Eaton
Fluid Conveyance Master Catalog

Competing at the edge of change

The new standard for fluid conveyance

EATON
Powering Business Worldwide

Table of content

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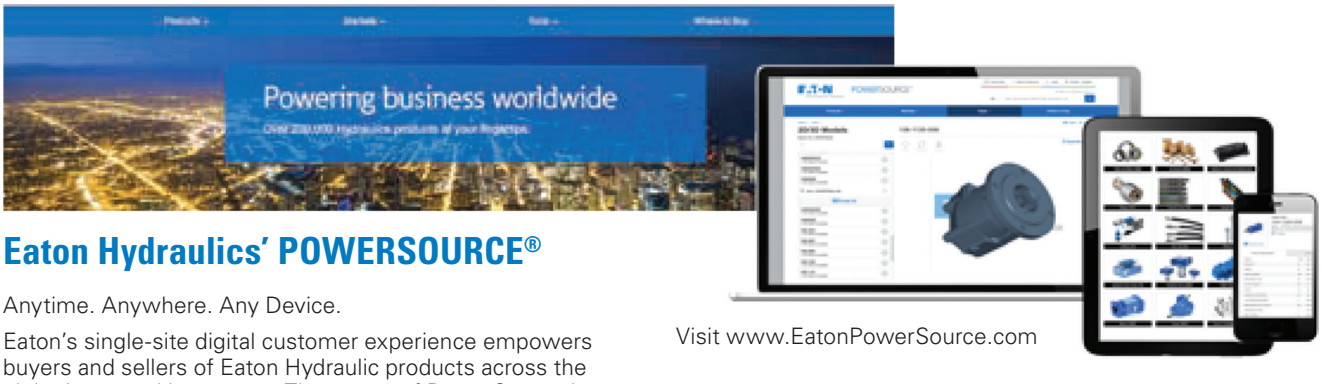
Application data



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DURA-KOTE™ plating technology

Hose fittings that will now offer 3x the corrosion protection on carbon steel fittings as compared to competitive hose fittings. Eaton's DURA-KOTE fittings provide up to 1000 hours of corrosion protection. This is a huge step forward in metal fitting corrosion protection.

3X **Carbon steel**
Corrosion protection

Corrosion of current carbon steel adapters after 650 hours of exposure to salt spray testing.

DURA-SEAL™ technology

This patent-pending innovation from Eaton eliminates hose assembly cool-down leakage, while extending hose assembly life, reducing equipment down-time.

Class 0 **Cool-down**
Leakage protection

4S/6S Fitting

Important safety information

Assembly product warning and How to order

Eaton's Aeroquip hose and fitting assembly product warning

Flexible hose lines offer many advantages over rigid tubing including routing ease, vibration absorption, sound deafening and the ability to accommodate movement of connected components. However, hose lines require caution in use not only to provide long service, but also to guard against potentially dangerous failure.

Important

The user should carefully observe the precautions listed in this catalog, including the recommendations on the selection of hose and fittings on the relevant pages, and the pages on fluid compatibility. In addition, care should be taken not to exceed the minimum bend radius listed for each hose size and type in the hose section. Maximum operating pressure should not exceed pressures listed in the hose data. Instructions for assembling fittings to different hose should be followed carefully to ensure the performance of the completed assembly.

⚠ **Warning:** Eaton fitting tolerances are engineered to match Eaton's Aeroquip hose tolerances. The use of Eaton fittings on hose supplied by other manufacturers and/or the use of Eaton's Aeroquip hose with fittings supplied by other manufactures may result in the production of unreliable and unsafe hose assemblies and is neither recommended nor authorized by Eaton or any of its affiliates or subsidiaries.

⚠ **Warning:** Application considerations must be observed in selecting appropriate components for the application of these products contained herein. The failure to follow the recommendations set forth in this catalog may result in an unstable application which may result in serious personal injury or property damage.

Eaton or any of its affiliates or subsidiaries shall not be subject to and disclaims any obligations or liabilities (including but not limited to all consequential, incidental and contingent damages) arising from tort claims (including without limitation negligence and strict liability) or other theories of law with respect to any hose assemblies not produced from genuine aeroquip hose fittings, hose and aeroquip approved equipment, and in conformance with Eaton's aeroquip process and product instructions for each specific hose assembly.

Failure to follow these processes and product instructions and limitations could lead to premature hose assembly failures resulting in property damage, serious injury or death.

Routing

If the user follows the recommendations on hose line routing and installation as provided herein, improved safety and longer service life of any hose installation will result.

Hose installation

Proper installation of the hose is essential to the proper operation and safe use of the hose and related equipment. Improper installation of the hose can result in serious injury or property damage caused by spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from improper installation of the hose, you should carefully review the information in this catalog regarding hose installation.

Some of the factors you must consider in installing the hose properly are:

- Changes in length
- Proper bend radius
- Protection from high temperature sources
- Elbows and adapters to relieve strain
- Rubbing or abrasion
- Twisting
- Improper hose movement

These factors and the other information in this catalog regarding hose installation should be considered by you before installing the hose. If you have any questions regarding proper hose installation, please contact **Eaton Application Engineering** at +49 7221 6820

Hose maintenance

Proper maintenance of the hose is essential to the safe use of the hose and related equipment. Hose should be stored in a dry place. Hose should also be visually inspected. Any hose that has a cut or gouge in the cover that exposes the reinforcement should be retired from service. Hoses should also be inspected for kinking or broken reinforcement. If the outside diameter of the hose is reduced by 20% at the spot where it is bent then the hose should be retired from service. Inadequate attention to maintenance of the hose can result in hose leakage, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances.

How to order

Accurate processing and prompt delivery of your order depends on easy identification of your requirements. Please order Eaton brand parts using correct part numbers as described in this catalog. Inquiries and orders should be directed to your Eaton distributor:

Part numbers and dash sizes Dash size designates the nominal size in 16th of an inch. This number immediately follows the part number and is separated from it with a dash.

Dimensions

Dimensions given in this catalog for Eaton products are approximate and should be used for reference only. Exact dimensional information for a given product is subject to change and varying tolerances; contact Eaton directly for full current information.

⚠ **Warning**

Hose assemblies Eaton manufactures the terminal ends of our hose fittings to the appropriate requirements established by the EN/SAE. Therefore, the performance ratings of these hose fittings meet the EN/SAE requirements. It is possible to order a hose assembly with a fitting terminal end that has a performance rating lower than the hose rating. When ordering hose assemblies, please keep the connecting end performance rating in mind since this may affect overall hose assembly performance. Hose assembly components (hose and fittings) are easily assembled in the field. However, factory assembled reusable and crimped hose assemblies are available. For complete information,contact Eaton.

⚠ **Caution:**

Prior to installing or when using any Eaton product, please ensure that you comply at all time with the then-current manufacturing, technical documentation and instructions applicable to our product. All the latest versions of Eaton's manufacturing, technical documentation and instructions are published and accessible at www.my.eaton.com. If you have any question, please contact either your technical representative or customer service representative at Eaton.

If you resell the Eaton products to your end-customers, it's your continuous duty to inform your customers accordingly and provide them with the applicable and up to date manufacturing, technical documentation and instructions regarding the Eaton products.

Eaton disclaims any and all liabilities with respect to any technical issue that could result from the customer and/or end-customer not complying with the Eaton's then-current manufacturing/technical documentation and instructions.

Selection, installation and maintenance of hose and assemblies

The following recommendations on selection, installation and maintenance of hose assemblies were established by the SAE in 1991. Please read these general instructions carefully. More detailed information on many of these subjects is covered in this catalog.

1. Scope

Hose (also includes hose assemblies) has a finite life and there are a number of factors which will reduce its life. This recommended practice is intended as a guide to assist system designers and/or users in the selection, installation, and maintenance of hose.

The designers and users must make a systematic review of each application and then select, install, and maintain the hose to fulfill the requirements of the application. The following are general guidelines and are not necessarily a complete list.

⚠ **Warning:** improper selection, installation, or maintenance may result in premature failures, bodily injury, or property damage.

2. References

2.1 Applicable documents

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply.

2.1.1 SAE and EN publications

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

J516—Hydraulic hose fittings

J517—Hydraulic hose

EN853—Hydraulic hose wire braided

EN854—Hydraulic hose textile reinforced

EN855—Thermoplastic hydraulic hose

EN856—Hydraulic hose wire spiral reinforced

EN857—Hydraulic hose wire braided

3. Selection

The following is a list of factors which must be considered before final hose selection can be made.

3.1 Pressure

After determining the system pressure, hose selection must be made so that the recommended maximum operating pressure is equal to or greater than the system pressure. Surge pressures higher than the maximum operating pressure will shorten hose life and must be taken into account by the hydraulic designer.

3.2 Suction

Hoses used for suction applications must be selected to insure the hose will withstand the negative pressure of the system.

3.3 Temperature

Care must be taken to insure that fluid and ambient temperatures, both static and transient, do not exceed the limitations of the hose. Special care must be taken when routing near hot manifolds.

3.4 Fluid compatibility

Hose selection must assure compatibility of the hose tube, cover and fittings with the fluid used. Additional caution must be observed in hose selection for gaseous applications.

3.5 Size

Transmission of power by means of pressurized fluid varies with pressure and rate of flow. The size of the components must be adequate to keep pressure losses to a minimum and avoid damage to the hose due to heat generation or excessive turbulence.

3.6 Routing

Attention must be given to optimum routing to minimize inherent problems.

3.7 Environment

Care must be taken to insure that the hose and fittings are either compatible with or protected from the environment to which they are exposed. Environmental conditions such as ultraviolet light, ozone, salt water, chemicals, and air pollutants can cause degradation and premature failure and, therefore, must be considered.

3.8 Mechanical loads

External forces can significantly reduce hose life. Mechanical loads which must be considered include excessive flexing, twist, kinking, tensile or side loads, bend radius, and vibration. Use of swivel-type fittings or adapters may be required to insure no twist is put into the hose. Unusual applications may require special testing prior to hose selection.

3.9 Abrasion

While hose is designed with a reasonable level of abrasion resistance, care must be taken to protect the hose from excessive abrasion which can result in erosion, snagging and cutting of the hose cover. Exposure of the reinforcement will significantly accelerate hose failure.

3.10 Proper end fitting

Care must be taken to insure proper compatibility exists between the hose and coupling selected based on the manufacturer's recommendations substantiated by testing to industry standards such as SAE J517. End fitting components from one manufacturer are usually not compatible with end fitting components supplied by another manufacturer (i.e., using a hose fitting nipple from one manufacturer with a hose socket from another manufacturer). It is the responsibility of the fabricator to consult the manufacturer's written instructions or the manufacturer directly for proper end fitting componentry.

3.11 Length

When establishing proper hose length, motion absorption, hose length changes due to pressure, as well as hose and machine tolerances must be considered.

3.12 Specifications and standards

When selecting hose, government, industry and manufacturers' specifications and recommendations must be reviewed as applicable.

3.13 Hose cleanliness

Hose components vary in cleanliness levels. Care must be taken to insure that the assemblies selected have an adequate level of cleanliness for the application.

3.14 Electrical conductivity

Certain applications require that hose be nonconductive to prevent electrical current flow. Other applications require the hose to be sufficiently conductive to drain off static electricity. Hose and fittings must be chosen with these needs in mind.

4. Installation

After selection of proper hose, the following factors must be considered by the installer.

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4.1 Pre-installation

Inspection Prior to installation, a careful examination of the hose must be performed. All components must be checked for correct style, size and length. In addition, the hose must be examined for cleanliness, I.D. obstructions, blisters, loose cover, or any other visible defects.

Selection, installation and maintenance of hose and assemblies

The following recommendations on selection, installation and maintenance of hose assemblies were established by the SAE in 1991. Please read these general instructions carefully. More detailed information on many of these subjects is covered in this catalog.

4.2 Follow manufacturers' assembly instructions

Hose assemblies may be fabricated by the manufacturer, an agent for or customer of the manufacturer, or by the user. Fabrication of permanently attached fittings to hydraulic hose requires specialized assembly equipment. Field attachable fittings (screw style and segment clamp style) can usually be assembled without specialized equipment although many manufacturers provide equipment to assist in the operation.

SAE J517 hose from one manufacturer is usually not compatible with SAE J516 fittings supplied by another manufacturer. It is the responsibility of the fabricator to consult the manufacturer's written assembly instructions or the manufacturers directly before intermixing hose and fittings from two manufacturers. Similarly, assembly equipment from one manufacturer is usually not interchangeable with that of another manufacturer. It is the responsibility of the fabricator to consult the manufacturer's written instructions or the manufacturer directly for proper assembly equipment. Always follow the manufacturer's instructions for proper preparation and fabrication of hose assemblies.

4.3 Minimum bend radius

Installation at less than minimum bend radius may significantly reduce hose life. Particular attention must be given to preclude sharp bending at the hose/fitting juncture.

4.4 Twist angle and orientation

Hose installations must be such that relative motion of machine components produces bending of the hose rather than twisting.

4.5 Securement

In many applications, it may be necessary to restrain, protect, or guide the hose to protect it from damage by unnecessary flexing, pressure surges, and contact with other mechanical components. Care must be taken to insure such restraints do not introduce additional stress or wear points.

4.6 Proper connection of ports

Proper physical installation of the hose requires a correctly installed port connection while insuring that no twist or torque is put into the hose.

4.7 Avoid external damage

Proper installation is not complete without insuring that tensile loads, side loads, kinking, flattening, potential abrasion, thread damage, or damage to sealing surfaces are corrected or eliminated.

4.8 System check out

After completing the installation, all air entrapment must be eliminated and the system pressurized to the maximum system pressure and checked for proper function and freedom from leaks.

Note: Avoid potential hazardous areas while testing.

5. Maintenance

Even with proper selection and installation, hose life may be significantly reduced without a continuing maintenance program. Frequency should be determined by the severity of the application and risk potential. A maintenance program should include the following as a minimum.

5.1 Hose storage

Hose products in storage can be affected adversely by temperature, humidity, ozone, sunlight, oils, solvents, corrosive liquids and fumes, insects, rodents and radioactive materials. Storage areas should be relatively cool and dark and free of dust, dirt, dampness and mildew.

5.2 Visual inspection

Any of the following conditions requires replacement of the hose:

a. Leaks at fitting or in hose (leaking fluid is a fire hazard)

b. Damaged, cut, or abraded cover (any reinforcement exposed)

c. Kinked, crushed, flattened, or twisted hose

d. Hard, stiff, heat cracked or charred hose

e. Blistered, soft, degraded, or loose cover

f. Cracked, damaged, or badly corroded fittings

g. Fitting slippage on hose

5.3 Visual inspection

The following items must be tightened, repaired, or replaced as required:

a. Leaking port conditions

b. Clamps, guards, shields

c. Remove excessive dirt buildup

d. System fluid level,fluid type, and any air entrapment

5.4 Functional test

Operate the system at maximum operating pressure and check for possible malfunctions and freedom from leaks.

Note: Avoid potential hazardous areas while testing.

5.5 Replacement intervals

Specific replacement intervals must be considered based on previous service life, government or industry recommendations, or when failures could result in unacceptable down time, damage, or injury risk.

Numbering system

Cut length hose

Cut lengths of hose should be ordered as shown below by specifying lengths in mm.

For numeric part numbers: **2651 - 10 - 00484**

Hose type
Hose size (in 16th of an inch)
Cut length (in millimeters)

For alpha-numeric part numbers: **FC300 - 08 - 00484**

Hose type
Hose dash size
Cut length (in millimeters)

Bulk hose

Bulk hose that is produced as fix lengths should be ordered by specifying lengths in meters as shown below: **GH681 - 24 MT46**

Hose type
Hose size
Coil length in meter

Hose assembly length	Up to and including 25	Nominal bore over 25 and including 50	Over 50
mm	Tolerance	Tolerance	Tolerance
Up to and including 630	+7 mm -3 mm	+12 mm -4 mm	+25 mm -6 mm
Over 360 and including 1250	+12 mm -4 mm	+20 mm -6 mm	
Over 1250 and including 2500	+20 mm -6 mm	+25 mm -6 mm	
Over 2500 and including 8000	+ 1,5% -0,5%		
Over 8000	+3% -1%		

Agency listings

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Hose part number	Page	Category	Specification	MSHA	EN45545 *	ABS	DNV / GL	CO2	BV	BAAINBw	MED	LR	USCG	RINA
GH681	35	Premium	EN857 1SC	X		X	X	"X -4 to -16"	X	X	X	X	X	X
GH781	36	Premium	EN857 2SC	X		X	X		X	X	X	X		
EC881	37	Premium	EN857 2SC	X		X	X	"X -4 to -16"	X	X	X	X	X	X
GH506	39	Premium	EN856 4SH	X	X	X	X		X	X	x	X	X	X
GH425	38	Premium	EN856 4SP	X	X	X	X		X	X	X	X	X	
FC500	40	Premium	SAE 100R13			X	X							
GH466	41	Premium	SAE 100R15	X	X	X	X		X			X		
GH681B	43	Premium Abrasion	EN857 1SC	X			X							
EC881B	44	Premium Abrasion	EN857 2SC	X			X							
GH425B	45	Premium Abrasion	EN856 4SP	X			X							
FC510	46	Premium High Temp	SAE 100R2	X	X		X				X			
GH195	47	Premium High Temp	SAE 100R2AT	X		X	X		X					
EC525	48	Premium High Temp	EN856 4SP	X	X									
GH120	49	Premium Low Temp	SAE 100R16	X	X									
EC810	50	Premium Low Temp	4SP/4SH/R15	X										
EC330	74	Specialty	3 wire	X										
SH222	73	Specialty	Hi-pac	X										
FC310	72	Specialty	Hi-pac	X			X							
EC112	65	Specialty	EN857 1SC		X									
EC109	64	Specialty	EN853 1SN		X									
EC212	67	Specialty	EN857 2SC		X									
EC209	66	Specialty	EN853 2SN		X									
EC045	68	Specialty	EN854 2TE		X									
EC600	42	Specialty	SAE 100R15	X										
EC850	75	Specialty	SAE 100R15	X	X									
EC910	71	Specialty	EN1829-2											
GH435	77	Specialty	-											
FC300	78	Specialty	SAE 100R5			X	X							
FC350	79	Specialty	SAE J1402			X	X		X		X			
FC355	80	Specialty	SAE J1527			X	X		X		X	X		
FC234	81	Specialty	-			X								
FC332	82	Specialty	ASTM D380,ASTM D6751, EN412, EN2240											
GH100	85	Specialty	ASTM D380,ASTM D6751, EN412, EN2241											
GH101	86	Specialty	SAE 100R4	X		X								
FC619	87	Specialty	SAE 100R4											
GH180	88	Specilaty	SAE 100R4											
EC190	89	Specilaty	SAE 100R4		X									
EC115	54	Standard	EN853 1SN	X			X			X				
EC110	53	Standard	EN857 2SC	X			X			X				
EC215	56	Standard	EN853 2SN	X			X			X				
EC210	55	Standard	EN856 4SH	X			X							
EC512	58	Standard	EN856 4SP	X			X							
EC426	57	Standard	SAE 100R13	X			X							
EC420	59	Standard	SAE 100R15	X			X							

Hose part number	Page	Category	Specification	MSHA	EN45545 *	ABS	DNV / GL	CO2	BV	BAAINBw	MED	LR	USCG	RINA
EC615	60	Standard	SAE 100R15											
3CH0	92	Premium	SAE 100R7											
3DH0	93	Premium	SAE 100R7											
3740	95	Premium	SAE 100R7											
37AL	94	Premium	SAE 100R7											
37B0	96	Premium	SAE 100R7											
3R80	97	Premium	SAE 100R8											
3E80	98	Premium	SAE 100R8											
3800	99	Premium	SAE 100R8											
31CT	100	Premium	SAE 100R18											
3V10	102	Premium	-											
3VE0	103	Premium	-											
35NG	104	Premium	ANSI/CSA NGV4.2-2014 (Class A, D), ECE R110											
4234	111	-	DIN73378											
GH001	114	Premium	SAE J2064 SAEJ3062											
FC800	115	Premium	SAE J2064											
S-TW	117	Premium	SAE 100R14A											
SC-TW	118	Premium	SAE 100R14A											
8000	119	Premium	-											
8500	120	Premium	-											

* Please contact Eaton for more informaion about Hazardous levels (HL) achieved

Hose selection

Hose dash size to maximum operating pressure

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Hose dash size to maximum operating pressure

This table is intended as a guide in the selection of hose by maximum operating pressure. It is not a guarantee. Final selection is further dependent on fluid and ambient temperature,concentration of fluid, intermittent or continuous exposure, etc. For further details on a specific hose see the respective catalog pages or contact Eaton.

Hose tube ID chart

1. Synthetic rubber
2. PTFE
3. Thermoplastic
4. AQP
5. Special application hose
6. EPDM

Hose part number	Category	Hose tube	-02	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-40	-48	-64
GH681	Premium	1	-	250	255	225	235	221	140	138	103	69	52	41	-	-	-
GH781	Premium	1	-	-	448	350	400	345	276	241	207	172	138	110	-	-	-
EC881	Premium	1	-	-	450	400	400	360	350	330	280	172	138	110	-	-	-
GH425	Premium	1	-	-	-		490	420	420	380	320	-	-	-	-	-	-
GH506	Premium	1	-	-	-	-	-	-	-	420	420	350	300	250	-	-	-
FC500	Premium	1	-	-	-	-	-	-	-	350	350	350	350	350	-	-	-
GH466	Premium	1	-	-	-	-	-	-	-	-	-	420	420	420	-	-	-
EC600	Premium	1	-	-	-	-	-	-	-	420	420	420	-	-	-	-	-
GH681B	Abrasion resistant	1	-	250	255	225	235	221	140	138	103	69	52	41	-	-	-
EC881B	Abrasion resistant	1	-	-	450	400	400	360	350	330	280	172	138	110	-	-	-
GH425B	Abrasion resistant	1	-	-	-	-	490	420	420	380	320	-	-	-	-	-	-
FC510	High temperature	4	-	-	345	-	275	240	190	155	138	112	-	-	-	-	-
GH195	High temperature	4	-	-	400	-	345	293	250	215	175	155	125	105	-	-	-
EC525	High temperature	4	-	-	-	-	-	-	-	345	345	240	240	225	-	-	-
GH120	Low temperature	1	-	-	414	-	345	310	276	241	193	159	138	103	-	-	-
EC810	Low temperature	1	-	-	-	-	420	420	420	420	420	420	420	420	-	-	-
GH585	Specialty	1	-	80	75	68	63	58	50	45	40	-	-	-	-	-	-
GH586	Specialty	1	-	-	145	130	110	93	80	70	55	45	-	-	-	-	-
EC330	Specialty	1	-	-	-	-	445	415	350	350	-	-	-	-	-	-	-
SH222	Specialty	1	-	-	400	-	350	300	-	300	240	-	-	-	-	-	-
FC310	Specialty	1	-	350	345	300	275	240	190	155	138	112	-	-	-	-	-
EC112	Specialty	5	-	-	225	215	180	160	130	105	88		-	-	-	-	-
EC109	Specialty	5	-	-	225	215	180	160	130	105	88	-	-	-	-	-	-
EC212	Specialty	5	-	-	400	350	330	275	250	215	165	125	100	90	-	-	-
EC209	Specialty	5	-	-	400	350	330	275	250	215	165	-	-	-	-	-	-
EC045	Specialty	5	-	80	75	68	63	58	50	45	40	-	-	-	-	-	-
EC850	Specialty	1	-	-	-	-	-	-	500	500	500	500	-	-	-	-	-
GH507	Specialty	1	-	-	-	-	-	-	-	-	-	420	-	-	-	-	-
EC910	Specialty	5	-	-	-	-	-	1100	-	1000	700	-	-	-	-	-	-
GH435	Specialty	5	-	-	-	-	490	420	400	380	320	-	-	-	-	-	-
EC116	Specialty	1	-	-	250	250	250	250	-	-	-	-	-	-	-	-	-
EC216	Specialty	1	-	-	400	400	400	400	-	-	-	-	-	-	-	-	-
FC300	Specialty	4	-	-	207	207	155	138	121	103	55	43	35	24	24	-	-
FC350	Specialty	4	-	-	138	103	103	86	86	52	28	21	17	-	-	-	-
FC355	Specilaty	4	-	-	103	103	103	86	86	52	28	21	17	14	-	-	-
FC234	Specialty	4	-	-	-	103	103	86	86	52	28	-	-	-	-	-	-
FC332	Specialty	4	-	-	20.7	20.7	20.7	20.7	20.7	20.7	-	-	-	-	-	-	-
GH100	Specialty	5	-	-	28	-	28	28	24	24	-	-	-	-	-	-	-
GH101	Specialty	5	-	-	28	-	28	28	24	-	-	-	-	-	-	-	-
FC619	Specialty	4	-	-	-	-	-	-	-	21	17	14	10.5	7	4	4	-
GH180	Specialty	1	-	-	-	-	-	-	-	21	17	14	10	7	4	4	-
EC190	Specialty	5	-	-	-	-	-	-	-	21	17	14	10	7	4	4	-
2661	Specilaty	4	-	-	-	-	-	-	-	21	17	14	11	7	4.5	4	3.5
EC115	Standard	1	-	-	225	215	180	160	130	105	88	63	50	40	-	-	-
EC110	Standard	1	-	-	225	215	180	160	130	105	88	63	50	40	40	35	-
EC215	Standard	1	-	-	400	350	330	275	250	215	165	125	100	90	-	-	-
EC210	Standard	1	-	-	400	350	330	275	250	215	165	125	90	80	69	50	-
EC426	Standard	1	-	-	-	-	445	415	350	350	280	210	-	-	-	-	-
EC512	Standard	1	-	-	-	-	-	-	-	420	380	350	290	250	-	-	-
EC420	Standard	1	-	-	-	-	-	-	-	350	350	350	350	350	-	-	-
EC615	Standard	1	-	-	-	-	-	-	-	-	420	420	420	420	-	-	-

Hose dash size to maximum operating pressure

This table is intended as a guide in the selection of hose by maximum operating pressure. It is not a guarantee. Final selection is further dependent on fluid and ambient temperature,concentration of fluid, intermittent or continuous exposure, etc. For further details on a specific hose see the respective catalog pages or contact Eaton.

Hose tube ID chart

1. Synthetic rubber
2. PTFE
3. Thermoplastic
4. AQP
5. Special application hose
6. EPDM

Hose part number	Category	Hose tube	-02	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-40	-48	-64
3CH0	Thermoplastic	3	210	210	210	175	157	140	105	88	70	-	-	-	-	-	-
3DH0	Thermoplastic	3	-	207	190	172	155	138	-	-	-	-	-	-	-	-	-
3740	Thermoplastic	3	-	-	-	-	-	-	-	86	69	-	-	-	-	-	-
37AL	Thermoplastic	3	-	207	207	207	207	207	-	-	-	-	-	-	-	-	-
37B0	Thermoplastic	3	-	165	175	155	155	-	-	-	-	-	-	-	-	-	-
3R80	Thermoplastic	3	-	350	350	-	280	245	-	157	140	-	-	-	-	-	-
3E80	Thermoplastic	3		350	350	-	280	245	-	157	140	-	-	-	-	-	-
3800	Thermoplastic	3	413	345	345	-	276	240	-	-	-	-	-	-	-	-	-
31CT	Thermoplastic	3	-	210	210	210	210	210	210	210	-	-	-	-	-	-	-
3V10	Thermoplastic	3	-	700	700	-	552	-	-	-	-	-	-	-	-	-	-
3VE0	Thermoplastic	3	-	700	700	-	552	-	-	-	-	-	-	-	-	-	-
35NG	Thermoplastic	3	-	-	345	-	345	345	-	-	-	-	-	-	-	-	-
GH001	Air conditioning	5	-	-	35	-	35	35	35	35	35	-	-	-	-	-	-
FC800	Air conditioning	5	-	-	-	-	-	-	-	35	35	35	35	-	-	-	-
S-TW	PTFE	2	-	-	207	207	172	138	121	103	69	-	-	-	-	-	-
SC-TW	PTFE	2	-	-	207	207	172	138	121	103	69	-	-	-	-	-	-
8000	PTFE	2	-	-	-	-	-	103	-	86	62	62	52	34.5	-	-	-
8500	PTFE	2	-	-	-	-	-	104	-	86	62	62	52	34.5	-	-	-

A

Fluid compatibility

This chart indicates the suitability of various elastomers and metals for use with fluids to be conveyed. It is intended as a guide only and is not a guarantee. Final selection of the proper hose style, seal, or material of metal components is further dependent on many factors including pressure, fluid and ambient temperature, concentration, duration of exposure, etc.

How to use the chart

1. The chart has separate sections for rating elastomers for use as hose inner tubes and as seals. Ratings for a given elastomer may not always be the same in both sections.
2. Both the elastomer and the metal must be considered when determining suitability of a combination for a hose assembly, adapter with o-ring, swivel joint or coupling.
3. Locate the fluid to be conveyed and determine the suitability of the elastomeric and metal components according to the resistance ratings shown for each.
4. Specific hose part numbers can be found under the inner tube material groupings in the Hose Tube Identification Chart.
5. Dimensional and operating specifications for each hose can be found on the catalog pages shown with each hose part number.
6. Information on o-rings and seal options for swivel joints and couplings, and how to specify them, are shown in the respective sections of this catalog.
7. For further details on the products shown in this catalog, and their applications, contact:

Resistance key rating

E = **Excellent** – Fluid has little or no effect.

G = **Good** – Fluid has minor to moderate effect.

C = **Conditional** – Service conditions should be described to Eaton Aeroquip for determination of suitability for application.

U = **Unsatisfactory**

The differences between ratings "E" and "G" are relative. Both indicate satisfactory service. Where there is a choice, the materials rated **"E"** may be expected to give better or longer service than those rated **"G"**

Note: Special precautions are necessary in gaseous applications due to the potential volume of gaseous fluid in the system. Unless the cover is perforated, hose styles with rubber or thermoplastic covers are not suitable for gases above 250 psi. Hose styles with perforated covers are so noted in their construction descriptions.

Warning: Compatibility of hose fittings with conveyed fluid is an essential factor in avoiding chemical reactions that may result in release of fluids or failure of the connection with the potential of causing severe personal injury or property damage.

Seal elastomer data

Seal elastomer	Application specification	Max. operating temperature range
Buna-N†	none	–40°C to +121°C [–40°F to +250°F]
Neoprene	none	–54°C to +100°C [–65°F to +212°F]
EPR (Ethylene Propylene Rubber)/ EPDM	none	–54°C to +149°C [–65°F to +300°F]
Viton*	MIL-R-25897	–29°C to +204°C [–15°F to +400°F]

†Buna-N temperature range -65°F to +225°F. Also per MIL-R- 6855.

*Viton is a trademark of E.I. DuPont.

This chart is intended for reference use only

The information in this chart pertains strictly to material

compatibility and is not intended to be used as an application guide.

For information on specific applications not included in this catalog, please contact Eaton Aeroquip.

*Viton is a E.I. DuPont trademark.

Note 1 - Rubber-covered hose must be perforated to allow gas to escape.

Note 2 - Due to the widely different additives in these fluids, testing should be done on the actual fluid being considered.

**For Special application hose (5) fluid compatibility please contact Eaton for more information

E=Excellent
G=Good
C=Conditional
U =Unsatisfactory

Fluid	Hose					Seals						Metal					
	Synthetic rubber	PTFE	Thermoplastic elastomer	AQP	Special application hose**	EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
	1	2	3	4	5	6											
Acetaldehyde	U	E	C	U	-	G	U	C	C	U	U	G	G	E	E	E	E
Acetic acid, 10%	U	E	C	C	-	E	U	U	E	G	U	C	U	U	C	C	U
Acetic acid, glacial	U	E	C	C	-	E	U	U	C	U	U	C	U	U	C	C	C
Acetone	U	E	G	U	-	E	U	U	G	U	U	G	E	E	E	E	E
Acetophenone	U	E	-	U	-	E	U	U	E	U	U	-	E	E	E	E	E
Acetyl acetone	U	E	U	U	-	E	U	U	G	U	U	G	U	C	C	C	C
Acetyl chloride	U	E	U	U	-	U	U	U	U	E	U	U	C	C	C	C	E
Acetylene1	G	E	G	G	-	E	U	U	G	E	G	G	E	E	E	E	E
Air, hot (up to +160°F)1	E	E	E	E	-	E	E	E	E	E	E	E	E	E	E	E	E
Air, hot (161°F – 200°F)1	C	E	U	E	-	E	G	G	E	E	G	G	E	E	E	E	E
Air, hot (201°F – 300°F)1	U	E	U	C	-	G	U	U	G	E	U	U	E	E	E	E	E
Air wet, below 160°F1	E	E	C	E	-	E	E	E	E	E	G	C	U	G	E	E	E
Aluminum chloride, 10% aq	E	E	E	E	-	E	E	E	E	E	G	E	U	U	U	U	U
Aluminum fluoride, 10% aq	E	E	E	U	-	E	E	E	E	E	G	E	U	U	U	U	C
Aluminum nitrate, 10% aq	E	E	E	C	-	E	E	E	E	E	G	E	U	U	C	C	C
Aluminum sulfate, 10% aq	E	E	G	E	-	E	E	E	E	E	-	G	U	C	E	E	C
Alums, 10% aq	E	E	E	E	-	E	E	E	E	E	E	E	U	C	E	E	C
Ammonia, anhydrous1	C	U	U	C	-	E	E	E	E	U	-	-	E	U	E	E	E
Ammonia, aqueous	G	G	U	C	-	E	E	E	E	U	-	-	E	U	E	E	E
Ammonium carbonate, 10% aq	U	E	C	U	-	E	U	E	E	U	-	C	C	U	C	C	C
Ammonium chloride, 10% aq	E	E	C	U	-	E	E	E	E	U	-	-	U	U	C	C	C
Ammonium hydroxide, 10% aq	U	E	U	U	-	E	C	C	E	C	U	U	G	U	C	C	U
Ammonium nitrate, 10% aq	E	E	C	U	-	E	E	G	E	U	G	C	G	U	G	G	U

Fluid	Hose					Seals						Metal					
	Synthetic rubber	PTFE	Thermoplastic elastomer	AQP	Special application hose	EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
	1	2	3	4	5	6											
Ammonium phosphate, 10% aq	E	E	C	U	-	E	E	E	E	-	G	C	U	C	G	U	G
Ammonium sulfate/sulfide, 10% aq	E	E	C	U	-	E	E	E	E	U	G	C	U	U	G	U	G
Amyl acetate	U	E	U	U	-	E	U	U	G	U	U	U	E	E	E	E	E
Amyl alcohol	G	E	E	C	-	E	G	C	E	G	C	E	G	G	E	U	G
Aniline, aniline oil	U	E	U	U	-	E	U	U	G	U	U	U	E	U	E	G	G
Aniline dyes	U	E	U	U	-	E	U	G	G	G	U	U	U	C	G	C	G
Asphalt, < 200°F	C	E	G	G	-	U	G	C	U	E	G	G	E	G	E	C	E
IRM 901	E	E	E	E	-	U	E	E	C	E	E	E	E	E	E	E	E
ASTM #2	E	E	E	E	-	U	E	G	U	E	G	E	E	E	E	E	E
IRM 903	E	E	E	E	-	U	E	G	U	E	G	E	E	E	E	E	E
Automatic trans. fluid 2	G	E	G	G	-	U	E	G	U	E	C	G	E	E	E	E	E
Barium chloride, 10% aq	E	E	C	C	-	E	E	E	E	E	G	C	U	G	G	G	G
Barium hydroxide, 105 aq	E	E	G	C	-	E	E	E	E	E	E	G	G	U	G	U	G
Barium sulfide, 10% aq	E	E	C	C	-	E	E	E	E	E	G	C	C	U	G	U	U
Benzene, benzol	U	E	U	U	-	U	U	U	U	E	U	C	G	E	E	G	E
Benzoic acid	U	E	C	U	-	U	U	U	E	E	C	C	U	G	G	G	G
Benzyl alcohol	U	E	C	U	-	E	U	G	G	E	C	C	E	G	E	G	G
Biodiesel (<180°F)	G	E	G	C	-	U											
Biodiesel (>180°F)	C	E	U	U	-	U											
Black sulfate liquor	G	E	C	C	-	E	C	C	C	E	U	C	E	C	E	U	U
Blast furnace gas	C	U	C	G	-	U	U	U	U	E	U	C	E	C	E	U	U
Borax, 10% aq	E	E	G	C	-	E	G	G	E	E	G	E	E	E	E	G	-
Boric acid, 10% aq	E	E	C	E	-	E	G	G	G	E	G	G	U	G	C	C	C
Brine	G	E	C	C	-	C	E	G	E	E	G	C	U	G	G	U	E
Bromine, dry	U	E	U	U	-	U	U	U	U	E	U	U	U	C	U	C	C
Butane1	LPG approved hose only				-	E	C	U	E	-	-	E	E	E	E	E	
Butyl acetate	U				-	E	U	U	G	U	U	C	E	E	E	E	E
Butyl alcohol	E				-	C	E	E	G	E	G	G	G	G	G	G	G

Resistance key rating

E = Excellent – Fluid has little or no effect.

G = Good – Fluid has minor to moderate effect.

C = Conditional – Service conditions should be described to Eaton Aeroquip for determination of suitability for application.

U = Unsatisfactory

Hose selection

Fluid compatibility

A

This chart is intended for reference use only

The information in this chart pertains strictly to material compatibility and is not intended to be used as an application guide.

For information on specific applications not included in this catalog, please contact Eaton Aeroquip.

*Viton is a E.I. DuPont trademark.

Note 1 - Rubber-covered hose must be perforated to allow gas to escape.

Note 2 - Due to the widely different additives in these fluids, testing should be done on the actual fluid being considered.

E=Excellent
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Fluid	Hose					Seals							Metal				
	Synthetic rubber	PTFE	Thermoplastic elastomer	AQP	Special application hose	EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
	1	2	3	4	5	6											
Butyl cellosolve	U	E	U	U	-	E	U	U	G	U	U	C	E	E	E	E	E
Butylene (butene)1	C	E	-	C	-	U	C	U	U	E	U	-	E	E	E	E	E
Butyl stearate	U	E	-	U	-	U	G	U	U	E	-	-	G	G	G	G	G
Butyraldehyde	U	E	-	U	-	E	U	U	G	U	U	-	E	E	E	E	G
Calcium acetate, 10% aq	G	E	C	C	-	E	G	G	E	U	U	C	G	G	G	C	G
Calcium bisulfate, 10% aq	U	E	C	G	-	U	E	E	U	E	G	G	U	C	C	U	U
Calcium chloride, 10% aq	E	E	E	C	-	E	E	E	E	E	E	E	G	G	G	C	G
Calcium hydroxide, 10% aq	E	E	C	C	-	E	E	E	E	E	U	C	G	G	G	U	G
Calcium hydroxide, 10% aq	C	E	C	U	-	E	U	U	E	E	U	C	U	G	C	U	U
Calcium nitrate, 10% aq	E	E	E	G	-	E	E	E	E	E	E	E	G	G	G	G	G
Carbitol	G	E	G	C	-	G	G	G	G	G	U	G	E	E	E	E	E
Carbolic acid (phenol)	U	E	U	U	-	C	U	U	G	E	U	U	U	E	E	-	-
Carbonic acid	C	E	C	U	-	E	G	E	E	E	C	C	U	C	E	G	E
Carbon dioxide, dry gas1	E	E	E	E	-	E	G	G	E	E	G	E	E	E	E	E	E
Carbon disulfide	U	E	U	U	-	U	U	U	U	E	C	C	G	G	G	E	G
Carbon monoxide1	E	E	E	E	-	E	G	G	E	E	G	E	E	E	E	E	E
Carbon tetrachloride	U	E	U	U	-	U	U	U	U	E	U	U	U	G	G	U	E
Castor oil	E	E	G	E	-	G	E	E	G	E	G	G	E	E	E	E	E
Cellosolve acetate	U	E	U	U	-	E	U	U	G	U	U	U	U	U	E	G	E
China wood oil tung Oil)	E	E	C	C	-	U	G	G	U	E	U	C	E	G	E	E	E
Chlorine1	U	G	U	U	-	U	U	U	U	G	U	U	C	C	C	C	C
Chloroacetic acid	U	E	U	U	-	E	U	U	G	U	U	U	U	U	U	U	G

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Fluid	Hose					Seals							Metal				
	Synthetic rubber	PTFE	Thermoplastic elastomer	AQP	Special application hose	EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
	1	2	3	4	5	6											
Chloroacetone	U	E	U	U	-	E	U	U	E	U	U	U	G	G	G	U	G
Chlorobenzene	U	E	U	U	-	U	U	U	U	G	U	U	G	G	G	G	G
Chloroform	U	E	U	U	-	U	U	U	U	E	U	U	G	G	G	G	G
O-Chlorophenol	U	E	U	U	-	U	U	U	U	E	U	U	G	G	G	U	G
Chlosulfonic acid	U	U	U	U	-	U	U	U	U	U	U	U	G	U	G	G	C
Chrome plating solution	U	E	-	U	-	U	U	U	G	E	U	-	C	U	U	U	U
Chromic acid	U	E	-	U	-	C	U	U	C	E	U	-	C	U	U	U	U
Citric acid	G	E	C	G	-	E	E	E	E	E	E	C	C	C	C	C	C
Coke oven gas	U	E	-	U	-	U	U	U	U	E	U	-	E	C	E	U	U
Copper chloride, 10% aq	E	E	E	G	-	E	E	E	E	E	G	E	U	U	U	U	U
Copper cyanide, 10% aq	E	E	-	G	-	E	E	E	E	E	E	-	E	U	G	U	G
Copper sulfate, 10% aq	E	E	G	G	-	E	E	E	E	E	G	G	U	C	G	U	G
Cotton seed Oil	E	E	E	G	-	C	E	G	C	E	E	E	E	E	E	E	E
Creosote (coal tar)	G	E	U	G	-	U	G	C	U	E	U	U	E	C	E	E	E
Crude oil	G	E	C	E	-	U	E	G	U	E	G	C	G	U	G	U	U
Cyclohexanol	C	E	C	G	-	U	E	G	U	E	C	C	E	E	E	C	E
Cyclohexanone	U	E	C	U	-	G	U	U	G	U	G	G	E	E	E	C	E
Detergent/ Water solution	E	E	C	G	-	E	E	E	E	E	C	C	G	E	E	E	E
Diacetone alchohol (acetol)	U	E	U	U	-	E	U	U	E	U	C	C	E	E	E	E	E
Dibenzyl ether	U	E	-	U	-	G	U	U	G	U	-	-	G	G	G	G	G
Diesel oil 2	G	E	C	G	-	U	E	C	U	E	C	C	E	E	E	E	E
Diethylamine	C	E	-	C	-	C	G	G	G	U	-	-	E	U	E	-	E
Dioctyl phthalate (DOP)	U	E	C	C	-	G	U	U	G	G	C	C	E	E	E	E	E
Dowtherm A&E	U	E	-	U	-	U	U	U	U	E	-	-	G	U	E	E	E
Ethyl alcohol (Ethanol)	E	E	C	G	-	E	E	E	E	E	C	C	E	E	E	G	E
Ethyl acetate	U	E	C	U	-	G	U	U	G	U	C	C	E	E	E	E	E
Ethyl benzene	U	E	-	U	-	U	U	U	U	E	U	-	E	G	G	G	E
Ethyl cellulose	G	E	U	U	-	G	G	G	G	U	C	C	E	G	G	G	G
Ethyl chloride	C	E	U	U	-	U	U	U	U	E	U	U	E	E	E	G	G
Ethylene dichloride	U	E	U	U	-	U	U	U	U	G	U	U	G	C	G	G	G
Ethylene glycol	E	E	C	G	-	E	E	E	E	E	C	C	U	G	E	E	E

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Note 1 - Rubber-covered hose must be perforated to allow gas to escape.

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Fluid	Hose					Seals							Metal				
	Synthetic rubber	PTFE	Thermoplastic elastomer	AQP	Special application hose	EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
	1	2	3	4	5	6											
Butyl cellosolve	U	E	U	U	-	E	U	U	G	U	U	C	E	E	E	E	E
Butylene (butene)1	C	E	-	C	-	U	C	U	U	E	U	-	E	E	E	E	E
Butyl stearate	U	E	-	U	-	U	G	U	U	E	-	-	G	G	G	G	G
Butyraldehyde	U	E	-	U	-	E	U	U	G	U	U	-	E	E	E	E	G
Calcium acetate, 10% aq	G	E	C	C	-	E	G	G	E	U	U	C	G	G	G	C	G
Calcium bisulfate, 10% aq	U	E	C	G	-	U	E	E	U	E	G	G	U	C	C	U	U
Calcium chloride, 10% aq	E	E	E	C	-	E	E	E	E	E	E	E	G	G	G	C	G
Calcium hydroxide, 10% aq	E	E	C	C	-	E	E	E	E	E	U	C	G	G	G	U	G
Calcium hydroxide, 10% aq	C	E	C	U	-	E	U	U	E	E	U	C	U	G	C	U	U
Calcium nitrate, 10% aq	E	E	E	G	-	E	E	E	E	E	E	E	G	G	G	G	G
Carbitol	G	E	G	C	-	G	G	G	G	G	U	G	E	E	E	E	E
Carbolic acid (phenol)	U	E	U	U	-	C	U	U	G	E	U	U	U	E	E	-	-
Carbonic acid	C	E	C	U	-	E	G	E	E	E	C	C	U	C	E	G	E
Carbon dioxide, dry gas1	E	E	E	E	-	E	G	G	E	E	G	E	E	E	E	E	E
Carbon disulfide	U	E	U	U	-	U	U	U	U	E	C	C	G	G	G	E	G
Carbon monoxide1	E	E	E	E	-	E	G	G	E	E	G	E	E	E	E	E	E
Carbon tetrachloride	U	E	U	U	-	U	U	U	U	E	U	U	U	G	G	U	E
Castor oil	E	E	G	E	-	G	E	E	G	E	G	G	E	E	E	E	E
Cellosolve acetate	U	E	U	U	-	E	U	U	G	U	U	U	U	U	E	G	E
China wood oil (tung Oil)	E	E	C	C	-	U	G	G	U	E	U	C	E	G	E	E	E
Chlorine1	U	G	U	U	-	U	U	U	U	G	U	U	C	C	C	C	C
Chloroacetic acid	U	E	U	U	-	E	U	U	G	U	U	U	U	U	U	U	G
Chloroacetone	U	E	U	U	-	E	U	U	E	U	U	U	G	G	G	G	G
Chlorobenzene	U	E	U	U	-	U	U	U	U	G	U	U	G	G	G	G	G
Chloroform	U	E	U	U	-	U	U	U	U	E	U	U	G	G	G	G	G
O-Chlorophenol	U	E	U	U	-	U	U	U	U	E	U	U	G	G	G	G	G
Chlosulfonic acid	U	U	U	U	-	U	U	U	U	U	U	U	G	U	G	G	C
Chrome plating solution	U	E	-	U	-	U	U	U	G	E	U	-	C	U	U	U	U
Chromic acid	U	E	-	U	-	C	U	U	C	E	U	-	C	U	U	U	U
Citric acid	G	E	C	G	-	E	E	E	E	E	E	C	C	C	C	C	C
Coke oven gas	U	E	-	U	-	U	U	U	U	E	U	-	E	C	E	E	U
Copper chloride, 10% aq	E	E	E	G	-	E	E	E	E	E	G	E	U	U	U	U	U
Copper cyanide, 10% aq	E	E	-	G	-	E	E	E	E	E	E	-	E	U	G	G	G
Copper sulfate, 10% aq	E	E	G	G	-	E	E	E	E	E	G	G	U	C	G	G	G
Cotton seed Oil	E	E	E	G	-	C	E	G	C	E	E	E	E	E	E	E	E
Creosote (coal tar)	G	E	U	G	-	U	G	C	U	E	U	U	E	C	E	E	E
Crude oil	G	E	C	E	-	U	E	G	U	E	G	C	G	U	G	G	U
Cyclohexanol	C	E	C	G	-	U	E	G	U	E	C	C	E	E	E	E	E
Cyclohexanone	U	E	C	U	-	G	U	U	G	U	G	G	E	E	E	E	E
Detergent/ Water solution	E	E	C	G	-	E	E	E	E	E	C	C	G	E	E	E	E
Diacetone alchohol (acetol)	U	E	U	U	-	E	U	U	E	U	C	C	E	E	E	E	E
Dibenzyl ether	U	E	-	U	-	G	U	U	G	U	-	-	G	G	G	G	G
Diesel oil 2	G	E	C	G	-	U	E	C	U	E	C	C	E	E	E	E	E
Diethylamine	C	E	-	C	-	C	G	G	G	U	-	-	E	U	E	E	E
Dioctyl phthalate (DOP)	U	E	C	C	-	G	U	U	G	G	C	C	E	E	E	E	E
Dowtherm A&E	U	E	-	U	-	U	U	U	U	E	-	-	G	U	E	E	E
Ethyl alcohol (Ethanol)	E	E	C	G	-	E	E	E	E	E	C	C	E	E	E	E	E
Ethyl acetate	U	E	C	U	-	G	U	U	G	U	C	C	E	E	E	E	E
Ethyl benzene	U	E	-	U	-	U	U	U	U	E	U	-	E	G	G	G	E
Ethyl cellulose	G	E	U	U	-	G	G	G	G	U	C	C	E	G	G	G	G
Ethyl chloride	C	E	U	U	-	U	U	U	U	E	U	U	E	E	E	E	G
Ethylene dichloride	U	E	U	U	-	U	U	U	U	G	U	U	G	C	G	G	G
Ethylene glycol	E	E	C	G	-	E	E	E	E	E	C	C	U	G	E	E	E

Resistance key rating

E = Excellent – Fluid has little or no effect.

G = Good – Fluid has minor to moderate effect.

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U = Unsatisfactory

Hose selection

Fluid compatibility

A

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*Viton is a E.I. DuPont trademark.

Note 1 - Rubber-covered hose must be perforated to allow gas to escape.

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E=Excellent
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Fluid	Hose					Seals						Metal				
	1 Synthetic rubber	2 PTFE	3 Thermoplastic elastomer	4 AQP	5 Special application hose	6 EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
Ferric chloride, 10% aq	E	E	-	G	-	E	E	G	E	E	-	-	U	U	U	U	U
Ferric nitrate, 10% aq	E	E	C	E	-	E	E	E	E	E	C	C	U	U	G	U	U
Ferric sulfate, 10% aq	E	E	C	E	-	E	G	G	G	E	C	C	U	U	E	U	U
Formaldehyde	U	E	C	U	-	E	C	C	G	G	C	C	E	E	E	G	G
Formic acid	G	E	U	C	-	E	C	G	E	U	U	U	U	C	C	C	C
Fuel oil	E	E	G	E	-	U	E	G	U	E	G	G	E	E	E	E	E
Furfural	U	E	-	U	-	G	C	C	G	U	U	-	G	G	G	G	G
Gallic acid, solution	G	E	-	C	-	G	G	G	G	E	U	-	U	-	G	C	G
Gasoline 2	G	E	E	G	-	U	E	C	U	E	E	E	E	E	E	E	E
Gasohol 2	G	E	G	C	-	U	G	G	U	E	E	E	E	E	E	G	E
Glycerine/Glycerol	E	E	E	E	-	E	E	E	E	E	G	E	E	G	E	E	E
Green sulfate liquor	G	E	-	U	-	E	G	G	E	E	-	-	U	U	E	U	U
Helium1	E	G	C	E	-	E	E	E	E	E	E	E	E	E	E	E	E
Heptane	E	E	E	C	-	U	E	G	U	E	G	G	E	E	E	E	E
Hexaldehyde	U	E	-	U	-	E	U	G	G	U	U	-	G	G	E	E	G
Hexane	E	E	E	E	-	U	E	G	U	E	G	G	E	E	E	E	E
Hydraulic oils 2																	
Ester blend	C	E	C	G	-	C	E	U	U	E	U	E	E	E	E	E	E
Phos. Ester/petroleum blend	U	E	C	U	-	U	U	U	U	C	U	G	E	E	E	E	E
Silicone oils	E	E	E	E	-	E	E	E	E	E	E	E	E	E	E	E	E
Straight petroleum base	E	E	E	E	-	U	E	G	U	E	E	E	E	E	E	E	E
Straight phosphate ester	U	E	C	U	-	E	U	U	G	C	U	G	E	E	E	E	E
Water glycol	E	E	C	G	-	E	E	E	E	E	C	C	E	E	E	G	E
Water petroleum emulsion	E	E	C	G	-	U	E	G	U	E	C	C	C	E	E	G	E

Fluid	Hose					Seals						Metal				
	1 Synthetic rubber	2 PTFE	3 Thermoplastic elastomer	4 AQP	5 Special application hose	6 EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
Hydrobromic acid	U	E	U	E	-	G	U	U	E	E	U	U	E	U	E	E	U
Hydrochloric acid, cold	U	E	U	U	-	G	U	U	G	E	U	U	U	U	U	U	U
Hydrocyanic acid	C	E	-	U	-	E	C	C	E	E	-	-	E	E	G	E	G
Hydrofluoric acid	U	E	U	U	-	U	U	U	C	U	U	U	U	U	U	U	C
Hydrofluorosilic acid	E	E	-	G	-	G	G	G	E	E	-	-	U	U	U	U	U
Hydrogen1	G	C	G	G	-	E	E	E	E	E	E	E	E	E	E	E	E
Hydrogen peroxide	C	E	G	C	-	G	G	G	G	E	G	G	U	U	G	E	U
Hydrogen sulfide, dry	C	C	C	U	-	E	U	G	E	U	-	G	E	G	G	G	G
Isocyanate	U	E	U	U	-	U	U	U	G	E	U	U	G	-	G	-	-
Iso octane	G	E	E	G	-	U	E	G	U	E	G	E	E	E	E	E	E
Isopropyl acetate	U	E	C	U	-	C	U	U	G	U	U	C	E	-	E	E	E
Isopropyl alcohol	G	E	C	G	-	E	G	G	E	E	U	C	E	E	E	G	E
Isopropyl ether	G	E	-	C	-	U	G	U	U	U	C	-	G	G	G	-	-
JP-4, JP-5	E	E	G	E	-	U	E	U	U	E	U	G	E	E	E	E	E
Kerosene	G	E	G	E	-	U	E	U	U	E	U	G	E	E	E	E	E
Lacquer/ lacquer solvents	U	E	U	U	-	E	U	U	U	U	U	G	U	E	E	E	E
Lime sulfur	U	E	C	U	-	E	U	E	E	E	C	C	G	U	G	-	U
Linseed oil	E	E	G	G	-	U	E	G	U	E	G	G	E	E	E	E	E
LPG1	LPG approved hose only					E	G	U	E	-	-	E	E	E	E	E	E
Lubricating oils2	See hydraulic oils					See hydraulic oils								See hydraulic oils			
Magnesium chloride, 10%aq	E	E	C	E	-	E	E	E	E	E	C	C	E	C	C	G	G
Magnesium hydroxide, 10% aq	G	G	C	G	-	E	G	G	E	E	C	C	E	G	E	G	G
Magnesium sulfate, 10% aq	E	E	C	E	-	E	E	E	E	E	C	C	E	E	E	E	E
Maleic acid	U	U	C	C	-	G	U	U	U	E	C	C	E	G	G	G	G
Maleic anhydride	U	U	C	U	-	C	U	U	U	E	C	C	G	U	E	G	E
Malic acid	G	G	-	G	-	U	G	G	U	G	-	-	U	-	E	G	E
Mercuric chloride	G	G	E	G	-	G	E	E	E	E	E	E	U	U	U	U	U
Mercury	E	E	E	E	-	E	E	E	E	E	E	E	E	U	E	U	G
Methanol	E	E	C	E	-	E	G	G	E	U	C	C	G	G	E	C	E

Resistance key rating

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Fluid	Hose					Seals							Metal				
	1 Synthetic rubber	2 PTFE	3 Thermoplastic elastomer	4 AQP	5 Special application hose	6 EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
Methyl bromide	C	E	U	U	-	U	G	U	U	E	U	U	E	E	G	U	E
Methyl chloride	U	E	U	U	-	U	U	U	U	E	U	U	E	E	E	U	G
Methyl butyl ketone	U	E	U	U	-	E	U	U	E	U	C	C	E	E	E	-	E
Methyl ethyl ketone	U	E	U	U	-	E	U	U	E	U	U	G	G	G	G	G	G
Methylene chloride	U	E	U	U	-	U	U	U	U	G	U	U	G	G	G	G	G
Methyl isobutyl ketone	U	E	U	U	-	E	U	U	U	U	U	U	G	G	G	G	G
Methyl isopropyl ketone	U	E	U	C	-	E	U	U	U	U	U	U	G	G	G	G	G
Methyl salicylate	U	E	-	U	-	C	U	U	C	U	-	-	E	G	G	E	G
MIL-L-2104	E	E	E	E	-	U	E	G	U	E	E	E	E	E	E	-	E
MIL-H-5606	E	E	E	E	-	U	E	G	U	E	E	E	E	E	E	E	E
MIL-H-6083	E	E	E	E	-	U	E	E	U	E	E	E	E	E	E	-	E
MIL-L-7808	G	E	G	G	-	U	G	U	U	E	G	G	G	G	E	-	-
MIL-L-23699	E	E	-	G	-	U	G	U	U	E	-	-	E	E	E	E	E
MIL-H-46170	G	E	-	G	-	C	E	G	U	E	-	-	E	E	E	-	E
MIL-H-83282	G	E	-	G	-	U	E	U	U	E	-	-	E	E	E	-	E
Mineral oils	E	E	G	E	-	U	E	G	U	E	G	G	E	E	E	E	E
Naphtha	C	E	G	E	-	U	C	U	U	E	C	G	-	-	-	-	-
Naphthalene	U	E	U	U	-	U	U	U	U	E	C	G	E	G	E	G	G
Naphthenic acid	U	E	-	U	-	U	C	U	U	E	-	-	-	G	E	G	G
Natural gas1	LPG approved hose only					E	E	U	E	-	-	G	G	G	G	G	
Nickel acetate, 10% aq	G	C	U	G	-	E	C	C	E	G	U	U	G	C	E	G	E
Nickel chloride, 10% aq	E	E	U	E	-	E	E	G	E	E	U	U	U	U	G	U	G
Nickel sulfate, 10% aq	E	E	U	E	-	E	E	E	E	E	U	U	U	G	G	U	G
Nitric acid, to 10%	U	E	U	U	-	G	U	U	U	E	U	C	U	U	E	U	U
Nitric acid, over 10%	U	C	U	U	-	U	U	U	U	G	U	U	U	U	E	C	U
Nitrobenzene	U	E	U	U	-	E	U	U	U	G	U	U	E	G	E	E	E

Fluid	Hose					Seals							Metal				
	1 Synthetic rubber	2 PTFE	3 Thermoplastic elastomer	4 AQP	5 Special application hose	6 EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
Nitrogen1	E	E	E	E	-	E	E	E	E	E	E	E	E	E	E	E	E
Octyl alcohol	C	E	E	U	-	U	E	E	E	E	E	E	E	E	E	E	E
Oleic acid	G	E	G	U	-	U	U	U	C	G	G	E	C	E	G	C	G
Orthodichlorobenzene	U	E	-	U	-	U	U	U	U	E	-	-	G	G	G	G	G
Oxalic acid, 10% aq	C	E	C	C	-	E	G	G	E	E	C	C	U	C	C	C	C
Oxygen1	U	U	U	U	-	E	-	-	-	-	-	-	G	G	G	G	G
Palmitic acid	E	E	E	E	-	G	E	E	G	E	-	E	G	-	E	G	G
Paradichlorobenzene	U	E	-	U	-	U	U	U	U	E	-	-	G	G	G	G	G
Pentane1	Lpg approved hose only					E	E	U	E	U	G	G	G	G	E	G	
Perchloric acid	U	E	U	U	-	G	E	E	G	E	U	U	U	U	U	U	U
Perchloroethylene	U	E	U	U	-	U	U	U	U	E	U	U	C	G	G	G	E
Petroleum base oils	G	E	E	E	-	U	E	E	U	E	E	E	E	E	E	E	E
Phenol (carbolic acid)	U	E	U	U	-	U	U	U	G	E	U	U	U	E	E	E	G
Phosphate ester2	U	E	C	U	-	E	U	U	G	C	U	G	E	E	E	E	E
Phosphoric acid 20%	U	E	U	U	-	E	U	U	G	E	U	U	U	E	U	C	E
Phosphorous trichloride	U	E	U	U	-	E	U	U	E	E	U	U	C	U	C	E	E
Potassium Acetate, 10% aq	G	E	-	G	-	E	G	G	E	U	-	-	C	G	C	U	G
Potassium chloride, 10% aq	E	E	E	E	-	E	E	E	E	E	E	E	E	C	E	U	G
Potassium cyanide, 10% aq	E	E	E	G	-	E	E	E	E	E	E	E	C	U	G	U	C
Potassium dichromate, 10% aq	E	E	E	E	-	E	E	E	E	E	E	E	C	C	C	C	C
Potassium hydroxide, to 10%	G	E	C	C	-	E	G	G	E	G	C	C	G	G	G	U	E
Potassium hydroxide, over 10%	C	E	U	C	-	E	C	C	E	U	U	U	G	G	G	U	E
Potassium nitrate, 10% aq	E	E	E	E	-	E	E	E	E	E	E	E	G	G	E	G	-
Potassium sulfate, 10% aq	E	E	E	E	-	E	E	E	E	E	E	E	-	-	-	-	-
Propane1 (liquified)	LPG approved hose only					C	C	-	-	-	-	E	E	E	E	E	

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Fluid	Hose					Seals							Metal				
	Synthetic rubber	PTFE	Thermoplastic elastomer	AQP	Special application hose	EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
	1	2	3	4	5	6											
Propyl acetate	U	E	-	U	-	G	U	U	G	U	-	-	E	-	E	E	E
Propyl alcohol	E	E	U	E	-	E	E	E	E	E	U	U	E	E	E	E	E
Propylene1	U	E	-	U	-	U	U	U	U	E	-	-	E	E	E	E	E
Refrigerant R-121	E	-	G	C	-	C	G	E	C	E	E	E	E	E	E	E	E
Refrigerant R-131	E	-	G	C	-	G	G	E	C	E	E	E	E	E	E	E	E
Refrigerant R-221	U	C	U	U	-	E	U	E	C	U	U	U	E	E	E	E	E
Refrigerant R-134a1	C	C	U	U	-	E	E	C	U	U	U	E	E	E	E	E	E
Sewage	G	E	E	G	-	E	E	E	E	E	U	E	G	G	G	G	G
Silicone oils	G	E	E	G	-	E	E	E	E	E	E	E	E	E	E	E	E
Soap (water solutions)	E	E	C	E	-	E	E	E	E	E	C	C	E	E	E	U	E
Sodium acetate, 10% aq	G	U	-	G	-	E	G	G	E	U	-	-	E	E	G	E	E
Sodium Bicarbonate, 10% aq	E	E	E	E	-	E	E	E	E	E	E	E	G	G	E	G	E
Sodium borate, 10% aq	E	E	E	E	-	E	E	E	E	E	E	E	E	E	E	G	-
Sodium carbonate, 10% aq	E	E	E	E	-	E	E	E	E	E	E	E	E	G	E	U	E
Sodium chloride, 10% aq	E	E	E	G	-	E	E	E	E	E	E	E	U	C	C	C	E
Sodium cyanide, 10% aq	E	E	E	E	-	E	E	E	E	E	E	E	E	-	C	U	U
Sodium hydroxide, to 10%	C	E	G	C	-	E	U	G	E	E	G	G	C	G	C	U	C
Sodium hydroxide, over 10%	U	E	C	U	-	E	U	U	G	E	C	C	C	C	C	U	C
Sodium hypochlorite, 10% aq	C	E	C	G	-	G	C	C	E	C	C	C	U	U	U	U	C
Sodium metaphosphate, 10% aq	E	E	E	E	-	E	E	E	E	E	E	E	E	G	G	U	G

Fluid	Hose					Seals							Metal				
	Synthetic rubber	PTFE	Thermoplastic elastomer	AQP	Special application hose	EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
	1	2	3	4	5	6											
Sodium nitrate, 10% aq	G	E	E	G	-	E	G	G	E	-	E	E	E	C	E	E	E
Sodium perborate, 10% aq	G	E	-	G	-	E	G	G	E	E	-	-	C	U	C	U	C
Sodium peroxide, 10% aq	G	E	-	G	-	G	G	G	E	E	U	-	U	U	C	C	C
Sodium phosphates, 10% aq	E	E	E	C	-	E	E	E	E	E	E	E	U	E	G	U	E
Sodium silicate, 10% aq	E	E	E	G	-	E	E	E	E	E	E	E	E	E	E	E	E
Sodium sulfate, 10% aq	E	E	E	G	-	E	E	E	E	E	E	E	C	G	G	G	G
Sodium sulfide, 10% aq	E	E	E	G	-	E	E	E	E	E	E	E	C	U	C	U	G
Sodium thiosulfate, 10% aq	G	E	E	G	-	E	G	E	E	E	E	E	U	U	C	G	E
Soy bean oil	E	E	G	C	-	U	E	G	U	E	G	G	E	E	E	E	E
Stannic chloride	G	E	C	G	-	E	E	G	E	E	C	C	U	U	U	U	U
Steam1 Steam1 (up to 388°F)	U	E	U	U	-	G	U	U	C	C	U	U	E	E	E	G	E
Stearic acid	G	E	G	G	-	G	G	G	G	E	G	G	C	C	E	C	E
Stoddard solvent	G	E	U	C	-	U	E	G	U	E	U	U	E	E	E	E	E
Styrene	U	E	U	U	-	U	U	U	U	G	U	U	E	E	E	E	E
Sulfur, slurry	C	E	G	E	-	E	U	E	E	E	G	G	E	U	G	E	E
Sulfur chloride, Wet	U	E	-	U	-	U	U	U	U	E	-	-	G	-	G	G	U
Sulfur dioxide, dry1	U	E	U	U	-	E	U	U	G	E	U	U	E	G	G	E	G
Sulfuric acid, to 10%	U	E	U	U	-	E	U	G	U	E	C	C	U	G	C	-	E
Sulfuric acid, over 10%	U	E	U	U	-	U	U	U	U	G	U	U	C	C	C	U	C
Sulfurous acid	U	E	U	G	-	G	C	C	U	G	U	U	U	C	C	C	U
Tannic acid	G	E	G	G	-	E	G	E	E	E	G	G	E	E	E	C	E
Tar (Bituminous)	G	E	G	G	-	U	G	U	U	E	G	G	E	G	E	E	E
Tartaric acid	E	E	G	E	-	G	E	G	G	E	G	G	U	C	C	E	E
Tertiary butyl alcohol	G	E	G	E	-	G	G	G	G	E	G	G	G	G	G	G	G
Titanium tetrachloride	U	E	-	U	-	U	C	U	U	E	-	-	E	U	G	U	
Toluene (toluol)	U	E	U	U	-	U	U	U	U	E	U	U	E	E	E	E	E

Resistance key rating

E = Excellent – Fluid has little or no effect.

G = Good – Fluid has minor to moderate effect.

C = Conditional – Service conditions should be described to Eaton Aeroquip for determination of suitability for application.

U = Unsatisfactory

This chart is intended for reference use only

The information in this chart pertains strictly to material compatibility and is not intended to be used as an application guide.

For information on specific applications not included in this catalog, please contact Eaton Aeroquip.

E=Excellent
G=Good
C=Conditional
U =Unsatisfactory

	Synthetic rubber	PTFE	Thermoplastic elastomer	AQP	Special application hose	EPDM	Buna-N	Neoprene	EPR	Viton*	Urethane	Hytrel	Steel	Brass	Stainless steel	Aluminum	Monel
	1	2	3	4	5	6											
Fluid	**Hose**					**Seals**							**Metal**				
Trichlorethylene	U	E	U	U	-	U	U	U	U	E	U	U	E	G	E	E	E
Tricresyl Phosphate	U	E	U	U	-	E	U	U	E	G	U	U	E	-	C	-	G
Triethanolamine	G	E	U	G	-	E	E	U	E	U	U	U	E	U	E	E	E
Tung Oil	E	E	C	C	-	U	G	G	U	E	U	C	E	G	E	E	E
Turpentine	E	E	G	G	-	U	G	U	U	E	G	G	G	G	G	G	G
Varnish	C	E	G	G	-	U	G	U	U	E	G	G	E	G	E	E	E
Vinyl Chloride	U	E	U	U	-	U	U	U	U	E	U	U	E	U	C	E	E
Water (to +150°F)	E	E	E	G	-	E	E	E	E	E	E	E	C	G	E	G	E
Water (+151°F to +200°F)	C	E	U	C	-	E	E	E	E	E	U	U	C	G	E	G	E
Water (+201°F to +350°F)	U	E	U	U	-	E	U	U	G	G	U	U	C	G	E	G	E
Water Glycol	E	E	C	E	-	E	E	E	E	E	C	C	E	E	E	G	E
Water Petroleum Emulsion2	E	E	C	C	-	U	E	G	U	E	C	C	C	E	E	G	E
Xylene	U	E	C	U	-	U	U	U	U	E	U	C	E	E	E	E	E
Zinc Chloride, 10% aq	E	E	E	E	-	E	E	E	E	E	E	E	E	U	U	C	G
Zinc Sulfate, 10% aq	E	E	-	E	-	E	E	E	E	E	-	-	U	C	G	C	G

Resistance key rating

E = Excellent – Fluid has little or no effect.

G = Good – Fluid has minor to moderate effect.

C = Conditional – Service conditions should be described to Eaton Aeroquip for determination of suitability for application.

U = Unsatisfactory

*Viton is a E.I. DuPont trademark.

Note 1 - Rubber-covered hose must be perforated to allow gas to escape.

Note 2 - Due to the widely different additives in these fluids, testing should be done on the actual fluid being considered.

Hydraulic fluids & lubricating oils

The following is a representative list of fluids and manufacturers. The fluids are grouped under generic "family" heads and arranged alphabetically. For each generic "family" listing we have included maximum fluid temperature recommendations for the six hose classifications on page A-12 (1 through 6). Two maximum fluid temperature ratings are listed under designations of "H" and "LP". The "H" designation is for hydraulic service up to the maximum rated operating pressure of any particular hose in the classification. The "LP" designation is for low-pressure service such as lubricating oil systems or low-pressure hydraulic return lines. The letter "U" in the box indicates unsatisfactory resistance to the fluid type. Fluid temperature ratings are predicated on maximum allowable ambient temperatures as follows:

Classifications 1 and 3

(Synthetic rubber and thermoplastic elastomer)

"H" fluid temp. ratings: +60°C (+140°F)

"LP" fluid temp. ratings: +82°C (+180°F)

Classification 2 (PTFE)

"H" fluid temp. ratings: +204°C (+400°F)

"LP" fluid temp ratings: +204°C (+400°F)

Classification 4 (AQP)

"H" fluid temp. ratings: +71°C (+160°F)

"LP" fluid temp. ratings: +121°C (+250°F)

(If "H" fluid temperature is +107°C (+225°F) or less, allowable ambient temperature may be increased to +94°C (+200°F))

Ambient temperatures in excess of those recommended, in conjunction with maximum fluid temperatures, can materially shorten the service life of the hose.

Caution: The fluid manufacturer's recommended maximum operating temperature for any specific name brand fluid should be scrupulously observed by the user. These recommended temperatures can vary widely between name brands of different fluid compositions, even though they fall into the same generic "family" of fluids. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown, producing by-products that are harmful to elastomeric products, as well as other materials in the system. If a manufacturer's recommended maximum temperature for his specific fluid is lower than that for the hose rating, it should take precedence over the hose rating for service usage.

Hose selection

Fluid compatibility

Straight petroleum-base

Maximum fluid temperature recommendation.

See caution on page A-12 for maximum fluid temperatures and limiting ambient temperatures.

Hose classifications (see page. A-15)

	1	2	3	4
H	+94°C (+200°F)	+204°C (+400°F)	+94°C (+200°F)	+149°C (+300°F)
LP	+94°C (+200°F)	+232°C (+450°F)	+94°C (+200°F)	+149°C (+300°F)

Fluid name

Aircraft hydraulic oil AA
Ambrex oils
Arco A.T.F. Dexron
Arco A.T.F. dDexron IV
Arco A.T.F. Ype F
Arco fleet motor
Arco H.T.F. C-2 fluid
Arco H.T.C. 100 fluid
Arco 303 fluid
ATF special
Automatic transmission fluid (Dexron)
Carnea oils
Citgo amplex
Citgo ATF, type F
Citgo ATF, Dexron
Citgo extra duty circulating oils mineral oil (Heavy duty) (R & O)
Citgo motor oils
Citgo pacemaker series mineral oil (R & O)
Citgo pacemaker t series mineral oil (R & O)
Citgo pacemaker XD series mineral oil (Heavy duty) (R & O)
Citgo sentry
Citgo tractor hydraulic fluid
Conoco 303 fluid
Custom motor oil
Dectol R & O oils
Delo 400 motor oils
Delvac oils
Delvac SHC
Delvac special 10W-30
Donax T oils
DTE oils
Duro
Duro AW
EP hydraulic oils
EP industrial oils
EP machine oils
Energol HL68
Energol HLP C68
Etna oils
Exxon ATF
Factovis 52 – Conventional R & O hydraulic fluid
Gulf harmony AW
Gulf security AW
Glide
Hulburt 27 series
Hydraulic series
Hydraulic oils
Hydroil series
Industron 53 – anti wear hydraulic fluid
Lubrite motor 20W-40
Mobil AFT 210
Mobil AFT 220
Mobilfluid 62
Mobilfluid 423
Mobil hydraulic oils
Mobiloil special
Mobiloil super 10W-40
NUTO oils
OC turbine oils
Peaco oils
Pennbell oils
Power-tran fluid
Quadroil series
Rando oils
Rando oils HD
Redind oils
Regal oils R & O
Rimula oils
Rotella oils
Rotella T oils
RPM Delo 200 motor oils
RPM Delo 300 motor oils
RPM Delo special motor oils
Rubilene
Shell brand
Special motor oils
Sun R & O oils
Suntac HP oils
Suntac WR oils
Sunvis 700 oils
Sunvis 800 oils
Sunvis 900 oils
Super hydraulic oils
Supreme motor oils
Tellus oils
Teresstic oils
Torque fluids
Torque fluid 47
Torque fluid 56
Tractor hydraulic fluid
Union ATF Dexron
Union ATF type F
Union C-2 fluid
Union C-P oil
Union custom motor oil
Union gas engine oil
Union Guardol motor oil
Union heavy duty motor oil
Union hydraulic oil AW
Union hydraulic tractor fluid
Union premium motor oil
Union S-1 motor oil
Union special motor oil
Union super motor oil
Union torque correction fluid
Union turbine oil
Union turbine Oil XD
Union Unax
Union Unax AW
Union Unax R & O
Union Unax RX
Union Unitec motor oil
Univis J13
Univis J26
Univis P32
Vactra oils
Vitrea oils
Way lubricants
XD-3 motor oils

Water and petroleum oil emulsion (fr)

Maximum fluid temperature recommendation.

See caution on page A-12 for maximum fluid temperatures and limiting ambient temperatures.

Hose classifications (see page. A-15)

	1	2	3	4
H	+94°C (+200°F)	+121°C (+250°F)	+66°C (+150°F)	+94°C (+200°F)
LP	+94°C (+200°F)	+121°C (+250°F)	+66°C (+150°F)	+94°C (+200°F)

Fluid name
Aqualube
Astrol #587
Chevron FR Fluid D
Chrysler L-705
Citgo pacemaker invert
FR fluid
Conoco FR hydraulic fluid
Dasco IFR
Duro FR-HD
Fire resistant hydrafluid
Fire resistant hydraulic
Fluid B
FR 3110 hydraulic fluid (invert)
Fyre-safe W/O
Gulf R & D FR fluid
Houghto-safe 5046
Houghto-safe 5046W
Hulsafe 500
Hy-chock oil
Hydrasol A
Ironsides #814-A
Irus fluid 905
Kutwell 40
Masol fire resistant fluid
Meltran FR 900
Mine guard
Mobilmet S122
Penn drake hydraqua fluid
Permamul FR
Puro FR fluid
Pyrogard C
Pyrogard D
Quintolubric 957 series
Quintolubric 958 series
Regent hydrolube #670
Safoil hydraulic fluid
anti-wear
Sinclair Duro FR-HD
Solvac 1535G
Staysol FR
Sunsafe F
Union FR fluid
Union soluble oil HD
Veedol auburn FRH
Veedol auburn FRH
Concentrate

Water and glycol solution

Maximum fluid temperature recommendation.

See caution on page A-12 for maximum fluid temperatures and limiting ambient temperatures.

Hose classifications (see page. A-15)

	1	2	3	4
H	+94°C (+200°F)	+121°C (+250°F	+66°C (+150°F)	+94°C (+200°F)
LP	+94°C (+200°F)	+121°C (+250°F	+66°C (+150°F)	+94°C (+200°F)

Fluid name
Chem-trend HF-18
Chem-trend HF-20
Chevron glycol FR fluids
Citgo glycol FR fluids
Citgo glycol FR-20 XD
Citgo pacemaker
Dasco FR 150
Dasco FR 200
Dasco FR 200 B
Dasco FR 310
Fyrguard 150
Fyrguard 200
Fyre-Safe 225
Gulf FR fluid G-200
Gulf FR fluid – G series
Houghto-safe 271
Houghto-safe 416
Houghto-safe 520
Houghto-safe 525
Houghto-safe 616
Houghto-safe 620
Houghto-Safe 625
Houghto-safe 640
Hydra safe 620
Hydra safe 625
Hydraulic safety fluid 200
Hydraulic safety fluid 300
Hyspin AF-1
Hyspin AF-2
Hyspin AF-3
Maxmul
Maxmul FR
Melsyn 200
Melsyn glycol FR
Nyvac FR fluid
Nyvac FR 200 fluid
Nyvac 20 (WG)
Nyvac 30 (WG)
Park water glycol
hydraulic fluid
Pennzoil fluid FR 2X
Quintolubric 700 series
Santosafe W/G 15
Santosafe W/G 20
Santosafe W/G 30
Standard glycol FR #15
Standard glycol FR #20
Standard glycol FR #25
Ucon hydrolube 150 CP
Ucon hydrolube 200 CP
Ucon hydrolube 275 CP
Ucon hydrolube 300 CP
Ucon hydrolube 550 CP
Ucon hydrolube 900 CP
Ucon hydrolube 150 DB
Ucon hydrolube 275 DB
Ucon hydrolube 150 LT
Ucon hydrolube 200 LT
Ucon hydrolube 275 LT
Ucon hydrolube 300 LT
Ucon M-1
Ucon hydrolube 200 NM
Ucon hydrolube 300 NM

Hose selection

Fluid compatibility

Straight phosphate-ester (fr)

Maximum fluid temperature recommendation.

See caution on page A-12 for maximum fluid temperatures and limiting ambient temperatures.

Hose classifications (see page. A-15)

	1	2	3	4	6
H	U	+204°C (+400°F)	+94°C (+200°F)	U	+94°C (+200°F)
LP	U	+204°C (+400°F)	+94°C (+200°F)	U	+94°C (+200°F)

FR Fluids

Fyrquel 90
Fyrquel 150
Fyrquel 220
Fyrquel 300
Fyrquel 550
Fyrquel 1000
Fyrquel 150 R & O
Fyrquel 220 R & O
Fyrquel 550 R & O
Gulf FR Fluid P-37
Gulf FR Fluid P-40
Gulf FR Fluid P-43
Gulf FR Fluid P-45
Gulf FR Fluid P-47
Houghto-Safe 1010
Houghto-Safe 1055
Houghto-Safe 1115
Houghto-Safe 1120
Houghto-Safe 1130
Pyrogard 51
Pyrogard 53
Pyrogard 55
Safetytex 215
Skydraul 500A
Skydraul 7000
Univis P12

Ester blend turbine oils

Maximum fluid temperature recommendation.

See caution on page A-12 for maximum fluid temperatures and limiting ambient temperatures.

Hose classifications (see page. A-15)

	1	2	3	4
H	+121°C (+250°F)	+232°C (+450°F)	+94°C (+200°F)	+149°C (+300°F)
LP	+250°F	+450°F	+200°F	+300°F

Fluid name

Stauffer Jet I
Stauffer Jet II

Silicone oils

Maximum fluid temperature recommendation.

See caution on page A-12 for maximum fluid temperatures and limiting ambient temperatures.

Hose classifications (see page. A-15)

	1	2	3	4
H	+94°C (+200°F)	+204°C (+400°F)	+94°C (+200°F)	+149°C (+300°F)
LP	+121°C (+250°F)	+204°C (+400°F)	+94°C (+200°F)	+149°C (+300°F)

FR Fluids

Dow Corning 200
Fluid (100CS)
Dow Corning QF1-2023
Dow Corning 4-3600
Dow Corning 3-3672

Polyol-ester

Maximum fluid temperature recommendation.

See caution on page A-12 for maximum fluid temperatures and limiting ambient temperatures.

Hose classifications (see page. A-15)

	1	2	3	4
H	-	-	-	-
LP	+121°C (+250°F)	+232°C (+450°F)	+94°C (+200°F)	+149°C (+300°F)

FR Fluids

Quintolubric 822 Series

Lubricant compatibility chart

Lubricant	FC802	FC800	FC555	GH134	GH001
Mineral oil	Y	Y	Y	Y	Y
PAG	Y	Y	Y	Y	Y
Ester oil	Y	Y	Y	Y	Y
Alkylbenzene	Y	Y	Y	C*	C*

* Contact your Eaton or Eaton Tech Support for additional information.

Y = Compatible N = Non-compatible C=Conditional

Nomogram for determining nominal hose diameter

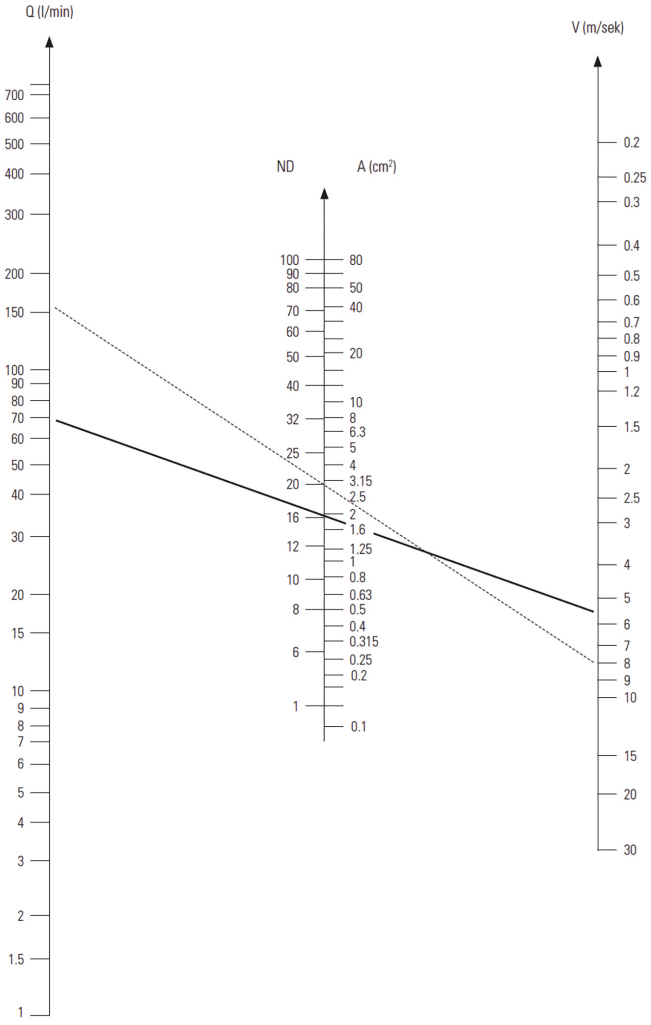
This nomogram provides a guide for determining the nomina diameter (ND) required for a hose (DIN)

Nomogramm zur Bestimmung der Schlauch-Nennweite

Dieses Nomogramm gibt einen Anhaltspunkt bei der Bestimmung der für eine Schlauchleitung erforderlichen Nennweite (ND).

Abaque donnant le diamètre nominal du tuyau

Cette abaque permet de dèterminder le diamètre nominal du tuyau par lecture directe.



Example 1 (----------)

A velocity V = 8 m/s and rate of Q = 150/min. have been selected. The straight line linking these two values on the outer scales intersects the nominal hose diameter ND20 on the middle scale.

Example 2 (_____)

A velocity V=5,5 m/s and flow rate of Q = 66 l/min. have been selected. The straight line linking these two values on the outer scales intersects the nominal hose diameter ND16 on the middle scale. No allowance is incorporated for the resistance of the pipes, elbows and valves viscosity, the effect of temperature on viscosity and other factors.

Beispiel 1 (----------)

Man wählt eine Geschwindigkeit

V= 8 m/s und eine Durchflussmenge Q = 150 l/min. Die geradlinige Verbindung dieser beiden Werte auf den äußeren Skalen ergibt auf dern mittleren Skala die Schlauch-Nenn-weite ND20

Beispiel 2 (_____)

Man wählt eine Geschwindigkeit v= 5,5 m/s und eine Durchflussmenge Q=66 l/min. Die geradlinige Verbindung dieser beiden Werte auf den äußeren Skalen ergibt auf der mittleren Skala die Schlauch Nennweite ND16. Der Widerstand der Rohre, der Krümmer und Ventile sowie Viskosität, Temperatureinflüsse auf dieViskosität und andere Faktoren sind nicht berücksischtigt.

Example 1 (----------)

On choisit une vitesse v = 8 m/s et u n débit de Q = 150 l/min. La liaison en ligne droite de ces deux valeurs sur les échelles extériures founit un diamétre nominal de tuyau de ND20 sur l'echelle centrale.

Example 2 (_____)

On choisit une vitesse V = 5,5 m/s et un débit de Q = 66 l/min. La liaison en ligne droite de ces deux valeurs sur les échelles extérieures fournit un diamétre nominla de tuyau de ND16 sur l'échelle centrale. La réesistance des tubes, des coudes et des vannes, la viscosité et les autres facteurs ne sont pas pris en consideération

Hose selection

Flow capacities pressure drop

A

Hose pressure drop

Pressure drop is expressed in milibar (mb) per 1 metre length of hose (smooth bore) without fittings.

Fluid spec. specific gravity = 0,85. Viscosity = 20 centi stokes (cs) ref MIL-H-5606 at +21°C.

Dimensions: mm in bold type inches in light type

Druckverlust in Schlauchleitungen

Druckverlust in Milibar (mb) bei 1 Meter Schlauchlänge ohne Armaturen und Durch-Flussmengen von 1 bis 1000 l/min.

Spezifikation des Mediums: spez. Gewicht 0,85, Kinematische Zähigkeit = 20 centi stokes, entsprechend MIL-H-5606 bei 21°C.

Abmessungen: in mm.

Pertes de charges dans les tuyaux

La perte de charge est exprimée en milibar (mb) pour une longueur de tuyau de 1 m, sans embout, et des débits de 1 à 1000 l/min.

Spécification du fluide: gravité = 0,85; viscosité = 20 centistokes (cs); conformément à la MIL-H-5606 à +21°C.

Diamétres réels en caractéres gras Modules en caracteres maigres

Hose pressure drop

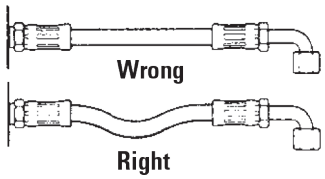
DN nach acc. DIN		**5**	**6**		**8**	**10**		**12**		**16**		**20**	**25**		**32**		**40**		**50**	**60**	**80**
DN (real)		**4,8**	**6,4**	**6,4**	**8,0**	**9,5**	**10,3**	**12,7**	**12,7**	**15,9**	**15,9**	**19,0**	**22,2**	**254**	**28,6**	**31,8**	**35,0**	**38,1**	**46,0**	**50,8**	**60,3**	**76,2**
Schlauchgröße hose size		**-04**		**-05**	**-06**		**-08**		**-10**		**-12**		**-16**		**-20**		**-24**		**-32**		**-48**	**-48**
Durchflußmenge	1	242	75.4	75,4																		
l/min. flow	2	466	146	146	66,1																	
litres per min	4	996	293	293	133	58,6																
	8	2433	613	613	250	117	85															
	10	3540	880	880	335	144	103	45,4	45,4													
	15		1776	1776	660	273	182	68,6	68,6	27,4	27,4											
	20		3080	3080	1129	462	308	116	116	41,4	41,4	18,1										
	30				2159	887	592	228	228	81,8	81,8	31,8	13,6									
	40					1496	1000	379	379	141	141	50,0	26,3	14,0								
	50						1414	555	555	192	192	75,0	41,1	21,5	12,1							
	60						1938	756	756	263	263	111	55,9	29,6	15,6	9,87						
	70							970	970	373	373	154	71,4	37,4	18,3	13,3	8,51					
	80							1250	1250	475	475	200	89,5	49,1	28,0	16,8	11,0	6,91				
	90							1531	1531	560	560	237	115	66,0	34,1	21,1	13,5	8,50	3,61			
	100									653	653	274	137	73,1	40,8	25,1	15,8	10,0	4,25	2,71		
	125									964	964	393	196	103	59,2	35,6	22,7	14,5	5.78	3,79		
	150											567	273	147	77,4	49,8	31,8	19,4	8.57	5,44		
	175											7.5	349	186	106	60,4	41,0	26,5	11,0	7,12	3,06	
	200											920	431	228	136	83,3	51,4	33,3	13,8	8,63	3,79	
	250												642	347	198	124	78,5	49,9	20,8	13,2	6,01	
	300												864	475	272	162	105	68,2	27,4	17,3	7,77	2,52
	400													832	483	303	177	118	47,7	32,4	13,9	4,54
	500													1159	690	425	250	164	66,0	43,3	19,4	6,38
	600															562	339	222	88,6	57,4	25,8	8,49
	700															733	461	301	120	78,2	34,6	11,2
	800															924	584	383	151	98,4	43,4	13,8
	900															1144	706	468	182	118	53,2	16,2
	1000																841	553	219	140	67,5	19,6

A

Hose routing and installation

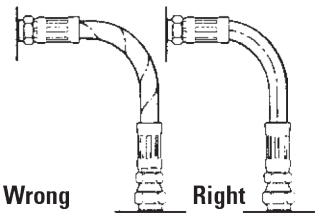
1. Provide for length change.

In straight hose installations, allow enough slack in the hose line to provide for changes in length that will occur when pressure is applied. This change in length can be from +2% to -4%.



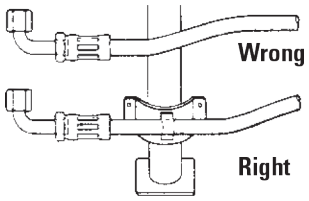
2. Avoid twisting and orient properly.

Do not twist hose during installation. This can be determined by the printed layline on the hose. Pressure applied to a twisted hose can cause hose failure or loosening of connections.



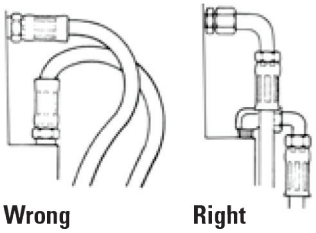
3. Protect from hazardous environment.

Keep hose away from hot parts. High ambient temperature will shorten hose life. If you can not route it away from the heat source, insulate it. (See Spring Guards page K-2)



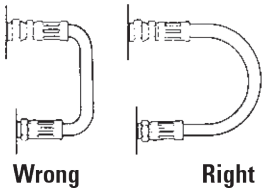
4. Avoid mechanical strain.

Use elbows and adapters in the installation to relieve strain on the assembly and to provide easier and neater installations that are accessible for inspection and maintenance.



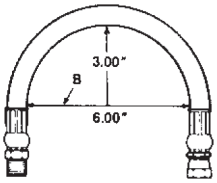
5. Use proper bend radius.

Keep the bend radius of the hose as large as possible to avoid collapsing of the hose and restriction of flow. Follow catalog specs on minimum bend radii.



6. Use proper bend radius (cont'd).

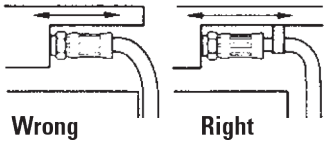
Minimum bend radius is measured on the inside bend of the hose. To determine minimum bend, divide the total distance between ends (B length) by 2. For example, B=6, minimum bend radius=3.



7. Secure for protection.

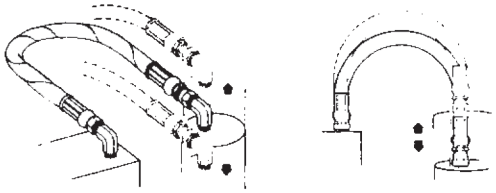
Install hose runs to avoid rubbing or abrasion. Use Areoquip Hose Clamps to support long runs of hose or to keep hose away from moving parts. It is important that the clamps not allow the hose to move. This movement will cause abrasion and premature hose failure.

See Hose Clamps page K-5.



8. Avoid improper hose movement.

Make sure relative motion of the machine components produces bending rather than twisting of the hose. Hose should be routed so that the flex is in the same plane as the equipment movement.



Refer to safety information regarding hose installation on pages A-2 and A-3.

A

Analyzing failures

Everyone in maintenance encounters hose failures. Normally, there is no problem. The hose is replaced and the equipment goes back in operation. Occasionally the failures come too frequently – the same equipment with the same problems keep popping up. At this point the task is to determine and correct the cause of these repeated failures.

Improper application

Beginning with the most obvious, the most common cause of hose failures – Improper application – compare the hose specifications with the requirements of the application. Pay particular attention to the following areas:

- The maximum operating pressure of the hose.
- The recommended temperature range of the hose.
- Whether the hose is rated for vacuum service.
- The fluid compatibility of the hose.

Check all of these areas against the requirements of the application. If they don't match up, you need to select another hose. It's a good idea at this point to call on your local hose distributor for assistance in selecting the proper hose. Eaton's distributors, for example, are well equipped to perform this service for you.

Distributor personnel attend special training courses in hydraulics and hose application conducted by the company. Or, if your problem is particularly difficult, the distributor can call on the services of Eaton's field engineering staff. The company will send in a hose and hydraulic specialist to study the problem and come up with a solution.

Improper assembly and installation

The second major cause of premature hose failure is improper assembly and installation procedures. This can involve anything from using the wrong fitting on a hose, to poor routing of the hose.

Eaton provides excellent training material that you can use to combat this problem. A little time spent in training your maintenance people could pay big dividends in reduced downtime.

You can make use of the material available from Eaton to improve your hose assembly and installation techniques.

External damage

External damage can range from abrasion and corrosion, to hose that is crushed by a lift truck. These are problems that can normally be solved simply once the cause is identified. The hose can be re-routed or clamped, or a fire sleeve or abrasion guard can be used. In the case of corrosion, the answer may be as simple as changing to a hose with a more corrosion resistant cover or re-routing the hose to avoid the corrosive element.

Faulty equipment

Too frequent or premature hose failure can be the symptom of a malfunction in your equipment. This is a factor that should be considered since prompt corrective action can sometimes avoid serious and costly equipment breakdown. Reprints of an article on "Troubleshooting hydraulic systems," which tells you how to spot problems in a hydraulic system are available from Eaton.

Faulty hose

Occasionally a failure problem will lie in the hose itself. The most likely cause of a faulty rubber hose is old age. Check the lay line on the hose to determine the date of manufacture. (2Q99 means second quarter 1999.) The hose may have exceeded its recommended shelf life. If you suspect that the problem lies in the manufacture of the hose (and don't jump to this conclusion until you have exhausted the other possibilities) contact your distributor. Given effective quality control methods, the odds of a faulty batch of hose being released for sale are extremely small. So make sure that you haven't overlooked some other problem area.

Analyzing failures

A physical examination of the failed hose can often offer a clue to the cause of the failure. Following are 22 symptoms to look for along with the conditions that could cause them:

1. Symptom: The hose tube is very hard and has cracked.

Cause: Heat has a tendency to leach the plasticizers out of the tube. This is a material that gives the hose its flexibility or plasticity.

Aerated oil causes oxidation to occur in the tube. This reaction of oxygen on a rubber product will cause it to harden. Any combination of oxygen and heat will greatly accelerate the hardening of the hose tube. Cavitation occurring inside the tube would have the same effect.

2. Symptom: The hose is cracked both externally and internally but the elastomeric materials are soft and flexible at room temperature.

Cause: The probable reason is intense cold ambient conditions while the hose was flexed. Most standard hoses are rated to –40°C (–40°F). Some AQP hoses are rated at –49°C (–55°F). Military specified hoses are generally rated to –54°C (–65°F). PTFE hose is rated to –73°C (–100°F). Some Everflex Polyon thermoplastic hoses are rated at –54°C (–65°F).

3. Symptom: The hose has burst and examination of the wire reinforcement after stripping back the cover reveals random broken wires the entire length of the hose.

Cause: This would indicate a high frequency pressure impulse condition. SAE impulse test requirements for a double wire braid reinforcement are 200,000 cycles at 133% of recommended working pressure. The SAE impulse test requirements for a four spiral wrapped reinforcement (100R12) are 500,000 cycles at 133% maximum operating and at 121°C (+250°F). If the extrapolated impulses in a system amount to over a million in a relatively short time a spiral reinforced hose would be the better choice.

Analyzing failures

4. Symptom: The hose has burst, but there is no indication of multiple broken wires the entire length of the hose. The hose may have burst in more than one place.

Cause: This would indicate that the pressure has exceeded the minimum burst strength of the hose. Either a stronger hose is needed or the hydraulic circuit has a malfunction which is causing unusually high pressure conditions.

5. Symptom: Hose has burst. An examination indicates the wire braid is rusted and the cover has been cut, abraded or deteriorated badly.

Cause: The primary function of the cover is to protect the reinforcement. Elements that may destroy or remove the hose covers are:

1. Abrasion
2. Cutting
3. Battery acid
4. Steam cleaners
5. Chemical cleaning solutions
6. Muriatic acid (for cement clean-up)
7. Salt water
8. Heat
9. Extreme cold

Once the cover protection is gone the wire reinforcement is susceptible to attack from moisture or other corrosive matter.

6. Symptom: Hose has burst on the outside bend and appears to be elliptical in the bent section. In the case of a pump supply line, the pump is noisy and very hot. The exhaust line on the pump is hard and brittle.

Cause: Violation of the minimum bend radius is most likely the problem in both cases. Check the minimum bend radius and make sure that the application is within specifications. In the case of the pump supply line partial collapse of the hose is causing the pump to cavitate creating both noise and heat. This is a most serious situation and will result in catastrophic pump failure if not corrected.

7. Symptom: Hose appears to be flattened out in one or two areas and appears to be kinked. It has burst in this area and also appears to be twisted. Cause: Torquing of a hydraulic control hose will tear loose the reinforcement layers and allow the hose to burst through the enlarged gaps between the braided plaits of wire strands. Use swivel fittings or joints to be sure there is no twisting force on a hydraulic hose.

8. Symptom: Hose type has broken loose from the reinforcement and piled up the end of the hose. In some cases it may protrude from the end of the hose fitting. Cause: The probable cause is high vacuum or the wrong hose for vacuum service. No vacuum is recommended for double wire braid, 4 and 6 spiral wire hose unless some sort of internal coil support is used. Even though a hose is rated for vacuum service, if it is kinked, flattened out or bent too sharply this type of failure may occur.

9. Symptom: Hose has burst about six to eight inches away from the end fitting. The wire braid is rusted. There are no cuts or abrasions of the outer cover.

Cause: Improper assembly of the hose end fitting allowing moisture to enter around the edge of the fitting socket. The moisture will wick through the reinforcement. The heat generated by the system will drive it out around the fitting area but six to eight inches away it will be entrapped between the inner line and outer cover causing corrosion of the wire reinforcement.

10. Symptom: There are blisters in the cover of the hose. If one pricks the blisters, oil will be found in them.

Cause: A minute pin hole in the hose tube is allowing the high pressure oil to seep between it and the cover. Eventually it will form a blister wherever the cover adhesion is weakest. In the case of a screw together reusable fitting insufficient lubrication of the hose and fitting can cause this condition because the dry tube will adhere to the rotating nipple and tear enough to allow seepage. Faulty hose can also cause this condition.

11. Symptom:

Blistering of the hose cover where a gaseous fluid is being used. Cause: The high pressure gas is effusing through the hose tube, gathering under the cover and eventually forming a blister wherever the adhesion is weakest. Specially constructed hoses are available for high pressure gaseous applications. Your supplier can advise you on the proper hose to use in these cases.

12. Symptom: Fitting blew off of the end of the hose.

Cause: It may be that the wrong fitting has been put on the hose. Recheck manufacturer's specifications and part numbers. In the case of a crimped fitting the wrong machine setting may have been used resulting in over or under crimping. The socket of a screw together fitting for multiple wire braided hose may be worn beyond its tolerance. The swaging dies in a swaged hose assembly may be worn beyond the manufacturer's tolerances. The fitting may have been applied improperly to the hose. Check manufacturer's instructions. The hose may have been installed without leaving enough slack to compensate for the possible 4% shortening that may occur when the hose is pressurized. This will impose a great force on the fitting. The hose itself may be out of tolerance.

13. Symptom: The tube of the hose is badly deteriorated with evidences of extreme swelling. In some cases the hose tube may be partially "washed out."

Cause: Indications are that the hose tube is not compatible with the agent being carried. Even though the agent is normally compatible, the addition of heat can be the catalyst that can cause inner liner deterioration. Consult your hose supplier for a compatibility list or present him with a sample of the fluid being conducted by the hose for analysis. Make sure that the operating temperatures both internal and external do not exceed recommendations.

Hose selection

Analyzing failures

14. Symptom: Hose has burst. The hose cover is badly deteriorated and the surface of the rubber is crazed.

Cause: This could be simply old age. The crazed appearance is the effect of weathering and ozone over a period of time. Try to determine the age of the hose. Some manufacturers print or emboss the cure date on the outside of the hose. As an example, Aeroquip hose would show "4Q01" which would mean that the hose was manufactured during the fourth quarter (October, November or December) of 2001.

15. Symptom: Hose is leaking at the fitting because of a crack in the metal tube adjacent to the braze on a split flange head.

Cause: Because the crack is adjacent to the braze and not in the braze this is a stress failure brought on by a hose that is trying to shorten under pressure and has insufficient slack in it to do so. We have cured dozens of these problems by lengthening the hose assembly or changing the routing to relieve the forces on the fitting.

16. Symptom: A spiral reinforced hose has burst and literally split open with the wire exploded out and badly entangled.

Cause: The hose is too short to accommodate the change in length occurring while it is pressured.

17. Symptom: Hose is badly flattened out in the burst area. The tube is very hard down stream of the burst but appears normal up stream of the burst.

Cause: The hose has been kinked either by bending it too sharply or by squashing it in some way so that a major restriction was created. As the velocity of the fluid increases through the restriction the pressure decreases to the vaporization point of the fluid being conveyed. This is commonly called cavitation, and causes heat and rapid oxidation to take place which hardens the tube of the hose down stream of the restriction.

18. Symptom: Hose has not burst but it is leaking profusely. A bisection of the hose reveals that the tube has been gouged through to the wire braid for a distance of approximately two inches.

Cause: This failure would indicate that erosion of the hose tube has taken place. A high velocity needle like fluid stream being emitted from an orifice and impinging at a single point on the hose tube will hydraulically remove a section of it. Be sure that the hose is not bent close to a port that is orificed. In some cases where high velocities are encountered particles in the fluid can cause considerable erosion in bent sections of the hose assembly.

19. Symptom: The hose fitting has been pulled out of the hose. The hose has been considerably stretched out in length. This may not be a high pressure application.

Cause: Insufficient support of the hose. It is very necessary to support very long lengths of hose, especially if they are vertical. The weight of the hose along with the weight of the fluid inside the hose in these cases is being imposed on the hose fitting. This force can be transmitted to a wire rope or chain by clamping the hose to it much like the utilities support bundles of wire from pole to pole. Be sure to leave sufficient slack in the hose between clamps to make up for the possible 4% shortening that could take place when the hose is pressurized.

20. Symptom: The hose has not burst but it is leaking profusely. An examination of the bisected hose reveals that the tube has burst inwardly.

Cause: This type of failure is commonly referred to as hose tube blow down. It is usually associated with very low viscosity fluids such as air, nitrogen, freon and other gases. What happens is that under high pressure conditions the gases will effuse into the pores of the hose tube charging them up like miniature accumulators. If the pressure is very suddenly reduced to zero the entrapped gases literally explode out of the tube often tearing holes in it. In some hose constructions a second hose tube made from a plastic such as nylon, is inserted into the hose.

A small leak will allow the gaseous fluid to seep between the two inner liners and when pressure is reduced to zero the innermost liner will collapse because the entrapped pressure around its inner diameter.

21. Symptom: PTFE hose assembly has collapsed internally in one or more places.

Cause: One of the most common causes for this is improper handling of the PTFE assembly. PTFE is a thermoplastic material which is not rubber-like. When bent sharply it simply collapses. This type of collapse is localized in on area and is radical. When the PTFE tube is folded longitudinally in one or more places this could be the result of heat (which softens the hose) along with vacuum conditions inside of it. Because of the additional tension of the wire braid, reinforcement inherent with this type of hose, there is always a radial tension on the tube trying to push it in. Rapid cycling from a very hot agent in the hose to a very cold agent in the hose can produce the same type of failure. Eaton Aeroquip offers an internal support coil that will eliminate this problem.

22. Symptom: A PTFE hose assembly has developed a pin hole leak or several pin hole leaks.

Cause: This situation occurs when a petroleum based fluid, with low viscosity, is flowing at high velocity. This condition can generate high voltage use to static electricity. The high voltage is seeking a ground connection and the only ground connection available is the braided stainless steel reinforcement. This causes an electric arc, which penetrates through the PTFE tube as it travels to the reinforcement. Specially constructed PTFE tubes are available that have enough carbon black in them so as to be conductive. They will "drain off" the static electricity and preclude this problem.

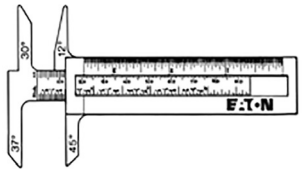
A

Fluid connectors identification

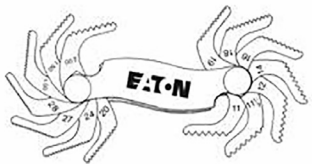
Measuring Tools: A seat angle gauge, thread pitch gauge and an I.D./O.D. caliper are necessary to make accurate measurements of commonly used connectors. Eaton offers a unique new caliper than offers the capabilities of both a caliper and a seat angle gauge in one unit.

FT1341

Identification Tool Kit



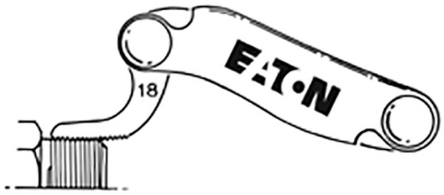
I.D./O.D. Angle gauge caliper

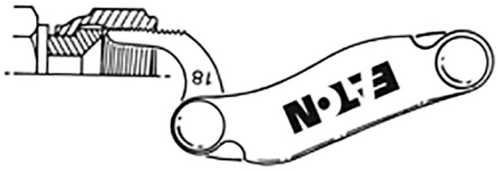


Thread pitch gauge

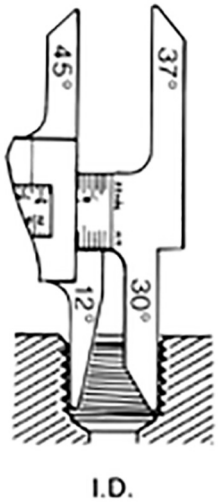
How to measure threads

Use a thread pitch gauge to determine the number of threads per inch or the distance between threads in metric connections. Place the gauge on the threads until the fit is snug. Match the measurement to the charts.





Measure the thread diameter with an I.D./O.D. caliper as shown. Match the measurements to the charts.

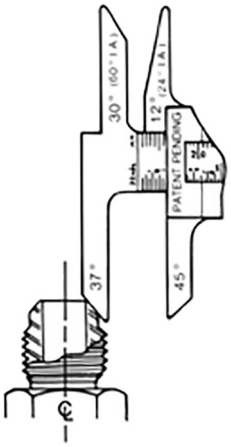


I.D.

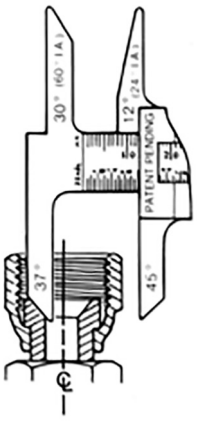
O.D.

How to measure sealing surface angles

Female connections are usually measured by inserting the gauge into the connection and placing it on the sealing surface. If the centerlines of the connection and gauge are parallel, the correct angle has been determined.



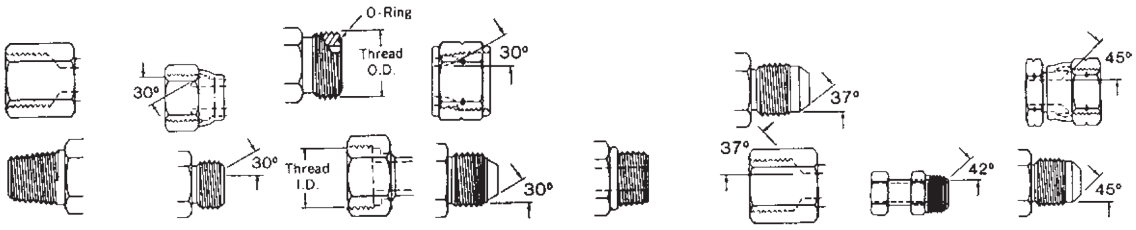
Male flare type connectors are usually measured by placing the gauge on the sealing surface. If the centerlines of the connection and gauge are parallel, the correct angle has been determined.



A

Thread size chart

The following chart is intended as a quick reference guide for thread size by dash size.

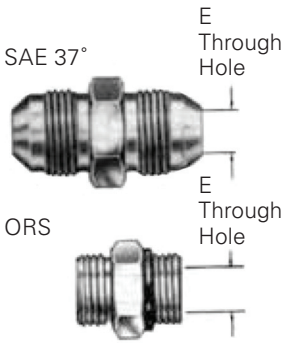


Dash size	N.P.T.F.	N.P.S.M. approx. dia.	SAE 45° auto. refrig.	SAE 37° (J.I.C.) hydraulic	SAE O-Ring boss	P.T.T. 30° automotive	SAE invert. flare	ORS
–02	1/8–27	1/8–27	5/16–24	5/16–24	5/16–24	-	5/16–24	-
–03	-	-	3/8–24	3/8–24	3/8–24	-	3/8–24	-
–04	1/4–18	1/4–18	7/16–20	7/16–20	7/16–20	-	7/16–24	9/16–18
–05	-	-	1/2–20	1/2–20	1/2–20	-	1/2–20	-
–06	3/8–18	3/8–18	5/8–18	9/16–18	9/16–18	-	5/8–18	11/16–16
–07	-	-	11/16–24	-	-	-	11/16–18	-
–08	1/2–14	1/2–14	3/4–16	3/4–16	3/4–16	-	3/4–18	1 3/16–16
–10	-	-	7/8–14	7/8–14	7/8–14	-	7/8–18	1–14
–12	3/4–14	3/4–14	1 1/16–14	1 1/16–12	1 1/16–12	-	1 1/16–16	13/16–12
–14	-	-	-	1 3/16–12	1 3/16–12	-	-	-
–16	1–11 1/2	1–11 1/2	-	1 5/16–12	1 5/16–12	1 5/16–14	-	1 7/16–12
–20	1 1/4–11 1/2	1 1/4–11 1/2	-	1 5/8–12	1 5/8–12	1 5/8–14	-	1 11/16–12
–24	1 1/2–11 1/2	1 1/2–11 1/2	-	1 7/8–12	1 7/8–12	1 7/8–14	-	2–12
–32	2–11 1/2	2–11 1/2	-	2 1/2–12	2 1/2–12	2 1/2–12	-	-
–40	2 1/2–8	2 1/2–8	-	3–12	3–12	-	-	-
–48	3–8	3–8	-	3 1/2–12	3 1/2–12	-	-	-

Through hole dimensions

All dimensions are nominal. In jump size bodies, the minimum through hole dimensions will correspond to the smallest dash size.

Dash size	E through hole			
	SAE 37°		ORS	
	mm	in	mm	in
–03	3,0	0.12	-	-
–04	4,3	0.17	4,3	0.17
–05	5,8	0.23	-	-
–06	7,6	0.30	6,6	0.26
–08	9,9	0.39	9,7	0.38
–10	12,2	0.48	12,2	0.48
–12	15,5	0.61	15,5	0.61
–16	21,3	0.84	20,6	0.81
–20	25,8	1.08	26,7	1.05
–24	33,3	1.31	33,3	1.31
–32	45,2	1.78	-	-



Premium hose

1 Wire braid construction

B

GH681 Matchmate global™

Exceeds EN 857 1SC

Triple crown
• Pressure • Temperature • Abrasion resistance

1 Million impulse cycle performance and 1/2 SAE bend radius

Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH681-3	5	4.8	0.19	11.5	0.45	250	3625	1000	14500	45	1.77	0.13	0.09
GH681-4	6	6.4	0.25	13.5	0.53	255	3700	1020	14800	50	1.97	0.14	0.09
GH681-5	8	7.9	0.31	14.5	0.57	225	3250	900	13000	55	2.17	0.15	0.10
GH681-6	10	9.5	0.37	16.9	0.67	235	3400	940	13600	63	2.48	0.22	0.15
GH681-8	12	12.7	0.50	20.4	0.80	221	3200	884	12800	90	3.54	0.29	0.19
GH681-10	16	15.9	0.63	23.0	0.91	140	2025	560	8100	100	3.94	0.28	0.19
GH681-12	19	19.0	0.75	26.7	1.05	138	2000	552	8000	120	4.72	0.37	0.25
GH681-16	25	25.4	1.00	34.9	1.37	103	1500	412	6000	150	5.91	0.54	0.36
GH681-20	31	31.8	1.25	42.3	1.67	69	1000	276	4000	210	8.27	0.68	0.46
GH681-24	38	38.1	1.50	48.9	1.93	52	750	208	3000	250	9.84	0.80	0.54
GH681-32	51	50.8	2.00	65.5	2.58	41	600	164	2400	315	12.40	1.29	0.87

English

Construction

- Synthetic rubber tube
- One wire braid reinforcement
- DURA-TUFF™ synthetic rubber cover

Temperature range

- -46°C to +126°C
- (-50°F to +259°F)

Application

Hydraulic system service with petroleum and water-based fluids, for general industrial service

Agency listings

- MSHA
- DNV-GL
- ABS
- BV
- LR
- MED
- RINA

Deutsch

Aufbau

- Synthetische Gummiseele
- 1-Durahtgeflecht Druckträger
- DURA-TUFF™ synthetische Gummidecke"

Temperaturbereich

- -46°C bis +126°C
- (-50°F bis +259°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser-Emulsionen, für allegemeine Industrieamwendungen

Typenzertifizierung

- MSHA
- DNV-GL
- ABS
- BV
- LR
- MED
- RINA

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1 tresse acier
- Tube ext. en gomme synthétique

Plage de température

- -46°C á +126°C
- (-50°F á +259°F)

Applications

Systeme hydraulique á huile minerale ou fluide abase d'eua pou

Homologations de type

- MSHA
- DNV-GL
- ABS
- BV
- LR
- MED
- RINA

Approved fittings	Product group code	Example
TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

GH781 Matchmate global™

Meets or exceeds: SAE 100R16 Type S, EN857 2SC, ISO 11237-1 Type 2SC

Triple crown
• Pressure • Temperature • Abrasion resistance

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH781-4	6	6.4	0.25	13.5	0.53	448	6500	1792	25980	50	1.97	0.33	0.22
GH781-5	8	7.9	0.31	14.5	0.57	350	5100	1400	20300	55	2.17	0.36	0.24
GH781-6	10	9.5	0.38	16.9	0.66	400	5800	1600	23200	63	2.48	0.43	0.29
GH781-8	12	12.7	0.5	20.4	0.8	345	5000	1380	20000	90	3.54	0.58	0.39
GH781-10	16	15.9	0.63	23	0.91	276	4025	1104	16010	100	3.94	0.65	0.44
GH781-12	19	19	0.75	26.7	1.05	241	3485	964	13980	120	4.72	0.79	0.53
GH781-16	25	25.4	1	34.9	1.37	207	3000	828	12010	150	5.91	1.07	0.72
GH781-20	31	31.8	1.25	42.3	1.67	172	2500	688	9980	210	8.27	1.62	1.09
GH781-24	38	38.1	1.5	48.9	1.93	138	2000	552	8000	250	9.84	2.08	1.39
GH781-32	51	50.8	2	65.5	2.58	110	1600	440	6380	315	12.4	2.82	1.89

English

Construction
- Synthetic rubber tube
- Two wire braid reinforcement
- DURA-TUFF™ synthetic rubber cover

Temperature range
- -46°C to +126°C
- (-50°F to +259°F)

Application
Hydraulic system service with petroleum and water-based fluids, for general industrial service

Agency listings
- MSHA
- DNV-GL
- ABS
- BV
- BAAINBw
- MED
- LR

Deutsch

Aufbau
- Synthetische Gummiseele
- 2-Durahtgeflecht Druckträger
- DURA-TUFF™ synthetische

Temperaturbereich
- -46°C bis +126°C
- (-50°F bis +259°F)

Anwendung
Für Hydrauliksysteme auf Mineralölbasis und Wasser-Emulsionen, für allegemeine Industrieamwendungen

Typenzertifizierung
- MSHA
- DNV-GL
- ABS
- BV
- BAAINBw
- MED
- LR

Français

Construction
- Tube int. en caout. Synth.
- Reinforcement 2 tresse acier
- Tube ext. en gomme synthétique

Plage de température
- -46°C á +126°C
- (-50°F á +259°F)

Applications
Systeme hydraulique á huile minerale ou fluide abase d'eua pou

Homologations de type
- MSHA
- DNV-GL
- ABS
- BV
- BAAINBw
- MED
- LR

Approved fittings	Product group code	Example
TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Premium hose

2 Wire braid construction

B

EC881 Dynamax™

Exceeds EN857 2SC

1 Million impulse cycle performance and 1/3 SAE bend radius

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC881-4	6	6,4	0.25	14.2	0.56	450	6525	1800	26100	33	1.30	0.32	0.21
EC881-5	8	7,9	0.31	16.0	0.63	400	5800	1600	23200	38	1.50	0.38	0.26
EC881-6	10	9.5	0.38	18.3	0.72	400	5800	1600	23200	42	1.65	0.42	0.28
EC881-8	12	12.7	0.50	21.5	0.85	360	5220	1440	20880	60	2.36	0.58	0.39
EC881-10	16	15.9	0.63	24.7	0.97	350	5075	1400	20300	68	2.68	0.75	0.50
EC881-12	19	19.0	0.75	28.6	1.13	330	4785	1320	19140	80	3.15	1.03	0.69
EC881-16	25	25.4	1.00	36.6	1.44	280	4060	1120	16240	150	5.90	1.47	0.98
EC881-20	31	31.8	1.25	44.3	1.74	172	2500	688	9980	210	8.27	1.75	1.18
EC881-24*	38	38.1	1.50	52.8	2.08	138	2000	552	7700	250	9.84	1.91	1.28
EC881-32	51	50.8	2.00	65.5	2.58	110	1600	440	6375	315	12.40	2.62	1.76

* Qualified for 800.000 cycles

English

Construction

- Synthetic rubber tube
- Two wire braid reinforcement
- DURA-TUFF™ synthetic rubber cover

Temperature range

- -46°C to +126°C
- (-50°F to +259°F)

Note: *Qualified for 800.000 impulse cycles

Application

Hydraulic system service with petroleum and water-based fluids, for general industrial service

Agency listings

- MSHA
- DNV-GL
- ABS
- BV
- LR
- MED
- RINA

Deutsch

Aufbau

- Synthetische Gummiseele
- 2-Durahtgeflecht Druckträger
- DURA-TUFF™ synthetische Gummidecke

Temperaturbereich

- -46°C bis +126°C
- (-50°F bis +259°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser-Emulsionen, für allegemeine Industrieamwendungen

Typenzertifizierung

- MSHA
- DNV-GL
- ABS
- BV
- LR
- MED
- RINA

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 2 tresse acier
- Tube ext. en DURRA-TUFF™ gomme synthétique

Plage de température

- -46°C á +126°C
- (-50°F á +259°F)

Applications

Systeme hydraulique á huile minerale ou fluide abase d'eua pou

Homologations de type

- MSHA
- DNV-GL
- ABS
- BV
- LR
- MED
- RINA

Approved fittings	Product group code	Example
TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée

GH425

Exceeds EN 856 4SP

# Part number	Hose I.D.			Hose O.D.		Max operating pressure with crimp fitting		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH425-6	10	9.5	0.38	20.9	0.87	490	7100	1960	28400	180	7.09	0.70	0.54
GH425-8	12	12.7	0.50	24.4	1.00	420	6100	1680	24400	230	9.06	0.92	0.62
GH425-10	16	15.9	0.63	28.1	1.14	420	6100	1680	24400	250	9.84	1.13	0.67
GH425-12	19	19	0.75	33	1.30	380	5500	1520	22000	300	11.81	1.50	1.01
GH425-16	25	25.4	1.00	39.8	1.61	320	4650	1280	18600	340	13.39	2.15	1.44

English

Construction

- Synthetic rubber tube
- 4-heavy wire spiral reinforcement
- DURA-TUFF™ synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)
- Short term to +120°C

Application

High Pressure Hydraulic system service with petroleum and water-based fluids, for general industrial service.

Agency listings

- MSHA
- DNV-GL
- ABS
- BV
- LR
- MED
- BAAINBw
- EN45545-2

Deutsch

Aufbau

- Synthetische Gummiseele
- 4 Spiraldrahtlagen als Druckträger
- DURA-TUFF™ synthetische Gummidecke

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)
- Kurzzeitig bis +120°C

Anwendung

Für Hochdruck-Hydrauliksysteme auf Mineralölbasis und Wasseremulsionen, für allgemeine Industrieanwendungen.

Typenzertifizierung

- MSHA
- DNV-GL
- ABS
- BV
- LR
- MED
- BAAINBw
- EN45545-2

Français

Construction

- Tube int. en caout. Synth.
- Renforcement par 4 nappes acier
- Tube ext. en DURA-TUFF™ gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)
- à court terme +120°C

Applications

Circuits hydrauliques très haute pression à base d'huiles minérales et lubrifiants ·Dépasse les performances spécifiées par la norme EN856/4SP

Homologations de type

- MSHA
- DNV-GL
- ABS
- BV
- LR
- MED
- BAAINBw
- EN45545-2

Approved fittings	Product group code	Example
One-piece 1T	1T (-6, -8, -10)	1T16DS10
One-piece 4S/6S	4S (-12, -16)	4S16FH16

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Premium hose

Spiral construction

B

GH506

Exceeds EN 856 4SH

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH506-12	19	19	0.75	33	1.30	420	6100	1680	24400	280	11.02	1.49	1.00
GH506-16	25	25.4	1	39.9	1.57	420	6100	1680	24400	340	13.39	2.05	1.38
GH506-20	31	31.8	1.25	47.1	1.85	350	5100	1400	20300	460	18.11	2.54	1.71
GH506-24	38	38.1	1.05	55.1	2.17	300	4350	1200	17400	560	22.05	3.27	2.20
GH506-32	51	50.8	2	69.7	2.74	250	3650	1000	14500	700	27.56	4.58	3.08

English

Construction

- Synthetic NBR rubber tube
- 4 high tensile spiral wire reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)
- Short term to +120°C
- Short term to +248°F

Application

- High pressure hydraulic systems with petroleum based fluids
- Chalenging applications like construction equipment, agriculture machines, stationary applications

Agency listings

- MSHA
- DNV-GL, ABS, RINA
- LR, BAAINBw, BV, EN45545-2

Deutsch

Aufbau

- Synthetische Gummiseele
- Druckträger 4 hochzugfeste Draht-Spirallagen
- Decke synth. Gummi

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)
- Kurzzeitig bis +120°C
- Kurzzeitig bis +248°F

Anwendung

Hochdruck-Hydrauliksysteme auf Mineralölbasis ·Anspruchvolle Anwendung in Baugewerbe, Landwirtschaft, stationäre Maschinen

Typenzertifizierung

- MSHA
- DNV-GL, ABS, RINA
- LR, BAAINBw, BV, EN45545-2

Français

Construction

- Tube int. en caout. NBR Synth.
- 4 nappes d'acier haute résiliance
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)
- à court terme +120°C
- à court terme +248°F

Applications

Pour circuits hydraulique strès haute pression à base d'huiles minérales ·Applications difficiles telles que les équipements de chantier, machines agricoles,application industrielles

Homologations de type

- MSHA
- DNV-GL, ABS, RINA
- LR, BAAINBw, BV, EN45545-2

Approved fittings	Product group code	Example
Internal Skive (ISC)	1W	1W12FH12
ISC Socket type	1WA	1WA12

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

FC500 X-Flex

Exceeds SAE 100 R13

1/2 SAE bend radius

Part number	Hose I.D.			Hose O.D.		Max operating pressure with crimp fitting		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC500-12	19	19	0.75	31.8	1.25	350	5100	1400	20400	121	4.75	1.28	0.86
FC500-16	25	25.4	1.00	39.1	1.54	350	5100	1400	20400	152	6.00	1.85	1.24
FC500-20	31	31.8	1.25	47	1.85	350	5100	1400	20400	210	8.25	2.50	1.68
FC500-24	38	38.1	1.50	55.1	2.17	350	5100	1400	20400	254	10.00	3.38	2.27
FC500-32	51	50.8	2.00	72.6	2.86	350	5100	1400	20400	476	18.75	6.07	4.08

English

Construction

- Synthetic rubber tube
- 4 or 6-heavy wire spiral reinforcement
- DURA-TUFF™ synthetic rubber cover

Temperature range

- -40°C to +127°C
- (-40°F to +260°F)

Application

High pressure hydraulic system service with petroleum and water-based fluids, for general industrial service.

Agency listings

- MSHA
- DNV-GL
- ABS

Deutsch

Aufbau

- Synthetische Gummiseele
- 4 oder 6 Spiraldrahtlagen als Druckträger
- DURA-TUFF™ synthetische Gummidecke

Temperaturbereich

- -40°C bis +127°C
- (-40°F bis +260°F)

Anwendung

Für Hochdruck-Hydrauliksysteme auf Mineralölbasis und Wasseremulsionen, für allgemeine Industrieanwendungen.

Typenzertifizierung

- MSHA
- DNV-GL
- ABS

Français

Construction

- Tube int. en caout. Synth.
- 4 ou 6 nappes d'acier haute résiliance
- Tube ext. en DURA-TUFF™ gomme synthétique

Plage de température

- -40°C á +127°C
- (-40°F á +260°F)

Applications

Pour circuits hydrauliques á base huiles minerals, fuel, huiles de lubrification, air*.

Homologations de type

- MSHA
- DNV-GL
- ABS

Approved fittings	Product group code	Example
One-piece 4S/6S	4S (-12 to -24)	4S16FH16
One-piece 4S/6S	6S (-32)	6S32FH32

Premium hose

Spiral construction

B

GH466

Exceeds SAE 100 R15

2 Million flex impulse cycle performance

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH466-20	31	31.8	1.25	51.3	2.02	420	6100	1680	24400	420	16.54	3.48	2.34
GH466-24	38	38.1	1.50	58.8	2.31	420	6100	1680	24400	500	19.69	4.63	3.11
GH466-32	51	50.8	2.00	72.7	2.86	420	6100	1680	24400	630	24.80	6.70	4.50

English

Construction

- Synthetic rubber tube
- 6 high tensile spiral wire layers reinforcement
- Syntethic rubber cover

Temperature range

- -40°C to +120°C
- (-40°F to +248°F)

Application

High pressure hydraulic systems with constant high working pressure for use with petroleum based fluids

Agency listings

- MSHA
- DNV-GL
- BV
- LR
- EN45545-2
- ABS

Deutsch

Aufbau

- Synthetische Gummiseele
- Druckträger 6 hochzugfeste Draht-Spirallagen
- Synthetische Gummidecke

Temperaturbereich

- -40°C bis +120°C
- (-40°F bis +248°F)

Anwendung

Hochdruck-Hydrauliksysteme mit konstant hohem Arbeitsdruck auf Mineralölbasis

Typenzertifizierung

- MSHA
- DNV-GL
- BV
- LR
- EN45545-2
- ABS

Français

Construction

- Tube int. en caout. Synth.
- 6 nappes d'acier haute résiliance
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +120°C
- (-40°F á +248°F)

Applications

Systèmes hydrauliques haute pression avec pointes de pression extrèmes à base d'huiles minérales

Homologations de type

- MSHA
- DNV-GL
- BV
- LR
- EN45545-2
- ABS

Approved fittings	Product group code	Example
Internal Skive (ISC)	1W	1W20FH20
ISC Socket type	1WB	1WB20

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC600 X-Flex

Meets or exceeds: SAE 100 R15, ISO 18752-DC

1 Million impulse cycle performance and 1/2 SAE bend radius

# Part number	Hose I.D.			Hose O.D.		Max operating pressure with crimp fitting		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC600-12	19	19.0	0.75	33.3	1.31	420	6100	1680	24400	135	5.31	1.52	1.01
EC600-16	25	25.4	1.00	39.4	1.55	420	6100	1680	24400	165	6.50	2.04	1.36
EC600-20	31	31.8	1.25	50.5	1.99	420	6100	1680	24400	225	8.86	3.89	2.61

English

Construction

- Synthetic rubber tube
- 4 or 6-heavy wire spiral reinforcement
- DURA-TUFF™ synthetic rubber cover

Temperature range

- -40°C to +121°C
- (-40°F to +250°F)

Application

High pressure hydraulic system service with petroleum and water-based fluids, for general industrial service.

Agency listings

- MSHA

Deutsch

Aufbau

- Synthetische Gummiseele
- 4 oder 6 Spiraldrahtlagen als Druckträger
- DURA-TUFF™ synthetische Gummidecke

Temperaturbereich

- -40°C bis +121°C
- (-40°F bis +250°F)

Anwendung

Für Hochdruck-Hydrauliksysteme auf Mineralölbasis und Wasseremulsionen, für allgemeine Industrieanwendungen.

Typenzertifizierung

- MSHA

Français

Construction

- Tube int. en caout. Synth.
- 4 ou 6 nappes d'acier haute résiliance
- Tube ext. en DURRA-TUFF™ gomme synthétique

Plage de température

- -40°C á +121°C
- (-40°F á +250°F)

Applications

Pour circuits hydrauliques á base huiles minerals, fuel, huiles de lubrification, air*.

Homologations de type

- MSHA

Approved fittings	Product group code	Example
Internal Skive (ISC)	1W	1W16FH16
ISC Socket type	1WD (-12, -16)	1WD16
ISC Socket type	1WE (-20)	1WE20
One-piece 4S/6S	4S (-12, -16)	4S16FH16
One-piece 4S/6S	6S (-20)	6S20FH20

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Premium abrasion resistant hose

1 Wire braid construction

B

GH681B Bruiser™

Exceeds EN 857 1SC

1 Million impulse cycle performance and 1/2 SAE bend radius

#		Hose I.D.			Hose O.D.		Max operating		Burst pressure		Minimum bend radius		Weight	
Part number		DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH681B-3		5	4.8	0.19	11.5	0.45	250	3625	1000	14500	45	1.77	0.16	0.11
GH681B-4		6	6.4	0.25	13.5	0.53	255	3700	1020	14800	50	1.97	0.21	0.14
GH681B-5		8	7.9	0.31	14.5	0.57	225	3250	900	13000	55	2.17	0.22	0.15
GH681B-6		10	9.5	0.37	16.9	0.67	235	3400	940	13600	63	2.48	0.30	0.20
GH681B-8		12	12.7	0.50	20.4	0.80	221	3200	884	12800	90	3.54	0.45	0.30
GH681B-10		16	15.9	0.63	23.0	0.91	140	2025	560	8100	100	3.94	0.44	0.30
GH681B-12		19	19.0	0.75	26.7	1.05	138	2000	552	8000	120	4.72	0.60	0.40
GH681B-16		25	25.4	1.00	34.9	1.37	103	1500	412	6000	150	5.91	0.85	0.57
GH681B-20		31	31.8	1.25	42.3	1.67	69	1000	276	4000	210	8.27	1.00	0.67
GH681B-24		38	38.1	1.50	48.9	1.93	52	750	208	3000	250	9.84	1.26	0.85
GH681B-32		51	50.8	2.00	65.5	2.58	41	600	164	2400	315	12.40	2.18	1.46

English

Construction

- Synthetic rubber tube
- One wire braid reinforcement
- High abrasion resistant BRUISER™ cover

Temperature range

- -46°C to +126°C
- (-50°F to +259°F)

Application

Hydraulic system service with petroleum and water-based fluids, for general industrial service with high abrasion protection

Agency listings

- MSHA
- DNV-GL

Deutsch

Aufbau

- Synthetische Gummiseele
- 1-Drahtgeflecht Druckträger
- Hoch-Abriebfeste BRUISER Decke

Temperaturbereich

- -46°C bis +126°C
- (-50°F bis +259°F)

Anwendung

Hochdruck Hydrauliksystem auf Mineralölbasis; generelle Anwendungen, welche einen hohen abriebsfesten Schlauch erfordern

Typenzertifizierung

- MSHA
- DNV-GL

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1 tresse acier
- BRUISER tube ext. en caout. Avec excellente résistance à l'abrasion

Plage de température

- -46°C á +126°C
- (-50°F á +259°F)

Applications

Circuits hydrauliques à base de fluides minéraux; applications dans lesquelles la conduite hydraulique est soumise à des contraintes continues d'usure et d'abrasion

Homologations de type

- MSHA
- DNV-GL

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC881B Bruiser™

Exceeds EN 857 2SC

500.000 impulse cycle performance and 1/3 SAE bend radius

# Part number	Hose I.D.			Hose O.D.		Max operating pressure with crimp fitting		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC881B-4	6	6,4	0.25	14.2	0.56	450	6525	1800	26100	33	1.30	0.32	0.21
EC881B-5	8	7,9	0.31	16	0.63	400	5800	1600	23200	38	1.50	0.38	0.26
EC881B-6	10	9.5	0.38	18.3	0.72	400	5800	1600	23200	42	1.65	0.42	0.28
EC881B-8	12	12.7	0.5	21.5	0.85	360	5220	1440	20880	60	2.36	0.58	0.39
EC881B-10	16	15.9	0.63	24.7	0.97	350	5075	1400	20300	68	2.68	0.75	0.50
EC881B-12	19	19	0.75	29.4	1.16	330	4785	1320	19140	80	3.15	1.03	0.69
EC881B-16	25	25.4	1	36.6	1.44	280	4060	1120	16240	150	5.90	1.47	0.98
EC881B-20	31	31.8	1.25	44.3	1.74	172	2500	688	9980	210	8.27	1.75	1.18
EC881B-24	38	38.1	1.50	52.8	2.08	138	2000	552	7700	250	9.84	1.91	1.28
EC881B-32	51	50.8	2.00	65.5	2.58	110	1600	440	6375	315	12.40	2.62	1.76

English

Construction

- Synthetic rubber tube
- Two wire braid reinforcement
- High abrasion resistant Bruiser™ cover

Temperature range

- -46°C to +126°C
- (-50°F to +259°F)

Application

Hydraulic system service with petroleum and water-based fluids, for general industrial service

Agency listings

- MSHA
- DNV-GL

Deutsch

Aufbau

- Synthetische Gummiseele
- 2-Drahtgeflecht Druckträger
- Hoch-Abriebfeste BRUISER Decke

Temperaturbereich

- -46°C bis +126°C
- (-50°F bis +259°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser-Emulsionen, für allegemeine Industrieamwendungen

Typenzertifizierung

- MSHA
- DNV-GL

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 2 tresse acier
- Bruiser tube ext. en caout. Avec excellente résistance à l'abrasion

Plage de température

- -46°C á +126°C
- (-50°F á +259°F)

Applications

Systeme hydraulique á huile minerale ou fluide abase d'eua pou

Homologations de type

- MSHA
- DNV-GL

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Premium abrasion resistant hose

Spiral construction

B

GH425B Bruiser™

Exceeds EN 856 4SP

Part number	Hose I.D.			Hose O.D.		Max operating		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH425B-6	10	9.5	0.38	22.2	0.87	490	7100	1960	28400	180	7.09	0.80	0.54
GH425B-8	12	12.7	0.5	25.4	1.00	420	6100	1680	24400	230	9.06	0.92	0.62
GH425B-10	16	15.9	0.63	29	1.14	420	6100	1680	24400	250	9.84	1.00	0.67
GH425B-12	19	19	0.75	33	1.30	380	5500	1520	22000	300	11.81	1.50	1.01
GH425B-16	25	25.4	1	40.9	1.61	320	4650	1280	18600	340	13.39	2.15	1.44

English

Construction

- Synthetic rubber tube
- 4-heavy wire spiral reinforcement
- High abrasion resistant BRUISER™ cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)
- Short term to +120°C

Application

High pressure hydraulic systems with petroleum and lubricating oils · Exceeds DIN EN856/4SP performance specifications

Agency listings

- MSHA
- DNV-GL

Deutsch

Aufbau

- Synthetische Gummiseele
- 4 Spirallagen als Druckträger
- Hoch-Abriebfeste BRUISER Decke

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)
- Kurzzeitig bis +120°C

Anwendung

Hochdruck-Hydrauliksysteme auf Mineralölbasis und Schmieröle. Höhere Performance als nach DIN EN 856/4SP gefordert

Typenzertifizierung

- MSHA
- DNV-GL

Français

Construction

- Tube int. en caout. Synth.
- Renforcement par 4 nappes acier
- BRUISER tube ext. en caout. Avec excellente résistance à l'abrasion

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)
- à court terme +120°C

Applications

Circuits hydrauliques très haute pression à base d'huiles minérales et lubrifiants ·Dépasse les performances spécifiées par la norme DIN EN856/4SP

Homologations de type

- MSHA
- DNV-GL

Approved fittings	Product group code	Example
One-piece 1T	1T (-6, -8, -10)	1T16DS10
One-piece 4S/6S	4S (-12, -16)	4S16FH16

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

FC510 AQP high temperature +150°C

Exceeds SAE 100R2 performance

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC510-4	6	6.4	0.25	14.9	0.59	345	5000	1380	20000	76	3.00	0.34	0.23
FC510-6	10	9.5	0.37	18.2	0.72	275	4000	1100	16000	89	3.50	0.43	0.29
FC510-8	12	12.7	0.50	20.7	0.81	240	3500	960	14000	127	5.00	0.50	0.34
FC510-10	16	15.9	0.63	24.4	0.96	190	2750	760	11000	152	6.00	0.66	0.44
FC510-12	19	19.0	0.75	28.2	1.11	155	2250	620	9000	178	7.00	0.77	0.52
FC510-16	25	25.4	1.00	35.2	1.39	138	2000	552	8000	229	9.00	1.05	0.71
FC510-20	31	31.8	1.25	43.7	1.72	112	1625	448	6500	279	11.00	1.61	1.08

English

Construction

- AQP Elastomer tube
- Patented HI-PAC wire braid reinforcement
- Blue AQP elastomer cover

Temperature range

- -40°C to +150°C
- (-40°F to +300°F)

Application

Petroleum and fire-resistant hydraulic fluids, fuel and lubricating oils, gasoline, water and other industrial fluids.

Agency listings

- DNV-GL
- EN45545
- MED

Deutsch

Aufbau

- AQP Elastomer seele
- Patentiertes HI-PAC Drahtgeflecht
- AQP Elastomer Außendecke, blau

Temperaturbereich

- -40°C bis +150°C
- (-40°F bis +300°F)

Anwendung

Hydrauliksysteme mit mineralischen und nichtbrennbaren Hydraulikflüssigkeiten, Benzin und Schmiersysteme

Typenzertifizierung

- DNV-GL
- EN45545
- MED

Français

Construction

- Tube en élastomère AQP
- Renforcement 1 tresse HI-PAC breveté
- Robe AQP bleue

Plage de température

- -40°C á +150°C
- (-40°F á +300°F)

Applications

Circuits hydrauliques avec fluides à base de pétrole, fluides résistant au feu, combustibles et lubrifiants

Homologations de type

- DNV-GL
- EN45545
- MED

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Premium high temperature hose

2 Wire braid construction

B

GH195 AQP high temperature +150°C

Meets or exceeds: SAE 100R2A, EN 853 2ST, ISO 1436-1 Type 2ST

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH195-4	6	6.4	0.25	15.7	0.62	400	5800	1600	23200	102	4.02	0.40	0.27
GH195-6	10	9.5	0.37	19.8	0.78	345	5000	1380	20000	125	4.92	0.58	0.39
GH195-8	12	12.7	0.50	22.9	0.90	293	4250	1172	17000	180	7.09	0.68	0.46
GH195-10	16	15.9	0.63	26.3	1.04	250	3650	1000	14600	205	8.07	0.80	0.54
GH195-12	19	19.0	0.75	30.2	1.19	215	3125	860	12500	240	9.45	1.00	0.67
GH195-16	25	25.4	1.00	38.6	1.52	175	2550	700	10200	300	11.81	1.44	0.97
GH195-20	31	31.8	1.25	49.0	1.93	155	2250	620	9000	420	16.54	2.38	1.60
GH195-24	38	38.1	1.50	55.9	2.20	125	1800	500	7200	500	19.69	2.59	1.74
GH195-32	51	50.8	2.00	68.6	2.70	105	1525	420	6100	630	24.80	3.38	2.27

English

Construction

- AQP Elastomer tube
- Double wire braid reinforcement
- Blue AQP elastomer cover

Temperature range

- -40°C to +150°C
- (-40°F to +302°F)

Application

Petroleum and fire-resistant hydraulic fluids, fuel and lubricating oils, gasoline, water and other industrial fluids.

Agency listings

- ABS
- EN45545
- DNV-GL
- BV

Deutsch

Aufbau

- AQP Elastomer seele
- 2-Durahtgeflecht Druckträger
- AQP Außendecke, blau

Temperaturbereich

- -40°C bis +150°C
- (-40°F bis +302°F)

Anwendung

Hydrauliksysteme mit mineralischen und nicht brennbaren Hydraulikflüssigkeiten, Wasser-Gemische, Benzin und Schmiersysteme

Typenzertifizierung

- ABS
- EN45545
- DNV-GL
- BV

Français

Construction

- Tube int. en elastomere AQP
- Reinforcement par 2 tresses acier
- Tube ext. en AQP bleue

Plage de température

- -40°C á +150°C
- (-40°F á +302°F)

Applications

Pour circuits hydrauliques avec fluides à base de pétrole, fluides resistant au feu, fluides à base d'eau, combustibles et lubrifiants.

Homologations de type

- ABS
- EN45545
- DNV-GL
- BV

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC525 AQP high temperature +150°C

Meets SAE 100R12, EN856 R12, 4SP

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC525-12	19	19.0	0.75	31.5	1.24	345	5000	1380	20000	241.3	9.50	1.28	0.86
EC525-16	25	25.4	1.00	38.5	1.52	345	5000	1380	20000	304.8	12.00	1.73	1.16
EC525-20	31	31.8	1.25	47.5	1.87	240	3500	960	14000	419.1	16.50	2.31	1.55
EC525-24	38	38.1	1.50	54.9	2.16	240	3500	960	14000	508.0	20.00	2.96	1.99
EC525-32	51	50.8	2.00	68.5	2.70	225	3250	900	13000	635.0	25.00	4.42	2.97

English

Construction

- AQP Elastomer tube
- 4 spiral wire reinforcement
- Blue AQP elastomer cover

Temperature range

- -40°C to +150°C
- (-40°F to +302°F)

Application

Petroleum and fire-resistant hydraulic fluids, fuel and lubricating oils, gasoline, water and other industrial fluids.

Agency listings

- EN45545

Deutsch

Aufbau

- AQP Elastomer seele
- 4-Drahtspirallangen Druckträger
- AQP Außendecke, blau

Temperaturbereich

- -40°C bis +150°C
- (-40°F bis +302°F)

Anwendung

Hydrauliksysteme mit mineralischen und nicht brennbaren Hydraulikflüssigkeiten, Wasser-Gemische, Benzin und Schmiersysteme

Typenzertifizierung

- EN45545

Français

Construction

- Tube int. en elastomere AQP
- Reinforcement 4 nappes
- Tube ext. en AQP bleue

Plage de température

- -40°C á +150°C
- (-40°F á +302°F)

Applications

Pour circuits hydrauliques avec fluides à base de pétrole, fluides resistant au feu, fluides à base d'eau, combustibles et lubrifiants.

Homologations de type

- EN45545

Approved fittings	Product group code	Example
One-piece 4S/6S	4S	4S16FH16

Premium low temperature hose

2 Wire braid construction

B

GH120 MatchMate™ ICE™ -57°C

Meets or exceeds: SAE 100R16 Types, EN 857 Type 2SC

Triple crown
• Pressure • Temperature • Abrasion resistance

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH120-4	6	6.4	0.25	14.5	0.57	414	6000	1656	24000	51	2.01	0.30	0.20
GH120-6	10	9.5	0.37	18.8	0.74	345	5000	1380	20000	64	2.52	0.40	0.27
GH120-8	12	12.7	0.50	22.1	0.87	310	4500	1240	18000	89	3.50	0.58	0.39
GH120-10	16	15.9	0.63	25.4	1.00	276	4000	1104	16000	102	4.02	0.74	0.50
GH120-12	19	19.0	0.75	29.0	1.14	241	3500	964	14000	121	4.76	0.92	0.62
GH120-16	25	25.4	1.00	36.6	1.44	193	2800	772	11200	152	5.98	1.22	0.82
GH120-20	31	31.8	1.25	44.2	1.74	159	2300	636	9200	210	8.27	1.59	1.07
GH120-24	38	38.1	1.50	52.8	2.08	138	2000	552	8000	254	10.00	2.11	1.42
GH120-32	51	50.8	2.00	65.5	2.58	103	1500	412	6000	318	12.52	2.80	1.88

English

Construction

- Special low temperature synthetic rubber tube
- Two wire braid reinforcement
- DURA-TUFF™ synthetic rubber cover

Temperature range

- -57°C to +100°C
- (-70°F to +212°F)

Application

Low temperature flexing and hydraulic system service with petroleum and water based fluids For use in frigid environments on construction equipment and other mobile applications

Agency listings

- MSHA

Deutsch

Aufbau

- Synthetische Gummiseele
- 2-Durahtgeflecht Druckträger
- DURA-TUFF™ synthetische Gummidecke

Temperaturbereich

- -57°C bis +100°C
- (-70°F bis +212°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser- Emulsionen. Einsatz in Niedertemperatur-Umgebungen in Baumaschinen und anderen mobilen Arbeitsmaschinen

Typenzertifizierung

- MSHA

Français

Construction

- Tube interne et externe en composite Aeroquip spécial basse température
- Reinforcement 2 tresse acier
- Tube ext. en gomme synthétique DURA-TUFF™

Plage de température

- -57°C á +100°C
- (-70°F á +212°F)

Applications

Flexion répétée à basse température et systèmes hydrauliques à huile minérale ou fluide àbase d'eau. Utilisation en environnement base température sur engins de chantiers et autres machines mobiles.

Homologations de type

- MSHA

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC810 Ice champion™ -57°C

Meets EN856 type 4SH & SAE100 R15

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC810-06	10	9.5	0.37	22.2	0.87	420	6100	1680	24400	180	7.09	0.74	0.50
EC810-08	12	12.7	0.50	25.4	1.00	420	6100	1680	24400	230	9.06	0.95	0.64
EC810-10	16	15.9	0.63	29.0	1.14	420	6100	1680	24400	250	9.84	1.11	0.75
EC810-12	19	19.0	0.75	33.0	1.30	420	6100	1680	24400	280	11.02	1.61	1.08
EC810-16	25	25.4	1.00	39.9	1.57	420	6100	1680	24400	340	13.39	2.02	1.36
EC810-20	31	31.8	1.25	50.4	1.98	420	6100	1680	24400	420	16.54	3.55	2.39
EC810-24	38	38.1	1.50	58.3	2.30	420	6100	1680	24400	510	20.08	4.74	3.19
EC810-32	51	50.8	2.00	72.7	2.86	420	6100	1680	24400	630	24.80	6.70	4.50

English

Construction

- Synthetic rubber tube
- 4-spiral wire or 6-spiral wire reinforcement
- Synthetic rubber cover

Temperature range

- -57°C to +100°C
- (-70°F to +212°F)

Application

-Hydraulic system service with petroleum based fluids for use in cold environments on construction equipment and other mobile applications.

Agency listings

- MSHA

Deutsch

Aufbau

- Synthetische Gummiseele
- 4 bis 6 Spirallagen als Druckträger
- Synthetische Gummidecke

Temperaturbereich

- -57°C bis +100°C
- (-70°F bis +212°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis für den Einsatz in Niedertemperatur-Umgebungen in Baumaschinen und anderen mobilen Arbeitsmaschinen.

Typenzertifizierung

- MSHA

Français

Construction

- Tube int. en caout. Synth.
- 4 ou 6 nappes d'acier
- haute résiliance
- Tube ext. en gomme synthétique

Plage de température

- -57°C á +100°C
- (-70°F á +212°F)

Applications

Pour systèmes hydrauliques à huile minérale ou fluide àbase d'eau. Utilisation en environnement base température sur engins de chantiers et autres machines mobiles

Homologations de type

- MSHA

Approved fittings	Product group code	Example
Internal Skive (ISC)	1W (-12 to -32)	1W16FH16
ISC Socket type	1WA (-12, -16)	1WA16
ISC Socket type	1WB (-20, -24, 32)	1WB20
One-piece 4S/6S	4S (-12, -16)	4S16FH16
One-piece 4S/6S	6S (-20, -24, -32)	6S20FH20
One-piece 1T	1T (-6, -8, -10)	1T16DS10

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Premium

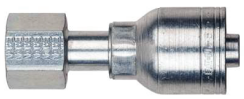
Our new core premium hoses for OEM or aftermarket use exceed industry standards for pressure, temperature and abrasion resistance, with options adapted to handle your toughest jobs. Look for Triple Crown hoses for the highest pressure and temperature ratings to extend the life of your hose.

Standard

Eaton Winner® hoses meet all industry standards for pressure, temperature and abrasion resistance, offering the right product at a competitive price point for OEM markets.

	Premium	Premium Low Temp.	Premium High Temp.	Premium Abrasion	Standard
Operating Temperature Range	High: 126°C Low: -40°C	High: 100°C Low: -57°C	High: 150°C Low: -40°C	High: 100°C Low: -40°C	High: 100°C Low: -40°C
Cover Abrasion Resistance	**DURA-TUFF™** Coverings (8x greater than standard)			**BRUISER** Coverings (700x greater than standard)	Standard Abrasion (10,000 Cycles per ISO 6945)
Bend Radius	1/2 bend	1/2 bend	Full bend	1/2 bend	1/2 bend
Impulse Life	**Eaton Premium:** All premium hoses exceed industry specifications for impulse cycles.				**Eaton Standard**
Fluid Compatibility and Rubber Compounding	**Eaton Premium**				**Eaton Standard**
Certifications	SAE ABS EN MSHA ISO DNV Customer specs U.S. Coast Guard	SAE EN MSHA Customer specs	SAE ABS EN MSHA Customer specs U.S. Coast Guard	SAE ABS EN DNV Customer specs	SAE EN MSHA Customer specs

Fittings



TTC Series

Eaton's best selling one-piece "Bite-the-wire" style hose fitting that is qualified with virtually all Aeroquip one and two wire braided hydraulic hoses.

4S/6S Spiral Series

A higher performing spiral hose assembly for the most demanding applications while using a simple more user-friendly hose and hose fitting assembly process. Industry leading class "0" cool-down leakage and higher operating performance.

Two-piece Winner

A competitive non-skive two-piece hose fitting that is qualified with the Eaton Winner standard hoses.

Standard hose

Standard hydraulic hose

Standard hose

1 Wire braid construction

C

EC110

EN 853 1SN

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC110-4	6	6.4	0.25	14.1	0.56	225	3250	900	13000	100	3.94	0.22	0.15
EC110-5	8	7.9	0.31	15.7	0.62	215	3125	860	12500	115	4.53	0.26	0.17
EC110-6	10	9.5	0.37	18.1	0.71	180	2600	720	10400	130	5.12	0.33	0.22
EC110-8	12	12.7	0.50	21.4	0.84	160	2300	640	9200	180	7.09	0.41	0.28
EC110-10	16	15.9	0.63	24.5	0.96	130	1900	520	7600	200	7.87	0.47	0.32
EC110-12	19	19.0	0.75	28.5	1.12	105	1525	420	6100	240	9.45	0.59	0.40
EC110-16	25	25.4	1.00	36.6	1.44	88	1275	352	5100	300	11.81	0.87	0.58
EC110-20	31	31.8	1.25	44.8	1.76	63	925	252	3700	420	16.54	1.20	0.81
EC110-24	38	38.1	1.50	52.0	2.05	50	725	200	2900	500	19.69	1.40	0.94
EC110-32	51	50.8	2.00	65.5	2.58	40	580	160	2320	630	24.80	1.91	1.28
EC110-40*	63	63.5	2.50	78.0	3.07	40	580	160	2320	762	30.00	2.52	1.69
EC110-48*	80	76.2	3.00	90.5	3.56	35	508	140	2032	900	35.43	2.70	1.81

English

Construction

- Synthetic rubber tube
- One wire braid reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Applications

Hydraulic system service with petroleum and water-based fluids, for general industrial service

Agency listings

- MSHA
- DNV-GL
- BAAINBw

Deutsch

Aufbau

- Synthetische Gummiseele
- 1-Durahtgeflecht Druckträger
- Synthetische Gummidecke

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser-Emulsionen, für allegemeine Industrieamwendungen

Typenzertifizierung

- MSHA
- DNV-GL
- BAAINBw

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1 tresse acier
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

Systeme hydraulique á huile minerale ou fluide abase d'eua pou

Homologations de type

- MSHA
- DNV-GL
- BAAINBw

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6
Two-pieces Winner	20411 (DKO-L)	20411-16-06WZF
Winner Socket type	00110	00110-06AEWZF

*-40 & -48 only available as bulk hose

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC115

Meets EN 857 1SC

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC115-4	6	6.4	0.25	13.5	0.53	225	3250	900	13000	50	1.97	0.18	0.12
EC115-5	8	7.9	0.31	14.5	0.57	215	3125	860	12500	55	2.17	0.20	0.13
EC115-6	10	9.5	0.37	16.9	0.67	180	2600	720	10400	63	2.48	0.26	0.17
EC115-8	12	12.7	0.50	20.4	0.80	160	2300	640	9200	90	3.54	0.34	0.23
EC115-10	16	15.9	0.63	23.0	0.91	130	1900	520	7600	100	3.94	0.42	0.28
EC115-12	19	19.0	0.75	26.7	1.05	105	1525	420	6100	120	4.72	0.50	0.34
EC115-16	25	25.4	1.00	34.9	1.37	88	1275	352	5100	160	6.30	0.74	0.50
EC115-20	31	31.8	1.25	42.4	1.67	63	925	252	3700	210	8.27	0.99	0.67
EC115-24	38	38.1	1.50	49.0	1.93	50	725	200	2900	300	11.81	1.20	0.81
EC115-32	51	50.8	2.00	62.0	2.44	40	580	160	2320	400	15.75	1.50	1.01

English

Construction

- Synthetic rubber tube
- One wire braid reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Applications

Hydraulic system service with petroleum and water-based fluids, for general industrial service

Agency listings

- MSHA
- DNV-GL
- BAAINBw

Deutsch

Aufbau

- Synthetische Gummiseele
- 1-Drahtgeflecht Druckträger
- Synthetische Gummidecke"

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser-Emulsionen, für allegemeine Industrieamwendungen

Typenzertifizierung

- MSHA
- DNV-GL
- BAAINBw

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1 tresse acier
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

Systeme hydraulique á huile minerale ou fluide abase d'eua pou

Homologations de type

- MSHA
- DNV-GL
- BAAINBw

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6
Two-pieces Winner	20411 (DKO-L)	20411-16-06WZF
Winner Socket type	00110	00110-06AEWZF

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Standard hose

2 Wire braid construction

C

EC210

EN 853 2SN

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC210-4	6	6.4	0.25	15.7	0.62	400	5800	1600	23200	100	3.94	0.38	0.26
EC210-5	8	7.9	0.31	17.3	0.68	350	5100	1400	20400	115	4.53	0.43	0.29
EC210-6	10	9.5	0.37	19.7	0.78	330	4800	1320	19200	130	5.12	0.54	0.36
EC210-8	12	12.7	0.50	23.0	0.91	275	4000	1100	16000	180	7.09	0.64	0.43
EC210-10	16	15.9	0.63	26.2	1.03	250	3650	1000	14600	200	7.87	0.75	0.50
EC210-12	19	19.0	0.75	30.1	1.19	215	3125	860	12500	240	9.45	0.93	0.62
EC210-16	25	25.4	1.00	38.9	1.53	165	2400	660	9600	300	11.81	1.29	0.87
EC210-20	31	31.8	1.25	49.5	1.95	125	1800	500	7200	420	16.54	1.89	1.27
EC210-24	38	38.1	1.50	55.9	2.20	90	1300	360	5200	500	19.69	2.10	1.41
EC210-32	51	50.8	2.00	68.6	2.70	80	1150	320	4600	630	24.80	2.76	1.85
EC210-40*	63	63.5	2.50	81.0	3.19	69	1000	276	4000	760	29.92	3.80	2.55
EC210-48*	80	76.2	3.00	93.0	3.66	50	725	200	2900	900	35.43	4.03	2.71

English

Construction

- Synthetic rubber tube
- Two wire braid reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Applications

Hydraulic system service with petroleum and water-based fluids, for general industrial service

Agency listings

- MSHA
- DNV-GL
- BAAINBw

Deutsch

Aufbau

- Synthetische Gummiseele
- 2-Durahtgeflecht Druckträger
- Synthetische Gummidecke

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser-Emulsionen, für allegemeine Industrieamwendungen

Typenzertifizierung

- MSHA
- DNV-GL
- BAAINBw

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 2 tresse acier
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

Systeme hydraulique á huile minerale ou fluide abase d'eua pou

Homologations de type

- MSHA
- DNV-GL
- BAAINBw

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6
Two-pieces Winner	20411 (DKO-L)	20411-16-06WZF
Winner Socket type	03310	03310-06EWZF

*-40 & -48 only available as bulk hose

Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC215

Meets EN 857 2SC

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC215-4	6	6.4	0.25	14.2	0.56	400	5800	1600	23200	50	1.97	0.28	0.19
EC215-5	8	7.9	0.31	16.0	0.63	345	5000	1380	20000	55	2.17	0.33	0.22
EC215-6	10	9.5	0.37	18.3	0.72	330	4800	1320	19200	65	2.56	0.41	0.28
EC215-8	12	12.7	0.50	21.5	0.85	275	4000	1100	16000	90	3.54	0.57	0.38
EC215-10	16	15.9	0.63	24.7	0.97	250	3650	1000	14600	100	3.94	0.68	0.46
EC215-12	19	19.0	0.75	28.6	1.13	215	3125	860	12500	120	4.72	0.81	0.54
EC215-16	25	25.4	1.00	36.6	1.44	165	2400	660	9600	160	6.30	1.17	0.79
EC215-20	31	31.8	1.25	45.1	1.78	125	1800	500	7200	250	9.84	1.56	1.05
EC215-24	38	38.1	1.50	52.3	2.06	100	1450	400	5800	300	11.81	1.81	1.22
EC215-32	51	50.8	2.00	64.2	2.53	90	1300	360	5200	400	15.75	2.36	1.59

English

Construction

- Synthetic rubber tube
- Two wire braid reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Applications

Hydraulic system service with petroleum and water-based fluids, for general industrial service

Agency listings

- MSHA
- DNV-GL
- BAAINBw

Deutsch

Aufbau

- Synthetische Gummiseele
- 2-Durahtgeflecht Druckträger
- Synthetische Gummidecke

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser-Emulsionen, für allegemeine Industrieamwendungen

Typenzertifizierung

- MSHA
- DNV-GL
- BAAINBw

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 2 tresse acier
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

Systeme hydraulique á huile minerale ou fluide abase d'eua pou

Homologations de type

- MSHA
- DNV-GL
- BAAINBw

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6
Two-pieces Winner	20411 (DKO-L)	20411-16-06WZF
Winner Socket type	03310	03310-06EWZF

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Standard hose

Spiral construction

C

EC426

Meets EN 856 4SP

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC426-6	10	9.5	0.37	22.2	0.87	445	6450	1780	25800	180	7.09	0.73	0.49
EC426-8	12	12.7	0.50	25.4	1.00	415	6000	1660	24000	230	9.06	0.88	0.59
EC426-10	16	15.9	0.63	29.0	1.14	350	5100	1400	20400	250	9.84	1.04	0.70
EC426-12	19	19.0	0.75	33.0	1.30	350	5100	1400	20400	300	11.81	1.47	0.99
EC426-16	25	25.4	1.00	40.9	1.61	280	4050	1120	16200	340	13.39	1.90	1.28
EC426-20	31	31.8	1.25	52.4	2.06	210	3050	840	12200	460	18.11	2.93	1.97

English

Construction

- Synthetic rubber tube
- 4 high tensile spiral wire reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

Hydraulic system service with petroleum and water-based fluids, for general industrial service

Agency listings

- MSHA
- DNV-GL

Deutsch

Aufbau

- Synthetische Gummiseele
- Druckträger 4 hochzugfeste Draht-Spirallagen
- Decke synth. Gummi

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser- Emulsionen, für allegemeinelndustrieam wendungen

Typenzertifizierung

- MSHA
- DNV-GL

Français

Construction

- Tube int. en caout. Synth.
- 4 nappes d'acier haute résiliance
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

Pour circuits hydrauliques á base, huiles minerals, fuel, huiles de lubrification, air*.

Homologations de type

- MSHA
- DNV-GL

Approved fittings	Product group code	Example
One-piece 1T	1T (-6, -8, -10)	1T16DS10
One-piece 4S/6S	4S (-12, -16, -20)	4S16FH16

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC512

Meets EN 856 4SH

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC512-12	19	19.0	0.75	33.0	1.30	420	6100	1680	24400	280	11.02	1.47	0.99
EC512-16	25	25.4	1.00	39.9	1.57	380	5500	1520	22000	340	13.39	2.04	1.37
EC512-20	31	31.8	1.25	47.1	1.85	350	5100	1400	20400	460	18.11	2.39	1.61
EC512-24	38	38.1	1.50	55.1	2.17	290	4200	1160	16800	560	22.05	3.19	2.14
EC512-32	51	50.8	2.00	69.7	2.74	250	3650	1000	14600	700	27.56	4.37	2.94

English

Construction

- Synthetic rubber tube
- 4 high tensile spiral wire reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

Hydraulic system service with petroleum and water-based fluids, for general industrial service

Agency listings

- MSHA
- DNV-GL

Deutsch

Aufbau

- Synthetische Gummiseele
- Druckträger 4 hochzugfeste Draht-Spirallagen
- Decke synth. Gummi

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser- Emulsionen, für allegemeinelndustrieam wendungen

Typenzertifizierung

- MSHA
- DNV-GL

Français

Construction

- Tube int. en caout. Synth.
- 4 nappes d'acier haute résiliance,
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

Pour circuits hydrauliques á base, huiles minerals, fuel, huiles de lubrification, air*.

Homologations de type

- MSHA
- DNV-GL

Approved fittings	Product group code	Example
One-piece 4S/6S	4S	4S16FH16

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Standard hose

Spiral construction

C

EC420

Meets SAE 100 R13

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC420-12	19	19.0	0.75	33.2	1.31	350	5100	1400	20400	240	9.45	1.54	1.03
EC420-16	25	25.4	1.00	39.9	1.57	350	5100	1400	20400	300	11.81	2.01	1.35
EC420-20	31	31.8	1.25	51.3	2.02	350	5100	1400	20400	420	16.54	3.78	2.54
EC420-24	38	38.1	1.50	58.8	2.31	350	5100	1400	20400	500	19.69	4.73	3.18
EC420-32	51	50.8	2.00	72.7	2.86	350	5100	1400	20400	630	24.80	7.26	4.88

English

Construction

- Synthetic rubber tube
- 4 or 6-heavy wire spiral reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +121°C
- (-40°F to +250°F)

Application

High pressure hydraulic systems with constant high working pressure for use with petroleum based fluids

Agency listings

- MSHA
- DNV-GL

Deutsch

Aufbau

- Synthetische Gummiseele
- 4 oder 6 Spiraldrahtlagen als Druckträger
- synthetische Gummidecke

Temperaturbereich

- -40°C bis +121°C
- (-40°F bis +250°F)

Anwendung

Hochdruck-Hydrauliksysteme mit konstant hohem Arbeitsdruck auf Mineralölbasis

Typenzertifizierung

- MSHA
- DNV-GL

Français

Construction

- Tube int. en caout. Synth.
- 4 ou 6 nappes d'acier haute résiliance
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +121°C
- (-40°F á +250°F)

Applications

Systèmes hydrauliques haute pression avec pointes de pression extrèmes à base d'huiles minérales

Homologations de type

- MSHA
- DNV-GL

Approved fittings	Product group code	Example
One-piece 4S/6S	4S (-12, -16)	4S16FH16
One-piece 4S/6S	6S (-20, -24, -32)	6S32FH32

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC615

Meets SAE 100 R15

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC615-16	25	25.4	1.00	39.9	1.57	420	6100	1680	24400	330	12.99	2.00	1.34
EC615-20	31	31.8	1.25	51.3	2.02	420	6100	1680	24400	445	17.52	3.77	2.53
EC615-24	38	38.1	1.50	58.8	2.31	420	6100	1680	24400	530	20.87	5.17	3.47
EC615-32*	51	50.8	2.00	72.8	2.87	420	6100	1680	24400	600	23.62	7.26	4.88

English

Construction

- Synthetic rubber tube
- 4 or 6-heavy wire spiral reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +121°C
- (-40°F to +250°F)

Application

High pressure hydraulic systems with constant high working pressure for use with petroleum based fluids

Agency listings

- MSHA
- DNV-GL

Deutsch

Aufbau

- Synthetische Gummiseele
- 4 oder 6 Spiraldrahtlagen als Druckträger
- synthetische Gummidecke

Temperaturbereich

- -40°C bis +121°C
- (-40°F bis +250°F)

Anwendung

Hochdruck-Hydrauliksysteme mit konstant hohem Arbeitsdruck auf Mineralölbasis

Typenzertifizierung

- MSHA
- DNV-GL

Français

Construction

- Tube int. en caout. Synth.
- 4 ou 6 nappes d'acier haute résiliance
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +121°C
- (-40°F á +250°F)

Applications

Systèmes hydrauliques haute pression avec pointes de pression extrèmes à base d'huiles minérales

Homologations de type

- MSHA
- DNV-GL

Approved fittings	Product group code	Example
One-piece 4S/6S	4S (-16)	4S16FH16
One-piece 4S/6S	6S (-20, -24)	6S20FH20

*-32 available only as bulk hose

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

Specialty hydraulic hose

GH585

EN 854 2TE

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH585-3	5	4.8	0.19	11.8	0.46	80	1160	320	4640	35	1.38	0.12	0.08
GH585-4	6	6.4	0.25	13.4	0.53	75	1088	300	4350	40	1.57	0.14	0.09
GH585-5	8	7.9	0.31	14.9	0.59	68	986	272	3944	50	1.97	0.17	0.11
GH585-6	10	9.5	0.37	16.5	0.65	63	914	252	3654	60	2.36	0.18	0.12
GH585-8	12	12.7	0.50	19.7	0.78	58	841	232	3364	70	2.76	0.22	0.15
GH585-10	16	15.9	0.63	23.9	0.94	50	725	200	2900	90	3.54	0.30	0.20
GH585-12	19	19.0	0.75	27.0	1.06	45	653	180	2610	110	4.33	0.35	0.24
GH585-16	25	25.4	1.00	34.4	1.35	40	580	160	2320	150	5.91	0.49	0.33

English

Construction

- Synthetic NBR rubber tube
- Textile reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C (up to +125°C)
- (-40°F to +212°F)
- Air* up to +70°C

Application

Hydraulic systems with petroleum base fluids for fuel and lubricating oils, air* and water

Agency listings

- MSHA

Deutsch

Aufbau

- Synthetische Gummiseele, NBR
- Textileinlagen Druckträger
- Synth. Gummidecke

Temperaturbereich

- -40°C bis +100°C (max +125°C)
- (-40°F bis +212°F)
- Luft* max. +70°C

Anwendung

Für Hydrauliksysteme auf Mineralölbasis, leichtes Heizöl, Schmieröl, Luft* und Wasser.

Typenzertifizierung

- MSHA

Français

Construction

- Tube int. en NBR
- Reinforcement 1 tresse textile
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C (jusqu'à +125°C)
- (-40°F á +212°F)
- Air* jusqu'à +70°C

Applications

Pour circuits hydrauliques á base, 'huiles minerals, fuel, huiles de lubrification, air* et eau.

Homologations de type

- MSHA

Approved fittings	Product group code	Example
One-piece OTC	1G	1G10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

Textile braid construction

D

GH586

Meets EN 854 3TE

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH586-4	6	6.4	0.25	14.4	0.57	145	2103	580	8410	45	1.77	0.17	0.11
GH586-5	8	7.9	0.31	16.9	0.67	130	1885	520	7540	55	2.17	0.27	0.18
GH586-6	10	9.5	0.37	18.5	0.73	110	1595	440	6380	70	2.76	0.27	0.18
GH586-8	12	12.7	0.50	21.7	0.85	93	1349	372	5394	85	3.35	0.34	0.23
GH586-10	16	15.9	0.63	26.4	1.04	80	1160	320	4640	105	4.13	0.48	0.32
GH586-12	19	19.0	0.75	29.0	1.14	70	1015	280	4060	130	5.12	0.49	0.33
GH586-16	25	25.4	1.00	35.9	1.41	55	798	220	3190	150	5.91	0.69	0.46
GH586-20	31	31.8	1.25	42.3	1.67	45	653	180	2610	190	7.48	0.85	0.57

English

Construction

- Synthetic NBR rubber tube
- Textile reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C (up to +125°C)
- (-40°F to +212°F)
- Air* up to +70°C

Application

Hydraulic systems with petroleum base fluids for fuel and lubricating oils, air* and water

Agency listings

- MSHA
- BAAINBw

Deutsch

Aufbau

- Synthetische Gummiseele, NBR
- Textileinlagen Druckträger
- Synth. Gummidecke

Temperaturbereich

- -40°C bis +100°C (max +125°C)
- (-40°F bis +212°F)
- Luft* max. +70°C

Anwendung

Für Hydrauliksysteme auf Mineralölbasis, leichtes Heizöl, Schmieröl, Luft* und Wasser.

Typenzertifizierung

- MSHA
- BAAINBw

Français

Construction

- Tube int. en NBR
- Reinforcement 1 tresse textile
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C (jusqu'à +125°C)
- (-40°F á +212°F)
- Air* jusqu'à +70°C

Applications

Pour circuits hydrauliques á base, 'huiles minerals, fuel, huiles de lubrification, air* et eau.

Homologations de type

- MSHA
- BAAINBw

Approved fittings	Product group code	Example
One-piece OTC	1G	1G10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC109
EN45545 Railway hose

Meets EN853 1SN

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC109-04	6	6.4	0.25	11.6	0.46	225	3250	900	13000	100	3.94	0.24	0.16
EC109-05	8	7.9	0.31	13.1	0.52	215	3125	860	12500	115	4.53	0.28	0.19
EC109-06	10	9.5	0.37	15.5	0.61	180	2600	720	10400	130	5.12	0.36	0.24
EC109-08	12	12.7	0.50	18.6	0.73	160	2300	640	9200	180	7.09	0.44	0.30
EC109-10	16	15.9	0.63	21.7	0.85	130	1900	520	7600	200	7.87	0.51	0.34
EC109-12	19	19.0	0.75	25.7	1.01	105	1525	420	6100	240	9.45	0.64	0.43
EC109-16	25	25.4	1.00	33.6	1.32	88	1275	352	5100	300	11.81	0.96	0.65

English

Construction

- Synthetic rubber tube
- One wire braid reinforcement
- Black fire retardant synthetic rubber cover

Temperature range

- -40°C to +125°C
- (-40°F to +250°F)
- Air max +75°C(+165°F)
- Water max +85°C(+185°F)

Application

Hydraulic Railway systems with Petroleum and Water-Glycol Base Fluids, for lubricating oils and water

Agency listings

- EN45545
- ISO 15540

Deutsch

Aufbau

- Synthetische Gummiseele
- 1-Drahtgeflecht Druckträger
- Synth. Feuerresistente Gummidecke

Temperaturbereich

- -40°C bis +125°C
- (-40°F bis +250°F)
- Luft max. +75°C (+165°F)
- Wasser max: +85°C(+185°F)

Anwendung

Hydrauliksysteme auf Mineralölbasis, leichtes Heizöl,Schmieröl, Luft* und Wasser

Typenzertifizierung

- EN45545
- ISO 15540

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1 tresse acier
- Gaine noire, retardant à la flamme, en caoutchouc synthétique

Plage de température

- -40°C á +125°C
- (-40°F á +250°F)
- Air jusqu'à +70°C(+165°F)
- Eau jusqu'à +85°C(+185°F)

Applications

Pour circuits hydrauliques á base huiles minerals, fuel, huiles de lubrification, air*.

Homologations de type

- EN45545
- ISO 15540

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

1 Wire braid construction

EC112
EN45545 Railway hose

D

Meets EN857 1SC

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC112-04	6	6.4	0.25	13.5	0.53	225	3250	900	13000	50	1.97	0.20	0.13
EC112-05	8	7.9	0.31	14.5	0.57	215	3125	860	12500	55	2.17	0.22	0.15
EC112-06	10	9.5	0.37	16.9	0.67	180	2600	720	10400	63	2.48	0.27	0.18
EC112-08	12	12.7	0.50	20.4	0.80	160	2300	640	9200	90	3.54	0.37	0.25
EC112-10	16	15.9	0.63	23.0	0.91	130	1900	520	7600	100	3.94	0.45	0.30
EC112-12	19	19.0	0.75	26.7	1.05	105	1525	420	6100	120	4.72	0.53	0.36
EC112-16	25	25.4	1.00	34.9	1.37	88	1275	352	5100	150	5.91	0.73	0.49

English

Construction

- Synthetic rubber tube
- One wire braid reinforcement
- Black fire retardant synthetic rubber cover

Temperature range

- -40°C to +125°C
- (-40°F to +250°F)
- Air max +75°C(+165°F)
- Water max +85°C(+185°F)

Application

Hydraulic Railway systems with Petroleum and Water-Glycol Base Fluids, for lubricating oils and water

Agency listings

- EN45545
- ISO 15540

Deutsch

Aufbau

- Synthetische Gummiseele
- 1-Drahtgeflecht Druckträger
- Synth. Feuerresistente Gummidecke

Temperaturbereich

- -40°C bis +125°C
- (-40°F bis +250°F)
- Luft max. +75°C (+165°F)
- Wasser max: +85°C(+185°F)

Anwendung

Hydrauliksysteme auf Mineralölbasis, leichtes Heizöl,Schmieröl, Luft*und Wasser

Typenzertifizierung

- EN45545
- ISO 15540

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1 tresse acier
- Gaine noire, retardant à la flamme, en caoutchouc synthétique

Plage de température

- -40°C á +125°C
- (-40°F á +250°F)
- Air jusqu'à +70°C(+165°F)
- Eau jusqu'à +85°C(+185°F)

Applications

Pour circuits hydrauliques á base huiles minerals, fuel, huiles de lubrification, air*.

Homologations de type

- EN45545
- ISO 15540

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC209
EN45545 Railway hose

Meets EN853 2SN

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC209-04	6	6.4	0.25	13.3	0.52	400	5800	1600	23200	100	3.94	0.41	0.28
EC209-05	8	7.9	0.31	14.8	0.58	350	5100	1400	20400	115	4.53	0.47	0.32
EC209-06	10	9.5	0.37	17.2	0.68	330	4800	1320	19200	130	5.12	0.57	0.38
EC209-08	12	12.7	0.50	20.3	0.80	275	4000	1100	16000	180	7.09	0.70	0.47
EC209-10	16	15.9	0.63	23.4	0.92	250	3600	1000	14400	200	7.87	0.81	0.54
EC209-12	19	19.0	0.75	27.4	1.08	215	3100	860	12400	240	9.45	0.98	0.66
EC209-16	25	25.4	1.00	35.2	1.39	165	2393	660	9572	300	11.81	1.38	0.93

English

Construction

- Synthetic rubber tube
- Two wire braid reinforcement
- Black fire retardant synthetic rubber cover

Temperature range

- -40°C to +125°C
- (-40°F to +250°F)
- Air max +75°C(+165°F)
- Water max +85°C(+185°F)

Application

Hydraulic Railway systems with Petroleum and Water-Glycol Base Fluids, for lubricating oils and water

Agency listings

- EN45545
- ISO 15540

Deutsch

Aufbau

- Synthetische Gummiseele
- 2-Drahtgeflecht Druckträger
- Synth. Feuerresistente Gummidecke

Temperaturbereich

- -40°C bis +125°C
- (-40°F bis +250°F)
- Luft max. +75°C (+165°F)
- Wasser max: +85°C(+185°F)

Anwendung

Hydrauliksysteme auf Mineralölbasis, leichtes Heizöl,Schmieröl, Luft* und Wasser

Typenzertifizierung

- EN45545
- ISO 15540

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1 tresse acier
- Gaine noire, retardant à la flamme, en caoutchouc synthétique

Plage de température

- -40°C á +125°C
- (-40°F á +250°F)
- Air jusqu'à +70°C(+165°F)
- Eau jusqu'à +85°C(+185°F)

Applications

Pour circuits hydrauliques á base huiles minerals, fuel, huiles de lubrification, air*.

Homologations de type

- EN45545
- ISO 15540

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

2 Wire braid construction

D

EC212
EN45545 Railway hose

Meets EN857 2SC

#		Hose I.D.		Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
Part number	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC212-04	6	6.4	0.25	14.2	0.56	400	5800	1600	23200	50	1.97	0.30	0.20
EC212-05	8	7.9	0.31	16.0	0.63	350	5100	1400	20400	55	2.17	0.37	0.25
EC212-06	10	9.5	0.37	18.3	0.72	330	4800	1320	19200	63	2.48	0.44	0.30
EC212-08	12	12.7	0.50	21.5	0.85	275	4000	1100	16000	90	3.54	0.60	0.40
EC212-10	16	15.9	0.63	24.7	0.97	250	3650	1000	14600	100	3.94	0.72	0.48
EC212-12	19	19.0	0.75	28.6	1.13	215	3125	860	12500	120	4.72	0.87	0.58
EC212-16	25	25.4	1.00	36.6	1.44	165	2400	660	9600	150	5.91	1.24	0.83
EC212-20	31	31.8	1.25	44.4	1.75	125	1800	500	7200	210	8.27	1.68	1.13
EC212-24	38	38.1	1.50	51.5	2.03	100	1450	400	5800	250	9.84	1.98	1.33
EC212-32	51	50.8	2.00	64.2	2.53	90	1305	360	5220	315	12.40	2.97	2.00

English

Construction

- Synthetic rubber tube
- Two wire braid reinforcement
- Black fire retardant synthetic rubber cover

Temperature range

- -40°C to +125°C
- (-40°F to +250°F)
- Air max +75°C(+165°F)
- Water max +85°C(+185°F)

Application

Hydraulic Railway systems with Petroleum and Water-Glycol Base Fluids, for lubricating oils and water

Agency listings

- EN45545
- ISO 15540

Deutsch

Aufbau

- Synthetische Gummiseele
- 2-Drahtgeflecht Druckträger
- Synth. Feuerresistente Gummidecke

Temperaturbereich

- -40°C bis +125°C
- (-40°F bis +250°F)
- Luft max. +75°C (+165°F)
- Wasser max: +85°C(+185°F)

Anwendung

Hydrauliksysteme auf Mineralölbasis, leichtes Heizöl,Schmieröl, Luft* und Wasser

Typenzertifizierung

- EN45545
- ISO 15540

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 2 tresse acier
- Gaine noire, retardant à la flamme, en caoutchouc synthétique

Plage de température

- -40°C á +125°C
- (-40°F á +250°F)
- Air jusqu'à +70°C(+165°F)
- Eau jusqu'à +85°C(+185°F)

Applications

Pour circuits hydrauliques á base huiles minerals, fuel, huiles de lubrification, air*.

Homologations de type

- EN45545
- ISO 15540

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC045
EN45545 Railway hose

Meets EN854 2TE

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC045-3	5	4.8	0.19	12.0	0.47	80	1168	320	4672	35	1.38	0.12	0.08
EC045-4	6	6.4	0.25	14.2	0.56	75	1095	300	4380	40	1.57	0.16	0.11
EC045-5	8	7.9	0.31	15.7	0.62	68	993	270	3971	50	1.97	0.19	0.13
EC045-6	10	9.5	0.37	17.3	0.68	63	920	250	3679	60	2.36	0.21	0.14
EC045-8	12	12.7	0.50	20.7	0.81	58	847	230	3387	70	2.76	0.26	0.17
EC045-10	16	15.9	0.63	24.9	0.98	50	730	200	2920	90	3.54	0.37	0.25
EC045-12	19	19.0	0.75	28.0	1.10	45	657	180	2628	110	4.33	0.43	0.29
EC045-16	25	25.4	1.00	35.9	1.41	40	584	160	2336	150	5.91	0.63	0.42

English

Construction

- Synthetic rubber tube
- Textile reinforcement
- Black fire retardant synthetic rubber cover

Temperature range

- -40°C to +125°C
- (-40°F to +250°F)
- Air max +75°C(+165°F)
- Water max +85°C(+185°F)

Application

Hydraulic Railway systems with Petroleum and Water-Glycol Base Fluids, for lubricating oils and water

Agency listings

- EN45545

Deutsch

Aufbau

- Synthetische Gummiseele
- Textileinalge als Druckträger
- Synth. Feuerresistente Gummidecke

Temperaturbereich

- -40°C bis +125°C
- (-40°F bis +250°F)
- Luft max. +75°C (+165°F)
- Wasser max: +85°C(+185°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser-Emulsionen, für allegeme inelndustrieamwendungen

Typenzertifizierung

- EN45545

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1 tresse acier
- Gaine noire, retardant à la flamme, en caoutchouc synthétique Tu

Plage de température

- -40°C á +125°C
- (-40°F á +250°F)
- Air jusqu'à +70°C(+165°F)
- Eau jusqu'à +85°C(+185°F)

Applications

Pour circuits hydrauliques á base huiles minerals, fuel, huiles de lubrification, air*.

Homologations de type

- EN45545

Approved fittings	Product group code	Example
One-piece OTC	1G	1G10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

1 Wire braid construction

D

EC116 Wash Down hose

Meets EN1829-2

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC116-04BU	6	6.4	0.25	13.0	0.51	300	4380	900	13140	75	2.95	0.19	0.13
EC116-05BU	8	7.9	0.31	14.4	0.57	300	4380	900	13140	85	3.35	0.21	0.14
EC116-06BU	10	9.5	0.37	16.3	0.64	300	4380	900	13140	90	3.54	0.26	0.17
EC116-08BU	12	12.7	0.50	19.8	0.78	300	4380	900	13140	130	5.12	0.36	0.24

*Product also available in GY-Grey

English

Construction

- Synthetic rubber tube
- One wire braid reinforcement
- Oil, abrasion and weather resistant special synthetic rubber smooth cover
- Available in Blue or Grey color cover

Temperature range

- -40°C to intermittent +150°C*
- (-40°F to intermittent +302°F)*
- *For Pressure washer application only

Application

High pressure cleaners for food, car wash, labor and swimming bath areas

Deutsch

Aufbau

- Synthetische Gummiseele
- 1-Drahtgeflecht Druckträger
- Öl-, abrieb- und wetterbeständige spezielle synthetische glatte decke
- Verfügbar mit blauer oder grauer Decke

Temperaturbereich

- -40°C bis kurzzeitig +150°C*
- (-40°F bis kurzzeitig +302°F)*
- *nur für Hochdruckreinigung

Anwendung

Hochdruckreinigung für Lebensmittel, Autowasch, Labor und Badeeinrichtungen.

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1 tresse acier
- Gaine lisse en caoutchouc synthétique, résistante à l'huile, à l'abrasion et aux intempéries
- Disponible avec une gaine de couleur bleue ou grise

Plage de température

- -40°C á +150°C
- (-40°F á +302°F)
- *For Pressure washer application only

Applications

Nettoyeurs à haute pression pour les environnements alimentaires, stations de lavage, zones de travail et piscines

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC216 Wash Down hose

Meets EN1829-2

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC216-04BU	6	6.4	0.25	14.2	0.56	500	7250	1500	21800	75	2.95	0.29	0.19
EC216-05BU	8	7.9	0.31	15.8	0.62	500	7250	1500	21800	85	3.35	0.34	0.23
EC216-06BU	10	9.5	0.37	18.0	0.71	500	7250	1500	21800	90	3.54	0.42	0.28
EC216-08BU	12	12.7	0.50	21.5	0.85	500	7250	1500	21800	130	5.12	0.58	0.39

*Product also available in GY-Grey

English

Construction

- Synthetic rubber tube
- Two wire braid reinforcement
- Oil, abrasion and weather resistant special synthetic rubber smooth cover
- Available in Blue or Grey color cover

Temperature range

- -40°C to intermittent +150°C*
- (-40°F to intermittent +302°F)*
- *For Pressure washer application only

Application

High pressure cleaners for food, car wash, labor and swimming bath areas

Deutsch

Aufbau

- Synthetische Gummiseele
- 2-Drahtgeflecht Druckträger
- Öl-, abrieb- und wetterbeständige spezielle synthetische GLATTE DECKE
- Verfügbar mit blauer oder grauer Decke

Temperaturbereich

- -40°C bis kurzzeitig +150°C*
- (-40°F bis kurzzeitig +302°F)*
- *nur für Hochdruckreinigung

Anwendung

Hochdruckreinigung für Lebensmittel, Autowasch, Labor und Badeeinrichtungen.

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 2 tresse acier
- GAINE LISSE en caoutchouc synthétique, résistante à l'huile, à l'abrasion et aux intempéries
- Disponible avec une gaine de couleur bleue ou grise

Plage de température

- -40°C á +150°C
- (-40°F á +302°F)
- *For Pressure washer application only

Applications

Nettoyeurs à haute pression pour les environnements alimentaires, stations de lavage, zones de travail et piscines

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

Spiral construction

D

EC910 SAFESHIELD™ Waterblast

Meets: ISO 7751, EN1829-2

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC910-08*	12	12.7	0.50	25.4	1.00	1100	16000	2750	40000	229	9.00	1.12	0.75
EC910-12	19	19.0	0.75	32.8	1.29	1000	14500	2500	36250	279	11.00	1.74	1.17
EC910-16	25	25.4	1.00	39.6	1.56	700	10200	1750	25500	305	12.00	2.23	1.50

English

Construction

- Synthetic rubber tube
- 4 heavy spiral wire reinforcement
- DURA-TUFF™ synthetic rubber cover

Temperature range

- -40°C to +93°C
- (-40°F to +200°F)

Application

Waterblast service with water, water-soap emulsion.
Exceeds ISO7751 requirements.

Deutsch

Aufbau

- Synthetische Gummiseele
- 4 Spiraldrahtlagen als Druckträger
- DURA-TUFF™ synthetische Gummidecke

Temperaturbereich

- -40°C bis +93°C
- (-40°F bis +200°F)

Anwendung

Wasserstrahlanwendung mit Wasser und Wasser-Seife Emulsionen.
Übertrifft Anforderungen der ISO7751.

Français

Construction

- Tube int. en caout. Synth.
- Renforcement par 4 nappes acier
- Tube ext. en DURA-TUFF™ gomme synthétique

Plage de température

- -40°C á +93°C
- (-40°F á +200°F)

Applications

Jet d'eau, émulsion eau-savon. Dépasse les exigences ISO7751

Approved fittings	Product group code	Example
Internal Skive (ISC)	1W (-12, -16)	1W16FH16
ISC Socket type	1WA (-12, -16)	1WA16

*-08 only available as bulk hose

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

FC310 Hi-Pac mining hose

SAE 100R2 performance

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC310-3	5	4.8	0.19	12.1	0.48	350	5100	1400	20400	45	1.77	0.23	0.15
FC310-4	6	6.4	0.25	14.7	0.58	345	5000	1380	20000	50	1.97	0.28	0.19
FC310-5	8	7.9	0.31	15.9	0.63	300	4350	1200	17400	60	2.36	0.32	0.22
FC310-6	10	9.5	0.37	17.8	0.70	275	4000	1100	16000	65	2.56	0.36	0.24
FC310-8	12	12.7	0.50	20.8	0.82	240	3500	960	14000	90	3.54	0.45	0.30
FC310-10	16	15.9	0.63	24.4	0.96	190	2750	760	11000	100	3.94	0.54	0.36
FC310-12	19	19.0	0.75	27.9	1.10	155	2250	620	9000	120	4.72	0.70	0.47
FC310-16	25	25.4	1.00	35.3	1.39	138	2000	552	8000	150	5.91	0.98	0.66
FC310-20	31	31.8	1.25	44.2	1.74	112	1625	448	6500	210	8.27	1.46	0.98

English

Construction

- Synthetic NBR rubber tube
- One wire braid Hi-Pac reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)
- Air* up to +70°C

Application

Hydraulic system service with petroleum and water-based fluids, for general industrial service

Agency listings

- MSHA
- DNV-GL

Deutsch

Aufbau

- Synthetische Gummiseele, NBR
- Hi Pac Durahtgeflecht Druckträger
- Synthetische Gummidecke

Temperaturbereich

- -40°C bis +100°C
- (40°F bis +212°F)
- Luft* max.+70°C

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasser-Emulsionen, für allegemeine Industrieamwendungen

Typenzertifizierung

- MSHA
- DNV-GL

Français

Construction

- Tube int. en NBR
- Reinforcement 1 tresse acier HI Pac
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)
- Air* jusqu'à +70°C

Applications

Systeme hydraulique á huile minerale ou fluide abase d'eua pou

Homologations de type

- MSHA
- DNV-GL

Approved fittings	Product group code	Example
TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

2 Wire braid construction

D

SH222
Hi-Pac Mining Hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
SH222-4	6	6.4	0.25	15.7	0.62	400	5800	1600	23200	70	2.76	0.39	0.26
SH222-6	10	9.5	0.37	19.7	0.78	350	5100	1400	20400	90	3.54	0.56	0.38
SH222-8	12	12.7	0.50	23.0	0.91	300	4350	1200	17400	120	4.72	0.68	0.46
SH222-12	19	19.0	0.75	30.5	1.20	300	4350	1200	17400	170	6.69	1.07	0.72
SH222-16	25	25.4	1.00	37.4	1.47	240	3500	960	14000	210	8.27	1.38	0.93

English

Construction

- Synthetic NBR rubber tube
- Two wire braid reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)
- Air* up to +70°C

Application

High pressure hydraulic systems with petroleum and lubricating oils.

Agency listings

- MSHA

Deutsch

Aufbau

- Synthetische Gummiseele NBR
- Durahtgeflecht Druckträger
- Synthetische Gummidecke

Temperaturbereich

- -40°C bis +100°C
- (40°F bis +212°F)
- Luft* max.+70°C

Anwendung

Hochdruck-Hydrauliksystemeauf Mineralölbasisund Schmieröle

Typenzertifizierung

- MSHA

Français

Construction

- Tube int. en NBR
- Reinforcement 2 tresses acier
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)
- Air* jusqu'à +70°C

Applications

Pour circuits hydrauliques haute pression à base d'huiles minérales et huiles de lubrification

Homologations de type

- MSHA

Approved fittings	Product group code	Example
One-piece TTC	1A	1A10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

EC330

3 Wire braid for 4SP performance

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC330-6	10	9.5	0.37	19.7	0.78	445	6450	1780	25800	120	4.72	0.81	0.54
EC330-8	12	12.7	0.50	22.9	0.90	415	6000	1660	24000	160	6.30	0.94	0.63
EC330-10	16	15.9	0.63	26.5	1.04	350	5100	1400	20400	210	8.27	1.13	0.76
EC330-12	19	19.0	0.75	30.0	1.18	350	5100	1400	20400	260	10.24	1.49	1.00

English

Construction

- Synthetic rubber tube
- Three wire braid reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

Hydraulic system service with petroleum and water-based fluids, for construction and agriculture equipment

Agency listings

- MSHA

Deutsch

Aufbau

- Synthetische Gummiseele
- 3 Drahtgeflecht Druckträger
- Synthetische Gummidecke

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

Für Hydrauliksysteme auf Mineralölbasis und Wasseremulsionen, für Bau- und Landmaschinen

Typenzertifizierung

- MSHA

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 3 tresse acier
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

Pour circuits hydrauliques haute pression à base d'huiles minérales et huiles de lubrification

Homologations de type

- MSHA

Approved fittings	Product group code	Example
One-piece 1T	1T (-6, -8, -10)	1T16DS10
One-piece 4S/6S	4S (-12)	4S12FH12

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

Spiral construction

D

EC850 Dynamax™

500 bar hose, Exceeds SAE 100 R15

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC850-10	16	15.9	0.63	29.0	1.14	500	7250	2000	29000	200	7.87	1.23	0.83
EC850-12	19	19.0	0.75	33.3	1.31	500	7250	2000	29000	215	8.46	1.52	1.02
EC850-16	25	25.4	1.00	40.4	1.59	500	7250	2000	29000	270	10.63	2.31	1.55
EC850-20	31	31.8	1.25	50.9	2.00	500	7250	2000	29000	380	14.96	4.01	2.69

English

Construction

- Synthetic rubber tube
- 4 spiral wire in -10, -12,-16
- 6 spiral wire in -20
- DURA-TUFF™ cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

- Ultra high pressure applications
- Hydraulic systems with petroleum and water glycol based fluids
- Lubricating oils and water

Agency listings

- MSHA
- EN45545

Deutsch

Aufbau

- Synthetische Gummiseele
- 4 Spirallagen als Druckträger (-10, -12,-16)
- 6 Spirallagen als Druckträger (-20)
- DURA-TUFF™ synthetische Gummidecke

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

- Anwendungen mit sehr hohen Drücken
- Für Hydrauliksysteme auf Mineralölbasis und Wasseremulsionen
- Schmieröle und Wasser

Typenzertifizierung

- MSHA
- EN45545

Français

Construction

- Tube int. en caout. Synth.
- 4 nappes d'acier haute résiliance(-10,-12,-16)
- 6 nappes d'acier haute résiliance (-20)
- Tube ext. en DURA-TUFF™ gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

- Applications à ultra haute pression
- Systèmes hydrauliques avec fluides à base de pétrole et d'eau glycolée
- Huiles lubrifiantes et eau

Homologations de type

- MSHA
- EN45545

Approved fittings	Product group code	Example
Internal Skive (ISC)	1W	1W16FH16
ISC Socket type	1WD (-10, -12, -16)	1WD16
ISC Socket type	1WE (-20)	1WE20

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

GH507

According to EN 856 4SH/SAE 100R15 specification

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH507-20	31	31.8	1.25	46.8	1.84	420	6120	1560	22620	420	16.54	2.74	1.85

English

Construction

- Synthetic rubber tube
- 4-heavy wire spiral reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +120°C
- (-40°F to +248°F)

Application

- High pressure hydraulic systems with petroleum based fluids
- Challenging applications like construction equipment, agriculture machines, stationary applications

Agency listings

- MSHA
- DNV-GL
- MED

Deutsch

Aufbau

- Synthetische Gummiseele
- 4 Spiraldrahtlagen als Druckträger
- Synthetische Gummidecke

Temperaturbereich

- -40°C bis +120°C
- (-40°F bis +248°F)

Anwendung

- Hochdruck-Hydrauliksysteme auf Mineralölbasis ·Anspruchsvolle Anwendung in Baugewerbe, Landwirtschaft, stationäre Maschinen

Typenzertifizierung

- MSHA
- DNV-GL
- MED

Français

Construction

- Tube int. en caout. Synth.
- Renforcement par 4 nappes acier
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +120°C
- (-40°F á +248°F)

Applications

- Pour circuits hydraulique strès haute pression à base d'huiles minérales ·Applications difficiles telles que les équipements de chantier,machines agricoles,application industrielles

Homologations de type

- MSHA
- DNV-GL
- MED

Approved fittings	Product group code	Example
Internal Skive (ISC)	1W	1W20FH20
ISC Socket type	1WC	1WC20

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

Spiral construction

D

GH435

Phosphat-Ester hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH435-6	10	9.5	0.37	19.0	0.75	490		1960	0	180	7.09	0.65	0.44
GH435-8	12	12.7	0.50	21.5	0.85	420		1680	0	230	9.06	0.80	0.54
GH435-10	16	15.9	0.63	25.4	1.00	400		1600	0	250	9.84	0.95	0.64
GH435-12	19	19.0	0.75	28.8	1.13	380		1520	0	300	11.81	1.28	0.86
GH435-16	25	25.4	1.00	35.4	1.39	320		1280	0	340	13.39	1.55	1.04

English

Construction

- Polyamide tube
- 4-spiral wire reinforcement
- Synth.EPDM rubber cover

Temperature range

- -40°C to +70°C
- (-40°F to +26°F)

Application

For hydraulic systems with phosphate-ester fluids (HFD fluids) · Great compatibility against aggressive fluidssuch as phosphate ester due to the special inner tube

Deutsch

Aufbau

- Seele Polyamid
- Druckträger 4-Draht-Spirallagen
- Decke synth. Gummi EPDM

Temperaturbereich

- -40°C bis +70°C
- (-40°F bis +26°F)

Anwendung

Hydraulikanlagen mit Phosphat-Ester Flüssigkeiten der HFD-Gruppe. Besonders gute Medienbeständigkeit gegen aggressive Fluide, aufgrund der besonderen Seele

Français

Construction

- Tube int. en Polyamide
- Renforcement par 4 nappes acier
- Tube ext. Caout. Synth. EPDM

Plage de température

- -40°C á +70°C
- (-50°F á +26°F)

Applications

Pour circuits hydrauliques á base 'huiles minerals, fuel, huiles de lubrification, air*.

Approved fittings	Product group code	Example
One-piece 1T	1T (-6, -8, -10)	1T16DS10
One-piece 4S/6S	4S (-12, -16)	4S16FH16

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

FC300

Textile and wire braid hose

Meets: SAE 100R5, SAE J109, SAE J1402

DOT/FMVSS 106 type all

# Part number	Hose I.D.		Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC300-04	4.8	0.19	13.7	0.54	207	3000	828	12000	76	2.99	0.19	0.13
FC300-05	6.4	0.25	15.3	0.60	207	3000	828	12000	86	3.39	0.24	0.16
FC300-06	7.9	0.31	17.6	0.69	155	2250	620	9000	102	4.02	0.27	0.18
FC300-08	10.3	0.41	20.0	0.79	138	2000	552	8000	117	4.61	0.33	0.22
FC300-10	12.7	0.50	24.0	0.94	121	1750	484	7000	140	5.51	0.49	0.33
FC300-12	15.9	0.63	28.0	1.10	103	1500	412	6000	165	6.50	0.58	0.39
FC300-16	22.2	0.87	32.2	1.27	55	800	220	3200	187	7.36	0.55	0.37
FC300-20	28.6	1.13	38.9	1.53	43	625	172	2500	229	9.02	0.68	0.46
FC300-24	34.9	1.37	45.2	1.78	35	500	140	2000	265	10.43	0.92	0.62
FC300-32	46.0	1.81	57.6	2.27	24	350	96	1400	337	13.27	1.29	0.87
FC300-40	60.3	2.37	74.2	2.92	24	350	96	1400	610	24.02	2.13	1.43

English

Construction

- AQP Elastomer tube
- Polyester inner braid, single wire braid reinforcement
- Blue polyester braid cover

Temperature range

- -49°C to +150°C
- (-55°F to +302°F)
- Air not exceed +121°C (+250°F)

Application

Hydraulics handling petroleumbase fluids and air, gasoline, fuel and lubricating oils, fireresistant hydraulic fluids andother industrial fluids.

Agency listings

- DNV-GL
- ABS

Deutsch

Aufbau

- AQP Elastomer Seele
- Polyester Innengeflecht,1-Drahtgeflecht Druckträger
- Polyester-Außengeflecht blau

Temperaturbereich

- -49°C bis +150°C
- (-55°F bis +302°F)
- Luft max. +121°C [+250°F].

Anwendung

Für Hydrauliksysteme mit mineralischen und allen nicht brennba-ren Hydraulikflüssigkeiten, für Luft, Benzin, Rohöl, Dieselöl, Schmieröle und andere industriell verwendete Me-dien

Typenzertifizierung

- DNV-GL
- ABS

Français

Construction

- Tube intérieur en élastomère AQP
- Renforcement par une tresse polyester etune tresse acier
- Robe extérieure constituée d'une tressepolyester bleue

Plage de température

- -49°C á +150°C
- (-55°F á +302°F)
- Air jusqu'a +121°C [+250°F]

Applications

Pour circuits hydrau-liques utilisant des fluides à base de pé-trole, fluides résistant au feu, pour air, combustibles, pétrole brut et dérivés, lubrifiants et autres fluides industriels.

Homologations de type

- DNV-GL
- ABS

Approved fittings	Product group code	Example
Crimp	100R5 FJ	
Reusable	SAE100R5 style	-

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

Truck and engine maintenance - Engine and air brake

D

FC350

AQP Truck hose

Meets: SAE J1402, DOT/FMVSS 106 Type All

# Part number	Hose I.D.		Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC350-04	4.8	0.19	13.7	0.54	138	2000	552	8000	19.1	0.75	0.19	0.13
FC350-05	6.4	0.25	15.3	0.60	103	1500	412	6000	25.4	1.00	0.24	0.16
FC350-06	7.9	0.31	17.7	0.70	103	1500	412	6000	31.8	1.25	0.28	0.19
FC350-08	10.3	0.41	20.1	0.79	86	1250	344	5000	44.5	1.75	0.33	0.22
FC350-10	12.7	0.50	24.0	0.94	86	1250	344	5000	57.2	2.25	0.50	0.34
FC350-12	15.9	0.63	27.9	1.10	52	750	208	3000	69.9	2.75	0.58	0.39
FC350-16	22.2	0.87	32.3	1.27	28	400	112	1600	88.9	3.50	0.55	0.37
FC350-20	28.6	1.13	38.9	1.53	21	300	84	1200	114.3	4.50	0.68	0.46
FC350-24	34.9	1.37	46.0	1.81	17	250	68	1000	139.7	5.50	0.85	0.57

English

Construction

- AQP Elastomer tube
- Polyester inner braid, single wire braid reinforcement
- Black polyester braid cover

Temperature range

- -49°C to +150°C
- (-55°F to +302°F)
- Air not exceed +121°C(+250°F)

Application

Air, gasoline, fuel, lubricating oils and coolants

Agency listings

- DNV-GL
- ABS
- BV
- MED

Deutsch

Aufbau

- AQP Elastomer Seele
- Polyester Innengeflecht, 1-Drahtgeflecht Druckträger
- Schwarze Polyestergeflecht -Außendecke

Temperaturbereich

- -49°C bis +150°C
- (-55°F bis +302°F)
- Luft max. +121°C [+250°F].

Anwendung

Luft, Diesel, Benzin, Schmieröleund Kühlmittel

Typenzertifizierung

- DNV-GL
- ABS
- BV
- MED

Français

Construction

- Tube intérieur en élastomère AQP
- Renforcement par une tresse polyester etune tresse acier
- Robe tressée textile en polyester

Plage de température

- -49°C á +150°C
- (-55°F á +302°F)
- Air jusqu'a +121°C [+250°F]

Applications

Air, essence, combustibles, lubrifiants et liquides derefroidissement

Homologations de type

- DNV-GL
- ABS
- BV
- MED

Approved fittings	Product group code	Example
Crimp	100R5 FJ	
Reusable	SAE100R5 style	-

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

FC355

Engine and airbrake hose

Meets: SAE J1402, DOT/FMVSS 106 type all

# Part number	Hose I.D.		Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC355-04	4.8	0.19	13.7	0.54	103	1500	412	6000	19.1	0.75	0.24	0.16
FC355-05	6.4	0.25	15.2	0.60	103	1500	412	6000	25.4	1.00	0.26	0.17
FC355-06	7.9	0.31	17.8	0.70	103	1500	412	6000	31.8	1.25	0.34	0.23
FC355-08	10.3	0.41	20.1	0.79	86	1250	344	5000	44.5	1.75	0.42	0.28
FC355-10	12.7	0.50	24.1	0.95	86	1250	344	5000	57.2	2.25	0.49	0.33
FC355-12	15.9	0.63	27.9	1.10	52	750	208	3000	69.9	2.75	0.65	0.44
FC355-16	22.2	0.87	32.8	1.29	28	400	112	1600	88.9	3.50	0.68	0.46
FC355-20	28.6	1.13	39.6	1.56	21	300	84	1200	114.3	4.50	0.85	0.57
FC355-24	34.9	1.37	45.2	1.78	17	250	68	1000	139.7	5.50	1.01	0.68
FC355-32	46.0	1.81	57.4	2.26	14	200	56	800	215.9	8.50	1.44	0.97

English

Construction

- AQP Elastomer tube
- Polyester inner braid, single wire braid reinforcement
- Blue AQP elastomer cover

Temperature range

- -49°C to +150°C
- (-55°F to +302°F)
- Air not exceed +121°C(+250°F)

Application

Air, gasoline, fuel, lubricatingoils and coolants

Deutsch

Aufbau

- AQP Elastomer Seele
- Polyester Innengeflecht,1-Drahtgeflecht Druckträger
- AQP Elastomer Außendecke, blau

Temperaturbereich

- -49°C bis +150°C
- (-55°F bis +302°F)
- Luft max. +121°C [+250°F].

Anwendung

Luft, Diesel, Benzin, Schmieröleund Kühlmittel

Français

Construction

- Tube intérieur en élastomère AQP
- Renforcement par une tresse polyester etune tresse acier
- Robe AQP bleue

Plage de température

- -49°C á +150°C
- (-55°F á +302°F)
- Air jusqu'a +121°C [+250°F]

Applications

Air, essence, combustibles, lubrifiants et liquides derefroidissement

Approved fittings	Product group code	Example
Crimp	100R5 FJ	
Reusable	SAE100R5 style	-

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

Truck and engine maintenance - Fuel and oil hose

D

FC234

High temperature fuel and oil hose

Fire resistant USCG/MMT

Meets: SAE J1527 Type A1

# Part number			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC234-05	6.4	0.25	15.2	0.60	103	1500	412	6000	25	0.98	0.33	0.22
FC234-06	7.9	0.31	17.8	0.70	103	1500	412	6000	32	1.26	0.42	0.28
FC234-08	10.3	0.41	19.8	0.78	86	1250	344	5000	44	1.73	0.45	0.30
FC234-10	12.7	0.50	24.4	0.96	86	1250	344	5000	57	2.24	0.62	0.42
FC234-12	15.9	0.63	28.2	1.11	52	750	208	3000	70	2.76	0.68	0.46
FC234-16	22.2	0.87	32.8	1.29	28	400	112	1600	89	3.50	0.68	0.46

English

Construction

- AQP Elastomer tube
- Brass plated steel wire reinforcement, braide refractory insulation
- Blue AQP elastomer cover

Temperature range

- -40°C to +150°C
- (-40°F to +302°F)
- Air not exceed +121°C(+250°F)

Application

Diesel fuel, gasoline, hot lubeoil and water

Agency listings

- ABS
- DNV-GL
- BV
- LR

Deutsch

Aufbau

- AQP Elastomer Seele
- Druckträger: Stahldrahtgeflecht, vermessingt, ZwischenlageGeflecht
- AQP Elastomer Außendecke, blau

Temperaturbereich

- -40°C bis +150°C
- (-40°F bis +302°F)
- Luft max. +121°C [+250°F].

Anwendung

Kraftstoffe, Diesel, Gasohol, Kerosin, Turbinentreibstoff, Hydrauliköl, synthetische undmineralische Schmierstoffe

Typenzertifizierung

- ABS
- DNV-GL
- BV
- LR

Français

Construction

- Tube intérieur en élastomère AQP
- Renforcement 1 tresse laiton traitée et 1 tresse réfractaire
- Robe AQP bleue

Plage de température

- -40°C á +150°C
- (-40°F á +302°F)
- Air jusqu'a +121°C [+250°F]

Applications

Hydrocarbures, toutes les essences, kérosènes, gaz de turbines, gazole, ainsi que liquides de refroidissement, fluides hydrauliques, lubrifiants synthétiques et à base de pétrole

Homologations de type

- ABS
- DNV-GL
- BV
- LR

Approved fittings	Product group code	Example
Crimp	100R5 FJ	
Reusable	SAE100R5 style	-

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

FC332
AQP socketless™

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC332-04	6	6.4	0.25	13.5	0.53	20.7	300	82.8	1200	76.2	3.00	0.12	0.08
FC332-06	10	9.5	0.37	16.5	0.65	20.7	300	82.8	1200	76.2	3.00	0.18	0.12
FC332-08	12	12.7	0.50	19.8	0.78	20.7	300	82.8	1200	127	5.00	0.22	0.15
FC332-10	16	15.9	0.63	23.9	0.94	20.7	300	82.8	1200	152.4	6.00	0.31	0.21
FC332-12	19	19.0	0.75	26.9	1.06	20.7	300	82.8	1200	177.8	7.00	0.37	0.25

English

Construction

- AQP Elastomer tube
- Textile braid reinforcement
- Blue AQP elastomer cover

Temperature range

- -40°C to +150°C
- (-40°F to +302°F)
- Air not exceed +121°C(+250°F)

Application

For gasoline, fuel and lubricating oils, air and water. Not recommended for hydraulicimpulse applications and not approved for airbrake applications

Agency listings

- ABS

Deutsch

Aufbau

- AQP Elastomer Seele
- Druckträger: Textilgeflecht
- AQP Elastomer Außendecke, blau

Temperaturbereich

- -40°C bis +150°C
- (-40°F bis +302°F)
- Luft max. +121°C [+250°F].

Anwendung

Benzin, Treibstoffe, Schmieröle, Luft und Wasser.Nicht zu empfehlen für hydraulische Impuls Anwendungen und nicht zugelassen für Druckluftbremsen

Typenzertifizierung

- ABS

Français

Construction

- Tube intérieur en élastomère AQP
- Renforcement 1 tresse textile
- Robe AQP bleue

Plage de température

- -40°C á +150°C
- (-40°F á +302°F)
- Air jusqu'a +121°C [+250°F]

Applications

essence, combustible, lubrifiants, air et eau. Ne convient pas pour les circuits hydraulique dynamique et freinage pneumatique

Homologations de type

- ABS

Approved fittings	Product group code	Example
Socketless		GA15705-6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

D

2556

Low pressure SOCKETLESS™

Meets: SAE 30R2 Type 1

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
2556-4	6	6.4	0.25	13.2	0.52	25.0	365	100.0	1460	38.1	1.50	0.12	0.08
2556-6	10	9.5	0.37	16.3	0.64	21.0	305	84.0	1220	69.9	2.75	0.18	0.12
2556-8	12	12.7	0.50	19.7	0.78	21.0	305	84.0	1220	89	3.50	0.24	0.16
2556-10	16	15.9	0.63	23.9	0.94	18.0	260	72.0	1040	108.0	4.25	0.31	0.21
2556-12	19	19.0	0.75	26.9	1.06	18.0	260	72.0	1040	146.0	5.75	0.37	0.25

English

Construction

- Synthetic rubber inner tube
- Textile braid reinforcement
- Synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

For gasoline, fuel and lubricating oils, air and water

Agency listings

- ABS

Deutsch

Aufbau

- AQP Elastomer Seele
- Druckträger: Textilgeflecht
- Synth. Gummidecke

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

Benzin, Treibstoffe, Schmieröle, Luft und Wasser. Nicht zu empfehlen für hydraulische Impuls Anwendungen und nicht zugelassen für Druckluftbremsen

Typenzertifizierung

- ABS

Français

Construction

- Tube intérieur en élastomère AQP
- Renforcement 1 tresse textile
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

Essence, combustible, lubrifiants, air et eau. Ne convient pas pour les circuits hydraulique dynamique et freinage pneumatique

Homologations de type

- ABS

Approved fittings	Product group code	Example
Socketless		FJ9068-0606S

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

FC699

High Temperature fuel and oil hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC699-04	6	6.4	0.25	14.0	0.55	28	400	112	1600	31.8	1.25	0.09	0.06
FC699-06	10	9.5	0.37	16.6	0.65	28	400	112	1600	38.1	1.50	0.15	0.10
FC699-08	12	12.7	0.50	20.1	0.79	28	400	112	1600	50.8	2.00	0.19	0.13
FC699-10	16	15.9	0.63	24.4	0.96	24	350	96	1400	63.5	2.50	0.27	0.18
FC699-12	19	19.1	0.75	28.2	1.11	21	300	83	1200	101.6	4.00	0.30	0.20
FC699-16	25	25.4	1.00	33.8	1.33	17	250	69	1000	114.3	4.50	0.41	0.28

English

Construction

- AQP Elastomer tube
- Aramid inner braid
- Black polyester braid cover

Temperature range

- -40°C to +150°C
- (-40°F to +302°F)
- Air not exceed +121°C(+250°F)

Application

For gasoline, fuel and lubricating oils, air transmission oil cooler application

Deutsch

Aufbau

- AQP Elastomer Seele
- Aramid Innengeflecht
- Schwarze Polyestergeflecht -Außendecke

Temperaturbereich

- -40°C bis +150°C
- (-40°F bis +302°F)
- Luft max. +121°C [+250°F].

Anwendung

Benzin, Treibstoffe, Schmieröle und Getriebeölkühleranwendungen

Français

Construction

- Tube intérieur en élastomère AQP
- Renforcement par une tresse aramid
- Robe tressée textile en polyester

Plage de température

- -40°C á +150°C
- (-40°F á +302°F)
- Air jusqu'a +121°C [+250°F]

Applications

Essence, combustible, lubrifiants et air pour l'application de refroidisseur d'huile de transmission

Approved fittings	Product group code	Example
OTC	1G	1G16DL16

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

Truck and engine maintenance - Diesel and biodiesel hose

D

GH100 ESP™

Braided textile - diesel and biodiesel hose

Meets: ASTM D380, ASTM D6751, EN412, EN2240

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH100-04	6	6.4	0.25	13.3	0.52	28.0	400	112.0	1600	31.8	1.25	0.12	0.08
GH100-06	10	9.5	0.37	15.9	0.63	28.0	400	112.0	1600	38.1	1.50	0.15	0.10
GH100-08	12	12.7	0.50	19.1	0.75	28.0	400	112.0	1600	50.8	2.00	0.19	0.13
GH100-10	16	15.9	0.63	23.1	0.91	24.0	350	96.0	1400	63.5	2.50	0.27	0.18
GH100-12	19	19.0	0.75	27.9	1.10	24.0	350	96.0	1400	76.2	3.00	0.30	0.20

English

Construction

- Eaton developed HNBR tube
- Aramid braid reinforcement
- Fibre braid cover

Temperature range

- Up to B20
- -40°C to +150°C
- (-40°F to +302°F)
- Up to B100
- -40°C to +125°C
- (-40°F to +257°F)

Application

Engine fuel systems for diesel and biodiesel fuels. Low pressure oil applications,including syntetics for transmission oil cooler application. Qualified with ultra-low-sulfur diesel(ULSD), every blend of biodiesel up to B100

Deutsch

Aufbau

- Von Eaton entwickelte HNBR Schlauchseele
- Aramdigeflecht als Druckträger
- Geflochtene Textildecke

Temperaturbereich

- bis zu B20
- -40°C bis +150°C
- (-40°F bis +302°F)
- bis zu B100
- -40°C bis +125°C
- (-40°F bis +257°F)

Anwendung

Motorkraftstoffsysteme für Diesel- und Biodieselkraftstoffe. Niederdruckölanwendungen, einschließlich Synthetik für Getriebeölkühleranwendungen. Qualifiziert mit ultra-schwefelarmem Diesel (ULSD), jede Mischungsverhältnis von Biodiesel bis B100.

Français

Construction

- Eaton a développé le tube HNBR
- Renforcement en tresse aramide
- Gaine tressée fibre

Plage de température

- Up to B20
- -40°C to +150°C
- (-40°F to +302°F)
- Up to B100
- -40°C to +125°C
- (-40°F to +257°F)

Applications

Systèmes d'alimentation en carburant pour le diesel et biodiesel. Applications hydraulique basse pression, y compris les synthétiques pour l'application de refroidisseur d'huile de transmission. Qualifié avec du diesel à très faible teneur en soufre (ULSD), tous les mélanges de biodiesel jusqu'à B100Ÿ

Approved fittings	Product group code	Example
OTC	1G	1G10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

GH101 ESP™

CPE rubber - diesel and biodiesel hose

High temperature, low pressure oil

Meets: ASTM D380, ASTM D6751, EN412, EN2240

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH101-04	6	6.4	0.25	14.6	0.57	28.0	400	112.0	1600	31.8	1.25	0.14	0.09
GH101-06	10	9.5	0.37	17.4	0.69	28.0	400	112.0	1600	38.1	1.50	0.18	0.12
GH101-08	12	12.7	0.50	21.2	0.83	28.0	400	112.0	1600	50.8	2.00	0.25	0.17
GH101-10	16	15.9	0.63	24.5	0.96	24.0	350	96.0	1400	69.8	2.75	0.28	0.19

English

Construction

- Eaton developed HNBR tube
- Aramid braid reinforcement
- CPE cover

Temperature range

- Up to B20
- -40°C to +150°C
- (-40°F to +302°F)

- Up to B100
- -40°C to +125°C
- (-40°F to +257°F)

Application

Engine fuel systems for diesel and biodiesel fuels. Low pressure oil applications,including syntetics for transmission oil cooler application.

Deutsch

Aufbau

- Von Eaton entwickelte HNBR Schlauchseele
- Aramdigeflecht als Druckträger
- CPE Decke

Temperaturbereich

- bis zu B20
- -40°C bis +150°C
- (-40°F bis +302°F)

- bis zu B100
- -40°C bis +125°C
- (-40°F bis +257°F)

Anwendung

Motorkraftstoffsysteme für Diesel- und Biodieselkraftstoffe. Niederdruckölanwendungen, einschließlich Synthetik für Getriebeölkühleranwendungen

Français

Construction

- Eaton a développé le tube HNBR
- Renforcement en tresse aramide
- Gaine CPE

Plage de température

- B20
- -40°C to +150°C
- (-40°F to +302°F)

- B100
- -40°C to +125°C
- (-40°F to +257°F)

Applications

Pour circuits hydrauliques á base d'huiles minerals, fuel, huiles de lubrification, air*.

Approved fittings	Product group code	Example
OTC	1G	1G10DL6

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

Suction hose

FC619

SAE 100R4 hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Vaccum	Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in		kg/m	lbs/ft
FC619-12	19	19.1	0.75	30.7	1.21	21	300	84	1200	64	2.50	-0.85	0.68	0.46
FC619-16	25	25.4	1.00	37.6	1.48	17	250	70	1000	76.2	3.00	-0.85	0.83	0.56
FC619-20	31	31.8	1.25	44.5	1.75	14	200	56	800	102	4.02	-0.85	1.16	0.78
FC619-24	38	38.1	1.50	51.8	2.04	10.5	150	42	600	127	5.00	-0.85	1.49	1.00
FC619-32	51	50.8	2.00	64.8	2.55	7	100	28	400	152.4	6.00	-0.85	1.83	1.23
FC619-40	63	63.5	2.50	79.2	3.12	4	62	17	250	355.6	14.00	-0.85	2.35	1.58
FC619-48	80	76.2	3.00	95.3	3.75	4	62	16	225	457.2	18.00	-0.85	3.36	2.26

English

Construction

- AQP Elastomer tube
- Helical wire between two textile reinforcement layers
- Black AQP elastomer cover

Temperature range

- -40°C to +135°C
- (-40°F to +275°F)

Application

Suction applications for petroleum, lubricating oils, fuel, gasoline, air and water.

Agency listings

- MSHA
- ABS

Deutsch

Aufbau

- Synthetische AQP Gummiseele
- Draht spirale zwischen einem inneren und einem äußeren Textilgeflecht
- Synth. AQP Gummidecke

Temperaturbereich

- -40°C bis +135°C
- (-40°F bis +275°F)

Anwendung

Saugleitungen für Hydrauliksysteme auf Mineralölbasis, Schmieröle, Luft, Wasser, leichtes Heizöl und Benzin.

Typenzertifizierung

- MSHA
- ABS

Français

Construction

- Tube int. en AQP
- Reinforcement 1fil metallique en spirale entre 2 tresses textile
- Tub ext. en AQP noir

Plage de température

- -40°C á +135°C
- (-40°F á +275°F)

Applications

Aspiration et transport des produits pétroliers, fluides hydrauliques, combustibles, lubrifiants, essences eau et air

Homologations de type

- MSHA
- ABS

Approved fittings	Product group code	Example
OTC	1G	1G16DL16

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

GH180

SAE 100R4 hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Vaccum	Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in		kg/m	lbs/ft
GH180-12	19	19.1	0.75	29.0	1.14	21	305	84	1220	40	1.57	-0.80	0.51	0.34
GH180-16	25	25.4	1.00	35.0	1.38	17	245	70	980	45.0	1.77	-0.80	0.65	0.44
GH180-20	31	31.8	1.25	42.0	1.65	14	200	56	800	60	2.36	-0.80	0.83	0.56
GH180-24	38	38.1	1.50	49.0	1.93	10.5	145	42	580	65	2.56	-0.80	1.10	0.74
GH180-32	51	50.8	2.00	62.0	2.44	7	100	28	400	100.0	3.94	-0.80	1.93	1.30
GH180-40	63	63.5	2.50	75.5	2.97	4	60	17	250	140.0	5.51	-0.80	2.40	1.61
GH180-48	80	76.2	3.00	88.0	3.46	4	60	16	225	180.0	7.09	-0.80	2.99	2.01
GH180-64	102	101.6	4.00	115.0	4.53	2	30	8	113	260.0	10.24	-0.80	3.34	2.24

English

Construction

- Synthetic rubber inner tube
- Helical wire between two textile reinforcement layers"
- Black synthetic rubber cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

Suction applications for petroleum, lubricating oils, fuel, gasoline, air and water.

Agency listings

Deutsch

Aufbau

- Synthetische Gummiseele
- Draht spirale zwischen einem inneren und einem äußeren Textilgeflecht
- Synth. Gummidecke

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

Saugleitungen für Hydrauliksysteme auf Mineralölbasis, Schmieröle, Luft, Wasser, leichtes Heizöl und Benzin.

Typenzertifizierung

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1fil metallique en spirale entre 2 tresses textile
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

Aspiration et transport des produits pétroliers, fluides hydrauliques, combustibles, lubrifiants, essences eau et air

Homologations de type

Approved fittings	Product group code	Example
OTC	1G	1G16DL16

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Specialty hose

Suction hose

EC190
EN45545 Railway hose

D

Meets SAE 100R4

Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Vaccum	Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in		kg/m	lbs/ft
EC190-12	19	19.0	0.75	32.6	1.28	21	305	84	1220	40	1.57	-0.80	0.83	0.56
EC190-16	25	25.4	1.00	38.2	1.50	17	245	68	980	45.0	1.77	-0.80	0.97	0.65
EC190-20	31	32.0	1.26	46.0	1.81	14	205	56	820	60	2.36	-0.80	1.29	0.87
EC190-24	38	38.0	1.50	52.4	2.06	10.5	145	40	580	65	2.56	-0.80	1.66	1.12
EC190-32	51	50.8	2.00	66.0	2.60	7	100	28	400	100.0	3.94	-0.80	2.37	1.59
EC190-40	63	63.5	2.50	79.1	3.11	4	60	16	240	140.0	5.51	-0.80	2.92	1.96
EC190-48	80	76.2	3.00	95.0	3.74	4	60	16	240	180.0	7.09	-0.80	4.18	2.81

English

Construction

- Synthetic rubber inner tube
- High tensile synthetic rextile, steel helix wire and antistatic copper strand
- Black fire retardant synthetic rubber cover

Temperature range

- -40°C to +125°C
- (-40°F to +275°F)
- Air max +75°C(+165°F)
- Water max +85°C(+185°F)

Application

Suction applications for petroleum, lubricating oils, fuel, gasoline, air and water. For use in Railway

Agency listings

- EN45545-2

Deutsch

Aufbau

- Synthetische Gummiseele
- Synth. Gummidecke

Temperaturbereich

- -40°C bis +125°C
- (-40°F bis +257°F)
- Luft max. +75°C (+165°F)
- Wasser max: +85°C(+185°F)

Anwendung

Saugleitungen für Hydrauliksysteme auf Mineralölbasis, Schmieröle, Luft, Wasser, leichtes Heizöl und Benzin.

Typenzertifizierung

- EN45545-2

Français

Construction

- Tube int. en caout. Synth.
- Tube ext. en gomme synthétique

Plage de température

- -40°C á +125°C
- (-40°F á +257°F)
- Air jusqu'à +70°C(+165°F)
- Eau jusqu'à +85°C(+185°F)

Applications

Aspiration et transport des produits pétroliers, fluides hydrauliques, combustibles, lubrifiants, essences eau et air

Homologations de type

- EN45545-2

Approved fittings	Product group code	Example
OTC	1G	1G16DL16

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Ausendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

2661

High temperature suction hose

Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
2661-12	19	19.1	0.75	34.9	1.37	21	300	84	1200	125	4.92	0.62	0.42
2661-16	25	25.4	1.00	41.3	1.63	17	255	70	1000	150.0	5.91	0.74	0.50
2661-20	31	31.8	1.25	50.8	2.00	14	205	56	810	200	7.87	1.34	0.90
2661-24	38	38.1	1.50	57.2	2.25	11.0	160	44	640	255	10.04	1.68	1.13
2661-32	51	50.8	2.00	69.9	2.75	7	100	28	400	300.0	11.81	1.93	1.30
2661-40	63	63.5	2.50	82.6	3.25	4.5	65	18	260	355.0	13.98	2.56	1.72
2661-48	80	76.2	3.00	95.3	3.75	4	60	16	230	457.2	18.00	2.92	1.96
2661-64	102	101.6	4.00	120.7	4.75	3.5	50	14	205	610.0	24.02	4.58	3.08

English

Construction

- AQP Elastomer tube
- Helical wire between two textile reinforcement layers"
- Blue AQP elastomer cover

Temperature range

- -40°C to +149°C
- (-40°F to +300°F)

Application

Suction applications for petroleum, lubricating oils, fuel, gasoline, air and water.

Agency listings

- MSHA
- ABS
- BV

Deutsch

Aufbau

- Synthetische AQP Gummiseele
- Draht spirale zwischen einem inneren und einem äußeren Textilgeflecht
- AQP Elastomer Außendecke, blau

Temperaturbereich

- -40°C bis +149°C
- (-40°F bis +300°F)

Anwendung

Saugleitungen für Hydrauliksysteme auf Mineralölbasis, Schmieröle, Luft, Wasser, leichtes Heizöl und Benzin.

Typenzertifizierung

- MSHA
- ABS
- BV

Français

Construction

- Tube int. en AQP
- Reinforcement 1fil metallique en spirale entre 2 tresses textile
- Robe AQP bleue

Plage de température

- -40°C á +149°C
- (-40°F á +300°F)

Applications

Aspiration et transport des produits pétroliers, fluides hydrauliques, combustibles, lubrifiants, essences eau et air

Homologations de type

- MSHA
- ABS
- BV

Approved fittings	Product group code	Example
OTC	1G	1G16DL16

*Rubber covered hose styles for use with gases above 17,5 bar (250 psi) must be perforated.

*Bei Gasdrücken über 17,5 bar (250 psi) muss die Gummi-Außendecke perforiert sein.

*Pour les utilisations avec fluides gazeux à plus de 17,5 bar (250 psi), la robe exterieur doit être micro-perforée.

Thermoplastic hose

Thermoplastic hose

3CH0

Meets SAE 100R7 Specifications

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
3CH0-02	3	3.5	0.14	8.4	0.33	210	3000	840	12000	13	0.50	0.05	0.03
3CH0-03	5	4.8	0.19	9.9	0.39	210	3000	840	12000	19	0.75	0.06	0.04
3CH0-04	6	6.4	0.25	12.7	0.50	210	3000	840	12000	32	1.26	0.10	0.07
3CH0-05	8	7.9	0.31	14.4	0.57	175	2550	700	10200	45	1.77	0.13	0.09
3CH0-06	10	9.5	0.37	15.5	0.61	157	2300	628	9200	51	2.01	0.13	0.09
3CH0-08	12	12.7	0.50	19.9	0.78	140	2050	560	8200	76	2.99	0.20	0.13
3CH0-10	16	16.2	0.64	24.7	0.97	105	1530	420	6120	102	4.00	0.27	0.17
3CH0-12	19	19.2	0.76	28.0	1.18	88	1280	350	5120	127	5.00	0.31	0.22
3CH0-16	25	25.5	1.00	35.7	1.41	70	1000	280	4000	203	8.00	0.48	0.31

English

Construction

- Polyamid core tube
- Synthetic fiber reinforcement
- Perforated polyurethane cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

- General hydraulics
- Access platforms
- Material handling

Features

- High chemical resistance with Polyamide core tube
- Working pressure exceeds SAE 100R7
- Wide working temperature range up to +100°C
- Low hose expansion for smooth, precise steering

Deutsch

Aufbau

- Polyamidinnenrohr
- Synthetikfaser Druckträger
- Perforierte Polyurethandecke

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

- Allgemeine Hydraulik
- Hebebühnen
- Material Handling

Merkmale

- Hohe chemische Beständigkeit mit Polyamidinnenrohr
- Betriebsdruck übertrifft SAE 100R7
- Großer Arbeitstemperaturbereich bis + 100 ° C
- Geringe Schlauchexpansion für sanftes und präzises Lenken

Français

Construction

- Tube intérieur polyamide
- Renforcement tresse synthétique
- Gaine perforée en polyuréthane

Plage de température

- -40°C à +100°C
- (-40°F à +212°F)

Applications

- Hydraulique générale
- Nacelles
- Manutention de matiéres

Caractéristiques

- Haute résistance chimique grâce au tube intérieur en polyamide
- Dépasse les pressions de travail SAE 100R7
- Large plage de température jusque +100°C
- Faible expansion volumétrique pour une direction souple et précise

Approved fittings	Product group code	Example
903 crimp or swage	903	90306-06B000
9M3 crimp or swage	903	9M306-06B000

Temperature range -40°C to +66°C maximum with water based or fire resistant fluids.
Temperaturbereich : -40°C bis +66°C bei wasserlöslichen und feuerbeständigen Flüssigkeiten.
Plage de températures : -40°C à +66°C avec des fluides à base d'eau ou résistants au feu.

Thermoplastic hose

Medium Pressure

E

3DH0

SAE 100 R7 hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
3DH0-03	5	4.8	0.19	10.9	0.43	207	3000	828	12000	30	1.18	0.08	0.06
3DH0-04	6	6.4	0.25	13.4	0.53	190	2750	760	11000	40	1.57	0.12	0.08
3DH0-05	8	7.9	0.31	14.4	0.57	172	2500	688	10000	55	2.17	0.12	0.08
3DH0-06	10	9.5	0.37	16.0	0.63	155	2250	620	9000	65	2.56	0.14	0.09
3DH0-08	12	12.7	0.50	20.1	0.79	138	2000	552	8000	75	2.95	0.21	0.14

English

Construction

- Polyester core tube
- Synthetic fiber reinforcement
- Perforated polyurethane cover

Temperature range

- -40°C to +93°C
- (-40°F to +200°F)

Application

- General hydraulics
- Access platforms
- Forklifts
- Scissors

Features

- Tight bending radius
- Commonly used in Multiline versions
- Low elongation

Deutsch

Aufbau

- Polyesterinnenrohr
- Synthetikfaser Druckträger
- Perforierte Polyurethandecke

Temperaturbereich

- -40°C bis +93°C
- (-40°F bis +200°F)

Anwendung**

- Allgemeine Hydraulik
- Hebebühnen
- Gabelstapler
- Schere

Merkmale

- Enger Biegeradius
- Häufig in Multiline-Versionen verwendet
- Geringe Dehnung

Français

Construction

- Tube intérieur polyester
- Renforcement tresse synthétique
- Gaine perforée en polyuréthane

Plage de température

- -40°C à +93°C
- (-40°F à +200°F)

Applications

- Hydraulique générale
- Nacelles
- Chariots élévateurs
- Cisailles

Caractéristiques

- Faible rayon de courbure
- Généralement utilisé en version multiligne
- Faible allongement

Approved fittings	Product group code	Example
903 crimp or swage	903	90306-06B000
9M3 crimp or swage	903	9M306-06B000

Temperature range -40°C to +66°C maximum with water based or fire resistant fluids.
Temperaturbereich : -40°C bis +66°C bei wasserlöslichen und feuerbeständigen Flüssigkeiten.
Plage de températures : -40°C à +66°C avec des fluides à base d'eau ou résistants au feu.

37AL

Meets SAE 100 R7 Specifications

# Part number	Hose I.D.			Hose O.D.		Max operating pressure ANSI A92.2		Max operating pressure SAE 100R7		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
37AL-03	5	4.8	0.19	10.8	0.43	207	3000	207	3000	828	12000	19	0.75	0.07	0.05
37AL-04	6	6.4	0.25	12.3	0.49	207	3000	190	2750	759	11000	32	1.25	0.89	0.60
37AL-05	8	7.9	0.31	14.7	0.58	207	3000	172	2500	690	10000	45	1.75	1.12	0.75
37AL-06	10	9.5	0.37	16.1	0.64	207	3000	155	2250	621	9000	51	2.00	1.41	0.95
37AL-08	12	12.7	0.50	20.7	0.81	207	3000	155	2250	621	9000	77	3.01	2.13	1.43

English

Construction

- Polyester core tube
- Braided synthetic fiber reinforcement
- Orange non-perforated non-stick polyurethane cover

Temperature range

- -54°C to +100°C
- (-65°F to +212°F)

Application

- Electric utility truck Hydraulic systems
- Mobile equipment (picker, utility vehicles)
- Rescue equipment and tools

Features

- Flexible in low temperatues
- Abrasion and UV resistant cover
- SAE J517 non-conductive hose construction
- Complies with ANSI A92.2 for vehicle-mounted, aerial devices (i.e., AL)
- Less than 50 micro-amperes leakage when subjected to 75.000 volts/ft for five minutes

Deutsch

Aufbau

- Polyesterinnenrohr
- Geflochtener Druckträger aus Synthetikfaser
- Orange, nichtperforierte, nichthaftende Polyurethandecke

Temperaturbereich

- -54°C bis +100°C
- (-65°F bis +212°F)

Anwendung

- Hydrauliksysteme für leichte Elekrofahrzeuge
- Mobilausrüstung (leichte Pickups, Transportfahrzeuge)
- Rettungsausrüstung und -werkzeuge

Merkmale

- Biegsam bei niedrigen Temperauteren
- Abriebsfeste und UV-beständige Decke
- SAE J517 elektrisch nichtleitende Schlauchausführung
- Richtet sich nach ANSI A92.2 for vehicle-mounted, aerial devices (i.e., Hebebühnen)
- Stromstärkeverlust kleiner 50mA bei 5 Min. Belastung mit 75.000 Volt/Fuß

Français

Construction

- Tube intérieur polyester
- Renforcement tressé en fibre synthétique
- Gaine orange non perforée en Polyuréthane anti-adhérant

Plage de température

- -54°C à +100°C
- (-65°F à +212°F)

Applications

- Systèmes hydrauliques des véhicules
- Equipements mobiles (nacelles télescopiques, utilitaires
- Equipement de sécurité

Caractéristiques

- Flexible même à basses températures
- Gaine résistante à l´abrasion et aux UV
- Flexible non-conducteur de construction SAE J517
- Classifié selon la norme ANSI A92.2 pour équipements de levage aériens montés sur véhicules
- Moins de 50 micro-ampères de fuite quand soumis à 75.000 volts/pied pendant 5 minutes

Approved fittings	Product group code	Example
90A/9MA swage	90A/9MA	90306-06B000
Coll-O-Crimp 'U Series'	U	90A06-065500
06U-P56	FC	FC5810-0606S
903 crimp or swage	903	90306-06B000
9M3 crimp or swage	903	9M306-06B000

Temperature range -40°C to +60°C maximum with water based or fire resistant fluids.

Temperaturbereich : -40°C bis +60°C bei wasserlöslichen und feuerbeständigen Flüssigkeiten.

Plage de températures : -40°C à +60°C avec des fluides à base d'eau ou résistants au feu.

Thermoplastic hose

Non-Conductive Medium Pressure

E

3740

Meets SAE 100 R7 Specifications

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
3740-12	19	19.0	0.75	27.2	1.07	86	1250	345	5000	127	5.00	0.29	0.19
3740-16	25	25.4	1.00	34.1	1.34	69	1000	276	4000	203	8.00	0.39	0.26

English

Construction

- Polyamid core tube
- Braided synthetic fiber reinforcement
- Orange polyurethane non-perforated cover
- Non-conductive marking and color code

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

- General hydraulic systems that may contact high voltage sources
- Rescue equipment and tools
- Mobile machinery
- Aerial equipment

Features

- Very flexible through temperature range
- Less than 50 micro-amperes leakage when subjected to 75.000 volts/ft for five minutes

Deutsch

Aufbau

- Polyamidinnenrohr
- Geflochtener Druckträger aus Synthetikfaser
- Orange, nichtperforierte Polyurethandecke
- Markierungen und Farbcodes für nichtleitende Schläuche

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

- Allgemeine Hydrauliksysteme, die mit Hochspannungsquellen in Berührung kommen können
- Rettungsausrüstung und -werkzeuge
- Mobile Maschinen
- Hebebühnen

Typenzertifizierung

- Sehr biegsam in allen Temperaturbereichen
- Stromstärkeverlust kleiner 50mA bei 5 Min. Belastung mit 75.000 Volt/Fuß

Français

Construction

- Tube intérieur polyamide
- Renforcement tressé en fibre synthétique
- Gaine orange non-perforée en Polyuréthane
- Marquage non-conducteur et code couleur

Plage de température

- -40°C à +100°C
- (-40°F à +212°F)

Applications

- Systèmes d´hydraulique générale susceptibles d´entrer en contact avec des sources haute tension
- Equipement de sécurité
- Machines mobiles
- Equipement aériens

Homologations de type

- Très flexible dans toute la plage de températures
- Moins de 50 micro-ampères de fuite quand soumis à 75.000 volts/pied pendant 5 minutes

Approved fittings	Product group code	Example
903 (-12)	903	90306-06B000
90A (-12)	903	90A06-065500
Coll-O-Crimp 'U Series'	U	06U-P56
		FC5810-0606S

Temperature range -40°C to +60°C maximum with water based or fire resistant fluids.

Temperaturbereich : -40°C bis +60°C bei wasserlöslichen und feuerbeständigen Flüssigkeiten.

Plage de températures : -40°C à +60°C avec des fluides à base d'eau ou résistants au feu.

37B0

Meets SAE 100 R7 Specifications

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
37B0-03	5	4.8	0.19	10.8	0.43	165	2390	660	9560	20	0.79	0.10	0.07
37B0-04	6	6.4	0.25	13.1	0.52	175	2535	700	10140	32	1.26	0.14	0.09
37B0-05	8	7.9	0.31	14.9	0.59	155	2250	620	9000	45	1.77	0.14	0.09
37B0-06	10	9.5	0.37	16.6	0.65	155	2250	620	9000	51	2.01	0.17	0.11

English

Construction

- Polyurethane core tube
- Braided synthetic fiber reinforcement
- Black polyester cover

Temperature range

- -54°C to +100°C
- (-65°F to +212°F)

Application

- Forklift working in cold storage areas
- General hydraulics
- Mobile equipment
- Lift truck hydraulic systems
- Cold temperature motion control

Features

- Cold storage hose
- Very flexible at low temperatures
- Abrasion resistant polyester cover
- Commonly used for Twin - hose

Deutsch

Aufbau

- Polyurethaninnenrohr
- Geflochtener Druckträger aus Synthetikfaser
- Schwarze Polyesterdecke

Temperaturbereich

- -54°C bis +100°C
- (-65°F bis +212°F)

Anwendung

- Gabelstapler für den Einsatz in Kühlräumen
- Allgemeine Hydraulik
- Mobilausrüstung
- Hydrauliksysteme für Hubwagen
- Bahnsteuerung bei kalten Temperaturen

Merkmale

- Schläuche für Kühlanlagen
- Sehr biegsam bei niedrigen Temperaturen
- Abriebsfeste Polyesterdecke
- Commonly used for Twin - hose

Français

Construction

- Tube intérieur en Polyuréthane
- Renforcement tresse synthétique
- Gaine en Polyester

Plage de température

- -54°C à +100°C
- (-65°F à +212°F)

Applications

- Chariots élévateurs intervenant en zones de stockage
- froide
- Hydraulic générale
- Equipements mobiles
- Systèmes hydrauliques de chariots élévateurs
- Commande de mouvement par températures froides

Caractéristiques

- Flexible pour stockage a froid
- Très flexible à basses températures
- Gaine polyester résistante à l´abrasion
- Généralement utilisé en version multiligne

Approved fittings	Product group code	Example
903 crimp or swage	903	90306-06B000
9M3 crimp or swage	9M3	9M306-06B000

Temperature range -40°C to +60°C maximum with water based or fire resistant fluids
Temperaturbereich : -40°C bis +60°C bei wasserlöslichen und feuerbeständigen Flüssigkeiten
Plage de températures : -40°C à +60°C avec des fluides à base d'eau ou résistants au feu.

Thermoplastic hose

High pressure

3R80 Synflex

Meets SAE 100 R8 Specifications

E

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
3R80-03	5	4.8	0.19	13.1	0.52	350	5100	1400	20400	38	1.50	0.11	0.08
3R80-04	6	6.4	0.25	15.9	0.63	350	5100	1400	20400	51	2.00	0.18	0.12
3R80-06	10	9.5	0.37	19.4	0.76	280	4050	1120	16200	64	2.50	0.22	0.15
3R80-08	12	12.7	0.50	22.7	0.89	245	3550	980	14200	102	4.00	0.28	0.19
3R80-12	19	19.0	0.75	28.9	1.14	157	2300	628	9200	165	6.50	0.38	0.26
3R80-16	25	25.4	1.00	37.3	1.47	140	2050	560	8200	254	10.00	0.57	0.38

English

Construction

- Nylon tube
- Braided, synthetic fiber reinforcement
- Black perforated polyurethane cover

Operating parameters

- -40°C to + 100°C (-40°F to + 212°F) or
- -40°C to +66°C (-40°F to +150°F) with water-based, or fire-resistant, fluids
- Change in working length at working PSI ±2%

Application

- General hydraulic systems
- Hydraulic tools
- Mobile equipment
- High-pressure chemical transfer

Features

- Long life in impulse cycling and flexing

Deutsch

Aufbau

- Schwarze, perforierte Polyurethandecke
- Geflochtener Druckträger aus Synthetikfaser
- Nyloninnenrohr

Temperaturbereich

- -40°C bis 100°C oder bis 66°C, bei wasserlöslichen und feuerbeständigen Flüssigkeiten

Anwendung**

- Allgemeine Hydrauliksysteme
- Hydraulikwerkzeuge
- Mobilausrüstung
- Hochdruck-Pneumatiksysteme
- Durchleitung von Chemikalien unter Hochdruck

Merkmale

- Langlebig bei Druckimpulsen und Biegen

Français

Construction

- Tube intérieur polyamide
- Renforcement tresse synthétique
- Gaine perforée en polyuréthane

Plage de température

- -40°C à +100°C
- (-40°F à +212°F)

Applications

- Systèmes d´hydraulique générale
- Outils hydrauliques
- Equipements mobiles
- Systèmes pneumatiques haute pression
- Transport haute pression de produits chimiques

Caractéristiques

- Longue durée de vie en cycle d´impulsion et en flexion

Approved fittings	Product group code	Example
90H crimp or swage	90H	90H06-06B000
9MH crimp or swage	9MH	9MH06-06B000
90L swage	90L	9ML06-065500
TTC + sleeve	1A + FF91064	1A10DL6+FF91064-XX

Temperature range -40°C to +66°C maximum with water based or fire resistant fluids.

Temperaturbereich : -40°C bis +66°C bei wasserlöslichen und feuerbeständigen Flüssigkeiten.

Plage de températures : -40°C à +66°C avec des fluides à base d'eau ou résistants au feu.

3E80

Meets SAE 100 R8 Specifications

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
3E80-03	5	4.8	0.19	13.1	0.52	350	5100	1400	20400	38	1.50	0.11	0.08
3E80-04	6	6.4	0.25	15.9	0.63	350	5100	1400	20400	51	2.00	0.18	0.12
3E80-06	10	9.5	0.37	19.4	0.76	280	4050	1120	16200	64	2.50	0.22	0.15
3E80-08	12	12.7	0.50	22.7	0.89	245	3550	980	14200	102	4.00	0.28	0.19
3E80-12	19	19.0	0.75	28.9	1.14	157	2300	628	9200	165	6.50	0.38	0.26
3E80-16	25	25.4	1.00	37.3	1.47	140	2050	560	8200	254	10.00	0.57	0.38

English

Construction

- Nylon core tube
- Braided synthetic fiber reinforcement
- Orange polyurethane non-perforated cover
- Non-conductive marking and color code

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

- General hydraulic systems that may contact high voltage sources
- Rescue equipment and tools
- Mobile machinery
- Aerial equipment

Features

- Long life for impulse cycling and flexing
- UV resistant cover
- SAE J517 non-conductive hose construction. Less than 50 micro-amperes leakage when subjected to 75.000 volts/ft for 5 minutes

Deutsch

Aufbau

- Polyamidinnenrohr
- Geflochtener Druckträger aus Synthetikfaser
- Orange, nichtperforierte Polyurethandecke
- Markierungen und Farbcodes für nichtleitende Schläuche

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

- Allgemeine Hydrauliksysteme, die mit Hochspannungsquellen in Berührung kommen können
- Rettungsausrüstung und -werkzeuge
- Mobile Maschinen
- Hebebühnen

Merkmale

- Langlebig bei Druckimpulsen und Biegen
- UV-beständige Decke
- SAE J517 elektrisch nichtleitende Schlauchausführungen. Stromstärkeverlust kleiner 50mA bei 5 Min. Belastung mit 75.000 Volt/Fuß

Français

Construction

- Tube intérieur polyamide
- Renforcement tresse en fibre synthétique
- Gaine orange non-perforée en Polyuréthane
- Marquage non-conducteur et code couleur

Plage de température

- -40°C à +100°C
- (-40°F à +212°F)

Applications

- Systèmes d´hydraulique générale susceptibles d´entrer en contact avec des sources haute tension
- Equipement de sécurité
- Machines mobiles
- Equipement aériens

Caractéristiques

- Longue durée de vie en cycle d´impulsion et en flexion
- Gaine résistante aux UV
- Flexible non-conducteur de construction SAE J517 Moins de 50 micro-amperès de fuite quand soumis à 100.000 volts/ pied pendant 5 minutes

Approved fittings	Product group code	Example
90H crimp or swage	90H	90H06-06B000
9MH crimp or swage	9MH	9MH06-06B000
90L swage	90L	9ML06-065500
TTC + sleeve	1A + FF91064	1A10DL6+FF91064-XX
Coll-O-Crimp 'E Series'	336	33606E-606

Temperature range -40°C to +66°C maximum with water based or fire resistant fluids.

Temperaturbereich : -40°C bis +66°C bei wasserlöslichen und feuerbeständigen Flüssigkeiten.

Plage de températures : -40°C à +66°C avec des fluides à base d'eau ou résistants au feu.

Thermoplastic hose

High pressure hose

3800

SAE 100 R8 hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
3800-02	3	3.2	0.13	8.5	0.33	413	6000	1655	24000	20	0.79	0.04	0.03
3800-03	5	4.8	0.19	11.0	0.43	345	5000	1379	20000	38	1.50	0.09	0.06
3800-04	6	6.4	0.25	13.5	0.53	345	5000	1379	20000	51	2.01	0.12	0.08
3800-06	10	9.5	0.37	16.9	0.67	276	4000	1103	16000	64	2.52	0.16	0.11
3800-08	12	12.7	0.50	21.3	0.84	240	3500	965	14000	102	4.02	0.22	0.15

English

Construction

- Nylon core tube
- Braided high tensile aramid fiber reinforcement
- Black perforated polyurethane cover

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

- General hydraulic systems
- Machine tools
- Mobile equipment
- Agricultural equipment
- Marine steering

Features

- 100R8 hose performance with 100R7
- hose dimensions - for fitting versatility
- Low volumetric expansion

Deutsch

Aufbau

- Nyloninnenrohr
- Geflochtener Druckträger aus hochzugsfester Aramidfaser
- Schwarze, perforierte Polyurethandecke

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

- Allgemeine Hydrauliksysteme
- Werkzeugmaschinen
- Mobilausrüstung
- Landwirtschaftliche Geräte
- Lenkungssysteme für die Schifffahrtsindustrie

Merkmale

- 100R8- Schlauchqualität mit 100R7-
- Schlauchabmessungen - für eine Vielzahl von Armaturen
- Geringe Volumenexpansion

Français

Construction

- Tube intérieur en Polyamide
- Renforcement tressé en fibre d`aramide hautement résistante à la traction
- Gaine perforée en polyuréthane

Plage de température

- -40°C à +100°C
- (-40°F à +212°F)

Applications

- Hydraulique gènèrale
- Machines-outiles
- Equipements mobiles
- Equipements agricoles
- Application marine

Caractéristiques

- Performances d´un flexible100R8 avec
- les dimensions d´uns flexible 100R7 - pour polyvalence des raccords
- Faible expansion volumétrique

Approved fittings	Product group code	Example
903/9M3 (-03 to -08)	903/9M3	90306-06B000
90A/9MA (-03 to -08)	90A/9MA	90A06-065500
98E (-02)	98E	98E02-045400

Temperature range -40°C to +66°C maximum with water based or fire resistant fluids.

Temperaturbereich : -40°C bis +66°C bei wasserlöslichen und feuerbeständigen Flüssigkeiten.

Plage de températures : -40°C à +66°C avec des fluides à base d'eau ou résistants au feu.

31CT

SAE 100 R18 hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
31CT-03	5	4.8	0.19	10.1	0.42	210	3050	840	12200	25	1.00	0.08	0.05
31CT-04	6	6.6	0.25	12.7	0.48	210	3050	840	12200	32	1.25	0.09	0.06
31CT-05	8	7.9	0.31	15.5	0.61	210	3050	840	12200	38	1.50	0.15	0.10
31CT-06	10	9.7	0.37	17.0	0.66	210	3050	840	12200	51	2.00	0.18	0.12
31CT-08	12	13.0	0.50	21.7	0.85	210	3050	840	12200	89	3.50	0.25	0.17
31CT-10	16	16.2	0.63	27.0	1.06	210	3050	840	12200	102	4.00	0.41	0.28

English

Construction

- Polymeric core tube
- Braided synthetic fiber reinforcement
- Black non stick perforated polyurethane cover

Temperature range

- -40°C to +93°C
- (-40°F to +200°F)

Application

- Forklifts
- Construction
- General hydraulic systems
- Agricultural equipment
- Material Handling
- Machines tools and robotics
- Lubrication equipment

Features

- Multilines (up to 8 lines) for combination of hydraulic and electrical lines
- Abrasion resistant cover
- Tight bending radius

Deutsch

Aufbau

- Polymerinnenrohr
- Geflochtener Druckträger aus Synthetikfaser
- Schwarze, nichthaftende, perforierte Polymerdecke

Temperaturbereich

- -40°C bis +93°C
- (-40°F bis +200°F)

Anwendung

- Gabelstapler
- Bauwirtschaft
- Allgemeine Hydrauliksysteme
- Landwirtschaftliche Geräte
- Material handling
- Werkzeugmaschinen und Robotik
- Schmieranlagen

Merkmale

- Multilinien (bis zu 8 Zeilen) für die Kombination von hydraulische und elektrische Leitungen
- Abriebfeste Decke
- Enger Biegeradius

Français

Construction

- Tube intériéur en polymère
- Renforcement tresse en fibre synthétique
- Gaine perforée en polymère anti-adhérant

Plage de température

- -40°C à +93°C
- (-40°F à +200°F)

Applications

- Chariots élévateurs
- Construction
- Hydraulique générale
- Equipements agricoles
- Manutention de matières
- Machines-outiles et robotique
- Equipements de lubrification

Caractéristiques

- Multilignes (jusque 8 lignes) pour combinaison de lignes hydraulique et électriques
- Gaine résistante à l'abrasion
- Faible rayon de courbure

Approved fittings	Product group code	Example
903 (-06 to -08) Crimp	903	90306-06B000
9M3 (-06 to -08) Crimp	9M3	9M306-06B000
90N (-06 to -10) -AS Crimp	90N-AS	90N06-20JS00-AS
9MN (-06 to -10) -AS Crimp	9MN-AS	90N10-24JS00-AS

Temperature range -40°C to +66°C maximum with water based or fire resistant fluids.

Temperaturbereich : -40°C bis +66°C bei wasserlöslichen und feuerbeständigen Flüssigkeiten.

Plage de températures : -40°C à +66°C avec des fluides à base d'eau ou résistants au feu.

Thermoplastic hose

Constant Pressure Hose

E

3TB0

Meets SAE100 R18 Specifications

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
3TB0-06	10	9.7	0.37	17.0	0.67	270*	3920	840	15680	52	2.05	0.18	0.12
3TB0-08	12	13.0	0.50	21.6	0.85	270*	3920	840	15680	89	3.50	0.25	0.17
3TB0-10	16	16.2	0.63	27.0	1.06	270*	3920	840	15680	102	4.00	0.41	0.28

English

Construction

- Polyester lined core tube
- Braided synthetic fiber reinforcement
- Black non stick perforated polyurethane cover

Temperature range

- -40°C to +94°C
- (-40°F to +200°F)

Application

- Forklifts
- Telehandler (telescopic boom)
- Material Handling

Features

- Multilines (up to 8 lines) for combination of hydraulic and electrical lines
- Abrasion resistant cover
- Tight bending radius

Deutsch

Aufbau

- Polymerinnenrohr
- Geflochtener Druckträger aus Synthetikfaser
- Schwarze, nichthaftende, perforierte Polymerdecke

Temperaturbereich

- -40°C bis +94°C
- (-40°F bis +200°F)

Anwendung**

- Gabelstapler
- Teleskoplader
- Material Handling

Merkmale

- Multilinien (bis zu 8 Zeilen) für die Kombination von
- hydraulische und elektrische Leitungen
- Abriebfeste Decke
- Enger Biegeradius

Français

Construction

- Tube intérieur en polymère
- Renforcement tresse en fibre synthétique
- Gaine perforée en polymère anti-adhérant

Plage de température

- -40°C à +94°C
- (-40°F à +200°F)

Applications

- Chariots élévateurs
- Télescopique (flèche télescopique)
- Manutention de matières

Caractéristiques

- Multilignes (jusque 8 lignes) pour combinaison
- de lignes hydraulique et électriques
- Gaine résistante à l'abrasion
- Faible rayon de courbure

* 270 bar operating pressure possible with 3:1 safety factor

Approved fittings	Product group code	Example
903 (-06 to -08) Crimp	903	90306-06B000
9M3 (-06 to -08) Crimp	9M3	9M306-06B000
90N (-06 to -10) -AS Crimp	90N-AS	90N06-20JS00-AS
9MN (-06 to -10) -AS Crimp	9MN-AS	90MN10-24JS00-AS

Temperature range -54°C to +66°C maximum with water based or fire resistant fluids.
Temperaturbereich : -54°C bis +66°C bei wasserlöslichen und feuerbeständigen Flüssigkeiten.
Plage de températures : -54°C à +66°C avec des fluides à base d'eau ou résistants au feu.

3V10

700 bar hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
3V10-03	5	4.8	0.19	13.2	0.52	700	10153	2800	40612	38	1.50	0.12	0.08
3V10-04	6	6.4	0.38	15.1	0.59	700	10153	2760	40000	64	2.50	0.16	0.11
3V10-06	10	9.5	0.37	19.8	0.78	552	8000	2208	32000	76	3.00	0.24	0.16

English

Construction

- Nylon-lined core tube
- Spiraled gihgh tensile aramid fiber reinforcement
- Black perforated polyurethane cover

Temperature range

- -40°C to +66°C
- (-40°F to +150°F)

Application

- High pressure hydraulic tools
- Rescue equipment and tools
- High pressure test equipment

Features

- Compact size
- Low elongation
- Designed for permanent high pressure fittings with hose guards
- Lightweight

Deutsch

Aufbau

- Mit Nylon ausgekleidetes Innenrohr
- Spiralförmiger Druckträger aus hochzugsfester Aramidfaser
- Schwarze, perforierte Polyurethandecke

Temperaturbereich

- -40°C bis +66°C
- (-40°F bis +150°F)

Anwendung**

- Hydraulische Hochdruckwerkzeuge
- Rettungsausrüstung und -werkzeuge
- Hochdruck- Testausrüstung

Merkmale

- Kompaktgrößen
- Geringe Dehnung
- Entwickelt für Hochdruck-Einwegarmaturen mit Schlauchschutz
- Geringes Gewicht

Français

Construction

- Tube intérieur en polyamide co-extrudé
- Renforcement spiralé en fibre de aramide hautement résistante à la traction
- Gaine perforée en polyuréthane

Plage de température

- -40°C à +66°C
- (-40°F à +150°F)

Applications

- Outils hydrauliques haute pression
- Equipement de sécurité
- Equipement d´essai hate pression

Caractéristiques

- Compact
- Allongement faible
- Concu pour utilisation avec de raccords permanents haute pression munis de ressorts de protection
- Léger

Approved fittings	Product group code	Example
90V swage	90V	90V04-061000
9CV stainless swage	9CV	9CV04-065500

*Not recommended for high dynamic applications!

*Nicht empfohlen für sehr dynamische Anwendungen!

*Non recommandé pour les applications hautement dynamiques!

Thermoplastic hose

Non-Conductive Very High Pressure Hose

3VE0

700 bar hose

Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
3VE0-03	5	4.8	0.19	13.2	0.52	700	10153	2800	40612	38	1.50	0.12	0.08
3VE0-04	6	6.4	0.38	15.1	0.59	700	10153	2760	40000	64	2.50	0.16	0.11
3VE0-06	10	9.5	0.37	19.8	0.78	552	8000	2208	32000	76	3.00	0.24	0.16

English

Construction

- Construction
- Nylon-lined core tube
- Spiraled high tensile aramid fiber reinforcement
- Orange polyurethane non-perforated cover
- Non-conductive marking and color code

Temperature range

- -40°C to +66°C
- (-40°F to +150°F)

Application

- General hydraulic systems that may
- contact high voltage sources
- Rescue equipment and tools
- Mobile machinery
- Aerial equipment

Features

- Compact size; Lightweight
- Low elongation
- Designed for permanent high pressure fittings with hose guards
- UV resistant cover
- SAE J517 non-conductive hose construction. Less than 50 micro-amperes leakage when subjected to 100.000 volts/ft for 5 minutes

Deutsch

Aufbau

- Mit Nylon ausgekleidetes Innenrohr
- Spiralförmiger Druckträger aus hochzugsfester Aramidfaser
- Orange, nichtperforierte Polyurethandecke
- Markierungen und Farbcodes für nichtleitende Schläuche

Temperaturbereich

- -40°C bis +66°C
- (-40°F bis +150°F)

Anwendung*

- Allgemeine Hydrauliksysteme, die mit
- Hochspannungsquellen in Berührung
- kommen können
- Rettungsausrüstung und -werkzeuge
- Mobile Maschinen
- Hebebühnen

Merkmale

- Kompaktgrößen; Geringes Gewicht
- Geringe Dehnung
- Entwickelt für Hochdruck-Einwegarmaturen mit Schlauchschutz
- UV-beständige Decke
- SAE J517 elektrisch nichtleitende Schlauchausführungen. Stromstärkeverlust kleiner 50mA bei 5 Min. Belastung mit 100.000 Volt/Fuß

Français

Construction

- Tube intérieur en polyamide co-extrudé
- Renforcement spiralé en fibre de aramide hautement résistante à la traction
- Gaine orange non-perforée en Polyuréthane
- Marquage non-conducteur et code couleur

Plage de température

- -40°C à +66°C
- (-40°F à +150°F)

Applications*

- Systèmes d´hydraulique générale
- susceptibles d´entrer en contact avec des
- sources haute tension
- Equipement de sécurité
- Machines mobiles
- Equipement aériens

Caractéristiques

- Compact; Léger
- Allongement faible
- Concu pour utilisation avec de raccords permanents haute pression munis de ressorts de protection
- Gaine résistante aux UV
- Flexible non-conducteur de construction SAE J517 Moins de 50 micro-amperès de fuite quand soumis à 100.000 volts/pied pendant 5 minutes

Approved fittings	Product group code	Example
90V swage	90V	90V04-061000
9CV stainless swage	9CV	9CV04-065500

*Not recommended for high dynamic applications!

*Nicht empfohlen für sehr dynamische Anwendungen!

*Non recommandé pour les applications hautement dynamiques!

35NG

CNG hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
35NG-04	6	6.4	0.25	16.0	0.63	345	5000	1379	20000	51	2.01	0.16	0.11
35NG-06	10	9.7	0.38	19.5	0.77	345	5000	1379	20000	102	4.02	0.22	0.15
35NG-08	12	12.8	0.50	22.5	0.89	345	5000	1379	20000	140	5.51	0.31	0.21

English

Construction

- Conductive nylon core
- Synthetic fiber reinforcement
- Black perforated polyurethane cover

Temperature range

- -40°C to +85°C
- (-40°F to +185°F)

Application

- CNG refueling dispensers
- CNG transfer lines
- High pressure CNG lines

Agency listings

- ANSI/CSA NGV4.2-2014 (Class A, D)
- ANSI/CSA NGV3.1-2014 (Class B)
- Conforms to NFPA 52
- ECE R110

Deutsch

Aufbau

- Polyamidinnenrohr
- Synthetikfaser Druckträger
- Schwarze perforierte Polyurethandecke

Temperaturbereich

- -40°C bis +85°C
- (-40°F bis +185°F)

Anwendung

- CNG Tankautomaten
- CNG Transferleitungen
- Hochdruck CNG Schlauchleitungen

Typenzertifizierung

- ANSI/CSA NGV4.2-2014 (Klasse A, D)
- ANSI/CSA NGV3.1-2014 (Klasse B)
- Entspricht der NFPA 52
- ECE R110

Français

Construction

- Tube intérieur polyamide
- Renforcement tresse synthétique
- Gaine perforée en polyuréthane

Plage de température

- -40°C à +85°C
- (-40°F à +185°F)

Applications

- Distributeurs de carburant CNG
- Conduites de transport de CNG
- Lignes CNG haute pression

Homologations de type

- ANSI/CSA NGV4.2-2014 (Classe A, D)
- ANSI/CSA NGV3.1-2014 (Classe B)
- Conforme à NFPA 52
- ECE R110

Approved fittings	Product group code	Example
90H swage*	90H	see CNG Catalogue
90L swage*	90L	see CNG Catalogue

*Only specific connection ends are approved for the different NGV classes

Thermoplastic hose

Grease lubrication hose

43GW-DN4MA

Greaseline hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
43GW-DN4MA	4	4.0	0.16	8.75	0.34	325	4716	840	12188	20	0.79	0.05	0.03

English

Construction

- Polyester core tube (Option: Polyamid core tube)
- Braided synthetic fiber reinforcement
- Black perforated polyurethane cover

Temperature range

- -30°C to +80°C
- (-22°F to +176°F)

Application

- Hand-held grease guns
- Central lubricating systems

Agency listings

- Long life for impulse cycling and flexing
- Replace rigid nylon and/or steel pipes
- Very flexible

Deutsch

Aufbau

- Nyloninnenrohr
- Geflochtener Druckträger aus Synthetikfaser
- Schwarze, perforierte Polyurethandecke

Temperaturbereich

- -30°C bis +80°C
- (-22°F bis +176°F)

Anwendung

- Handschmierpresse
- Zentralschmiersysteme

Typenzertifizierung

- Lange Lebensdauer für Impulszyklus und Bewegung
- Ersetzt starre Nylon- und / oder Stahlrohre
- Sehr flexibel

Français

Construction

- Tube intérieur en Polyamide
- Renforcement tresse en fibre synthétique
- Gaine perforée en polyuréthane

Plage de température

- -30°C à +80°C
- (-22°F à +176°F)

Applications

- Pistolets graisseurs manuels
- Systèmes de lubrification centralisée

Homologations de type

- Longue durée de vie pour cycles d'impulsion et de flexion
- Remplace avantageusement les tubes rigides en Polyamide et/ ou acier
- Très flexible

3CH0, 3TB0, 37B0 and 3R80

3CH0 Medium pressure hose
Meets SAE 100R7

# Part number	Hose size	Number of hoses	Hose I.D.		Length
			mm	in	mm
3CH0-03-2-M0075	3CH0-03	2	4.8	0.19	75
3CH0-04-2-M0075	3CH0-04	2	6.4	0.25	75
3CH0-05-2-M0075	3CH0-05	2	7.9	0.31	75
3CH0-06-2-M0075	3CH0-06	2	9.5	0.37	75
3CH0-08-2-M0075	3CH0-08	2	12.7	0.5	75

Please contact Eaton customer service for twin-line, tri-line, and multi-line configuration options.

37B0 Medium pressure hose
Meets SAE 100R7

# Part number	Hose size	Number of hoses	Hose I.D.		Length
			mm	in	mm
37B0-03-2-M0075	37B0-03	2	4.8	0.19	75
37B0-04-2-M0075	37B0-04	2	6.4	0.25	75
37B0-05-2-M0075	37B0-05	2	7.9	0.31	75
37B0-06-2-M0075	37B0-06	2	9.5	0.37	75

Please contact Eaton customer service for twin-line, tri-line, and multi-line configuration options.

3TB0 Constant pressure hose
Meets SAE 100R18

# Part number	Hose size	Number of hoses	Hose I.D.		Length
			mm	in	mm
3TB0-06-2-M0075	3TB0-06	2	9.5	0.37	75
3TB0-08-2-M0075	3TB0-08	2	12.7	0.50	75
3TB0-10-2-M0075	3TB0-10	2	16.0	0.63	75

Please contact Eaton customer service for twin-line, tri-line, and multi-line configuration options.

3R80 High pressure hose
Meets SAE 100R8

# Part number	Hose size	Number of hoses	Hose I.D.		Length
			mm	in	mm
3R80-03-2-M0075	3R80-03	2	4.8	0.19	75
3R80-04-2-M0075	3R80-04	2	6.4	0.25	75
3R80-06-2-M0075	3R80-06	2	9.5	0.37	75
3R80-08-2-M0075	3R80-08	2	12.7	0.50	75

Please contact Eaton customer service for twin-line, tri-line, and multi-line configuration options.

For continuous lengths please add C at the end of the part number - 3CH0-06-2-M0075C

Thermoplastic tubing

Thermoplastic tubing

1201

PELD Tubing

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
1201-M04		2.5	0.10	4.0	0.16	11.3	163	45	653	20	0.79	0.72	0.48
1201-M04		2.0	0.08	4.0	0.16	15.5	225	62	900	20	0.79	0.88	0.59
1201-M06		4.0	0.16	6.0	0.24	9.0	131	36	522	30	1.18	1.47	0.99
1201-M08		6.0	0.24	8.0	0.31	6.5	94	26	377	40	1.57	2.05	1.38
1201-M10		8.0	0.31	10.0	0.39	5.0	73	20	290	50	1.97	2.64	1.77
1201-M10		7.0	0.28	10.0	0.39	8.8	127	35	508	50	1.97	3.74	2.51
1201-M10		6.0	0.24	10.0	0.39	11.3	163	45	653	50	1.97	4.70	3.15
1201-M12		10.0	0.39	12.0	0.47	4.5	65	18	261	60	2.36	3.23	2.17
1201-M12		9.0	0.35	12.0	0.47	6.8	98	27	392	55	2.17	4.62	3.11

English

Construction

- Virgin low density polyethylene

Temperature range

- -40°C to +80°C
- (-40°F to +176°F)

Application

- Pneumatic instrumentation lines
- Low pressure hydraulic or pneumatic supply lines
- Process sampling lines
- High moisture content environments

Deutsch

Aufbau

- Polyethylen niederer Dichte

Temperaturbereich

- -40°C bis +80°C
- (-40°F bis +176°F)

Anwendung

- Messleitungen für pneumatische Mess- und Regelsysteme
- Hydraulische und pneumatische Niederdruckzuleitungen
- Leitungen für die Probeentnahme im Prozess
- Umgebungen mit hohem Feuchtigkeitsgehalt

Français

Construction

- Polyéthylène monocouche vierge basse densité

Plage de température

- -40°C á +80°C
- (-40°F á +176°F)

Applications

- Lignes pneumatiques d'instrumentation
- Lignes d'alimentation hydraulique ou pneumatique basse pression
- Lignes d'échantillonnage
- Environnements à forte saturation hygrométrique

Approved fittings	Product group code	Example

Temp.	-40°C +23°C	+24°C +40°C	+41°C +66°C	+67°C +80°C
Factor	1	0,65	0,32	0,20

Note: Coefficient of pressure increase or decrease versus temperature

Hinweis: Druckerhöhungs- und Verringerungskoeffizient je nach Temperatur

Remarque : Le coefficient de pression augmente ou diminue en fonction de la température

Thermoplastic tubing

High density polyethylene tubing

F

1204

PEHD Tubing

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
1204-M06		4.0	0.16	6.0	0.24	17.5	254	70	1016	35	1.38	0.90	0.60
1204-M08		6.0	0.24	8.0	0.31	12.5	181	50	726	45	1.77	1.50	1.01
1204-M10		8.0	0.31	10.0	0.39	10.0	145	40	580	55	2.17	2.70	1.81
1204-M12		10.0	0.39	12.0	0.47	7.5	109	30	435	65	2.56	3.20	2.15

English

Construction

- Virgin high density polyethylene

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

- Pneumatic instrumentation lines
- Low pressure hydraulic or pneumatic supply lines
- Process sampling lines
- High moisture content environments

Deutsch

Aufbau

- Polyethylen höherer Dichte

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

- Messleitungen für pneumatische Mess- und Regelsysteme
- Hydraulische und pneumatische Niederdruckzuleitungen
- Leitungen für die Probeentnahme im Prozess
- Umgebungen mit hohem Feuchtigkeitsgehalt

Français

Construction

- Polyéthylène monocouche vierge haute densité

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

- Lignes pneumatiques d'instrumentation
- Lignes d'alimentation hydraulique ou pneumatique basse pression
- Lignes d'échantillonnage
- Environnements à forte saturation hygrométrique

Temp.	-40°C +23°C	+24°C +40°C	+41°C +66°C	+67°C +80°C	+81°C +100°C
Factor	1	0,70	0,35	0,25	0,10

Note: Coefficient of pressure increase or decrease versus temperature

Hinweis: Druckerhöhungs- und Verringerungskoeffizient je nach Temperatur

Remarque : Le coefficient de pression augmente ou diminue en fonction de la température

F

7TS4

PA12-HL Greaseline tubing

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
7TS4-M06		3.00	0.12	6.00	0.24	80.0	1161	320	4643	45	1.77	0.022	0.015

English

Construction

- Special compound non-plasticized polyamide resin

Temperature range

- -40°C to +93°C
- (-40°F to +200°F)

Application

- Pneumatic systems
- Low pressure hydraulic
- Lubrication systems

Agency listings

Deutsch

Aufbau

- Polyamidkunstharz-Spezialgemisch, weichmacherfrei

Temperaturbereich

- -40°C bis +93°C
- (-40°F bis +200°F)

Anwendung

- Pneumatiksysteme
- Niederdruckhydraulik
- Schmiersysteme

Typenzertifizierung

Français

Construction

- Résine Polyamide non-plastifiée à composé spécial

Plage de température

- -40°C á +93°C
- (-40°F á +200°F)

Applications

- Systèmes pneumatiques
- Hydraulique basse pression
- Systèmes de lubrification

Homologations de type

Approved fittings	Product group code	Example

Temp.	-40°C +23°C	+24°C +40°C	+41°C +60°C	+61°C +80°C	+81°C +100°C
Factor	1	0,74	0,57	0,47	0,40

Note: Coefficient of pressure increase or decrease versus temperature
Hinweis: Druckerhöhungs- und Verringerungskoeffizient je nach Temperatur
Remarque : Le coefficient de pression augmente ou diminue en fonction de la température

Thermoplastic tubing

Nylon tubing - PA12-PHLY tubing

F

4234

DIN73378, DIN74324-1, ISO 7628

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
4234-043		2.0	0.08	4.0	0.16	12.5	180	180	2611	20	0.79	0.009	0.006
4234-063		4.0	0.16	6.0	0.24	12.5	180	108	1566	30	1.18	0.011	0.007
4234-083		6.0	0.24	8.0	0.31	12.5	180	77	1119	40	1.57	0.023	0.015
4234-103		8.0	0.31	10.0	0.39	12.5	180	60	870	60	2.36	0.029	0.019
4234-104		7.5	0.30	10.0	0.39	12.5	180	77	1119	60	2.36	0.035	0.024
4234-125		9.0	0.35	12.0	0.47	12.5	180	77	1119	60	2.36	0.051	0.034
4234-146		10.0	0.39	14.0	0.55	12.5	180	90	1305	75	2.95	0.077	0.052
4234-155		12.0	0.47	15.0	0.59	12.5	180	60	870	90	3.54	0.065	0.044
4234-166		12.0	0.47	16.0	0.63	12.5	180	77	1119	95	3.74	0.090	0.060
4234-186		14.0	0.55	18.0	0.71	12.5	180	68	980	100	3.94	0.103	0.069

English

Construction

- Single wall PA12 PHLY stabilized

Temperature range

- -40°C to +100°C
- (-40°F to +212°F)

Application

- Automotive air brake and fuel
- Air conditioning, coolant lines, refrigeration
- CO_2 and Air tubing
- Chemical transfer
- Hydraulic lines and pneumatic controls
- Compressed Air and instrumentation systems
- Lubrication and Oils

Agency listings

- DIN 73378
- DIN 74324-1
- ISO 7628

Deutsch

Aufbau

- Einlagiges Rohr aus PA12 PHLY

Temperaturbereich

- -40°C bis +100°C
- (-40°F bis +212°F)

Anwendung

- Kraftfahrzeuge (Druckluftbremssysteme)
- Klimatisierung, Kühlschläuche, Kühlung
- CO_2 – und Luftrohre
- Durchleitung von Chemikalien
- Hydraulikleitungen und Pneumatiksteuerungen
- Druckluft und Messsysteme
- Schmiersysteme, Brennstoffe und Öle

Typenzertifizierung

- DIN 73378
- DIN 74324-1
- ISO 7628

Français

Construction

- PA12 PHLY monocouche

Plage de température

- -40°C á +100°C
- (-40°F á +212°F)

Applications

- Automobile (systèmes de freinage à air comprimé)
- Air conditionné, conduites de réfrigérant, réfrigération
- Tubing pour CO_2 et air
- Transport de produits chimiques
- Conduites hydrauliques et commandes pneumatiques
- Air comprimé et systèmes d'instrumentation
- Lubrification, carburants et huiles

Homologations de type

- DIN 73378
- DIN 74324-1
- ISO 7628

1300

Metal/Plastic tubing

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
1300-044		4.32	0.17	6.30	0.25	28.8	418	115	1668	19	0.75	0.024	0.016
1300-066		6.35	0.25	9.48	0.37	28.8	418	115	1668	32	1.26	0.051	0.034
1300-086		9.65	0.38	12.65	0.50	24.5	355	90	1305	50	1.97	0.069	0.046
1300-M06		4.00	0.16	6.00	0.24	28.8	418	115	1668	19	0.75	0.024	0.016
1300-M08		5.30	0.21	8.00	0.31	28.8	418	115	1668	25	0.98	0.039	0.026
1300-M10		6.20	0.24	10.00	0.39	28.8	418	115	1668	32	1.26	0.058	0.039
1300-M12		8.13	0.32	12.00	0.47	24.5	355	98	1421	40	1.57	0.075	0.050
1300-M14		9.75	0.38	14.00	0.55	24.5	355	90	1305	50	1.97	0.096	0.065
1300-M15		10.75	0.42	15.00	0.59	20.0	290	65	943	50	1.97	0.10	0.069

English

Construction

- Polyethylene/Aluminum composite

Temperature range

- -40°C to +80°C
- (-40°F to +176°F)

Application

- Pneumatic instrumentation and control lines located in very wet or moist environments
- Air and gas sampling
- Corrosive environments
- ID surface best suited for air

Features

- Improved routing with forming capability
- Reduced clamps and ties required
- No moisture ingression with aluminum barrier

Deutsch

Aufbau

- Polyethylen-/ Aluminiumverbund

Temperaturbereich

- -40°C bis +80°C
- (-40°F bis +176°F)

Anwendung

- Pneumatische Mess- und Regelleitungen in sehr nasser oder feuchter Umgebung
- Luft- und Gasprobennahme
- Aggressive Umgebungen (Korrosion)
- Innenfläche am besten für Luft geeignet

Merkmale

- Verbessertes Verlegung mit Formierungsfunktion
- Reduzierte Schellen und Verbindungen erforderlich
- Kein Eindringen von Feuchtigkeit durch Aluminiumbarriere

Français

Construction

- Composite polyéthylène/aluminium

Plage de température

- -40°C á +80°C
- (-40°F á +176°F)

Applications

- Lignes pneumatiques d'instrumentation et de commande situées en environnements très humides
- Echantillonnage d'air et de gaz
- Environnements corrosifs
- Paroi intérieure particulièrement appropriée à l'air

Caractéristiques

- Cheminement amélioré grâce à la capacité de formage
- Réduction de l'utilisation de brides de serrage
- Pas d'humidité grâce à la barrière aluminium

Air conditioning hose

Air Conditioning hose

GH001

Exceeds SAE J2064 and SAE J3062 performance type E hose

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH001-4	5	5.1	0.20	11.5	0.45	35	500	140	2000	38.1	1.50	0.10	0.07
GH001-6	8	8.1	0.32	15.2	0.60	35	500	140	2000	50.8	2.00	0.15	0.10
GH001-8	10	10.7	0.42	18.3	0.72	35	500	140	2000	63.5	2.50	0.21	0.14
GH001-10	13	13.2	0.52	20.7	0.81	35	500	140	2000	76.2	3.00	0.22	0.15
GH001-12	16	16.5	0.65	25.1	0.99	35	500	140	2000	101.6	4.00	0.34	0.23
GH001-16	19	22.9	0.90	30.9	1.22	35	500	140	2000	177.8	7.00	0.37	0.25

English

Construction

- Polyamide inner tube
- Single fabric braid
- EPDM cover

Temperature range

- -40°C to +140°C
- (-40°F to +284°F)

Application

- Air conditioning and refrigeration
- Ag, construction, truck and refrigeration

Features

- Permeation rate 1 kg/m²/year at 80°C (R1234yf)
- Moisture ingression <0,039 g/cm²/year
- Qualified with R134a, R407C, R1234yf, R404a, R410 and others
- Oils qualified: POE, PAG, Mineral Oil, Alkybenzene
- Flexible hose with high kink resistance
- Exceeds SAE J2064 and SAE J3062 Performance

Deutsch

Aufbau

- Polyamid Seele
- Polyestergeflecht Verstärkung
- EPDM Schlauchdecke

Temperaturbereich

- -40°C to +140°C
- (-40°F to +284°F)

Anwendung

- Kälteklima und Gefriersystem
- Landwirtschaft, Baumaschinen, LKW und Gefriersysteme

Vorteile

- Effusionsrate < 1 kg/m²/year bei 80°C (R1234yf)
- Feuchtigkeitsaufnahme <0,039 g/cm²/year
- Qualifiziert mit R134a, R407C, R1234yf, R404a, R410 und anderen
- Öle qualifiziert: POE, PAG, Mineralöl, Alkylbenzole
- Flexibler Schlauch mit hoher Knickfestigkeit

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1 tresse acier
- Tube ext. en gomme synthétique

Plage de température

- -40°C to +140°C
- (-40°F to +284°F)

Applications

- Pour circuits hydrauliques á base 'huiles minerals, fuel, huiles de lubrification, air*.

Caractéristiques

- Taux de perméation de 1 kg/m²/an à 80°C (R1234yf)
- Absorption d'humidité <0,039 g/cm²/an
- Qualifié avec R134a, R407C, R1234yf, R404a, R410 et autres
- Huiles qualifiée: POE, PAG, huile minérale, Alkybenzene
- Flexible souple avec haute résistance au croquage
- Dépasse les perfomances SAE J2064 et SAE J3062

Approved fittings	Product group code	Example
Crimp	GH	GH23700-12
EZ-Clip	GA	GA23911-6-6

Air conditioning hose

EverCool™ large bore A/C hose

G

FC800

Exceeds SAE J2064

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC800-12	16	16.4	0.65	27.2	1.07	35	500	140	2000	70.0	2.76	0.67	0.45
FC800-16	19	22.8	0.90	31.5	1.24	35	500	140	2000	80.0	3.15	0.71	0.48
FC800-20	25	29.3	1.15	38.6	1.52	35	500	140	2000	100.0	3.94	0.92	0.62
FC800-24	31	35.5	1.40	45.6	1.80	35	500	140	2000	160.0	6.30	1.15	0.77

English

Construction

- CR Chloroprene inner tube
- Polyamide barrier foil
- Wire braid reinforcement
- EPDM hose cover

Temperature range

- -40°C to +125°C
- (-40°F to +257°F)

Application

- Air Conditioning and Refrigeration
- Bus and Rail AC

Features

- Permeation rate 0,5 kg/m²/year at 80°C (R134a)
- Moisture ingression <0,039 g/cm²/year
- Qualified with R134a, R407C, R1234yf and others
- Oils qualified: POE, PAG, Mineral Oil, Alkybenzene
- Flexible hose for long lifetime
- Exceeds SAE J2064 Performance

Deutsch

Aufbau

- Polyamid Seele
- Polyestergeflecht Verstärkung
- EPDM Schlauchdecke

Temperaturbereich

- -40°C to +125°C
- (-40°F to +257°F)

Anwendung

- Kälteklima und Gefriersystem
- Landwirtschaft, Baumaschinen, LKW, Bus und Gefriersysteme

Vorteile

- Effusionsrate < 1 kg/m²/year bei 80°C (R1234yf)
- Feuchtigkeitsaufnahme <0,039 g/cm²/year
- Qualifiziert mit R134a, R407C, R1234yf, R404a, R410 und anderen
- Öle qualifiziert: POE, PAG, Mineralöl, Alkylbenzole
- Flexibler Schlauch mit hoher Knickfestigkeit

Français

Construction

- Tube int. en caout. Synth.
- Reinforcement 1 tresse acier
- Tube ext. en gomme synthétique

Plage de température

- -40°C to +125°C
- (-40°F to +257°F)

Applications

- Pour circuits hydrauliques á base 'huiles minerals, fuel, huiles de lubrification, air*.

Caractéristiques

- Taux de perméation de 1 kg/m²/an à 80°C (R1234yf)
- Absorption d'humidité <0,039 g/cm²/an
- Qualifié avec R134a, R407C, R1234yf, R404a, R410 et autres
- Huiles qualifiée: POE, PAG, huile minérale, Alkybenzene
- Flexible souple avec haute résistance au croquage
- Dépasse les perfomances SAE J2064 et SAE J3062

Approved fittings	Product group code	Example
Crimp	1Y	1Y20DL16
Crimp	GL	GL25117-16G
Reusable	GA	GA23911-6-6

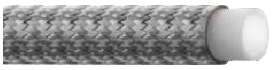
Teflon hose

Teflon hose

Smooth bore

S-TW

Meets SAE 100R14A



H

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
S-4TW	5	4.8	0.19	8.2	0.32	207	3000	827	12000	50.8	2.00	0.09	0.06
S-5TW	6	6.4	0.25	10.1	0.40	207	3000	827	12000	76.2	3.00	0.12	0.08
S-6TW	8	7.9	0.31	11.6	0.46	172	2500	689	10000	101.6	4.00	0.15	0.10
S-8TW	10	10.4	0.41	14.3	0.56	138	2000	552	8000	127.0	5.00	0.18	0.12
S-10TW	13	12.7	0.50	16.8	0.66	121	1750	483	7000	165.1	6.50	0.25	0.17
S-12TW	16	15.7	0.62	20.1	0.79	103	1500	414	6000	190.5	7.50	0.28	0.19
S-16TW	22	22.4	0.88	26.9	1.06	69	1000	276	4000	228.6	9.00	0.40	0.27

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
S-4TW316SS	5	4.8	0.19	8.2	0.32	207	3000	827	12000	50.8	2.00	0.09	0.06
S-16TW316SS	22	22.4	0.88	26.9	1.06	62	900	248	3600	228.6	9.00	0.40	0.27

English

Construction

- Non-conductive Teflon inner tube
- One or two layers of stainless steel braid

Temperature range

- -73°C to +260°C
- (-40°F to +257°F)

Application

- Steam
- Compressor discharge
- Chemical transfer

Deutsch

Aufbau

- Nicht leitendes Teflon-Innenrohr
- Eine oder zwei Lagen Edelstahlgeflecht

Temperaturbereich

- -73°C bis +260°C
- (-40°F bis +257°F)

Anwendung

- Dampf
- Kompressorentladung
- Chemische Übertragung

Français

Construction

- Tube intérieur Teflon non-conducteur
- Une ou deux couches de tresse en acier inoxydable

Plage de température

- -73°C to +260°C
- (-40°F to +257°F)

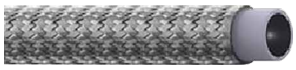
Applications

- Vapeur
- Décharge compresseur
- Transport de produits chimiques

Approved fittings	Product group code	Example
Crimp	GH / SH	GH15974-4S / SH17909-4
Reusable	07.04xx	07.046-4-4

SC-TW

Meets SAE 100R14A. Conductive tube



# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
SC-4TW	5	4.8	0.19	8.2	0.32	207	3000	827	12000	50.8	2.00	0.09	0.06
SC-5TW	6	6.4	0.25	10.1	0.40	207	3000	827	12000	76.2	3.00	0.12	0.08
SC-6TW	8	7.9	0.31	11.6	0.46	172	2500	689	10000	101.6	4.00	0.15	0.10
SC-8TW	10	10.4	0.41	14.3	0.56	138	2000	552	8000	127.0	5.00	0.18	0.12
SC-10TW	13	12.7	0.50	16.8	0.66	121	1750	483	7000	165.1	6.50	0.25	0.17
SC-12TW	16	15.7	0.62	20.1	0.79	103	1500	414	6000	190.5	7.50	0.28	0.19
SC-16TW	22	22.4	0.88	26.9	1.06	69	1000	276	4000	228.6	9.00	0.40	0.27

# Part number	Hose I.D.			Hose O.D.		Max operating pressure		Burst pressure		Minimum bend radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
SC-4TW316SS	5	4.8	0.19	8.2	0.32	207	3000	827	12000	50.8	2.00	0.09	0.06
SC-16TW316SS	22	22.4	0.88	26.9	1.06	62	900	248	3600	228.6	9.00	0.40	0.27

English

Construction

- Conductive Teflon inner tube
- One or two layers of stainless steel braid

Temperature range

- -73°C to +260°C
- (-40°F to +257°F)

Application

- Steam
- Compressor discharge
- Chemical transfer

Deutsch

Aufbau

- Leitfähiges Teflon-Innenrohr
- Eine oder zwei Lagen Edelstahlgeflecht

Temperaturbereich

- -73°C bis +260°C
- (-40°F bis +257°F)

Anwendung

- Dampf
- Kompressorentladung
- Chemische Übertragung

Français

Construction

- Tube intérieur Teflon conducteur
- Une ou deux couches de tresse en acier inoxydable

Plage de température

- -73°C to +260°C
- (-40°F to +257°F)

Applications

- Vapeur
- Décharge compresseur
- Transport de produits chimiques

Approved fittings	Product group code	Example
Crimp	GH / SH	GH15974-4S / SH17909-4
Reusable	07.04xx	07.046-4-4

Teflon hose

Convoluted

8000

Non-conductive tube

H

Part number	Hose size	Hose I.D.		Nominal I.D.		Max. Nominal O.D.	Max operating		Burst pressure		Minimum bend radius		Weight	
		mm	in	mm	in		bar	mm	bar	psi	mm	in	kg/m	lbs/ft
8008	-8	1/2			14.4	20.5		20.5	414		38.0		0.23	0.15
8012	-12	3/4			21.0	27.9		27.9	345		63.0		0.31	0.21
8016	-16	1			26.9	34.0		34.0	248		76.0		0.42	0.28
8020	-20	1-1/4			33.2	40.6		40.6	248		89.0		0.52	0.35
8024	-24	1-1/2			40.1	46.4		46.4	207		114.0		0.59	0.40
8032	-32	2			52.3	60.4		60.4	138		152.0		0.86	0.58

English

Construction

- Conductive Teflon inner tube
- One or two layers of stainless steel braid

Temperature range

- -54°C to +204°C
- (-65°F to +400°F)

Application

- Automotive
- Platen presses
- Pharmaceutical
- Bus & truck
- Reserve osmosis
- Hydraulics

Features

- Chemical processing
- Steam, Air, Water
- Tire Manufacturing
- Electronics
- Steel mills
- Food processing

Deutsch

Aufbau

- Leitfähiges Teflon-Innenrohr
- Eine oder zwei Lagen Edelstahlgeflecht

Temperaturbereich

- -54°C bis +204°C
- (-65°F bis +400°F)

Anwendung

- Automobil
- Druckplattenpressen
- Pharmaindustrie
- Bus & LKW
- Reserve Osmose
- Hydraulik

Vorteile

- Chemische Verarbeitung
- Dampf, Luft, Wasser
- Reifenherstellung
- Elektronik
- Stahlwerke
- Lebensmittelverarbeitung

Français

Construction

- Tube intérieur Teflon conducteur
- Une ou deux couches de tresse en acier inoxydable

Plage de température

- -54°C to +204°C
- (-65°F to +400°F)

Applications

- Automobile
- Pharmaceutique
- Bus et camion
- Hydraulique

Caractéristiques

- Traitement chimique
- Vapeur, Air, Eau
- Fabrication de pneus
- Électronique
- Aciéries
- Agroalimentaire

Approved fittings	Product group code	Example
Crimp	G82	G820108-8-CZ
Reusable		

8500

Conductive tube

# Part number	Hose size	Hose I.D.	Nominal I.D.	Max. Nominal O.D.	Max operating		Burst pressure		Minimum bend radius		Weight	
		mm	in		bar	mm	bar	psi	mm	in	kg/m	lbs/ft
8508	-8	1/2	14.4	20.5	103		414		38.0		0.23	0.15
8512	-12	3/4	21.0	27.9	86		345		63.0		0.31	0.21
8516	-16	1	26.9	34.0	62		248		76.0		0.42	0.28
8520	-20	1-1/4	33.2	40.6	62		248		89.0		0.52	0.35
8524	-24	1-1/2	40.1	46.4	52		207		114.0		0.59	0.40
8532	-32	2	52.3	60.4	34		138		152.0		0.86	0.58

English

Construction

- Conductive Teflon inner tube
- One or two layers of stainless steel braid

Temperature range

- -54°C to +204°C
- (-65°F to +400°F)

Application

- Automotive
- Platen presses
- Pharmaceutical
- Bus & truck
- Reserve osmosis
- Hydraulics

Features

- Chemical processing
- Steam, Air, Water
- Tire Manufacturing
- Electronics
- Steel mills
- Food processing

Deutsch

Aufbau

- Leitfähiges Teflon-Innenrohr
- Eine oder zwei Lagen Edelstahlgeflecht

Temperaturbereich

- -54°C to +204°C
- (-65°F to +400°F)

Anwendung

- Automobil
- Druckplattenpressen
- Pharmaindustrie
- Bus & LKW
- Reserve Osmose
- Hydraulik

Vorteile

- Chemische Verarbeitung
- Dampf, Luft, Wasser
- Reifenherstellung
- Elektronik
- Stahlwerke
- Lebensmittelverarbeitung

Français

Construction

- Tube intérieur Teflon conducteur
- Une ou deux couches de tresse en acier inoxydable

Plage de température

- -54°C to +204°C
- (-65°F to +400°F)

Applications

- Automobile
- Pharmaceutique
- Bus et camion
- Hydraulique

Caractéristiques

- Traitement chimique
- Vapeur, Air, Eau
- Fabrication de pneus
- Électronique
- Aciéries
- Agroalimentaire

Approved fittings	Product group code	Example
Crimp	G82	G820108-8-CZ
Reusable		

Accessories

Accessories

GA7000555 Plastic protective coil sleeve

Recommended to protect hose from abrasion this plastic sleeve is unaffected by air water,oil,gazoline and hydraulic fluids. Temperature ranger between -18°C to +82°C

Part number	Sleeve I.D.	
	mm	in
GA700555-6	9.5	0.37
GA700555-8	12.5	0.49
GA700555-10	16	0.63
GA700555-12	19	0.75
GA700555-16	25.4	1
GA700555-22	32	1.34

900705 Steel protective coil sleeve

Recommended for use where hose lines are subjected to excessive abrasion, kinking or accidental damage. Construction: spring steel, rust resistant. This coil should fit snugly to the hose O.D. expanding the coil I.D. (unwind the coil) may be necessary for proper installation.

For use with hose:
see pages L12-L20

Sleeve dash no	Sleeve I.D.	
	mm	in
-17S	11,2	0.44
-1S	12,7	0.50
-13S	14,5	0.57
-2S	16,0	0.63
-3S	19,0	0.75
-4S	22,3	0.88
-5S	26,2	1.03
-14S	28,7	1.13
-6S	31,0	1.22
-7S	37,3	1.47
-9S	42,9	1.69
-8S	48,5	1.91
-10S	54,1	2.13
-16S	62,0	2.44
-11S	65,0	2.56

GA70000696 Plastic protective coil spring

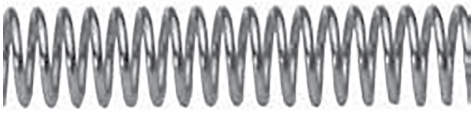
Recommended to protect hose from abrasion, this light weight plastic sleeve is unaffected by air, water, oil, gasoline, hydraulic and most other fluids. This coil can also be used for group bundling of hose lines. Celsius range of -20°C to +60°C.

For use with hose:
see pages L12-L20

Sleeve dash no	Sleeve I.D.	
	mm	in
-1S	15,5	0.61
-12S	17,0	0.67
-2S	19,0	0.75
-15S	20,6	0.81
-14S	21,6	0.85
-3S	23,1	0.91
-4S	26,4	1.04
-5S	30,0	1.18
-6S	34,0	1.34
-7S	42,2	1.66
-9S	47,5	1.87
-8S	54,1	2.13
-10S	60,4	2.38
-13S	69,8	2.75
-11S	73,1	2.88

900564 Steel protective coil spring

Protects hose cover and reinforcement from abrasion and accidental damage. Construction; steel wire, rust resistant. This coil should fit snugly to the hose O.D. expanding the coil I.D. (unwind the coil) may be necessary for proper installation.



For use with hose:
see pages L12-L20

Part number	Sleeve I.D.	
	mm	in
900952-30	40,0	1.58
900952-22	34,0	1.34
900952-16	27,0	1.06
900952-12	21,0	0.83
900952-10	16,0	0.63
900952-8	12,5	0.49
900952-6	9,5	0.37
900952-4	6,0	0.24

624 Firesleeve

Firesleeve will protect hose from direct flame. Firesleeve is constructed of a uniform single layer of braided fiberglass tubing impregnated with flame resistant silicone rubber. Temperature range of -65°F to +500°F.

For use with hose:
see pages L12-L20

Part #	Nominal Sleeve I.D.* "B"	
	mm	in
624-5	7,9	0.31
624-7	11,2	0.44
624-8	12,7	0.50
624-9	14,2	0.56
624-10	15,7	0.62
624-11	17,5	0.69
624-12	19,0	0.75
624-13	20,6	0.81
624-14	22,3	0.88
624-16	25,4	1.00
624-18	28,4	1.12
624-20	31,7	1.25
624-22	35,0	1.38
624-24	38,1	1.50
624-26	41,1	1.62
624-28	44,4	1.75
624-30	47,7	1.88
624-32	50,8	2.00
624-38	60,4	2.38
624-42	66,5	2.62
624-46	73,1	2.88
624-50	79,2	3.12
624-54	85,8	3.38
624-60	95,2	3.75

FC425 Nylon abrasion sleeve meets MSHA requirements

Nylon sleeve protects hose from abrasion and allows bundling of hose lines.

For use with hose:
see pages L12-L20

Part #	Nominal Sleeve I.D.* "B"	
	mm	in
FC425-12	18,0	0.71
FC425-16	25,4	1.00
FC425-18	28,7	1.13
FC425-20	31,7	1.25
FC425-24	40,4	1.59
FC425-28	44,4	1.75
FC425-32	52,6	2.07
FC425-38	60,4	2.38
FC425-40	64,5	2.54
FC425-46	72,6	2.86
FC425-54	84,8	3.34
FC425-59	93,0	3.66

*The maximum O.D. of hose fittings must be allowed for if fittings are to be covered.

FF90754 Guardian sleeve

Properties and specifications

Properties	Specification	Description
Burst pressure	16,000 psi	Capable to contain hose burst up to 16,000 psi
Pin hole leak pressure	4,000 psi	Sustained 4,000 psi pin hole deflection from focused 1mm pin hole
Abrasion cycles	250,000 psi	Holds up to 250,000 Abrasion cycles per ISO 6945

General and dimensional information

Part number	Nominal I.D. (in)	A – Flat Width (in) +/- 0.125	Weights in lbs per 300 ft Roll	Rolls per box
FF90754-68	0.68	1.290	7.43	8
FF90754-79	0.79	1.400	8.50	7
FF90754-91	0.91	1.590	9.70	6
FF90754-98	0.98	1.590	10.13	6
FF90754-106	1.06	1.825	11.10	5
FF90754-122	1.22	2.076	12.60	4
FF90754-142	1.42	2.390	14.50	4
FF90754-157	1.57	2.650	16.10	3
FF90754-173	1.73	2.910	17.70	3
FF90754-185	1.85	3.100	18.80	3
FF90754-209	2.09	3.470	21.10	2
FF90754-219	2.19	3.630	22.10	2
FF90754-238	2.38	3.925	23.90	2
FF90754-288	2.88	4.714	28.60	2
FF90754-366	3.66	5.938	36.10	1

Denier: 1260

Melting Point: 215˚C/420˚F

Material: Polyamide 6, made with pre-dyed yarn

Dim. Stability: Great resistance to sun, atmospheric agents and aging

Toxicity: Non-Toxic

Color: Black

Packing Requirements: Eaton Guardian Sleeve comes in a 300 foot roll with no more than 3 cuts per roll and no piece shorter than 30 feet. Note must be ordered by the roll.

Guardian sleeve selection chart

Suggested sleeve Part number	Sleeve I.D. (in)	Max hose OD that sleeve can accept (in)	Hose size as a ref.
FF90754-68	0.68	0.52	-4
FF90754-79	0.79	0.61	-4
FF90754-91	0.91	0.70	-6
FF90754-98	0.98	0.76	-6
FF90754-106	1.06	0.80	-6
FF90754-122	1.22	0.92	-8
FF90754-142	1.42	1.02	10
FF90754-157	1.57	1.13	10
FF90754-173	1.73	1.24	12
FF90754-185	1.85	1.34	16
FF90754-209	2.09	1.50	16
FF90754-219	2.19	1.54	20
FF90754-238	2.38	1.70	20
FF90754-288	2.88	2.00	20
FF90754-366	3.66	2.40	24

Assembly instructions

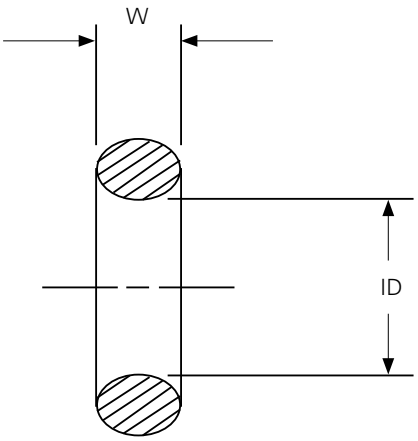
1. Select the correct sleeve part number for the
2. Hose as outlined in the Table 2.
3. Cut the sleeve 2 inches longer than the cut length of the hose to allow full hose bend radius.
4. The ends of the sleeves must be seared to prevent sleeve from fraying.
5. Slide the sleeve over the hose.
6. Properly assemble the hose ends.
7. Secure the sleeve over hose sockets with a metal banding product.

900729 Support clamp

These lightweight vinyl-coated steel support clamps are designed to support hose where long runs are necessary. This clamp not only furnishes a cleaner installation, but prevents damage, exposure and chafing. The lining will withstand high ambient temperatures. Bolt hole dia: Clamp dash no. –01 thru –8, –18 thru –23 is .406; –9 thru –17, –24 thru –31 is .531.

For use with hose: see pages L12-L20

Clamp dash no.	Clamp I.D. Closed	
	mm	in.
-18	6,3	0.25
-19	9,6	0.38
-01	11,2	0.44
-1	12,7	0.50
-2	14,2	0.56
-21	16,0	0.63
-3	17,5	0.69
-4	19,0	0.75
-5	20,6	0.81
-6	23,9	0.94
-23	25,4	1.00
-8	26,9	1.06
-9	28,7	1.13
-27	30,2	1.19
-24	31,7	1.25
-25	33,3	1.31
-10	38,1	1.50
-11	39,6	1.56
-12	44,4	1.75
-28	46,0	1.81
-13	50,8	2.00
-29	52,3	2.06
-14	57,1	2.25
-30	63,5	2.50
-31	66,8	2.63
-15	69,8	2.75
-16	73,1	2.88
-17	90,4	3.56



O-Rings for ISC type 1W fittings (-20, -24, -32):

Part number	Hose size	W (mm)	ID (mm)
05.071-27.30x2.40	-20	2,40	27,30
05.071-32.99x2,62	-24	2,62	32,99
05.071-44.12x2.62	-32	2,62	44,12

*O-rings must be ordered separately.

**Two (2) O-Rings are required for one nipple.

***O-rings must be installed with PAG oil (only) prior to crimping.

Flaretite® seals

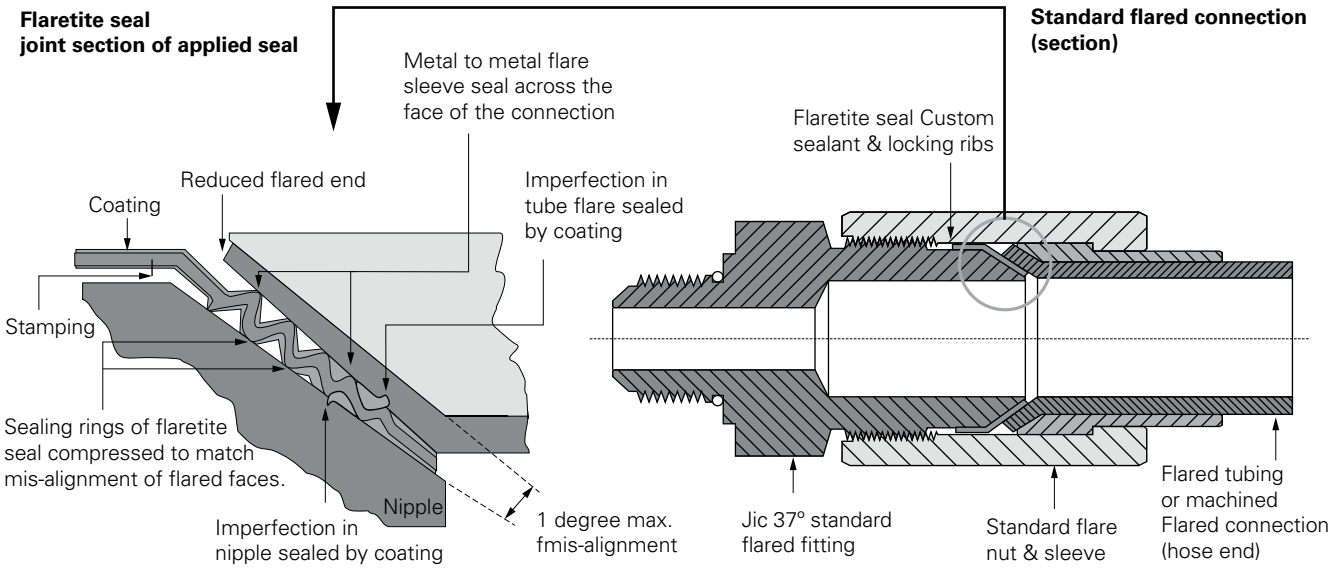
The ideal product to enhance new installations of SAE 37˚ connections, as well as seal off minor leaks and weeping connections.

Features

- Ribbed insert design
- Coated with Loctite® sealant
- Economical method to reduce minor leaks and weeping connections
- Built-in clip to attach the Flaretite seal to the nose of the SAE 37 degree connection
- Available sizes: -04 through -32

Benefits

- Multiple surface contact points
- Locks the joint and fills surface imperfections
- Saves time & money associated with maintenance and rework
- Quick & easy assembly



Part number	Package part number	Number of seals per package
Burst pressure	16,000 psi	Capable to contain hose burst up to 16,000 psi
Pin hole leak pressure	4,000 psi	Sustained 4,000 psi pin hole deflection from focused 1mm pin hole
Abrasion cycles	250,000 psi	Holds up to 250,000 Abrasion cycles per ISO 6945

Assembly and torque requirements

To assemble an SAE 37˚ connection using a Flaretite seal, simply push the Flaretite seal onto the male portion of the connection. The built-in clip will hold the Flaretite seal onto the male half.

During assembly ensure:

- The seal is fitted squarely to the conical nose of the JIC fitting -37˚ flare.
- The sealing faces of the flared connector part are clean and free of burrs.
- The flared joint is correctly tightened with recommended torque settings noted below.

Recommended torque settings:

Tolerance: +10% -0%

-04 (1/4")	SAE 37°: 14lb-ft.	-10 (5/8")	SAE 37°: 80lb-ft.	-20 (1-1/4")	SAE 37°: 190lb-ft.
-06 (3/8")	SAE 37°: 26lb-ft.	-12 (3/4")	SAE 37°: 110lb-ft.	-24 (1-1/2")	SAE 37°: 220lb-ft.
-08 (1/2")	SAE 37°: 55lb-ft.	-16 (1")	SAE 37°: 140lb-ft.	-32 (2")	SAE 37°: 325lb-ft.

Accessories

Hose part #	"900564-* Steel protective coil spring "	"900705-* Steel protective coil sleeve"	"GA7000555-* Plastic protective coil sleeve"	"GA7000696-* Plastic protective coil spring"	"624-* Firesleeve"	"FC425-* Nylon abrasion sleeve"	"900729-* Support clamp"
GH681(B)-3	-1S	-13S	-6	-6	-9	-12	-2
GH681(B)-4	-1S	-2S	-8	-8	-10	-12	-21
GH681(B)-5	-12S	-3S	-8	-8	-11	-12	-3
GH681(B)-6	-2S	-3S	-10	-10	-13	-15	-4
GH681(B)-8	-3S	-5.1	-10		-16	-16	-6
GH681(B)-10	-4S	-5.1	-12		-18	-18	-23
GH681(B)-12	-5S	-6S	-16	-16	-20		-9
GH681(B)-16	-7S	-9S		-22	-24	-28	-10
GH681(B)-20	-9S	-8S			-30	-32	-12
GH681(B)-24	-10S	-10S			-36	-38	-29
GH681(B)-32	-11S				-46	-54	-15
EC881(B)-4	-12S	-3S	-8	-8	-11	-12	-21
EC881(B)-5	-2S	-3S	-10	-10	-12	-15	-4
EC881(B)-6	-14S	-4S	-10	-10	-14	-15	-5
EC881(B)-8	-4S	-5.1	-12		-16	-18	-23
EC881(B)-10	-5S	-14S	-12	-12	-18	-20	-8
EC881(B)-12	-6S	-6S	-16	-16	-20	-24	-24
EC881(B)-16	-7S	-9S	-22	-22	-26	-28	-11
EC881(B)-20	-8S	-8S		-30	-30	-32	-28
EC881(B)-24	-10S	-11S			-36	-38	-14
EC881(B)-32	-11S	-12S			-46	-54	-15
GH781-4	-12S	-2S	-8	-8	-11	-12	-21
GH781-5	-2S	-3S	-10	-10	-12	-15	-4
GH781-6	-14S	-4S	-10	-10	-14	-15	-5
GH781-8	-4S	-5.1	-12		-16	-18	-23
GH781-10	-5S	-14S	-12	-12	-18	-20	-8
GH781-12	-6S	-6S	-16	-16	-22	-24	-24
GH781-16	-7S	-9S	-22	-22	-26	-28	-11
GH781-20	-8S	-8S		-30	-32	-32	-28
GH781-24	-10S	-11S			-36	-38	-14
GH781-32	-11S	-12S			-46	-54	-15
GH425(B)-6	-4S	-5.1	-12		-16	-16	-6
GH425(B)-8	-5S	-14S	-12	-12	-18	-20	-8
GH425(B)-10	-6S	-6S	-16	-16	-20	-24	-27
GH425(B)-12	-7S	-7S			-24	-24	-10
GH425(B)-16	-9S	-8S			-28	-32	-12
GH506-12	-7S	-7S			-24	-24	-10
GH506-16	-9S	-8S			-28	-32	-12
GH506-20	-8S	-10S		-30	-32	-38	-13
GH506-24	-10S	-11S			-38	-40	-14
GH506-32					-48	-54	-16
FC500-12	-7S	-7S			-24	-24	-10
FC500-16	-9S	-9S	-22		-28	-32	-12
FC500-20	-8S	-10S		-30	-32	-38	-13
FC500-24	-10S	-11S			-38	-40	-14

Hose part #	 "900564-* Steel protective coil spring "	 "900705-* Steel protective coil sleeve"	 "GA7000555-* Plastic protective coil sleeve"	 "GA7000696-* Plastic protective coil spring"	 "624-* Firesleeve"	 "FC425-* Nylon abrasion sleeve"	 "900729-* Support clamp"
FC500-32					-50	-54	
GH466-20	-10S	-11S			-36	-38	-14
GH466-24		-11S			-40	-46	-30
GH466-32					-50	-54	
EC600-12	-7S	-7S			-24	-24	-10
EC600-16	-9S	-9S			-28	-32	-12
EC600-20	-10S	-10S			-36	-38	-14
FC510-4	-2S	-3S	-8	-8	-11	-15	-3
FC510-6	-14S	-4S	-10	-10	-14	-15	-5
FC510-8	-4S	-5.1	-12		-16	-16	-6
FC510-10	-5S	-14S	-12	-12	-18	-20	-8
FC510-12	-6S	-6S	-16	-16	-22	-24	-27
FC510-16	-7S	-9S	-22	-22	-26	-28	-10
FC510-20	-8S	-8S		-30	-30	-32	-28
GH195-4	-2S	-3S	-8	-10	-12	-15	-4
GH195-6	-3S	-4S			-16	-16	-6
GH195-8	-4S	-5.1	-12		-16	-18	-23
GH195-10	-5S	-6S	-16	-12	-20	-20	-9
GH195-12	-6S	-7S	-16	-16	-22	-24	-25
GH195-16	-9S	-9S	-22		-28	-32	-12
GH195-20	-8S	-10S			-36	-38	-13
GH195-24	-10S	-11S			-38	-40	-30
GH195-32	-11S	-12S			-46	-54	-16
EC525-12	-7S	-7S			-24	-24	-25
EC525-16	-9S	-9S	-22		-28	-32	-12
EC525-20	-8S	-10S			-36	-38	-13
EC525-24	-10S	-11S			-38	-40	-14
EC525-32	-11S				-46	-54	-16
GH120-4	-12S	-3S	-8	-8	-11	-12	-35
GH120-6	-14S	-4S	-10	-10	-14	-15	-5
GH120-8	-4S	-5.1	-12		-16	-18	-23
GH120-10	-5S	-6S	-16	-12	-18	-20	-9
GH120-12	-6S	-7S	-16	-16	-22	-24	-24
GH120-16	-7S	-9S	-22	-22	-26	-28	-11
GH120-20	-8S	-10S		-30	-32	-32	-28
GH120-24	-10S	-11S			-36	-38	-14
GH120-32	-11S				-46	-54	-15
EC810-6	-4S	-5.1	-12		-16	-18	-23
EC810-8	-5S	-14S	-16	-12	-18	-20	-8
EC810-10	-6S	-7S	-16	-16	-22	-24	-24
EC810-12	-7S	-7S			-24	-24	-10
EC810-16	-9S	-8S			-28	-32	-12
EC810-20	-10S	-10S			-36	-38	-29
EC810-24		-11S			-40	-46	-30
EC810-32					-50	-54	
EC115-4	-12S	-2S	-8	-8	-10	-12	-21

Accessories

Continued...

Hose part #	 "900564-* Steel protective coil spring "	 "900705-* Steel protective coil sleeve"	 "GA7000555-* Plastic protective coil sleeve"	 "GA7000696-* Plastic protective coil spring"	 "624-* Firesleeve"	 "FC425-* Nylon abrasion sleeve"	 "900729-* Support clamp"
EC115-5	-12S	-3S	-8	-8	-11	-12	-35
EC115-6	-14S	-3S	-10	-10	-13	-15	-5
EC115-8	-3S	-5.1	-12		-16	-16	-6
EC115-10	-4S	-5.1	-12		-18	-18	-23
EC115-12	-5S	-6S	-16	-16	-20	-20	-9
EC115-16	-7S	-9S		-22	-26	-28	-10
EC115-20	-9S	-8S			-30	-32	-12
EC115-24	-8S	-10S			-36	-38	-13
EC115-32	-11S	-12S			-42	-46	-31
EC110-4	-12S	-2S	-8	-8	-11	-12	-21
EC110-5	-2S	-3S	-8	-10	-12	-15	-4
EC110-6	-14S	-4S	-10	-10	-13	-15	-5
EC110-8	-4S	-5.1	-12		-16	-16	-6
EC110-10	-5S	-14S	-12	-12	-18	-20	-8
EC110-12	-6S	-7S	-16	-16	-22	-24	-27
EC110-16	-7S	-9S	-22	-22	-26	-28	-11
EC110-20	-8S	-10S		-30	-32	-32	-13
EC110-24	-10S	-11S			-36	-38	-14
EC110-32	-11S	-12S			-46	-54	-15
EC215-4	-12S	-2S	-8	-8	-11	-12	-21
EC215-5	-2S	-3S	-10	-10	-12	-15	-4
EC215-6	-14S	-4S	-10	-10	-14	-15	-5
EC215-8	-4S	-5.1	-12		-16	-18	-23
EC215-10	-5S	-14S	-12	-12	-18	-20	-8
EC215-12	-6S	-7S	-16	-16	-22	-24	-27
EC215-16	-7S	-9S	-22	-22	-26	-28	-10
EC215-20	-8S	-10S		-30	-32	-32	-13
EC215-24	-10S	-11S			-36	-38	-14
EC215-32	-11S	-12S			-46	-54	-31
EC210-4	-2S	-3S	-8	-10	-12	-15	-4
EC210-5	-14S	-4S	-10	-10	-13	-15	-5
EC210-6	-3S	-4S			-16	-16	-6
EC210-8	-4S	-5.1	-12		-18	-18	-23
EC210-10	-5S	-6S	-16	-12	-20	-20	-9
EC210-12	-6S	-7S	-16	-16	-22	-24	-25
EC210-16	-9S	-9S	-22		-28	-32	-12
EC210-20	-10S	-10S			-36	-38	-29
EC210-24	-10S	-11S			-38	-40	-30
EC210-32	-11S				-46	-54	-16
EC426-6	-4S	-5.1	-12		-16	-18	-23
EC426-8	-5S	-6S	-16	-12	-20	-20	-8
EC426-10	-6S	-7S	-16	-16	-22	-24	-24
EC426-12	-7S	-7S			-24	-24	-10
EC426-16	-9S	-8S			-30	-32	-12
EC426-20		-10S			-36	-38	-13
EC512-12	-7S	-7S			-24	-24	-10

Hose part #	 "900564-* Steel protective coil spring "	 "900705-* Steel protective coil sleeve"	 "GA7000555-* Plastic protective coil sleeve"	 "GA7000696-* Plastic protective coil spring"	 "624-* Firesleeve"	 "FC425-* Nylon abrasion sleeve"	 "900729-* Support clamp"
EC512-16	-9S	-8S			-28	-32	-12
EC512-20	-8S	-10S		-30	-32	-38	-13
EC512-24	-10S	-11S			-38	-40	-14
EC512-32	-11S				-48	-54	-16
EC420-12	-7S	-7S			-24	-24	-10
EC420-16	-9S	-8S			-28	-32	-12
EC420-20	-10S	-10S			-36	-38	-14
EC420-24		-11S			-40	-46	-30
EC420-32					-50	-54	
EC615-12							
EC615-16	-9S	-8S			-28	-32	-12
EC615-20	-10S	-10S			-36	-38	-14
EC615-24		-11S			-40	-46	-30
EC615-32							
GH585-3	-1S	-13S	-6		-10	-12	-21
GH585-4	-12S	-2S	-8	-8	-11	-12	-21
GH585-5	-2S	-3S	-8	-10	-12	-15	-4
GH585-6	-14S	-4S	-10	-10	-14	-15	-5
GH585-8	-3S	-5.1	-12		-16	-16	-6
GH585-10	-5S	-14S		-12	-18	-20	-8
GH585-12	-6S	-6S	-16	-16	-22	-24	-27
GH585-16	-7S	-9S	-22	-22	-26	-28	-11
GH586-4	-2S	-3S	-8	-8	-12	-15	-4
GH586-5	-14S	-4S	-10	-10	-14	-15	-5
GH586-6	-3S	-4S	-10	-10	-16	-15	-6
GH586-8	-4S	-5.1	-12		-18	-18	-23
GH586-10	-6S	-6S	-16	-16	-20	-20	-9
GH586-12	-6S	-7S	-16	-16	-22	-24	-25
GH586-16	-7S	-9S	-22	-22	-28	-28	-11
GH586-20	-8S	-10S		-30	-32	-32	-28
EC109-4	-12S	-3S	-8	-8	-11	-12	-21
EC109-5	-2S	-3S	-8	-10	-12	-15	-4
EC109-6	-14S	-4S	-10	-10	-14	-15	-5
EC109-8	-4S	-5.1	-12		-16	-16	-6
EC109-10	-5S	-14S	-12	-12	-18	-20	-8
EC109-12	-6S	-6S	-16	-16	-22	-24	-27
EC109-16	-7S	-9S	-22	-22	-26	-28	-11
EC112-4	-1S	-2S	-8	-8	-10	-12	-21
EC112-5	-12S	-3S	-8	-8	-11	-12	-35
EC112-6	-14S	-3S	-10	-10	-13	-15	-5
EC112-8	-3S	-4S	-10		-16	-16	-6
EC112-10	-4S	-5.1	-12		-18	-18	-23
EC112-12	-5S	-6S	-16	-16	-20	-20	-9
EC112-16	-7S	-9S		-22	-26	-28	-10
EC209-4	-2S	-3S	-8	-10	-12	-15	-4
EC209-5	-14S	-4S	-10	-10	-13	-15	-5

Accessories

Continued...

Hose part #	 "900564-* Steel protective coil spring "	 "900705-* Steel protective coil sleeve"	 "GA7000555-* Plastic protective coil sleeve"	 "GA7000696-* Plastic protective coil spring"	 "624-* Firesleeve"	 "FC425-* Nylon abrasion sleeve"	 "900729-* Support clamp"
EC209-6	-3S	-4S	-10		-16	-16	-6
EC209-8	-4S	-5.1	-12		-18	-18	-23
EC209-10	-5S	-6S	-16	-12	-20	-20	-9
EC209-12	-6S	-7S	-16	-16	-22	-24	-25
EC209-16	-9S	-9S	-22		-28	-32	-12
EC212-4	-12S	-3S	-8	-8	-11	-12	-21
EC212-5	-2S	-3S	-10	-10	-13	-15	-4
EC212-6	-14S	-4S	-10	-10	-14	-15	-5
EC212-8	-4S	-5.1	-12		-16	-18	-23
EC212-10	-5S	-14S	-12	-12	-18	-20	-8
EC212-12	-6S	-6S	-16	-16	-22	-24	-27
EC212-16	-7S	-9S	-22	-22	-26	-28	-11
EC212-20	-8S	-10S		-30	-32	-32	-13
EC212-24	-10S	-11S			-36	-38	-14
EC212-32	-11S				-46	-54	-31
EC045-3	-1S	-13S	-6		-10	-12	-2
EC045-4	-12S	-2S	-8	-8	-11	-12	-21
EC045-5	-2S	-3S	-8	-10	-12	-15	-4
EC045-6	-14S	-4S	-10	-10	-14	-15	-5
EC045-8	-3S	-5.1	-12		-16	-16	-23
EC045-10	-5S	-14S		-12	-18	-20	-8
EC045-12	-6S	-6S	-16	-16	-20	-24	-27
EC045-16	-7S	-9S	-22	-22	-26	-28	-10
EC116-4	-1S	-2S	-8	-8	-10	-12	-21
EC116-5	-12S	-3S	-8	-8	-11	-12	-35
EC116-6	-2S	-3S	-10	-10	-12	-15	-4
EC116-8	-3S	-4S	-10		-16	-16	-6
EC216-4	-12S	-3S	-8	-8	-11	-12	-21
EC216-5	-2S	-3S	-8	-10	-12	-15	-4
EC216-6	-14S	-4S	-10	-10	-14	-15	-5
EC216-8	-4S	-5.1	-12		-16	-18	-23
EC910-8	-5S	-14S	-16	-12	-20	-20	-8
EC910-12	-7S	-7S			-24	-24	-10
EC910-16	-9S	-8S			-28	-32	-12
FC310-3	-1S	-13S	-6		-10	-12	-2
FC310-4	-12S	-3S	-8	-8	-11	-15	-3
FC310-5	-2S	-3S	-8	-10	-12	-15	-4
FC310-6	-14S	-4S	-10	-10	-13	-15	-5
FC310-8	-4S	-5.1	-12		-16	-16	-6
FC310-10	-5S	-14S	-12	-12	-18	-20	-8
FC310-12	-6S	-6S	-16	-16	-22	-24	-27
FC310-16	-7S	-9S	-22	-22	-26	-28	-10
FC310-20	-8S	-10S		-30	-32	-32	-28
SH222-4	-2S	-3S	-8	-10	-12	-15	-4
SH222-6	-3S	-4S			-16	-16	-6
SH222-8	-4S	-5.1	-12		-18	-18	-23

Hose part #	 "900564-* Steel protective coil spring "	 "900705-* Steel protective coil sleeve"	 "GA7000555-* Plastic protective coil sleeve"	 "GA7000696-* Plastic protective coil spring"	 "624-* Firesleeve"	 "FC425-* Nylon abrasion sleeve"	 "900729-* Support clamp"
SH222-12	-6S	-7S	-16		-22	-24	-25
SH222-16	-7S	-9S	-22	-22	-26	-28	-11
EC330-6	-3S	-4S	-12		-16	-16	-6
EC330-8	-4S	-5.1	-12		-16	-18	-23
EC330-10	-5S	-6S	-16	-12	-20	-20	-9
EC330-12	-6S	-7S	-16	-16	-22	-24	-25
EC850-10	-6S	-7S	-16	-16	-22	-24	-24
EC850-12	-7S	-7S			-24	-24	-10
EC850-16	-9S	-8S			-28	-32	-12
EC850-20	-10S	-10S			-36	-38	-14
GH435-6	-3S	-4S	-10		-16	-16	-6
GH435-8	-4S	-5.1	-12		-16	-18	-23
GH435-10	-5S	-6S	-16	-12	-20	-20	-9
GH435-12	-6S	-7S	-16	-16	-22	-24	-25
GH435-16	-7S	-9S	-22	-22	-26	-28	-10
FC300-4	-12S	-2S	-8	-8	-11	-12	-21
FC300-5	-2S	-3S	-8	-8	-12	-15	-4
FC300-6	-14S	-4S	-10	-10	-13	-15	-5
FC300-8	-3S	-4S	-12		-16	-16	-6
FC300-10	-5S	-14S	-12	-12	-18	-18	-8
FC300-12	-6S	-7S	-16	-16	-20	-24	-27
FC300-16	-7S	-7S			-24	-24	-10
FC300-20	-9S	-8S	-22		-28	-32	-12
FC300-24	-8S	-10S		-30	-32	-32	-13
FC300-32		-11S			-40	-46	-30
FC300-40	-	-12S			-50		
FC350-4	-12S	-2S	-8	-8	-11	-12	-21
FC350-5	-2S	-3S	-8	-8	-12	-15	-4
FC350-6	-14S	-4S	-10	-10	-13	-15	-5
FC350-8	-3S	-5.1	-12		-16	-16	-6
FC350-10	-5S	-5.1	-12	-12	-18	-18	-8
FC350-12	-6S	-6S	-16	-16	-20	-24	-27
FC350-16	-7S	-7S			-24	-24	-10
FC350-20	-9S	-9S	-22		-28	-32	-12
FC350-24	-8S	-10S		-30	-32	-38	-13
FC355-4	-12S	-2S	-8	-8	-11	-12	-21
FC355-5	-2S	-3S	-8	-8	-12	-15	-4
FC355-6	-14S	-4S	-10	-10	-13	-15	-5
FC355-8	-3S	-4S	-12		-16	-16	-6
FC355-10	-5S	-14S	-12	-12	-18	-18	-8
FC355-12	-6S	-6S	-16	-16	-20	-24	-27
FC355-16	-7S	-7S			-24	-24	-10
FC355-20	-9S	-8S			-28	-32	-12
FC355-24	-8S	-10S		-30	-32	-32	-13
FC355-32		-11S			-40	-46	-30
FC234-5	-2S	-3S	-8	-8	-12	-15	-4

Hose part #	"900564-* Steel protective coil spring "	"900705-* Steel protective coil sleeve"	"GA7000555-* Plastic protective coil sleeve"	"GA7000696-* Plastic protective coil spring"	"624-* Firesleeve"	"FC425-* Nylon abrasion sleeve"	"900729-* Support clamp"
FC234-6	-14S	-4S	-10	-10	-13	-15	-5
FC234-8	-3S	-4S			-16	-16	-6
FC234-10	-5S	-14S	-12	-12	-18	-20	-8
FC234-12	-6S	-6S	-16	-16	-20	-24	-27
FC234-16	-7S	-7S			-24	-24	-10
FC332-4							
FC332-6							
FC332-8							
FC332-10							
FC332-12							
GH100-4	-12S	-2S	-8	-8	-11	-12	-21
GH100-6	-2S	-3S	-10	-10	-12	-15	-4
GH100-8	-3S	-4S	-12		-16	-16	-6
GH100-10	-5S	-14S	-12	-12	-18	-20	-8
GH100-12	-6S	-6S	-16	-16	-20	-24	-27
GH101-4	-12S	-3S	-8	-8	-11	-12	-35
GH101-6	-14S	-4S	-10	-10	-13	-15	-5
GH101-8	-4S	-5.1	-12		-16	-16	-23
GH101-10	-5S	-14S	-12	-12	-18	-20	-8
FC619-12	-7S	-7S			-24	-24	-10
FC619-16	-9S	-9S	-22	-22	-28	-32	-12
FC619-20	-8S	-10S		-30	-32	-38	-13
FC619-24	-10S	-15S			-36	-38	-14
FC619-32	-11S				-46	-54	-15
FC619-40					-54	-59	
FC619-48							
GH180-12	-7S	-7S		-22	-26	-28	-10
GH180-16	-9S	-8S			-30	-32	-12
GH180-20	-10S	-10S			-36	-38	-14
GH180-24		-11S			-40	-46	-30
GH180-32	-11S				-48	-54	-16
GH180-40					-60		-17
GH180-48							
GH180-64							
EC190-12	-7S	-7S			-24	-24	-10
EC190-16	-9S	-9S	-22	-22	-28	-28	-11
EC190-20	-8S	-8S		-30	-32	-38	-13
EC190-24	-10S	-10S			-36	-38	-14
EC190-32	-11S				-46	-54	-15
EC190-40					-54	-59	
EC190-48							
GH507-20	-8S	-10S			-36	-38	-13
GH001-4	-1S	-13S	-6		-9	-12	-2
GH001-6	-2S	-3S	-8	-8	-12	-15	-4
GH001-8	-14S	-4S	-10	-10	-14	-15	-5
GH001-10	-3S	-5.1	-12		-16	-16	-6

Hose part #	 "900564-* Steel protective coil spring "	 "900705-* Steel protective coil sleeve"	 "GA7000555-* Plastic protective coil sleeve"	 "GA7000696-* Plastic protective coil spring"	 "624-* Firesleeve"	 "FC425-* Nylon abrasion sleeve"	 "900729-* Support clamp"
GH001-12	-5S	-14S		-12	-18	-20	-8
GH001-16	-6S	-7S	-16		-22	-24	-25
FC800-12	-6S	-6S	-16	-16	-20	-24	-27
FC800-16	-7S	-7S			-24	-24	-10
FC800-20	-9S	-9S			-28	-32	-12
FC800-24	-8S	-10S		-30	-32	-38	-13

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