



THERMOPLASTIC TUBING AND HOSES
SINCE 1961



ZEC CATALOGUE - NORTH AMERICA

Thermoplastic Hoses

FLUID POWER WATER HANDLING SPIRAL HOSES

LUBRICATION GENERAL INDUSTRY



THERMOPLASTIC TUBING AND HOSES
MADE IN ITALY

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ZEC S.p.A.: Flexibility for Choice

ZEC S.p.A., founded in 1961 by Mr. Eugenio Zantelli in Colorno, Province of Parma, Italy, manufactures thermoplastic tubing and hoses for low, medium, high and very high pressure applications.

Domestic business activities are boosted by an International breakthrough as of 1990.

Investments in special skilled human resources, manufacturing, product innovations and commercial presence elevates ZEC S.p.A. meanwhile into the global market, covering more than 90 countries world-wide.

Significant growth in all areas have been accompanied with an ever increasing product range dedicated to a large portfolio of applications such as fluid power, pneumatics, lubrication, automotive, food processing, marine, refrigeration, petrochemical-offshore, and so on.

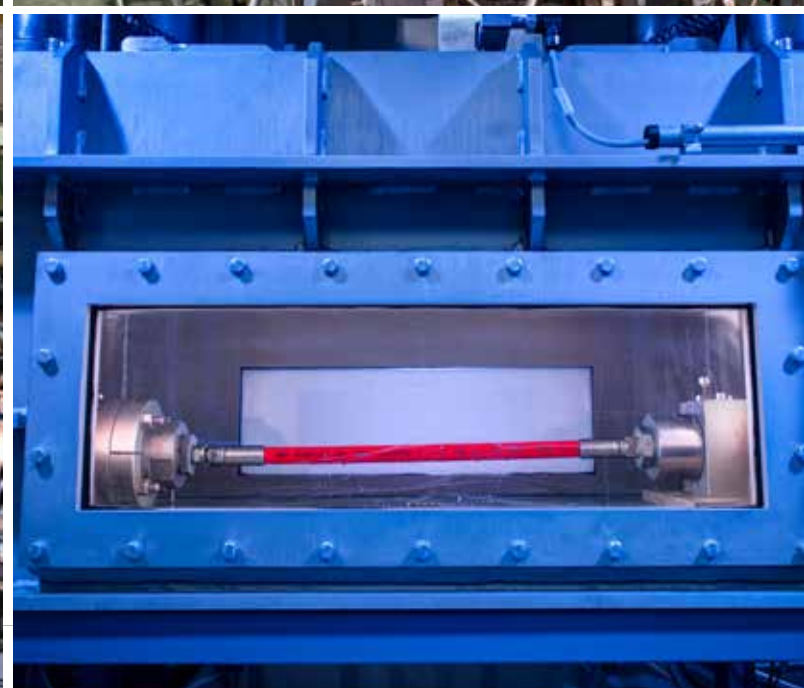
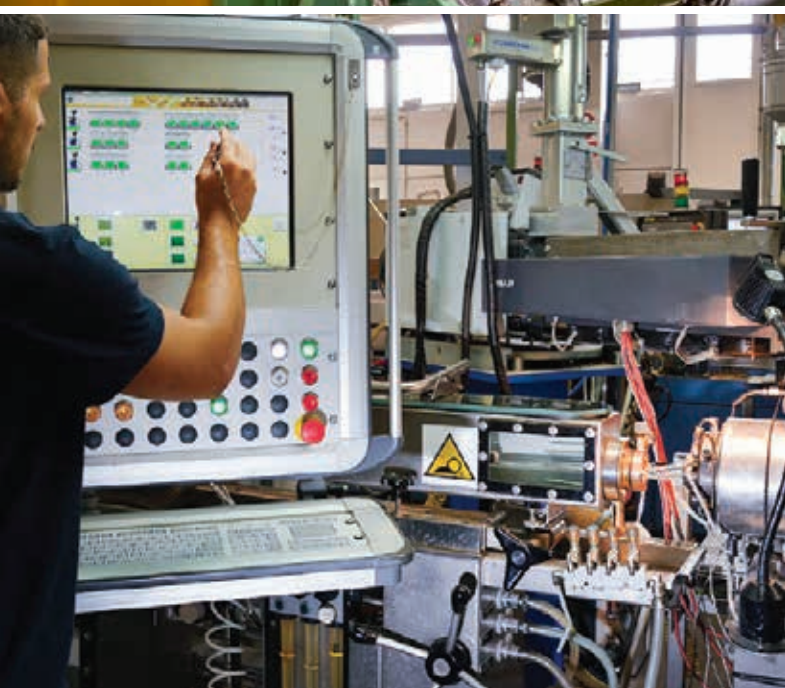
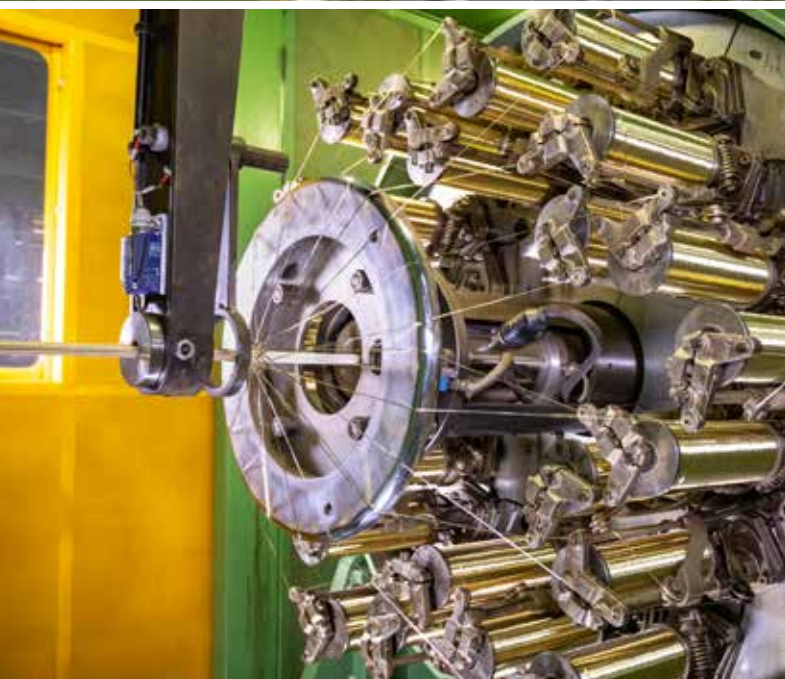
The ZEC S.p.A. product range includes standard or customized single, multiple and coiled thermoplastic tubing and hoses, with technical characteristics within the range of 2mm to 40mm inner diameter, working pressures from 5bar to 1280bar and operating temperatures from -200°C to +260°C.

All products manufactured by ZEC S.p.A. are of top quality and carefully selected raw materials. Manufacturing processes are continuously multiple controlled.

The entire production takes place in our facilities located in Colorno, Italy.

End products comply strictly with major international standards such as SAE, EN, DIN & ISO.

All company sectors and activities are qualified and operate according to UNI EN ISO 9001-2015 quality system.



ZEC provides its customers with products meeting high quality standards in compliance with current European and international regulations in force.

DNV Type Approval has been obtained on 8 series of hoses commonly used for the marine/off-shore world, for hydraulic circuits on platforms or submarines, methanol injection, safety equipment for extraction (BOP), remote-controlled submarine vehicles, in addition to the management onto rigs/vessels (air, O₂, Nitrox).

ZEC has also obtained the **MSHA – Mine Safety and Health Administration** approval (www.msha.gov).

The approved hoses can be used in underground mines for hydraulics applications conveying oils or water with the limitation of not to be used in firefighting applications.

All ZEC hoses are manufactured in conformity to **European regulation EU 1907/2006 “REACH”** and **European directive EU 2011/65 “RoHS”**. Both declarations are available on: www.zecspa.com/en/technical-support.





Thermoplastic solution: 10 IMPORTANT ADVANTAGES

The materials and technology behind the production of ZEC tubing and hoses, provide important advantages to finished products, especially compared to traditional rubber hoses:



High abrasion resistance

The external covering ensures high abrasion resistance. In particular the use of additives and sliding materials, as well as covering's adhesion solutions, ensure a longer service life of thermoplastic hoses compared to that of traditional rubber solutions.



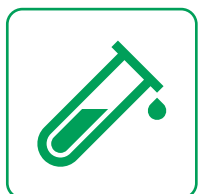
Light weight and non conductivity

Reinforcement made of textile or hybrid fibers makes the thermoplastic hose remarkably light, without reducing its pressure resistance (weight reduction up to 70% compared to rubber). Furthermore textile braided thermoplastic hoses are the only ones meeting the ANSI A92.2 standard.



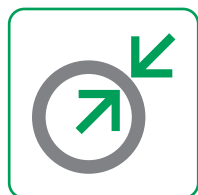
Resistance to environmental agents / long shelf-life

External cover in antiabrasion materials, UV rays stabilized and resistant to hydrolysis and micro-organisms, makes thermoplastic hoses suitable for outdoor applications, in extremely humid and saline environments, and high and low temperatures. It also ensures a guarantee for long term shelf-life.



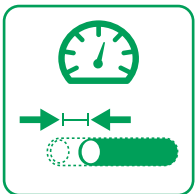
High chemical resistance

The option to use different materials for the hoses inner core, makes them suitable for several applications, handling also aggressive oils, polyoils and emulsions. (See chemical compatibility chart available on: www.zecspa.com/en/technical-support).



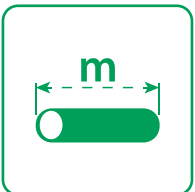
Compactness and reduced volumetric expansion

Thermoplastic hoses can have a very small outer diameter, at same working pressure, compared to traditional rubber hoses. Moreover they ensure a lower volumetric expansion, at same pressure rate.



Lower pressure drops and elongation under pressure

The smooth and compact inner core tubing surface, reduces fluid friction to a minimum, avoiding turbulences and overheatings.
ZEC standard maximum elongation is +/-1,5% (50% of traditional rubber hoses).



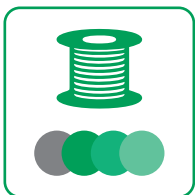
Long lengths

For some product series, thermoplastic hoses can be manufactured in continuous lengths up to over 1.000 meters (over 3000ft), depending on size.



Multiple hoses in parallel and umbilical solutions

ZEC offer multiple parallel solutions up to 6 hoses, reducing the overall dimensions. ZEC is also able to offer umbilical solutions, including also electrical cables, if required.



Flexibility on customization and packaging

ZEC thermoplastic solutions are easily customizable, offering a huge variety of colours, customized lengths and reels for long lengths.

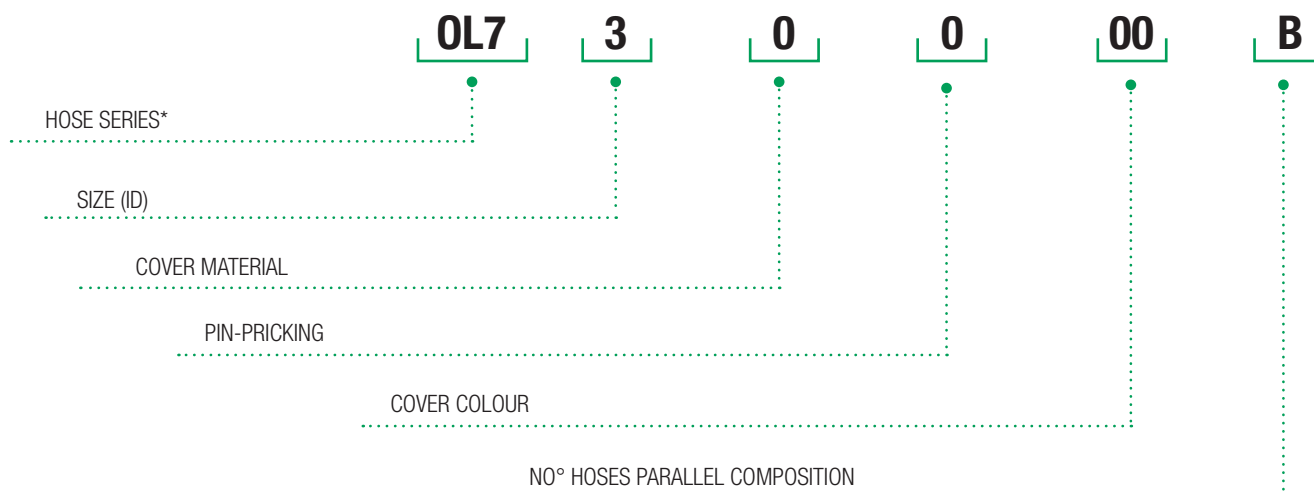


Appropriate solution for gas handling

The use of specific materials limits the permeability level of thermoplastic hoses compared to that of traditional rubber hoses. ZEC has a specific test bench for tests with inert gas up to 500 bar.









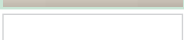
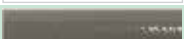

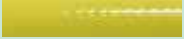


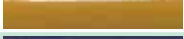


HOSES AND OPTIONS CODING

The identification code of each thermoplastic hose is composed of several elements, each of which refers to a specific feature. Below is an example of how a hose code is composed.



* HOSE SERIES normally specifies inner core material type and so the chemical compatibility of the hose.

To verify chemical resistance with specific fluids you are invited to check the on-line chart at: www.zecspa.com/en/technical-support.

HIGH PRESSURE HOSES COLOURS TABLE			
COLOUR	CODE	PICTURE	SIMILAR TO
Black	00		RAL 9005
Orange	01		RAL 2004
Light Blue	02		RAL 5015
Blue EU	03		RAL 5002
Zinc Yellow	04		RAL 1018
Red	05		RAL 3028
Silver	07		RAL 9023
Green	09		RAL 6032
White	10		RAL 9003
Transparent	11		-
Grey RAL 7046	12		RAL 7046
Bronze	13		-
Light Yellow	14		RAL 1016
Magenta	18		RAL 4010
Green PANTONE® 382	22		PANTONE® 382
Signal Yellow	23		RAL 1003
Blue PANTONE® 281	24		PANTONE® 281 - RAL 5003

HIGH PRESSURE HOSE CODES DEFINITION				
SIZE (ID)	COVER MATERIAL	PINPRICKING	EXTERNAL COLOUR	MULTI-HOSE
1 = 1/8"	0 = PU POLIESTERE / OIL PROOF PU	0 = NO	00 = BLACK	B = 2 HOSE
2 = 3/16"	1 = POLIESTERE / TPEE	1 = YES	01 = ORANGE	T = 3 HOSE
3 = 1/4"				Q = 4 HOSE
4 = 5/16"	3 = POLYAMIDE			C = 5 HOSE
5 = 3/8"	7 = PU POLIESTERE / WATER PROOF PU			
6 = 1/2"	8 = SELF-EXTINGUISHING PU			
7 = 5/8"	12 = PU MATT WATER PROOF			
8 = 3/4"				
9 = 1"				
10 = 1" 1/4				
12 = 1" 1/2				

OPTIONS

1) Inner core available materials:

- Thermoplastic Polyester
(OL, MTH, MTKH, PLH, GR, TS SERIES)
- Polyamide (VE, MT, MTK, MTKM, HOG SERIES)

2) Cover colours (see colour table p. 24)

3) Lengths:

- standard from 50 to 200 m depending on hose diameters / types
- possibility to request specific (or multiple) lengths

4) Marking:

- ZEC standard (white or yellow)
- customizable in case of specific requirements

5) Packing:

- coils wrapped in plastic film
- reel options (cardboard and wood), according to specific requirements



6) Traceability:

Each single coil has its own identity card on the label, which reflects the lot number printed on the hose. From these data it is possible to trace all the manufacturing processes, up to the raw materials used.

7) Tests:

To each finished product batch test certificate 3.1 (SAE J343 / ISO 1402).

Other periodic tests or tests on request:

- impulse test SAE J343 / ISO 6803
- abrasion test UNI ISO 6945 / DIN 20040

ZEC solutions for fluid power applications

ZEC thermoplastic tubing and hoses are suitable for fluid power applications. They are the ideal solution for the conduction of polyols and hydraulic fluids for both high and low pressure, also under heavy duty environmental and applicative conditions.

APPLICATIONS ZEC tubing and hoses designed for fluid power sector are used in a wide range of applications, to name a few:

MATERIAL HANDLING EQUIPMENT



- Lifts
- Hose reels
- Forklifts

HOSES
OL7F
OL7F NC
OL7PL

HEAVY MATERIAL HANDLING



- Cranes
- Hydraulic booms
- Tele-handlers
- Container lifting devices

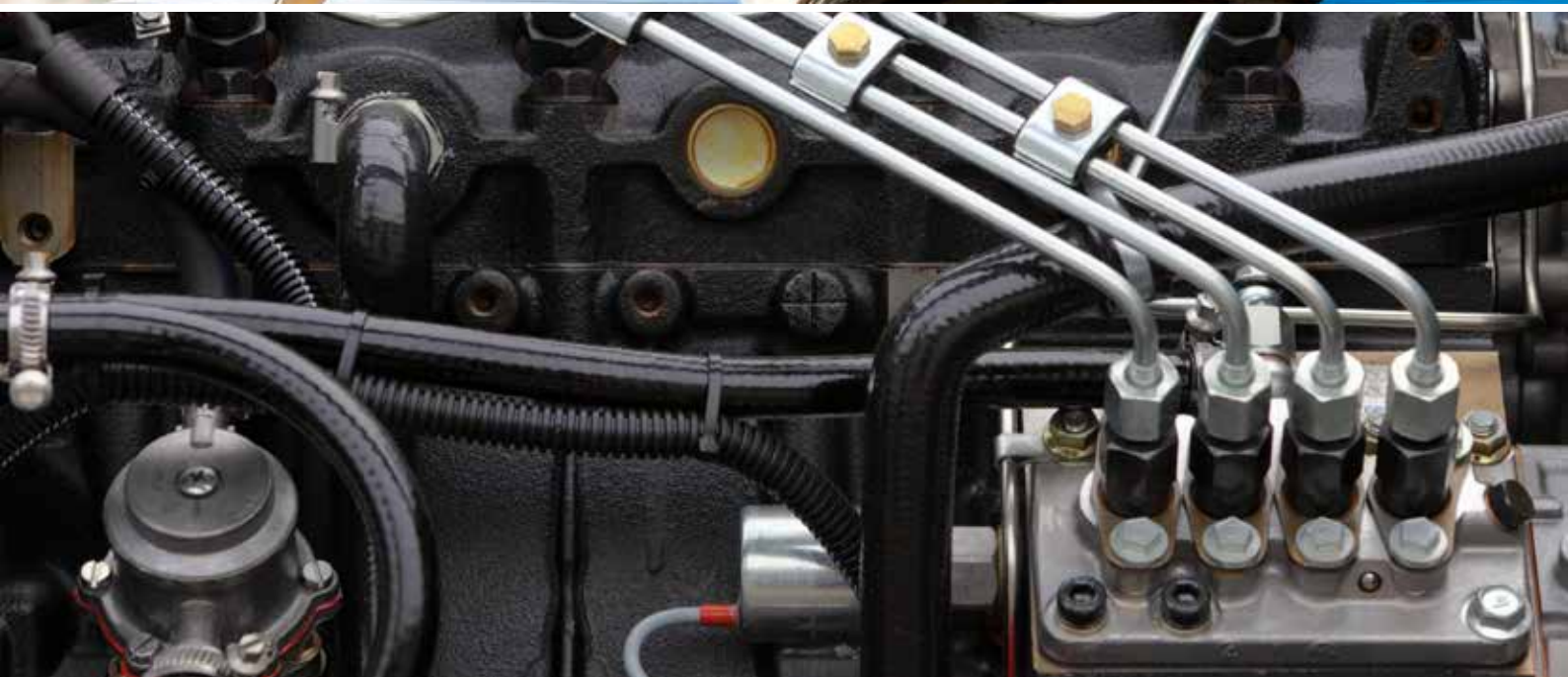
HOSES
OL7F
OL7F NC
OL7PL

POWER GENERATION



- Solar power generation
- Wind turbines

HOSES
OL7F
OL7F NC



OL7F WATERPROOF COVER



Main Features

- Pressures 155 to 224 bar / 2250 to 3250 psi
- Extreme kinking resistance
- Very compact and tough construction
- Matt cover, abrasion resistant
- Ideal for insertion into ducts and narrow conduits
- SAE 100R7, ISO 3949 and MSHA standards

Technical Features

Technical-constructive features:

Inner core in thermoplastic polyester elastomer (TPE), bonded reinforcement in high density polyester fiber, and outside covering in anti-abrasion matt black polyurethane, pinpricked, UV light stabilized and resistant to hydrolysis for outdoor applications. Twin or multi-line constructions available.

Applications:

The OL7F series hoses have been developed for medium pressure hydraulic use in applications requiring high mechanical resistance.

The compact and tough construction makes the OL7F hose extremely resistant to kinking and abrasions, ideal per insertion into ducts and narrow conduits.

Working temperatures:

From -40°C to +100°C From -40°F to +212°F

In case of water or water-based fluids max. working temperature is + 70°C (+158°F).

Length variation (@ max WP):

-1.5% to +1.5%

Working pressure:

Safety factor 1:4

Vacuum rating:

0.93 bar; 700 mmHg

Specifications:

These hoses meet or exceed SAE J517 – 100R7, ISO 3949, MSHA (MSHA IC-332/04).

Data Sheet



CODE	inch	-dash	mm	DN	inch	mm	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
OL7F212100	3/16"	-3	4.8	5	0.425	10.8	224	3250	15	0.590	84.9	0.0570	BP316MTK
OL7F312100	1/4"	-4	6.2	6	0.476	12.1	207	3000	25	0.984	95.3	0.0640	BP14R7
OL7F412100	5/16"	-5	8.0	8	0.555	14.1	172	2500	35	1.378	119.2	0.0801	BP516R7V
OL7F512100	3/8"	-6	9.8	10	0.639	16.1	155	2250	45	1.772	149.3	0.1003	BP38R7V
OL7F612100	1/2"	-8	12.7	12	0.811	20.6	155	2250	65	2.559	234.6	0.1576	BP12R7V
OL7F812100	3/4"	-12	19.2	19	1.083	27.5	86	1250	105	4.134	350.1	0.2353	BP34JC7

OL7F NC

WATERPROOF COVER



Main Features

- Pressures 155 to 224 bar / 2250 to 3250 psi
- Extreme kinking resistance
- Very compact and tough construction
- Matt cover, abrasion resistant
- Ideal for insertion into ducts, narrow conduits and aerial lifting devices
- SAE 100R7, ISO 3949, MSHA and ANSI A92.2 standards

Technical Features

Technical-constructive features:

Inner core in thermoplastic polyester elastomer (TPE), bonded reinforcement in high density polyester fiber, and outside covering in anti-abrasion matt orange polyurethane, non-perforated, UV light stabilized and resistant to hydrolysis for outdoor applications. Twin or multi-line constructions available.

Applications:

The Non-Conductive OL7F series hoses have been developed for medium pressure hydraulic use in applications requiring high electrical insulation.

The compact and tough construction makes the Non-Conductive OL7F hose extremely resistant to kinking and abrasions, ideal per insertion into ducts and narrow conduits.

These hoses meet SAE J517 with less than 50 μ A leakage under 250000 V/m, suitable for aerial platforms and material lifting device.

Working temperatures:

From -40°C to $+100^{\circ}\text{C}$ From -40°F to $+212^{\circ}\text{F}$

In case of water or water-based fluids max. working temperature is $+70^{\circ}\text{C}$ ($+158^{\circ}\text{F}$).

Length variation (@ max WP):

-1.5% to $+1.5\%$

Working pressure:

Safety factor 1:4 is required if hose failure could result in motion of the platform(s), or material lifting device, or both.

Safety factor 1:3 is acceptable if hose failure will not result in motion of aerial devices.

SAE Standard requires safety factor 1:4.

Vacuum rating:

0.93 bar; 700 mmHg

Specifications:

These hoses meet or exceed SAE J517 – 100R7, ISO 3949, ANSI A92.2 for vehicle-mounted aerial devices, MSHA.

Data Sheet



CODE	inch	-dash	mm	DN	inch	mm	bar	psi	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
OL7F212001	3/16"	-3	4.8	5	0.425	10.8	224	3250	224	3250	15	0.590	84.9	0.0570	BP316MTK
OL7F312001	1/4"	-4	6.2	6	0.476	12.1	207	3000	217	3150	25	0.984	95.3	0.0640	BP14R7
OL7F412001	5/16"	-5	8.0	8	0.555	14.1	172	2500	217	3150	35	1.378	119.2	0.0801	BP516R7V
OL7F512001	3/8"	-6	9.8	10	0.639	16.1	155	2250	207	3000	45	1.772	149.3	0.1003	BP38R7V
OL7F612001	1/2"	-8	12.7	12	0.811	20.6	155	2250	207	3000	65	2.559	234.6	0.1576	BP12R7V
OL7F812001	3/4"	-12	19.2	19	1.083	27.5	86	1250	114	1660	105	4.134	350.1	0.2353	BP34JC7

OL7PL-PRO·LIFTech™



Main Features

- **Isobaric Series** - constant pressure 210 bar / 3053 psi (SF 1:4)
280 bar / 4070 psi (SF 1:3) according to EN ISO 3691
- High kinking resistance
- Ultra compact and tough construction
- Compliant with SAE J517-100R18, iso 3949
- High/low temperature resistant

Technical Features

• Technical-constructive features:

Inner core in thermoplastic polyester, reinforcement in polyester fibre, outside cover in black glossy special polyester, UV-stabilized, suitable for outdoor applications with extreme temperatures, pinpricked for conduction of air and compatible gases.

• Working temperatures:

From -54°C to +100°C From -65°F to +212°F.

Max. working temperature with air, water and water-based fluids is +70°C (+158°F).

• Working pressure:

Safety ratio 1:4

Safety ratio 1:3

• Vacuum rating:

0.93 bar; 700 mm Hg

• Specifications:

These hoses meet or exceed SAE J517-100R18, ISO 3949.

Data Sheet



CODE	inch	-dash	mm	DN	inch	mm	bar	psi	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
OL7PL21100	3/16"	-3	4.8	5	0.421	10.7	210	3053	280	4070	18	0.71	84	0.056	BP316MTK
OL7PL21100B	3/16"	-3	4.8	5	0.421	10.7	210	3053	280	4070	18	0.71	168	0.113	BP316MTK
OL7PL31100	1/4"	-4	6.2	6	0.480	12.2	210	3053	280	4070	25	0.98	94	0.063	BP14MT1
OL7PL31100B	1/4"	-4	6.2	6	0.480	12.2	210	3053	280	4070	25	0.98	188	0.126	BP14MT1
OL7PL41100	5/16"	-5	8	8	0.591	15.0	210	3053	280	4070	34	1.34	146	0.098	BP516R1TV
OL7PL41100B	5/16"	-5	8	8	0.591	15.0	210	3053	280	4070	34	1.34	292	0.196	BP516R1TV
OL7PL51100	3/8"	-6	9.8	10	0.653	16.6	210	3053	280	4070	45	1.77	161	0.108	BP38R2T
OL7PL51100B	3/8"	-6	9.8	10	0.653	16.6	210	3053	280	4070	45	1.77	322	0.216	BP38R2T
OL7PL61100	1/2"	-8	12.7	12	0.831	21.1	210	3053	280	4070	70	2.76	249	0.167	BP12R2TV
OL7PL61100B	1/2"	-8	12.7	12	0.831	21.1	210	3053	280	4070	70	2.76	498	0.335	BP12R2TV
OL7PL71100	5/8"	-10	16.0	12	1.055	26.8	210	3053	280	4070	100	3.937	395	0.265	BP34R2TV
OL7PL71100B	5/8"	-10	16.0	12	1.055	26.8	210	3053	280	4070	100	3.937	790	0.530	BP34R2TV



ZEC solutions for water handling

Continuous development of new urban centers and therefore their sewers, shipbuilding industry and food industry brings with it the necessity of cleaning and maintenance, very often related also to hygiene and health reasons.

This product range has been developed to meet the most demanding applications, even in terms of performance. This is the reason why the development has occurred during the years, especially thanks to the customers investing together with ZEC on field testing, enabling ZEC to validate the optimal product range for the market.

APPLICATIONS Water handling hose range has been developed for multiple Industrial sectors, including the following applications:

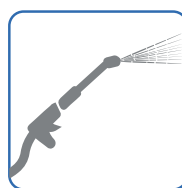
SEWER JETTING APPLICATIONS



- Road network
- Secondary or domestic drains

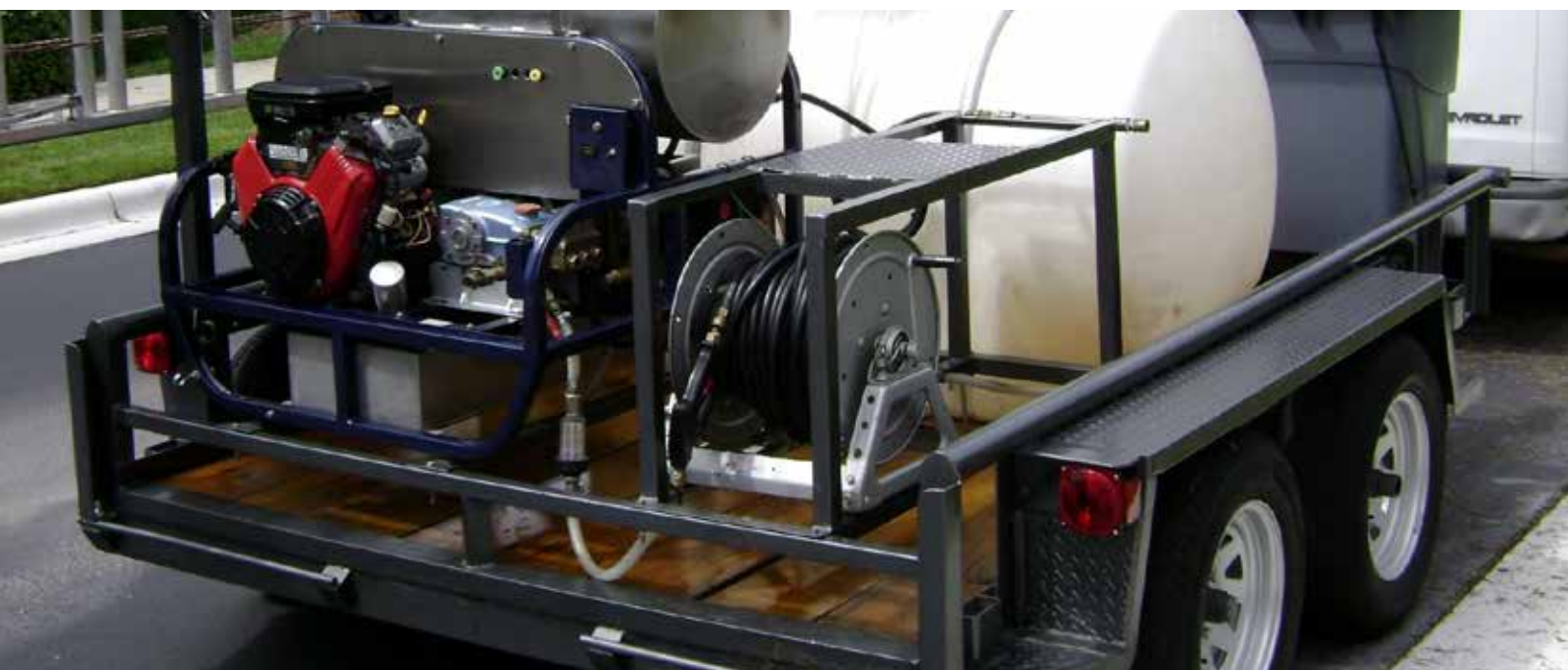
HOSES
JC5U-2500
JC7U 3000
JCL-5000

HIGH PRESSURE WASHER SYSTEMS



- Industrial cleaning
- Car washer

HOSES
JCL-5000



JC5U-2500

AMERICAN STANDARD



Main Features

- Working pressure from 175 bar / 2.500 psi
- High kinking, torsion and flattening resistance
- Compatibility with fittings and accesories standard on market

Technical Features

• Technical-constructive features:

Inner core in thermoplastic compound, double braided polyester fiber reinforcement and outer covering in in antiabrasion polyurethane, pin-pricked, stabilized to UV rays and resistant to hydrolysis for outdoor applications, in environments having high humidity and saline levels.

• Applications:

The JC5U Series hoses have been created for water applications in the high pressure cleaning field.

• Working temperature:

from -40°C to +55°C (-40°F to 131°F)

• Working pressure:

Safety ratio 1:2.5

• Length variation:

+/- 1.5%

• Reels length:

Availables upon request, up to 350mts.

Data Sheet



CODE	inch	-dash	mm	DN	inch	mm	bar	psi	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
JC5U67101	1/2"	-8	12.7	13	0.799	20.3	175	2540	438	6350	140	5.512	296	0.199	BP12R7V
JC5U77101	5/8"	-10	16.0	16	0.961	24.4	175	2540	438	6350	140	5.512	379	0.255	BP34R7
JC5U87101	3/4"	-12	19.2	19	1.165	29.6	175	2540	438	6350	120	4.724	517	0.347	BP34JC7
JC5U97101	1"	-16	25.6	25	1.468	37.3	175	2540	438	6350	150	5.906	780	0.524	BP1JC7S

JC7U-3000

AMERICAN STANDARD



Main Features

- Working pressure from 207 bar / 3.000 psi
- Compact and consistent solution
- High kinking, torsion and flattening resistance
- Compatibility with fittings and accessories standard on market

Technical Features

Technical-constructive features:

Inner core in thermoplastic compound, 2 or more reinforcement braids in high tenacity textile fibers and outer covering in in antiabrasion polyurethane, pin-pricked, stabilized to UV rays and resistant to hydrolysis for outdoor applications, in environments having high humidity and saline levels.

Applications:

The JC7U Series hoses have been created for water applications in the high pressure cleaning field.

Working temperature:

from -40°C to +55°C (-40°F to 131°F)

Working pressure:

Safety ratio 1:2.5

Max. vacuum value:

0.93 absolute bar; 700 mmHg.

Length variation:

+/- 1.5%

Reels length:

Available upon request, up to 350mts.

Data Sheet



CODE	inch	-dash	mm	DN	inch	mm	bar	psi	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
JC7U67102	1/2"	-8	12.7	13	0.799	20.3	207	3000	517	7500	140	5.512	296	0.199	BP12JC7
JC7U77102	5/8"	-10	16.0	16	0.961	24.4	207	3000	517	7500	140	5.512	379	0.255	BP34R7
JC7U87102	3/4"	-12	19.2	19	1.165	29.6	207	3000	517	7500	120	4.724	517	0.347	BP34JC7
JC7U97102	1"	-16	25.6	25	1.468	37.3	207	3000	517	7500	150	5.906	780	0.524	BP1JC7S

JCL-5000



Main Features

- Isobaric series - WP 345bar / 5,000psi
- For high pressure cleaning of lateral and domestic lines or for video-inspection cleaning support
- Super sliding and abrasion resistant
- Flexible and kinking resistant

Technical Features

• Technical-constructive features:

Inner core in thermoplastic polymer, reinforcement in high tensile fiber braids and outside covering in antiabrasion polyurethane, stabilized to UV rays and resistant to hydrolysis for outdoor applications, in environments having high humidity levels.

• Applications:

the JCL Series hoses have been developed for high pressure water jetting applications for cleaning and purging of industrial and domestic lateral sewage lines.

• Working pressure:

Safety ratio 1:2.5

• Working temperature:

from -40° to +70°C (-40°F a +158°F).

• Length variation:

-0% to +3%

• Reels length:

Availables upon request, up to 350mts.

Data Sheet



CODE	inch	-dash	mm	DN	inch	mm	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
JCL17100	1/8"	-2	3.5	3	0.295	7.5	345	5000	25	0.98	41	0.028	BP180L5
JCL27100	3/16"	-3	4.8	5	0.413	10.5	345	5000	30	1.18	69	0.046	BP316R7
JCL37100	1/4"	-4	6.4	6	0.480	12.2	345	5000	50	1.97	87	0.058	BP14MT1
JCL57100	3/8"	-6	9.7	10	0.661	16.8	345	5000	75	2.95	156	0.105	BP38R7V





SPIRAL
HOSES



FLUID
POWER



WATER
HANDLING

ZEC solutions for highest pressure

ZEC Hose Series for the high pressure is suitable for conduction of polyols and hydraulic fluids in static and dynamic systems used in construction, safety, mining, shipbuilding and offshore field.

APPLICATIONS

ZEC Hoses Series are used in fluid power applications, such as:

- lifting cylinders
- manual pumps
- rescue tools
- hydraulic tensioning systems
- cable reels
- water jetting

SPIRAL HOSES

Zec is now able to develop and propose spiral hoses for high and very high pressure applications. Compared to a braided solution, **significantly higher pressures** can be achieved with the same amount of reinforcement materials.

Zec spiral hoses result in many advantages:

For the assembler

Zec spiral hose is a flexible hose with a very low tendency to flare. No cutting tape is required during installation. The matching fittings have the hose stop system in the ferrule as well as having a clear reference mark on the insert which makes it much easier to check the correct insertion depth.

For the end user

It is a very light yet compact product. Although it is an extremely reinforced hose, it retains a high degree of flexibility, allowing small bending radii.

In use:

- has a very low volumetric expansion
- allows a very long impulse resistance
- has a high chemical resistance that makes it suitable for a wide range of applications

Zec is also able to guarantee the availability of this article without additional fittings even in very important lengths.

Thermoplastic hoses for highest pressure



JACK HOSE STATIC PRESSURE WATERPROOF COVER



Main Features

- STATIC pressure 700bar with safety ratio 1:2.5
- MSHA (IC-332/06) compliant
- Excellent abrasion and hydrolysis resistance
- High flexibility

Technical Features

• Technical-constructive features:

Inner core made of polyamide (with the exception of MTH2J57000), reinforcement of Aramid fiber and/or high tensile steel braids and exterior cover made of antiabrasion polyurethane, resistant to hydrolysis and stabilized for outdoor applications, pinpricked on request for the conduction of air and compatible gases.

• Working temperatures:

From -40°C to +100°C (-40°F to 212°F)

Max. working temperature with air, water and water-based fluids is +70°C (+158°F).

• Vacuum rating:

0.93 bar; 700 mm Hg

• Working pressures:

Safety ratio 1:2.5

• Specifications:

Hoses meet or exceed MSHA (IC-332/06) standards.

Data Sheet



CODE	inch	-dash	mm	DN	inch	mm	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE	TAIL
MT2J37000	1/4"	-4	6.4	6	0.531	13.5	700	10150	40	1.57	296	0.199	BP14R9R	TL
MT2J37000B *	1/4"	-4	6.4	6	0.531	13.5	700	10150	40	1.57	592	0.398	BP14R9R	TL
MTH2J57000#	3/8"	-6	9.7	10	0.701	17.8	700	10150	60	2.36	400	0.269	BP38R9R	TL
MTKJ57000	3/8"	-6	9.7	10	0.709	18.0	700	10150	60	2.36	340	0.228	BP38R9R	TL
MTKJ67000	1/2"	-8	13.0	12	0.866	22.0	700	10150	75	2.95	486	0.327	BP12R9R	TL

#Inner core made of Thermoplastic Polyester-Elastomer material (TPE). SF 2,15 :1

• Available colours:

black (00), red (05), yellow (04). Change the last two numbers of the codes with the respective colour codes.

* TWIN-LINE hose, on request also in two different colours.

Thermoplastic hoses for highest pressure

JACK HOSE DYNAMIC PRESSURE WATERPROOF COVER



Main Features

- Dynamic pressure 700 bar with safety ratio 1:4
- MSHA (IC-332/06) compliant
- Excellent abrasion and hydrolysis resistance
- High flexibility and low weight

Technical Features

• Technical-constructive features:

Inner core made of polyamide, reinforcement of Aramid fiber and high tensile steel braid and exterior cover made of polyurethane, resistant to hydrolysis and stabilized for outdoor applications, pinpricked on request for the conduction of air and compatible gases.

• Working temperatures:

From -40°C to +100°C (-40°F to 212°F)

Max. working temperature with air, water and water-based fluids is +70°C (+158°F).

• Vacuum rating:

0.93 bar; 700 mm Hg

• Working pressures:

Safety ratio 1:4

Safety ratio 1:3.42

• Specifications:

Hoses meet or exceed, MSHA (IC-332/06) standards, DNV type approval.

Data Sheet



CODE	inch	-dash	mm	DN	inch	mm	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE	TAIL
MTK37000	1/4"	-4	6.4	6	0.571	14.5	700	10150	40	1.57	242	0.163	BP14R9R	TL
MTK37000B *	1/4"	-4	6.4	6	0.571	14.5	700	10150	40	1.57	484	0.326	BP14R9R	TL
MTKM57000	3/8"	-6	9.7	10	0.740	18.8	700	10150	90	3.54	375	0.257	BP38MTKM	TL
MTKM67000 #	1/2"	-8	13.0	12	0.992	25.2	700	10150	140	5.51	588	0.395	BP12MTKM	S

• Available colours:

black (00), red (05), yellow (04). Change the last two numbers of the codes with the respective colour codes.

* TWIN-LINE hose, on request also in two different colours.

THERMOPLASTIC SPIRAL HOSES HP SERIES HYDRAULICS



Main Features

- For high pressure hydraulic applications
- Abrasion resistant cover
- Reinforcement in high tensile steel spirals
- Working pressure up to 720 bar - SF 1:4
- Very flexible and compact
- Low volumetric expansion

Technical Features

• Constructive features:

Inner core in polyamide, reinforcement in high tensile steel spirals, outside cover in abrasion resistant polyurethane, UV stabilized and resistant to microorganisms and hydrolysis.

• Applications

Dynamic and static high pressure hydraulic applications: lifting, clamping, rescue equipment.

• Medium

Mineral oils, water-based fluids, water-oil emulsions.

• Working temperatures:

-40°C (-40°F) to +100°C (+212°F).

In case of water-based fluids the maximum working temperature is +70°C (+158°F).

• Colour:

Black, other colours available on request.

Data Sheet



Part nr.	inch	-dash	mm	DN	inch	mm	bar	psi	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
HP-720-6-000	1/4"	-4	6.4	6	0.492	12.5	720	10.500	2.880	41.800	70	2.76	245	0.165	BP14HSP
HP-720-8-000	5/16"	-5	8.3	8	0.602	15.3	720	10.500	2.880	41.800	85	3.35	340	0.228	BP516HSP

Thermoplastic hoses for highest pressure

THERMOPLASTIC SPIRAL HOSES MP SERIES HYDRAULICS



Main Features

- Inner core in polyamide
- Reinforcement in high tensile steel
- Flexible and compact
- Low volumetric expansion
- Available also as twin and triple line

Technical Features

• Constructive features:

Inner core in polyamide, reinforcement in high tensile steel spirals, outside cover in abrasion resistant polyurethane, UV stabilized and resistant to microorganisms and hydrolysis.

• Applications

MP hose has been developed for dynamic and static medium pressure hydraulic applications.

• Medium

Mineral oils, water-based fluids, water-oil emulsions.

• Working temperatures:

-40°C (-40°F) to +100°C (+212°F).

In case of water-based fluids the maximum working temperature is +70°C (+158°F).

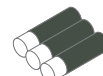
• Colour:

Black

Data Sheet



Part nr.	inch	-dash	mm	DN	inch	mm	bar	psi	bar	psi	mm	inch	g/m	lbs/ft
MP-465-6-000	1/4"	-4	6.5	6	0.492	12.5	465	6800	1860	27000	70	2.76	185	0.124
MP-440-8-000	5/16"	-5	8.3	8	0.563	14.3	440	6400	1760	25500	100	3.94	235	0.158
MP-420-10-000	3/8"	-6	10.0	10	0.649	16.5	420	6100	1680	24400	120	4.72	310	0.208
MP-350-12-000	1/2"	-8	13.0	13	0.787	20.0	350	5100	1400	20300	150	5.91	450	0.302



inch	Part nr.	g/m	Part nr.	g/m
1/4"	MP-465-6-000B	370	MP-465-6-000T	555
5/16"	MP-440-8-000B	470	MP-440-8-000T	705
3/8"	MP-420-10-000B	620	MP-420-10-000T	930
1/2"	MP-350-12-000B	900	MP-350-12-000T	1350

THERMOPLASTIC SPIRAL HOSES WJ SERIES

WATER JETTING



Main Features

- For high pressure water cleaning
- Abrasion resistant cover
- Reinforcement in high tensile steel spirals
- Working pressure up to 1200 bar - SF 1:2.5
- Very flexible and compact
- Low volumetric expansion

Technical Features

• Constructive features:

Inner core in polyamide, reinforcement in high tensile steel spirals, outside cover in abrasion resistant polyurethane, UV stabilized and resistant to microorganisms and hydrolysis.

• Applications

High pressure water cleaning in several applications: heat exchangers, tanks, paint removal.

• Medium

Water, water-based fluids, water-oil emulsions.

• Working temperatures:

-40°C (-40°F) to +70°C (+158°F).

• Colour:

Black, other colours available on request.

Data Sheet



Part nr.	inch	-dash	mm	DN	inch	mm	bar	psi	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
WJ-1200-6-000	1/4"	-4	6.4	6	0.492	12.5	1.200	17.400	3.000	43.500	70	2.76	250	0.168	BP14HSP
WJ-1100-8-000	5/16"	-5	8.3	8	0.602	15.3	1.100	16.000	2.750	40.000	85	3.35	350	0.235	BP516HSP



ZEC Solutions for Lubrication Systems

ZEC offers a dedicated range of thermoplastic hoses and tubing designed for both high and low pressure conveying of lubricants and grease. They are used in a huge variety of markets, such as manufacturing industry, industrial vehicles, mining, agricultural and construction machinery, to mention only a few.

They are designed to resist against harsh environmental conditions.

TECHNICAL FEATURES

- Compact
- Lightweight
- Extremely flexible
- Kinking resistant

CENTRAL GREASING AND LUBRICATION SYSTEMS



HOSES
GR7

HANDHELD GREASE DISTRIBUTION EQUIPMENT



HOSES
GR7

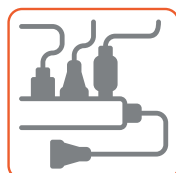
ZEC Solutions for Measuring Systems and Mini High Pressure Hydraulic Equipment

ZEC offers a dedicated range of thermoplastic micro bore hoses designed for in line pressure testing and high pressure hydraulic use, suitable for the conduction of hydraulic fluids and gas transfer.

TECHNICAL FEATURES

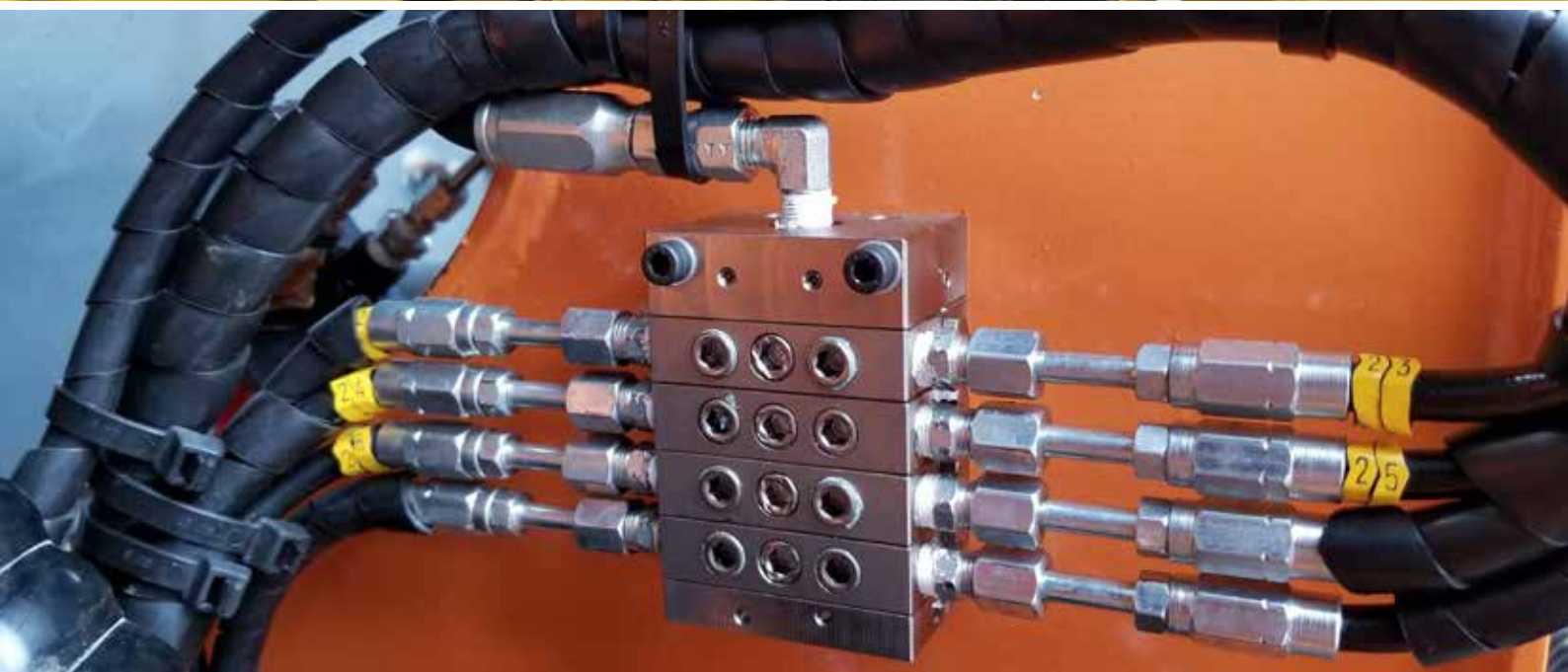
- Compact
- Lightweight
- Very flexible and kinking resistant

HYDRAULIC PRESSURE TEST SYSTEMS



HOSES
TS8/TS8-PA

Lubrication and Measuring Systems



GR7 FOR LUBRICATION SYSTEMS



Main Features

- Low weight and compactness
- High flexibility
- Kinking resistance
- High abrasion resistance

Technical Features

• Technical-constructive features:

Inner core of polyester (or polyamide*), braided reinforcement of polyester fiber and outer covering of matte or shiny black polyurethane. Self-extinguishing cover available on request (UL94-V0).

• Working temperatures:

From -40°C (-40°F) to +80°C (+176°F).

Max. working temperature with water or water based fluids is +70°C (+158°F). Temperatures higher than +80°C may reduce hose lifespan.

• Max. vacuum value:

absolute pressure 0.93 bar; 700 mmHg.

(absolute pressure 13.5 psi; 27.5 inchHg).

• Max. length variation at working pressure:

From -1.5% to +1.5%

• Specifications:

These hoses meet MSHA standard.

Δ These hoses meet or exceed pressures of DIN 1283 standard.

Data Sheet



CODE	mm	inch	DN	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lbs/ft
GR7112000	3.5	1/8"	3	7.5	0.295	200	2900	800	11600	25	0.984	37	0.025
GR710412000 ^Δ	4.0	0.157	4	10.0	0.394	400	5800	900	13050	35	1.378	75	0.050
GR7840000**	4.0	0.157	4	8.0	0.315	200	2900	800	11600	30	1.181	45	0.030
GR7712000	4.0	0.157	4	8.6	0.339	280	4060	840	12180	20	0.787	46	0.031
GR7PA712000*	4.0	0.157	4	8.6	0.339	280	4060	840	12180	20	0.787	46	0.031
GR7940000** ^Δ	4.0	0.157	4	9.1	0.358	250	3630	900	13050	40	1.575	60	0.040
GR720000**	4.8	3/16"	5	9.2	0.362	200	2900	800	11600	30	1.181	59	0.040
GR7312000	6.3	0.248	6	11.3	0.445	280	4060	840	12180	35	1.378	84	0.056
GR7PA312000*	6.3	0.248	6	11.3	0.445	280	4060	840	12180	20	0.787	84	0.056

* PA inner core. ** Shiny PU cover.

TS8/TS8-PA MICRO BORE HOSES



Main Features

- High pressure hydraulic applications
- Lightweight
- High flexibility
- Kinking resistant

Technical Features

Technical-constructive Features:

Inner core of polyester (or polyamide* **), single braided aramid reinforcement and outer covering of shiny black polyurethane (or polyamide*), pin-pricked for conveying air and compatible gases. Matte polyurethane cover available on request.

Working Temperatures:

From -40°C (-40°F) to +100°C (+212°F).

Max. working temperature with water or water-based fluids is +70°C (+158°F).

Temperatures higher than +80°C may reduce hose lifespan.

Max. Vacuum Value:

absolute pressure 0.93 bar; 700 mmHg.

(absolute pressure 13.5 psi; 27.5 inchHg).

Max. Length Variation at Working Pressure:

-1.5% to +1.5%

Specifications:

DN2 hose with inner core and PA cover (ref. TS850213100PA) has passed impulse test at 1 mio cycles.

Note:

Standard branding specifies 1:3 SF only.

Data Sheet



CODE	mm	inch	DN	mm	inch	bar	psi	bar	psi	bar	psi	mm	inch	g/m	lbs/ft	FERRULE
TS850210100	2.1	0.0827	2	5.0	0.197	472	6850	630	9140	1890	27410	20	0.787	19	0.013	BPTS50
TS850210100PA*	2.1	0.0827	2	5.0	0.197	472	6850	630	9140	1890	27410	20	0.787	18	0.012	BPTS50
TS850213100PA**	2.1	0.0827	2	5.0	0.197	500	7250	666	9660	2000	29010	20	0.787	17	0.011	BPTS50
TS855210100	2.1	0.0827	2	5.5	0.216	472	6850	630	9140	1890	27410	20	0.787	23	0.015	BPTS55
TS855260100	2.6	0.1024	3	5.5	0.216	472	6850	630	9140	1890	27410	20	0.787	23	0.015	BPTS5525
TS864290100PA*	2.9	0.1142	3	6.4	0.252	500	7250	666	9660	2000	29010	35	1.378	28	0.019	BPTSM65
TS864293100PA**	2.9	0.1142	3	6.4	0.252	500	7250	666	9660	2000	29010	35	1.378	26	0.018	BPTSM65
TS855300100PA*	3.0	0.1181	3	5.5	0.216	472	6850	630	9140	1890	27410	20	0.787	20	0.013	BPTS55
TS860300100	3.0	0.1181	3	6.0	0.236	400	5800	533	7730	1600	23210	30	1.181	26	0.018	BPTS60
TS8840100	4.0	0.1575	4	8.0	0.315	412	5970	550	7980	1650	23930	35	1.378	44	0.030	BP480L5
TS880410100PA*	4.1	0.1614	4	8.0	0.315	500	7250	666	9660	2000	29010	40	1.575	38	0.026	BP480L5
TS880413100PA**	4.1	0.1614	4	8.0	0.315	500	7250	666	9660	2000	29010	40	1.575	36	0.024	BP480L5

* PA inner core and cover ** PA inner core

ZEC Solutions for Paint Spray, Solvents and Injection

ZEC offers a range of thermoplastic micro perforated hoses designed for medium and high pressure conduction of polyols, solvents and paints.

TECHNICAL FEATURES

- Lightweight
- High abrasion resistance
- Excellent chemical resistance

ANTISTATIC PAINT

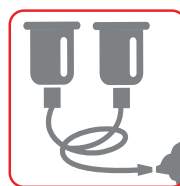


- Paint spray antistatic

HOSES

AS7
MT1
MT2
MT2Y

POLYURETHANE INJECTION AND FOAMING APPLICATION



- Polyurethane Injection

HOSES

AS7
MT2
MT2Y

SOLUTIONS WITH DETERGENTS AND SOLVENTS



- Detergents solutions
- Solvents
- Aggressive fluids

HOSES

AS7
MT1



AS7 ANTISTATIC

Brevetto
N° IT-1328746
Patent



Main Features

- Pressure from 70 to 250 bar - safety ratio 1:4
- Pressure from 93 to 333 bar - safety ratio 1:3
- Medium pressure solution for polyols, solvents, paints and compatible gases
- Electrical resistance less than $3 \times 10^4 \Omega/m$

Technical Features

• Technical-constructive features:

Inner core in polyamide, polyester textile double braid reinforcement, external covering in antiabrasion micro perforated polyurethane for the conduction of air and compatible gases. The hose's electrical resistance is less than $3 \times 10^4 \Omega/m$ in accordance with ISO 8031 Standard.

• Working temperature:

from -40°C to $+100^\circ\text{C}$ from -40°F to $+212^\circ\text{F}$.

Max. working temperature of air, water and water-based fluids is $+70^\circ\text{C}$ ($+158^\circ\text{F}$).

• Working pressure:

Safety ratio 1:4 for DYNAMIC pressure (according to SAE norm)

Safety ratio 1:3 for STATIC pressure

• Vacuum rating:

0.93 bar; 700 mm Hg

• Specifications:

Hoses meet or exceed SAE J517 sect. SAE 100R7 – ISO 3949 Standards. Patent No.

Data Sheet



CODE	inch	-dash	mm	DN	inch	mm	bar	psi	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
AS720102	3/16"	-3	4.8	5	0.413	10.5	250	3625	333	4830	30	0.47	75	0.050	BP316R7
AS730102	1/4"	-4	6.4	6	0.500	12.7	228	3306	304	4409	40	1.18	102	0.068	BP14MT1
AS740102	5/16"	-5	8.0	8	0.563	14.3	190	2755	253	3669	55	1.38	126	0.084	BP516R7V
AS750102	3/8"	-6	9.7	10	0.681	17.3	228	3306	304	4409	60	1.77	179	0.120	BP380L7M
AS760102	1/2"	-8	13.0	12	0.799	20.3	140	2030	187	2712	75	2.17	214	0.144	BP12R7V
AS770102	5/8"	-10	16.0	16	0.925	23.5	105	1522	140	2030	120	2.95	258	0.173	BP58R7V
AS780102	3/4"	-12	19.2	19	1.043	26.5	90	1305	120	1740	145	4.72	301	0.202	BP34R7V
AS790102	1"	-16	25.6	25	1.322	33.6	70	1015	93	1349	200	5.71	369	0.248	BP1R7V

MT1

OIL PROOF COVER



Main Features

- Pressure from 70 to 375 bar - safety ratio 1:4
- Pressure from 94 to 500 bar - safety ratio 1:3
- SAE 100R1, EN 853 1ST, 1SN - EN 857 1SC standards
- High pressure conductive solution for oils, polyols, solvents, paints and compatible gases

Technical Features

• Technical-constructive features:

Inner core in polyamide, reinforcement in high tensile steel braid and exterior covering in antiabrasion polyurethane, micro perforated on request for the conduction of air and compatible gases.

• Working temperature:

from -40°C to +100°C from -40°F to +212°F.

Max. working temperature of air, water and water-based fluids is + 70°C (+158°F).

• Working pressure:

Safety ratio 1:4 for Dynamic Pressure

Safety ratio 1:3 for Static Pressure

• Vacuum rating:

0.93 bar; 700 mm Hg

• Specifications:

Hoses meet or exceed pressures under SAE 100R1 - EN 853 1ST, 1SN - EN 857 1SC Standards.

Data Sheet



CODE	inch	-dash	mm	DN	inch	mm	bar	psi	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
MT110000	1/8"	-2	3.5	3	0.295	7.5	375	5437	500	7250	30	1.18	76	0.051	BP18MT1
MT120000	3/16"	-3	4.8	5	0.394	10.0	350	5075	467	6772	30	1.18	131	0.088	BP316MT1
MT130000	1/4"	-4	6.4	6	0.469	11.9	300	4350	400	5800	40	1.57	165	0.111	BP14MT1
MT140000	5/16"	-5	8.0	8	0.551	14.0	240	3480	320	4640	50	1.97	205	0.138	BP516R7V
MT150000	3/8"	-6	9.7	10	0.630	16.0	225	3262	300	4350	60	2.36	253	0.170	BP38R1TV
MT160000	1/2"	-8	13.0	12	0.756	19.2	190	2755	254	3683	75	2.95	314	0.211	BP12R2TV
MT170000	5/8"	-10	16.3	16	0.917	23.3	150	2175	200	2900	110	4.33	406	0.273	BP58R7V
MT180000	3/4"	-12	19.2	19	1.003	25.5	130	1885	174	2523	150	5.91	447	0.300	BP34R7V
MT190000	1"	-16	25.6	25	1.280	32.5	105	1520	140	2030	185	7.28	590	0.396	BP1R7V
MT1100000	1"1/4	-20	32.0	32	1.574	40.0	70	1015	94	1360	290	11.41	842	0.566	BP114JC7

MT2 OIL PROOF COVER



Main Features

- Pressure from 165 to 400 bar - safety ratio 1:4
- Pressure from 220 to 534 bar - safety ratio 1:3
- SAE 100R2 Standard
- High pressure conductive solution for paints, solvents, foaming and PU injection systems

Technical Features

• Technical-constructive features:

Inner core in polyamide, reinforcement in double high tensile steel braid and exterior covering in antiabrasion polyurethane, micro perforated on request for the conduction of air and compatible gases.

• Working temperature:

from -40°C to +100°C from -40°F to +212°F.

Max. working temperature of air, water and water-based fluids is + 70°C (+158°F).

• Working pressure:

Safety ratio 1:4 for DYNAMIC pressure

Safety ratio 1:3 per STATIC pressure

• Vacuum rating:

0.93 bar; 700 mm Hg

• Specifications:

Hoses meet or exceed pressures of the SAE 100R2 Standard.

Data Sheet



CODE	inch	-dash	mm	DN	inch	mm	bar	psi	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
MT230000	1/4"	-4	6.4	6	0.531	13.5	400	5800	534	7740	40	1.57	286	0.192	BP14R2TV
MT240000	5/16"	-5	8.0	8	0.594	15.1	350	5075	467	6772	50	1.97	340	0.228	BP38R7V
MT250000	3/8"	-6	9.7	10	0.669	17.0	330	4785	440	6380	60	2.36	408	0.274	BP38R2T
MT260000	1/2"	-8	13.0	12	0.846	21.5	275	3988	367	5322	75	2.95	572	0.384	BP12R2TV
MT270000	5/8"	-10	16.3	16	0.965	24.5	250	3625	334	4843	110	4.33	639	0.429	BP34R7V
MT280000	3/4"	-12	19.2	19	1.083	27.5	215	3118	287	4162	150	5.91	765	0.514	BP34JC7
MT290000	1"	-16	25.6	25	1.378	35.0	165	2400	220	3190	185	7.28	1026	0.689	BP1R1T

MT2Y

OIL PROOF COVER



Main Features

- High pressure conductive solution for paints, solvents, foaming and PU injection systems
- Economic and isobaric pressure solution (450 bar / 6,500 PSI)

Technical Features

- **Technical-constructive features:**

Inside core in polyamide, reinforcement in high tensile steel braids, outside cover in antiabrasion blue colored polyurethane. On request it is also available in pinpricked version for air and compatible gases.

- **Working temperature:**

from -40°C to +100°C from -40°F to +212°F.

Max. working temperature of air, water and water-based fluids is + 70°C (+158°F).

- **Vacuum rating:**

0.93 bar; 700 mm Hg

- **Specifications:**

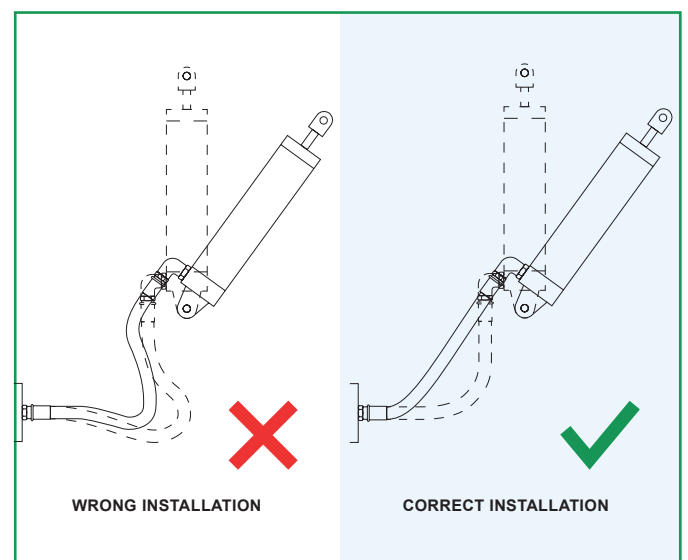
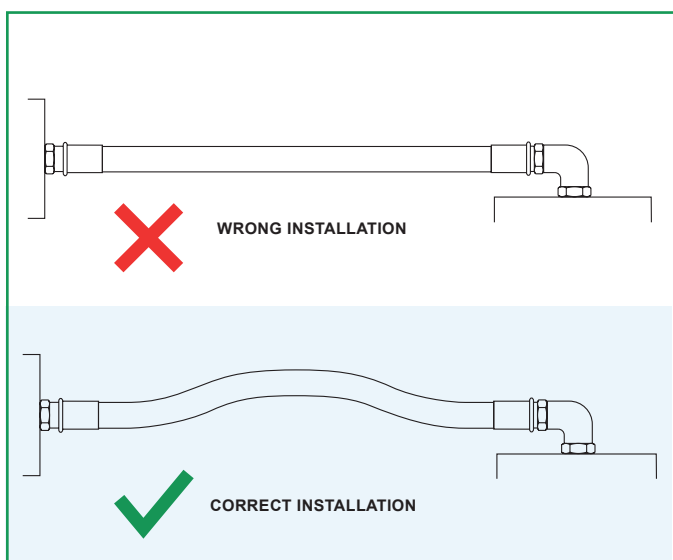
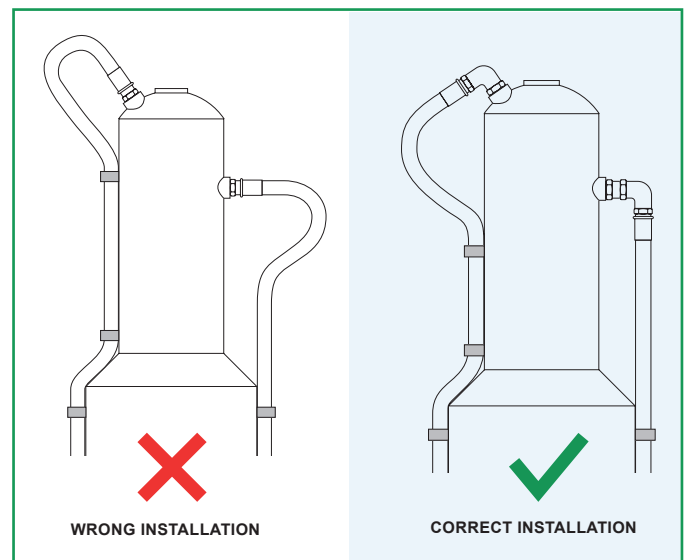
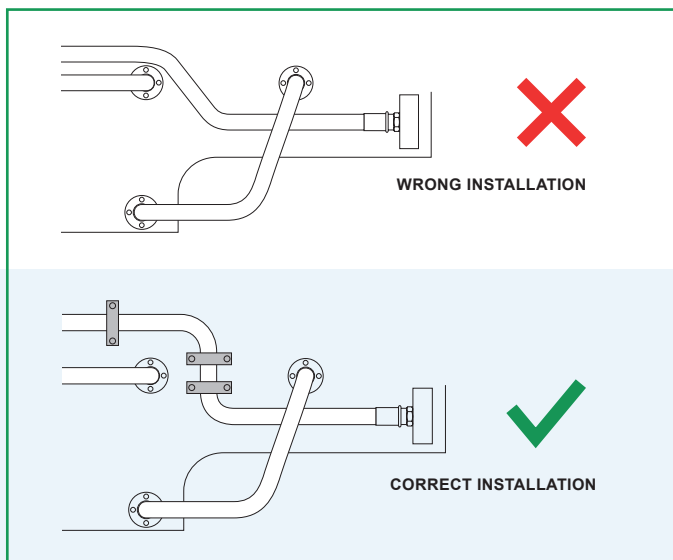
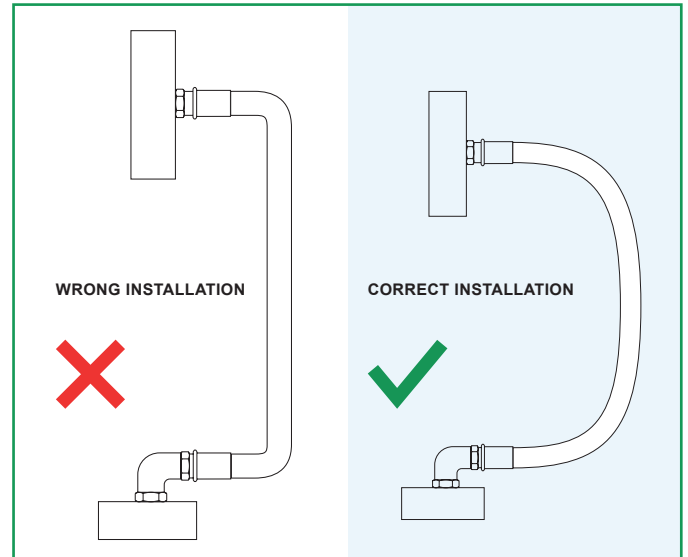
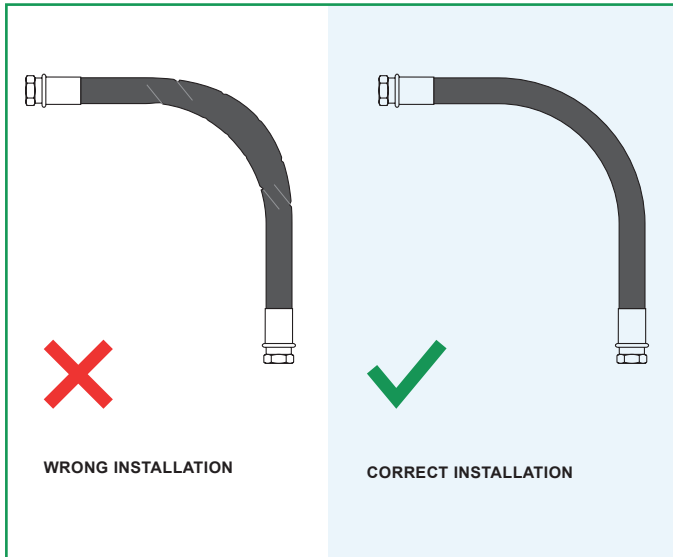
Hoses meet or exceed pressures of the SAE 100R2 Standard.

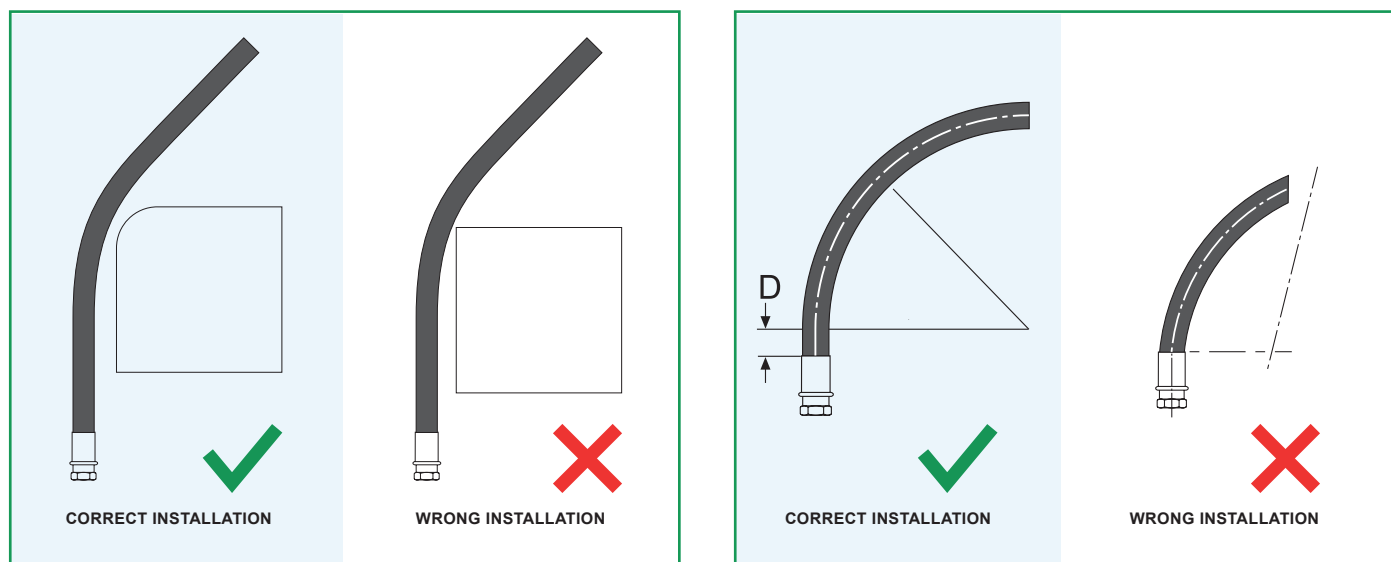
Data Sheet



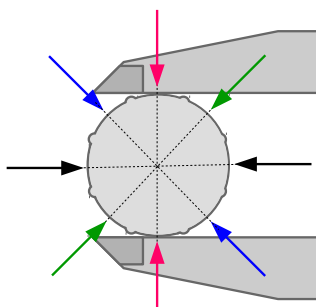
CODE	inch	-dash	mm	DN	inch	mm	bar	psi	bar	psi	mm	inch	g/m	lbs/ft	FERRULE CODE
MT2Y30003	1/4"		6.4		0.531	13.5	450	6527	1800	26107	40	1.57	296	0.199	BP14R2TV
MT2Y50003	3/8"		9.7		0.669	17.0	450	6527	1800	26107	60	2.36	413	0.277	BP38R2T

INSTALLATION INSTRUCTIONS (SAE J1273 - ISO 8331)





CRIMPING DATA AND INSTRUCTIONS



For a correct and safe crimping operation, we recommend the use of ZEC ferrules and fittings; proper instructions and crimping diameters are available and always updated into Restricted Area on ZEC's web page: www.zecspa.com/en/reserved-area





THERMOPLASTIC TUBING AND HOSES
MADE IN ITALY

The images and values indicated in the present document are to be intended only as an indication, with the purpose of permitting the customer a first evaluation of the products application possibilities. Our production can be modified without any obligation of prior notice to our customers. Therefore we recommend to consult our website www.zecspa.com for the latest version of the technical data sheets.

It's the Customer's responsibility to check that hoses and fittings are suitable for his application and meet the required specifications and standards.

For Terms of Sale please refer to www.zecspa.com/en/general-conditions-of-sale.



General conditions of sale



THERMOPLASTIC TUBING AND HOSES
MADE IN ITALY



بیسارایزن پارس

نمایندگی ایران

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