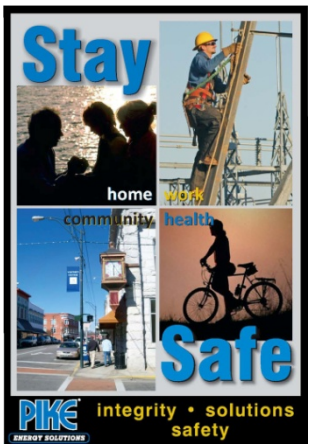


Pike Electric Stay Safe Alert

Sling Safety

Reason for Alert:

During a pulling operation, a transmission conductor was dropped on distribution underbuild because of incorrect rigging and sling use.

Rules for Working with a Sling

- Inspect slings before use
- Immediately removed damaged slings from service
- Store slings in a manner such that they will not be damaged
- Never exceed the rated capacity of a sling

What this Means to You:

To help ensure safety in tasks that involve slings, you must use a sling that is in good working condition within the safe working capacity of the sling as recommended by the manufacturer.

Sling Inspection

- All slings (synthetic or steel) should be inspected before use
- All slings must be labeled
- Any sling that does not pass inspection should be immediately removed from service

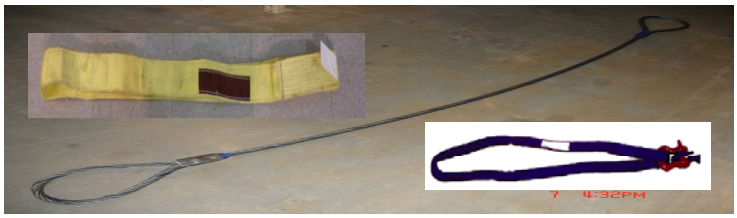
- Inspect synthetic web slings for:
  - Acid or caustic burns
  - Melting or charring to any part of the sling surface
  - Snags, punctures, tears or cuts
  - Broken or worn stitches
  - Other signs of damage

Inspect steel slings for:

- Excessive broken wires
- Kinking
- Bird Caging
- Crushing
- Deformation

Sling Safety

- **Never** exceed the rated capacity
- **Never** use a damaged sling
- **Never** shorten with knots, bolts or other devices
- **Always** protect slings from sharp edges of the load
- **Always** keep hands and fingers clear of slings under tension
- **Always** be aware of down strain at dead end poles and take that into account when calculating sling capacity



Sling Storage

- Store in a dry environment out of sunlight
- Store off the floor or ground to prevent corrosion
- Hang from hook to prevent tangling
- Store away from electrical sources
- Store by sling type (don't mix steel slings with synthetics, etc.)

This information is intended only for the use of Pike Electric Employees or customers
Pictures may be staged to provide emphasis and/or demonstrate conditions that may be encountered in the field

Sling Safety

Slings

- Inspection
- Storage
- Lifting Capacity
- Working Rules for Slings
- Slings used by Pike

Inspection

Inspection

- All slings (synthetic or steel) should be inspected before use
- All slings must be labeled
- Any sling that does not pass inspection should be immediately removed from service

Inspection

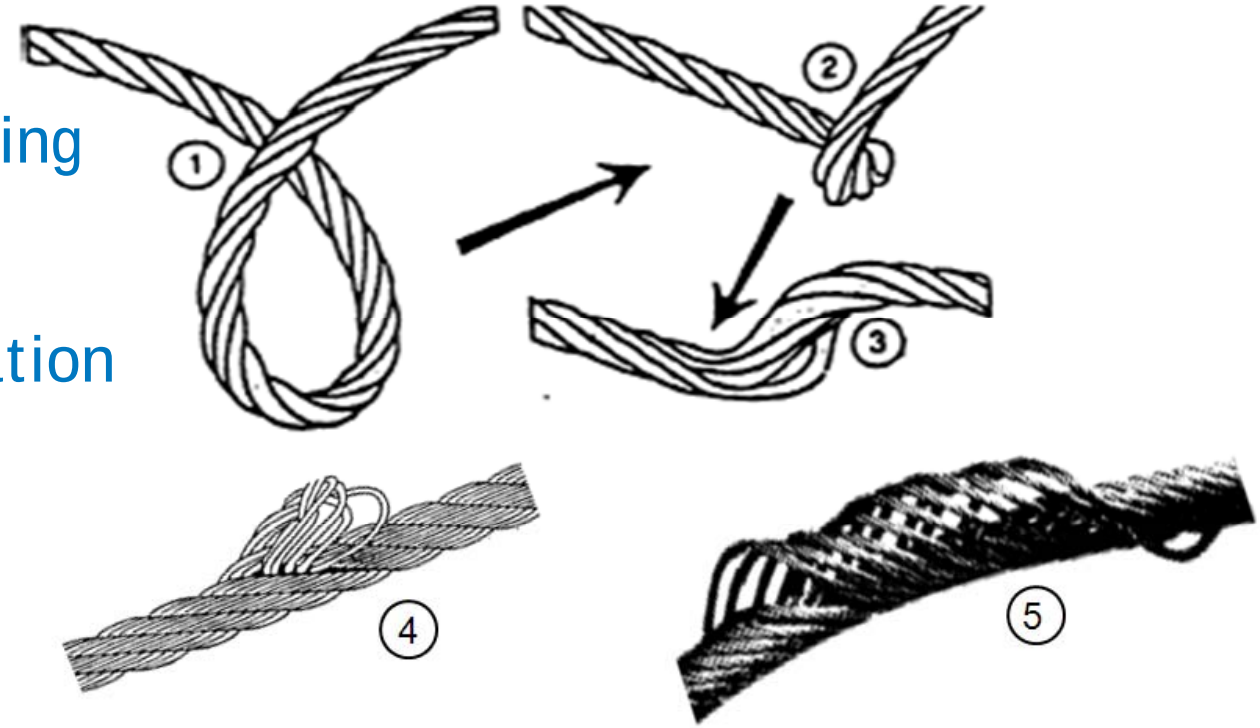
- Synthetic web slings must be inspected daily before use
- Each synthetic web sling must be marked or coded with:
  - Name or trademark of manufacturer
  - Rated capacities for type of hitch to be used
  - Type of material
- Synthetic slings must be removed from service if they do not pass inspection

Inspection

- Synthetic web slings will be immediately taken out of service if any of the following conditions are present:
  - Acid or caustic burns
  - Melting or charring o any part of the sling surface
  - Snags, punctures, tears or cuts
  - Broken or worn stitches
  - Other signs of damage

Inspection

- Steel slings should be inspected for:
  1. Excessive broken wires
  2. Kinking
  3. Bird Caging
  4. Crushing
  5. Deformation



Storage

Storage

- Store in a dry environment out of sunlight
- Store off the floor or ground to prevent corrosion
- Hang from hook to prevent tangling
- Store away from electrical sources
- Store by sling type (don't mix steel slings with synthetics, etc.)

Lifting Capacity

Lifting Capacity

- Never try to lift a load that exceeds the capacity of your sling
- Take factors such as sling angle and down strain into account when determining safe working load of a sling

Working Rules for Slings

Working Rules for Slings

- **Never** exceed the rated capacity
- **Never** use a damaged sling
- **Never** shorten with knots, bolts or other devices
- **Always** protect slings from sharp edges of the load
- **Always** keep hands and fingers clear of slings under tension
- **Always** be aware of down strain at dead end poles and take that into account when calculating sling capacity

Slings Used by Pike

I and I Slings

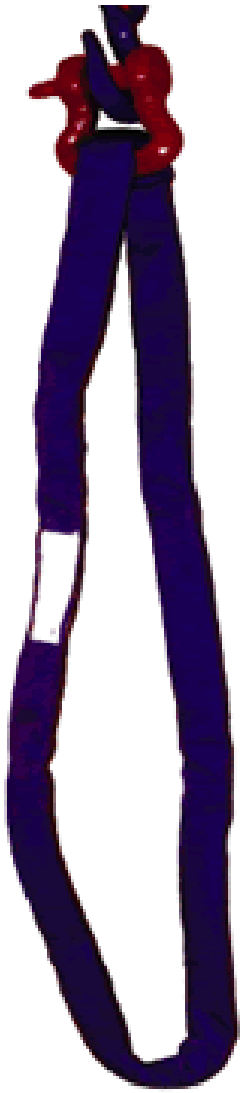
I and I Slings

Pike uses SP3200

SINGLE-PATH ROUND SLINGS

		RATED CAPACITIES (LBS.)				
CODE	COLOR	VERTICAL	CHOKER	BASKET	WIDTH	Approx. Weight lbs. per ft.
SP300	Purple	3,000	2,400	6,000	2"	.30
SP450	Black	4,500	3,600	9,000	2"	.45
SP600	Green	6,000	4,800	12,000	2"	.48
SP900	Yellow	9,000	7,200	18,000	2"	.70
SP1200	Gray	12,000	9,600	24,000	3"	.90
SP1400	Red	14,000	11,200	28,000	3"	.95
SP1700	Brown	17,000	13,600	34,000	3"	1.20
SP2200	Blue	22,000	17,600	44,000	3"	1.40
SP2600	Orange	26,000	20,800	52,000	4"	1.70
SP3200	Orange	32,000	25,600	64,000	4"	1.90
SP5000	Orange	50,000	40,000	100,000	5"	2.70
SP6000	Orange	60,000	48,000	120,000	5"	3.00

Sling cover color can change to meet customer specifications. DO NOT EXCEED RATED CAPACITY.



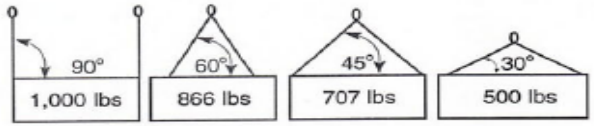
I and I Slings

If red core yarns are visible, if rated load tag is missing or is illegible, do not use the sling. Repair or replace it. ***Frequent inspection*** is done by the person handling the sling before each use and must include all of the ***Before use*** items. ***Periodic inspections*** should be recorded at least annually in normal service, more often if the use is frequent or severe. Recorded, ***Periodic inspections*** are performed by a designated person who records the observed condition and determines when further use would be hazardous.

REPAIR ◆ Field repair is not permitted. Only manufacturers or other qualified persons may make repairs.

LOAD ANGLE CHART

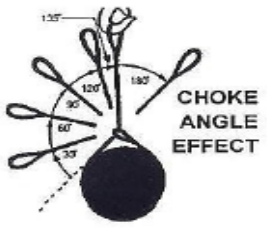
Angle factor *must* be applied to calculate the reduced sling capacity when lifting force is not at 90° to the plane of the load!



Multiply angle factor x sling's vertical rated load to calculate the reduced capacity at that angle.

Angle	Factor	Angle	Factor	Angle	Factor	Angle	Factor
90°	1.0000	70°	0.9397	55°	0.8192	40°	0.6428
80°	0.9848	65°	0.9063	50°	0.7660	35°	0.5736
75°	0.9659	60°	0.8660	45°	0.7071	30°	0.5000

Because of the greatly reduced lifting capacity, use extra care when the **horizontal** lift angle is less than 45° and do not make lifts of less than 30° load angle. *Example*: A sling rated at and lifting 1,000 pounds will be damaged – and could break suddenly – when the lifting angle is less than 30° at which angle the sling's capacity is reduced to only 500 pounds. *Important*: Use a longer sling to increase the angle that will also increase the allowable capacity. For choker hitches, the lifting capacity is reduced by 25% or more, depending on the angle of choke.



ANGLES OF CHOKE	SLING RATED LOAD PERCENTAGE OF SINGLE LEG SLING CAPACITY
120 - 180	75%
90 - 119	65%
60 - 89	55%
30 - 59	40%

⚠WARNING

Can fail if damaged, misused, or overloaded. Inspect before use. Use only if trained. Observe rated load. Pad edges of load to avoid damage to sling. Avoid exposure to acid, alkali, ultraviolet light, sunlight, and temperatures over 180° F. DEATH or INJURY can occur from improper use or care.

RATED LOAD = RATED CAPACITY = WORKING LOAD LIMIT

SYNTHETIC WEB SLINGS

INSTRUCTIONS FOR CARE, USE, INSPECTION, AND REPAIR.

CARE◆ Store in a clean area away from sun and any ultraviolet light source, chemicals or extreme temperatures.

USE ◆ Check weight of load. ◆ Check sling rated load for type of lift and angle of loading (see load angle chart). ◆ Sling shall not be twisted, tied into knots or joined by knotting. ◆ Shackles and other hardware must be inspected and padded if there are edges that could cut the sling. ◆ Be sure that the load cannot cut the sling during the lift by padding corners, edges, protrusions or abrasive surfaces; ***use materials of sufficient strength and thickness***. ◆ Center load on base (bowl) of hook unless hook is designed for point loading. ◆ Balance load. ◆ Maintain load control. ◆ Avoid jerking the load. ◆ Be alert for snagging of load. ◆ Avoid dragging sling over rough surfaces and from under the load. ◆ Choker hitch must choke on webbing, never on a splice or end fitting. ◆ Stand clear of load at all times. ◆ Persons are not to ride on sling or load. ◆ For use in abnormal conditions of heat, cold, chemical activity, consult the manufacturer ◆ Web slings must be used with compatible fittings, hooks and shackles. ◆ Bunching of webbing reduces capacity.

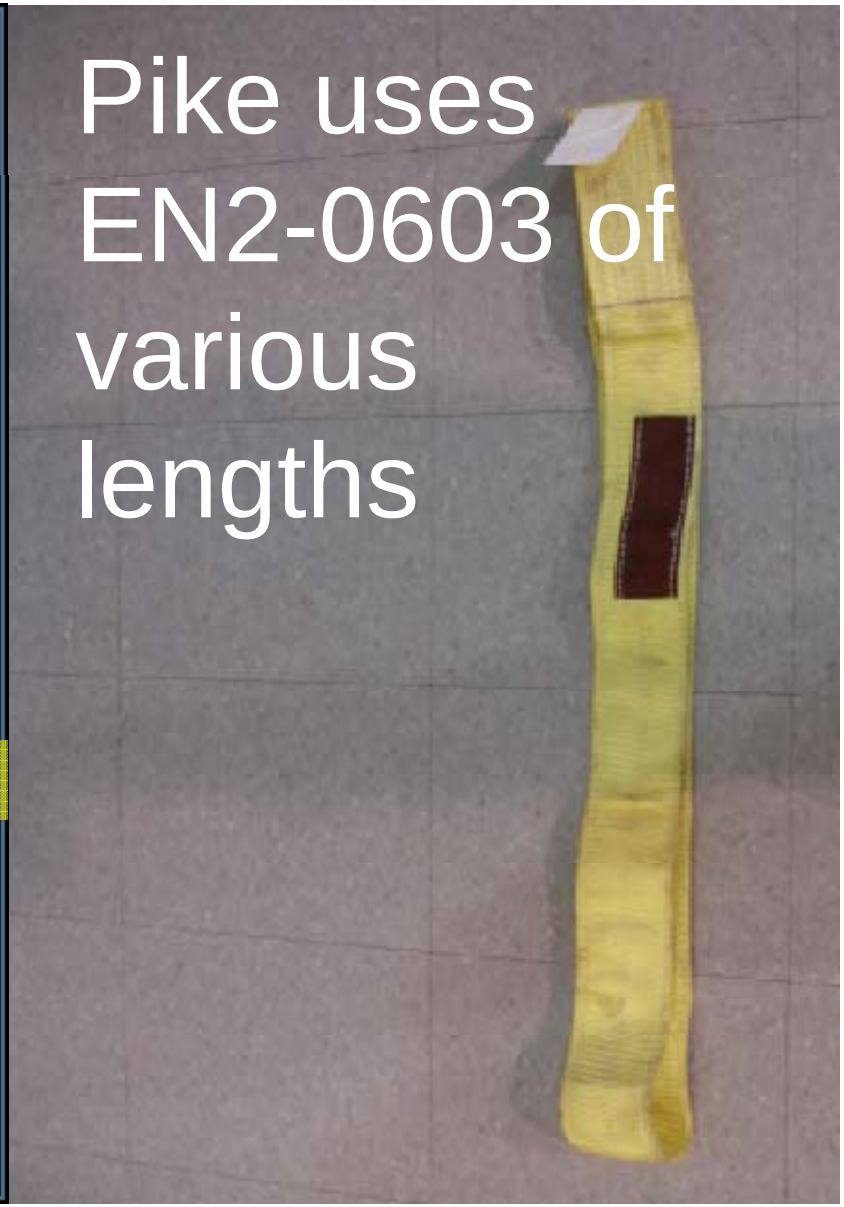
INSPECTION ◆ **Before use:** Check tag for rated load adequate for the lift. Look at webbing for knots, worn eyes, cuts, fraying, melted or charred fabric or chemical damage. Look at hardware for distorted, cracked, worn fitting. **If this wear or damage is present,**

OVER

WearFlex Slings

WearFlex Slings

Order by Stock No. and Length	Sling Width Inches	Rated Capacity Choker @ 30°	Rated Capacity Vertical @ 90°	Rated Capacity Basket @ 90°
EN1-0601	1"	1760	2200	4400
EN1-0901	1"	2480	3100	6200
EN2-0601	1"	3520	4400	8800
EN2-0901	1"	4960	6200	12400
EN1-0601-1/2	1-1/2"	2640	3300	6600
EN1-0901-1/2	1-1/2"	3760	4700	9400
EN2-0601-1/2	1-1/2"	5360	6700	13400
EN2-0901-1/2	1-1/2"	7520	9400	18800
EN1-0602	2"	3520	4400	8800
EN1-0902	2"	4960	6200	12400
EN2-0602	2"	7120	8900	17800
EN2-0902	2"	10000	12500	25000
EN1-0603	3"	5360	6700	13400
EN1-0903	3"	7520	9400	18800
EN2-0603	3"	10720	13400	26800
EN2-0903	3"	15040	18800	37600
EN1-0604	4"	7120	8900	17800
EN1-0904	4"	10000	12500	25000
EN2-0604	4"	14320	17900	35800
EN2-0904	4"	20000	25000	50000
EN1-0606	6"	10720	13400	26800
EN1-0904	6"	15040	18800	37600
EN2-0606	6"	21440	26800	53600
EN2-0906	6"	30080	37600	75200



Certex Slings

EXTRA IMPROVED PLOW STEEL IWRC
RATED CAPACITY IN TONS

CERTEX Cat. Ref. No.	ROPE DIAMETER (INCHES)	VERTICAL	CHOKER	BASKET AT DEGREES			
				VERTICAL BASKET	30 DEGREE	45 DEGREE	60 DEGREE
CX02-0001	1/4	0.85	0.48	1.3	0.85	0.91	1.1
CX02-0002	5/16	1.0	0.74	2.0	1.0	1.4	1.7
CX02-0003	3/8	1.4	1.1	2.9	1.4	2.0	2.5
CX02-0004	7/16	1.9	1.4	3.9	1.9	2.7	3.4
CX02-0005	1/2	2.5	1.9	5.1	2.5	3.6	4.4
CX02-0006	9/16	3.2	2.4	6.4	3.2	4.5	5.5
CX02-0007	5/8	3.9	2.9	7.8	3.9	5.5	6.8
CX02-0008	3/4	5.6	4.1	11	5.6	7.9	9.7
CX02-0009	7/8	7.6	5.6	15	7.6	11	13
CX02-0010	1	9.8	7.2	20	9.8	14	17
CX02-0011	1 1/8	12	9.1	24	12	17	21
CX02-0012	1 1/4	15	11	30	15	21	26
CX02-0013	1 3/8	18	13	36	18	25	31
CX02-0014	1 1/2	21	16	42	21	30	37
CX02-0015	1 5/8	24	18	49	24	35	42
CX02-0016	1 3/4	28	21	57	28	40	49
CX02-0017	1 7/8	32	24	64	32	46	56
CX02-0018	2	37	28	73	37	52	63
CX02-0019	2 1/8	40	31	80	40	56	69
CX02-0020	2 1/4	44	35	89	44	63	77
CX02-0021	2 3/8	49	38	99	49	70	85
CX02-0022	2 1/2	54	42	109	54	77	94
CX02-0023	2 5/8	60	46	119	60	84	103
CX02-0024	2 3/4	65	51	130	65	92	113
CX02-0025	2 7/8	71	55	141	71	100	122
CX02-0026	3	77	60	153	77	108	132
CX02-0027	3 1/8	82	64	165	82	117	143
CX02-0028	3 1/4	89	69	177	89	125	153
CX02-0029	3 3/8	95	74	190	95	135	165
CX02-0030	3 1/2	102	79	203	102	144	176
CX02-0031	4	130	101	260	130	183	224
CX02-0032	4 1/2	160	124	320	160	225	276

RATED CAPACITIES BASKET HITCH BASED ON D/d RATIO OF 25

RATED CAPACITIES BASED ON PIN DIAMETER NO LARGER THAN NATURAL EYE WIDTH OR LESS THAN THE NOMINAL SLING DIAMETER

RATED CAPACITIES BASED ON DESIGN FACTOR OF 5

HORIZONTAL SLING ANGLES LESS THAN 30 DEGREES SHALL NOT BE USED

Rated capacities shown apply only to 6x19 and 6x37 classification wire rope.

CHOKER HITCH RATED CAPACITY ADJUSTMENT	
ANGLE OF CHOKE IN DEGREES	RATED CAPACITY IWRC AND FC ROPE PERCENT**
OVER 120	100
90-120	87
60- 89	74
30- 59	62
0 - 29	49

**Percent of sling rated capacity in a choker hitch.