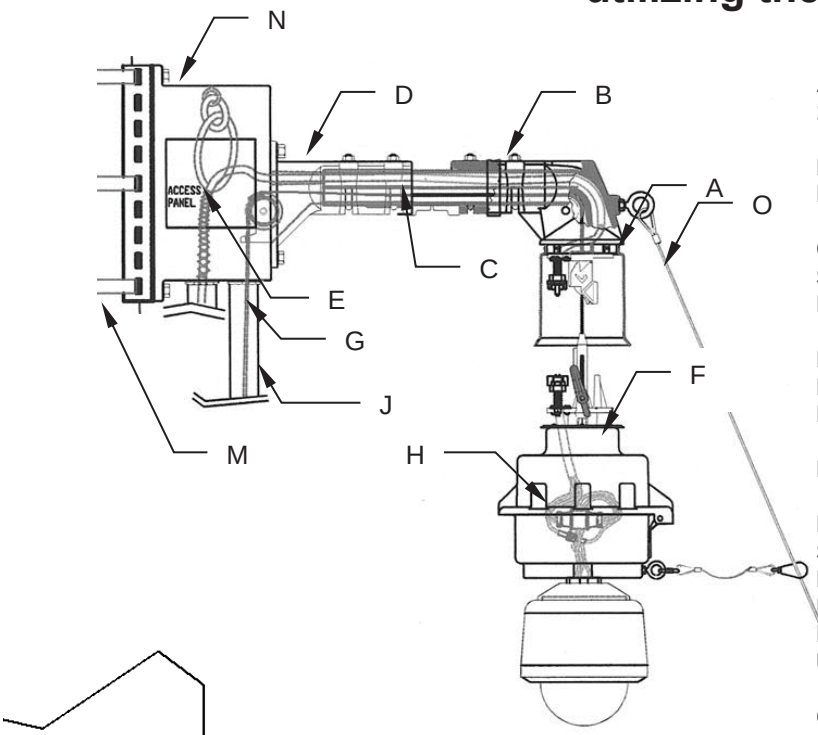
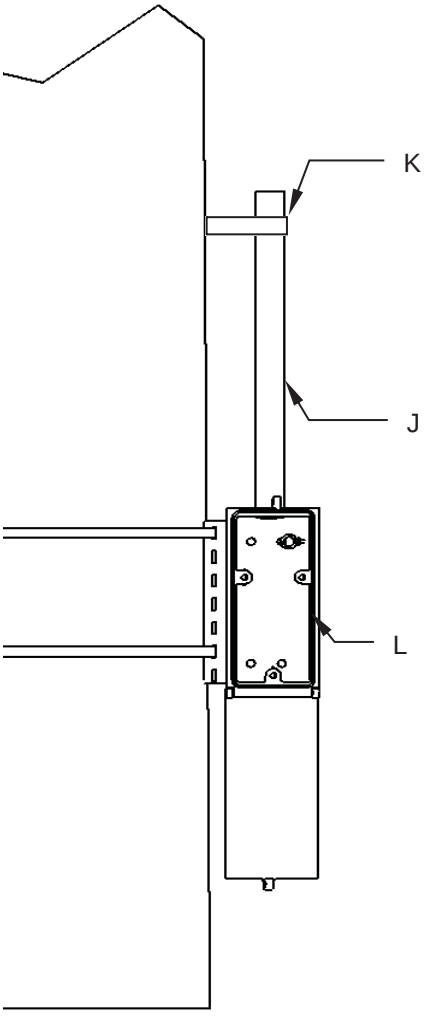
CAMERA LOWERING SYSTEMS

Design CTMT-16HDD

Arm and Disconnect Unit for External Pole/Tower Mount with Guide Cable and Security Locking Box, utilizing the Portable Lowering Tool





A. ELECTRICAL AND SIGNAL DISCONNECT UNIT WITH 16 CONTACT CONNECTOR, GUIDE EYE BOLT.

B. HEAVY DUTY ALUM DISCONNECT UNIT FITTER WITH PULLEY AND U-BOLT MOUNTING.

C. ¼" THICK DIVIDED PIPE ARM: 2-3/8 IN. O.D. SEPARATES CONTROL CABLE AND ELECTRICAL/SIGNAL WIRES.

D. POLE MOUNTED FITTER WITH LARGE PULLEY HOUSING AND MOUNTING BRACKET FOR STRAP MOUNTING TO POLE (STRAPS BY OTHERS).

E. COMPOSITE CABLE STRAIN RELIEF.

F. CAMERA CONNECTION BOX PROVIDED WITH STABILIZING WEIGHTS. EASY OPEN SWING DOWN DESIGN PERMITS QUICK ACCESS TO SIGNAL WIRES FROM CAMERA ASSEMBLY. FEATURES UNIVERSAL MOUNTING FOR ALL CAMERA TYPES AND PAN/TILT UNITS.

G. CONTROL CABLE CONSTRUCTED OF 5/32 INCH DIA. 316 STAINLESS STEEL 7X19 CABLE (XX). CABLE LENGTH VARIES PER PROJECT.

H. ELECTRICAL/SIGNAL CABLE (OUTDOOR POE CAT6) CONNECTOR. 1 PCE CABLE FROM DISCONNECT UNIT TO CABINET, PROVIDED BY CLS.

J. 1 1/2" CONDUIT (BY OTHERS).

K. CONDUIT BRACKET WITH CLAMPS ATTACHING CONDUIT TO POLE (OPTIONAL).

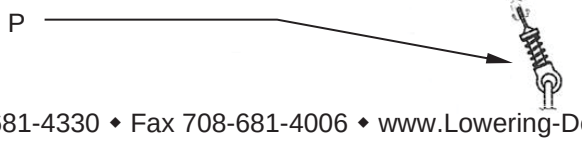
L. HEAVY DUTY ALUMINUM SECURITY LOCKING BOX FOR USE WITH PORTABLE LOWERING TOOL. BOX DOOR HINGES DOWN TO ALLOWING BOX TO BE MOUNTED TO THE RIGHT OR LEFT OF POLE. OPERATES 90 DEGREES FROM CAMERA ARM. (PADLOCK BY OTHERS).

M. POLE-BELTS (BY OTHERS) AS PER REQUIREMENTS.

N. HEAVY DUTY CAST AUMINUM HOUSING WITH LARGE ACCESS PANEL.

O. CAMERA GUIDE CABLE, 5/32" STAINLESS STEEL ALLOWING CAMERA TO SAFELY FOLLOW GUIDE TO GROUND (OPTIONAL).

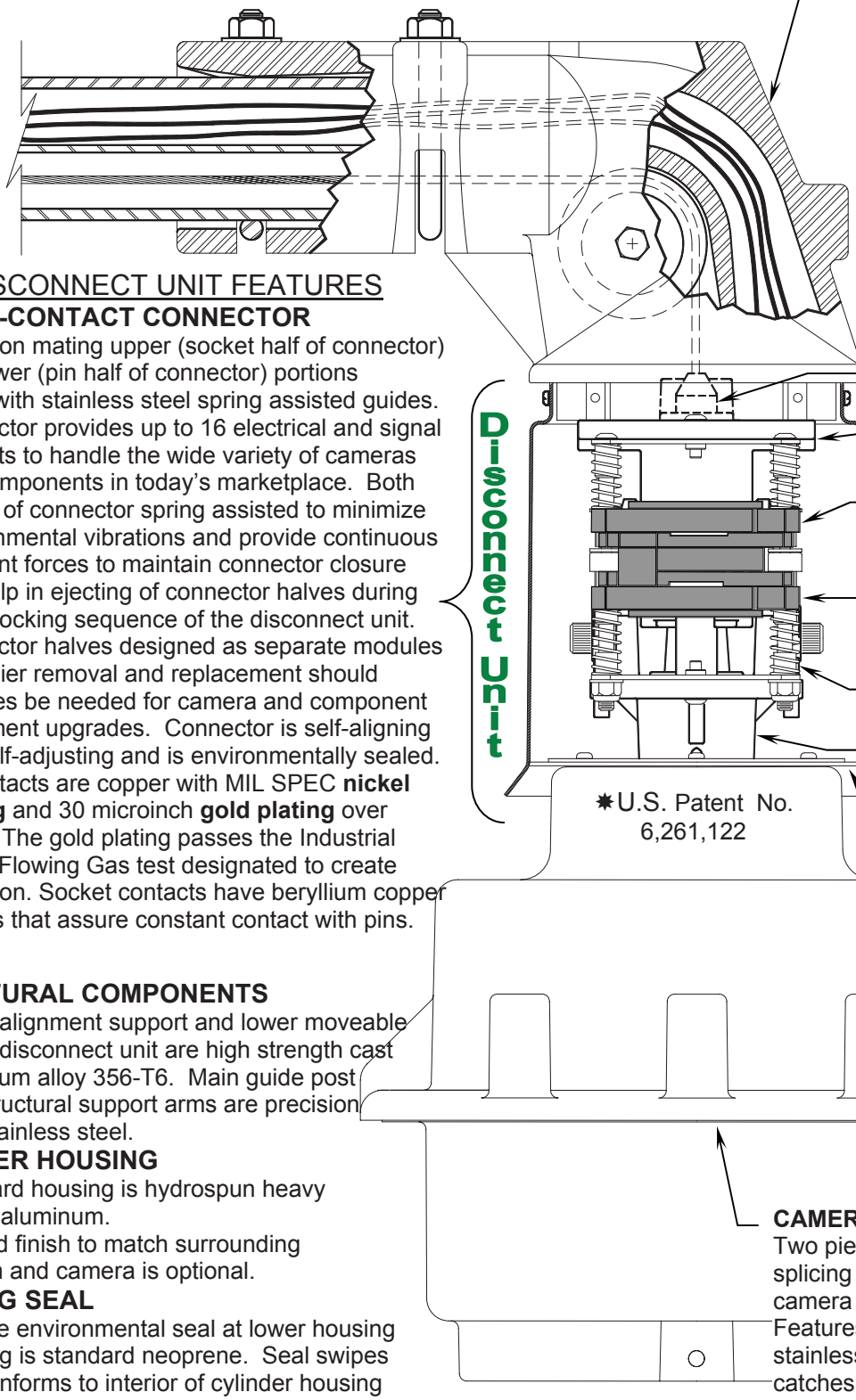
P. GUIDE CABLE ANCHOR IN GROUND (By Others).



835 Industrial Drive ◆ Elmhurst, IL 60126 ◆ Phone 708-681-4330 ◆ Fax 708-681-4006 ◆ www.Lowering-Device.com

CAMERA LOWERING SYSTEMS

16HD
ELECTRICAL DISCONNECT UNIT



MOUNTING FITTERS
Cast aluminum alloy. Completely isolates the moving control cable from the signal cable. Molybdenum filled nylon pulley has sintered bronze permanently lubricated bearing for maintenance free life. This insures their use for dirty atmosphere and corrosive environments.

Outdoor Model: (Shown)
For 2-3/8" O.D. Galv. pipe. Tower, pole, & wall mtg.

Indoor Model: Has upper flange for surface mtg.

Stainless Steel Guide Post

Upper Alignment Support (Maze)

Upper 16 Contact Half (Socket Contacts)

Lower 16 Contact Half (Pin Contacts)

Stainless Steel Guides and Springs 8 Places

Lower Moveable Half of Disconnect Unit

✸U.S. Patent No. 6,261,122

Aluminum Cylinder Housing

Housing Seal

DISCONNECT UNIT FEATURES

✸MULTI-CONTACT CONNECTOR

Precision mating upper (socket half of connector) and lower (pin half of connector) portions aided with stainless steel spring assisted guides. Connector provides up to 16 electrical and signal contacts to handle the wide variety of cameras and components in today's marketplace. Both halves of connector spring assisted to minimize environmental vibrations and provide continuous resistant forces to maintain connector closure and help in ejecting of connector halves during the unlocking sequence of the disconnect unit. Connector halves designed as separate modules for easier removal and replacement should changes be needed for camera and component equipment upgrades. Connector is self-aligning and self-adjusting and is environmentally sealed. All contacts are copper with MIL SPEC **nickel plating** and 30 microinch **gold plating** over nickel. The gold plating passes the Industrial Mixed Flowing Gas test designated to create corrosion. Socket contacts have beryllium copper springs that assure constant contact with pins.

STRUCTURAL COMPONENTS

Upper alignment support and lower moveable half of disconnect unit are high strength cast aluminum alloy 356-T6. Main guide post and structural support arms are precision cast stainless steel.

CYLINDER HOUSING

Standard housing is hydrospun heavy gauge aluminum.
Painted finish to match surrounding system and camera is optional.

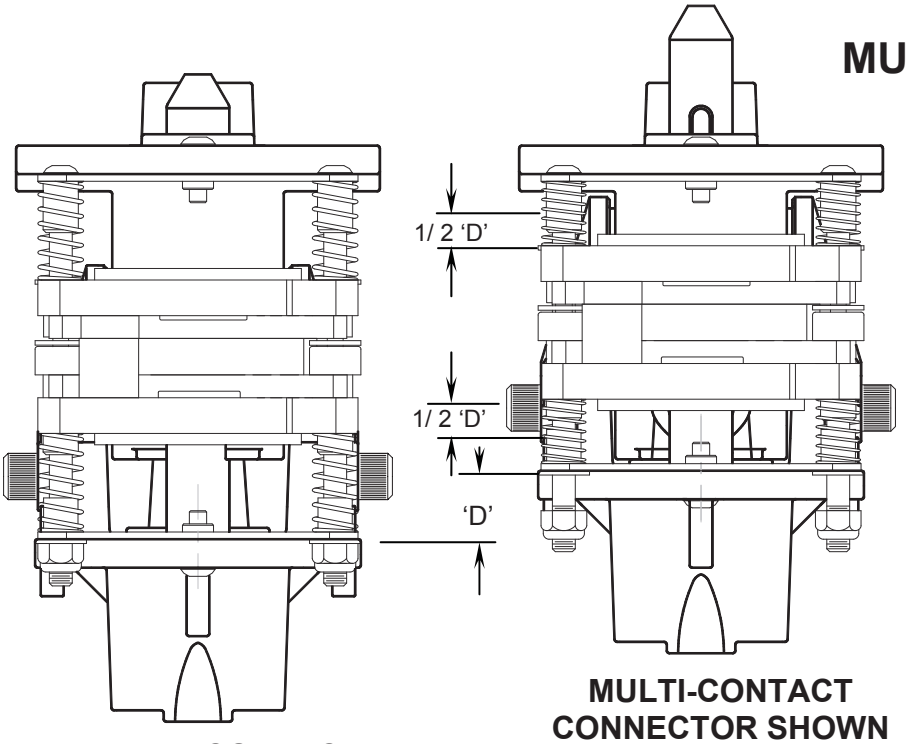
HOUSING SEAL

Flexible environmental seal at lower housing opening is standard neoprene. Seal swipes and conforms to interior of cylinder housing during all operating stages of the disconnect. unit.

CAMERA CONNECTION BOX
Two piece hinging cast aluminum splicing box has large capacity for camera power and signal leads. Features vibration resistant stainless steel fasteners and safety catches.

CAMERA LOWERING SYSTEMS

16HD-HEAVY DUTY
ELECTRICAL DISCONNECT UNIT
FOR MULTI-FUNCTION CAMERAS



MULTI-CONTACT CONNECTOR SHOWN IN LOCKED POSITION

MULTI-CONTACT CONNECTOR SHOWN IN LOCKING OR UNLOCKING POSITION

OPERATION OF THE MULTI-CONTACT CONNECTOR

Distance **'D'** is the total distance that the disconnect unit must travel to lock and unlock. This unique design (patented) by Camera Lowering Systems provides spring-assisted upper and lower portions of the connector that splits the total travel distance in half, thereby equalizing the retaining forces required to assure a uniform seal. Because the upper half (the socket contacts) and the lower half (the pin contacts) float within the disconnect unit, the connector is isolated from vibrations that would affect signal discontinuity.

LOCKED POSITION

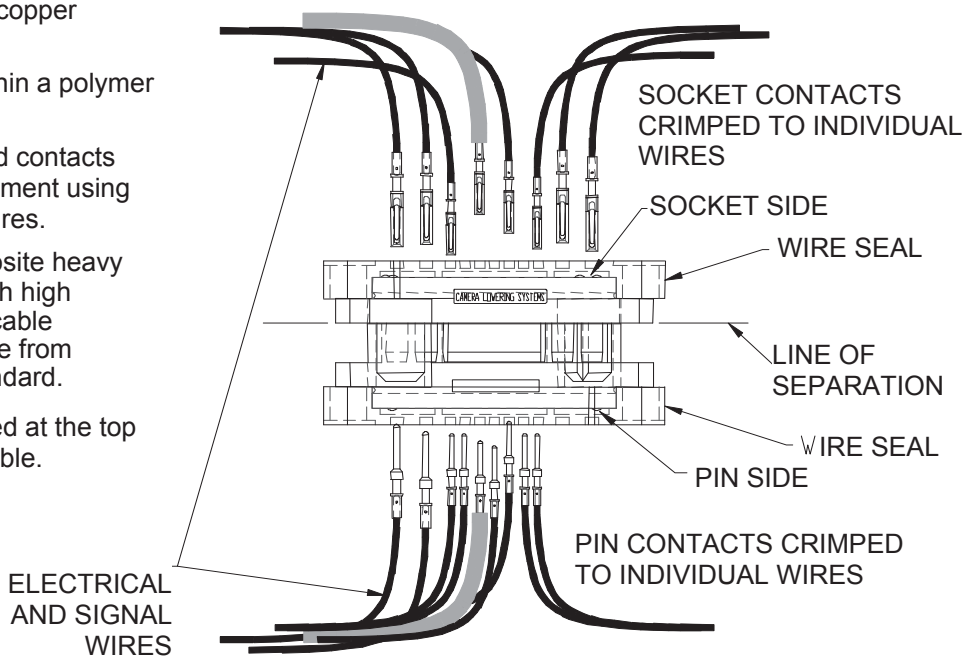
When the disconnect unit is in the locked position, the multi-contact connector has all contacts engaged. Springs are slightly compressed to provide equal and constant pressure against the two halves to maintain an environmental seal.

LOCKING POSITION & UNLOCKING POSITION

During the operation to lock or unlock the disconnect unit, the springs of both halves of the connector compress in equal proportions and stainless steel

CONTACTS AND WIRES

- Twin connectors provide up to 16 Heavy Duty 12gge gold plated over nickel, pure copper electrical contacts.
- Contacts are securely contained within a polymer body.
- Upper and lower groups of wires and contacts are sealed from the external environment using potted glandular seals around the wires.
- Wires are up to 16 conductor composite heavy gauge electrical and signal wires with high quality CAT6 ethernet cable. (See cable specs). A one-piece composite cable from disconnect unit to the cabinet is standard.
- No additional connectors are required at the top of the pole, where access is impossible.



CAMERA LOWERING SYSTEMS

16HD DISCONNECT UNIT FOR MULTI-FUNCTION CAMERAS

OPERATION OF THE MULTI-CONTACT CONNECTOR

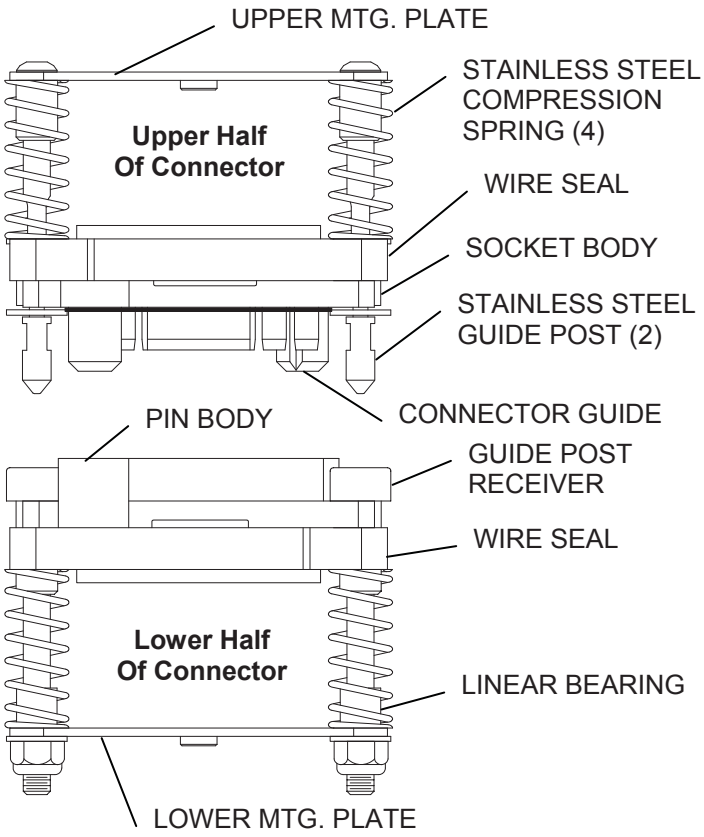
guide posts move through linear bearings as the support arms of the disconnect unit move into the proper position within the tracking guide. Electrical and signal contacts remain fully engaged and the camera is still operational.

RAISING POSITION

The connector assembly utilizes precision machined stainless steel guides to align the two halves of the connector. These are used in addition to the 3-way guides of the disconnect unit. A set of alignment posts built into the connector halves serve as the final guides to assure that all pin and socket contacts are perfectly lined up before engagement.

LOWERING POSITION

As the disconnect unit begins to unlock, the springs expand and the guide posts begin to separate. The last parts of the connector to disengage are the electrical and signal contacts. Any ground wires or shielding use a longer pin contact to assure that they are the very last to disengage before the camera is lowered for servicing.



ELECTRICAL DISCONNECT UNIT (EDU) SPECIFICATION GUIDE

❖ The coaxial and electrical disconnect unit shall meet or exceed sine vibration tests of 3.5 g's within the frequency range of 5-60 Hz in all three axes for minimum of six 5-minute cycle each axes. It shall meet or exceed random vibration tests of frequency range 60-1000 HZ at .025 g2/Hz applied for 30 minutes in each of the three axes. It shall have results to exhibit no signal or electrical discontinuities greater than 10 microseconds. Tests applicable to Electrical Disconnect Unit and attached components.

❖ The EDU shall have a 3-way tracking guide and support. It shall be constructed of precision cast high strength aluminum alloy 356-T6. A permanently fixed position piece incorporating a special tracking guide system permits the moveable portion of the *Disconnect Unit* to align in the same position every time the system is operated, thereby eliminating the need to re-orientate the camera. The Electrical Disconnect Unit shall have twin high strength notches securing the load of the *Lower Contact Assembly* and camera.

❖ The MULTI-CONTACT Connector assembly shall be modular for easy installation and retrofit requirements. All pin and socket contacts shall be insertable and removable. The connector shall have a maximum of 16 copper alloy C14500, size 12 contacts (.095" Dia.) rated at 35 Amps with gold plating per MIL-G-45204. All hardware shall be corrosion resistant stainless steel. It shall have a self-aligning and self-adjusting mechanical system comprised of two principal assemblies:
Two UPPER CONTACT HALVES shall house the socket contacts. It shall incorporate spring assisted polymer contact body with precision-machined guideposts. The socket contact body shall have integral guideposts for precise contact alignment.
Two LOWER CONTACT HALVES shall house the pin contacts comprised of spring assisted polymer contact body with precision-machined guidepost receivers. The pin contact body aligns with guideposts of integral socket body guideposts.

❖ The EDU cover shall be a one-piece hydro-spun heavy gauge stainless steel. The unit shall have a guidepost constructed of precision cast high strength stainless steel. It shall utilize a cast-in-place guide bar for precise alignment of *Lower Contact Assembly* with the fixed portion of the *EDU.*

❖ If required, connectors in pole top junction box and camera junction box are provided by others.

SPECIFICATIONS FOR OTHER COMPONENTS FOR CTMT

❖ A DISCONNECT UNIT FITTER shall be provided made of heavy duty cast aluminum alloy to fit a 2-3/8 inch (60.3mm) outside diameter *Divided Pipe Arm*. Two U-bolt pipe clamps shall be used to rigidly hold the *Divided Pipe Arm.* The fitter is designed to completely isolate the moving *Control Cable* from the electrical and signal wires. It shall contain a molybdenum impregnated nylon pulley providing high strength and low resistance for the moving *Control Cable,* thereby increasing the life of the cable. The pulley shall have a permanently lubricated bearing.

❖ The system shall have a CABINET MOUNTED FITTER made of heavy duty cast aluminum alloy to fit 2-3/8 inch (60.3mm) O.D. *Divided Pipe Arm*. It shall utilize a cast-in-place cable stop to prevent cable connections from entering pulley. It shall contain a molybdenum impregnated nylon pulley with a permanently lubricated bearing. Two U-bolt pipe clamps shall be used to rigidly hold the *Divided Pipe Arm.* The fitter shall be designed to bolt directly to a 4" (101.6mm) Diameter pole top. The system shall have a horizontal divided pipe arm that fits inside and connects the Disconnect Unit Fitter with the Pole Mounted Fitter. It shall be made of 2-3/8 inch (60.3mm) O.D. with ¼" (6.4mm) wall thickness steel pipe with galvanized finish standard (polyester powder coat painted finish optional). The pipe shall be divided entire length to keep *Control Cable* and electrical/signal wires separate. Arm shall be position aligned non-rotating type incorporating interlocking positioning keys.

❖ The system shall have a POLE MOUNT CABINET made of heavy duty cast aluminum. The cabinet shall have a side utility door. The cabinet shall be secured to the pole using stainless steel or galv. steel bracket. The connection box shall have a cast aluminum cover retained by stainless steel set screws. The box shall incorporate bosses for direct mounting of cord strain relief brackets and cord grips. It shall also be used to connect cable splices (not required). If preferred, the Signal Cable can be a one piece from disconnect unit to pole base or cabinet to eliminate need of a connector in the upper Pole Mount Cabinet.

❖ The system shall utilize a CONTROL CABLE (mechanical raising and lowering cable) made of type 316 Stainless Steel 5/32 inch (4.0 mm) diameter 7 x 19 construction cable. The cable should be manufactured so as not to unwind or become unraveled during the raising and lowering operation. Minimum breaking strength shall be 2200 lbs. One end of the cable shall have a heavy-duty Stainless Steel connecting link. The control cable shall be the only cable that moves when the camera is raised and lowered.

❖ The system shall also have a CAMERA CONNECTION BOX. It shall be a two piece design for easy camera mounting. Both sections shall be made of corrosion resistant cast aluminum. The top half shall be mounted and gasketed to the bottom of the disconnect unit. Inside the top half, it shall have provision to mount additional weights for lightweight cameras or other equipment. All parts shall be made of extra heavy construction. The Camera Connection Box shall be adaptable to all brands of cameras. The two piece construction shall feature a lower box that hinges down for easy access to wiring. It shall contain a large capacity-splicing compartment for camera power, signal leads, and connectors. All hardware shall be made of stainless steel. The box shall also have a cable loop allowing the box and camera to follow the cable guide down to the ground.

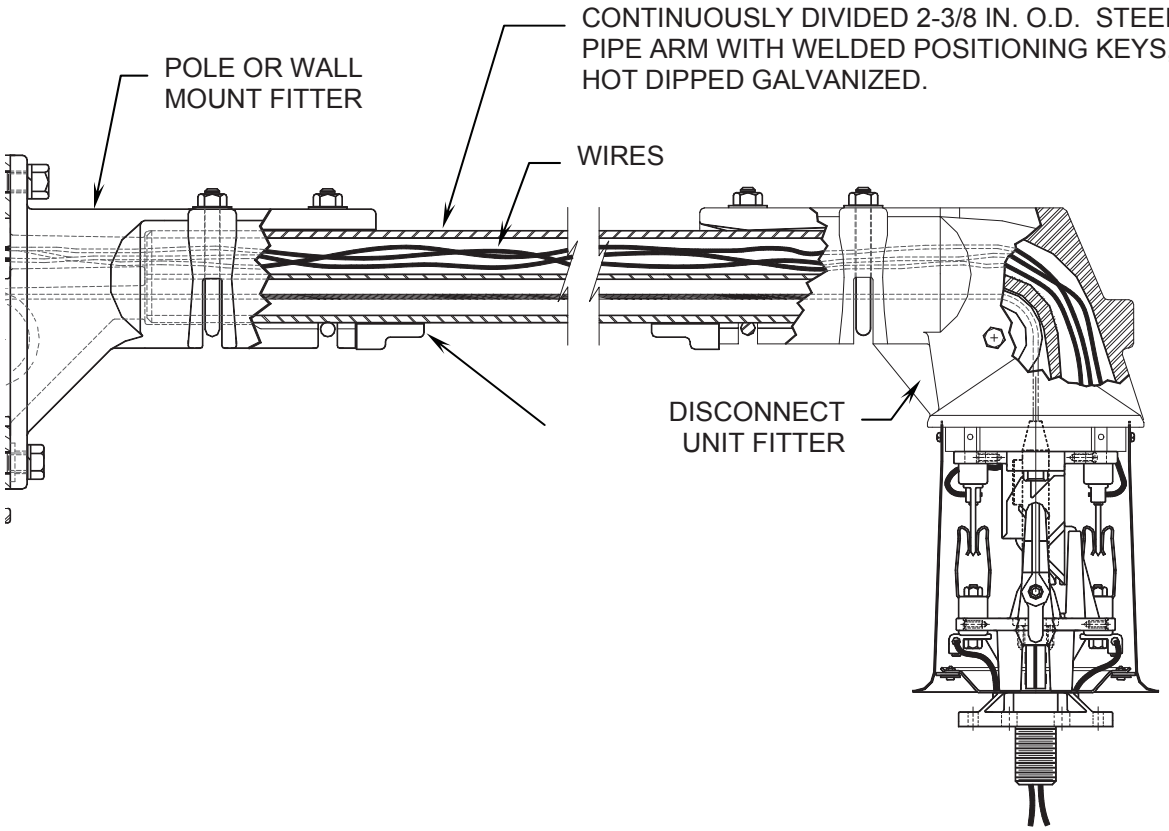
❖ SECURITY LOCK BOX shall be a 14"x5"x5.5" heavy duty cast aluminum cabinet with a drop down hinged door. The Security box shall have a heavy duty corrosion resistant mounting bracket to attach the box to the side of the pole.

❖ An LT-4-XX LOWERING TOOL shall be supplied with each order. It is a portable lowering tool consisting of the gearbox, disc brake, frame, and lowering cable. The gearbox shall be of heavy-duty design. It shall incorporate solid steel heated treated gears for maximum durability and strength. The gearbox shall be equipped with a special automatically actuated disc brake for load holding ability and the prevention the load from freewheeling. This is essential for all lifting operations. The winch has a 3:1 Gear reduction to reduce the effort required to raise and lower the camera assembly. The frame shall be of a heavy-duty design with brackets making the unit stable when mounted to the Security Lock Box. The frame shall have a pulley with a permanently lubricated bearing. The raising and lowering (control) cable shall be made of stainless steel 1/8-inch (3.2mm) diameter 7 x 19 construction. Minimum breaking strength shall be 1760lbs. It shall come with a heavy-duty stainless steel swivel.

❖ CAMERA GUIDE CABLE shall be 5/32" aircraft cable that guides the camera to the ground. It shall be attached to the Disconnect Unit Fitter at the top and a spring loaded bolt in the ground (by others). It shall be equipped with a corrosion resistance turnbuckle allowing adjustment of the cable length.

INTERLOCKING ARM & FITTERS

PROVIDES POSITIVE NON-ROTATING POSITIONING OF PIPE ARM FOR ALL OUTDOOR POLE AND WALL MOUNTED LOWERING SYSTEMS

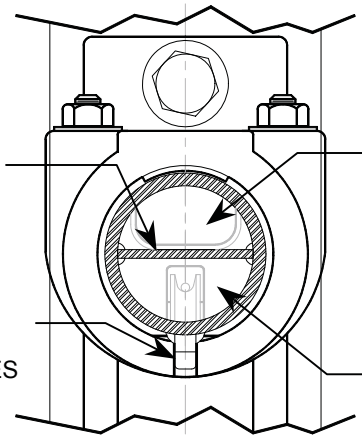


CAMERA LOWERING SYSTEMS

INTERLOCKING ARM & FITTERS

PROVIDES POSITIVE NON-ROTATING POSITIONING OF PIPE ARM FOR ALL OUTDOOR POLE AND WALL MOUNTED LOWERING SYSTEMS

ARM CROSS SECTION



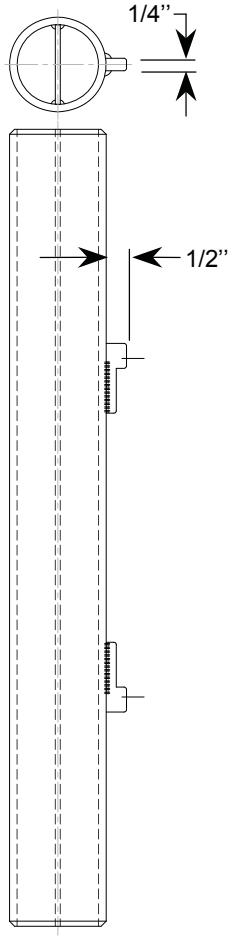


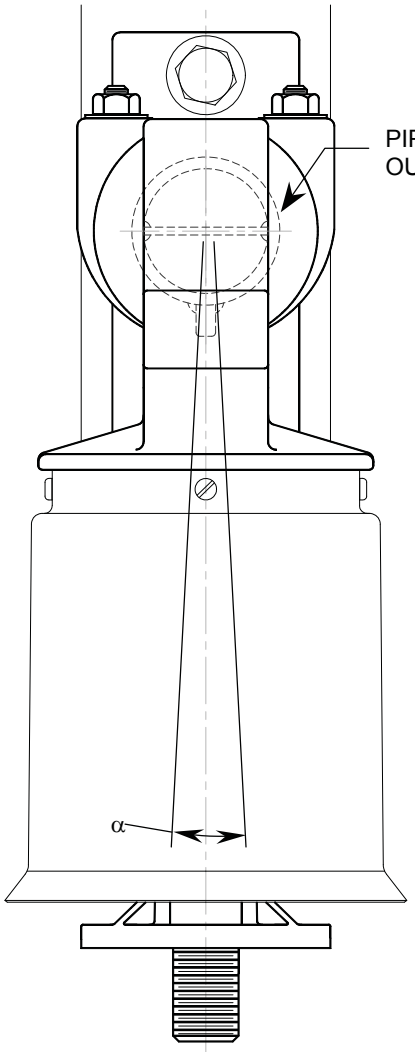
Fig. 1

DETAILS OF FEATURES

NOTE: **WHEN THE INTERLOCKING POSITIONING KEYS OF THE ARM ASSEMBLY ARE MATED WITH THE CORRESPONDING NOTCHES IN THE FITTERS, THE POLE SHAFT MUST BE PLUMB FOR THE PROPER OPERATION OF THE SYSTEM.**

ANGLE α: The angle α shown in the END VIEW is based on mechanical tolerances between mating parts and should not exceed a total of 1/2 °. This deviation from plumb will not affect the operation of the components of the arm assembly. All tolerances are based on the pole shaft being plumb when installed.

PIPE ARM: **(See Fig. 1)** Constructed of 2 inch structural steel pipe having an outside diameter of 2-3/8 inch. Positioning keys are permanently welded to the pipe arm at precise positions that align with notches in the ends of each of the fitters. Arm finish is hot dip galvanized after all welding is completed. Optional finishes over the galvanizing are available to match the color of the pole. Ends of the pipe arm bottom out against the inside of the fitters a small fraction of an inch before the keys bottom out in the notches to provide a secure fit.
The pipe arm is installed complete with the rest of the arm components at the factory and is pre-wired to eliminate any need for adjustment in the field.



END VIEW

LIGHTING & LOWERING SYSTEMS®

SPECIFICATION SHEET
663-242-CAT6-UTP Composite Cable –D

OUTDOOR RATED CAT6 CABLE FOR POE

Features And Benefits

- Innovative cross-web design allowing for maximum pair separation, increasing key electrical performance parameters
- **Gel-filled construction to prevent moisture migration in underground and wet applications**
- **Outdoor, Direct Burial rated jacket with cable.**
- Wide temperature range for extreme weather environments
- Made in U.S.A.

Applications

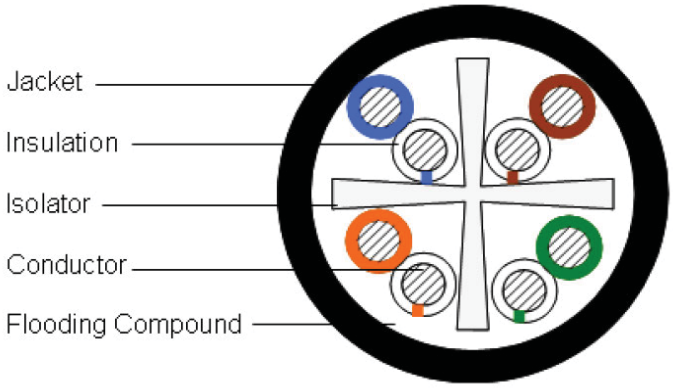
- Data transmission rates up to 2.4 Gb/s
- 1000 BASE-T (Gigabit Ethernet)
- 100/10 BASE-T (IEEE 802.3)
- 52/155 Mbps ATM
- Duct and outdoor conduit installations

Standard Compliances

- ANSI/TIA 568-C.2
- ISO 11801 (Category 6)
- ICEA S-102-700 (Category 6)
- Telcordia (Bellcore) Specification GR-421- CORE Water Penetration

Requirement

- RoHS Compliant Directive 2002/95/EC



CONSTRUCTION

Conductors
- **23 AWG solid bare annealed copper**

Insulation Material
- Polyolefin

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Separator Material
- Cross-web, Polyolefin

Flooding Compound
- **Waterproof gel**

Jacket
- UV- and Abrasion-Resistant Polyethylene

ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100 m (328 ft) @ 20˚C	9.38 ohms
DC Resistance Unbalance (max) Individual Pair %	5.0
Delay Skew (max) ns/100 m	45
Nom. Velocity of Propagation % Speed of Light	65
Characteristic Impedance Frequency (f): 1-250 MHz	Ohms 100 ± 15

PHYSICAL DATA

Nominal Cable Diameter (in)	0.260
Jacket Thickness (in)	0.026
Nominal Cable Weight (lbs/1000	26.4
Minimum Bend Radius (in)	1.0
Maximum Pulling Force (lbs)	25
Temperature Rating (˚C)	
Installation:	-30 to +70
Operation:	-40 to +70

LIGHTING & LOWERING SYSTEMS®

SPECIFICATION SHEET
663-242-CAT6-UTP Composite Cable –D
OUTDOOR RATED CAT6 CABLE FOR POE

ELECTRICAL CHARACTERISTICS

Mutual Capacitance	6.0 nF/100 m @ 1 kHz
Operating Frequency, Maximum	250 MHz
Operating Voltage, Maximum	80 V
Transmission Standards	ANSI/TIA-568-C.2 / CENELEC EN 50288-6-1 / ISO/IEC 11801 Class E
Dielectric Strength, minimum	1500 Vac / 2500 Vdc

Note: All electrical transmission tests include swept frequency measurements

ELECTRICAL PERFORMANCE

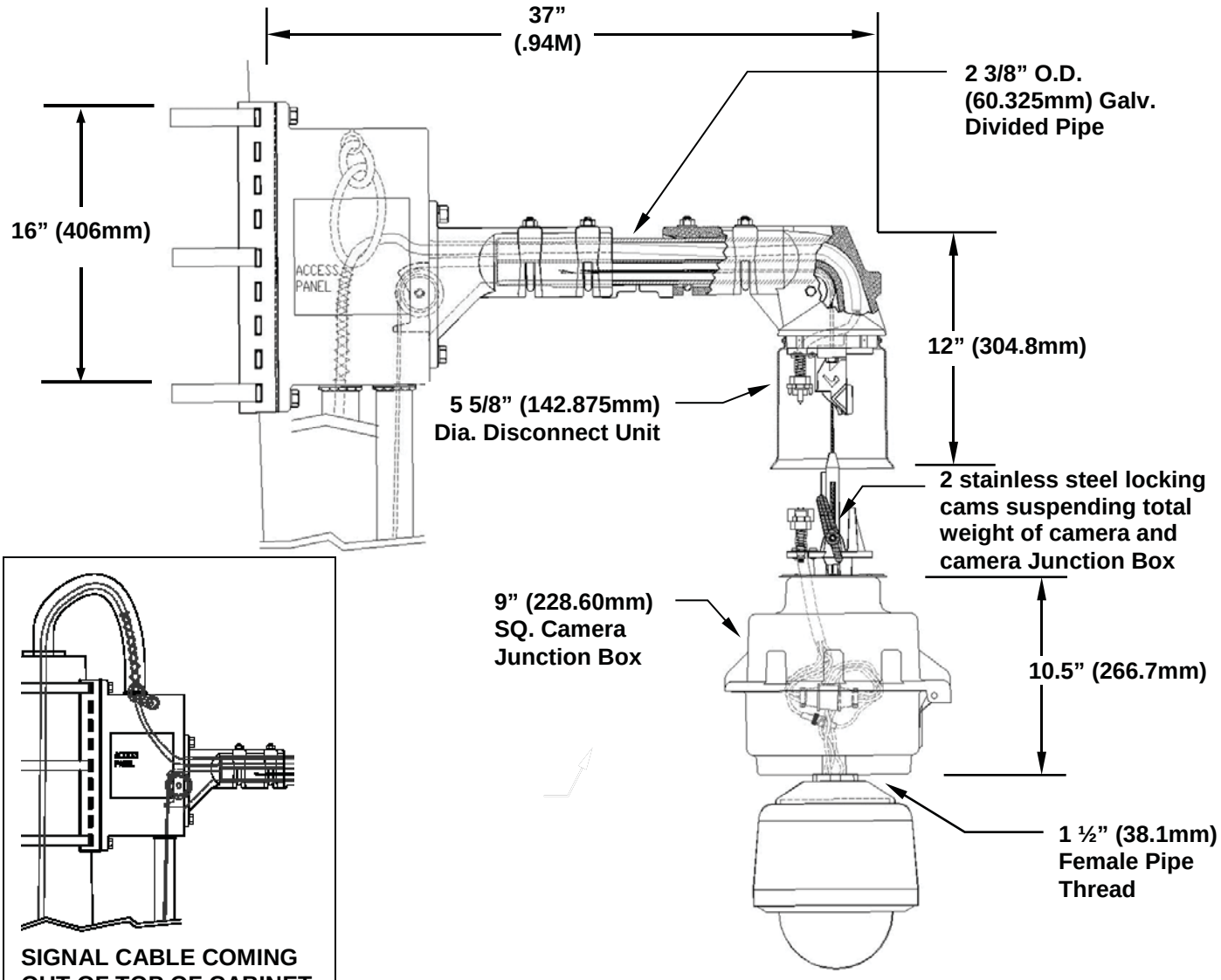
Frequency MHz	**PSACR*** (min)	**ACR*** (min)	**Insertion Loss** (max)	**PSNEXT** (min)	**NEXT** (min)	**PSACRF** (min)	**ACRF** (min)	**Return Loss** (min)
1	70.3	72.3	2.0	72.3	74.3	64.8	67.8	20.0
4	59.3	61.5	3.8	63.3	65.3	52.8	55.7	23.0
10	51.3	53.3	6.0	57.3	59.3	44.8	47.8	25.0
16	46.7	48.7	7.6	54.2	56.2	40.7	43.7	25.0
20	44.3	46.3	8.5	52.8	54.8	38.8	41.7	25.0
31.25	39.2	41.2	10.7	49.9	51.9	34.9	37.9	23.6
62.5	29.9	32.0	15.4	45.4	47.4	28.9	31.8	21.5
100	22.5	24.5	19.8	42.3	44.3	24.8	27.8	20.1
200	8.8	10.8	29.0	37.8	39.8	18.8	21.8	18.0
250	3.5	5.5	32.8	36.3	38.3	16.8	19.8	17.3

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20˚C.
*PSACR & ACR not specified in ANSI/TIA 568-C.2

CAMERA LOWERING SYSTEMS

Design **CTMT** ***SERIES***

External Mount Disconnect Unit Measurements



SIGNAL CABLE COMING OUT OF TOP OF CABINET (OPTIONAL)

Disconnect Unit Load Capacity:
200 lbs (91kgs) with a 12:1 safety factor
400 lbs (182kgs) with a 6:1 safety factor
600 lbs (273kgs) with a 4:1 safety factor

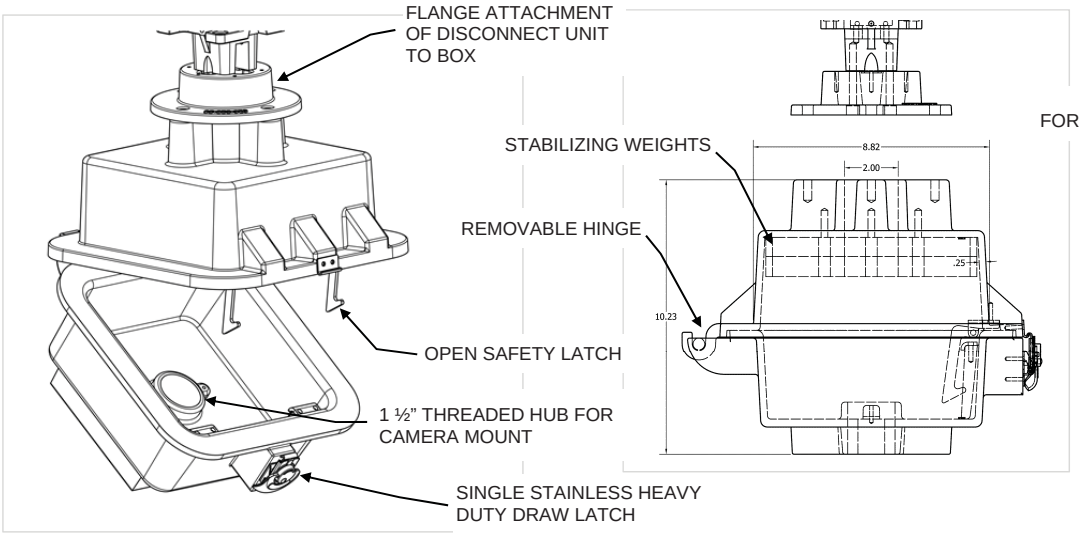
Complete CTMT with Arm Assembly Load Capacity:
200 lbs (91kgs) with a safety factor of 9:1

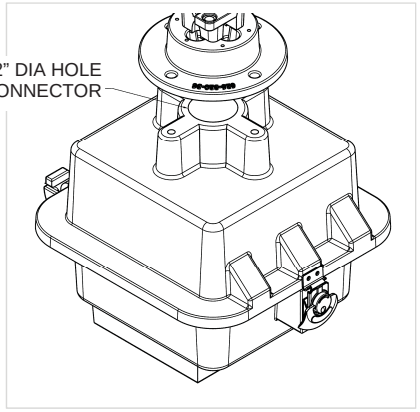
Operating Temperature Range: NEMA TS2 -40C to +140C, 100% Humidity
Wind load Rating: 130mph (211kmph) w/1.3 Gust with 1.65 safety factor.
Total EPA: 3.00 **Total Weight:** 95 lbs (43 kgs)
(EPA and Weight includes arm, disconnect unit, camera junction box, Top tower cabinet, and camera)

CAMERA LOWERING SYSTEMS

Design **CAMJB-10**

Camera Junction Box Specifications





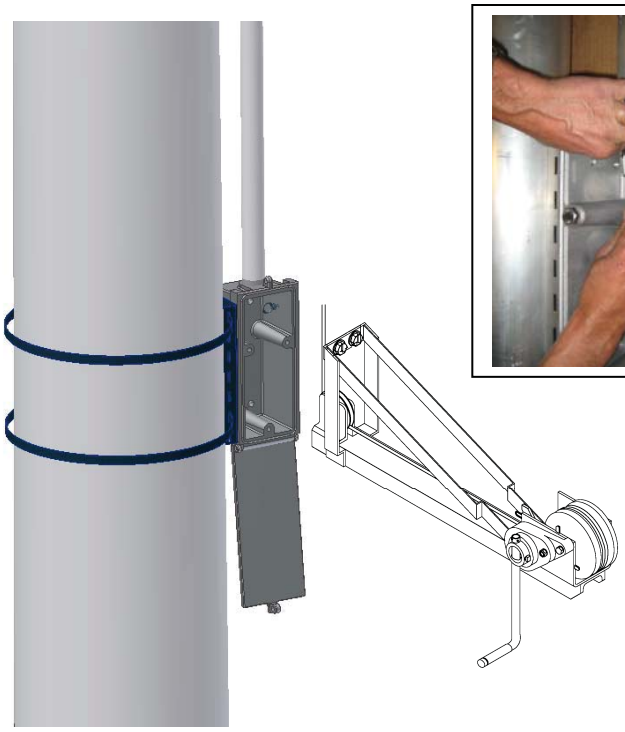
The Camera Junction Box shall be a two piece design for easy camera mounting and wiring connection

- The top half shall be mounted and gasketed to the bottom of the disconnect unit flange.
- Flange assembly shall extend into the cylinder of the disconnect unit and designed to repel water. The gasket shall be made of neoprene.
- The Camera Junction Box must exceed the ingress protection rating of IP55.
- Inside the top half, it shall have provision to mount additional weights for lightweight cameras or other equipment.
- There shall be an option to mount the stabilizing weights on the outside of the box.
- Total weight of Camera Junction box with weights: **45 lbs.**
- Made of extra heavy construction.
- The Camera Junction Box shall be adaptable to all brands of cameras. It shall be able to accommodate cameras with a 1 ½" threaded mount, or a flange mount.
- There shall be two open safety latches to keep the bottom half of the box from flying too far open.
- The two piece construction shall feature a lower box that hinges down for easy access to wiring. It shall contain a large capacity-splicing compartment for camera power, signal leads, and connectors.
- The two-piece clamshell is designed with a removable hinge on one side, and a single latch on the opposite side.
- Both sections shall be made of corrosion resistant cast aluminum.
- In between the two halves, there shall be a gasket made of neoprene, to resist moisture.
- For ease of attachment, disconnect unit flange attaches to the Junction Box from outside of the box.
- Bottom of box must have a screened 'breather hole' for moisture to escape.
- All hardware shall be made of stainless steel.
- There shall be one heavy duty stainless steel spring-loaded Draw Latch to lock the two halves of the Camera Junction Box together.

CAMERA LOWERING SYSTEMS

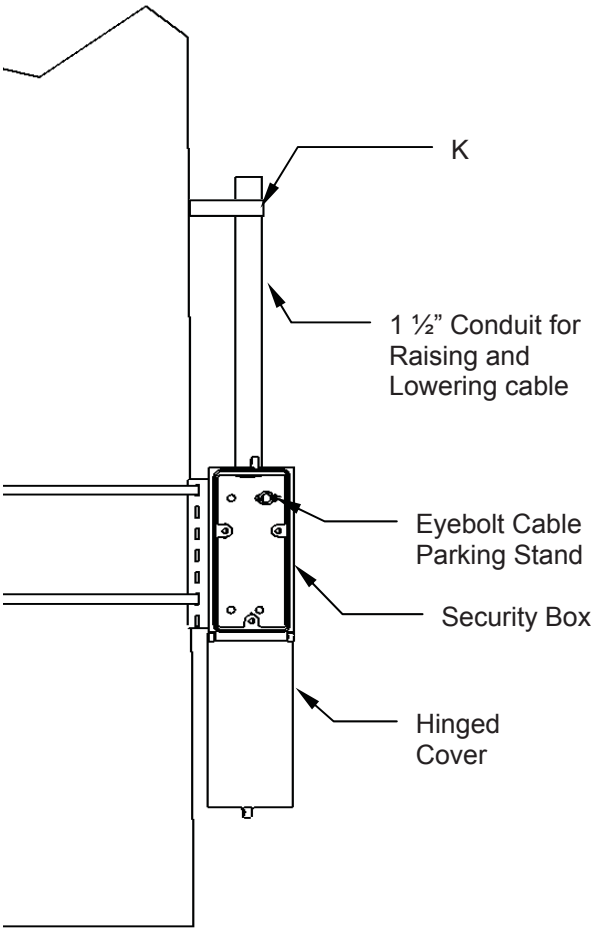
Design SLB-3 for CTMT-16HD

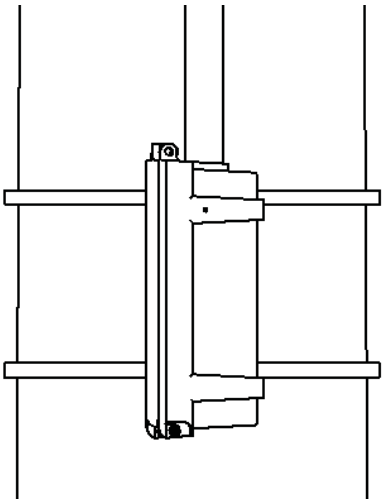
External Pole/Tower Mount with Security Locking Box for Portable Lowering Tool



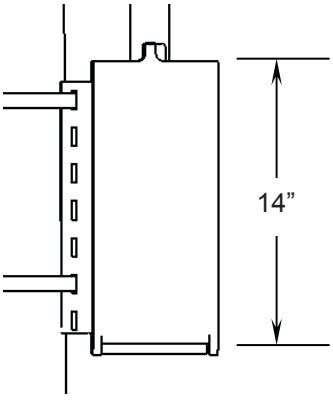
HEAVY DUTY SECURITY LOCKING BOX

- **MATERIAL:** CORROSION FREE CAST ALUMINUM
- **FINISH:** ALUMINUM. OPTIONAL-POWDER COAT PAINTED FINISH
- **DOOR:** CAST ALUMINUM HINGED DOOR, HINGING DOWNWARD, WITH TOOLESS S.S. HARDWARE.
- **MOUNTING:** BOX IS SIDE MOUNTED TO POLE, ALLOWING THE OPENING TO BE LOCATED 90° FROM LOWERING ARM. THIS PREVENTS OPERATOR FROM STANDING UNDERNEATH THE CAMERA WHILE IT IS RAISED AND LOWERED.
- **OPTIONAL MOUNTING:** BOX CAN BE MOUNTED FROM THE REAR OF THE BOX, TO A WALL.
- **LOWERING TOOL:** TO BE USED WITH A LT-4-XX PORTABLE LOWERING TOOL.
- **CONDUIT OPENING:** OPENING IN TOP OF BOX FOR 1 ½" CONDUIT (CONDUIT BY OTHERS).
- **GASKET:** NEOPRENE O-RING GASKET AROUND DOOR, PREVENTING WATER FROM PENETRATING.
- **MOISTURE DRAIN:** SCREENED WEEP HOLE IN BASE OF BOX FOR MOISTURE RELEASE.
- **LOCK:** PAD LOCKABLE DOOR TO BOX CAST OPENING. PADLOCK BY OTHERS.
- **OPENING:** LARGE OPENING ALLOWS TOOL TO BE ATTACHED TO THE BOX, WITH ROOM FOR SERVICING THE RAISING AND LOWERING CABLE.
- **EYEBOLT:** STAINLESS STEEL EYEBOLT FOR RAISING AND LOWERING CABLE PARKING STAND LOCATED INSIDE OF BOX.
- **MOUNTING BRACKET:** HEAVY DUTY STAINLESS STEEL MOUNTING BRACKET WITH SLOTS, TO ATTACH TO POLE WITH STAINLESS STEEL BANDS (BANDS BY OTHERS).
- **DIMENSIONS:** HEIGHT OF 14" x 6" WIDE x 5" DEEP ALLOWS PLENTY OF ACCESS INTO THE BOX.





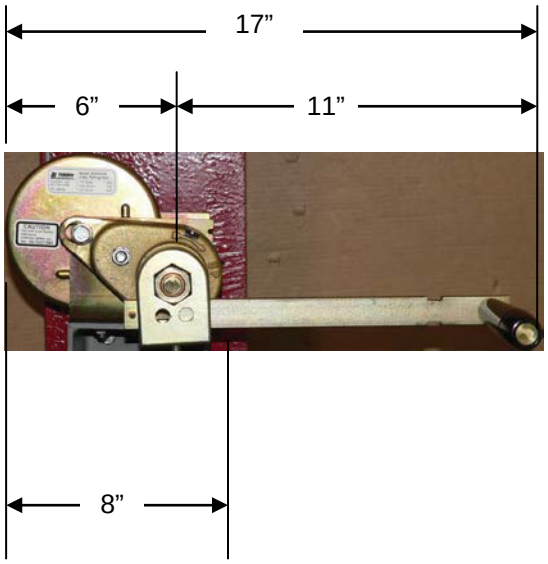
SIDE VIEW



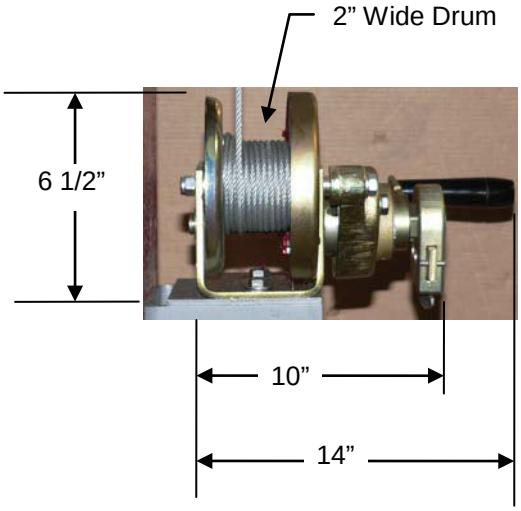
FRONTAL VIEW

LT-4-SSXX LOCKING BOX LOWERING TOOL

All gear boxes and lowering tools are of heavy duty design to provide reliability, long life, and ease of operation. They incorporate heat treated gears for maximum durability and strength. All are equipped with a special automatically actuated disc brake for better load holding ability and the prevention of the load free wheeling. The gear box assembly also has corrosion resistant plating. The systems are available for permanent installation or portable use indoors or outdoors for wall mounting or pole mounting. Each system is custom tailored to work with required load and operation for the raising/lowering specifications. The mounting bracket is made of heavy duty steel with a powder coated finish. The frame mounts to the Security Locking box utilizing 3 bolts.



CATALOG # LT-4-SSXX (Cable Length)
PORTABLE LOWERING TOOL FOR
SECURITY LOCKING BOX



Specifications on Lowering Tool

- Tool mounts on Security Locking Box
- Fabricated from heavy gauge steel w/black powder coat finish.
- The winch has a primer base coat followed by an enamel finish coat. Excellent resistance to corrosion.
- Oil impregnated bronze bushings and sealed ball bearings.
- All hardware is made out of stainless steel.
- The winch has a 3:1 Gear reduction to reduce the effort required to raise and lower the assembly.
- Winch comes with heavy-duty disk brake to afford greater load holding ability. This provides a positive locking mechanism to secure cable and keep from freewheeling.
- **Drum Capacity:** 75 ft. **Optional** 4” Drum for up to 150’ of cable.
- **Cable:** Equipped 1/8” 7x19 stainless steel aircraft cable.
- **Dimensions**: 29”L.x8”W. With handle, 12”W.
- **Dimension with Security Box**: 34” Long
- **Weight**:34LBS.

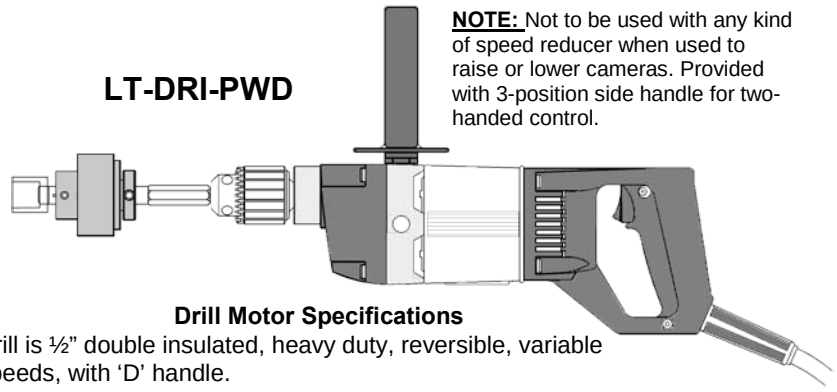
CAMERA LOWERING SYSTEMS

Lowering Tool with 3” Stainless Steel Drum, SS Aircraft Cable

LT-DRI-PWD Drill Motor with Clutch

All gearboxes and lowering tool frames are of heavy-duty design to provide reliability, long life, and ease of operation. They incorporate solid steel heat-treated gears for maximum durability and strength. All are equipped with a special automatically actuated disc brake for better load holding ability and the prevention of the load free wheeling. They are essential for lifting operations. Also available for permanent installation or portable use indoors or outdoors for wall mounting, tower mounting, or different kinds of pole mounting.

LT-DRI-PWD



NOTE: Not to be used with any kind of speed reducer when used to raise or lower cameras. Provided with 3-position side handle for two-handed control.

Drill Motor Specifications

- Drill is ½” double insulated, heavy duty, reversible, variable speeds, with ‘D’ handle.
- Chuck size is ½” key chuck with key.
- Electrical-Nom. 5 amp universal motor 115v.AC
- Torque-Develops nominal 170 lbs.-in.
- Speed/HP-.5 H.P. No load speed of 350 RPM
- Overall length is 15-1/8”
- Weight: Approx. 7lbs. 6oz.

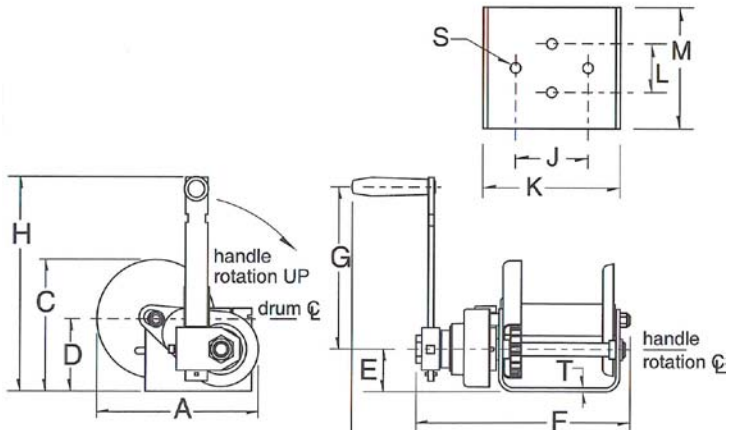
Overload Clutch Specifications

- Lubricated ball indent-totally enclosed-adjustable torque limiting.
- Coil spring type. Varied quantities depending on torque range. Torque range: 60 to 300 lb./in.
- Winch drive is 1-1/8” hex socket with ½” sq. drive.
- Max. operating speed is 350 RPM
- Dimensions of clutch: 1 ½”Dia., 1 5/8”L. Overall, 8 ½”L
- Hub shaft: 3/8” sq. w/spring loaded pin (clutch end).
- Socket shaft: 3/8” sq. w/spring loaded retaining pin.
- Open-end wrench type torque-adjusting nut. Snap ring tool included with clutch.
- Clutch weight: 2 lbs.

Winch Dimensions (inches)

drum dia.	1.50
flange dia.	4.56
drum width	3.00
A	7.27
B	14.12
C	6.12
D	3.31
E	2.00
flange dia.	10.12
G	10.59
H	13.12
J	3.00
K	5.68
L	2.00
M	5.00
S(hole dia.)	0.43
T	0.18

Spur Gear Winch, 3” Wide Stainless Steel Drum

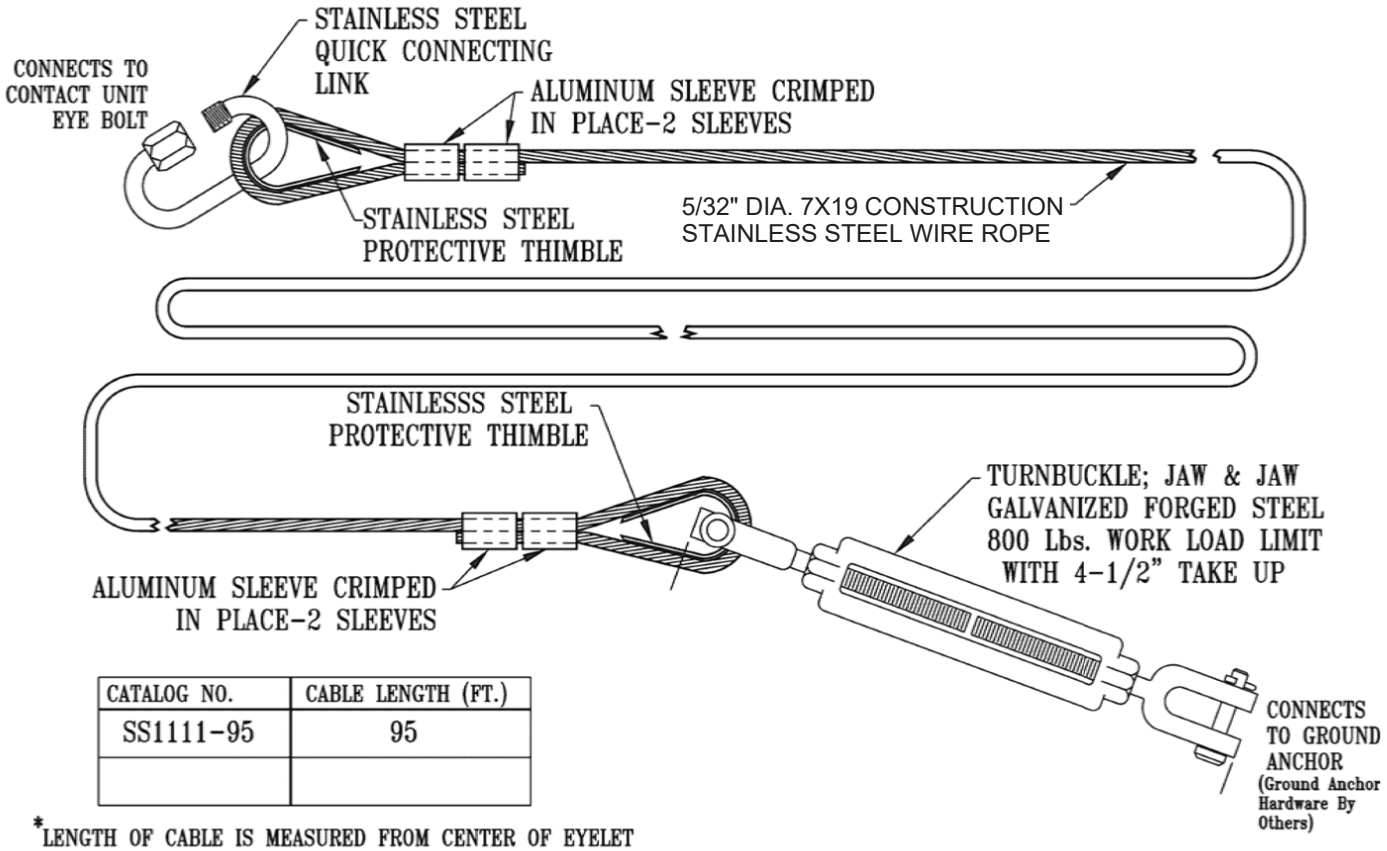


Specifications on Lowering Tool Winch Assembly

- **Winch:** Fabricated from heavy gauge steel w/zinc plated finish.
- **Winch Drum:** Stainless steel drum for greater corrosive resistant capability.
- All hardware is made out of stainless steel.
- The winch has a 3:1 Gear reduction to reduce the effort required to raise and lower the assembly.
- Winch comes with heavy-duty disk brake to afford greater load holding ability. This provides a positive locking mechanism to secure cable and keep from freewheeling.
- **Drum capacity**: 180FT of 1/8” diameter cable
- **Cable:** Raising & Lowering Cable for Lowering Tool. Marine grade type 316 Stainless Steel (SS) 1/8”-7x19 aircraft cable. Minimum breaking strength of 1760 lbs.
- **Load Rating:** 1000 lbs on first layer.
- **Weight:** 24LBS.

* All Lowering Systems gear boxes and lowering tools are designed for material handling usage only.
* Not for lifting people.
* Specifications subject to change without notice.

SS1111-XX GUIDE CABLE SPECS



CATALOG NO.	CABLE LENGTH (FT.)
SS1111-95	95

*LENGTH OF CABLE IS MEASURED FROM CENTER OF EYELET ON ONE END TO CENTER OF EYELET ON THE OTHER END.