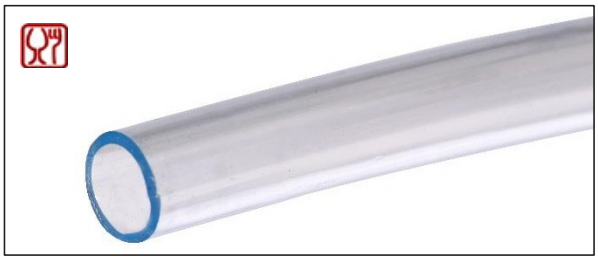
Universal hoses - general information

Universal hoses are designed for versatile use: for air, water, light chemicals, oils and fuels. Hoses that are hygienically certified are also suitable for food products. The versatility of hoses does not mean that they can be used for "everything". - the application must correspond to the information given in the hose characteristics. Hoses are made from materials such as PVC, polyurethane and rubber. Pressure resistance is ensured by appropriate reinforcement in the form of a braid, plastic or steel spiral. In the case of hoses made from thermoplastics (PVC and PU), the drop in working pressure with temperature must be taken into account. End fittings for universal hoses (see section INDUSTRIAL ARRANGEMENTS) should be assembled by means of twisting bands and hose clamps, they can also be pressed on by means of machine press sleeves.

Also look for hoses for these applications in the other chapters of the INDUSTRIAL HOSES section.

PVC universal hoses



CRISTALLO EXTRA

PVC non-reinforced hose for food substances and all-round use

Hose material: Transparent PVC
Operating temperature: -20°C to +60°C (temperature-dependent operating pressure)

All-purpose, highly flexible, non-reinforced hose designed for the non-pressurised (or very low pressure) transfer of air, water and liquids in general industrial applications, light chemicals (e.g. dilute acids and bases) and as a covering for pipes, hoses, cables, etc.
It can be used (at temperatures up to 40°C) for food substances such as juices, beverages, beer, wine, alcohols up to 50%, milk and milk products. It is not recommended for oils and oily food substances.

CRISTALLO EXTRA hose complies with European requirements 1935/2004/EC, 10/2011/EU (simulants A, B, C and D1), 2023/2006/EC (GMP). It is suitable for temporary food contact for the transmission of food substances - under the conditions specified in the manufacturer's declaration of conformity (available from Tubes International). For additional information on f o o d applications, see the section "Hoses for food products".

index	Internal diameter (d) [mm].	Outside diameter (D) [mm].	wall thickness (t) [mm].	mass [kg/m]	Roll length [m]	typical PVC hose, 20ºC		
						d [mm]	D [mm].	Working pressure * [bar]
FT-CRISTALLO-EX-03X05	3	5	1	0,015	100	3	5	2,82
FT-CRISTALLO-EX-04X06	4	6	1	0,019	100	4	6	2,31
FT-CRISTALLO-EX-05X07	5	7	1	0,023	100	5	7	1,95
FT-CRISTALLO-EX-06X08	6	8	1	0,027	100	6	8	1,68
FT-CRISTALLO-EX-07X10	7	10	1,5	0,049	100	7	10	2,05
FT-CRISTALLO-EX-08X12	8	12	2	0,077	100	8	12	2,31
FT-CRISTALLO-EX-09X13	9	13	2	0,084	100	9	13	2,11
FT-CRISTALLO-EX-10X13	10	13	1,5	0,066	50	10	13	1,54
FT-CRISTALLO-EX-12X16	12	16	2	0,107	50	12	16	1,68
FT-CRISTALLO-EX-13X17	13	17	2	0,112	50	13	17	1,57
FT-CRISTALLO-EX-14X18	14	18	2	0,123	50	14	18	1,48
FT-CRISTALLO-EX-15X19	15	19	2	0,130	50	15	19	1,39
FT-CRISTALLO-EX-16X20	16	20	2	0,138	50	16	20	1,32
FT-CRISTALLO-EX-18X23	18	23	2,5	0,196	50	18	23	1,44
FT-CRISTALLO-EX-19X24	19	24	2,5	0,206	50	19	24	1,38
FT-CRISTALLO-EX-20X25	20	25	2,5	0,212	50	20	25	1,32
FT-CRISTALLO-EX-25X31	25	31	3	0,318	50	25	31	1,27
FT-CRISTALLO-EX-30X38	30	38	4	0,514	25	30	38	1,39

Note: indexes highlighted in colour - most commonly used

* - Indicative value of the recommended operating pressure at a safety factor of 5:1.

For unreinforced hoses, manufacturers usually do not specify the working pressure or burst pressure due to the less clear-cut nature of hose bursting, preceded by permanent deformation. The values given were calculated using Lame's formula: working pressure= $(S/n)x(D^2-d^2)/(D^2+d^2)$, assuming S = 3 MPa (material stress at permanent deformation) and n=5 (safety factor). These are indicative values for a typical plasticised PVC hose. The use of a hose for a specific operating pressure should be preceded by a test under operating conditions.

Temperature d e p e n d e n c e of burst pressure and working pressure for typical PVC hoses	temperature	20ºC	30ºC	40ºC	50ºC	60ºC	70ºC
	pressure	100%	74%	55%	40%	30%	22%