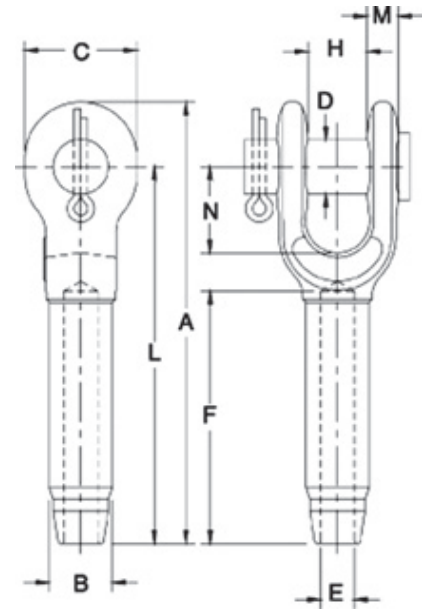




S-501 Open Swage Sockets

- Forged from special bar quality carbon steel, suitable for cold forming.
- Swage Socket terminations have an efficiency rating of 100% based on the catalog strength of wire rope.
- Hardness controlled by spheroidize annealing.
- Stamp for identification after swaging without concern for fractures (as per directions in Wire Rope End Terminations User's Manual).
- Swage sockets incorporate a reduced machined area of the shank which is equivalent to the proper "After Swage" dimension. Before swaging, this provides for an obvious visual difference in the shank diameter. After swaging, a uniform shank diameter is created allowing for a QUIC-CHECK® and permanent visual inspection opportunity.
  - Designed to quickly determine whether the socket has been through the swaging operation and assist in field inspections, it does not eliminate the need to perform standard production inspections which include gauging for the proper "After Swage" dimensions or proof loading.



**S-501 Open Swage Sockets**

S-501 and S-501B Open Socket Specifications																	Swager / Die Data					
Rope Size		Before Swage Dimensions (in)													Tolerance +/-		Stock No.				Side Load	
S-501 Stock No.	S-501B Stock No. †	(in.)	(mm)	Weight Each (lbs.)	Ultimate Load ** (t)	A	B	C	D	E	F	H	L	M	N	H	Max. After Swage Dim. (in)	Die Description	500 1000 1500 Ton 5 x 7	1500 3000 Ton 6 x 12	1500 Ton 6 x 12	3000 Ton 6 x 12
1039021	1054001	1/4	6	0.52	5.4	4.78	0.50	1.38	0.69	0.27	2.19	0.69	4.00	0.38	1.47	0.06	0.46	1/4 Socket	1192845	-	-	-
1039049	1054010	5/16	8	1.12	11.8	6.30	0.78	1.62	0.81	0.34	3.25	0.80	5.34	0.48	1.67	0.06	0.71	5/16-3/8 Socket	1192863	-	-	-
1039067	1054029	3/8	9-10	1.30	13.6	6.30	0.78	1.62	0.81	0.41	3.25	0.80	5.34	0.48	1.67	0.06	0.71	5/16-3/8 Socket	1192863	-	-	-
1039085	1054038	7/16	11-12	2.08	18.1	7.82	1.01	2.00	1.00	0.49	4.31	1.00	6.69	0.56	1.96	0.06	0.91	7/16-1/2 Socket	1192881	-	-	-
1039101	1054047	1/2	13	2.08	21.3	7.82	1.01	2.00	1.00	0.55	4.31	1.00	6.69	0.56	1.96	0.06	0.91	7/16-1/2 Socket	1192881	-	-	-
1039129	1054056	9/16	14	4.67	31.8	9.54	1.27	2.38	1.19	0.61	5.38	1.25	8.13	0.68	2.21	0.06	1.16	9/16-5/8 Socket	1192907	-	-	-
1039147	1054065	5/8	16	4.51	34.9	9.54	1.27	2.38	1.19	0.68	5.38	1.25	8.13	0.68	2.21	0.06	1.16	9/16-5/8 Socket	1192907	-	-	-
1039165	1054074	3/4	18-20	7.97	43.5	11.61	1.56	2.75	1.38	0.80	6.44	1.50	10.00	0.80	2.69	0.06	1.42	3/4 Socket	1192925	-	-	-
1039183	1054083	7/8	22	11.52	51.5	13.37	1.72	3.13	1.63	0.94	7.50	1.75	11.63	0.94	3.20	0.07	1.55	7/8 Socket	1192943	-	-	-
1039209	1054092	1	24-26	17.80	71.4	15.47	2.00	3.69	2.00	1.07	8.63	2.00	13.38	1.07	3.68	0.08	1.80	1 Socket	1192961	-	-	-
1039227	1054104	1-1/8	28	25.25	83.3	17.35	2.25	4.12	2.25	1.19	9.63	2.25	15.00	1.19	4.18	0.10	2.05	1-1/8 Socket	1192989	-	-	-
1039245	1054113	1-1/4	32	35.56	109	19.20	2.53	4.59	2.50	1.34	10.69	2.50	16.50	1.27	4.68	0.10	2.30	1-1/4 Socket	1193005	-	-	-
1039263	1054122	1-3/8	34-36	43.75	136	21.10	2.81	5.25	2.50	1.46	11.88	2.41	18.13	1.46	5.25	0.10	2.56	1-3/8 Socket	1193023	-	-	-
1039281	1054131	1-1/2	38-40	58.50	181	23.17	3.08	5.50	2.75	1.59	12.81	3.00	19.75	1.70	5.70	0.10	2.81	1-1/2 Socket	1193041	1191267	1195355	1195192
1039307	1054140	1-3/4	44	88.75	228	26.70	3.40	6.25	3.50	1.87	15.06	3.50	23.00	2.11	6.67	0.10	3.06	1-3/4 Socket	1193069	1191276	1195367	1195209
1042767	1054159	2	48-52	146.2	272	31.15	3.94	7.80	3.75	2.12	17.06	4.00	26.75	1.81	8.19	0.10	3.56	2 Socket	1193087	1191294	1195379	1195218

\*Maximum Proof Load shall not exceed 50% of XXIP rope catalog breaking strength. \*\* The Ultimate Loads of 3/4" through 1 1/4" sizes have been increased to meet the requirements for 8 strand 2160 Grade pendants. † Assembly with bolt, nut and cotter pin. Note: Fittings designed only to be used on exact sizes listed.

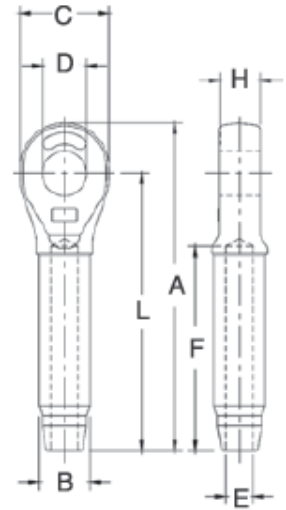


NOTE: S-501 Swage Sockets are recommended for use with 6 x 19 or 6 x 37, IPS or XIP (EIP), XXIP (EEIP), RRL, FC or IWRC wire rope. Before using any National Swage fitting with any other type of construction or grade of wire rope, it is recommended that the termination be destructively tested and documented to prove the adequacy of the assembly to be manufactured. In accordance with ASME B30.9, all slings terminated with swage sockets shall be proof loaded.\*



S-502 Closed Swage Sockets

- Forged from special bar quality carbon steel, suitable for cold forming.
- Swage Socket terminations have an efficiency rating of 100% based on the catalog strength of wire rope.
- Hardness controlled by spheroidize annealing.
- Stamp for identification after swaging without concern for fractures (as per directions in Wire Rope End Terminations User's Manual).
- Swage sockets incorporate a reduced machined area of the shank which is equivalent to the proper "After Swage" dimension. Before swaging, this provides for an obvious visual difference in the shank diameter. After swaging, a uniform shank diameter is created allowing for a **QUIC-CHECK®** and permanent visual inspection opportunity.
  - Designed to quickly determine whether the socket has been through the swaging operation and assist in field inspections, it does not eliminate the need to perform standard production inspections which



**S-502 Closed Swage Sockets**

S-502 Closed Socket Specifications														Swager / Die Data				
S-502 Stock No.	Rope Size		Weight Each (lbs.)	Ultimate Load ** (t)	Before Swage Dimensions (in)								Max. After Swage Dim. (in)	Die Description	Stock No.		Side Load	
	(in.)	(mm)			A	B	C	D	E	F	H	L			500 1000 1500 Ton 5 x 7	1500 3000 Ton 6 x 12	1500 Ton 6 x 12	3000 Ton 6 x 12
1039325	1/4	6	0.33	5.4	4.28	0.50	1.38	0.76	0.27	2.19	0.50	3.50	0.46	1/4 Socket	1192845	-	-	-
1039343	5/16	8	0.75	11.8	5.42	0.77	1.62	0.88	0.34	3.25	0.68	4.50	0.71	5/16-3/8 Socket	1192863	-	-	-
1039361	3/8	9-10	0.72	13.6	5.42	0.78	1.62	0.88	0.41	3.25	0.68	4.50	0.71	5/16-3/8 Socket	1192863	-	-	-
1039389	7/16	11-12	1.42	18.1	6.88	1.01	2.00	1.07	0.49	4.31	0.87	5.75	0.91	7/16-1/2 Socket	1192881	-	-	-
1039405	1/2	13	1.42	21.3	6.88	1.01	2.00	1.07	0.55	4.31	0.87	5.75	0.91	7/16-1/2 Socket	1192881	-	-	-
1039423	9/16	14	2.92	31.8	8.59	1.27	2.38	1.28	0.61	5.38	1.14	7.25	1.16	9/16-5/8 Socket	1192907	-	-	-
1039441	5/8	16	2.85	34.9	8.59	1.27	2.38	1.28	0.68	5.38	1.14	7.25	1.16	9/16-5/8 Socket	1192907	-	-	-
1039469	3/4	18-20	5.00	43.5	10.25	1.56	2.88	1.49	0.80	6.44	1.33	8.63	1.42	3/4 Socket	1192925	-	-	-
1039487	7/8	22	6.80	51.5	11.87	1.72	3.12	1.73	0.94	7.50	1.53	10.09	1.55	7/8 Socket	1192943	-	-	-
1039502	1	24-26	10.40	71.4	13.56	2.00	3.62	2.11	1.07	8.63	1.78	11.50	1.80	1 Socket	1192961	-	-	-
1039520	1-1/8	28	14.82	83.3	15.03	2.25	4.00	2.37	1.19	9.75	2.03	12.75	2.05	1-1/8 Socket	1192989	-	-	-
1039548	1-1/4	32	21.57	109	16.94	2.53	4.50	2.62	1.34	10.81	2.25	14.38	2.30	1-1/4 Socket	1193005	-	-	-
1039566	1-3/8	34-36	28.54	136	18.59	2.81	5.00	2.62	1.46	11.88	2.29	15.75	2.56	1-3/8 Socket	1193023	-	-	-
1039584	1-1/2	38-40	38.06	181	20.13	3.08	5.38	2.87	1.59	12.81	2.56	17.00	2.81	1-1/2 Socket	1193041	1191267	1195355	1195192
1039600	1-3/4	44	51.00	228	23.56	3.40	6.25	3.63	1.87	15.06	3.08	20.00	3.06	1-3/4 Socket	1193069	1191276	1195367	1195209
1042589	2	48-52	89.25	272	27.13	3.94	7.25	3.88	2.12	17.06	3.31	23.00	3.56	2 Socket	1193087	1191294	1195379	1195218

\* Maximum Proof Load shall not exceed 50% of XXIP rope catalog breaking strength. \*\*The Ultimate Loads of 3/4" through 1 1/4" sizes have been increased to meet the requirements for 8 strand 2160 Grade pendants. Note: Fittings designed only to be used on exact sizes listed.



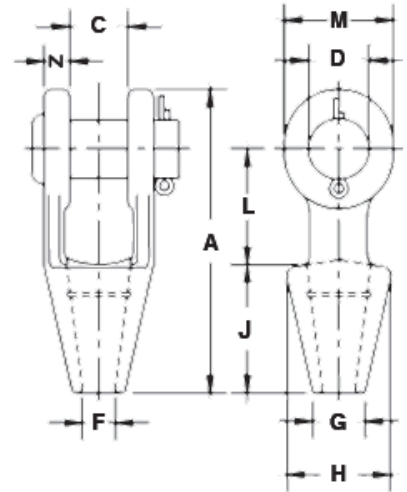
NOTE: S-502 Swage Sockets are recommended for use with 6 x 19 or 6 x 37, IPS or XIP (EIP), XXIP (EEIP), RRL, FC or IWRC wire rope. Before using any National Swage fitting with any other type la , construction or grade of wire rope, it is recommended that the termination be destructive tested and documented to prove the adequacy of the assembly to be manufactured. In accordance with ASME B30.9, all slings terminated with swage sockets shall be proof loaded.\*



**G-416/S-416**

Open Grooved Sockets meet the performance requirements of Federal Specification RR-S-550, Type A, except for those provisions required of the contractor.

- Forged Steel Sockets through 1-1/2", cast alloy steel 1-5/8" through 4".
- Spelter socket terminations have an efficiency rating of 100%, based on the catalog strength of wire rope.
- Ratings are based on the recommended use with 6 x 7, 6 x 19 or 6 x 37, IPS or XIP (EIP), XXIP (EEIP), RRL, FC or IWRC wire rope.
- Strand constructed with minimal number of wires (e.g. 1 x 7) requires special consideration that socket basket length be five (5) times the strand diameter or fifty (50) times the wire diameter, whichever is the greater.



**G-416 / S-416 Open Spelter Sockets**

Rope Dia.		Structural Strand Dia. (in)	Ultimate Load (t)	Stock No.		Weight Each (lb)	Dimensions (in)										Tolerance +/-
(in.)	(mm)			G-416 Galv.	S-416 S.C.		A	C	D	F	G	H	J	L	M	N	
5/16-3/8	8-10	-	12	1039637	1039646	1.30	4.84	0.81	0.81	0.50	0.81	1.69	2.25	1.75	1.50	0.44	0.06
7/16-1/2	11-13	-	20	1039655	1039664	2.25	5.56	1.00	1.00	0.56	0.94	1.88	2.50	2.00	1.88	0.50	0.06
9/16-5/8	14-16	1/2	27	1039673	1039682	3.60	6.75	1.25	1.19	0.69	1.13	2.25	3.00	2.50	2.25	0.56	0.06
3/4	18	9/16-5/8	43	1039691	1039708	5.83	7.94	1.50	1.38	0.81	1.25	2.62	3.50	3.00	2.62	0.62	0.06
7/8	20-22	11/16-3/4	55	1039717	1039726	9.65	9.25	1.75	1.63	0.94	1.50	3.25	4.00	3.50	3.13	0.80	0.06
1	24-26	13/16-7/8	78	1039735	1039744	15.50	10.56	2.00	2.00	1.13	1.75	3.75	4.50	4.00	3.75	0.88	0.06
1-1/8	28-30	15/16-1	92	1039753	1039762	21.50	11.81	2.25	2.25	1.25	2.00	4.12	5.00	4.62	4.12	1.00	0.12
1-1/4 - 1-3/8	32-35	1-1/16 - 1-1/8	136	1039771	1039780	31.00	13.19	2.50	2.50	1.50	2.25	4.75	5.50	5.00	4.75	1.13	0.12
1-1/2	38	1-3/16 - 1-1/4	170	1039799	1039806	47.25	15.12	3.00	2.75	1.63	2.75	5.25	6.00	6.00	5.38	1.19	0.12
*1-5/8	*40-42	1-5/16 - 1-3/8	188	1039815	1039824	55.00	16.25	3.00	3.00	1.75	3.00	5.50	6.50	6.50	5.75	1.31	0.12
*1-3/4 - 1-7/8	*44-48	1-7/16 - 1-5/8	268	1039833	1039842	82.00	18.25	3.50	3.50	2.00	3.13	6.38	7.50	7.00	6.50	1.56	0.12
*2 - 2-1/8	*50-54	1-11/16 - 1-3/4	291	1039851	1039860	129.00	21.50	4.00	3.75	2.25	3.75	7.38	8.50	9.00	7.00	1.81	0.12
*2-1/4 - 2-3/8	*56-60	1-13/16 - 1-7/8	360	1039879	1039888	167.00	23.50	4.50	4.25	2.50	4.00	8.25	9.00	10.00	7.75	2.13	0.12
*2-1/2 - 2-5/8	*64-67	1-15/16 - 2-1/8	424	1041633	1041642	252.00	25.50	5.00	4.75	2.88	4.50	9.25	9.75	10.75	8.50	2.38	0.12
*2-3/4 - 2-7/8	*70-73	2-3/16 - 2-7/16	511	1041651	1041660	315.00	27.25	5.25	5.00	3.12	4.88	10.50	11.00	11.00	9.00	2.88	0.25
*3 - 3-1/8	*75-80	2-1/2 - 2-5/8	563	1041679	1041688	380.00	29.00	5.75	5.25	3.38	5.25	11.12	12.00	11.25	9.50	3.00	0.25
*3-1/4 - 3-3/8	*82-86	2-3/4 - 2-7/8	722	1041697	1041704	434.00	30.88	6.25	5.50	3.62	5.75	11.88	13.00	11.75	10.00	3.12	0.25
*3-1/2 - 3-5/8	*88-92	3 - 3-1/8	779	1041713	1041722	563.00	33.25	6.75	6.00	3.88	6.50	12.38	14.00	12.50	10.75	3.25	0.25
*3-3/4 - 4	*94-102	-	875	1041731	1041740	783.00	36.25	7.50	7.00	4.25	7.25	13.62	15.00	13.50	12.50	3.50	0.25

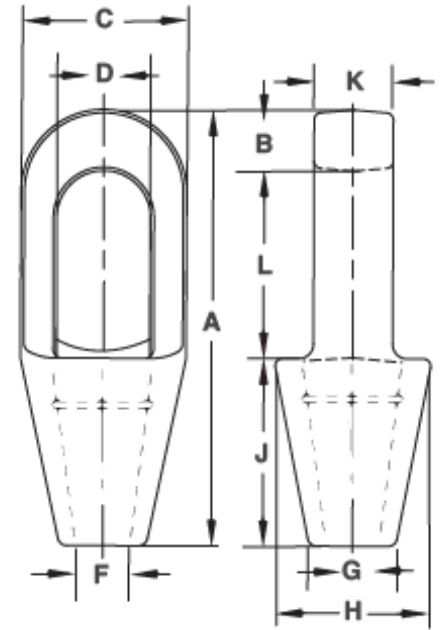
\* Cast Alloy Steel. NOTE: AVAILABLE WITH BOLT NUT AND COTTER.



NOTICE: All cast steel sockets 1-5/8" and larger are magnetic particle inspected and ultrasonic inspected. Proof testing available on special order. Drawing illustrates one groove used on sockets 5/16" through 3/4". Sizes 7/8" through 1-1/2" use 2 grooves. Sizes 1-5/8" and larger use 3 grooves.



- Forged Steel Sockets through 1-1/2", cast alloy steel 1-5/8" through 4".
- Spelter socket terminations have an efficiency rating of 100%, based on the catalog strength of wire rope.
- Ratings are based on recommended use with 6 x 7, 6 x 19, or 6 x 37, IPS or XIP (EIP), XXIP (EEIP), RRL, FC, or IWRC wire rope.
- Strand constructed with minimal number of wires (e.g. 1 x 7) requires special consideration that socket basket length be five (5) times the strand diameter or fifty (50) times the wire diameter, whichever is the greater.



**G-417/S-417**

Closed Grooved Sockets meet the performance requirements of Federal Specification RR-S-550, Type B, except for those provisions required of the contractor.

**G-417 / S-417 Closed Spelter Sockets**

Rope Dia.		Structural Strand Dia. (in)	Ultimate Load (t)	Stock No.		Weight Each (lb)	Dimensions (in)									
(in.)	(mm)			G-417 Galv.	S-417 S.C.		A	B	C	D*	F	G	H	J	K	L
5/16-3/8	8-10	-	12.0	1039913	1039922	0.75	4.94	0.62	1.69	0.97	0.50	0.81	1.69	2.25	0.69	2.06
7/16-1/2	11-13	-	20.0	1039931	1039940	1.50	5.50	0.69	2.00	1.16	0.56	0.94	2.00	2.50	0.88	2.31
9/16-5/8	14-16	1/2	30.8	1039959	1039968	2.50	6.31	0.81	2.63	1.41	0.69	1.12	2.38	3.00	1.00	2.50
3/4	18	9/16-5/8	43.5	1039977	1039986	4.25	7.62	1.06	3.00	1.66	0.88	1.25	2.75	3.50	1.25	3.06
7/8	20-22	11/16-3/4	65.3	1039995	1040000	7.25	8.75	1.25	3.63	1.94	1.00	1.50	3.25	4.00	1.50	3.50
1	24-26	13/16-7/8	81.6	1040019	1040028	10.50	9.91	1.41	4.13	2.30	1.13	1.75	3.75	4.50	1.75	4.00
1-1/8	28-30	15/16-1	100	1040037	1040046	14.25	11.00	1.50	4.50	2.56	1.25	2.00	4.13	5.00	2.00	4.50
1-1/4 - 1-3/8	32-35	1-1/16 - 1-1/8	136	1040055	1040064	19.75	12.12	1.63	5.00	2.81	1.50	2.25	4.75	5.50	2.25	5.00
1-1/2	38	1-3/16 - 1-1/4	170	1040073	1040082	29.20	13.94	1.94	5.38	3.19	1.63	2.75	5.25	6.00	2.50	6.00
† 1-5/8	† 40-42	1-5/16 - 1-3/8	188	1040091	1040108	36.00	15.13	2.13	5.75	3.25	1.75	3.00	5.50	6.50	2.75	6.50
† 1-3/4 - 1-7/8	† 44-48	1-7/16 - 1-5/8	268	1040117	1040126	57.25	17.25	2.19	6.75	3.75	2.00	3.13	6.38	7.50	3.00	7.56
† 2 - 2-1/8	† 50-54	1-11/16 - 1-3/4	309	1040135	1040144	79.00	19.87	2.44	7.63	4.38	2.25	3.75	7.38	8.50	3.25	8.81
† 2-1/4 - 2-3/8	† 56-60	1-13/16 - 1-7/8	360	1040153	1040162	105.00	21.50	2.75	8.50	5.00	2.63	4.13	8.25	9.00	3.63	9.75
† 2-1/2 - 2-5/8	† 64-67	1-15/16 - 2-1/8	424	1041759	1041768	140.00	23.50	3.12	9.50	5.50	2.88	4.50	9.25	9.75	4.00	10.62
† 2-3/4 - 2-7/8	† 70-73	2-3/16 - 2-7/16	549	1041777	1041786	220.00	25.38	3.12	10.75	6.25	3.12	4.88	10.19	11.00	4.88	11.25
† 3 - 3-1/8	† 75-80	2-1/2 - 2-5/8	656	1041795	1041802	276.00	27.12	3.37	11.50	6.75	3.38	5.25	11.50	12.00	5.25	11.75
† 3-1/4 - 3-3/8	† 82-86	2-3/4 - 2-7/8	750	1041811	1041820	313.00	29.25	4.00	12.25	7.25	3.62	5.75	12.25	13.00	5.75	12.25
† 3-1/2 - 3-5/8	† 88-92	3 - 3-1/8	820	1041839	1041848	400.00	31.00	4.00	13.00	7.75	3.88	6.31	13.00	14.00	6.25	13.00
† 3-3/4 - 4	† 94-102	-	1005	1041857	1041866	542.00	33.25	4.25	14.25	8.50	4.25	7.25	14.25	15.00	7.00	14.00

\* Diameter of pin must not exceed pin used on companion 416 socket. Reference adjacent page "D" dimension. † Cast Alloy Steel.



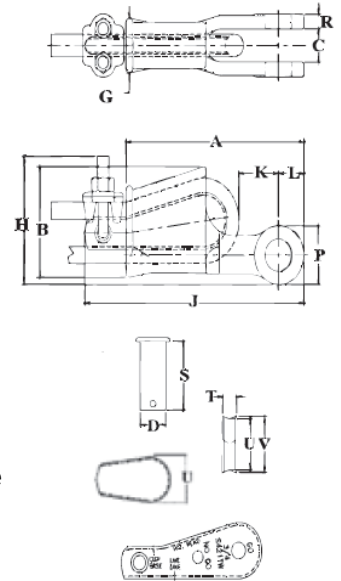
NOTICE: All cast steel sockets 1-5/8" and larger are magnetic particle inspected and ultrasonic inspected. Proof testing available on special order. Drawing illustrates one groove used on sockets 5/16" through 3/4". Sizes 7/8" through 1-1/2" use 2 grooves. Sizes 1-5/8" and larger use 3 grooves.



**S-421T**

Wedge sockets meet the performance requirements of Federal Specification RR-S-550F, Type C, except those provisions required of the contractor.

- Wedge socket terminations have an efficiency rating of 80% based on the catalog strength of XXI wire rope.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these sockets meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- Type Approval certification in accordance with ABS RULES FOR CONDITIONS OF CLASSIFICATION, PART 1 2017 STEEL VESSELS AND ABS GUIDE FOR CERTIFICATION OF LIFTING APPLIANCES 2017 available. Certificates available when requested at time of order and may include additional charges
- Basket is cast steel and individually magnetic particle inspected.
- Pin diameter and jaw opening allows wedge and socket to be used in conjunction with closed swage and spelter sockets.
- Secures the tail or "dead end" of the wire rope to the wedge, thus eliminates loss or "Punch out" of the wedge.
- Eliminates the need for an extra piece of rope, and is easily installed.
- The TERMINATOR™ wedge eliminates the potential breaking off of the tail due to fatigue.
- The tail, which is secured by the base of the clip and the wedge, is left undeformed.
- Incorporates Crosby's patented QUIC-CHECK® "Go" and "No-Go" feature cast into the wedge. The proper size rope is determined when the following criteria are met:
  - The wire rope should pass thru the "Go" hole in the wedge.
  - The wire rope should NOT pass thru the "No-Go" hole in the wedge.
- Utilizes standard Crosby Red-U-Bolt® wire rope clip.
- The 3/8 through 1-1/8 standard S-421 wedge socket can be retrofitted with the new style TERMINATOR wedge.
- Available with Bolt, Nut, and Cotter Pin.
- U.S. patent 5,553,360, Canada patent 2,217,004 and foreign equivalents.
- Meets the performance requirements of EN 13411-6.
- Available with API-2C certification upon request



**S-421T Wedge Sockets**

Assembly includes Socket, Wedge, Pin and Wire Rope Clip

Wire Rope Dia.										Dimensions (in.)													
(in.)	(mm)	S-421T Stock No.	S-421TB Stock No.	Weight Each (lb)	Wedge Only	Weight Each (lb)	Standard Bolt, Nut, & Cotter Assy	Weight Each (lb)	A	B	C +/- .09	D	G	H	J*	K*	L	P	R	S	T	U	V
3/8	9-10	1035000	1035203	3.30	1035555	0.50	2038971	0.38	5.69	2.72	0.81	0.81	1.38	3.06	7.80	1.88	0.88	1.56	0.44	2.13	0.44	1.25	1.38
1/2	11-13	1035009	1035212	6.10	1035564	1.05	2038972	0.69	6.88	3.47	1.00	1.00	1.62	3.76	8.91	1.26	1.06	1.94	0.50	2.56	0.53	1.75	1.88
5/8	14-16	1035018	1035221	10.5	1035573	1.79	2038974	1.15	8.25	4.30	1.25	1.19	2.12	4.47	10.75	1.99	1.22	2.25	0.56	3.25	0.69	2.00	2.19
3/4	18-19	1035027	1035230	16.4	1035582	2.60	2038976	1.91	9.88	5.12	1.50	1.38	2.44	5.28	12.36	2.41	1.40	2.63	0.66	3.63	0.78	2.34	2.56
7/8	20-22	1035036	1035249	24.8	1035591	4.00	2038978	3.23	11.25	5.85	1.75	1.63	2.69	6.16	14.37	2.48	1.67	3.13	0.75	4.31	0.88	2.69	2.94
1	24-26	1035045	1035258	35.5	1035600	5.37	2038980	5.40	12.81	6.32	2.00	2.00	2.94	6.96	16.29	3.04	2.00	3.75	0.88	4.70	1.03	2.88	3.28
1-1/8	28	1035054	1035267	48.8	1035609	7.30	2038982	7.50	14.38	6.92	2.25	2.25	3.31	7.62	18.34	2.56	2.25	4.25	1.00	5.44	1.10	3.25	3.56
1-1/4	30-32	1035063	1035276	71.5	1035618	10.60	2038984	10.34	16.34	8.73	2.62	2.50	3.56	9.39	20.48	2.94	2.34	4.50	1.06	6.13	1.19	4.62	4.94

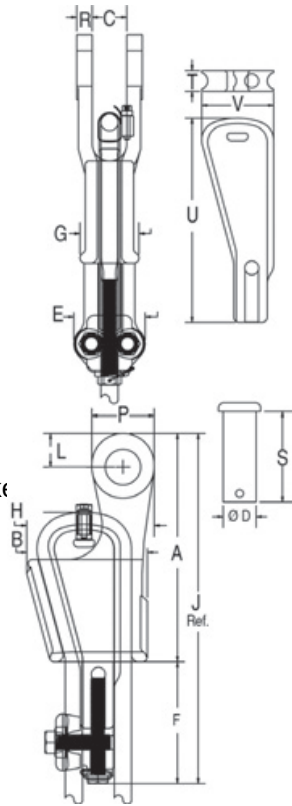
\* Nominal NOTE: For intermediate wire rope sizes, use next larger size socket. The S-423T Super TERMINATOR wedge is designed to be assembled only into the Crosby S-421T TERMINATOR socket body. IMPORTANT: The S-423TW for sizes 5/8" through 1-1/8" (14mm through 28mm) will fit respective size standard Crosby S-421T basket. The 1-1/4" (30-32mm) S-423TW will only fit the Crosby S-421T 1-1/4" basket marked with TERMINATOR.



**S-423T**

Wedge sockets meet the performance requirements of Federal Specification RR-S-550F, Type C, except those provisions required of the contractor.

- The 423T wedge socket terminations have a minimum efficiency rating on most high performance, high strength, compacted strand, rotation resistant wire ropes of 80% based on the catalog breaking strength of the various ropes.\*\*
- Design eliminates the difficulty of properly seating the wedge with high performance wire rope into a wedge socket termination.
- Proper application of the Super TERMINATOR eliminates the “first load” requirement of conventional wedge socket terminations.
- S-423TW Wedge Kit can be retrofitted onto existing Crosby S-421 TERMINATOR wedge sockets.
- Wedge and accessories provided with a zinc finish
- Meets the performance requirements of EN13411-6.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these sockets meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- US Patent 6,898,827.
- Basket is cast steel and individually magnetic particle inspected.
- Pin diameter and jaw opening allows wedge and socket to be used in conjunction with closed swage and spelter sockets.
- Secures the tail or “dead end” of the wire rope to the wedge, thus eliminates loss or “punch out” of the wedge.
- Eliminates the need for an extra piece of rope, and is easily installed.
- The TERMINATOR® wedge eliminates the potential breaking off of the tail due to fatigue.
- The tail, which is secured by the base of the clip and the tension device, is left undeformed.
- Available with Bolt, Nut, and Cotter Pin.
- Available with API-2C certification upon request.



**S-423T Wedge Sockets** Assembly includes Socket, Wedge, Pin, Wire Rope Clip, Tensioner, Bolts and Secondary Retention Wire.

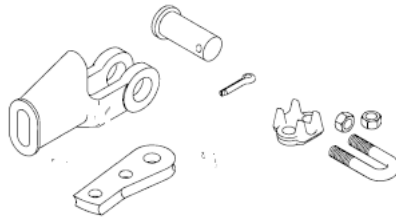
Wire Rope Dia.		S-423T Assembly with Round Pin & Cotter Pin			S-423TB Assembly with Bolt, Nut, & Cotter Pin			S-423TW** Wedge Kit		
(in.)	(mm)	S-423T Stock No.	S-423T Weight Each		S-423TB Stock No.	S-423TB Weight Each		S-423TW Stock No.	S-423TW Weight Each	
			(lb)	(kg)		(lb)	(kg)		(lb)	(kg)
5/8	14-16	1035123	12.7	5.8	1035218	13.1	5.9	1034018	5.2	2.4
3/4	18-19	1035132	19.4	8.8	1035227	19.1	8.7	1034027	7.2	3.3
7/8	20-22	1035141	28.8	13.1	1035236	27.8	12.6	1034036	10.3	4.7
1	24-26	1035150	39.2	17.8	1035245	37.3	16.9	1034045	11.9	5.4
1-1/8	28	1035169	57.1	25.9	1035254	57.9	25.9	1034054	19.9	9.0
1-1/4	30-32	1035178	88.6	40.2	1035272	88.1	39.9	1034063	33.8	15.3

\*\*Kit contains Wedge, Wire Rope Clip and Bolts, Tensioner Bolt and Secondary Retention Wire.

Wire Rope Dia.		S-423T Stock No.	Dimensions (in)																
(in)	(mm)		A	B	C	D	E	F	G	H	J*	K	L	P	R	S	T	U	V
5/8	14-16	1035123	8.25	4.50	1.25	1.19	3.00	4.06	2.13	4.61	12.31	1.09	1.22	2.25	.56	3.25	.75	6.88	2.60
3/4	18-19	1035132	9.88	5.20	1.50	1.38	3.25	4.81	2.44	5.37	14.69	1.50	1.40	2.62	.66	3.63	.88	7.65	3.02
7/8	20-22	1035141	11.25	5.88	1.75	1.63	3.81	5.73	2.69	6.16	16.98	1.59	1.67	3.13	.75	4.31	1.00	9.47	3.47
1	24-26	1035150	12.81	6.56	2.00	2.00	3.81	5.73	2.94	7.05	18.54	1.44	2.01	3.75	.88	4.70	1.13	10.41	3.82
1-1/8	28	1035169	14.38	6.94	2.25	2.25	4.00	6.85	3.38	7.81	21.23	1.12	2.26	4.25	1.00	5.44	1.25	11.83	4.22
1-1/4	30-32	1035178	16.34	8.63	2.62	2.50	4.50	7.76	3.57	9.38	24.10	1.50	2.34	4.50	1.06	6.62	1.38	13.87	5.82

\* Nominal NOTE: For intermediate wire rope sizes, use next larger size socket. The S-423T Super TERMINATOR wedge is designed to be assembled only into the Crosby S-421T TERMINATOR socket body. IMPORTANT: The S-423TW for sizes 5/8" through 1-1/8" will fit respective size standard Crosby S-421 basket. The 1-1/4" S-423TW will only fit the Crosby S-421 1-1/4" basket marked with TERMINATOR.



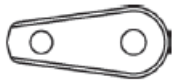


**S-421T / US-422T  
"TERMINATOR"™**

Extended Wedge Socket Assembly U.S. Patent No. 5,553,360 and Canada Patent No. 2,217,004

**NOTE:** The design of the basket for the S-421T 1-1/4" TERMINATOR™ Wedge Socket does not allow proper fit to the old style Crosby S-421W wedge (see Fig. 1). Do not assemble or use. The design of the basket for each US-422T TERMINATOR™ Wedge Socket does not allow proper fit to the old style UWO-422 wedge (See Fig. 1). Do not assemble or use. All S-421T and US-422T TERMINATOR™ baskets are marked with a capital "T" or TERMINATOR™.

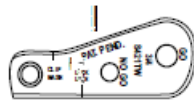
**Non TERMINATOR™  
Wedge**



**S-421W  
UWO-422**

**Figure 1**

**TERMINATOR™**



**S-421TW  
UWO-422T**

**QUIC-CHECK®** "Go" and "No-Go" features cast into wedge. The proper size wire rope is determined when the following criteria are met:

1. The wire rope shall pass thru the "Go" hole in the wedge.
2. The wire rope shall NOT pass thru the "No-Go" hole in the wedge.

**IMPORTANT SAFETY INFORMATION**

- Always inspect socket, wedge and pin before using.
- Do not use part showing cracks.
- Do not use modified or substitute parts.
- Repair minor nicks or gouges to socket or pin by lightly grinding until surfaces are smooth. Do not reduce original dimension more than 10%. Do not repair by welding.
- Inspect permanent assemblies annually, or more often in severe operating conditions.
- Do not mix and match wedges or pins between models or sizes.
- Always select the proper wedge and socket for the wire rope size.

**ASSEMBLY SAFETY**

- Use only with standard 6 to 8 strand wire rope of designated size. For intermediate size rope, use next larger size socket. For example: When using 9/16" diameter wire rope use a 5/8" size Wedge Socket Assembly. Welding of the tail on standard wire rope is not recommended. Seizing of the tail is preferred following the recommended practices of the wire rope manufacturer. The tail length of the dead end should be a minimum of 6 rope diameters but not less than 6" (See Figure 2).
- **To use with Rotation Resistant wire rope** (special wire rope constructions with 8 or more outer strands) ensure that the dead end is welded, brazed or seized before inserting the wire rope into the wedge socket to prevent core slippage or loss of rope lay. Seizing of the tail is preferred following the recommended practices of the wire rope manufacturer. The tail length of the dead end should be a minimum of 20 rope diameters but not less than 6" (See Figure 2).
- Properly match socket, wedge and clip (See Table 1) to wire rope size.
- Align live end of rope, with center line of pin.(See Figure 2)
- Secure dead end section of rope. (See Figure 2)
- Tighten nuts on clip to recommended torque. (See Table 1)
- Do not attach dead end to live end or install wedge backwards (See Fig. 3).
- Use a hammer to seat Wedge and Rope as deep into socket as possible before applying first load.



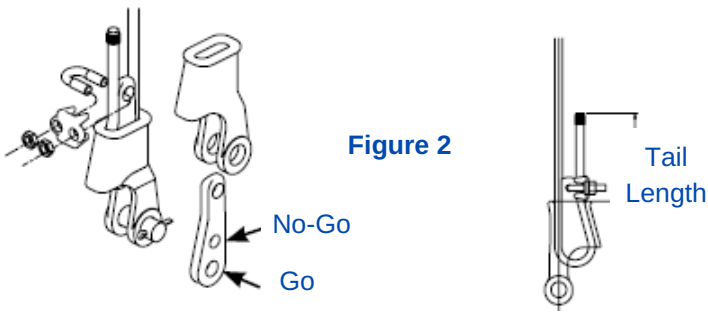


**GENERAL WARNINGS**

- Loads may slip or fall if the Wedge Socket is not properly installed.
- Load misapplied in direct contact with the wedge can dislodge the wedge and cause loss of load.
- A falling load can seriously injure or kill.
- Read and understand these instructions before installing the Wedge Socket.
- Do not side load the Wedge Socket.
- Apply first load to fully seat the Wedge and Wire Rope in the socket. This load should be of equal or greater weight than loads expected in use.
- Do not interchange wedges between S-421T and US422T or between sizes.
- Do not assemble an old style 1-1/4" (30-32mm)S-421W wedge into an S-421T 1-1/4" (30-32mm) TERMINATOR™ basket.
- Do not assemble an old style UWO-422 wedge into a US-422T TERMINATOR™ basket.

**OPERATING SAFETY**

- Apply first load to fully seat the Wedge and Wire Rope in the socket. This load should be of equal or greater weight than loads expected in use.
- Efficiency rating of the Wedge Socket termination is based upon the catalog breaking strength of Wire Rope. The efficiency of a properly assembled Wedge Socket is 80%.
- During use, do not strike the dead end section or wedge with any other elements of the rigging (Called two blocking).
- Do not allow a direct load to contact the wedge.



**Figure 2**

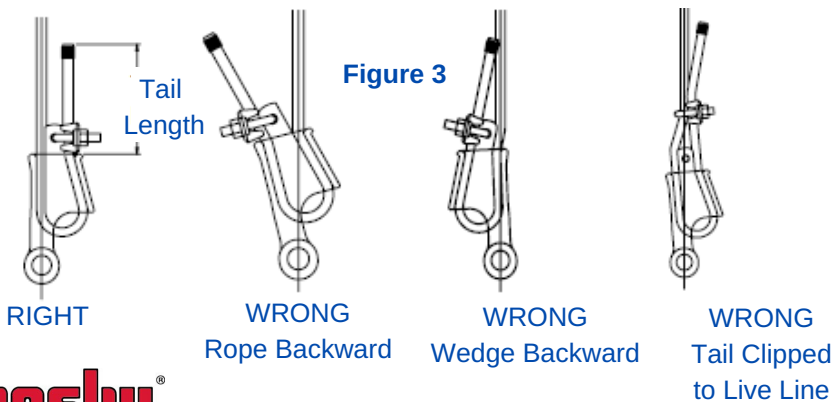
<b>*Tail Length</b>	
<b>Standard 6 to 8 Strand Wire Rope</b>	<b>Rotation Resistant Wire Rope</b>

A minimum of 6 rope diameters, but not less than 6" A minimum of 20 rope diameters, but not less than 6"

**Table 1**

Rope Size (in)	3/8	1/2	5/8	3/4	7/8	1	1-1/8	1-1/4
Clip Size (in)	3/8	1/2	5/8	3/4	7/8	1	1-1/8	1-1/4
*Torque Ft/lbs	45	65	95	130	225	225	225	360

\* The tightening torque values shown are based upon the threads being clean, dry, and free of lubrication.

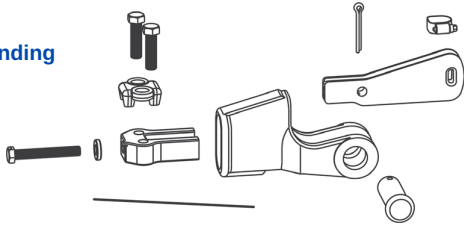


**Figure 3**





Patent Pending



### S-423T "SUPER TERMINATOR™"

The intended purpose of the SUPER TERMINATOR™ is to offer a Wedge Socket termination, which when assembled properly with high performance, high strength, compacted strand, rotation resistant wire rope will achieve an 80% termination efficiency. Due to the unique construction of these ropes, Crosby cannot make a broad general statement that all current and future designed ropes, when properly assembled with a SUPER TERMINATOR™, will achieve a minimum 80% termination efficiency. (To determine the efficiency rating for a specific rope, contact Crosby Engineering at 918-834-4611.)

The SUPER TERMINATOR™ may be purchased as a complete Wedge Socket assembly or the Wedge assembly may be purchased for retrofit onto your Crosby S-421T wedge socket basket.

The Crosby S-423TW SUPER TERMINATOR™ Wedge is designed to be assembled only into the Crosby S-421T socket basket. For the 1-1/4" S-423TW, assemble only on to S-421T basket marked TERMINATOR™.

### IMPORTANT SAFETY INFORMATION - READ & UNDERSTAND INSPECTION/MAINTENANCE SAFETY

- Always inspect socket, wedge and pin before using.
- Do not use part showing cracks.
- Do not use modified or substitute parts.
- Repair minor nicks or gouges to socket or pin by lightly grinding until surfaces are smooth. Do not reduce original dimension more than 10%. Do not repair by welding.
- Inspect permanent assemblies annually, or more often in severe operating conditions.
- Do not mix and match wedges or pins between models or sizes.
- Always select the proper wedge and socket for the wire rope size.

### ASSEMBLY SAFETY

- Properly match socket and wedge assembly to wire rope size.
- Ensure the dead end is properly seized before inserting the wire rope into the wedge socket basket. High performance, high strength, compacted strand, rotation resistant wire ropes are sensitive to seizing methods. For specific seizing procedures, contact the wire rope manufacturer.
- The tail length of the dead end should be a minimum of 20 rope diameters but not less than 10" (See Fig. 1).
- Mount wedge socket basket in vice.
- Insert live end of wire rope into wedge basket, aligning live end of rope with center line of pin. Make a loop and return. (See Figure 2).
- Pull on live line to remove excess out of loop, leaving enough room to properly insert wedge into basket. (See Figure 3).
- Secure rope to SUPER TERMINATOR™ Wedge with clamp (See Figure 4).
- Pull Wedge and rope into basket until tensioner bolt, with washers properly applied, can engage threads in nose of wedge. Auxilliary power may be required to fully pull wedge and rope into basket. (See Figure 5).
- Use torque wrench to tighten tensioner bolt to recommended torque value, properly seating wedge and rope into basket. Reference Table 1 for recommended Torque in Ft. Lbs.
- Secure dead end section of rope with clip base. Tighten bolts to recommended torque values (See Table 1).
- Properly install wire to securely lock tensioner bolt to tensioner. (See Figure 6).
- Do not attach dead end to live end or install wedge backwards. (See Figure 7).

### OPERATING SAFETY

- Proper application of the Super TERMINATOR™ eliminates the "first load" requirement of conventional wedge socket terminations.
- Efficiency rating of the Wedge Socket termination is based upon the catalog breaking strength of Wire Rope. The efficiency of a properly assembled Super Terminator on most high performance, high strength, compacted strand, rotation resistant ropes will achieve 80% of catalog breaking strength of rope, depending on the unique construction of these ropes. (To determine the efficiency rating for a specific rope, contact Crosby Engineering at 918-834-4611.)
- During use, do not strike the dead end section or wedge with any other elements of the rigging (Called two blocking).
- The SUPER TERMINATOR™ wedge socket may also be used with standard 6 to 8 strand and rotation resistant wire rope (special wire rope constructions with 8 or more strands).
- Do not allow direct load to contact the wedge.



**GENERAL WARNINGS**

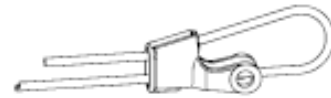
- Loads may slip or fall if the Wedge Socket is not properly installed.
- A falling load can seriously injure or kill.
- Load misapplied in direct contact with the wedge can dislodge the wedge and cause loss of load.
- Read and understand these instructions before installing the Wedge Socket.
- Do not side load the Wedge Socket.
- Apply recommended torque to tensioner and clip bolts, and properly install wire to securely lock tensioner bolt to tensioner.
- Do not assemble the S-423 Wedge in any brand or model socket basket other than the Crosby S-421T TERMINATOR™.
- The size is marked on the socket basket and wedge, do not interchange wedge between sizes.



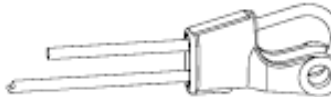
**Figure 1**

Tail Length

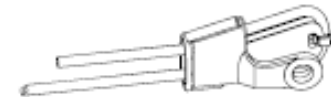
**Tail Length**  
A minimum of 20  
rope diameters,  
but not less than 10"



**Figure 2**



**Figure 3**

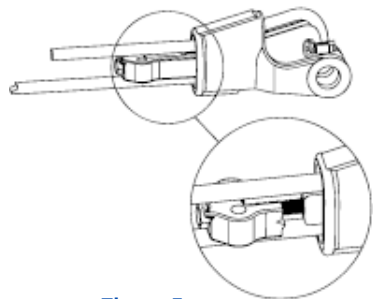


**Figure 4**

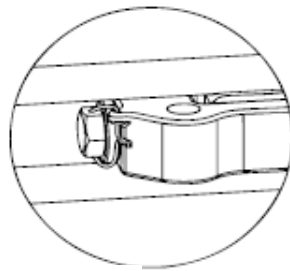


<b>Table 1 S-423T Torque Value Table</b>		
<b>Wedge Size (in)</b>	<b>Tensioner Bolt Torque Ft/lbs*</b>	<b>Clip Bolts Torque Ft/lbs</b>
5/8	110	95
3/4	150	130
7/8	380	225
1	380	225
1-1/8	600	225
1-1/4	900	360

\* The tightening torque values shown are based upon the threads being clean, dry, and free of lubrication.



**Figure 5**



**Figure 6**



**RIGHT**



**WRONG  
Rope Backward**



**WRONG  
Wedge Backward**



**WRONG  
Tail Clipped  
to Live Line**

**Figure 7**