

Vermeer® - Compatible Rod Specifications

Rod Size	D6/D7x11	D10 x15	D16x20	24x26/D24a
Forged / Inertia Weld	Forged	Forged	Forged	Forged
Plain-End / Upset-End	N/A	N/A	N/A	N/A
Reference Tech. Spec.	API 5D/Spec. 7	API 5D/Spec. 7	API 5D/Spec. 7	API 5D/Spec. 7
Pipe Body O.D.	1.660" +/-0.031"	1.660" +/-0.031"	1.90" +/-0.031"	2.063" +/-0.031"
Wall Thickness	.228"/.240"	.240"	.240"	.270"
O.A.L (S/S)	72.0" +/-0.250"	120.0" +/-0.250"	120.0" +/-0.250"	120.0" +/-0.250"
Bend Radius	98.1'	98.1'	112.1'	121.9'
Steel Chemistry	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130
Type	Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.
Quench & Temper	S-135	S-135	S-135	S-135
Tensile Strength	145,000 Min.	145,000 Min.	145,000 Min.	145,000 Min.
Yield Strength	135 Min./165 Max.	135 Min./165 Max.	135 Min./165 Max.	135 Min./165 Max.
Charpy 10x5	22ft-lb Avg./19 Min.	22ft-lb Avg./19 Min.	22ft-lb Avg./19 Min.	22ft-lb Avg./19 Min.
Pipe & Upset Testing	Mag. Particle	Mag. Particle	Mag. Particle	Mag. Particle
Inertia Weld Testing	N/A	N/A	N/A	N/A
Tool Joints				
Tool Joint O.D.	1.880"	1.880"	2.125"	2.250"
Tool Joint I.D.	0.750"	0.750"	0.750"	0.875"
Steel Chemistry	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130
Heat Treat	S-135	S-135	S-135	S-135
Weight	21 Lbs.	35 Lbs.	49 Lbs.	56 Lbs.

Ditch Witch® - Compatible Rod Specifications

Rod Size	PT 1010	PT520	JT820/JT920	JT920L	JT1220
Forged / Inertia Weld	Inertia Welded	Forged, Inertia Welded	Inertia Welded	Inertia Welded	Forged, Inertia Welded
Plain-End / Upset-End	Plain-End	Forged Upset	Plain-End	Plain-End	Forged Upset
Reference Tech. Spec.	API 5D/Spec. 7	API 5D/Spec. 7	API 5D/Spec. 7	API 5D/Spec. 7	API 5D/Spec. 7
Pipe Body O.D.	1.660" +/-0.031"	1.315" +/-0.031"	1.660" +/-0.031"	1.660" +/-0.031"	1.900" +/-0.031"
Wall Thickness	.240"	.179"	.240"	.240"	.240"
O.A.L (S/S)	24.0" +/-0.250"	59.0" +/-0.250"	78.75" +/-0.250"	118.11" +/-0.250"	118.0" +/-0.250"
Bend Radius	98.1'	77.1'	98.1'	98.1'	112.3'
Steel Chemistry	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130	4128M
Type	Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.
Quench & Temper	P-110	P-110	P-110	P-110	S-135
Tensile Strength	130,000 Min.	130,000 Min.	130,000 Min.	130,000 Min.	145,000 Min.
Yield Strength	110 Min./135 Max.	110 Min./135 Max.	110 Min./135 Max.	110 Min./135 Max.	135 Min./165 Max.
Charpy 10x5	22 ft-lb Avg./19 Min.	22 ft-lb Avg./19 Min.	22 ft-lb Avg./19 Min.	22 ft-lb Avg./19 Min.	22 ft-lb Avg./19 Min.
Pipe & Upset Testing	Mag. Particle	Mag. Particle	Mag. Particle	Mag. Particle	Mag. Particle
Inertia Weld Testing	Wet Mag. Particle	Wet Mag. Particle	Wet Mag. Particle	Wet Mag. Particle	Wet Mag. Particle
Tool Joints					
Tool Joint O.D.	2.0"	1.750"	2.000"	2.000"	2.375"
Tool Joint I.D.	.375"	.3125"	0.375"	0.375"	0.500"
Steel Chemistry	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130
Heat Treat	P-110	P-110	P-110	P-110	S-135
Weight	12 Lbs.	17 Lbs.	29 Lbs.	39 Lbs.	56 Lbs.

Vermeer® - Compatible Rod Specifications

D24x40	D24x40 IW	D40x40	D50x100	D80x100
Forged	Forged, Inertia Welded	Forged	Forged	Forged, Inertia Welded
N/A	Forged Upset	N/A	N/A	Forged Upset
API 5D/Spec. 7	API 5D/Spec. 7	API 5D/Spec. 7	API 5D/Spec. 7	API 5D/Spec. 7
2.375" +/-0.031"	2.375" +/-0.031"	2.375" +/-0.031"	2.875" +/-0.031"	3.500" +/-0.031"
.280"	.254"/.280"	.280"	.362"	.368"
120.0" +/-0.250"	120.0" +/-0.250"	180.0" +/-0.250"	180.0" +/-0.250"	180.0" +/-0.250"
140.4'	140.4'	140.4'	170'	206.9'
4125 Mod./4130	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130
Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.
S-135	S-135	S-135	S-135	S-135
145,000 Min.	145,000 Min.	145,000 Min.	145,000 Min.	145,000 Min.
135 Min./165 Max.	135 Min./165 Max.	135 Min./165 Max.	135 Min./165 Max.	135 Min./165 Max.
22ft-lb Avg./19 Min.	22ft-lb Avg./19 Min.	22ft-lb Avg./19 Min.	22ft-lb Avg./19 Min.	22ft-lb Avg./19 Min.
Mag. Particle	Mag. Particle	Mag. Particle	Mag. Particle	Mag. Particle
N/A	Wet Mag. Particle	N/A	N/A	Wet Mag. Particle
2.625"	2.625"	2.625"	3.250"	3.625"
0.875"	0.8125"	0.875"	1.250"	1.500"
4125 Mod./4130	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130	4125 Mod./4130
S-135	S-135	S-135	S-135	S-135
78 Lbs.	78 Lbs. (.280" wall)	100 Lbs.	156 Lbs.	232 Lbs.

Ditch Witch® - Compatible Rod Specifications

JT1720	JT2020	JT2720	JT2720Mach I	JT4020	JT7020
Forged, Inertia Welded	Forged, Inertia Welded	Forged, Inertia Welded	I.W.	Forged, Inertia Welded	Forged, Inertia Welded
Forged Upset	Forged Upset	Upset-End	Forged Upset	Forged Upset	
API 5D/Spec. 7	API 5D/Spec. 7	API 5D/Spec. 7	API 5D	API 5D/Spec. 7	API 5D/Spec. 7
2.063" +/-0.031"	2.063" +/-0.031"	2.375" +/-0.031"	2.375" +/-0.031"	2.875" +/-0.031"	3.500" +/-0.031"
.260"/.270"	.270"	.254"/.280"	.280"	.362"	.368"
118.11" +/-0.250"	118.0 +/-0.25"	118.11" +/-0.250"	118.1" +/-0.250"	177.2" +/-0.250"	177.2" +/-0.250"
121.9'	121.9'	140.4'	140.4'	170'	207'
4125 Mod./4130	4128 Mod.	4125 Mod./4130	4125 Mod.	4125 Mod./4130	4125 Mod./4130
Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.	Seamless Hot Roll.
S-135	S-135	S-135	S-135	S-135	S-135
145,000 Min.	145,000 Min.	145,000 Min.	145,000 Min.	145,000 Min.	145,000 Min.
135 Min./165 Max.	135 Min./165 Max.	135 Min./165 Max.	135 Min./165 Max.	135 Min./165 Max.	135 Min./165 Max.
22 ft-lb Avg./19 Min.	22 ft-lb Avg./19 Min.	22 ft-lb Avg./19 Min.	22 ft-lb Avg./19 Min.	22 ft-lb Avg./19 Min.	22 ft-lb Avg./19 Min.
Mag. Particle	Mag. Particle	Mag. Particle	Mag. Particle	Mag. Particle	Mag. Particle
Wet Mag. Particle	Wet Mag. Particle	Wet Mag. Particle	Wet Mag. Particle	Wet Mag. Particle	Wet Mag. Particle
2.500"	2.625"	2.750"	3.0"	3.250"	4.0"
0.625"	0.875"	0.625"	0.875"	1.125"	1.500"
4125 Mod./4130	4125 Mod./4130	4125 Mod./4130	4137H	4125 Mod./4130	4125 Mod./4130
S-135	S-135	S-135	S-135	S-135	S-135
59 Lbs.	59 Lbs.	78 Lbs.	85 Lbs.	176 Lbs.	238 Lbs.