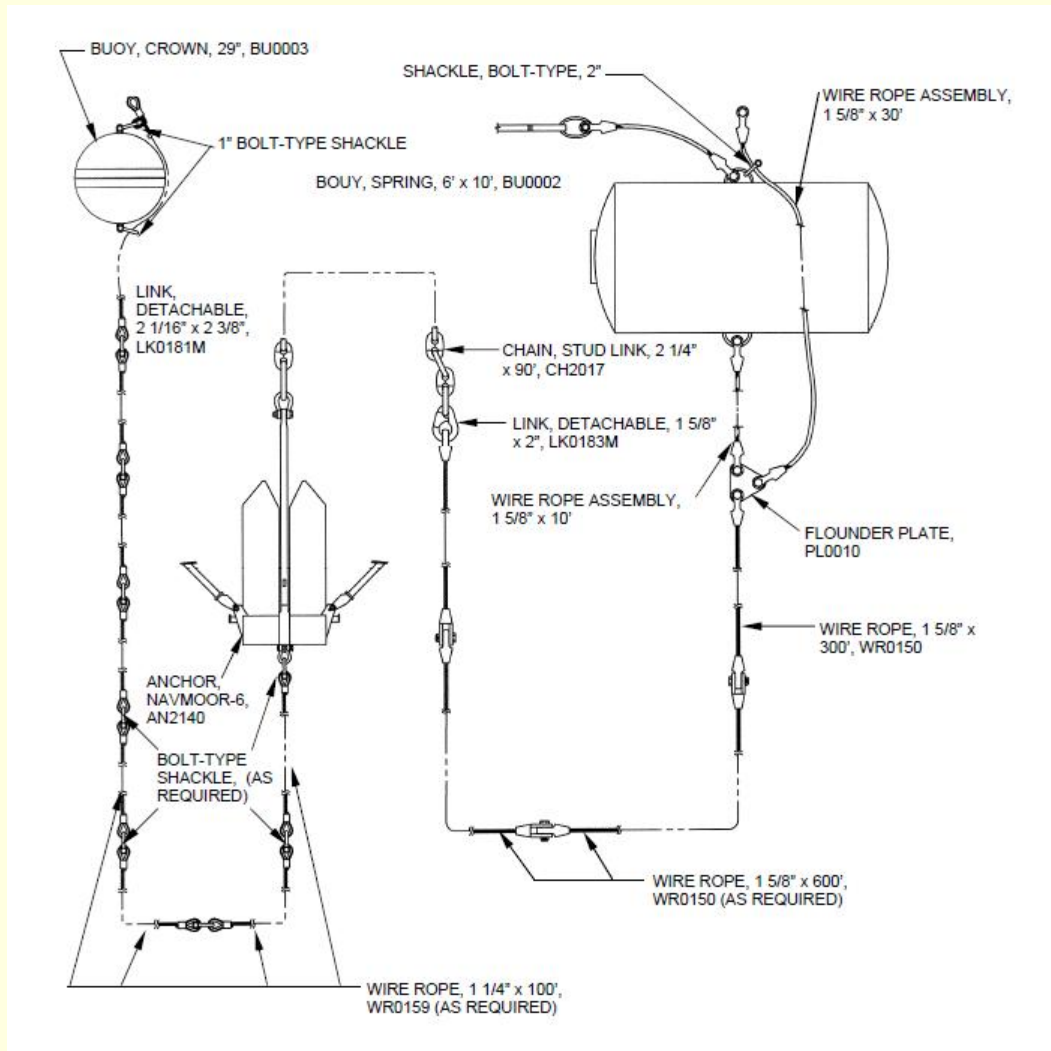


S0300-BV-CAT-010

FOUR POINT MOORING SYSTEM

System - DS0200



**Overview of Four-Point Mooring System DS0200
(One leg shown)**

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FOUR POINT MOORING SYSTEM

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SYSTEM ON IO BUT CURRENTLY NO SYSTEMS AVAILABLE LLS040114

The Four-Point Mooring System DS0200 consists of components and hardware necessary to assemble four identical mooring legs. Each leg consists of an anchor, anchor chain, wire ropes, mooring buoy, crown buoy, and rigging hardware. In addition, the system contains two optional anchor billboards to secure the anchors during transit and to deploy them at the salvage site. The mooring system is designed to moor a T-ATF 166 Class, or equivalent ship, in up to 600 feet of water. The Beach Gear System S05100 is used in conjunction with the Four-Point Mooring System.

Note: The Anchor Billboards are optional and may be requested by the user.

Also, the following hardware is included:

1. Shackle, Bolt-Type, 1 3/8" - 32
2. Shackle, Bolt-Type, 2" - 8

System Components for DS0200

Alternates

| ESSM No | Nomenclature | Type | Qty | NS | Cont |
|----------------|---|---------|-----|----|------|
| AN0080 | ANCHOR BILLBOARD, 4-PT MOORING SYSTEM | BL OPTL | 2 | | |
| AN2140 | ANCHOR, NAVMOOR-6 | BL | 4 | | |
| BU0002 | BUOY, SPRING, 6' DIA X 10' LG, STEEL | BL | 4 | | |
| BU0003 | BUOY, CROWN, 29" DIAMETER | BL | 4 | | |
| CH2017 | CHAIN, STUD LINK, 2 1/4" X 90' | BL | 4 | | |
| LK0181M | LINK, DTCH, PEAR-SHAPED, 2 1/16"-2 3/8", W/HAIRPI | BL | 4 | | |
| LK0183M | LINK, DTCH, PEAR-SHAPED, 1 5/8"-2", W/HAIRPIN | BL | 4 | | |
| PL0010 | PLATE, FLOUNDER, 4-PT MOORING SYS | BL | 4 | | |
| WR0150 | WIRE ROPE, 1 5/8" X 300' | BL | 4 | | |
| WR0151 | WIRE ROPE, 1 5/8" X 600' | BL | 4 | | |
| WR0159 | WIRE ROPE, 1 1/4" X 100' | BL | 8 | | |

Baseline verified on 4/1/2014, * Not shown in catalog.

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ESSM - AN0080 ANCHOR BILLBOARD, 4-PT MOORING SYSTEM



4-Point Mooring System Anchor Billboard AN0080

The 4-Point Mooring System Anchor Billboard AN0080 is an elevated two-piece (base and incline) structure designed to deploy an anchor from the deck of a vessel without requiring an anchor windlass. The billboard is installed at the rail of the host ship to hold the anchor securely during transit, and to release the anchor in a controlled, safe manner at the salvage site.

Specifications

| Type | Description | Qty |
|--------------|-------------|-----|
| Manufacturer | Commercial | |

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|-------------|--|
| | Shipping | Operating | |
| Incline | | | |
| Length | 13 ft, 4 in | 13 ft, 4 in | |
| Width | 6 ft, 3 in | 6 ft, 3 in | |
| Height | 11 ft, 6 in | 11 ft, 6 in | |
| Cube | 185 cu ft | 959 cu ft | |
| Footprint | 53 sq ft | 84 sq ft | |
| Weight | 4934 lb | 4934 lbs | |
| | | | |

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FOUR POINT MOORING SYSTEM

System - DS0200

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|------------|--|
| Base | | | |
| Length | 6 ft, 4 in | 6 ft, 4 in | |
| Width | 8 ft, 4 in | 8 ft, 4 in | |
| Height | 3 ft, 6 in | 3 ft, 6 in | |
| Cube | 185 cu ft | 185 cu ft | |
| Footprint | 53 sq ft | 53 sq ft | |
| Weight | 2206 lbs | 2206 lbs | |

References

| Ref No | Reference |
|--------|--|
| 1 | U.S. Navy Ship Salvage Manual, Volume 1, Theory of Strandings and the Use of Beach Gear, NAVSHIPS 0994-LP-000-3010 |

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ESSM - AN2140 ANCHOR, NAVMOOR-6



NAVMOOR-6 Anchor AN2140

The NAVMOOR-6 Anchor AN2140 is a high efficiency anchor used with the Four-Point Mooring System and the Beach Gear System. The NAVMOOR-6 is designed for high stress applications normally seen in salvage operations.

Specifications

| Type | Description | Qty |
|------------------|------------------------------|-----|
| Manufacturer | Commercial | |
| Type | NAVMOOR-6 (U.S. Navy Design) | |
| Weight (nominal) | 6000 lb | |

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|--------------|--|
| | Shipping | Operating | |
| Length | 13 ft, 5 in | 13 ft, 5 in | |
| Width | 6 ft, 6 in | 17 ft, 10 in | |
| Height | 4 ft, 0 in | 4 ft, 0 in | |
| Cube | 349 cu ft | 958 cu ft | |
| Footprint | 88 sq ft | 240 sq ft | |
| Weight | 8190 lb | 8190 lb | |

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FOUR POINT MOORING SYSTEM

System - DS0200

References

| Ref No | Reference |
|--------|--|
| 1 | NAVMOOR-6 Salvage Anchor, 7,200 lbs. (Wt), General Assembly, Customer Metal Fabrication, Inc., Dwg. D-1269 |

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FOUR POINT MOORING SYSTEM

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ESSM - BU0002 BUOY, SPRING, 6' DIA X 10' LG, STEEL



6-Foot Diameter Spring Buoy BU0002.

The 6-Foot Diameter Spring Buoy BU0002 is a large can-type buoy capable of sustaining the line load of the beach gear pulling wire ropes. The spring buoy is used to stabilize the loads on the beach gear and mooring system wire ropes during anchoring and salvage operations.

| Specifications | | |
|----------------|-------------|-----|
| Type | Description | Qty |
| Manufacturer | Commercial | |
| NAVSEA Drawing | 6648787 | |
| Material | Steel | |
| Buoyancy | 14,725 lb | |
| Weight | 3820 lb | |

| Physical Characteristics | | | |
|--------------------------|--------------------|-------------|--|
| Type | Descriptions | | |
| | Shipping | Operating | |
| Length | 10 ft, 0 in | 10 ft, 0 in | |
| Diameter | 6 ft, 0 in | 6 ft, 0 in | |
| Cube | 360 cu ft | 360 cu ft | |
| | | | |
| Weight | 3820 lb | 3820 lbs | |

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FOUR POINT MOORING SYSTEM

System - DS0200

References

| Ref No | Reference |
|--------|--|
| 1 | Spring Buoy, Ship Salvage, NAVSEA Dwg. 6648787 |

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FOUR POINT MOORING SYSTEM

System - DS0200

ESSM - BU0003 BUOY, CROWN, 29" DIAMETER



29 Diameter Crown Buoy BU0003

The Crown Buoy BU0003 is a 29-inch diameter, steel, spherical buoy used to mark the location of the anchor and its retrieving wire rope.

| Specifications | | |
|----------------|-------------|-----|
| Type | Description | Qty |
| Manufacturer | Commercial | |
| Material | Steel | |
| Diameter | 29" | |
| Buoyancy (net) | 325 lb | |

| Physical Characteristics | | | |
|--------------------------|--------------------|-----------|--|
| Type | Descriptions | | |
| | Shipping | Operating | |
| Diameter | 29 in | 29 in | |
| Cube | 1 cu ft | 1 cu ft | |
| Weight | 150 lb | 150 lb | |

| References | |
|------------|-----------|
| Ref No | Reference |
| 1 | None |

**ESSM - CH2017
CHAIN, STUD LINK, 2 1/4" X 90'**



2 1/4-Inch x 90-Foot Stud Link Chain CH2017



2 1/4-Inch x 90-Foot Stud Link Chain CH 2017 and Shipping Container

The 2 1/4-Inch x 90-Foot Stud Link Chain CH2017 is a standard shot (90 feet) of anchor chain. It may be used for mooring, towing, and other applications that require a strong yet flexible attachment between two points.

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FOUR POINT MOORING SYSTEM

System - DS0200

Specifications

| Type | Description | Qty |
|-------------------|-------------|-----|
| Manufacturer | Commercial | |
| Model | Grade 2 | |
| Link size | 2-1/4" | |
| Proof strength | 284,000 lb | |
| Breaking strength | 396,000 lb | |

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|--|--|
| | Shipping | | |
| Length | 5 ft, 2 in | | |
| Width | 3 ft, 0 in | | |
| Height | 3 ft, 6 in | | |
| Cube | 55 cu ft | | |
| Footprint | 16 sq ft | | |
| Weight | 4460 lb | | |

References

| Ref No | Reference |
|--------|---|
| 1 | Baldt Catalog #30 for Anchors and Chain |

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FOUR POINT MOORING SYSTEM

System - DS0200

ESSM - LK0181M LINK, DTCH, PEAR-SHAPED, 2 1/16"-2 3/8", W/HAIRPIN



2 1/16" - 2 3/8" Pear-Shaped Detachable Link w/Hairpin LK0181M

The Pear-Shaped Detachable Link w/Hairpin LK0181M is used to connect 2 1/4-inch chain to an anchor. The detachable link has been modified to accept a positive locking device (hairpin) to secure the internal taper pin in place.

Specifications

| Type | Description | Qty |
|-------------------|-------------------|-----|
| Manufacturer | Baldt Corporation | |
| Part number | 82021-06010 | |
| Size | 2-1/16" x 2-3/8" | |
| Proof strength | 447,000 lb | |
| Breaking strength | 675,000 lb | |

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|------------|--|
| | Shipping | Operating | |
| Length | 1 ft, 6 in | 1 ft, 6 in | |
| Width | 1 ft, 1 in | 1 ft, 1 in | |
| Height | 0 ft, 4 in | 0 ft, 4 in | |
| Cube | 1 cu ft | 1 cu ft | |
| Footprint | 2 sq ft | 2 sq ft | |

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FOUR POINT MOORING SYSTEM

System - DS0200

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|---------|--|
| Weight | 107 lb | 107 lbs | |

References

| Ref No | Reference |
|--------|---|
| 1 | Baldt Catalog #30 for Anchors and Chain |
| 2 | NAVSEA Drawing 702267, Hairpin Modification For Pear Shaped Detachable Link |
| 3 | NAVSEA Drawing 8594813, Hairpin Modification For Pear Shared Detachable Link Lk0181M, LK0183M |

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FOUR POINT MOORING SYSTEM

System - DS0200

ESSM - LK0183M LINK, DTCH, PEAR-SHAPED, 1 5/8"-2", W/HAIRPIN



1 5/8" x 2" Pear-Shaped Detachable Link w/Hairpin LK0183M

The Pear-Shaped Detachable Link w/Hairpin LK0183M is used to connect anchor chain to a closed socket on 1 5/8-inch wire rope. The detachable link has been modified to accept a positive locking device (hairpin) to secure the internal taper pin in place.

Specifications

| Type | Description | Qty |
|-------------------|-------------------|-----|
| Manufacturer | Baldt Corporation | |
| Part number | 82021-05010 | |
| Size | 1 5/8" x 2" | |
| Proof strength | 322,000 lb | |
| Breaking strength | 488,000 lb | |

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|-------------|--|
| | Shipping | Operating | |
| Length | 1 ft, 3 in | 1 ft, 3 in | |
| Width | 0 ft, 11 in | 0 ft, 11 in | |
| Height | 0 ft, 3 in | 0 ft, 3 in | |

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FOUR POINT MOORING SYSTEM

System - DS0200

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|---------|--|
| Cube | 1 cu ft | 1 cu ft | |
| Footprint | 2 sq ft | 2 sq ft | |
| Weight | 60 lb | 60 lbs | |

References

| Ref No | Reference |
|--------|---|
| 1 | Baldt Catalog #30 for Anchors and Chain |
| 2 | NAVSEA Drawing 702267, Hairpin Modification For Pear Shaped Detachable Link |
| 3 | NAVSEA Drawing 8594813, Hairpin Modification For Pear Shared Detachable Link Lk0181M, LK0183M |

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FOUR POINT MOORING SYSTEM

System - DS0200

ESSM - PL0010 PLATE, FLOUNDER, 4-PT MOORING SYS



4-Point Mooring System Flounder Plate PL0010

The 4-Point Mooring System Flounder Plate PL0010 is a plate-steel connecting device. The flounder plate is used in the mooring system to connect the spring buoy to the anchoring cable, thus allowing for retrieval and disconnecting the spring buoy at the end of operations.

| Specifications | | |
|-------------------|-------------|-----|
| Type | Description | Qty |
| Manufacturer | Commercial | |
| NAVSEA Dwg | 6648809 | |
| Capacity | 50 tons | |
| Proof strength | 100 tons | |
| Breaking strength | 150 tons | |

| Physical Characteristics | | | |
|--------------------------|--------------------|------------|--|
| Type | Descriptions | | |
| | Shipping | Operating | |
| Length | 1 ft, 8 in | 1 ft, 8 in | |
| Width | 1 ft, 7 in | 1 ft, 7 in | |
| Height | 0 ft, 2 in | 0 ft, 2 in | |
| Cube | 1 cu ft | 1 cu ft | |
| Footprint | 3 sq ft | 3 sq ft | |

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FOUR POINT MOORING SYSTEM

System - DS0200

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|--------|--|
| Weight | 90 lb | 90 lbs | |

References

| Ref No | Reference |
|--------|--|
| 1 | Ground Leg System, NAVSEA Dwg. 6648809 |

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FOUR POINT MOORING SYSTEM

System - DS0200

ESSM - WR0150 WIRE ROPE, 1 5/8" X 300'



1 5/8" x 300' Wire Rope WR0150

The 1 5/8-Inch Wire Rope WR0150 is used in situations that require a high strength, flexible connection for towing, mooring and other applications. Each length of wire rope has a spelter socket on each end; one closed, the other open. The wire rope is stored on a steel reel.

Specifications

| Type | Description | Qty |
|-------------------|--|-----|
| Manufacturer | Commercial | |
| Length | 300' | |
| Diameter | 1 5/8" | |
| Construction | 6x19 or 7x37 wire rope | |
| Core type | Independent wire rope core or fiber core | |
| Material | Improved plow steel | |
| End fittings | Open socket one end, closed socket one end | |
| Wire coating | Galvanized wire | |
| Breaking strength | 230,000 lb | |
| Safe working load | 115,000 lb | |

Physical Characteristics

| Type | Descriptions |
|------------|--------------------|
| | Shipping |

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FOUR POINT MOORING SYSTEM

System - DS0200

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|--|--|
| Diameter | 4 ft, 0 in | | |
| Height | 3 ft, 9 in | | |
| Cube | 60 cu ft | | |
| Footprint | 16 sq ft | | |
| Weight | 2328 lb | | |

References

| Ref No | Reference |
|--------|-----------|
| 1 | None |

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FOUR POINT MOORING SYSTEM

System - DS0200

ESSM - WR0151 WIRE ROPE, 1 5/8" X 600'



1 5/8" x 600' Wire Rope WR0151

The 1 5/8-Inch Wire Rope WR0151 is used in situations that require a high strength, flexible connection for towing, mooring and other applications. Each length of wire rope has a spelter socket on each end; one closed, the other open. The wire rope is stored on a steel reel.

Specifications

| Type | Description | Qty |
|-------------------|--|-----|
| Manufacturer | Commercial | |
| Length | 600' | |
| Diameter | 1 5/8" | |
| Construction | 6x19 or 7x37 wire rope | |
| Core type | Independent wire rope core or fiber core | |
| Material | Improved plow steel | |
| End fittings | Open socket one end, closed socket one end | |
| Wire coating | Galvanized wire | |
| Breaking strength | 230,000 lb | |
| Safe working load | 115,000 lb | |

Physical Characteristics

| Type | Descriptions |
|------------|--------------------|
| | Shipping |

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FOUR POINT MOORING SYSTEM

System - DS0200

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|--|--|
| Diameter | 4 ft, 0 in | | |
| Height | 3 ft, 9 in | | |
| Cube | 1 cu ft | | |
| Footprint | 16 sq ft | | |
| Weight | 3370 lb | | |

References

| Ref No | Reference |
|--------|-----------|
| 1 | None |

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FOUR POINT MOORING SYSTEM

System - DS0200

ESSM - WR0159 WIRE ROPE, 1 1/4" X 100' (FOUR ROPES PER REEL)



1 1/4" x 100' Wire Rope WR0159

The 1 1/4-Inch Wire Rope WR0159 is used in situations that require a high strength, flexible connection for towing, mooring, attachment of crown buoys, as a retrieval wire, and in other applications. Each wire rope reel contains four 100-foot lengths of 1 1/4-inch wire rope.

Specifications

| Type | Description | Qty |
|-------------------|--|-----|
| SPECIFICATIONS | Commercial | |
| Length | 100', 4 ropes per reel | |
| Diameter | 1 1/4" | |
| Construction | 6x19 or 7x37 wire rope | |
| Core type | Independent wire rope core or fiber core | |
| Material | Improved plow steel | |
| End fittings | Hard eyes, each end | |
| Wire coating | Galvanized wire | |
| Breaking strength | 138,800 lb | |
| Safe working load | 69,400 lb | |

Physical Characteristics

| Type | Descriptions |
|------------|--------------------|
| | Shipping |

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FOUR POINT MOORING SYSTEM

System - DS0200

Physical Characteristics

| Type | Descriptions | | |
|------------|--------------------|--|--|
| Diameter | 4 ft, 0 in | | |
| Height | 3 ft, 8 in | | |
| Cube | 59 cu ft | | |
| Footprint | 16 sq ft | | |
| Weight | 2135 lb | | |

References

| Ref No | Reference |
|--------|-----------|
| 1 | None |