

# S0300-BV-CAT-010

DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300



## Synthetic Line

# S0300-BV-CAT-010

## DEEP OCEAN SALVAGE SYNTHETIC LINE

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The Deep Ocean Salvage Synthetic Line system consists of numerous lines with physical/performance characteristics that can be applied to various lifting, mooring, rigging, or other applications during salvage operations. The synthetic lines are made of several materials and constructions, each of which has unique characteristics of strength, weight, stretch, chafe resistance, and flexibility. The line type and size needed for the assigned salvage task is determined by the onsite supervisor to satisfy the many constraints of the salvage scenario (depth of water, mass of object, recovery equipment used, etc.). The line fiber material may be aramid, nylon, or polyester, and the construction may be 3-strand, single or double braid. When line is requested for shipment to a salvage site, a rigging kit (applicable to the strength and type of line required) is included in the shipment.

Lines are available in continuous lengths of up to 24,000 feet, depending on the line diameter and material and can be obtained with soft or hard eyes, thimbles, links, or other end fittings, as determined by the onsite requirements.

## System Components for DS0300

Alternates

ESSM No	Nomenclature	Type	Qty	NS	Cont
<b>LN0300A*</b>	Aramid Fiber Line	BL Generic	1		Y
LN0011	LINE, ARAMID FIBER, 2" DIA X 3,500', W/T & L	Contents	1		
LN0028	LINE, ARAMID FIBER, 0.375" DIA X 24,000', W/T&L	Contents	1		
LN1175	LINE, ARAMID, 1"DIA X 17,000',SOFT EYES,W/LNG	Contents	1		
LN2100	LINE, ARAMID FIBER, 1" DIA X 4,000', W/T&L	Contents	1		
LN2108	LINE, ARAMID FIBER, 1" X 22,000', EEE	Contents	1		
LN2109	LINE, ARAMID FIBER, 1.5" DIA X 10,000'	Contents	1		
LN2117	LINE, ARAMID FIBER, 1" DIA X 500', W/T & L & BE	Contents	1		
LN2118	LINE, ARAMID FIBER, 1.5" DIA X 8,000'	Contents	1		
LN2119	LINE, ARAMID, 1.5" DIA X 1,200', HEOE	Contents	1		
LN2124	LINE, ARAMID FIBER, 0.75" DIA X 10,000', W/T&L	Contents	1		
LN2127	LINE, ARAMID FIBER, 2" DIA X 8,000', W/T & L	Contents	1		
LN2128	LINE, ARAMID FIBER, 1" DIA X 10,000', W/T & L ED	Contents	1		
LN2131	LINE, ARAMID FIBER, 1" DIA X 8,000', W/T & L ED	Contents	1		
LN2133	LINE, ARAMID FIBER, 1.75" DIA X 8,000', W/T & L	Contents	1		
LN2134	LINE, ARAMID FIBER, 1.5" DIA X 10,000', W/T & L	Contents	1		
LN2135	LINE, ARAMID FIBER, 2" DIA X 4,000', W/T&L EE	Contents	1		
LN2145	LINE, ARAMID, FOUR-STRD, 4 3/4" CIR X 1,200',W/	Contents	1		
LN2146	LINE, ARAMID FIBER, 0.75" DIA X 24,000',W/THIM	Contents	1		
LN2167	LINE, ARAMID FIBER, 0.75" DIA X 2,650', HEBE	Contents	1		
LN2194	LINE, ARAMID FIBER, 1" DIA X 3,700', W/T&L	Contents	1		
LN2220	LINE, ARAMID FIBER, 2" DIA X 22,000', W/REM TM	Contents	1		
LN2515	LINE, ARAMID FIBER, 1" DIA X 4,000', SEOE	Contents	1		
LN2520	LINE, ARMD, 1" DIA X 13,600' SPL TO 1.5" D X 370	Contents	1		
LN3482	LINE, ARAMID FIBER, 0.75" DIA X 8000', SFT EYE E	Contents	1		

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ESSM No	Nomenclature	Type	Qty	NS	Cont
LN3484	LINE, ARAMID FIBER, 0.75" DIA X 8000', T&L EA E	Contents	1		
<b>LN0300N*</b>	Nylon Plaited Line	BL Generic	1		Y
LN0107	LINE, NYLON, DBL BRD, 6" CIR X 500', W/TMB EA E	Contents	1		
LN0131	LINE, NYLON, DBL BRD, 7" CIR X 1000'	Contents	1		
<b>LN0300P*</b>	Polyester Braid Line	BL Generic	1		Y
LN0055	LINE, BOB, 12 STRD, 1" DIA X 12000', BLK URE CT	Contents	1		
LN0115	LINE, UNITREX XS MW, 1.15 DIA X 100', EYE ONE E	Contents	1		
LN0120	LINE, UNITREX XS MW, 1.94 DIA X 100', EYE ONE E	Contents	1		
LN2152	LINE, POLYESTER, DBL BRD, 10" CIR X 1850', NO E	Contents	1		

**Baseline verified on 7/12/2018, \* Not shown in catalog.**

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## ESSM - LN0300A\* Aramid Fiber Line



Representative Aramid Fiber Line

### SPECIFICATIONS

Diameter (in)	Circumference (in)	Overall Construction	Weight per 100 ft (lb)	Breaking Strength (lb)	Working Load Limit (lb)
3/8	1 1/8	1 x 36 Wire-lay w/ braided jacket	6.3	14,400	1196 – 2880
3/4	2 1/4	1 x 36 Wire-lay w/ braided jacket	18	34,200	2834 – 6840
1	3	1 x 36 Wire-lay w/ braided jacket	36	46,800	3880 – 9360
1 1/2	4 1/2	1 x 36 Wire-lay w/ braided jacket	62.5	94,500	7844 – 18900
2	6	1 x 36 Wire-lay w/ braided jacket	99	154,800	12848 – 30960

NOTE: Breaking strength and working load limit are from the Salvage Engineer's Handbook; refer to manufacturer for allowable safe working loads for particular line and application.

### Aramid Specifications

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Aramid fiber (e.g., Kevlar) line is a high-strength, low-stretch, multi-fiber line. The strength members of the line are contained within an outer braided cover. The line is used for lifting heavy loads in deepwater salvage applications because of its high strength-to-weight ratio. The line has limited resistance to abrasion. Care must be taken when designing the salvage system in sizing and aligning blocks, sheaves, and lifting components. Aramid fiber line can be obtained in diameters of 3/8, 3/4, 1, 1 1/2 and 2 inches, and in lengths of up to 24,000 feet, with soft or hard eyes, thimbles, links, or other end fittings, as determined by onsite requirements.

Aramid fiber line is shipped on a wooden or metal reel, as requested. The shipping weight and volume will be determined by the diameter and length of the line and the reel required to store it.

## Physical Characteristics

Type .....	Descriptions .....

## References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN0011 LINE, ARAMID FIBER, 2" DIA X 3,500', W/T & L

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	2"	
Circumference	6"	
Length	3500'	
End Fittings	Thimble and link	
Wt per 100 Ft	132 lb	
Breaking Strength	214,000 lb (reference 1)	
Working Load Limit (WLL)	35,667 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Start here			

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN0028 LINE, ARAMID FIBER, 0.375" DIA X 24,000', W/T&L

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	3/8"	
Circumference	1-1/8"	
Length	24,000'	
End Fittings	Thimble and link	
Wt per 100 Ft	4 lb	
Breaking Strength	17,800 lb	
Working Load Limit (WLL)	3,360 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping	S/N 005302 Only	
Length	5 ft, 0 in	5 ft, 6 in	
Width	5 ft, 0 in	5 ft, 6 in	
Height	3 ft, 2 in	3 ft, 1 in	
Cube	80 cu ft	94 cu ft	
Footprint	25 sq ft	31 sq ft	
Weight	1655 lb	1920 lb	

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN1175 LINE, ARAMID, 1"DIA X 17,000',SOFT EYES,W/LNG SPLC

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1"	
Circumference	3"	
Length	17,000'	
End Fittings	Soft eyes with long splice	
Wt per 100 Ft	31 lb	
Breaking Strength	90,000 lb (reference 1)	
Working Load Limit (WLL)	15,000 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	7 ft, 0 in		
Width	7 ft, 0 in		
Height	5 ft, 7 in		
Cube	274 cu ft		
Footprint	49 sq ft		
Weight	8845 lb		

### References

Ref No	Reference
1	LN1175-001 ESSM Facility Pull Test Log 04/18/18



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## ESSM - LN2100 LINE, ARAMID FIBER, 1" DIA X 4,000', W/T&L

### Specifications

Type	Description	Qty
Manufacturer	Cortland Cable Company Inc	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1"	
Circumference	3"	
Length	4,000'	
End Fittings	Thinble and link	
Wt per 100 Ft	31 lb	
Breaking Strength	139,083 lb (reference 1)	
Working Load Limit (WLL)	20,833 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	5 ft, 6 in		
Width	5 ft, 6 in		
Height	3 ft, 1 in		
Cube	94 cu ft		
Footprint	31 sq ft		
Weight	2410 lb		

### References

Ref No	Reference
1	Cortland Cable Company Certificate of Conformance

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## ESSM - LN2108 LINE, ARAMID FIBER, 1" X 22,000', EEE

### Specifications

Type	Description	Qty
Manufacturer	Whitehill Manufacturing Corporation	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1"	
Circumference	3"	
Length	22,000'	
End Fittings	Eye each end	
Wt per 100 Ft	31 lb	
Breaking Strength	127,700 (reference 1)	
Working Load Limit (WLL)	20,833 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Start here			

### References

Ref No	Reference
1	Whitehill Manufacturing Corporation Certification of Compliance

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## ESSM - LN2109 LINE, ARAMID FIBER, 1.5" DIA X 10,000'

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1-1/2"	
Circumference	4-1/2"	
Length	10,000'	
End Fittings	Bitter ends	
Wt per 100 Ft	31 lb	
Breaking Strength	94,500 lb (reference 1)	
Working Load Limit (WLL)	15,750 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	7 ft, 8 in		
Width	7 ft, 8 in		
Height	5 ft, 8 in		
Cube	334 cu ft		
Footprint	59 sq ft		
Weight	6005 lb		

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN2117 LINE, ARAMID FIBER, 1" DIA X 425', W/T & L & BE

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1"	
Circumference	3"	
Length	425'	
End Fittings	Thimble, link and bitter end	
Wt per 100 Ft	31 lb	
Breaking Strength	109,920 lb (reference 1)	
Working Load Limit (WLL)	18,320 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Length	3 ft, 0 in		
Width	3 ft, 0 in		
Height	2 ft, 4 in		
Cube	21 cu ft		
Footprint	9 sq ft		
Weight	470 lb		

### References

Ref No	Reference
1	GPC Certification of Test

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## ESSM - LN2118 LINE, ARAMID FIBER, 1.5" DIA X 8,000'

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1-1/2"	
Circumference	4-1/2"	
Length	8,000'	
End Fittings	Bitter ends	
Wt per 100 Ft	31 lb	
Breaking Strength	94,500 lb (reference 1)	
Working Load Limit (WLL)	15,750 lb	

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN2119 LINE, ARAMID, 1.5" DIA X 1,200', HEOE

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1-1/2"	
Circumference	4-1/2"	
Length	1,200'	
End Fittings	Hard eye one end	
Wt per 100 Ft	31 lb	
Breaking Strength	94,500 lb (reference 1)	
Working Load Limit (WLL)	15,750 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	4 ft, 0 in		
Width	4 ft, 5 in		
Height	3 ft, 1 in		
Cube	55 cu ft		
Footprint	18 sq ft		
Weight	890 lb		

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN2124 LINE, ARAMID FIBER, 0.75" DIA X 10,000', W/T&L

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	3/4"	
Circumference	2-1/4"	
Length	10,000'	
End Fittings	Thimble and link	
Wt per 100 Ft	19 lb	
Breaking Strength	lb (reference 1)	
Working Load Limit (WLL)	lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	6 ft, 6 in		
Width	6 ft, 6 in		
Height	4 ft, 4 in		
Cube	184 cu ft		
Footprint	43 sq ft		
Weight	3000 lb		

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN2127 LINE, ARAMID FIBER, 2" DIA X 8,000', W/T & L

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	2"	
Circumference	6"	
Length	8,000'	
End Fittings	Thimble and link	
Wt per 100 Ft	132 lb	
Breaking Strength	154,800 lb (reference 1)	
Working Load Limit (WLL)	25,800 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	9 ft, 0 in		
Width	9 ft, 0 in		
Height	6 ft, 6 in		
Cube	527 cu ft		
Footprint	81 sq ft		
Weight	13030 lb		

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010



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## ESSM - LN2128 LINE, ARAMID FIBER, 1" DIA X 10,000', W/T & L ED

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1"	
Circumference	3"	
Length	10,000'	
End Fittings	Thimble and link	
Wt per 100 Ft	31 lb	
Breaking Strength	46,800 lb (reference 1)	
Working Load Limit (WLL)	7,800 lb	

### Physical Characteristics

Type .....	Descriptions .....
	Operating/Shipping

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN2131 LINE, ARAMID FIBER, 1" DIA X 8,000', W/T & L ED

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1"	
Circumference	3"	
Length	8,000'	
End Fittings	Thimble and link	
Wt per 100 Ft	31 lb	
Breaking Strength	46,800 lb (reference 1)	
Working Load Limit (WLL)	7,800 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	6 ft, 6 in		
Width	6 ft, 6 in		
Height	4 ft, 0 in		
Cube	169 cu ft		
Footprint	43 sq ft		
Weight	4470 lb		

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN2133 LINE, ARAMID FIBER, 1.75" DIA X 8,000', W/T & L

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1-3/4"	
Circumference	5-1/2"	
Length	8,000'	
End Fittings	Thimble and link	
Wt per 100 Ft	31 lb	
Breaking Strength	133,200 lb (reference 1)	
Working Load Limit (WLL)	22,200 lb	

### Physical Characteristics

Type .....	Descriptions .....
	Operating/Shipping

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN2134 LINE, ARAMID FIBER, 1.5" DIA X 10,000', W/T & L

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1-1/2"	
Circumference	4-1/2"	
Length	10,000'	
End Fittings	Thimble and link	
Wt per 100 Ft	31 lb	
Breaking Strength	94,500 lb (reference 1)	
Working Load Limit (WLL)	15,750 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	7 ft, 8 in		
Width	7 ft, 8 in		
Height	5 ft, 9 in		
Cube	3380 cu ft		
Footprint	59 sq ft		
Weight	8845 lb		

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN2135 LINE, ARAMID FIBER, 2" DIA X 4,000', W/T&L EE

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	2"	
Circumference	6"	
Length	4,000'	
End Fittings	Thimble and link	
Wt per 100 Ft	132 lb	
Breaking Strength	154,800 lb (reference 1)	
Working Load Limit (WLL)	25,800 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	7 ft, 3 in		
Width	7 ft, 3 in		
Height	7 ft, 0 in		
Cube	368 cu ft		
Footprint	53 sq ft		
Weight	7610 lb		

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN2145 LINE, ARAMID, FOUR-STRD, 4 3/4" CIR X 1,200',W/TLS

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	4 strand braid	
Diameter	1-1/2"	
Circumference	4-3/4"	
Length	1,200'	
End Fittings	Thimbles and links	
Wt per 100 Ft	66 lb	
Breaking Strength	135,000 lb (reference 1)	
Working Load Limit (WLL)	22,500 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	4 ft, 1 in		
Width	4 ft, 1 in		
Height	3 ft, 11 in		
Cube	66 cu ft		
Footprint	17 sq ft		
Weight	1075 lb		
Diameter	4.75 in		

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN2146 LINE, ARAMID FIBER, 0.75" DIA X 24,000',W/THIMBLES

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	3/4"	
Circumference	2-1/4"	
Length	24,000'	
End Fittings	Thimbles	
Wt per 100 Ft	19 lb	
Breaking Strength	lb (reference 1)	
Working Load Limit (WLL)	lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	7 ft, 0 in		
Width	7 ft, 0 in		
Height	5 ft, 2 in		
Cube	254 cu ft		
Footprint	49 sq ft		
Weight	5960 lb		

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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## ESSM - LN2167 LINE, ARAMID FIBER, 0.75" DIA X 2,650', HEBE

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	3/4"	
Circumference	2-1/4"	
Length	2,650'	
End Fittings	Hard eye both ends	
Wt per 100 Ft	10 lb	
Breaking Strength	lb	
Working Load Limit (WLL)	lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	4 ft, 0 in		
Width	4 ft, 0 in		
Height	3 ft, 0 in		
Cube	48 cu ft		
Footprint	16 sq ft		
Weight	830 lb		



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## ESSM - LN2194 LINE, ARAMID FIBER, 1" DIA X 3,700', W/T&L

### Physical Characteristics

Type .....	Descriptions .....		
	Shipping	S/N 005308 Only	
Length	5 ft, 7 in	6 ft, 0 in	
Width	5 ft, 7 in	6 ft, 0 in	
Height	3 ft, 2 in	3 ft, 11 in	
Cube	99 cu ft	141 cu ft	
Footprint	32 sq ft	36 sq ft	
Weight	2000 lb	2000 lb	

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN2220 LINE, ARAMID FIBER, 2" DIA X 22,000', W/REM TMB EE

### Specifications

Type	Description	Qty
Manufacturer	Whitehill Manufacturing Corp.	
Model/Trademark	Vets I-BT	
Material	Technora T221 fiber	
Construction	Double Braid polyester cover over Technora fiber	
Diameter	2"	
Circumference	6"	
Length	22,000'	
End Fittings	Soft eye at each end with removable thimbles	
Wt per 100 Ft	132 lb	
Breaking Strength	300,000 lb	
Working Load Limit (WLL)	60,000 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Length	12 ft, 2 in		
Width	10 ft, 1 in		
Height	10 ft, 3 in		
Footprint	123 sq ft		
Cube	1258 cu ft		
Weight	34000 lb		

### References

Ref No	Reference
1	Whitehill Manufacturing Corporation Certificatioin of Compliance

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN2515 LINE, ARAMID FIBER, 1" DIA X 4,000', SEOE

### Specifications

Type	Description	Qty
Manufacturer	Cortland Cable Company	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1"	
Circumference	3"	
Length	4,000'	
End Fittings	Soft eye one end	
Wt per 100 Ft	31 lb	
Breaking Strength	125,000 lb (reference 1)	
Working Load Limit (WLL)	25, 000 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	5 ft, 0 in		
Width	5 ft, 0 in		
Height	3 ft, 5 in		
Cube	86 cu ft		
Footprint	25 sq ft		
Weight	2200 lb		

### References

Ref No	Reference
1	Cortland Cable Company Certificatioin of Compliance (leather tag on line)

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN2520 LINE, ARMD, 1" DIA X 13,600' SPL TO 1.5" D X 3700'

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	1" spliced to 1.5"	
Circumference	3" spliced to 4.5"	
Length	13,600 spliced to 3700'	
End Fittings	Soft eye on the 1.5" end	
Wt per 100 Ft	1" 31 lb 1.5" 75lb	
Breaking Strength	63,000 lb (reference 1)	
Working Load Limit (WLL)	10,500 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Length	7 ft, 7 in		
Width	7 ft, 7 in		
Height	9 ft, 4 in		
Cube	537 cu ft		
Footprint	58 sq ft		
Weight	12810 lb		

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN3482 LINE, ARAMID FIBER, 0.75" DIA X 8000', SFT EYE EAE

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	3/4"	
Circumference	2-1/4"	
Length	8,000'	
End Fittings	Soft Eye	
Wt per 100 Ft	19 lb	
Breaking Strength	lb (reference 1)	
Working Load Limit (WLL)	lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Length	7 ft, 7 in		
Width	7 ft, 7 in		
Height	9 ft, 4 in		
Cube	537 cu ft		
Footprint	58 sq ft		
Weight			

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN3484 LINE, ARAMID FIBER, 0.75" DIA X 8000', T&L EA END

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Kevlar	
Material	Aramid Fiber	
Construction	Double braid nylon cover over aramid fiber core	
Diameter	3/4"	
Circumference	2-1/4"	
Length	8,000'	
End Fittings	Thimble and Link Each End	
Wt per 100 Ft	19 lb	
Breaking Strength	lb (reference 1)	
Working Load Limit (WLL)	lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Length	7 ft, 7 in		
Width	7 ft, 7 in		
Height	9 ft, 4 in		
Cube	537 cu ft		
Footprint	58 sq ft		
Weight			

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN0300N\* Nylon Plaited Line



Representative Nylon 3-Strand Line



Representative Nylon Plaited Line

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## DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

### SPECIFICATIONS

Circumference (in)	Diameter (in)	Overall Construction	Weight per 100 ft (lb)	Breaking Strength (lb)	Working Load Limit (lb)
7	2 1/4	3-Strand	127	107,100	8,925 – 21,420
3 1/2	1 1/8	Double braid	34	31,500	2,625 – 6,300
4 1/2	1 1/2	Double braid	60	55,000	4,583 – 11,000
6	2	Double braid	106	96,900	8,075 – 19,380
7	2 1/4	Double braid	173	141,000	11,650 – 21,175
8	2 5/8	Double braid	181	163,800	13,600 – 32,760

NOTE: Breaking strength and working load limit are from the Cordage Institute Standard; refer to manufacturer for allowable safe working loads for particular line and application.

### Nylon Specifications

Nylon fiber lines offer excellent energy absorption for peak dynamic loads during towing or mooring operations. Nylon line should be considered for use as towing lines, mooring lines, anchor lines, and buoy mooring line. Double braid nylon lines can be readily spliced and are 25-30% stronger than twisted or plaited ropes have no wet strength loss, will not knot or hockle, and have excellent energy absorption.

When designing the salvage system, care must be taken in load analysis and sizing the line to prevent the hazards associated with "snap back" in the event of the line parting under heavy load. Nylon line is available in double braid construction in circumferences of 3 1/2, 4 1/2, 6, 7, and 8 inches; and 3-strand in 7" circumference, in lengths of up to 6,000 feet, with soft eyes, hard eyes, thimbles, links, or other fittings, as determined by onsite requirements.

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010



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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN0107

**LINE, NYLON, DOUBLE BRAID, 6" CIR X 500', THIMBLE EA END**

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Nylon double braid	
Material	Nylon	
Construction	Double Braid	
Diameter	2"	
Circumference	6"	
Length	500'	
End Fittings	Thimble each end	
Wt per 100 Ft	106 lb	
Breaking Strength	117,900 lb (reference 1)	
Working Load Limit (WLL)	19,650 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Length	5 ft, 10 in		
Width	4 ft, 8 in		
Height	4 ft, 8 in		
Cube	128 cu ft		
Footprint	28 sq ft		
Weight			

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN0131 LINE, NYLON, DOUBLE BRAID, 7" CIR X 1000'

### Specifications

Type	Description	Qty
Manufacturer	Samson Rope	
Model/Trademark	Stable braid	
Material	Polyester	
Construction	Double Braid class 1	
Diameter	2-1/4"	
Circumference	7"	
Length	1000'	
End Fittings	Thimble each end	
Wt per 100 Ft	173 lb	
Breaking Strength	141,000 lb (reference 1)	
Working Load Limit (WLL)	23,500 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Shipping		
Length	5 ft, 10 in		
Width	4 ft, 8 in		
Height	4 ft, 8 in		
Cube	128 cu ft		
Footprint	28 sq ft		
Weight	3195 lb		

### References

Ref No	Reference
1	Samson Rope Catalog - Commercial Marine

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN0300P\* Polyester Braid Line



Representative Polyester Double Braid Line

### SPECIFICATIONS

Circumference (in)	Diameter (in)	Overall Construction	Weight per 100 ft (lb)	Breaking Strength (lb)	Working Load Limit (lb)
4 1/2	1 1/2	Double Braid	60	55,000	4,583 – 11,000
6	2 1/8	Double Braid	120	108,900	9,075 – 21,780
7	2 1/4	Double Braid	152	137,200	9,861 – 22,313
8 1/2	2 3/4	Double Braid	217	193,800	16,150 – 38,780

NOTE: Breaking strength and working load limit are from the Cordage Institute standard; refer to manufacturer for allowable safe working loads for particular line and application.

### Polyester Specifications

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## DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

Polyester lines provide the best combination of high strength and abrasion resistance of any of the synthetic fibers. Stable braid line has the lowest stretch standard of any double braid rope available, good abrasion resistance wet or dry, a high strength-to-weight ratio, and high flexibility. Double braid polyester line is easy to handle, torque free, and has minimal UV degradation.

Recommended uses for stable braid-type lines are as tug headlines, winch lines, ship mooring lines, and stringing lines. Polyester line is available in double braid construction in circumferences of 4 1/2, 6, 7, and 8 1/2 inches. The line is available in lengths of up to 6,000 feet, with soft or hard eyes, thimbles, links, or other fittings, as determined by the onsite requirements.

Nylon line is shipped on a wooden or metal reel, or coiled, as requested. The shipping weight and volume will be determined by the diameter and length of the line and the reel or container required to store it.

### References

Ref No	Reference
1	U.S. Navy Salvage Engineer's Handbook, Volume 1 (Salvage Engineering) S0300-A8-HBK-010

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN0055 LINE, BOB, 12 STRD, 1" DIA X 12000', BLK URE CTD

### Specifications

Type	Description	Qty
Manufacturer	Cortland Limited	
Model/Trademark	BOB	
Material	Proprietary fiber blend	
Construction	12 strand braid	
Diameter	1"	
Circumference	3"	
Length	12,000'	
End Fittings	Bitter ends	
Wt per 100 Ft	32 lb	
Breaking Strength	110,000 lb (reference 1)	
Working Load Limit (WLL)	18,333 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		
Length	7 ft, 0 in		
Width	7 ft, 0 in		
Height	5 ft, 8 in		
Cube	278 cu ft		
Footprint	49 sq ft		
Weight	4460 lb		

### References

Ref No	Reference
1	Cortland Limited Certification of Compliance

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN0115 LINE, UNITREX XS MW, 1.15 DIA X 100', EYE ONE END

### Specifications

Type	Description	Qty
Manufacturer	Yale Cordage	
Model/Trademark	Unitrex XS Max Wear	
Material	Ultra high molecular weight polyethylene	
Construction	Parallel core with a polyester cover	
Diameter	1.15" (29 mm)	
Circumference		
Length	100'	
End Fittings	Eye one end	
Wt per 100 Ft	42 lb	
Breaking Strength	125,000 lb (reference 1)	
Working Load Limit (WLL)	20,833 lb	

### Physical Characteristics

Type .....	Descriptions .....
	Operating/Shipping

### References

Ref No	Reference
1	Yale Cordage catalog

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN0120 LINE, UNITREX XS MW, 1.94 DIA X 100', EYE ONE END

### Specifications

Type	Description	Qty
Manufacturer	Yale Cordage	
Model/Trademark	Unitrex XS Max Wear	
Material	Ultra high molecular weight polyethylene	
Construction	Parallel core with a polyester cover	
Diameter	1.94" (49 mm)	
Circumference		
Length	100'	
End Fittings	Eye one end	
Wt per 100 Ft	99 lb	
Breaking Strength	310,000 lb (reference 1)	
Working Load Limit (WLL)	77,500 lb	

### Physical Characteristics

Type .....	Descriptions .....		
	Operating/Shipping		

### References

Ref No	Reference
1	Yale Cordage catalog

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DEEP OCEAN SALVAGE SYNTHETIC LINE

System - DS0300

## ESSM - LN2152 LINE, POLYESTER, DBL BRD, 10" CIR X 1850', NO EYES

### Specifications

Type	Description	Qty
Manufacturer	Commercial	
Model/Trademark	Polyester double braid	
Material	Polyester	
Construction	Double braid	
Diameter	3.25"	
Circumference	10"	
Length	1,850'	
End Fittings	Bitter ends	
Wt per 100 Ft	354 lb	
Breaking Strength	292,000 lb (reference 1)	
Working Load Limit (WLL)	48,666 lb	

### Physical Characteristics

Type .....	Descriptions .....		
Length	10 ft, 5 in		
Width	5 ft, 5 in		
Height	6 ft, 9 in		
Volume (ft <sup>3</sup> )	381 cu ft		
Footprint (ft <sup>2</sup> )	56 sq ft		
Weight (lb)	9090 lb		

### References

Ref No	Reference
1	Samson Ocean Systems, Inc Certificate of Compliance