

Synthetic Shackle



Synthetic Shackle is made from our Ultrex 12-strand High Modulus Polyethylene HMPE fiber and is Maxijacket High Performance coated for structural firmness and increased abrasion resistance. It is lightweight and offers a quick connection with no tools required.



*Open length of the shackle describes the length as shown in the image above, omitting the knot.

Diameter		Minimum Open Length*	Minimum Increment	Knot Diameter	Maximum Diameter**	Average Break Strength	Work Load 5:1
Inches	(mm)	Inches	Inches	Inches	Inches	Lbs	Lbs
1/4	6	7	2	1.1	1.2	11,200	2,240
5/16	8	9	2	1.4	1.5	23,000	4,600
3/8	10	11	2	1.7	1.8	34,000	6,800
7/16	11	12	4	2.0	2.0	43,700	8,740
1/2	13	14	4	2.2	2.5	63,600	12,720
9/16	14	16	4	2.5	2.8	76,500	15,300
5/8	16	18	4	2.8	3.1	90,100	18,020
3/4	19	21	6	3.4	3.8	127,500	25,500
7/8	22	25	6	4.0	4.4	166,600	33,320
1	25	28	6	4.5	5.0	204,000	40,800
1-1/8	29	32	6	5.0	5.5	251,600	50,320
1-1/4	32	35	8	5.7	6.0	292,400	58,480
1-1/2	38	43	8	6.8	7.2	391,000	78,200
1-5/8	41	47	8	7.5	8.0	484,500	96,900
2	51	57	8	9.0	9.5	663,000	132,600

*Larger sizes available, contact Yale for details.

**Maximum diameter indicates the diameter of an object that the shackle can be closed around. Values represented are based on the minimum open lengths shown.

Tandem Stopper Assembly



An appropriately sized Tandem Stopper Assembly is the only recommended midspan termination technique for Unitrex. When properly configured, it is rated to the full working load of the underlying Unitrex (see load rating table below).

Other conventional termination devices/techniques have been demonstrated to cause an unacceptable amount of damage to Unitrex when tested. The Tandem Stopper Assembly will be packaged to include all necessary materials and hardware for installation, including a single shackle matched to the total assembly working load. connecting sling, allowing the load to be evenly shared between the two applied Stoppers.

Unitrex Diameter (inches)	Unitrex Diameter (mm)	Working Load (lbs)	Working Load (kg)
0.44	11	5,000	2,268
0.53	13	6,500	2,948
0.58	15	8,500	3,856
0.63	16	10,625	4,819
0.71	18	12,625	5,727
0.84	21	18,375	8,335
1.00	25	25,000	11,340
1.15	29	31,250	14,175