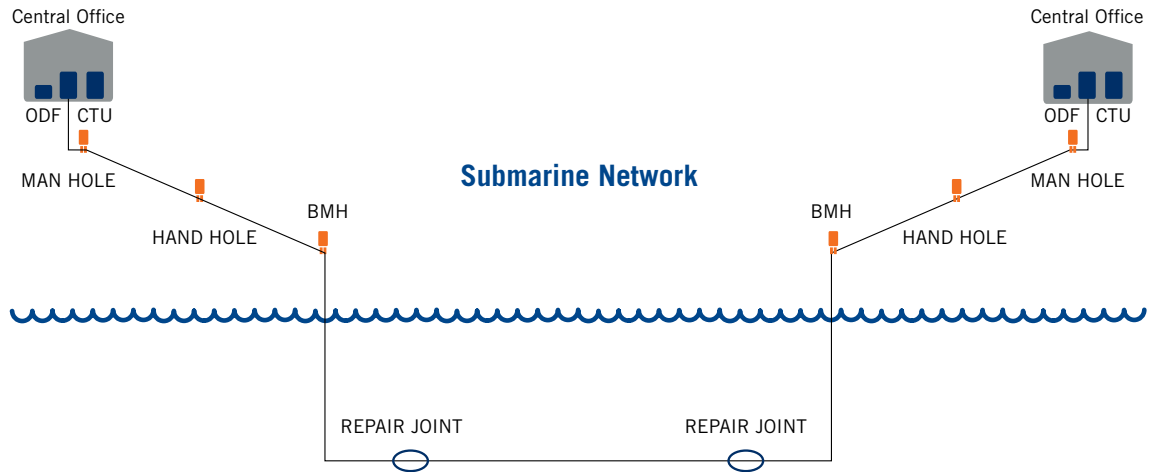




Submarine Cable Systems

Terrestrial Network



Terrestrial Network

Reach into the Future with Hexatronic Submarine Cable Systems

Originating from the former Ericsson cables operations, Hexatronic has extensive experience within submarine cable manufacturing and installation. With a renowned Swedish quality and competence, we know how to deliver submarine cable systems designed to withstand the toughest conditions.

The Hexatronic Submarine Cable Systems offering covers all aspects related to submarine cabling from the central office, land section to the beach manhole and crossing under the sea.

Hexatronic supports your project from start to finish, to ensure reliable subsea cable operations, that will connect people and places for generations to come.

Hexatronic Submarine Cable at a glance:

- Designed for depths down to 3000 m
- With or without enhanced toning or electroding capabilities
- Loose tube or slotted core ribbon options
- Superior mechanical and water blocking properties

For a wider selection of products from Hexatronic Cables & Interconnect Systems, please refer to the main catalogue Fiber Solutions for Access and Transport Networks or visit www.hexatronic.com

Contact the Hexatronic sales team to find your nearest wholesaler **+46 (0) 10 - 453 02 00**, order@hexatronic.com



ONLINE CATALOGUE

For the digital catalogue and more information about our products and services, please visit hexatronic.com
Hexatronic's catalogues are also available online at issuu: issuu.hexatronicpartners.se



Loading of submarine cable

Building the Networks of the World

Connecting people and places and transferring huge amounts of information at extremely high speed, is what makes the world go round. Hexatronic provides the life-line that connects continents, countries and islands, on the land and under the sea.

Extensive knowledge and experience

With a distinguished history of over 25 years, originating from Ericsson, Hexatronic has a unique knowledge and solid experience. Worldwide submarine cable projects include design, manufacturing, project management and installation. The focus is on providing cost effective, time saving installations, with the ability to customize according to the specific requirements.

Complete turn-key solutions

Hexatronic offers complete solutions for submarine cables and the entire passive fiber infrastructure based on scalable and future-proof technology.

Hexatronic Cables & Interconnect Systems offers:

- Over 25 years of experience with references from all over the world
- Swedish quality and technical proficiency
- Total turn-key solutions for the entire passive fiber infrastructure
- High quality optical fibers from world-leading producers



Hexatronic load out pier
Lat: 61° 43' 8.2488" Long: 17° p' 38.1456"

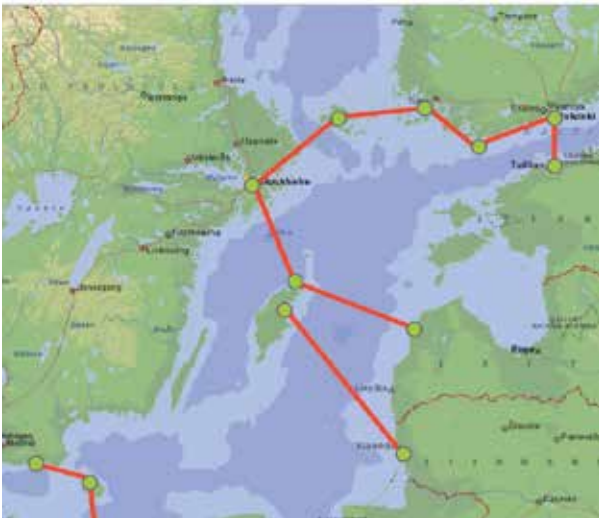


Hexatronic cable manufacturing plant 34 000m², Hudiksvall, Sweden

Hexatronic Submarine Systems

Global References

Hexatronic has extensive experience in worldwide submarine cable projects. Our references include a range of different needs and solutions. Here is a selection of a few installation types.



The Baltic Sea Projects

CABLE TYPE: Ribbon

PROJECT: Supply of submarine cables and accessories



ADONES – The Angola Domestic Network System Project

CABLE TYPE: Loose tube

PROJECT: Turn-key



C.A.T. Thailand Project

CABLE TYPE: Ribbon

PROJECT: Turn-key



The North Sea Project

CABLE TYPE: Ribbon

PROJECT: Turn-key



Philippines, Globe Telecom Project

CABLE TYPE: Loose tube

PROJECT: Turn-key



NordBalt Project

CABLE TYPE: Loose tube

PROJECT: Supply of submarine cables and accessories, services

Submarine Cable Design

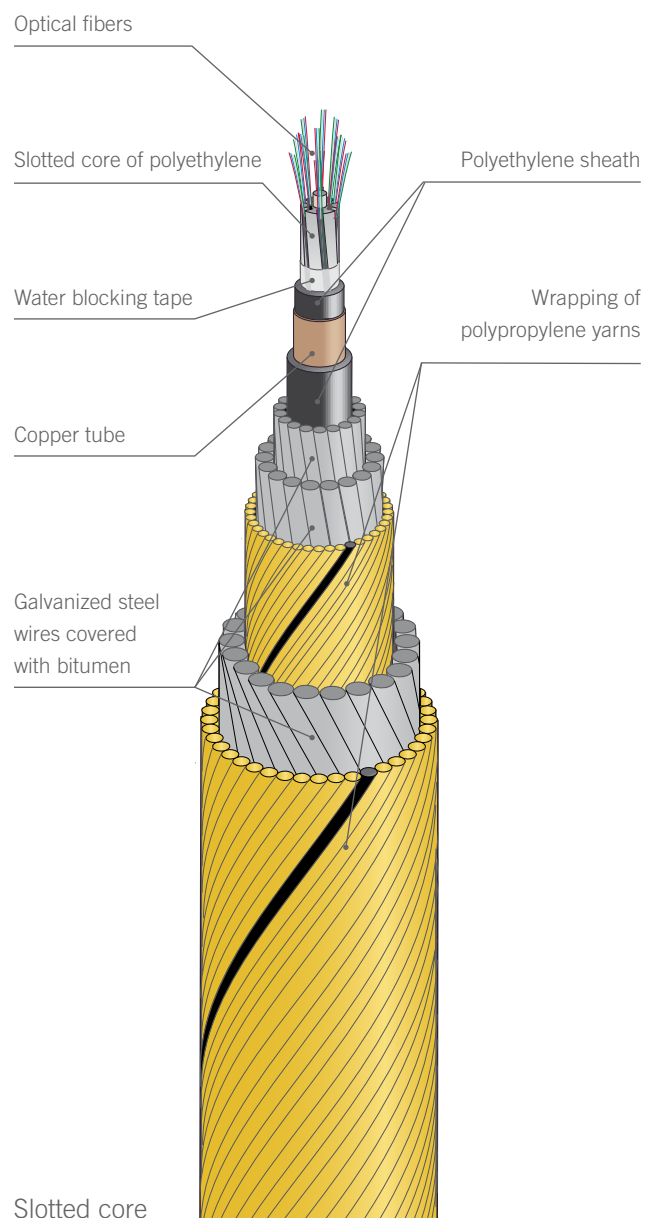
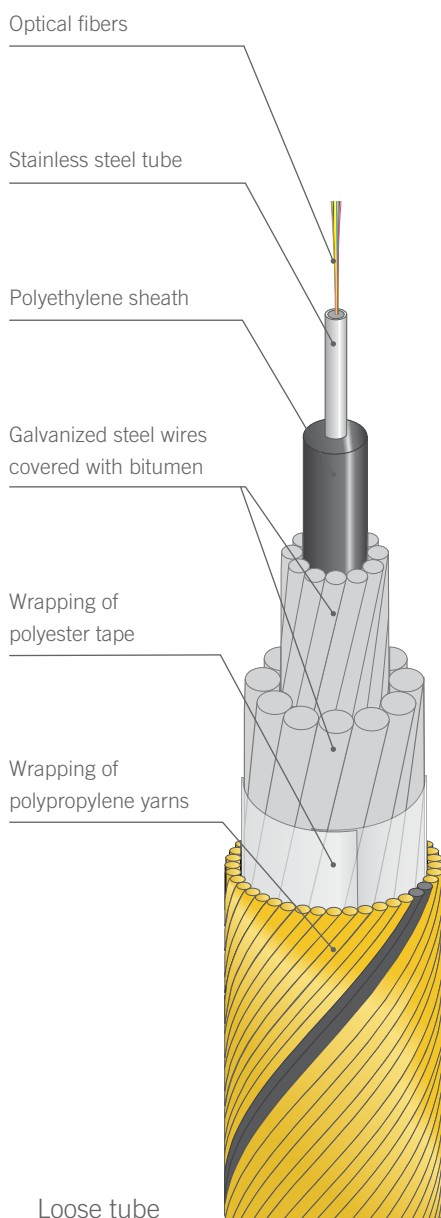
To ensure fiber optic cables have a long life span, Hexatronic's submarine cables are built to offer the best protection from water ingress and potential damage.

Two basic designs are used: loose tube or slotted core. The loose tube design is based on fibers protected in a hermetical stainless steel tube. The slotted core design incorporates fibers arranged in ribbons. The slotted core is protected in a copper tube.

A polyethylene sheath and one or two layers of steel wire armoring is used to provide high tensile strength and good mechanical protection. The cables are armored depending on where they are going to be installed. Double armored (DA) cables are installed in shallow water

with depths of 0 to 500 m. Most commonly the DA cables are installed no deeper than 200 m. For depths greater than 500 m the single armored (SA) cable is used. An outer sheath, normally made of high tensile polypropylene yarn wrapped around the armoring facilitates the handling of the cable during installation.

The product range comprises of cables and joints for depths down to 3 000 m. All loose tube cables are designed for both Universal Joint (UJ) and Universal Quick Joint (UQJ) qualification and are offered with or without enhanced toning and electroding capabilities. Electroding allows the cable to be detected and tracked. This facilitates locating the cable if it has been broken or an object on the seabed has moved it.



LOOSE TUBE CABLES

Hexatronic's loose tube cables provide superior mechanical protection, easy handling and reliable performance. All cables have steel wire armoring in one or several layers and/or stainless steel tube to provide the highest protection and water blocking properties.

The cables are resistant to tensile forces and impact caused by anchoring, recovery operations and handling.

All loose tube cables and joints are built with the highest quality protection to ensure a long life span for maximum efficiency over long distances.

Single Armored

TOL 404 1050 GJMLTV, 10-ton SA

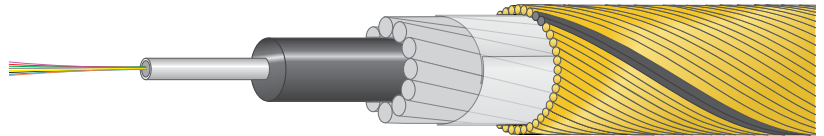
Single-armored, unitube cable where moderate protection is required in submarine applications. This design includes a hermetically sealed stainless steel tube (3.7 mm outer diameter). Inside the tube the fibers are free to move in the thixotropic water blocking compound. The tube is protected by a polyethylene sheath, one layer of galvanized steel wires and wrapped in a layer of polypropylene yarn.

The unitube technique results in a high packing density. This permits a small outer diameter and easy handling.

DESIGN: Loose tube, single armor

TYPE: 10 ton, ≤ 3000 m

CAPACITY: 12 - 96 fibers



Double Armored

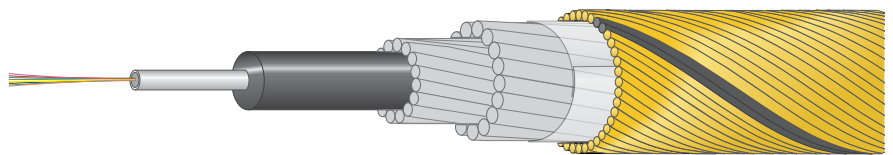
TOL 404 1051 GJMLTV, 15-ton DAL

Double-layer armored, unitube cable where high protection is required in submarine applications. This design includes a hermetically sealed stainless steel tube (3.7 mm outer diameter). Inside the tube the fibers are free to move in the thixotropic water blocking compound. The tube is protected by a polyethylene sheath, two layers of galvanized steel wires and wrapped in a layer of polypropylene yarn.

DESIGN: Loose tube, double armor

TYPE: 15 ton, ≤ 3000 m

CAPACITY: 12 - 96 fibers



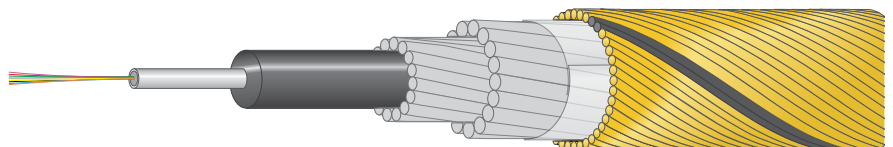
TOL 404 1062 GJMLTV, 25-ton DA

Double-layer armored, unitube cable with the same principal design as the GJMLTV, 15-ton DA.

DESIGN: Loose tube, double armor

TYPE: 25 ton, ≤ 3000 m

CAPACITY: 12 - 96 fibers



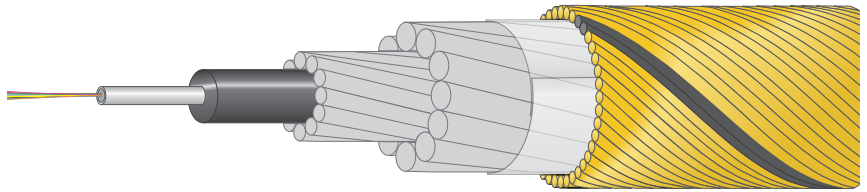
TOL 404 1054 GJMLTV, 40-ton DAH

Double-layer armored with the same principal design as the GJMLTVa, 15-ton DA.

DESIGN: Loose tube, double armor

TYPE: 40 ton, ≤ 3000 m

CAPACITY: 12 - 96 fibers



Electroding / Toning – Single Armored

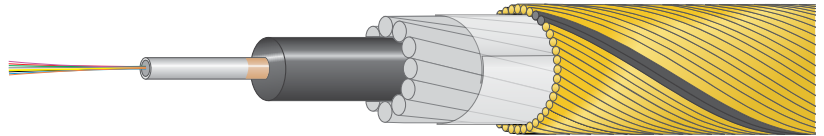
TOL 404 1080 GJMMLTV, 10-ton SA

Double-layer armored with the same principal design as the GJMLTV, 10-ton DA. The cable incorporates a copper layer wrapped around the stainless tube for electroding and toning.

DESIGN: Loose tube, single armor, electroding

TYPE: 10 ton, ≤ 3000 m

CAPACITY: 12 - 96 fibers



Electroding / Toning – Double Armored

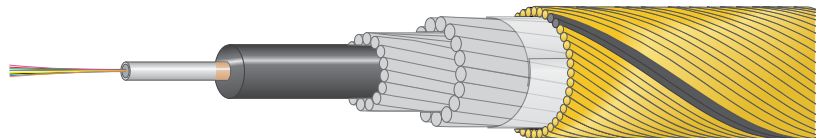
TOL 404 1082 GJMMLTV, 25-ton DA

Double-layer armored with the same principal design as the GJMLTV, 25-ton DA. The cable incorporates a copper layer wrapped around the stainless tube for electroding and toning.

DESIGN: Loose tube, double armor, electroding

TYPE: 25 ton, ≤ 3000 m

CAPACITY: 12 - 96 fibers



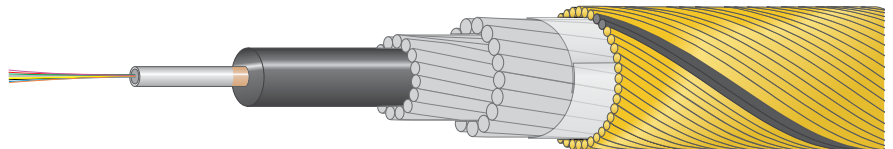
TOL 404 1083 GJMMLTV, 40-ton DAH

Double-layer armored with the same principal design as the GJMLTV, 15-ton DA.

DESIGN: Loose tube, double armor, electroding

TYPE: 40 ton, ≤ 3000 m

CAPACITY: 12 - 96 fibers



Submarine Joints for Loose Tube Cables

NCD 601 0014 Submarine Joint Closure

Closure made of heavy-duty stainless steel and hermetically sealed cable joints for loose tube fiber optic submarine cables. The joint can host up to 48 fibers.

DESIGN: Straight joint for GJMLTV

CAPACITY: 1 - 48 fibers



NCD 601+ Universal Joint for Submarine Cables

Universal Joint is a technology developed by the Universal Joint Consortium to facilitate efficient maintenance of installed submarine cable systems. Most of Hexatronic's submarine cables are qualified for this technology and for some cable types this joint type is used in installation projects of new systems.

DESIGN: UJ for 10-, 25-, 40 ton submarine cables

CAPACITY: 1 - 96 fibers



General Data – Loose Tube Cables

			Armor						Temperature (°C)				Coil
Product Name	Fiber No.	Fiber Type	SA	DA	RA	NTTS (kN)	Water Depth (m)	Electroding	Operation	Storage	Installation	UJ/UQJ	Diameter (m)
GJMLTV	12-96	G.65x	Yes	Yes	No	100-400	3000	No	-30 to +60	-40 to +70	-15 to +40	Yes	3
GJMMLTV	12-96	G.65x	Yes	Yes	No	100-400	3000	Yes	-30 to +60	-40 to +70	-15 to +40	Yes	3

Product Information – Loose Tube Cables

		Fiber			Wires (no./mm)			Weight (kg/m)		
Product No.*	Product Name	No.	Type	Electroding	1st Layer	2nd Layer	Diameter (mm)	in Air	in Water	NTTS (kN)
TOL4041050/xxA	GJMLTV G.652.D 10 TON SA	12-48	G.652.D	No	14/3.0	-	22	1.1	0.8	≤ 100
	GJMLTV 10 TON SA	12-96	G.65x	No	14/3.0	-	22	1.1	0.8	≤ 100
TOL4041051/xxA	GJMLTV G.652.D 15 TON DAL	12-48	G.652.D	No	18/2.2	18/3.0	26	1.9	1.4	≤ 150
	GJMLTV 15 TON DAL	12-96	G.65x	No	18/2.2	18/3.0	26	1.9	1.4	≤ 150
TOL4041062/xxA	GJMLTV G.652.D 25 TON DA	12-48	G.652.D	No	14/3.0	20/3.0	28	2.3	1.8	≤ 250
	GJMLTV 25 TON DA	12-96	G.65x	No	14/3.0	20/3.0	28	2.3	1.8	≤ 250
TOL4041054/xxA	GJMLTV G.652.D 40 TON DAH	12-48	G.652.D	No	12/3.8	16/4.4	32	3.4	2.7	≤ 400
	GJMLTV 40 TON DAH	12-96	G.65x	No	12/3.8	16/4.4	32	3.4	2.7	≤ 400
TOL4041080/xxA	GJMMLTV G.652.D 10 TON SA	12-48	G.652.D	Yes	14/3.0	-	22	1.1	0.8	≤ 100
	GJMMLTV 10 TON SA	12-96	G.65x	Yes	14/3.0	-	22	1.1	0.8	≤ 100
TOL4041081/xxA	GJMMLTV G.652.D 15 TON DAL	12-48	G.652.D	No	18/2.2	18/3.0	26	1.9	1.5	≤ 150
	GJMMLTV 15 TON DAL	12-96	G.65x	No	18/2.2	18/3.0	26	1.9	1.5	≤ 150
TOL4041082/xxA	GJMMLTV G.652.D 25 TON DA	12-48	G.652.D	Yes	14/3.0	20/3.0	28	2.3	1.8	≤ 250
	GJMMLTV 25 TON DA	12-96	G.65x	Yes	14/3.0	20/3.0	28	2.3	1.8	≤ 250
TOL4041083/xxA	GJMMLTV G.652.D 40 TON DAH	12-48	G.652.D	Yes	12/3.8	16/4.4	32	3.5	2.7	≤ 400
	GJMMLTV 40 TON DAH	12-96	G.65x	Yes	12/3.8	16/4.4	32	3.5	2.7	≤ 400

*where xx = fiber count (12-, 24-, 48-f.)

Product Information – Loose Tube Cable Joints

Product No.	Product Name	Fiber No.	Note
NCD6010014	Straight joint for GJMLTV	12-48	
NCD6010014/1	Aarmor Kit SA & DAL	12-48	2 pcs/joint required
NCD6010014/2	Aarmor Kit DA & DAH	12-48	2 pcs/joint required
NCD60100xx	Straight joint for GJMLTV	96	
NCD60100xx/1	Aarmor Kit SA & DAL	96	2 pcs/joint required
NCD60100xx/2	Aarmor Kit DA & DAH	96	2 pcs/joint required
NCD6010036	UJ for GJM(M)LTV SA to SA	12-96	
NCD6010038	UJ for GJM(M)LTV DA to DA	12-96	
NCD6010039	UJ for GJM(M)LTV DAH to DAH	12-96	
NCD6010041	UJ for GJM(M)LTV SA to DA	12-96	
NCD6010042	UJ for GJM(M)LTV SA to DAH	12-96	
NCD6010045	UJ for GJM(M)LTV DA to DAH	12-96	
NCD6010053	UQJ Ericsson GJM(M)LTV Tool Kit	12-48	
NCD6010054	UQJ for GJM(M)LTV SA to SA	12-48	
NCD6010055	UQJ for GJM(M)LTV DAL to DAL	12-48	
NCD6010056	UQJ for GJM(M)LTV DA to DA	12-48	
NCD6010057	UQJ for GJM(M)LTV DAH to DAH	12-48	
NCD6010058	UQJ for GJM(M)LTV SA to DAL	12-48	
NCD6010059	UQJ for GJM(M)LTV SA to DA	12-48	
NCD6010060	UQJ for GJM(M)LTV SA to DAH	12-48	
NCD6010061	UQJ for GJM(M)LTV DAL to DA	12-48	
NCD6010062	UQJ for GJM(M)LTV DAL to DAH	12-48	
NCD6010063	UQJ for GJM(M)LTV DA to DAH	12-48	

RIBBON CABLES

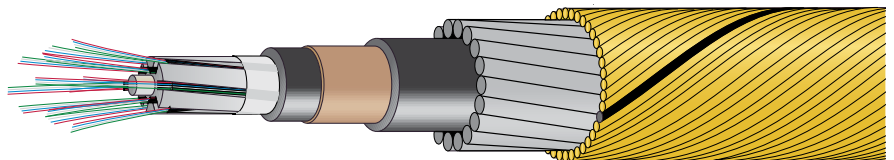
Hexatronic's ribbon cables offer high packing density and efficient fiber management as well as high protection for fiber in the harsh conditions under the sea. Exceptional mechanical and water blocking properties are provided by a slotted cable core design, protected by a copper tube and with steel wire armoring. This combination has a good resistance to crushing and heavy impacts, such as anchoring, recovery operations or manhandling. Protection from the water is achieved by the copper tube acting as a water barrier.

The cable core is also filled with a water repelling compound for extra reassurance. The cable design enables extremely long delivery length with a minimum number of bulky joint closures.

Single Armored

TOL 404 1010 and TOL 404 1038 GASLMLTV Submarine Cables 5 ton SAL Single Armored

GASLMLTV, 5-ton SAL is a single armored light fiber ribbon cable for submarine installations where light to moderate protection is required. This submarine cable is based on our well-proven 4- or 8-fiber ribbon cable design. Added on to the inner PE-jacket is a waterproof copper tube, followed by a second outer polyethylene jacket and a layer of galvanized steel wires. The complete cable is wrapped with a layer of polypropylene yarn.



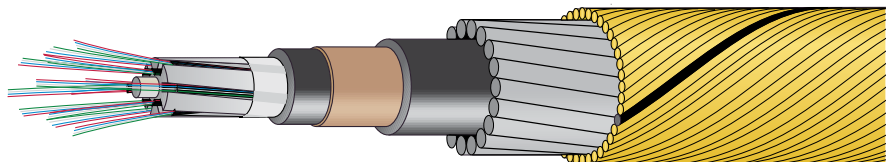
DESIGN: Slotted core ribbon, single armor

TYPE: 5 ton, ≤ 500 m

CAPACITY: 12 - 192 fibers

TOL 404 1016 and TOL 404 1039 GASLMLTV Submarine Cables 10 ton SA Single Armored

Single-layer armored with the same principal design as the GASLMLTV, 5-ton SAL.



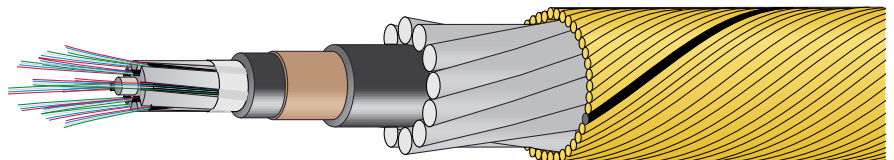
DESIGN: Slotted core ribbon, single armor

TYPE: 10 ton, ≤ 500 m

CAPACITY: 12 - 192 fibers

TOL 404 1023 and TOL 4040 1040 GASLMLTV Submarine Cables 15 ton SAH Single Armored

Single-layer armored with the same principal design as the GASLMLTV, 5-ton SAL.



DESIGN: Slotted core ribbon, single armor

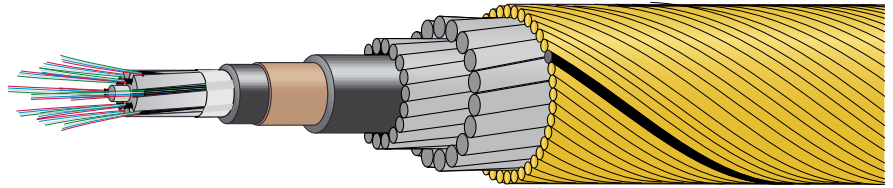
TYPE: 15 ton, ≤ 500 m

CAPACITY: 12 - 192 fibers

Double Armored

TOL 404 1011 and TOL 4040 1024 GASLMLTV Submarine Cables 20 ton DA Double Armored

GASLMLTV, 20-ton DA is a double armored fiber ribbon cable for submarine installation where high protection is required. This submarine cable is based on our well-proven 4- or 8- fiber ribbon cable design. Added on to the inner PE-jacket is a waterproof copper tube, followed by a second outer polyethylene jacket and two layers of galvanized steel wires. The complete cable is wrapped with a layer of polypropylene yarn.



DESIGN: Slotted core ribbon, double armor

TYPE: 20 ton, ≤ 500 m

CAPACITY: 12 - 192 fibers

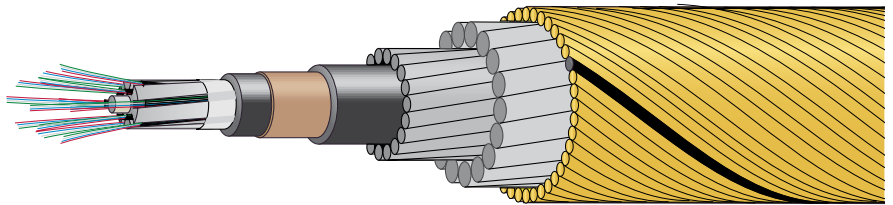
TOL 4040 1002 and TOL 404 1042 GASLMLTV Submarine Cables 40 ton DAH Double Armored

Double-layer armored with the same principal design as the GASLMLTV, 20-ton DA.

DESIGN: Slotted core ribbon, double armor

TYPE: 40 ton, ≤ 500 m

CAPACITY: 12 - 192 fibers



Rock Armored

TOL 404 1043 and TOL 404 1041 GASLMLTV Submarine Cables 20 ton RA Rock Armored

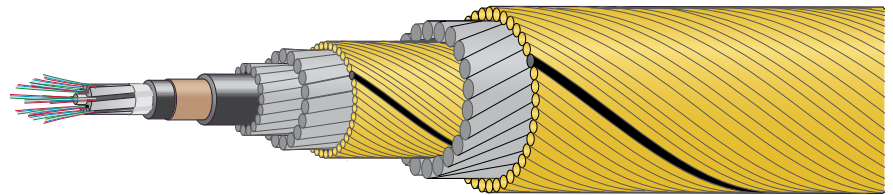
The GASLMLTV, 20-ton RA is a rock armored fiber ribbon cable for submarine installation in areas where the cable is exposed to severe mechanical wear and tear. For example, installation direct on rock or shore landings where the cable is hit by forces from waves and tides.

This submarine cable is based on our well-proven 4- or 8-fiber ribbon cable design. Added on to the inner PE-jacket is a waterproof copper tube, followed by a second outer polyethylene jacket and a triple layer of galvanized steel wires. The complete cable is wrapped with a layer of polypropylene yarn.

DESIGN: Slotted core ribbon, triple armor, rock

TYPE: 20 ton, ≤ 500 m

CAPACITY: 12 - 192 fibers



Submarine Joints

NCD 601 0010 and 0008 Submarine Cable Joint

The NCD 601 joint is designed for jointing of Hexatronic fiber optic submarine cables, maintaining the mechanical, optical and electrical properties of the cable.

The joint closure is made of corrosion resistant stainless steel alloy. The watertight outer housing provides the mechanical strength and protection. An inner sealed box contains the fiber organizers and can accommodate splice sleeves for up to 96 fibers in the NCD 601 0010 model and up to 192 fibers in the NCD 601 0008 model.

NCD 601 0010 is designed for 4-fiber ribbon submarine cables.

NCD 601 0008 is designed for 8-fiber ribbon submarine cables.

DESIGN: Straight joint for GASLMLTV

CAPACITY: 1 - 192 fibers



General Data – Ribbon Submarine Cables

			Armor						Temperature (°C)				Coil
Product Name	Fiber Count	Fiber Type	SA	DA	RA	NTTS (kN)	Water Depth (m)	Electroding	Operation	Storage	Installation	UJ/UQJ	Diameter (m)
GASLMLTV	12-192	G.65x	Yes	Yes	Yes	50-400	500	Yes	-30 to +60	-40 to +70	-15 to +40	Yes	3

Product Information – Ribbon Submarine Cables

		Fiber		Wires (no./mm)				Weight (kg/m)		
Product No.*	Product Name	No.	Type	1st Layer	2nd Layer	3rd Layer	Diameter (mm)	in Air	in Water	NTTS (kN)
TOL4041010/xxA	GASLMLTV G.652.D 5 TON SAL	12-96	G.652.D	20/3.0	-	-	28	1.7	1.2	≤ 50
	GASLMLTV 5 TON SAL	12-96	G.65x	20/3.0	-	-	28	1.7	1.2	≤ 50
TOL4041038/xxxA	GASLMLTV G.652.D 5 TON SAL	96-192	G.652.D	22/3.0	-	-	30	1.9	1.3	≤ 50
	GASLMLTV 5 TON SAL	96-192	G.65x	22/3.0	-	-	30	1.9	1.3	≤ 50
TOL4041016/xxA	GASLMLTV G.652.D 10 TON SA	12-96	G.652.D	16/4.2	-	-	31	2.4	1.8	≤ 100
	GASLMLTV 10 TON SA	12-96	G.65x	16/4.2	-	-	31	2.4	1.8	≤ 100
TOL4041039/xxxA	GASLMLTV G.652.D 10 TON SA	96-192	G.652.D	17/4.2	-	-	33	2.6	1.9	≤ 100
	GASLMLTV 10 TON SA	96-192	G.65x	17/4.2	-	-	33	2.6	1.9	≤ 100
TOL4041023/xxA	GASLMLTV G.652.D 15 TON SAH	12-96	G.652.D	12/6.0	-	-	34	3.4	2.6	≤ 150
	GASLMLTV 15 TON SAH	12-96	G.65x	12/6.0	-	-	34	3.4	2.6	≤ 150
TOL4041040/xxxA	GASLMLTV G.652.D 15 TON SAH	96-192	G.652.D	12/6.0	-	-	36	3.7	2.8	≤ 150
	GASLMLTV 15 TON SAH	96-192	G.65x	12/6.0	-	-	36	3.7	2.8	≤ 150
TOL4041011/xxA	GASLMLTV G.652.D 20 TON DA	12-96	G.652.D	20/3.0	20/4.2	-	37	4.1	3.2	≤ 200
	GASLMLTV 20 TON DA	12-96	G.65x	20/3.0	20/4.2	-	37	4.1	3.2	≤ 200
TOL4041024/xxxA	GASLMLTV G.652.D 20 TON DA	96-192	G.652.D	22/3.0	21/4.2	-	39	4.4	3.4	≤ 200
	GASLMLTV 20 TON DA	96-192	G.65x	22/3.0	21/4.2	-	39	4.4	3.4	≤ 200
TOL4041002/xxA	GASLMLTV G.652.D 40 TON DAH	12-96	G.652.D	20/3.0	18/4.9	-	38	4.6	3.6	≤ 400
	GASLMLTV 40 TON DAH	12-96	G.65x	20/3.0	18/4.9	-	38	4.6	3.6	≤ 400
TOL4041042/xxxA	GASLMLTV G.652.D 40 TON DAH	96-192	G.652.D	22/3.0	21/4.9	-	40	4.9	3.8	≤ 400
	GASLMLTV 40 TON DAH	96-192	G.65x	22/3.0	21/4.9	-	40	4.9	3.8	≤ 400
TOL4041043/xxA	GASLMLTV G.652.D 20 TON RA	12-96	G.652.D	20/3.0	20/4.2	24/5.0	50	8.2	6.4	≤ 200
	GASLMLTV 20 TON RA	12-96	G.65x	20/3.0	20/4.2	24/5.0	50	8.2	6.4	≤ 200
TOL4041041/xxxA	GASLMLTV G.652.D 20 TON RA	96-192	G.652.D	22/3.0	21/4.2	24/5.0	53	8.7	6.8	≤ 200
	GASLMLTV 20 TON RA	96-192	G.65x	22/3.0	21/4.2	24/5.0	53	8.7	6.8	≤ 200

*where xx = fiber count (12-, 24-, 48-f.)

Product Information – Ribbon Submarine Cable Joints

Product No.	Product Name	Fiber No.
NCD6010010	Straight Joint for GASLMLTV	12-96
NCD6010008	Straight Joint for GASLMLTV	96-192
	UJ for GASLMLTV	12-96

CABLE PARTS FOR INTEGRATION

Throughout our history of supplying high quality, reliable cable solutions, we have developed a long track record with leading power cable suppliers. Fiber optic submarine cable parts for integration into power cables, enables global suppliers to meet the growing need for more power over greater distances.

Cable up to 24 km can be installed without a factory joint. Cables that are longer than 24 km require factory joints. Repair joints can also be provided.

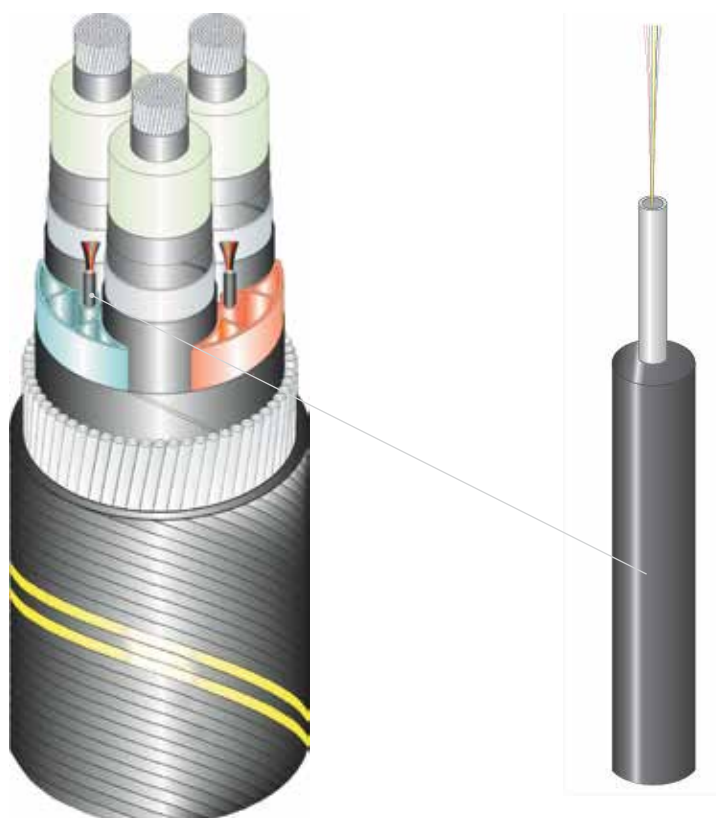


In courtesy of ABB

Global Installations

Hexatronic has delivered more than 3 000 km of fiber optic cable parts for hybrid cables, to well known cable suppliers worldwide.

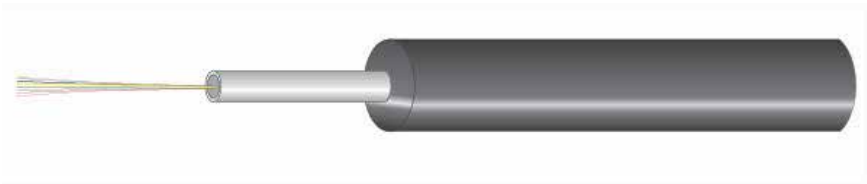
The hybrid cables are used in different parts of the power grid. In most cases the hybrid cables are connections to offshore wind farms, offshore oil and gas platforms or interconnect cables for power utilities.



In courtesy of ABB

GJMLV Submarine Optical Cable Part 12-96 Fibers

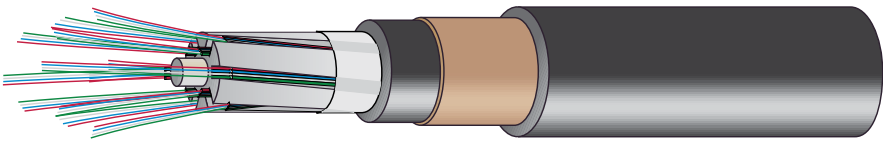
The cable part is based on a hermetically sealed stainless tube of 3.7mm outer diameter. Inside the tube the fibers are free to move in thixotropic water blocking compound. The steel tube is protected by a semiconductive polypropylene sheath. The fibers are easy to identify due to color and colored yarns. The cable part is designed to be integrated in submarine electrical power cables.



DESIGN: Loose tube
TYPE: For integration, ≤ 3000 m
CAPACITY: 12 - 96 fibers

GASMLV Submarine Optical Cable Part 12-192 Fibers, Ribbon

This submarine cable part is based on our well-proven 4- or 8- fiber ribbon cable design. Added on to the inner polyethylene jacket is a waterproof copper tube, followed by a second outer semiconductive polyethylene jacket.



DESIGN: Slotted core ribbon
TYPE: For integration, ≤ 500 m
CAPACITY: 12 - 192 fibers

General Data – Submarine Cable for Integration

Product Name	Type	Fiber Count	Fiber Type	Water Depth (m)	Semi-Conductive Sheath	Nom. Diameter (mm)	Weight (kg/m)	Bending Radius (m)		Temperature (°C)		
								Loaded	Unloaded	Operation	Storage	Installation
GJMLV	Loose Tube	12-96	G.65x	3000	Available	11.5	0.12	≥ 1.5	≥ 0.75	-40 to +80	-40 to +80	-15 to +40
GASMLV	Ribbon	12-192	G.65x	500	Available	18	0.4	≥ 1.5	≥ 0.75	-30 to +60	-40 to +70	-15 to +40

TERRESTRIAL PRODUCTS

Hexatronic's terrestrial cables and network products offer efficient installation for the entire passive infrastructure. All terrestrial cables are optimized in terms of capacity, quality and operational expenditure, for networks with the highest requirements. In addition, Hexatronic offers a wide variety of fiber optic accessories such as termination

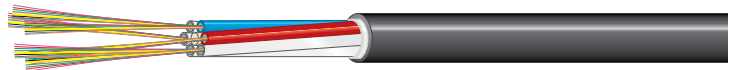
panels, rack systems, joint closures etc. All tested and approved for use with submarine cables. For the full range of products from Hexatronic Cables & Interconnect Systems, please refer to the main catalogue Fiber Solutions for Access and Transport Networks or visit www.hexatronic.com

Loose Tube Cables

TOL 401 2098 GRCLDV, DryTech

Slim loose tube cable with concentric core design, with up to six tubes per cable. The cable is all dielectric. DryTech filling compound is used in the cable core.

DESIGN: Concentric core, extra slim **TYPE:** Dielectric, DryTech
CAPACITY: 12 - 192 fibers **DIAMETER:** 11 - 18.5 mm



Ribbon Cables

TOL 401 1013 and TOL 401 1001 GASLDV

4-fiber ribbon cable using slotted core design. The design reduces installation costs and gives superior fiber protection. The cable is dielectric, making it suitable for installation where there is electrical interference.

DESIGN: Slotted core ribbon **TYPE:** Dielectric
CAPACITY: Ø 9.5 mm 4 - 48 fibers, Ø 12.5 mm 4 - 48 fibers, Ø 14 mm 48 - 96 fibers



TOL 401 1002 and TOL 401 1020 GASLDV

8-fiber ribbon cable using slotted core design. The design allows high packing density that reduces installation costs and gives superior fiber protection. Water blocking filling compound in the TOL 401 1002 cable and dry water blocking tape in the TOL 401 1020 cable prevents water penetration along the cables. The cable is dielectric, making it suitable for installation where there is electrical interference.

DESIGN: Slotted core ribbon **TYPE:** Dielectric
CAPACITY: Ø 15.5 mm 8 - 192 fibers, Ø 20 - 22.5 mm, 288 - 640 fibers



Product Information – Terrestrial Cables

Product No.*	Product Name	Type	Fiber	
			No.	Type
TOL4012098/xxA	GRCLDV	Loose Tube	12-96	G.652.D
	GRCLDV	Loose Tube	12-288	G.65x
TOL4011001/xxA	GASLDV	Ribbon	12-96	G.652.D
TOL4011002/xxA	GASLDV	Ribbon	96-192	G.652.D
	GASLDV	Ribbon	12-192	G.65x

Joint Closure

NCD 506 + Fiber Joint Closure

Closure for higher fiber counts in harsh outdoor environments. The generous size of the fiber organizers makes installation fast and trouble free. The design is compact but easy to expand to accommodate very large fiber counts. The closure can also handle mid-span access. Several versions and accessories are available resulting in a total capacity of 144 fibers to more than 2000 fibers depending on configuration.

TYPE: Underground, stainless steel

SEALING: IP class 68

CAPACITY: ≤576 single fiber splices
≤288 ribbon fiber splices



NCD 504 + Fiber/Duct Joint Closure

Plastic joint closure for outdoor, direct buried installations. The closure is designed for outdoor, underground installation in manholes. The closure can also handle mid-span access.

TYPE: Outdoor, plastic closure

CAPACITY: 96 (single)/192 (ribbon) splices

SEALING: IP class 68



ODF

NCD 513+ ODF Pre-terminated, with Stub Cable, 2U

Pre-terminated ODF with a capacity from 24 to 96 SC (192 LC) connectors. Options include: halogen-free, flame-retardant, loose tube, ribbon or micro cable. Optional accessories include horizontal patch cord guides for space-saving mounting directly onto the front of the ODF.

TYPE: Pre-terminated, 19" or ETSI mount, 2U

SIZE: 400x249x86 mm

CAPACITY: 24-96 SC, 24-192 LC

CABLE OPTIONS: Halogen-free, flame-retardant
loose tube, ribbon or micro cable, 10-100 m

CONNECTOR OPTIONS: SC, SC/APC, LC, LC/APC



Industry Leading System Solutions for Fiber Optic Communications

Hexatronic Cables & Interconnect Systems develops, manufactures, markets and provides solutions within the fiber optic cable infrastructure, for telecom companies. Hexatronic Cables & Interconnect Systems manufacture fiber optic cable, duct, copper cable and network accessories. The company originates from the former Ericsson site in Hudiksvall. Our products are developed and manufactured by Swedish specialists, with many years of experience and unique expertise in fiber optics. The product portfolio includes the industry leading brands Ribbonet® and Micronet.

A Part of Hexatronic Group

Hexatronic Cables & Interconnect Systems is a part of Hexatronic which is an innovative Swedish technology group, specializing in fiber communications. The Group provides products and solutions for the fiber optic network and together, the five independent, entrepreneurial companies offer a full range of passive infrastructure. We combine our large corporate stability and resources with small company flexibility and speed.

Our customers are companies within the telecommunications industry such as communications and telecom suppliers, operators and network owners. The other companies within The Group are, Memoteknik in Skellefteå, Hexatronic Elektronik & Data in Gothenburg, The Blue Shift and Proximion in Stockholm.

For more information about Hexatronic Group: www.hexatronicgroup.com



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