CORE®

Technical Data
Lightweight Clips

www.sbscore.co.uk

Technical Data - Lightweight Clips

CORE recently identified a potential limitation in the way "Lightweight Clips" are being used. The issue pertained to the possibility that welded bosses on clips could come under substantial shear loads resulting from perfectly normal sources such as thermal expansion of pipework, or even transportation of pipework modules.

Smith Brothers has developed CORE and subsequently the CORE clip ranges with the mindset that Unlined and Rubber Lined clips are not necessarily "Lightweight". We have always used innovative welding techniques on our clips which we believe offer an industry leading deadweight load, whilst offering a good resistance to shear.

CORE therefore routinely complete tests for shear loading on welded bosses on the CORE clip range.

These tests are carried out using specially developed tooling which would place a universal load on the welded bosses by a tool that moves at 3mm / Minute. All clips were tested to their maximum yield.

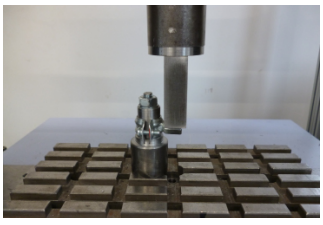
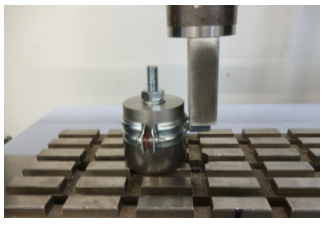
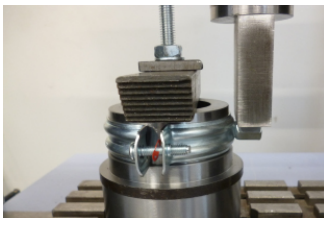
It is CORE's commitment to innovation in manufacture and testing which has now allowed us to publicise Safe Working Loads for the first time for Shear Loads as well as Deadweight Loads.

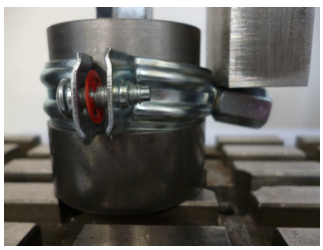
SHEAR TESTING: - Rubber Lined

SIZE	BREAKING LOAD	RECOMMENDED LOAD kN
15mm - 35mm	4.96kN (505kgf - 0.505t)	2.50kN
42mm - 2"	9.50kN (968kgf - 0.968t)	4.50kN
67mm - 4"	11.04kN (1125kgf - 1.125t)	5.50kN
120mm - 6"	13.75kN (1402kgf - 1.102t)	6.50kN

SHEAR TESTING:- Unlined

SIZE	BREAKING LOAD kN	RECOMMENDED LOAD kN
3/8" - 1 1/4"	4.96kN (505kgf - 0.505t)	2.50kN
1 1/2" - 70mm	9.50kN (968kgf - 0.968t)	4.50kN
2 1/2" - 120mm	11.04kN (1125kgf - 1.125t)	5.50kN
130mm - 175mm	13.75kN (1402kgf - 1.102t)	6.50kN

Technical Data - CORE RL Clips

CONSTRUCTION: Mild Steel

FINISH: BZP

BOSS NUT: M8/M10 Dual Boss

SCREWS: BZP Screw with Captive Washer

EPDM RUBBER LINER: All EPDM formulas for R/L Lined clips are manufactured without Plasticizers.

FOR USE WITH:
Copper Pipes
Steel Pipes
Stainless Steel Pipes
Plastic Pipes

The EPDM rubber insert has been screened against the REACH SVHC Candidate List (EC No 1907/2006) and no listed substances were detected above 0.1% (w/w). The compound does not contain intentionally added phthalates above REACH reporting thresholds. EPDM grades are free from ester-functional plasticisers, including phthalates, adipates, dibenzoates, DINCH and TXIB.

Pipe Size	Grip Range	Boss Type	Screw	Material	Shear SWL	Dead Weight SWL
15mm	13-20mm	M8/M10	M5 x M18	1 x 20	2.50kN	1.3kN
18mm	17-23mm	M8/M10	M5 x M18	1 x 20	2.50kN	1.3kN
22mm	21-26mm	M8/M10	M5 x M18	1 x 20	2.50kN	1.3kN
28mm	26-30mm	M8/M10	M5 x M18	1 x 20	2.50kN	1.3kN
35mm	33-37mm	M8/M10	M5 x M18	1 x 20	2.50kN	1.3kN
42mm	40-46mm	M8/M10	M5 x M18	1.2 x 20	4.50kN	1.6kN
1 1/2"	48-53mm	M8/M10	M5 x M18	1.2 x 20	4.50kN	1.6kN
54mm	53-59mm	M8/M10	M5 x M18	1.2 x 20	4.50kN	1.6kN
2"	60-66mm	M8/M10	M5 x M18	1.2 x 20	4.50kN	1.6kN
67mm	67-77mm	M8/M10	M6 x M25	1.5 x 25	5.50kN	1.6kN
76mm	75-84mm	M8/M10	M6 x M25	1.5 x 25	5.50kN	2.3kN
3"	83-93mm	M8/M10	M6 x M25	1.5 x 25	5.50kN	2.3kN
95mm	94-104mm	M8/M10	M6 x M25	1.5 x 25	5.50kN	2.3kN
108mm	102-111mm	M8/M10	M6 x M25	1.5 x 25	5.50kN	2.3kN
4"	109-119mm	M8/M10	M6 x M25	1.5 x 25	5.50kN	2.3kN
120mm	122-135mm	M8/M10	M6 x M25	2 x 25	6.50kN	2.6kN
133mm	128-139mm	M8/M10	M6 x M25	2 x 25	6.50kN	2.6kN
5"	135-148mm	M8/M10	M6 x M25	2 x 25	6.50kN	2.6kN
159mm	151-164mm	M8/M10	M6 x M25	2 x 25	6.50kN	2.6kN
6"	158-170mm	M8/M10	M6 x M25	2 x 25	6.50kN	2.6kN

SHEAR TESTING: - Rubber Lined

SIZE	BREAKING LOAD	RECOMMENDED LOAD kN
15mm - 35mm	4.96kN (505kgf - 0.505t)	2.50kN
42mm - 2"	9.50kN (968kgf - 0.968t)	4.50kN
67mm - 4"	11.04kN (1125kgf - 1.125t)	5.50kN
120mm - 6"	13.75kN (1402kgf - 1.102t)	6.50kN

Technical Data - CORE UL Clips

CONSTRUCTION: Mild Steel

FINISH: BZP

BOSS NUT: M8/M10 Dual Boss

SCREWS: BZP Screw with Captive Washer

FOR USE WITH: Steel Pipes
Insulated Pipe Supports

Pipe Size	Grip Range	Boss Type	Screw	Material	Shear SWL	Dead Weight SWL
3/8"	15-20mm	M8/M10	M5 x 18	1 x 20	2.50kN	1.3kN
1/2"	19-23mm	M8/M10	M5 x 18	1 x 20	2.50kN	1.3kN
22mm	23-28mm	M8/M10	M5 x 18	1 x 20	2.50kN	1.3kN
3/4"	26-30mm	M8/M10	M5 x 18	1 x 20	2.50kN	1.3kN
1"	32-35mm	M8/M10	M5 x 18	1 x 20	2.50kN	1.3kN
1 1/4"	39-43mm	M8/M10	M5 x 18	1 x 20	2.50kN	1.3kN
1 1/2"	45-51mm	M8/M10	M5 x 18	1.2 x 20	4.50kN	1.6kN
55mm	54-58mm	M8/M10	M5 x 18	1.2 x 20	4.50kN	1.6kN
2"	60-65mm	M8/M10	M5 x 18	1.2 x 20	4.50kN	1.6kN
70mm	67-71mm	M8/M10	M5 x 18	1.2 x 20	4.50kN	1.6kN
2 1/2"	74-82mm	M8/M10	M6 x 25	1.5 x 25	5.50kN	2.3kN
85mm	82-89mm	M8/M10	M6 x 25	1.5 x 25	5.50kN	2.3kN
3"	91-98mm	M8/M10	M6 x 25	1.5 x 25	5.50kN	2.3kN
95mm	93-101mm	M8/M10	M6 x 25	1.5 x 25	5.50kN	2.3kN
105mm	102-109mm	M8/M10	M6 x 25	1.5 x 25	5.50kN	2.3kN
4"	109-117mm	M8/M10	M6 x 25	1.5 x 25	5.50kN	2.3kN
120mm	116-125mm	M8/M10	M6 x 25	1.5 x 25	5.50kN	2.3kN
130mm	129-141mm	M8/M10	M6 x 25	2 x 25	6.50kN	2.6kN
5"	136-146mm	M8/M10	M6 x 25	2 x 25	6.50kN	2.6kN
145mm	142-154mm	M8/M10	M6 x 25	2 x 25	6.50kN	2.6kN
6"	159-169mm	M8/M10	M6 x 25	2 x 25	6.50kN	2.6kN
175mm	166-177mm	M8/M10	M6 x 25	2 x 25	6.50kN	2.6kN

SHEAR TESTING:- Unlined

SIZE	BREAKING LOAD kN	RECOMMENDED LOAD kN
3/8" - 1 1/4"	4.96kN (505kgf - 0.505t)	2.50kN
1 1/2" - 70mm	9.50kN (968kgf - 0.968t)	4.50kN
2 1/2" - 120mm	11.04kN (1125kgf - 1.125t)	5.50kN
130mm - 175mm	13.75kN (1402kgf - 1.102t)	6.50kN