strandcore
a cwi company

Craftsmen of Wire Rope

WHAT
WE OFFER

Strand Core is a leading Domestic manufacturer of Commercial and Mil-Spec Strand, Aircraft Cable, Wire Rope, and Wire Rope assemblies. With its focus on quality and over 40 years of excellence, Strand Core produces products for multiple industries. We greatly appreciate you taking the time to read about our product offerings and we look forward to working with you.

Craftsmen of Wire Rope

Strand Core has the capability to manufacture strand from .009” and wire rope up to .625” in diameter in many material forms including, but not limited to, stainless, galvanized, bright steel, copper, inconel, phos bronze, and many other specialty metals. We also provide compacting of rope, and produce a variety of cable assemblies per customer specifications, including cable assemblies for helicopter rescue systems and other demanding applications. We provide products used in mission-critical applications that provide high tolerances, resistance to corrosion and durability.

Strand Core is one of the few companies on the government’s Qualified Products List for aircraft control cables under MIL-DTL-83420, non-magnetic aircraft cables under MIL-DTL-18375, and non-rotating cables under MIL-DTL-83140. Beyond critical aircraft applications, our high-performance products go into the automotive, military, medical, sporting goods, agriculture, infrastructure, marine, construction, and general-purpose industries, to name a few. Additionally, Strand Core is a member of the Central Wire Industries (CWI) Rope and Assemblies Division, giving us access to global resources to meet the needs of the current marketplace. Located in Milton, FL, we can provide 100% domestic, Made in USA materials to meet any sourcing requirement our customers have.

CWI ROPE & ASSEMBLIES DIVISION

LOOS & CO. | LOOS & CO. CABLEWARE® DIVISION | Sanlo | strandcore

800-983-9926 | sales@strandcore.com | www.strandcore.com

ABOUT
THIS CATALOG

The product and service information found in this catalog represents a sampling of the strands, cables, wire ropes, and cable assemblies that Strand Core can manufacture or source for you. We offer additional materials and constructions, as well as jacketed, pre-stretched, or otherwise processed and tested products. Put Strand Core and the CWI Rope and Assembly Division to work for you. Visit us at www.strandcore.com, email us at sales@strandcore.com, or call our toll free number to learn more and to request a quotation today!

STRAND CORE
ABOUT US

Craftsmen of Wire Rope Since 1973

In partnership with our customers, Strand Core has built a nearly 50 year history of service, support, and growth. Backed by our decades of knowledge, we are proud to continue our tradition of providing the finest wire rope and aircraft cable, and earning the right to call ourselves true Craftsmen of Wire Rope since 1973.

About Strand Core

Strand Core was founded in 1973 as a division of Industrial Sales in Baltimore, MD. At that time, they manufactured strand up to .125” in diameter, primarily for the automotive industry. In 1983, Al Brown Jr., one of the original partners, retained 100% interest in the company and then moved the company to Westminster, MD in 1987.

The company continued to grow in capacity and capabilities and ten years later, they moved to their current location in Milton, FL. In 2014, Strand Core was purchased by Central Wire Inc. (CWI), a market leader in specialty wire products and the largest re-drawer of stainless steel and nickel alloy wire in North America. Backed by our parent company, Strand Core now has the capability to manufacture strand from .009” and wire rope up to .625” in diameter. We are able to make strand and wire rope from bright carbon steel, galvanized steel, stainless steels, tinned bronze, copper, Inconel®, Monel® and other specialty metals.

Today, backed and supported by the CWI Rope and Assemblies Division, Strand Core is one of the few companies on the government’s “Qualified Products List” for aircraft control cables. We have also developed additional capabilities, including compacting of rope, and can produce a variety of cable assemblies per customer design and specifications, including cable assemblies for helicopter rescue systems, and other demanding applications.

CONTACT US
800-983-9926 | 850.983.9926
5881 Commerce Road
Milton, FL 32583
sales@strandcore.com | strandcore.com

STRAND
COMMERCIAL/MIL-SPEC

strandcore

Strand provides the foundation of performance and durability regardless of material, industry, or application. Our 1x7 and two operation 1x19 offerings provide a strong base for higher wire count cables and ropes, and a non-flexible solution for rigging and staying applications

STAINLESS STEEL

1x7 Preformed T302/404 Non-flexible

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./ 1000 ft	Code
Inches	Metric			
.015	0.40	40	0.53	C
.031	0.80	185	2.5	C
.047	1.20	375	5.5	C
.063	1.60	500	8.5	C
.078	2.00	800	14	C
.093	2.40	1,200	20	C
.109	2.80	1,600	27	C
.125	3.20	2,100	35	C
.156	4.00	3,300	55	C
.187	4.80	4,700	73	C
.250	6.40	8,500	135	C
.312	7.90	13,200	212	C
.375	9.50	18,000	300	C

1x19 Preformed T302/404 Non-flexible

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./ 1000 ft	Code
Inches	Metric			
.047	1.20	375	5.5	C
.063	1.60	500	8.5	C & M
.078	2.00	800	14	C
.093	2.40	1,200	20	C
.109	2.80	1,600	27	C
.125	3.20	2,100	35	C
.156	4.00	3,300	55	C & M
.187	4.80	4,700	77	C
.218	5.60	6,300	102	C
.250	6.40	8,200	135	C

C: Commercial Strand
M: Military Specification Strand, MIL-DTL-87161 Wire Rope, non-flexible, for aircraft application

GALVANIZED CARBON STEEL

1x7 Preformed Non-flexible

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./ 1000 ft	Code
Inches	Metric			
.031	0.80	185	2.5	C
.047	1.20	375	5.5	C
.063	1.60	500	8.5	C
.078	2.00	800	14	C
.093	2.40	1,200	27	C
.125	3.20	2,100	35	C

Don't see the size you need?
We can make it for you!
Visit strandcore.com to request a quotation today!

1x19 Preformed Non-flexible

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./ 1000 ft	Code
Inches	Metric			
.047	1.20	375	5.5	C
.063	1.60	500	8.5	C
.078	2.00	800	14	C
.093	2.40	1,200	20	C & M
.109	2.80	1,600	35	C
.125	3.20	2,100	35	C
.156	4.00	3,300	55	C
.187	4.80	4,700	77	C
.218	5.60	6,300	102	C
.250	6.40	8,200	135	C
.312	7.90	12,500	210	C

AIRCRAFT
CABLES

Used in industries such as aerospace, oil and gas, marine, defense, construction, medical and rigging/hoisting and made in a range of stainless steels, galvanized carbon steel and other alloys. Strand Core is on the QPL for MIL-DTL-83420, MIL-DTL-83140, and MIL-DTL-18375.

T302/304 STAINLESS STEEL WIRE ROPE

7x7 Preformed, Flexible

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./ 1000 ft	Code
Inches	Metric			
.031	0.80	115	1.6	C
.047	1.20	270	4.2	C & M
.063	1.60	480	7.5	C & M
.078	2.00	650	11	C
.093	2.40	920	16	C & M
.125	3.20	1,700	28	C
.156	4.00	2,400	43	C
.187	4.80	3,700	62	C
.218	5.60	4,800	83	C
.250	6.40	6,100	106	C
.312	7.90	9,000	167	C
.375	9.50	12,000	236	C

See page 17 for complete cross reference of Strand Core parts to the Mil-Spec QPL call outs

7 x 19 Preformed, Flexible

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./ 1000 ft	Code*
Inches	Metric			
.093	2.4	920	16	C
.125	3.2	1,500	29	C
.156	4.0	2,160	45	C
.187	4.8	3,300	65	C & M
.218	5.6	4,500	86	C
.250	6.4	5,760	110	C & M

19 x 7 Preformed

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./ 1000 ft	Code
Inches	Metric			
.063	1.60	480	7.5	C & M
.093	2.40	920	16	C & M
.125	3.20	1,760	29	C & M
.156	4.00	2,400	45	C & M
.187	4.80	3,700	65	C & M
.218	5.60	5,000	86	C & M
.250	6.40	6,400	110	C & M
.281	7.10	7,800	139	C
.312	7.90	9,000	173	C & M
.375	9.50	12,000	243	C & M
.375	9.50	13,100	236	C

Materials

Available in a range of materials, custom alloys upon request.

- 302/304 Stainless is the most common grade of stainless steel. It provides good corrosion resistance.
- 316 Stainless is used widely in the medical and food preparation industries. It offers very good resistance to corrosion.
- Bright Steel is a general purpose wire that is ideal for a broad variety of industrial and commercial uses.
- Galvanized, zinc-coated carbon steel offers minimal corrosion resistance. Material remains ductile over long periods of use. It typically has a higher breaking strength compared to stainless materials.
- Phos Bronze is a brass alloy that is tin coated and commonly used in the electrical industry.

MIL-SPEC CABLES FROM STRAND CORE

Specification	QPL	Supersedes	Description
MIL-DTL-83420	QPL-83420	MIL-W-83420, MIL-C-5424 and MIL-W-1511	Wire rope, flexible, for aircraft control
MIL-DTL-18375	QPL-18375	MIL-W-18375	Cable, steel (corrosion-resisting, non-magnetic) flexible, preformed for aeronautical use
MIL-DTL-83140	QPL-83140	MIL-W-83140	Wire rope, steel (stainless) preformed, non-rotation, for aircraft rescue hoist and cargo handling (winching)

GALVANIZED CARBON STEEL WIRE ROPE

7x7 Preformed, Flexible

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./ 1000 ft	Code
Inches	Metric			
.047	1.20	270	4.2	C
.063	1.60	480	7.5	C & M
.078	2.00	650	11	C
.093	2.40	920	16	C & M
.125	3.20	1,700	28	C
.156	4.00	2,600	43	C
.187	4.80	3,700	62	C
.218	5.60	4,800	83	C
.250	6.40	6,100	106	C
.312	7.90	9,200	167	C
.375	9.50	13,100	236	C

7 x 19 Preformed, Flexible

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./ 1000 ft	Code
Inches	Metric			
.063	1.60	480	7.5	C
.093	2.40	1,000	16	C & M
.125	3.20	2,000	29	C & M
.156	4.00	2,800	45	C & M
.187	4.80	4,200	65	C & M
.218	5.60	5,600	86	C & M
.250	6.40	7,000	110	C & M
.281	7.10	8,000	139	C
.312	7.90	9,800	173	C & M
.375	9.50	14,400	243	C & M

19x7 Preformed, Non-rotating

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./ 1000 ft	Code
Inches	Metric			
.093	2.40	1,100	16	C
.125	3.20	1,500	29	C
.156	4.00	2,160	45	C
.187	4.80	3,300	65	C
.218	5.60	4,500	86	C
.250	6.40	6,400	110	C

Need an aircraft cable quotation?
Visit strandcore.com to request one today!

Information

C: Commercial; non-rotating for cargo handling
M: Military, Military Specification MIL-DTL-83420; wire rope, flexible, for aircraft control
Military, Military Specification MIL-DTL-83140; non-rotating for aircraft rescue hoist and cargo handling

WIRE ROPE
GENERAL PURPOSE

Used in industries such as aerospace, oil and gas, marine, defense, construction, medical and rigging/hoisting and made in a range of stainless steels, galvanized carbon steel and other alloys. Looking for the highest quality wire rope? In addition to over 40 years of Wire Rope manufacturing experience, Strand Core is on the Military Specification Qualified Producer's List for MIL-DTL-84320, MIL-DTL-83140, MIL-DTL, 87161, and MIL-DTL-18375 cables.

6 x 19 CLASS

6x19 IWRC Preformed Bright Wire and Galvanized Rope

Diameter		Min. Break Strength, Lbs.			Approx. Mass Weight, lbs./1000 ft
Inches	Metric	IPS	EIPS	EEIPS	
.187	4.80	–	3,840	–	65
.250	6.40	5,880	6,800	–	120
.312	7.90	9,160	10,540	–	180
.375	9.50	13,120	15,100	16,600	260
7/16	11.10	17,780	20,400	22,400	350
1/2	12.70	23,000	26,600	29,200	460
9/16	14.30	29.000	33,600	37,000	580
5/8	15.90	35,400	41,200	45,400	720

6x19 Fiber Core Preformed Bright Wire and Galvanized Rope

Diameter		Min. Break Strength, Lbs.			Approx. Mass Weight, lbs./1000 ft
Inches	Metric	IPS	EIPS	EEIPS	
.187	4.80	–	3,420	–	58
.250	6.40	5,480	6,020	–	110
.312	7.90	8,520	9,380	–	160
.375	9.50	12,200	13,420	14,760	240
7/16	11.10	16,450	18,200	20,000	320
1/2	12.70	21,400	23,600	25,800	420
9/16	14.30	27,000	29,800	32,600	530
5/8	15.90	33,400	36,800	40,400	660

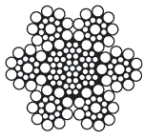
6x19 IWRC Preformed T302/304 Stainless Wire Rope

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./1000 ft
Inches	Metric		
7/16	11.10	15,900	350
1/2	12.70	22,200	460
9/16	14.30	27,800	590
5/8	15.90	34,100	720

General Purpose Wire Rope

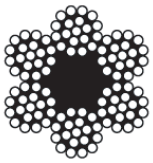
Ranges from .187" to 5/8" in 6x19 class IWRC and Fiber Core constructions

6x19 IWRC General Purpose



Used extensively in hoisting cranes, dredges, excavators, logging, and oil field applications.

6x19 Fiber Core General Purpose



Superior flexibility with less strength than steel core. Used in cranes, dredges, excavators, logging, oil fields, and marine excavations.

Looking for a different construction? Need a specialty alloy?
We're proud to call ourselves true craftsmen of wire rope. As a domestic manufacturer, we can provide custom configurations that draw on our years of manufacturing experience. Visit www.strandcore.com or call 800-983-9926 to day and let us know what we can craft for you!

STRAND CORE, INC. • MADE IN USA •

WIRE ROPE MATERIALS

302/304 STAINLESS	The most common grade of stainless steel. It provides good corrosion resistance.
BRIGHT STEEL	General purpose wire ideal for a broad variety of industrial and commercial uses.
GALVANIZED	Zinc coated carbon steel offers minimal corrosion resistance. Material remains ductile over long periods of use and typically has a higher breaking strength compared to stainless materials.

6 x 37 CLASS

6x37 IWRC Preformed Bright Wire and Galvanized Rope

Diameter		Min. Break Strength, Lbs.			Approx. Mass Weight, lbs./1000 ft
Inches	Metric	IPS	EIPS	EEIPS	
.187	4.80	–	3,840	–	65
.250	6.40	5,880	6,800	–	120
.312	7.90	9,160	10,540	–	180
.375	9.50	13,120	15,100	16,600	260
7/16	11.10	17,780	20,400	22,400	350
1/2	12.70	23,000	26,600	29,200	460
9/16	14.30	29,000	33,600	37,000	580
5/8	15.90	35,400	41,200	45,400	720

6x37 Fiber Core Preformed Bright Wire and Galvanized Rope

Diameter		Min. Break Strength, Lbs.			Approx. Mass Weight, lbs./1000 ft
Inches	Metric	IPS	EIPS	EEIPS	
.250	6.40	5,480	6,020	–	110
.312	7.90	8,520	9,380	–	160
.375	9.50	12,200	13,420	14,760	240
7/16	11.10	16,450	18,200	20,000	320
1/2	12.70	21,400	23,600	25,800	420
9/16	14.30	27,000	29,800	32,600	530
5/8	15.90	33,400	36,800	40,400	660

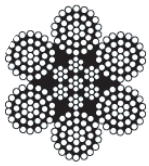
6x37 IWRC Preformed T302/304 Stainless Wire Rope

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./1000 ft
Inches	Metric		
.187	4.8	3,000	65
.218	5.6	4,000	86
.250	6.4	5,400	100
.312	7.9	8,300	180
.375	9.5	11,700	240
7/16	11.10	15,900	350
1/2	12.70	22,200	460
9/16	14.30	27,800	590
5/8	15.90	34,100	720

General Purpose Wire Rope

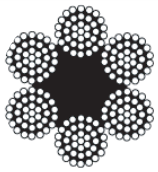
Ranges from .187" to .625" in 6x19 class IWRC and Fiber Core constructions

6x37 IWRC General Purpose



High wire count offers increased flexibility over 6x19 IRWC wire rope while maintaining strength. Used extensively in hoisting cranes, dredges, excavators, logging, and oil field applications.

6x37 Fiber Core General Purpose



Provides superior flexibility with less strength than steel core. Used in cranes, dredges, excavators, logging, oil fields, and marine excavations.

Bright Carbon Steel

- ***> Strong:*** *Improved Plow Steel (IPS)*
- ***> Stronger:*** *Extra Improved Plow Steel (EIPS)*
- ***> Strongest:*** *Extra, Extra Improved Plow Steel (EEIPS)*

Craftsmen of Wire Rope since 1973

MARINE
STRAND, CABLE, AND WIRE ROPE

Our high quality Marine Wire Rope is engineered for strength, appearance, abrasion resistance, elongation, exceptional corrosion resistance, and performance. We offer type 302/304 and 316 stainless products for fresh and salt water applications.

T302/304 STAINLESS STEEL STRAND

1x19 Preformed

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./1000 ft
Inches	Metric		
.047	1.2	375	5.5
.063	1.6	500	8.5
.078	20.	800	14
.093	2.4	1,200	20
.109	2.8	1,600	27
.125	3.2	2,100	35
.156	4.0	3,300	55
.187	4.8	4,700	77
.218	5.6	6,300	102
.250	6.4	8,200	135

T302/304 STAINLESS STEEL CABLE

7x7 Preformed

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./1000 ft
Inches	Metric		
.031	0.80	115	1.6
.047	1.20	270	4.2
.063	1.60	480	7.5
.078	2.00	650	11
.093	2.40	920	16
.125	3.20	1,700	28
.156	4.00	2,400	43
.187	4.80	3,700	62
.218	5.60	4,800	83
.250	6.40	6,100	106
.312	7.90	9,000	167
.375	9.50	12,000	236

Have an extreme heat or corrosion environment? *High Temperature and Corrosion Resistance Stainless Steel and Nickel Alloys are available. Visit strandcore.com or call 800-983-9926 to tell us more about your application. As a manufacturer, we can provide custom engineered solutions to help you in any situation.*

T302/304 STAINLESS STEEL

6x19 IWRC Preformed

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./1000 ft
Inches	Metric		
.187	4.80	3,700	65
.218	5.60	4,000	86
.250	6.35	5,400	100
.312	7.95	8,300	180
.375	9.52	11,700	240
7/16	11.1	15,900	350
1/2	12.7	22,200	460
9/16	14.3	27,800	580
5/8	15.9	34,100	720

ARCHITECTURAL
STRAND AND CABLE

Our Architectural Cable uses only the best stainless steel alloys to ensure your project shines for years to come. Products are available in both 302/304 and type 316 grades. We recommend 1x19, or 7x7 stainless steel cables; other constructions and alloys are available by request.

T302/304 STAINLESS STEEL

1x19 Preformed Strand Non-Flexible

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./1000 ft
Inches	Metric		
.047	1.20	375	5.5
.063	1.60	500	8.5
.078	2.00	800	14
.093	2.40	1,200	20
.109	2.80	1,600	27
.125	3.20	2,100	35
.156	4.00	3,300	55
.187	4.80	4,700	77
.218	5.60	6,300	102
.250	6.40	8,200	135

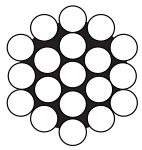
7x7 Preformed Wire Rope Flexible

Diameter		Min. Break Strength, Lbs.	Approx. Mass Weight, lbs./1000 ft
Inches	Metric		
.031	0.80	115	1.6
.047	1.20	270	4.2
.063	1.60	480	7.5
.078	2.00	650	11
.093	2.40	920	16
.125	3.20	1,700	28
.156	4.00	2,400	43
.187	4.80	3,700	62
.218	5.60	4,800	83
.250	6.40	6,100	106
.312	7.90	9,000	167
.375	9.50	12,000	236

Strand

Single-end strand and wire ropes up to 0.50" DIA and custom products and configurations for demanding specifications.

1 x 19 Strand



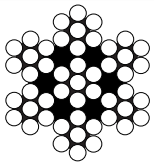
Smooth outside, fairly flexible and resists compressive forces. Performs well in push/pull operations. Perfect for applications that require luster, i.e., architectural installations and cable railings.

Need a custom construction for your next project?
Visit strandcore.com and request a quotation today!

Aircraft Cable

Ranges from .187" to .625" in 6x19 class IWRC and Fiber Core constructions

7x7 Aircraft Cable - Flexible



For use where extreme flexibility is not equired. Commonly used in auto and aircraft controls. Performs well in a wide range of mechanical applications.

6x19 Fiber Core General Purpose

Superior flexibility with less strength than steel core. Used in cranes, dredges, excavators, logging, oil fields, and marine excavations.

ASSEMBLIES
AIRCRAFT CABLE AND WIRE ROPE

We offer high quality wire rope and cable assemblies that meet technical requirements and demanding production schedules with an inventory of cable and fitting components, such as turnbuckles, swage terminals, quick disconnects, shackles, rod end fittings, forged clevises, strap eyes, and forks.

Commercial quality terminal wire rope studs, single shank balls, plain balls, double shank balls, thimbles, stainless ovals, tin plated ovals, aluminum stops, copper stop sleeves and zinc plated copper stop sleeves are also available.

Rescue Hoists
Strand Core manufactures rescue hoists for military and civil applications. Rigorous cycle testing and proof loading are performed to guarantee the highest level of performance.

Commercial Assemblies
Made using stainless or galvanized material, with other materials available upon request. Military specification cable and hardware is available for tighter tolerances.

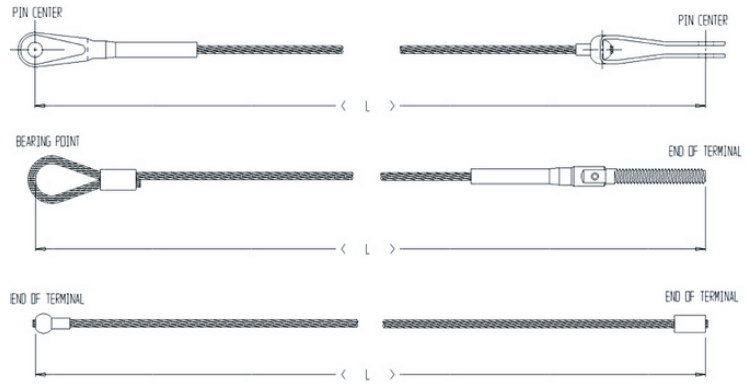
Cable Assembly Hardware
Ball Ends • Eye Ends • Fork Ends
Oval Sleeves • Rope Clips • Stop Sleeves
Studs • Turnbuckles • Thimbles
Our commercial MIL-SPEC and OEM hardware solutions can be paired with any of our aircraft cable or wire rope products, including any customized options we offer.

Standard Assembly Length Tolerances, +/-

Assembly Length, FT	Rescue Hoists/ Aerospace Assemblies, IN	Commercial Assemblies, IN
0 – 6	.063	.250
> 6 – 10	.097	.188
> 10 –20	.125	.250
> 20 – 40	.188	.375
> 40 – 60	.375	.500
> 60 – 80	.438	.875
> 80 – 100	.500	1.00
> 100	.563	1% of length

Tolerances closer than those listed can be supplied at a higher cost after reviewing your specific requirements and mutual agreement regarding the method of inspection

When specifying the measurements on your cable assembly, be sure to include the reference point from which the measurements are taken. Standard points of measure are:



MATERIALS
MATERIALS AND PACKAGING

The product you need, delivered the way you requested. We offer a selection of specialty alloys in addition to our standards listed below. Choose from a list of package options and specify with your shipment request. Don't see what you need? We can customize your shipment to leave our facility in whatever configuration you request.

Materials

302/304 STAINLESS

The most common grade of stainless steel. It provides good corrosion resistance.

BRIGHT CARBON STEEL

General purpose wire ideal for a broad variety of industrial and commercial uses.
Very resistant to wear and high in tensile as mechanical properties improve.
Available tensile options:
IPS-Improved Plow Steel (IPS)
Extra Improved Plow Steel (EIPS)
Extra Extra Improved Plow Steel (EEIPS)

316 STAINLESS

Widely used in the medical and food preparation industries.
It offers very good resistance to corrosion.

GALVANIZED

Zinc coated carbon steel offers minimal corrosion resistance.
Material remains ductile over long periods of use and typically has a higher breaking strength compared to stainless materials.

PHOS BRONZE

A tin coated brass alloy commonly used in the electrical industry.

Standard Packaging

CABLE

- For shorter lengths of strand, aircraft cable, or wire rope, primarily 250 feet or less.
- Product is coiled and shipping bulk in cardboard boxes. Each coil is zip-tied and placed into an identified plastic bag for shipment.

PLASTIC REELS

- For smaller sized cable and strand, preferably under .125" diameter, to minimize shipping weights.
- Less durability and strength than traditional wooden reels.
- Fewer variations of arbor hole, flange diameter, and drum sizes.
- Multiple colors are available.

HARDWOOD REELS

- Sturdy larger reels for larger, heavier ropes, i.e., .375" and larger and for aircraft cable shipments over 300 lbs.
- Multiple arbor holes, flange diameters and drum sizes for a range of constructions and materials.

NAILED HARDWOOD REELS

- Built of durable lumber, these larger reels are sturdy and can withstand shipment of larger, heavier ropes.
- Preferred for wire ropes .375" and larger and for aircraft cable shipments over 300 lbs.
- Come in multiple arbor holes, flange diameters and drum sizes for a range of constructions and materials.

Custom Packaging

INDIVIDUALLY PACKAGED AND LABELED

- For customer cable assemblies that require traceability to the individual part level
- Individual packaging can include serialization, unique bag labeling, and any other identification that you require.

BULK PACKAGED

- For commercial assemblies that do not require individual identification.
- Packaged and shipped in bulk with bundle sizes as requested to assist in counting and storage.
- Package level quantities and certifications provided, with carton level identification of customer product number and Strand Core manufacturing lot number on each box.



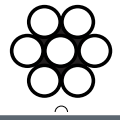

CONSTRUCTIONS
AIRCRAFT CABLE AND WIRE ROPE

Construction is the configuration and location of the individual wires and strands laid together inside of a wire rope. The wire rope, strand, or cable, is built through creating individual layers of the final construction by both wrapping wires around a center (king) wire to make a strand, then by wrapping those individual strands around a center strand (core, or IWRC), to create the finished rope.

Strand

Single-end strand and wire ropes up to 0.50" DIA and custom products and configurations for demanding specifications.

1 x 7 Strand

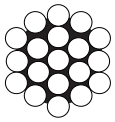


Basic strand for all concentric cable, relatively stiff in large diameters, offers the least amount of stretch. Excellent strength for guying applications in a range of environments.

1x3 Strand

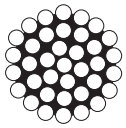
Also know as three-wire twist, stores very little twist since it lacks a core wire.
Often used as core strand in other constructions. Very stiff with little stretch.

1 x 19 Strand



Smooth outside, fairly flexible and resists compressive forces. Performs well in push/pull operations. Perfect for applications that require luster, i.e., architectural installations and cable railings.

1 x 37 Strand

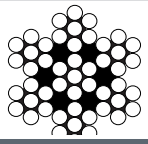


Smooth outside, higher flexibility than other strands. Basic strand used in larger wire ropes, performs well in straight line operations with minimal bend.

Aircraft Cable

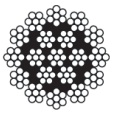
Cable for commercial and military specifications in sizes from .004 – .375" 7x7, 7x19, and 19x7 (non-rotating) constructions.

7x7 Aircraft Cable - Flexible



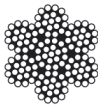
For use where extreme flexibility is not required. Commonly used in auto and aircraft controls. Performs well in a wide range of mechanical applications.

19x7 Aircraft Cable Non-Rotating



Used when a single line hoisting operations is necessary. MIL-SPEC version is typically used on helicopter rescue hoists; commercial version on cranes.

7x19 Aircraft Cable - Flexible



Performs well when flexibility and fatigue are concerns, such as aircraft controls, sailboat rigging, winches, and garage doors.

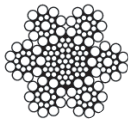
3x7 Aircraft Cable - Flexible

Also know as three-wire twist, stores very little twist since it lacks a core wire.
Often used as core strand in other constructions. Very stiff with little stretch.

General Purpose Wire Rope

Ranges from .187" to 5/8" in 6x19 and 6x36 class IWRC and Fiber Core constructions.

6x19 IWRC General Purpose

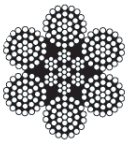


Used extensively in hoisting cranes, dredges, excavators, logging, and oil field applications.

6x19 Fiber Core General Purpose

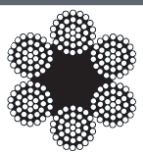
Superior flexibility with less strength than steel core. Used in cranes, dredges, excavators, logging, oil fields, and marine excavations.

6x37 IWRC General Purpose



High wire count offers increased flexibility over 6x19 IRWC wire rope while maintaining strength. Used extensively in hoisting cranes, dredges, excavators, logging, and oil field applications.

6x37 Fiber Core General Purpose



Provides superior flexibility with less strength than steel core. Used in cranes, dredges, excavators, logging, oil fields, and marine excavations.

NOTE: The numerical designation of the finished construction usually describes this construction in the following way: the rope consists of the number of strands X the number of wires in each strand. For example, 7x19 is 7 strands of 19 wires. Likewise. 6x19 IWRC is 6 strands of 19 wire, wrapped around an Independent Wire Rope Core.

SPECIFICATIONS
WIRE ROPE STRETCH

In any cable or wire rope application, stretch may be a concern. There are two forms of stretch in cable and wire rope: Structural Stretch and Elastic Stretch.

Calculate Wire Rope Stretch

Structural stretch is the lengthening of the lay in the construction of cable and wire rope as the individual wires adjust under load. Structural stretch in Strand Core products is less than 1% of the total cable length. This form of stretch can be completely removed by applying a cable or wire rope prestretching operation prior to shipment.

Elastic stretch is the actual physical elongation of the individual wires under load. The elastic stretch can be calculated by using the formula*:

$$(E = (W \times G) / D2)^{**}$$

E = Elastic stretch as a % of length
W = Weight of load in pounds
D = Diameter of wire rope in inches
G = Stretch factor (see below)

G Factor			
Construction		**Wire Rope**	**G Factor**
1 x 7		302 Stainless Steel	.0000735
		Galvanized	.00000661
1 x 19		302 Stainless Steel	.00000779
		Galvanized	.00000698
7 x 7		302 Stainless Steel	.0000120
		Galvanized	.00000107
7 x 19		302 Stainless Steel	.0000162
		Galvanized	.0000107
6 x 19		IWRC 302 Stainless	.0000157
		IWRC Galvanized	.0000140
6 x 37		IWRC 302 Stainless	.0000160
		IWRC Galvanized	.0000144
19 x 7		302 Stainless Steel	.0000197
		Galvanized	.0000178

* Values derived from this calculator are an approximation.
** Remember to keep your units of measure constant. The length of your cable must be calculated in inches to correspond with the diameter measurement, also in inches.

SPECIFICATIONS

MILITARY SPECIFICATIONS AND CROSS-REFERENCE

Military Specifications

Specification	Cross Reference	Supersedes	Description
MIL-DTL-83420	QPL-83420	MIL-W-83420, MIL-C-5424 and MIL-W-1511	Wire rope, flexible, for aircraft control.
MIL-DTL-87161	QPL-87161	MIL-W-87161, MIL-W-5693 and MIL-W-6940	Wire rope, non-flexible, for aircraft application.
MIL-DTL-18375	QPL-18375	MIL-W-18375	Cable, steel (corrosion-resisting, non-magnetic) flexible, preformed for aeronautical use.
MIL-DTL-83140	QPL-83140	MIL-W-83140	Wire rope, steel (stainless) preformed, non-rotation, for aircraft rescue hoist and cargo handling (winching).

QPL Reference

MIL-SPEC	DIA, IN	Construction	Strand Core Part #
MIL-DTL-83420			
Galvanized, Type 1, Comp. A			
M83420/1-001	.063	7x7	0455200
M83420/1-002	.093		0655200
M83420/1-003	.125	7x9	0856200
M83420/1-004			
M83420/1-005	.156		1056200
M83420/1-006	.187		1256200
M83420/1-007	.218		1456200
M83420/1-008	.250		1656200
M83420/1-009	.312		2056200
M83420/1-010	.375		2456200
M83420/1-014	.093		0656200
Tin Over Zinc			
M83420/1-103	.125	7x19	0806204
M83420/1-104			
Stainless, Type 1, Comp. B			
M83420/2-002	.063	7x7	0415200
M83420/2-003		7x19	0416200
M83420/2-004	.093		0616200
M83420/2-005	.125		0816200
M83420/2-006	.156		1016200
M83420/2-007	.187		1216200
M83420/2-008			
M83420/2-009	.250		1616200
M83420/2-010			
M83420/2-012	.312		2016200
M83420/2-013	.375		2416200
M83420/2-014	.047	7x7	0315200
M83420/2-015	.093		0615200
M83420/2-016	.218	7x19	1416200

MIL-SPEC	DIA, IN	Construction	Strand Core Part #
MIL-DTL-83140			
T302/304 Stainless Steel, Type 1			
M83140-1-6	.187	19x7	1215310
M83140-1-8	.250		1615320
MIL-DTL-18375			
T302/304 Stainless Steel, Type 1			
MIL-DTL-18375	.063	7x7	0425201

DIA, IN	Construction	Part #
MIL-DTL-18242B		
T305 Stainless Steel, Warrington RRL		
.187	7x19	Call for details
.250		
.312		
.375		
T305,IWRC,Type IV, Warrington RRL		
1/2	6x19	Call for details
5/8		

MIL-SPEC Designation	DIA, IN	Construction	Lay Direction	Part #
MIL-DTL-87161				
Stainless, Type 1, Comp. B				
M87161-2-B-1-04	.063	1x19	RL	0413201
M87161-2-B-2-04			LL	0413200
M87161-2-A-1-06	.093		RL	0653201
M87161-2-A-2-06			LL	0653200
M87161-2-B-1-10	.156		RL	1013201
M87161-2-B-2-10			LL	1013200

Additional Specifications

Specification	Description
RR-W-410	Federal specification for wire rope and strand.
ASTM A1023/A1023M	Stranded carbon steel wire ropes for general purposes.
BMS7-265	Boeing material specification flexible wire rope for aircraft controls.

SPECIFICATIONS
RECOMMENDED BEND RADIUS GUIDE

The tables below provide the minimum recommended pulley diameter and the approximate bend radius of the rope. Note that the calculation is approximately half of the minimum recommended pulley tread diameter. Whether running fully over the sheave or drum, or some fraction thereof, check your design against the recommendations to better understand the service life you can expect, in relation to the other factors involved.

Recommended Bend Radius Guide

3x7, 6x7, 6x42, 7x3, & 7x7		
Rope DIA	Min. Rec. Pulley DIA	Approx. Bend Radius
0.009	.375	.187
0.014	.625	.312
0.024	1.00	1/2
0.027	1.156	3.109
0.03	1.281	4.015
0.031	1 .312	2.031
0.032	1.031	4.047
0.035	1.500	3/4
0.036	1.218	49/64
0.047	2.00	1
0.063	2.625	1 .312
0.075	3.281	1 4.015
0.094	3.312	1 3.031
0.125	5.250	2 5/8
0.156	1.563	3 .281
0.188	7.875	3 1.312
0.25	10.500	5 .250
0.0313	13.125	6 9/16
0.375	15.750	7 7/8

6x19, 7x19, & 19x7		
Rope DIA	Min. Rec. Pulley DIA	Approx. Bend Radius
0.024	1.281	19/64
0.027	2.031	2.015
0.032	2.156	2.078
0.036	.875	7/16
0.038	1.312	1.156
0.047	1.125	16-Sep
0.063	1.50	4-Mar
0.094	2.250	1 .125
0.125	3.00	1 1/2
0.156	3.750	1 7/8
0.178	4.500	2 .250
0.219	5.250	2 5/8
0.25	6.00	3
0.313	7.500	3 3/4
0.375	9.00	4 1/2
0.438	10.500	5 .250
0.5	12.00	6
0.563	13.500	6 3/4
0.625	15.00	7 1/2

6x37 & 8x19		
Rope DIA	Min. Rec. Pulley DIA	Approx. Bend Radius
0.188	2.250	1 .125
0.25	3.00	1 1/2
0.313	3.750	1 7/8
0.375	4.500	2 .250
0.438	5.250	2 5/8
0.5	6.000	3
0.563	6.750	3 .375
0.625	7.500	3 3/4

Craftsmen of wire rope since 1973

As a manufacturer, we can build a rope to any specification, including yours! If you didn't find what you needed in this catalog, reach out to us on-line, via email, or call us directly and we will work to get engineer a solution for you. After all, that's how we've earned the right to call ourselves Craftsmen of Wire Rope!

SPECIFICATIONS
RADIUS GUIDES

The service life of cable and wire rope can be increased if it operates over the largest possible pulley or sheave diameter, and is properly supported in the pulley or sheave groove. The working life of individual wire strands is greatly reduced as the pulley or sheave diameter is diminished. This chart shows minimum tread diameters over which various sizes and constructions of cable should operate.

Pulley & Sheave Radius Guides

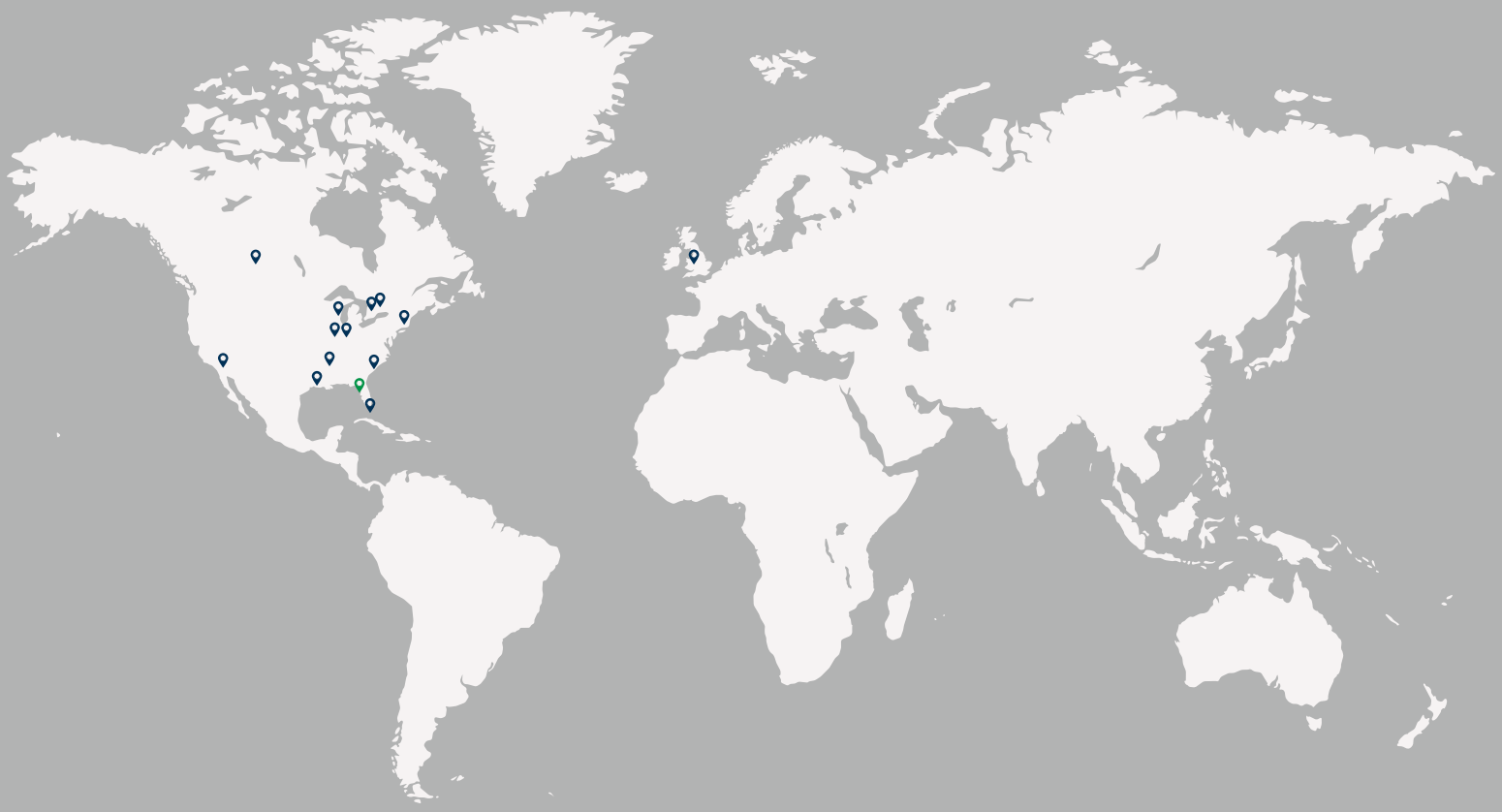
The recommendations below are based on the standard D:d ratio where
D = diameter of the pulley at its groove and d = diameter of the aircraft cable or wire rope

	Desired Minimum			Critical Minimum		
	4:1	24:1	12:1	28:1	18:1	10:1
Cable DIA	Construction			Construction		
	6x7 or 7x7	6x19 or 7x19	6x31 or 6x37	6x7 or 7x7	6x19 or 7x19	6x31 or 6x37
.063	2 5/8	---	---	1-3/4	---	---
.031	2-1.312	2-.250	---	2-5/8	1-1.063	---
.125	5-.250	3	---	3-1/2	2-.250	---
.156	6-9/16	3-3/4	---	4-.375	2-7/8	---
.187	7-7/8	4-1/2	---	5-.250	3-.375	---
.218	9-1.187	5-.250	---	6-.125	4	---
.250	10-1/2	6	3	7	4-1/2	2-1/2
.312	13-.125	7-1/2	3-3/4	8-3/4	5-5/8	3-.125
.375	15-3/4	9	4-1/2	10-1/2	6-3/4	3-3/4
7/16	18-.375	10-1/2	5-.250	12-.250	7-7/8	4-.375
1/2	21	12	6	14	9	5
9/16	23-5/8	13-1/2	6-3/4	15-3/4	10-.125	5-5/8
5/8	26-.250	15	7-1/2	17-1/2	11-.250	6-.250

NOTES

strandcore

Questions? Need a Quotation? Call 800-983-9926 or visit www.strandcore.com



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