SUBCAB® cables

Flygt SUBCAB cables are specially made to enhance the reliable and long-life operation of Flygt products. Among many features, flexible SUBCAB cables comprise a special tear- and abrasion-resistant compound that has a much higher tensile strength compared to conventional cables.

The wide range of SUBCAB cables offers very low water absorption properties, excellent insulation properties, high temperature resistance as well as oil resistance for many types of liquids. This broad assortment of flexible cables complies with most international standards and approvals.



Wide assortment

Many configurations
Flygt SUBCAB cables are available in many configurations for single-phase and three-phase applications as well as with or without monitoring conductors.

Screened versions for VFD
The SUBCAB range also comprises screened versions, 600/1000 V (Europe) and 600 V (CSA/UL), for use with variable frequency drives (VFD). The efficient screen reduces electromagnetic emissions to other electronics, complies with CE/EMC requirements and secures correct communication with supervision units. All screened SUBCAB cables have built-in monitoring cores.

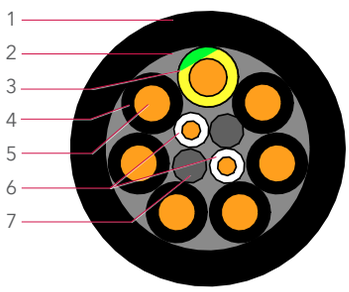
Control cores
For remote pump supervision, Flygt provides a simple, reliable solution through its cables with control cores. You only need one cable instead of using the conventional pump control solution that consists of a motor cable plus a separate control cable.

The SUBCAB range includes cables with twisted pairs of screened control cores specifically adapted for use with Flygt MAS 800. MAS 800 is a pump supervision system, which is available for use with Flygt's large, mid-range and slurry pumps. It constantly monitors pump operation, records and stores critical data, immediately alerts you with early warning signals and, if required, automatically stops them.

Cable for star-delta start
7-power core versions suitable for star-delta (Y/D) start are also available.



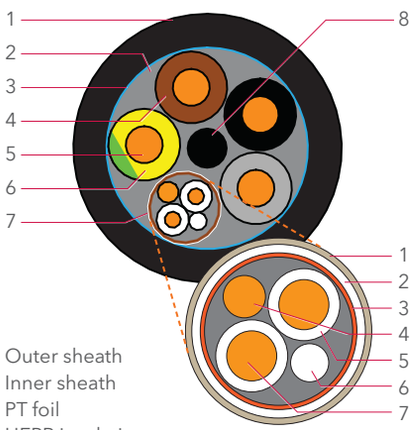
7G2.5+2×1.5 SUBCAB®



1. Outer sheath
2. Inner sheath
3. Ground core
4. EPR insulation
5. Copper conductor
6. Control cores (marked T1-T2)
7. Rubber filler



4G10+S(2×0.5) SUBCAB®

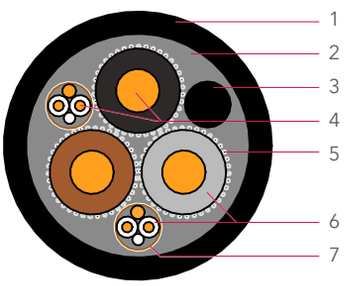


1. Outer sheath
2. Inner sheath
3. PT foil
4. HEPR insulation
5. Copper conductor
6. Ground core
7. Control element (cores marked T1-T2)
8. Rubber filler

1. Sheath
2. PT foil (wrapped)
3. Non-woven copper tape/screen longitude
4. Drain wire (tinned conductor)
5. HEPR insulation
6. Polyester yarn filler
7. Tinned copper strand T1-T2



S3x70+3x25/3+S2(2×0.5) SUBCAB®



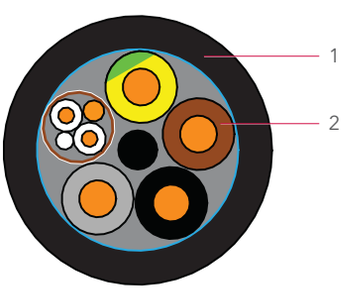
1. Outer sheath
2. Inner sheath
3. Rubber filler
4. Copper conductor
5. Screen
6. HEPR insulation
7. Control element (cores marked T1-T4)

Outer sheathing and insulation

Long lifetime

The outer sheath (made of chlorinated polyethylene CPE type VDE/5GM5) comprises several features that extend SUBCAB life expectancy four times longer than a conventional H07RN-F standard cable.

- High temperature resistance (withstands water temperatures up to 70°C)
- Superior mechanical strength
- High abrasion and tear resistance
- Extremely low absorption rate, withstands water depths up to 50 meters
- Chemical resistance (pH 3–10)
- Ozone resistance in compliance with EN 50396 and ISO 4892-2
- Oil and flame resistance according to IEC-norm 60811-1-1 and VDE 0472



1. Outer sheath
2. Insulation

Ensures a reliable leak-free fit
Flygt SUBCAB® cables have tight outer diameter tolerances and are designed and tested to fit perfectly together with the cable entry seal sleeve. The outer sheath withstands the high pressure of the seal sleeve and retains its mechanical and physical properties even after long periods of use. Cable deformation at the cable entry can therefore be minimized.

Prevent insulation deterioration
SUBCAB cables have an advanced insulation compound/inner sheath of HEPR/3GI3 (high density ethylene-propylene rubber) or EPR/3GI3 (ethylene-propylene rubber). These compounds have a temperature rating of 90°C, preventing insulation deterioration. The rated temperature will never be reached at normal current loads; therefore the risks of insulation cracks are minimized. Thanks to this, the unique compound highly contributes to an expected lifetime of SUBCAB cables, which is approximately four times longer compared to conventional H07RN-F standard cables.

Cable comparison

Features	Flygt SUBCAB cable	Standard H07RN-F cable
Expected lifetime	4 times H07RN-F and H07RN8-F. Slow aging due to the carefully selected high-quality materials.	
Qualified for permanent use in water	Yes, according to EN 50525-2-21 and VDE 0298-300 standards.	No
Tested for long-term sealing in Flygt pumps	Yes. Cable tested at a water pressure of 5 bar and temperature of 70°C. Sealing specifically adapted to Flygt pumps. Optimized outer diameters.	No
Maximum outer sheath and insulation temperature	Resists 70°C at outer sheath, 90°C at insulation.	Resists 40°C at outer sheath, 60°C at insulation
Extra heavy-duty cable for mining applications	Yes, meets material standard 5GM5 for mining industries. Resistant to mechanical wear.	No
Weather resistant	Yes, tested for UV and ozone resistance.	No
Integrated control cores	Yes, screened and unscreened. No separate control cable needed.	No
Ex approval	Yes, approved as explosion protected together with Flygt pumps and mixers in Europe (INERIS) and the US (FM).	No
Electrical and materials approvals	Yes. Europe (VDE), North America (CSA), China (CCC).	No
Screened versions for VFD and EMC applications	Yes. The screened cable attenuates electromagnetic interference produced by the use of variable frequency drives, (VFDs).	No
Special cable specification	Yes. Well specified for its purpose by Xylem.	No

Standards and approvals

Approved for explosion-proof and mining applications
SUBCAB® cables are approved for use in explosion-proof applications with Flygt pumps and mixers in accordance with FM (US) and INERIS (Europe), and approved for mining applications in accordance with VDE 0207.

Compliance with international standards
The outer sheath complies with most international standards for mechanical quality, temperature resistance as well as oil resistance, such as IEC, CSA, FM and VDE standards. For example, the low absorption rate qualifies SUBCAB cables for permanent use in water according to HD 22.16 and VDE 0298-300.

IEC 60245	General
IEC 60228 class 5	Conductor
IEC 60811-1-1 CLAUSE 9	Oil resistant
IEC 60811-2-1 CLAUSE 10	Oil resistant
IEC 60332-1	Flame retardant
IEC 60332-2	Flame retardant
IEC 60364-5-523	Current
CSA C22.2 No.49-1992	General
UL 1581	General
CCC.GB5013/IEC60245	General
EN 50525-2-21	General
EN 50363-1:2005	Material
VDE 0207 part 20	Material
VDE 0250	Material
VDE 0282 part 810	Material
VDE 0472 part 803-A	Oil resistant
VDE 0472 part 804-B	Flame retardant
VDE 0295	Conductor
VDE 0298	Current
VDE 0472	Testing
HD 22.4	General
EN 50525-2-21	Cables for submersible use



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