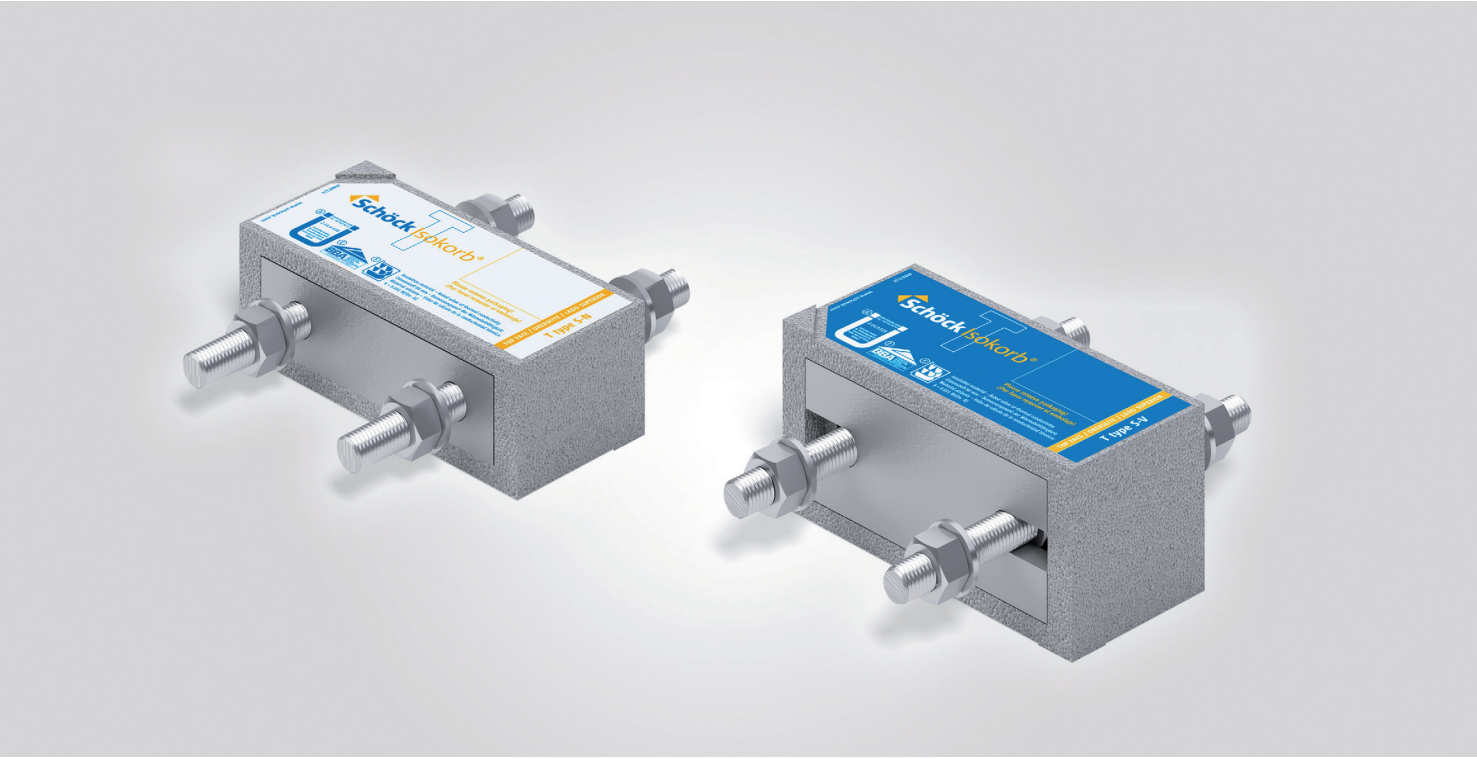
Schöck Isokorb®



Load Table for Standard Solutions

Schöck Isokorb® T Type S-D16

Schöck Isokorb® T Type S-D16.

Steel-to-steel thermal break connections.

Schöck offers a family of extremely efficient thermal break solutions capable of carrying high bending moment and shear forces in steel-to-steel connections penetrating the building envelope, while eliminating creep concerns commonly associated with pad type connections. It is ideal for engineers and architects who want to improve the thermal performance of the building envelope, eliminate condensation concerns at structural penetrations, and have the peace of mind that comes from working with a company of more than 35 years of experience providing 10+ million structural thermal breaks all around the world.

This document contains load tables for typical steel-to-steel connections using Schock Isokorb® T Type S-V-D16 and S-N-D16 (two sub-products of Isokorb® T Type S-D16) structural thermal break modules. These load tables can be used to quickly determine the appropriate number of modules required in the connection. *For other applications, other beam sections, or other load types (torsion and/or horizontal shear), more detailed analyses should be considered, in collaboration with Schöck, if necessary.*

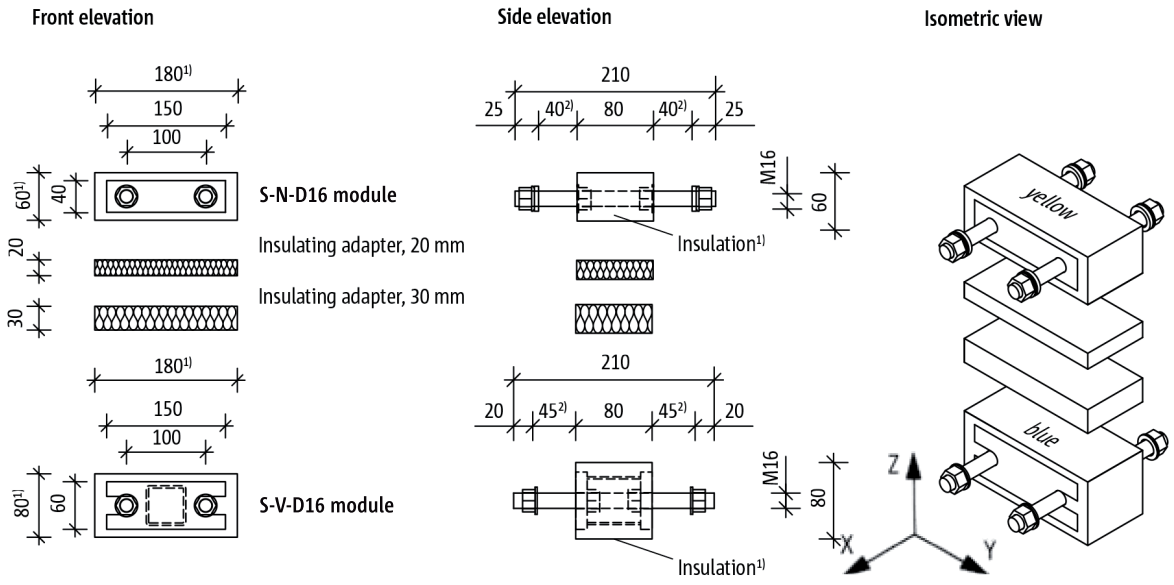
If you have questions, your Schöck Engineering Design team stands by, ready to help.

General comments on load tables:

- All values provided are maximum design ultimate force.
- Loads should be primarily static loads.
- Not for use in the primary load path of the structure (connections typically for cantilever projections)
- Expansion joints may be required, according to the manual.
- The strength values provided apply to the Isokorb connection only. The capacity of the beams entering the connection should be checked independently.
- If there is any doubt, please contact Schöck.

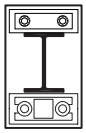
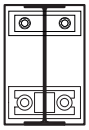
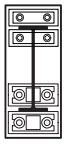
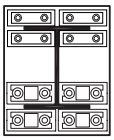
Two Schöck Isokorb® T Type S-D16 combination

Detailed view and coordinate system



Standard solution Schöck Isokorb® T Type S-D16

Imperial units

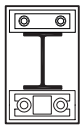
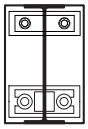
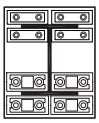
Beam size			W6×12	W8×10	W10×12	W12×14	W14×22	W16×26	W18×35	End-plate Thickness[2]
Beam flexural strength [kip-ft] F_y = 50 ksi			30.42	32.50	45.42	62.08	120.8	160.0	240.0	
2 modules outside flanges										
	ϕM_n [kip-ft]		-19.1	-23.2	-27.6	-32.0	-35.9	-40.3	-44.7	1
	ϕV_n [kips]		+10.3	+10.3	+10.3	+10.3	+10.3	+10.3	+10.3	
	Insulation spacers	30 mm	4	5	8	9	10	13	14	
		20 mm	1	2	–	1	2	–	1	
2 modules within flanges										
	ϕM_n [kip-ft]		N/A[1]	-10.2	-14.6	-18.9	-22.4	-26.7	-30.8	3/4
	ϕV_n [kips]			+10.3	+10.3	+10.3	+10.3	+10.3	+10.3	
	Insulation spacers	30 mm		–	3	4	6	7	8	
		20 mm		2	–	1	–	1	2	
4 modules around flanges										
	ϕM_n [kip-ft]		N/A[1]	-27.4	-34.5	-43.1	-49.9	-58.0	-66.0	1
	ϕV_n [kips]			+20.6	+20.6	+20.6	+20.6	+20.6	+20.6	
	Insulation spacers	30 mm		–	3	3	6	5	8	
		20 mm		2	–	2	–	4	2	
8 modules around flanges										
	ϕM_n [kip-ft]		N/A[1]	-54.8	-69.0	-86.2	-99.8	-116	-132.0	1
	ϕV_n [kips]			+41.2	+41.2	+41.2	+41.2	+41.2	+41.2	
	Insulation spacers	30 mm		–	6	6	12	10	16	
		20 mm		4	–	4	–	8	4	

Beam size			HSS 4×4×1/2	HSS 6×6×1/2	HSS 8×8×1/2	HSS 10×10×1/2	HSS 12×12×1/2	End-plate Thickness[2]
Beam flexural strength [kip-ft] F_y = 50 ksi			24.9	67.1	130.0	213.0	317.0	
2 modules outside flanges								
	ϕM_n [kip-ft]		-14.7	-19.1	-23.5	-27.8	-32.2	1
	ϕV_n [kips]		+10.3	+10.3	+10.3	+10.3	+10.3	
	Insulation spacers	30 mm	3	4	5	8	5	
		20 mm	–	1	2	–	2	

[1] This configuration is not feasible due to lack of space for Isokorb® modules within the beam depth.
[2] The end-plate thickness is provided for estimation and constructibility evaluation purposes only. Steel of ≥50ksi has been assumed. The Structural Engineer of Record will need to evaluate these values for the specifics of the project. The use of stiffeners might result in a lower thickness value.

Standard solution Schöck Isokorb® T Type S-D16

Metric units

Beam size			W150×18	W200×15	W250×18	W310×21	W360×33	W410×39	W460×52	End-plate Thickness[2]
Beam flexural strength [kNm] F_y = 345MPa			41.3	44.1	61.8	84.2	163	217	326	
2 modules outside flanges										
	ϕM_n [kNm]		-26.0	-31.5	-37.4	-43.4	-48.8	-54.7	-60.7	25mm
	ϕV_n [kN]		+46.0	+46.0	+46.0	+46.0	+46.0	+46.0	+46.0	
	Insulation spacers	30 mm	4	5	8	9	10	13	14	
		20 mm	1	2	–	1	2	–	1	
2 modules within flanges										
	ϕM_n [kNm]		N/A[1]	-13.9	-19.9	-25.7	-30.4	-36.3	-41.8	20mm
	ϕV_n [kN]			+46.0	+46.0	+46.0	+46.0	+46.0	+46.0	
	Insulation spacers	30 mm		–	3	4	6	7	8	
		20 mm		2	–	1	–	1	2	
4 modules around flanges										
	ϕM_n [kNm]		N/A[1]	-37.2	-46.8	-58.3	-67.6	-78.7	-89.5	25mm
	ϕV_n [kN]			+92.0	+92.0	+92.0	+92.0	+92.0	+92.0	
	Insulation spacers	30 mm		–	3	3	6	5	8	
		20 mm		2	–	2	–	4	2	
8 modules around flanges										
	ϕM_n [kNm]		N/A[1]	-74.4	-93.6	-116.6	-135.0	-157.0	-179.0	25mm
	ϕV_n [kN]			+184.0	+184.0	+184.0	+184.0	+184.0	+184.0	
	Insulation spacers	30 mm		–	6	6	12	10	16	
		20 mm		4	–	4	–	8	4	

Beam size			HSS 1.6×101.6×12×7	HSS 152.4×152.4×12.7	HSS 203.2×203.2×12.7	HSS 254.0×254.0×12.7	HSS 304.8×304.8×12.7	End-plate Thickness[2]
Beam flexural strength [kNm] F_y = 345MPa			33.7	91.1	176	289	431	
2 modules outside flanges								
	ϕM_n [kNm]		-20.0	25.9	-31.8	-37.8	-43.7	25mm
	ϕV_n [kN]		+46.0	+46.0	+46.0	+46.0	+46.0	
	Insulation spacers	30 mm	3	4	5	8	5	
		20 mm	–	1	2	–	2	

[1] This configuration is not feasible due to lack of space for Isokorb® modules within the beam depth.
[2] The end-plate thickness is provided for estimation and constructibility evaluation purposes only. Steel of 345MPa has been assumed. The Structural Engineer of Record will need to evaluate these values for the specifics of the project. The use of stiffeners might result in a lower thickness value.

Schöck North America
www.schock-na.com
Email: info@schock-na.com
Phone: 855 572 4625

Schöck USA Inc.
281 Witherspoon Street
Suite 110
Princeton, NJ 08540

Schöck Canada Inc.
116 Albert Street
Suite 300
Ottawa, ON K1P 5G3

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