

Otto Christ AG uses Lapp cables

ÖLFLEX® range for car washes

By Irmgard Nille

It is a boom time for car washes. Huge brushes and powerful fans ensure that our pride and joy is sparkling and shiny in just a few minutes. However, all kinds of high-tech equipment are needed to ensure that the various components turn, spray and blow correctly. Otto Christ AG from Benningen in the Allgäu is one of Europe's leading manufacturers of car wash systems. With extensive in-house production facilities, they produce portal washing systems for service stations, drive-through car washes and special washing systems for trains, trams, buses and trucks. The electrical experts from Christ have been working closely with Lapp Kabel for years. Almost every cable in their systems comes from Lapp Kabel in Stuttgart, one of the world's leading manufacturers and suppliers of high flexibility cables, cable accessories, industrial connectors, pre-assembled cables and communication technology.

Fritz Dreier, Head of Electronics at Otto Christ AG says: "We used to buy cables from different manufacturers. But we were always having problems. Since we have been ordering exclusively from Lapp, the buying process is much simpler and faster and we can be sure that we will be getting consistently high quality."

Just one portal washing system incorporates around 500 metres of Lapp cables in a small space. The heart of the system is the mobile control cabinet. From here, ÖLFLEX® connecting and control cables connect the 20 motors. The ÖLFLEX® CLASSIC 110 is perfect for the motors for the side brushes, the roof brushes, the blower and the nozzles that need to turn. The cable is made up of a fine strand of bare copper wires. Core insulation is made of a special PVC compound that has been specially developed in the Lapp laboratory, as has the sheath. The small external diameter means that less space is required. It is no great surprise that the cable is viewed as a true "all rounder" in the industry. It is suitable for use in dry, damp or wet environments with normal loads and is predominantly used in machinery, plant engineering, machine tools, paint shops, heating and air conditioning and power plants.

The 10 metre long power chains in a portal car wash use high flexibility PUR-sheathed ÖLFLEX® CLASSIC 810 P and CP with minimum bending radii. Chemical loads or atomised spray that can occur in a car wash have no effect at all on the ÖLFLEX® CLASSIC 810 P. The polyurethane outer sheath makes the cables oil and petrol resistant and abrasion and tear proof. Even better - laboratory tests have shown that they have a service life of at least five million alternating bending cycles in power chains with traverses of up to ten metres. For the four motors with frequency converters, the shielded CP version with copper screen braiding is preferred.

And because the wheel brushes in a car wash involve even more extreme loads in terms of moisture, chemicals and dirt, they use the durable ÖLFLEX® FD ROBUST power chain cable. This cable was launched by Lapp around three years ago and immediately impressed the electrical engineers at Christ. While normal PVC or PUR sheathed cables quickly lose their flexibility and become brittle at temperatures above 80 degrees, the ROBUST version retains its flexibility even at temperatures of over 100 degrees and at high humidity. In addition, their increased chemical resistance makes them ideally suited for use in the food industry, medical technology, car washes or cutting machines that use bio oils.

To link the control cabinet to the control panel, from where all system parameters are set and washing programs are selected, Christ uses the UL/CSA approved high flexibility and paired UNITRONIC® FD CP (TP) data cable with copper screen braiding and PUR outer sheath for use in power chains. The TP construction and the copper screen braiding provide the cable with exceptional protection against interference. It is also free of adhesion, resistant to hydrolysis and microbes and flame retardant to IEC 60332-1.

“We are delighted that Lapp Kabel can provide the ideal cable for every application. In a car wash, the cables must be able to withstand a diverse range of loads. In the upper areas, the loads are lower. Down at the bottom, moisture, wetness and chemicals are dominant”, report Hubert Kathan, electrical engineer at Christ.

As well as individual portal car washes, Lapp branded products are also used in drive-through car washes and special washing systems. The only difference is that the larger systems require even greater cable lengths. Otto Christ AG has supplied train washing systems for the Austrian national railways in Vienna, the Golden Pass line from Lucerne to Montreux, tram

washing systems for Budapest, Lisbon and Strasbourg and special systems for buses and trucks.



Washing systems require exceptionally robust cables that are resistant to high temperatures, water, oils, coolants and cleaning agents.

Photo: Christ



ÖLFLEX® ROBUST

Robust chain cable for use at high temperatures.

Excellent resistance to water, bio oils, softeners, coolants and cleaning agents.

Photo: Lapp Kabel