Provided By Alaska Railroad

Item #	Qty	Item ID	Description
			Fiber Optic Cable - OFS
		Fiber Configuration	
		Cable Description	
1	6500 FT	AT-3CE1CNT-144-1	AT-3CE1CNT-144-1_Fortex DT-100% Dry Single Jacket Single PE Jkt, Dielectric Central Member_ALLWAVE+-SM-.35/.31/.25 db/km@1310/1385/1550nm_ONE 12 AWG VIOLET COPPER CONDUCTOR
			Inner-Duct - Standard
		Main Line Duct	
2	4500 FT	POL HDPE1.25SDR11-3WAY	1.25" SDR11 HDPE Blue/ORG/GRN 7500 ft Reel @ 2500 FT EA color. 102"x45 Reel
			Inner-Duct - Tunnel Work
		Dura-Line FuturePath	
3	600 FT	Dura-Line FuturePath Jumbo 3 Way	3-Way 1 1/4' SDR 11 Blue/ORG/GRN 1000 FT Reel/ 96" x 46" Reel
			Duct Coupler 1/1/4"
		Duct Coupler Spec	
4	15	DUR 20005096	1.25” Clear-Lock Coupler
		(Click Below for Details)	**Vault - Splice & Storage**

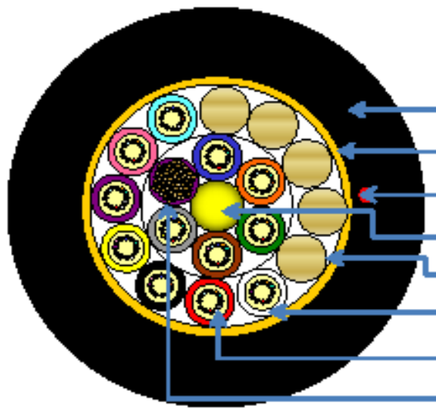
		https://www.tvcinc.com/shared-downloads/0062621527-bulk-7.pdf	**33,750 LB Load Rated = Composite Cover**
5	10 EA	CHA BULK3048360081001	Channell 30x48x36, Bolt down Security
		(Click Below for Details)	**Vault - Splice & Storage - Heavy Loading**
		https://www.tvcinc.com/shared-downloads/0062621527-bulk-7.pdf	**56,000 LB Load Rated = Iron Cover w/Steel Ring**
6	0 EA	CHA BULK736N102	Channel 30x48x36, Bolt down Security, Ductile Iron Lid
			Above Ground Locate Post
		TruView Locate Test Post	
		Locate Test Post - Video	
7	3	ACP PDST-6	POLYDOME TEST STATION, 3 TERMINAL BOARD, ORANGE WITH BLACK TEXT, WHITE POST WITH ANCHOR GENERIC TEXT "WARNING BURIED FIBER OPTIC CABLE 811 KNOW WHAT'S BELOW CALL BEFORE YOU DIG"
			Locate Markers
		Locate Puck (Vault & Conduit Ends)	
8	14	3M 1250-XR/ID	3M Full-Range Marker 1250-XR/ID, 8 Ft Range, Telecomm, 25/case

Ca

Fortex DT Toneable Single Jacket Loose Tube Cable w/ 12 AWG Copper Conductor AT-3CE1CNT-144-1

Fiber/Tube Color Code

1 12 AWG Copper Conductor
2 Blue
3 Orange
4 Green
5 Brown
6 Slate
7 White
8 Red
9 Black
10 Yellow
11 Violet
12 Pink
13 Aqua
14 Filler Rod
15 Filler Rod
16 Filler Rod
17 Filler Rod
18 Filler Rod



1.3 mm MDPE Outer Jacket
DryBlock Elements
Ripcord
3.5 mm Dielectric Central Member
2.5 mm Filler Rod
2.5 mm Dry Buffer tubes
Optical Fibers
12 AWG Copper Conductor

Cable OD: 18.8 mm (0.740 in)
Cable Weight: 205 kg/km (138 lb/kft)
Max Short Term tension: 600 lbs (2700 N)
Max Long Term Tension: 200 lbs (890 lbs)
Crush resistance 220 N/cm
Minimum Bend Radius (Installation): 15 x OD
Minimum Bend Radius (operation): 10 x OD

Not to Scale

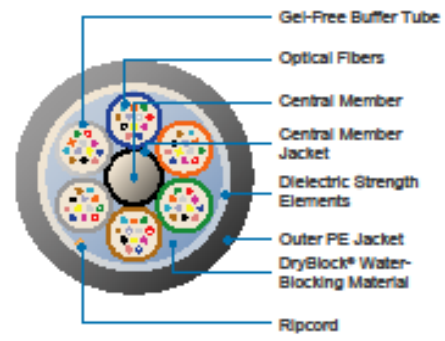
ofs A Furukawa Company Carrollton Georgia, USA	Date: January 2024	Fortex DT Toneable Single Jacket Loose Tube Cable

A Furukawa Company

Fortex™ DT Single Jacket Loose Tube Fiber Optic Cable

Lose the Gel with Completely Gel-Free Fiber Optic Cable for Cleaner, Faster Installations

Fortex™ DT Single Jacket
Loose Tube Fiber Optic Cable



Features and Benefits

- Totally gel-free fiber optic cable design for cleaner, faster installations
- Highly durable and reliable for duct and lashed aerial installations (including duct-to-lashed aerial) as well as general OSP installations
- Smaller, more flexible buffer tubes for easier installation and routing
- Optical fiber counts to 288
- Available with OFS application-specific fibers including AllWave® Zero Water Peak (ZWP) and AllWave+ Single-Mode, TrueWave® *RS* LWP Single-Mode, and Multimode optical fibers

Product Description

OFS' Fortex™ DT Single Jacket Loose Tube Cable delivers the durability and reliability essential for outside plant (OSP) use in an innovative, completely gel-free cable design.

To construct this all-dielectric cable, the optical fibers are placed in space-efficient, 2.5 mm buffer tubes that contain a specially-engineered, super-absorbent yarn that delivers water blocking "on demand." The color-coded buffer tubes are then stranded around a dielectric central member using the reverse oscillating lay (ROL) stranding technique for easy, mid-span fiber access.

Additional gel-free, super-absorbent material is applied to the cable core to offer exceptional water-blocking performance and faster cable preparation. Dielectric strength elements, a ripcord, and a durable polyethylene jacket complete the cable construction.

Why The Fortex DT Cable Single Jacket?

As the industry's first 100%[1] gel-free loose tube cable to meet the water-blocking requirements of ANSI/ICEA and Telcordia OSP cable standards, Fortex DT Single Jacket Cable offers all the benefits of a standard loose tube cable plus it's completely gel-free – even inside of the buffer tubes!

Unlike traditional OSP fiber optic cables that use gels in direct contact with optical fibers, Fortex DT Single Jacket Cable replaces gels with a specially-designed, super-absorbent yarn in each buffer tube that provides water blocking "on demand". By eliminating gels and filling compounds, this cable offers virtually effortless splice preparation, while keeping your tools, workspace, closures, and cabinets cleaner. Gel-free cables are also lighter in weight, making them easier to handle and less of a load on your work crew and plant infrastructure.

In addition to being completely gel-free, Fortex DT Single Jacket Cable offers the same high-performance features as OFS' traditional loose tube cables. Our 2.5 mm buffer tubes – among the smallest standard tubes in the industry – create far less bulk to be stored in closures and pedestals. Smaller, more flexible buffer tubes also coil more easily and into tighter diameters.

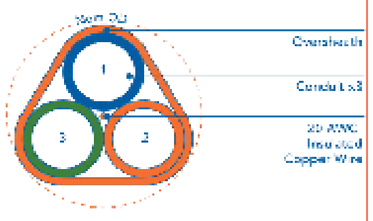
[1] "100% gel free" indicates that no oils, gels, or flooding compounds are used to block water penetration under the fiber optic cable sheath or through the core.


CAUTION
CAUTION

MICROBUNDLES TECHNICAL DATA SHEET

FUTUREPATH JUMBO

3-way 1 1/4" SDR 11



Configuration Size	(3) 1 1/4" SDR 11
Max OD	3.7 in
Width	3.46 in
Height	3.24 in
Oversheath	0.07 in
Weight	1.237 lb/ft
Bend Radius Sup	55 in
Bend Radius UnSup	92 in
Conduit SWPS	6756 lbs
Pathway One OD	42.2 mm / 1.66 in
Pathway One ID	33.5 mm / 1.318 in

STANDARD DETAILS	
DETAILS	FuturePath Jumbo is a unit of bundled conduits. Manufactured from flexible HDPE (High Density Polyethylene). All Smoothwall conduit dimensions meet or exceed one or more of the following: ASTM F-2160, ASTM D-3350, ASTM D-3485, NEMA TC-7, UL 651A, UL 1990, Bellcore GR-356.
INSTALLATION TYPES	Plow, Trench, MicroTrench, Directional Bore, Tray
FILL RATIO	Choose the correct MicroDuct size based on the Outer Diameter (OD) of desired MicroCable. Dura-Line recommends a fill ratio of 50% to 75% for optimal cable placement performance. Several factors impact jetting distance including the condition of route, bends, and equipment.
COLORS	Oversheath: Orange Conduits: (1) Blue, (2) Orange, (3) Green
CONDUIT MARKINGS	Permanent marking along FuturePath includes: material, relevant standards, production info, and sequential feet or meter markings. Custom options available.
CO-EXTRUDED LINING	SILICORE® ULF (Ultra-Low Friction) is co-extruded inside the HDPE wall creating a slick, permanent, interior lining. SILICORE® ULF exhibits no loss in performance over time or in extreme temperature conditions.
LOCATE WIRE	Includes a 20 AWG insulated copper wire
RIP CORD(S)	For easy opening of the oversheath
OPTIONS	
INTERNAL RIBS	Internal ribs available upon request

† Safe working pull strength is calculated at 80% of tensile or breaking strength
* Unsupported Bend Radius guidelines should be followed during the installation process. The Supported Bend Radius are post-installation measurements.

dura-line
+1 800 847 7861
WWW.DURALINE.COM
orbia

STANDARD ACCESSORIES

CLEAR-LOCK COUPLER

- Clear midsection gives added visibility during installation, removing all guesswork from the process
- Visual confirmation of the pipe within the coupler ensures that it has been properly seated at the center stop
- Ideal for pull boxes, vaults or other limited access areas
- Non-metallic construction provides excellent corrosion resistance in buried or encased applications and also has desirable dielectric properties
- Simple, one person 'push-on' assembly lowers installation costs
- Self-locking ring design assembles in seconds and is re-enterable
- High strength molded plastic body is ideal for buried duct applications
- Pre-lubricated O-ring is water-tight and air-tight
- Suitable for both cable pulling & jetting applications

ORDER REFERENCE

DESCRIPTION	NOM OD	DUCT ID WORKING RANGE	LENGTH (IN)	PULL OUT STRENGTH (LBS)	MAX PRESSURE (PSI)	CARTON QTY	PART #
0.50' Clear-Lock	0.840'	0.830' - 0.850'	2.7"	400	250	180	20005578
0.75' Clear-Lock	1.050'	1.040' - 1.060'	3"	500	250	144	20005661
1.00' Clear-Lock	1.315'	1.305' - 1.325'	3.6"	600	250	60	20005662
1.25' Clear-Lock	1.660'	1.650' - 1.670'	5"	700	250	60	20005596
1.50' Clear-Lock	1.900'	1.890' - 1.910'	5.5"	800	250	25	20005663
2.00' Clear-Lock	2.375'	2.365' - 2.385'	7"	2000	250	15	20005597

TriView Test Station™

Fact Sheet

Part# TVTI

TriGrip Anchor™

The TriView Test Station™ provides 360-visibility with three warning messages that can be read from any direction. Industry standard 11-hole pattern provides room for multiple terminals and custom configurations. All holes are one inch on center.

Description:

- Standard Lengths: 54" | 60" | 66" | 72" | 78" | 84" | 90"
- Triangular post with colored cap
- Two sides = 3.125" | One side = 3.0232"
- 360-degree visibility
- 18" bury-depth decal included
- Made with UV-stable RhinoPoly® – our proprietary blend of thermoplastics
- Removable Cap protects terminal board from the elements
- Standard with two internal stainless-steel terminals on 11-hole terminal board
- Patented TriGrip Anchor™ for locking post into ground
- 10-Year Warranty

Standard Post Colors

Red, Orange, Yellow, Green, Blue, Purple, White, Brown

Alternative Post Colors

Safety Green, Black, Pink, Tan

Standard Cap Color

Black

Alternative Cap Colors

Red, Orange, Yellow, Green, Blue, Purple, White

GENERIC & CUSTOM DECALS AVAILABLE

Decals Sold Separately

Options & Add-Ons

Extra Terminals
Part# TS-TERM

Shunt/Jump
Part# TS-SHUNT

Grounded LocatePlate™
Part# EM6300-EXT-KIT-RMS

ISO-Switch™
Part# ISO5T-TPST-NH

Reflective Bands
- 1" RB1S-TV
- 3" RB3S-TV

Cap Lock-Helps prevent vandalism
Part# TS-LOCK

12 Gauge Tracer Wire
10' Length, installed within the post

RhinoMarkers.com | 1-800-522-4343

TriView® Patents: U.S. 7,025,016 B1, U.S. 6,099,203, U.S. 9,469,948 B2
ISO-Switch: U.S. Patent Pending

Effective: 11-16-2021

TriView_Test_Station_Fact_Sheet

3M™ Electronic Marker System (EMS) Full-Range Markers

The 3M™ Full-Range Marker provides an accurate, convenient, long-lasting method of marking underground facilities. Electronic marking saves time and money spent searching for buried facilities prior to excavation. The marker also acts as a digging shield over buried facilities, lessening the chances of damage. And, unlike surface markers such as stakes, flags or paint, the full-range marker cannot be inadvertently moved or worn away by weather.

Second Generation iD Markers providing 4X Memory

The addition of the new 3M-iD markers provides additional functionality by enabling facility data to be stored in the marker. The pre-programmed unique serial number integrates with back office mapping and GIS systems when used for mapping new and legacy assets and points of special interest for construction and maintenance applications.

The full-range marker is buried over key facilities during construction or maintenance. Later, the marker is easily and accurately located using a 3M™ Dynatel™ Locator. The locator transmits a signal to the buried marker. The marker returns the signal to the locator, indicating the marker's exact position, while the locator provides both a visual reading and an audible tone.

3M™ Electronic Marker System(EMS) XR/iD Full-Range Markers

Features	Benefits
Accurate even in congested areas	Helps eliminate mislocates
Underground marker	Protected from damage from above-ground environment
Doubles as a digging shield	Eliminates costly dig ins
Easy to Use	Minimal training
RFID capability	Positive identification using facility information
Physical Specifications	
Size	15" diameter x 0.65" thick (38.10 cm x 1.65 cm)
Weight	Net: 1 lb. (0.45 kg) each/ Shipping: 27 lbs. (12.24 kg)/carton
Packaging	25 markers per carton
3M iD Markers Read Range	With a 'U' model (U.S.) locator: 8 ft. (2.4 m) With a 'E' model (Export, CE) locator: 2 m
3M Passive Markers Detection Range	8 ft (2.4 m)
Environmental Specifications	
Operating Temperature	-4°F to 122°F (-20°C to 50°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)

3M