5.50	19.8
168.3	×	73.0	140	7.3	140 ^{sw}	9.3
6		2½	5.50	16.1	5.50	20.5
		76.1	140	7.3	140 ^{sw}	9.3
		3OD	5.50	16.1	5.50	20.5
		88.9	140	7.3	140 ^{sw}	9.5
		3	5.50	16.1	5.50	20.9
		114.3	140	7.8	-	-
		4	5.50	17.2	-	-
		139.7	140 ^{sw}	9.7	-	-
		5½OD	5.50	21.4	-	-
		141.3	140 ^{sw}	9.7	-	-
		5	5.50	21.4	-	-
219.1	×	33.4	○		173 ^{sw}	17.5
8		1	○		6.81	38.6
		42.4	○		173 ^{sw}	17.5
		1½	○		6.81	38.6
		48.3	○		173 ^{sw}	17.5
		1½	○		6.81	38.6
		60.3	173 ^{sw}	17.5	173 ^{sw}	17.8
		2	6.81	38.6	6.81	19.0
		73.0	173 ^{sw}	17.5	173 ^{sw}	17.8
		2½	6.81	38.6	6.81	19.0
		76.1	173 ^{sw}	17.5	173 ^{sw}	17.8
		3OD	6.81	38.6	6.81	39.2
		88.9	173 ^{sw}	17.5	173 ^{sw}	18.5
		3	6.81	38.6	6.81	40.8
		114.3	173	13.0	-	-
		4	6.81	28.7	-	-
		139.7	173 ^{sw}	17.0	-	-
		5½OD	6.81	37.5	-	-
		141.3	173 ^{sw}	17.0	-	-
		5	6.81	37.5	-	-
		165.1	173	15.0	-	-
		6½OD	6.81	33.1	-	-
		168.3	173	15.0	-	-
		6	6.81	33.1	-	-

Actual O.D.			011		012	
			CE	Approx Wgt.eac h	CE	Approx Wgt.eac h
mm		mm	mm	kg	mm	kg
Inches		Inches	Inches	Lbs.ft	Inches	Lbs.ft
273	×	60.3	229	23.7	229	24.5
10		2	9	52.2	9	54
		73.0	229	23.9	229	24.8
		2½	9	52.7	9	54.7
		76.1	229	24	229	24.8
		3OD	9	52.9	9	54.7
		88.9	229	24.3	229	25.8
		3	9	53.6	9	56.9
		114.3	229	25	229	—
		4	9	55.1	9	—
		139.7	229	25.6	229	—
		5½OD	9	56.4	9	—
		141.3	229	25.6	229	—
		5	9	56.4	9	—
		165.1	229	27.5	229	—
		6½OD	9	60.6	9	—
		168.3	229	27.8	229	—
		6	9	61.3	9	—
		219.1	229	29	229	—
		8	9	63.9	9	—
323.9	×	60.3	254	35.2	254	36
12		2	10	77.6	10	79.4
		73.0	254	35.4	254	36.5
		2½	10	78	10	80.5
		76.1	254	35.4	254	36.5
		3OD	10	78	10	80.5
		88.9	254	35	254	36.5
		3	10	77.2	10	80.5
		114.3	254	35	254	—
		4	10	77.2	10	—
		139.7	254	35.3	254	—
		5½OD	10	77.8	10	—
		165.1	254	35.5	254	—
		6½OD	10	78.3	10	—
		168.3	254	35.5	254	—
		6	10	78.3	10	—
		219.1	254	37	254	—
		8	10	81.6	10	—
		273	254	38	254	—
		10	10	83.8	10	—

