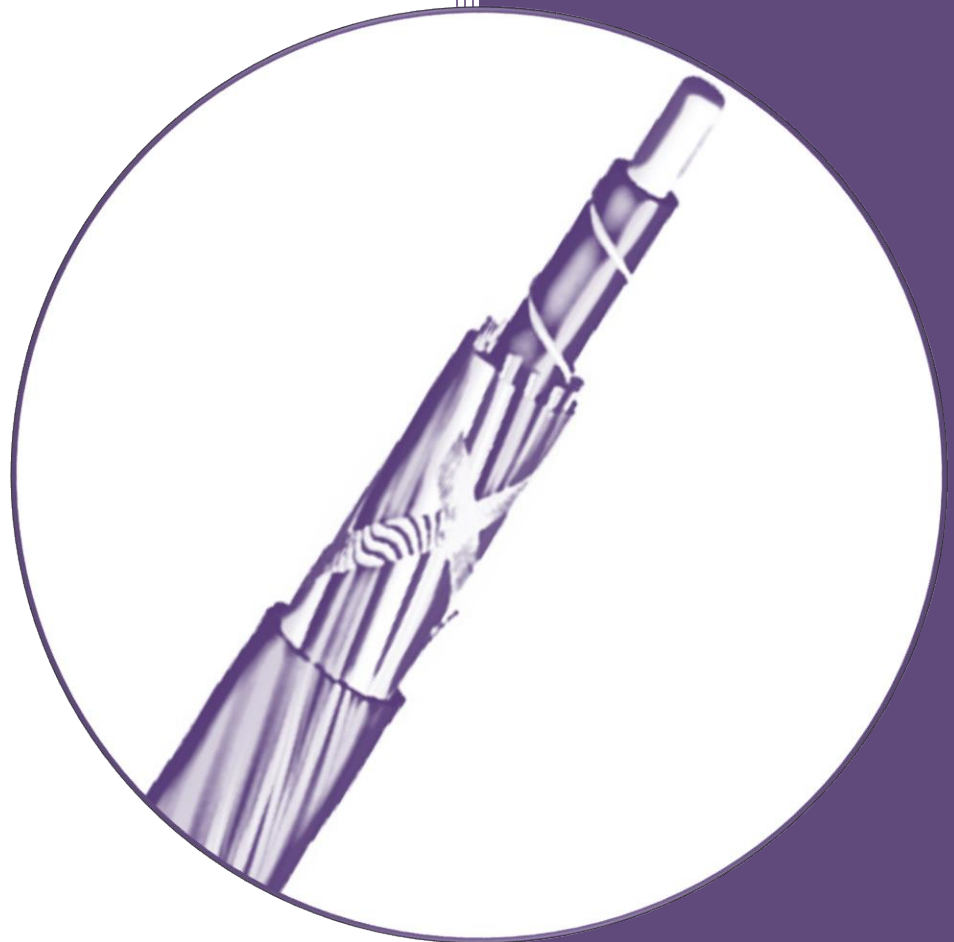


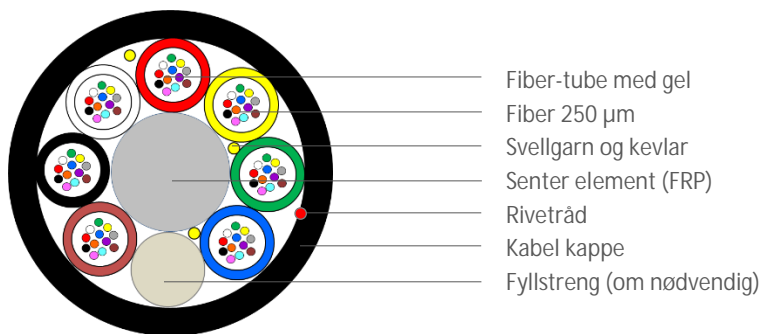


METRIC
INDUSTRIAL

FibreCore
QXXE Mikro



FibreCore QXXE Mikro er en metallfri utendørs fiberkabel som egner seg spesielt godt for blåsing i mikro- og kabelrør. Kabelen leveres med tørr kabelkjerne (svellgarn) og fett fylte fiber rør. Optiske fibre og fiber rør er fargekodet for enkel identifisering. Kabelen leveres med ITU-T G.652D fiber som standard, men andre fibertyper kan leveres på forespørsel. Typisk bruksområde er for eksempel tilførsel til fordelingspunkt i aksessnett ved FTTx utbygging.



- Svellgarn i stedet for gel i kabelkjernen gjør kabelen meget installasjonsvennlig
- Metallfri
- Halogenfri
- Lavfriksjon UV stabilisert HDPE kabel kappe
- SZ slatte fiber-rør rundt senter element
- Alle fiber-rør er fargekodet for enkel identifisering
- Lav vekt og liten kabeldiameter gir enkel håndtering

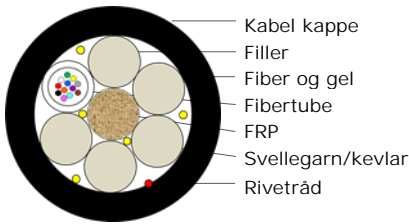
Typiske applikasjoner

- Telecom
- FTTx

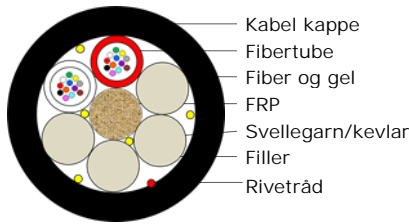
Standarder

- IEC 60793, IEC 60794
- Telcordia GR-20-CORE
- ITU-T G.650, ITU-T G.652

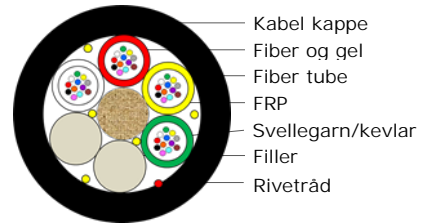
Konstruksjon



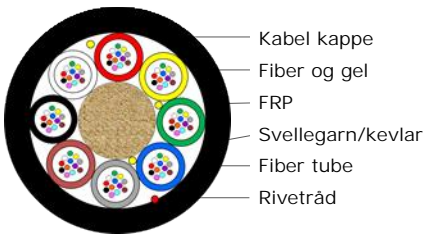
G12



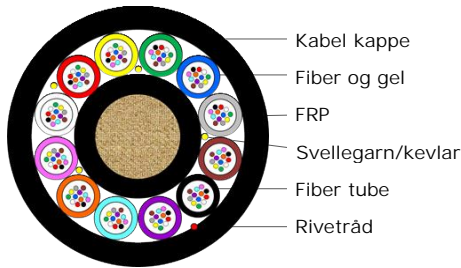
G24



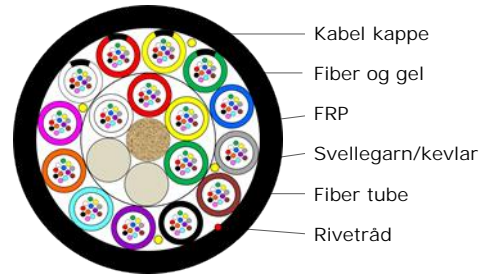
G48



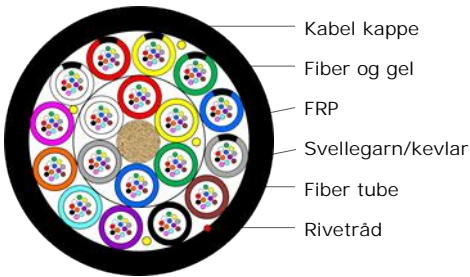
G96



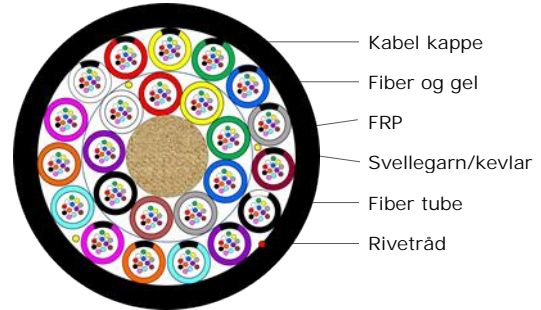
G144



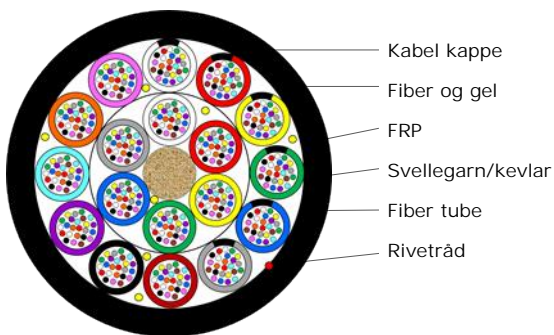
G192



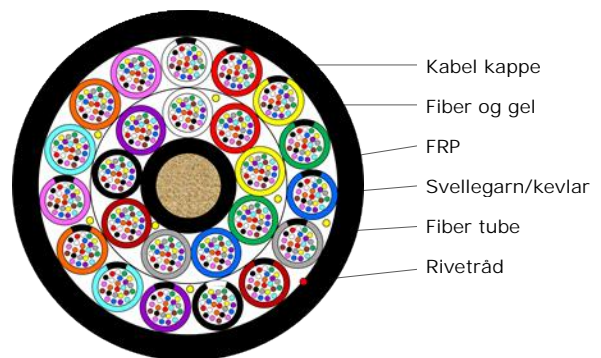
G216



G288



G432



G576

Fargekode fiber

12F/rør	1	2	3	4	5	6	7	8	9	10	11	12
	Hvit	Rød	Gul	Grønn	Blå	Grå	Brun	Sort	Fiolett	Aqua	Orange	Rosa
24F/rør	1	2	3	4	5	6	7	8	9	10	11	12
	Hvit	Rød	Gul	Grønn	Blå	Grå	Brun	Sort	Fiolett	Aqua	Orange	Rosa
	13	14	15	16	17	18	19	20	21	22	23	24
	Hvit	Rød	Gul	Grønn	Blå	Grå	Brun	Nøytral	Fiolett	Aqua	Orange	Rosa

Fargekode fiber-rør

G12	1	2	3	4	5	6										
	Hvit	Filler	Filler	Filler	Filler	Filler										
G24	1	2	3	4	5	6										
	Hvit	Rød	Filler	Filler	Filler	Filler										
G48	1	2	3	4	5	6										
	Hvit	Rød	Gul	Grønn	Filler	Filler										
G96	1	2	3	4	5	6	7	8								
	Hvit	Rød	Gul	Grønn	Blå	Grå	Brun	Sort								
G144	1	2	3	4	5	6	7	8	9	10	11	12				
	Hvit	Rød	Gul	Grønn	Blå	Grå	Brun	Sort	Fiolett	Aqua	Orange	Rosa				
G192	Indre lag	1	2	3	4	5	6									
		Hvit	Rød	Gul	Grønn	Filler	Filler									
G216	Ytre lag	1	2	3	4	5	6	7	8	9	10	11	12			
		Hvit	Rød	Gul	Grønn	Blå	Grå	Brun	Sort	Fiolett	Aqua	Orange	Rosa			
G288	Ytre lag	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Hvit	Rød	Gul	Grønn	Blå	Grå	Brun	Sort	Fiolett	Aqua	Orange	Rosa	Aqua	Orange	Rosa
G432	Ytre lag	1	2	3	4	5	6	7	8	9	10	11	12			
		Hvit	Rød	Gul	Grønn	Blå	Grå	Brun	Sort	Fiolett	Aqua	Orange	Rosa			
G576	Ytre lag	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Hvit	Rød	Gul	Grønn	Blå	Grå	Brun	Sort	Fiolett	Aqua	Orange	Rosa	Aqua	Orange	Rosa

Konstruksjon

Fiber type (ITU-T)	ITU-T G.652D									
Fiber antall	12	24	48	96	144	192	216	288	432	576
Fiber per fiberrør	12	12	12	12	12	12	12	12	24	24
Fiberrør lag	1	2	4	8	12	4	6	9	6	9
Fyllstrenget lag 1	5	4	2	0	0	2	0	0	0	0
Fiberrør lag 2	0	-	-	-	-	12	12	15	12	15
Diameter fiberrør (mm)	1,45	1,45	1,45	1,45	1,45	1,45	1,45	1,45	2,1	2,1
Diameter FRP strekkelement (mm)	1,6	1,6	1,6	2,4	2,4	1,6	1,6	2,8	2,25	2,8
Diameter strekkelement med PE lag (mm)	-	-	-	-	4,1	-	-	-	-	4,1
Kappetykkelse nominell (mm)	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Diameter kabel nominell (mm)	5,4	5,4	5,4	6,1	7,9	7,9	7,9	9,3	11,4	13,4
Vekt nominell (kg/km)	26	26	26	36	52	52	52	80	105	140
Passer i mikro rør med ID (mm)	8-12				10-14			12-16	14-20	16-25
Maksimum strekk (N)	600			800		600		1000		1200
Klem (N/100mm)	Dynamisk: 500 / Statisk: 200									
Minimum bøy radius fiber rør (mm)	50									
Minimum bøy radius statisk (mm)	12 x OD									
Min. bøy radius dynamisk (mm)	20 x OD									
Kappemateriale	HDPE (UV stabilisert)									
Temperatur transport/drift (°C)	-40 ~ +70									
Temperatur installasjon (°C)	-20 ~ +60									
Standard leveringslengde (km) ¹⁾	6	6	6	6	6	6	6	6	4	4
Kappe merking repeterende hver meter	YOFC FibreCore QXXE (12-576)xG652D ^ MndÅr ^ Batchnr. ^ Metermerking									

■ Andre leveringslengder tilgjengelig på forespørsel

Optical Fiber In Cable(ITU-G652D)

Category	Description	Specification	
		Before cable	After cable
Geometrical Characteristics	Cladding diameter	125.0 ± 1 µm	
	Cladding non-circularity	≤ 1.0 %	
	Core concentricity error	≤ 0.6 µm	
	Coating diameter	245 ± 10 µm(Before Colored) 250 ± 15 µm (Colored)	
	Coating/cladding concentricity error	≤ 12 µm	
Optical Characteristics	Mode field diameter at 1310 nm	8.7 – 9.5 µm	
	Point discontinuity	≤ 0.05dB	
	Attenuation at 1310 nm	≤ 0.34 dB/km	≤ 0.36 dB/km
	Attenuation at 1383 nm	≤ 0.34 dB/km	≤ 0.35 dB/km
	Attenuation at 1550 nm	≤ 0.21 dB/km	≤ 0.22dB/km
	Dispersion in 1288 – 1339 nm	≤ 3.5 ps/(nm·km)	
	Dispersion in 1271 – 1360 nm	≤ 5.3 ps/(nm·km)	
	Dispersion at 1550 nm	≤ 18 ps/(nm·km)	
	Zero dispersion wavelength	1300 – 1324 nm	
	Zero dispersion slope	≤ 0.092 ps/(nm ² ·km)	
	Cable cut-off wavelength	≤ 1260 nm	
	Polarization mode dispersion individual fiber	≤ 0.2 ps/√km	
	Polarization mode dispersion design link value (M=20, Q=0.01%)	≤ 0.1 ps/√km	
Macro-bend loss (100 turns, 30mm radius, 1550/1625nm)	≤ 0.1 dB		
Mechanical Specification	Proof stress level	≥100kpsi (0.69 GPa)	
	Coating strip force(peak value)	1.3-8.9N	
	Fiber curl (Radius)	≥ 4 m	

Test protokoll fysiske egenskaper (IEC 60794-1-21/22)

Tensile performance	-E1	Load: 500 N/mm Cable length under tension: Not less than 50m. Duration of load sustain: 1min. Velocity of transfer device: 10mm/min	The maximum fiber strain less than 0.6% under maximum tensile short-term load. The maximum increase in attenuation less than 0.1dB. No change in attenuation after test at 1550nm. Under visual examination without magnification, no damage to the sheath or to
Crush	-E3	Load: 500N Duration of load: 1 min	No change in attenuation after test at 1550nm. Under visual examination without magnification, no damage to the sheath or to the cable elements. The imprint of the striking surface on the sheath is not considered mechanical damage.
Bend	-E11A	Mandrel radius: 10x cable diameter Turns: 10 Cycles: 5	No change in attenuation at 1550nm after test. Under visual examination without magnification, no damage to the sheath or to
Repeated bending	-E6	Bending radius: 20 times cable diameter Cycles: 25 Load: 25N Duration of cycle: Approximately 2s.	No change in attenuation at 1550nm after test. Under visual examination without magnification, no damage to the sheath or to the cable elements.
Torsion	-E7	Cycles:5 Length under test: 1m Turns: $\approx 180^\circ$ Load: 40N	The variation on attenuation for each fiber less than 0.05dB at 1550nm. Under visual examination without magnification, no damage to the sheath or to the cable elements. No permanent change in attenuation after test
Coiling performance	-E20	Coil on standard drum	The outer sheath has no visible crack No damage on the cable
Temperature cycling	-F1	Sample length: at least 1000m Temperature range: -30°C+70°C Cycles: 2 Temperature cycling test dwell time: 12 hours	No change in attenuation coefficient at 1550nm after the test.
Water penetration	-F5B	Time : 24 hours Sample length : 3m Water height : 1m	No water leakage
Compound flow	-E14	Sample count:5 Sample length: 300 \pm 5 mm, Remove length: 130 \pm 2,5 mm, Time: 24 hours	No compound flow dripped

Remark: Test according to IEC 60794 Edition 1.0, 2008-10.

All optical tests proceeded at 1550nm

Varenummer

Elnr.	Varenummer	Elnr.	Varenummer.
1000904	G12-9/125 QXXE-M	1064750	G192-9/125 QXXE-M
1064746	G24-9/125 QXXE-M	1064751	G216-9/125 QXXE-M
1064747	G48-9/125 QXXE-M	1064753	G288-9/125 QXXE-M
1064748	G96-9/125 QXXE-M	1000977	G432-9/125 QXXE-M
1064749	G144-9/125 QXXE-M		G576-9/125 QXXE-M