# **SGS**<sub>SafetyGearStore</sub>

# Yoke Snatch Block with Captive Shackle

Snatch blocks are typically used for short term and intermittent lifting applications where loads are required to be lifted and or moved horizontally. They are easy to transport from location to location and are relatively quick and easy to rig. More permanent arrangements would typically use a crane or a construction block.

## **Features**

- YOKE snatch blocks are manufactured of the highest quality forged alloy steel.
- Available in sizes 2 tonnes to 20 tonnes.
- Designed with a safety factor 4:1
- Fatigue rated 20,000 cycles at 1.5 times the WLL.
- Snatch Blocks are supplied with bronze bushings and grease fitting nipples for ease of use and extended shelf life.
- Part number, wire rope size and working load limit are marked on each block.
- · Permanent batch codes link to test certificates for easy traceability.
- Meets or exceeds all requirements of ASME B30.26-2010
- ABS Type Approval Ref. TA1060896-PDA



## **DIMENSIONAL SPECIFICATIONS**

Part Code	WLL tonnes	Sheave Dia. mm	Wire Rope Size mm	a mm	b mm	e mm	f mm	g mm	k mm	l mm	r mm	Mass kg
8-501-02	2.0	76	8-10	35	30	64	11	75	150	228	217	3.8
8-501-04	4.0	114	10-13	64	50	79	19	107	243	356	336	6.2
8-501-08	8.0	152	16-19	87	76	104	32	152	320	484	452	13.2
8-501-0808	8.0	203	16-19	87	76	104	32	220	333	558	526	18.2
8-541-12	12.0	152	19-22	78	80	134	44	167	359	540	496	24.8
8-541-15	15.0	203	19-22	78	80	134	44	220	355	589	545	29.6
8-541-1510	15.0	254	19-22	78	80	134	44	280	423	714	670	42.7
8-501-1512	15.0	305	19-22	78	80	134	44	330	428	770	726	52.8
8-551-20	20.0	203	25-29	109	93	150	55	216	433	671	616	41.6
8-551-2010	20.0	254	25-29	109	93	150	55	280	481	778	723	52.4
8-551-2012-29	20.0	305	25-29	109	93	150	55	330	485	883	778	62.8

Part Code	WLL Ibs	Sheave Dia. inches	Wire Rope Size inch	a inch	b inch	e inch	f inch	g inch	k inch	l inch	r inch	Mass Ibs.
8-501-02	4,409	3	5/16 - 3/8	1.38	1.18	2.52	0.43	2.95	5.91	8.96	8.53	4.4
8-501-04	8,818	4-1/2	3/8 - 1/2	2.52	1.97	3.11	0.75	4.21	9.57	14.02	13.27	13.0
8-501-08	17,637	6	5/8 - 3/4	3.43	2.99	4.09	1.26	5.98	12.60	19.06	17.80	28.7
8-501-0808	19,841	8	5/8 - 3/4	3.43	2.99	4.09	1.26	8.66	13.10	21.90	20.64	43.0
8-541-12	26,455	6	3/4 - 7/8	3.07	3.15	5.28	1.73	6.57	14.13	21.26	19.63	53.6
8-541-15	33,069	8	3/4 - 7/8	3.07	3.15	5.28	1.73	8.66	13.99	23.19	21.46	65.1
8-541-1510	33,069	10	3/4 - 7/8	3.07	3.15	5.28	1.73	11.00	16.70	28.10	26.37	94.8
8-501-1512	33,069	12	3/4 - 7/8	3.07	3.15	5.28	1.73	13.00	16.80	30.30	28.57	117.9
8-551-20	44,092	8	1 - 1-1/8	4.29	3.66	5.91	2.17	8.50	17.05	26.42	24.25	90.8
8-551-2010	44,092	10	1 - 1-1/8	4.29	3.66	5.91	2.17	11.00	18.90	30.60	28.46	119.0
8-551-2012-29	44,092	12	1 - 1-1/8	4.29	3.66	5.91	2.17	13.00	19.10	32.80	30.63	137.8

## Loads on Blocks

#### **Angle Factor Mutipliers**

The Working Load Limit (WLL) for Yoke Group blocks indicates the maximum load that should be exerted on the block and its connecting fitting. This total load value may be different from the weight being lifted or pulled by a hoisting system. It is necessary to determine the total load being imposed on each block in the system to properly determine the rated capacity block to be used. A single sheave block used to change load line direction can be subjected to total loads greatly different from the weight being lifted or pulled. The total load value varies with the angle between the incoming and departing lines to the block. The following chart indicates the factor to be multiplied by the line pull to obtain the total load on the block.



Angle	Factor	Angle	Factor
0	2.00	100	1.29
10	1.99	110	1.15
20	1.97	120	1.00
30	1.93	130	0.84
40	1.87	135	0.76
45	1.84	140	0.68
50	1.81	150	0.52
60	1.73	160	0.35
70	1.64	170	0.17
80	1.53	180	0.00
90	1.41	-	-

# **Sheave Size and Wire Rope Strength**

Ratio A	Strength Efficiency Compared to Catalogue Strength in %	Ratio A	Strength Efficiency Compared to Catalogue Strength in %		
40	95	8	83		
30	93	6	79		
20	91	4	75		
15	89	2	65		
10	86	1	50		

#### Ratio A = Sheave Diameter ÷ Rope Diameter

### Strength Efficiency

Bending wire rope reduces its strength. To account for the effect of bend radius on wire rope strength when selecting a sheave, use the table above.

Ratio B	Relative Fatigue Bending Life	Ratio B	Relative Fatigue Bending Life		
30	10.0	16	2.1		
25	6.6	14	1.5		
20	3.8	12	1.1		
18	2.9	-	-		

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