



PIPING SYSTEM PTE LTD
PROFESSIONAL SUPPLIER OF PIPELINE MATERIALS AND EQUIPMENT

DRAWING NO.: ELBOW-DRAWING-AND-DATA-2026-02-25-16-53
DRAWING DATE: 25-Feb-2026

ELBOW DRAWING AND DIMENSIONS DATA

OR No.:	OR999999	DESCRIPTION:	ELBOW-4INCHES-90DEG-BEVELLED ENDS-SEAMLESS-SCH160(13.49MM)-CARBON STEEL-LONG RADIUS-GR WPB-ASTM A234-ASME
ITEM:	233		B16.9-NACE MR0175



ANSI ASME B16.9 / MSS SP-75 (in mm)

ITEM	NAME	TYPE	DEGREE	MATERIAL STANDARD	DN	OD INCH(ES)	ODMM	WALL THICKNESS	UNIT Volume (m³)	DIMENSIONS(MM)		
										L=A+½OD	W=A+½OD	H=OD
233	ELBOW	R=1.5D	90	ASTM A234/A234M GR WPB	100	4	114.3	13.49	0.00501905	209.55	209.55	114.3

MATERIAL STANDARD: ASTM A234/A234M GR WPB Chemical element composition content (%)

COMPONENT	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V
Max	—	—	0.29	—	—	—	—	—	—	—
Min	0.3	0.1	1.06	0.05	0.058	0.4	0.4	0.4	0.15	0.08

ASTM A234/A234M GR WPB Mechanical Properties

Condition	TENSILE STRENGTH σ_b Mpa	YIELD POINT σ_s Mpa	ELONGATION OR ELONGATION AT BREAK δ %
PIPE FITTINGS	≥415	≥240	Standard round specimen, or small specimen, or strip specimen long. : tr. : L0=4D: ≥22* L0=4D: ≥14* L0=50: ≥30© L0=50: ≥20



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