ClarkDietrich®

MEMBER PROPERTIES

IN CONFORMANCE WITH: **AISI S100-16 (2020) w/S2-20 North American Specification • International Building Code (IBC) 2024**

3-5/8" PilotTRAK Properties

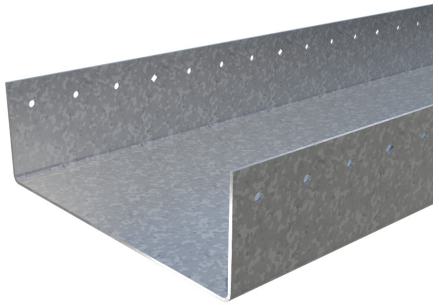
Member	Design thickness (in)	Yield strength Fy (ksi)	Gross Properties							Effective Properties				Torsional Properties						Lu (in)
			Area	Weight	Ix	Sx	Rx	Iy	Ry	Ixe	Sxe	Ma	Mad	Jx1000	Cw	Xo	m	Ro	β	
			(in^2)	(lb/ft)	(in^4)	(in^3)	(in)	(in^4)	(in)	(in^4)	(in^3)	(in-k)	(in-k)	(in^4)	(in^6)	(in)	(in)	(in)		
362PLT125-54	0.0566	50	0.346	1.18	0.723	0.378	1.45	0.0481	0.373	0.678	0.312	9.34	–	0.369	0.123	-0.648	0.404	1.63	0.841	–
362PLT125-68	0.0713	50	0.436	1.48	0.921	0.475	1.45	0.0596	0.370	0.908	0.427	12.78	–	0.738	0.156	-0.641	0.399	1.63	0.846	–
362PLT200-54	0.0566	50	0.431	1.47	1.02	0.536	1.54	0.177	0.640	0.832	0.345	10.34	–	0.460	0.442	-1.26	0.748	2.09	0.638	–
362PLT200-68	0.0713	50	0.543	1.85	1.31	0.675	1.55	0.221	0.638	1.14	0.480	14.38	–	0.919	0.564	-1.25	0.743	2.09	0.643	–

6" PilotTRAK Properties

Member	Design thickness (in)	Yield strength Fy (ksi)	Gross Properties							Effective Properties				Torsional Properties						Lu (in)
			Area	Weight	Ix	Sx	Rx	Iy	Ry	Ixe	Sxe	Ma	Mad	Jx1000	Cw	Xo	m	Ro	β	
			(in^2)	(lb/ft)	(in^4)	(in^3)	(in)	(in^4)	(in)	(in^4)	(in^3)	(in-k)	(in-k)	(in^4)	(in^6)	(in)	(in)	(in)		
600PLT125-54	0.0566	50	0.480	1.63	2.34	0.757	2.21	0.0539	0.335	2.24	0.592	17.74	–	0.513	0.384	-0.508	0.332	2.29	0.951	–
600PLT125-68	0.0713	50	0.605	2.06	2.97	0.951	2.22	0.0668	0.332	2.93	0.858	25.69	–	1.03	0.483	-0.503	0.329	2.30	0.952	–
600PLT200-54	0.0566	50	0.565	1.92	3.15	1.01	2.36	0.203	0.600	2.64	0.717	21.48	–	0.604	1.38	-1.04	0.649	2.65	0.846	–
600PLT200-68	0.0713	50	0.712	2.42	3.99	1.28	2.37	0.254	0.597	3.54	0.973	29.12	–	1.21	1.75	-1.03	0.644	2.65	0.849	–

8" PilotTRAK Properties

Member	Design thickness (in)	Yield strength Fy (ksi)	Gross Properties							Effective Properties				Torsional Properties						Lu (in)
			Area	Weight	Ix	Sx	Rx	Iy	Ry	Ixe	Sxe	Ma	Mad	Jx1000	Cw	Xo	m	Ro	β	
			(in^2)	(lb/ft)	(in^4)	(in^3)	(in)	(in^4)	(in)	(in^4)	(in^3)	(in-k)	(in-k)	(in^4)	(in^6)	(in)	(in)	(in)		
800PLT125-54	0.0566	50	0.594	2.02	4.75	1.16	2.83	0.0568	0.309	4.43	0.824	24.66	–	0.634	0.735	-0.432	0.289	2.88	0.977	–
800PLT125-68	0.0713	50	0.748	2.54	6.00	1.45	2.83	0.0703	0.307	5.96	1.22	36.40	–	1.27	0.920	-0.427	0.286	2.88	0.978	–
800PLT200-54	0.0566	50	0.679	2.31	6.15	1.50	3.01	0.218	0.567	5.15	0.872	26.09	–	0.725	2.66	-0.908	0.584	3.20	0.919	–
800PLT200-68	0.0713	50	0.854	2.91	7.79	1.89	3.02	0.272	0.564	7.05	1.31	39.22	–	1.45	3.36	-0.902	0.580	3.20	0.921	–



Gross Properties:

Ix = Moment of Inertia of cross-section about the x-axis.
Sx = Section Modulus about the x-axis.
Rx = Radius of Gyration of cross-section about the x-axis.
Iy = Moment of Inertia of cross-section about the y-axis.
Ry = Radius of Gyration of cross-section about the y-axis.

Effective Properties:

Ixe = Effective Moment of Inertia of cross-section about the x-axis.
Sxe = Effective Section Modulus about the x-axis.
Ma = Allowable Moment based on local buckling.
Mad = Allowable Moment based on distortional buckling, assuming Kϕ=0.

Torsional and Other Properties:

J = St. Venant Torsional Constant. The values of J shown in the tables have been factored by 1000.
Cw = Torsional Warping Constant.
Xo = Distance from shear center to the centroid along the principal axis.
m = Distance from shear center to mid-plane of web.
Ro = Polar Radius of Gyration of cross-section about the shear center.
Beta = 1-(Xo/Ro)²
Lu = Critical unbraced length for lateral-torsional buckling. Members are considered fully braced when unbraced length is less than Lu.

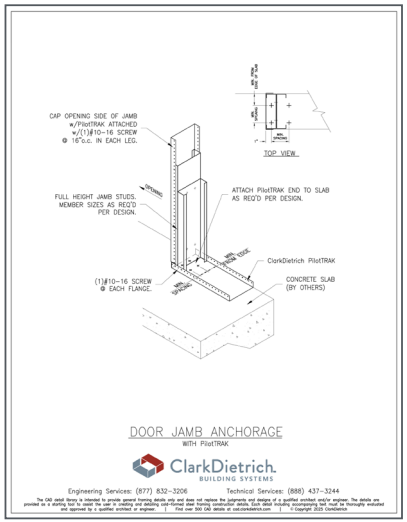
Complies with AISI S100-16 (2020) w/S2-20 • IBC 2024

The technical content of this literature is effective 07/09/25 and supersedes all previous information.

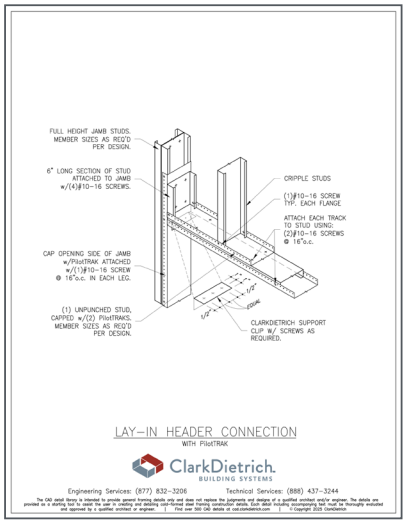
Allowable PilotTRAK Shear (lbs)

Member		Solid Section
Size (in)	mil (ksi)	
3.625	54 (50)	3372
	68 (50)	4703
6	54 (50)	2728
	68 (50)	5350
8	54 (50)	2039
	68 (50)	4087

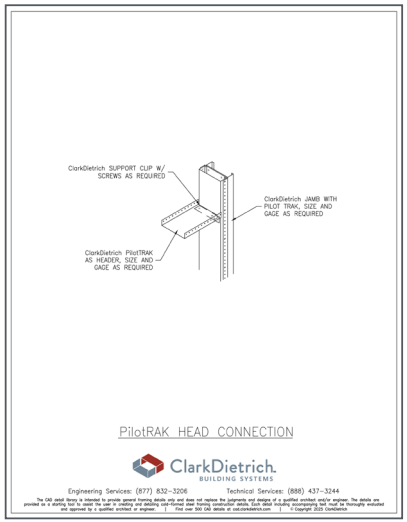
Note: Capacities are calculated per AISI S100-16 (2020) w/S2-20.



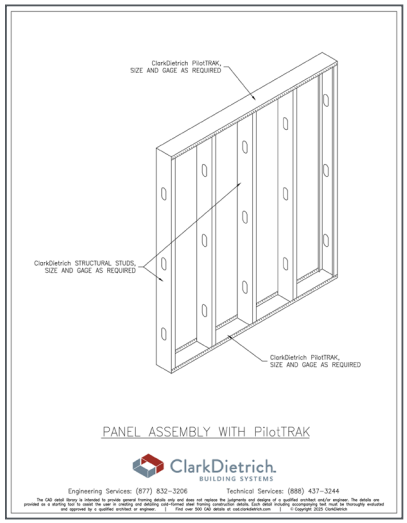
PilotTRAK Door Jamb



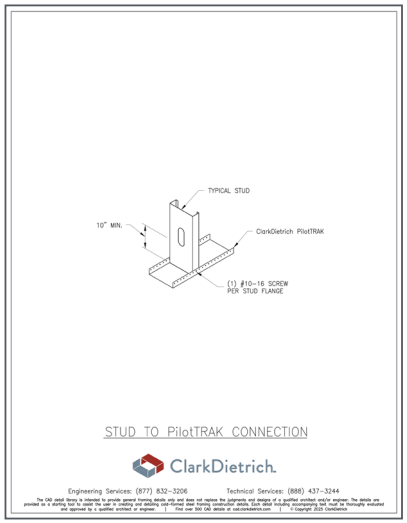
PilotTRAK Lay-in Header



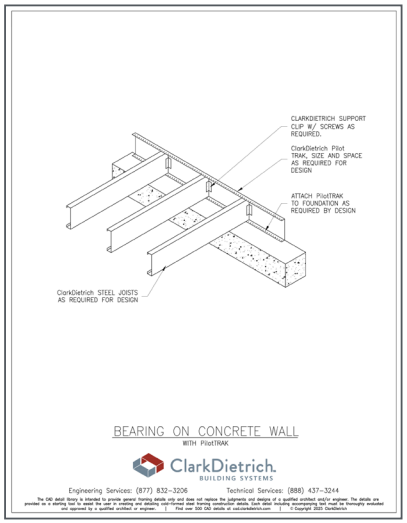
PilotTRAK Head Connection



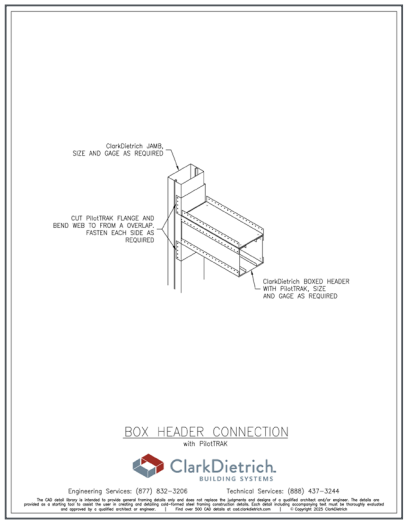
PilotTRAK Panel Assembly



Stud to PilotTRAK Connection



PilotTRAK Rim Track



PilotTRAK Box Header Connection

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CLARKDIETRICH MATERIAL CERTIFICATION—CODE APPROVALS AND PERFORMANCE STANDARDS

Structural Framing Standards

AISI S100-16 (2020) w/S2-20 - North American Specification for the Design of Cold-Formed Steel Structural Members

AISI S240-20 - North American Standard for Cold-Formed Steel Structural Framing

(Compliant to ASTM C955, but IBC replaced with AISI S200 in IBC 2015, AISI S240 in IBC 2018)

- Section A3 Material - Chemical & mechanical requirements (Referencing ASTM A1003/A1003M)
- Section A4 Corrosion Protection (Referencing ASTM A653/A653M)
- Section A5 Products - Thickness, shapes, tolerances, identification
- Section C Installation (Referencing ASTM C1007)

AISI S202-20 - Code of Standard Practice for Cold-Formed Steel Structural Framing

- Section F3 Delivery, handling and storage of materials

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