Co-Extrusion Heating Hose
Installation and Operating Manual

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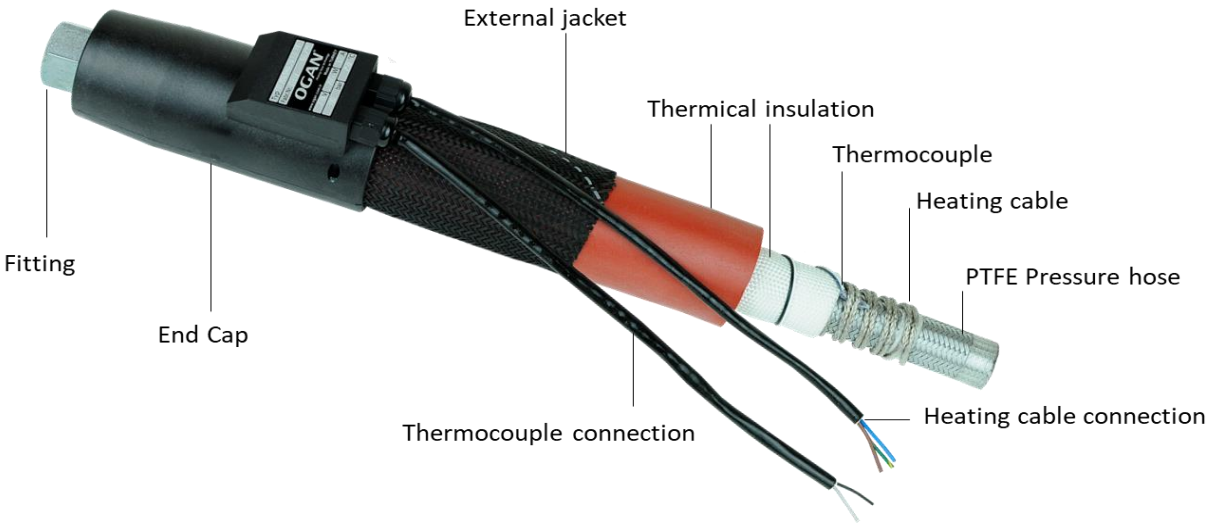
General Specifications of the Co-Extrusion Heating Hose



Co-extrusion heating hoses are designed and manufactured for the transfer of plastic and thermoplastic materials. It keeps the temperature constant at desired values between the extruder to the mold or application head.

PTFE pressure hose: Teflon hoses are manufactured from high quality PTFE material, offering very low coefficient of friction, high chemical resistance and ideal application in the -70° C to 250° C temperature range. Depending to the application, they can safely transfer the heated products upto 500bar pressure.
Fittings: Fittings that are suitable for high pressure working conditions are mounted at both end of the hose.
Heating cable: The hoses are equipped with a heating cable that is resistant to high temperature and humidity The power values that will meet the needs of the system are calculated and produced.
Thermocouple: The hoses are equipped with an integrated thermocouple or a sensor. It transmits the required temperature value to the temperature control device on the system.
Thermical Insulation: Insulation material is applied in order to reduce the heat loss to the minimum and to ensure that the system reaches the specified temperature
External jacket: The outer protective sheath, meets the static and dynamic bending requirements and ensures that the insulation material and the heating elements remain undamaged.
Thermocouple / Heating cable connections: The hoses are equipped with a connection cable long enough for the system requirements. Depending on the customer requests, supplied with or without connectors.
End cap : Both ends of the hoses are covered with hard or soft end caps.

Safety

This installation and operating manual contains important instructions for the safe installation, use, handling and maintenance of OGAN heating hoses.

Before installing and operating the heating hose, carefully read all technical and safety information provided. Make sure youunderstand the installation guidelines and follow all safety and operating instructions.

In addition, please follow all local occupational health and safety codes before installing and operating this product. Any intervention to the product other than the manufacturer will make the system unsafe and void the warranty. Personnel should have a thorough understanding of the equipment and its safety.

Heated hoses should be installed, operated and maintained only by authorized and qualified personnel. Qualified personnel must have knowledge of the rules of accident prevention at the workplace.

Safety Symbols

The following safety-related symbols warn of dangers and sources of danger. Get comprehensive information about these symbols.

Caution: Failure to follow these instructions will result in injury, death, and may cause damage to system and accessories.

Caution: Dangerous electrical voltage. Failure to follow these instructions will result in injury, death, and may cause damage to system and accessories. Heated hoses are electrical systems. Except for trained personnel who have sufficient knowledge about the subject, it should not be intervened.

Caution: Burn hazard. Wear heat protection clothing, safety goggles and protective gloves against heat.

Coution: Hot Surface, metal fittings at the end of the heated hose and application heads may be much hotter than the hose surface. Do not touch these areas without gloves while the system is running.

Caution : Toxic liquids or vapors can cause serious injury or death if splashed in the eyes or on the skin or inhaled. Store hazardous liquids in approved containers and use according to applicable guidelines. Always wear chemical impervious gloves when setting up or cleaning the equipment.
The system should be operated away from flammable and explosive materials.

Caution: Substances are transferred under high pressure and temperature within the heating Hoses. It is extremely important that the assembly is done correctly and checked frequently. Incorrect installation and use of damaged hoses cause serious injuries as a result of explosion.

Caution: Heated hoses are manufactured with ground wire and connected to the connector end. Open-ended (without connector) models, the ground cable must be connected to the grounded power supply.
Improper grounding, installation or use of hoses may cause electric shock.

Installation

Once all tests and controls of the co-extrusion heated hose are completed, the connection parts are closed with plastic stoppers so that no foreign material can enter the hose, protective nylon is covered outside the hose and shipped in a box.

1- While removing the hose from the box, prevent it from braking, do not pull from the cables. lay flat on the floor.
2- Connect the Extruder side of the hose and make sure the connections are not loose. Donot connect mold side of the hose yet.
3- Connect the power and thermocouple / sensor cables. Set the temperature at 80 °C and wait for the hose to be heated up, heated hose will be more flexible. Then, connect the mold side of the hose and prevent twisting of the hose when tightening. Please comply to the minimum bending radius of the hoses during installation.
4- Extruder should start with low speed. After completing all controls normal operating conditions can continue.
5- Prevent the external jacket of the hose and the end caps from contacting to hot surfaces.
6- If the length of the thermocouple cable installed on the hose is insufficient, the cable to be added must be the same as the thermocouple type of the hose and the connections must be done correctly and isolated.

Terms of Use

Our product will meet the requirements of your system under normal operating conditions if you comply with the following conditions and installation clauses.

1- The working conditions of the co-extrusion hoses must be within the limits recommended by the manufacturer. Follow the working pressure and temperature limits stated on the label of the hose.
2- The temperature control device and the hose thermocouple/sensor must be compatible. Incompatible temperature control allows the hose to heat up until it is damaged.
3- To prevent damaging of the hose and fittings during installation and dismounting, heat the hose upto 80 °C to make the hose flexible.
4- The frozen state material in the hose cannot become fully melted when hose reaches the operating temperature at first start. Homogeneous spread of temperature and melting of plastic in the hose requires more waiting time.
5- The first start must be at low speed. If possible, the mold side should be removed and reassemled after the molten plastic in the hose has been discharged.
6- Low temperature of the mold or blockage in the mold creates resistance and causes excessive pressure to PTFE pressure hose. Make sure that the mold meets the requirements.
7- Assembly instructions on pages 7 and 8 must be followed.

Terms of Use – With Hard Plastic / PVC

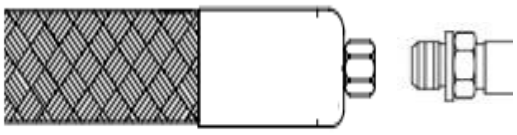
Besides above general guidelines for Co-extrusion hose usage, below cleaning process needs to be completed each time at the end of production if you are using hard plastic or pvc. Low liquidity of the PVC raw material will cause friction and extra pressure on the hose walls. There must be enough outer sliders in the structure of the PVC raw material. Sliding doped PVC material transfers without difficulty, and will not cause pressure and temperature increases.

At end of each production cyle with hard plastic or PVC

- Hose should be removed from the mold side and left in a position to flow.
- A dense (Antipak) mixture, which can push the PVC left in the screw sleeve and the hose, should flow through extrusion till it flows out from the open end of the hose. This will clean the screw sleeve and the internal walls of the hose.

* Please consult to your raw material supplier for the supply of Antipak.

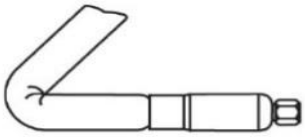
Assembly Instructions



Make sure that the fittings at the ends of the heated hoses are compatible with the connection parts of the extruder and mold system. Incompatible or warned/damaged parts may disturb the connection, causing device/hose damage and serious injury.

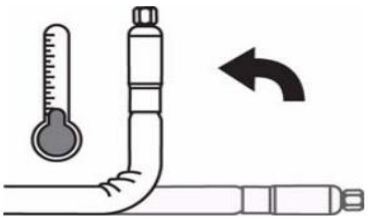
Prevent the damage of fittings during installation by not overlapping the threaded fitting surfaces or carelessness workmanship. Heat the hose upto 80 °C to make the hose flexible, and make sure that the threaded fittings overlap each other.

Connection parts of the extruder, mold and fittings of the hose should be controlled at each installation and dismounting process and warned, damaged parts should be replaced.

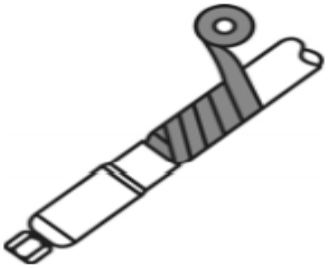


Proper installation is a key factor which determines the life of the hose. Bending or crimping disrups the structure of the pressure hose. Minimum bending radius should not be less than 4 times of the outer diameter of the heated hose.

Twisting negatively affects the dynamic and static operating conditions of the pressure hose. Avoid twisting of hose during installation. Otherwise, pressure hose, heating cables, sensors, and threaded fittings can be damaged.



Do not bend the hoses with glue in when cold state.



Do not wrap tape or similar material outside of the hose. Otherwise, temperature differences and humidity occur.

Never use plastic cable ties when the hose needs to be fixed or a cable or an air hose needs to be carried over the hose. Necessary fixings should be made with a soft belt without squeezing the hose.

EU-DECLARATION OF CONFORMITY

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Product Group : Heated hoses

Product Type : HT700 / RB400 / HT100 / HT200 / NN/ RB /2K / OGN /US / HT250

Directives : EN 2014/35/EU Low Voltage Directive
EN 60519-1/2015 General safety requirementr for industrial installations
EN 60519-2/2006 Safety in electroheat installations
EN 60204-1/2018 Safety of machinery - Electrical equipment

Test report Nr. : LVD-542-01 / LVD-542-02

We hereby declare that in planning and manufacturing of this product the basic safety and health requirements of the EU directives mentioned above have been observed.

July 2th 2020

Serhat Taşgedik

Managing director