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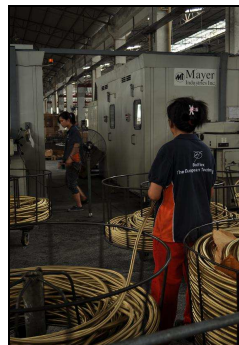
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Balflex® Group

since 1963



ISO 9001:2008



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The Balflex® Group

Established since 1963, **Balflex®** is an international group of companies dedicated to the design, production and distribution of all types of flexible hoses, fittings, connectors, adapters, quick couplings and v-belts with a very high quality standard.



50 years of know-how and expertise in this field makes **Balflex®** the first choice for the mining, agriculture, offshore and construction industries. Today the **Balflex® Group** covers worldwide users through our own company's production facilities, strategically located warehouses and Balflex distributors.

Quality

Quality is very important to us! We have fully equipped, modern laboratories and equipment, employing the industries most experienced personnel



Balflex® Has obtained various certifications for our Management Systems and Products.

This reliable and consistent approach has allowed us to achieve our ISO 9001 certification. At **Balflex** quality and service always comes first.



We are dedicated to continue the development of new products with a strong emphasis on quality

Products

Balflex® produces one of the most comprehensive ranges of hoses, fittings, flanges, adaptors and quick connectors.



All **Balflex®** hydraulic hoses are produced to **Balflex's** stringent specifications and are according to **ISO 1436**, **SAE J517** and **EN 853** to **EN 857** standards.

They cover a wide variety of low to very high pressure applications in rubber, thermoplastic or P.T.F.E,



with textile or steel reinforcement for petroleum and water based hydraulic fluids.

Balflex® industrial hoses are produced to **Balflex®** specifications that comply with international standards. Covering a wide variety of applications, using the best grade of high quality polymers with synthetic fibers or steel wire reinforcements for a wide range of fluids and temperatures.

Member of:



Certified by:

U.S. Department of Labor





Balflex® Hydraulic Hoses

Balflex® Hydraulic Hoses

Balflex® hydraulic hoses are produced to **Balflex®** specifications and according to **ISO 1436, ISO 3869, ISO 3949, SAE J517** and **EN 853** to **EN 857** standards. They cover a wide variety of low to very high-pressure applications, in rubber, thermoplastic or P.T.F.E, with textile and steel reinforcement, for petroleum and water base hydraulic fluids.



Balflex® optimized the production of these hoses and there compatibility with a wide range of connectors, in order to assure the highest level of performance and the most extensive range of applications.

The **Balflex®** hydraulic hose program includes:

- > Textile Braid Hydraulic Hoses
- > Wire Braid Hydraulic Hoses
- > 4 and 6 Spiral Hydraulic Hoses
- > Thermoplastic Hoses

General Guidelines

Balflex® hydraulic hoses are designed with a safety factor of 4: 1 relating minimum burst pressure and recommended working pressure (except 2-MAX hose which is 2.3: 1). Working pressure and nominal diameter are always branded on the hose, except on hoses with external steel braid.

Hydraulic hoses are designed for petroleum base hydraulic fluids applications with a temperature range of – 40°F (- 40°C) to + 212°F (+ 100°C). Special rubber compounds and other lining materials allow to exceed these limits. Hydraulic hoses may also be used for water base hydraulic fluids if the working temperature does not exceed + 158°F (+ 70°C). With the presence of air in the fluid working temperature should be reduced to + 140°F (+ 60°C).

Selection, assembly and installation of hydraulic hoses should follow **Balflex®** recommendations and **SAE J1273** and **DIN 20066** standards. **Hydraulic hose assemblies should always be inspected and hydraulically tested before installation.** All hydraulics systems should be tested against leakage and malfunction in an appropriate area after any intervention.

Installations that do not comply with an adequate geometry of the hose assembly may reduce significantly the lifetime of the hose. Likewise, the use of wrongly dimensioned hoses or application in a system where working characteristics exceed the hose specifications may shorten drastically the hose lifetime.

The failure of any hydraulic hose assembly may be dangerous and expose people and property to irreversible damage. Among other occurrences that must be prevented are the high velocity and high temperature projections of hydraulic fluid, the projection of couplings and it's parts, the whipping of unrestrained hose, spillage or combustion of the fluid, electrical shocks through contact with electrical sources, immovability, fall or sudden movement of masses controlled by the hydraulic system.

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Hydraulic Hose – General Safety Guidelines

Maintenance technicians, fabricators, end-users and installers need to be aware of the potential safety hazards when handling or even when in proximity to hydraulic hose assemblies.

The following conditions can lead to personal injury and property damage:

- 1) Always use hose in well-ventilated areas; some fluids may permeate the hose cover and create fumes and/or fire hazards.*
- 2) Hydraulic systems typically operate at very high pressures. Any leak of pressurized fluid can penetrate the skin, causing severe tissue damage and burns. One good approach is to use guards or shields around the hose assembly to reduce the risk of injury.*
- 3) Whipping – under high operating pressures, the hose and/or fitting can come loose or blow, causing the end of the hose to whip with great force. Again, the hose assembly should be shielded, guarded and, whenever possible, secured to avoid injury or damage from whipping.*
- 4) Hydraulic fluids are flammable and can explode with a source of ignition. To avoid possible injury or property damage, care should be taken to eliminate ignition sources and to properly route the hose assembly to minimize the chance of combustion.*
- 5) Most hose is conductive. Some applications require use of non-conductive hose to avoid electrocution.*
- 6) When hydraulic hose assemblies fail, the equipment it powers will fail too, sometimes abruptly and without warning. Never work directly beneath hydraulically powered booms, shovels or other large, heavy pieces of equipment.*
- 7) When air or gaseous materials are being conveyed, the correct hose should be used. A pin-perforated cover may be required. Perforations in the cover will prevent permeated gases from accumulating and blistering the cover. Check with your supplier for the correct hose specification.*
- 8) Extreme care should be used when operating hand-held hydraulic tools where the operator is in proximity to the hydraulic hose assembly. The following steps should be taken to avoid injury:*
 - a. Use strain relievers on each end of the hose to prevent kinking, excessive bending or stress on the hose at the coupling.*
 - b. Never use the hose assembly to pull or carry the tool.*
 - c. Exposed hose near the operator should be guarded in case hose assembly fails to prevent injury from high pressure or high temperature fluid.*
 - d. Operators should be protected with the required safety clothing for the job and fluids being used.*
 - e. The hose should be protected against any external damage.*
- 9) Hose assemblies should be properly routed to avoid strain and the possibility of the hose bursting. Proper routing will also protect the assembly against flex fatigue, excessive heat or abrasion.*
- 10) When selecting a hose style and assembly, check for hose compliance to all relevant government, industry, and safety standards or regulations.*

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Balflex® Hydraulic Hoses

HIGH-PRESSURE INJECTION HAZARDS

High-pressure injection injuries (also known as grease gun injuries), are caused by the accidental injection of a foreign material, such as grease, oil, or solvent under pressure, through the skin and into the underlying tissue. This is analogous to medical techniques used to administer immunization shots without a needle.

A grease gun injury can cause serious delayed soft tissue damage and should be treated as a surgical emergency. Any person sustaining an injury of this sort should seek immediate medical attention, regardless of the appearance of the wound or its size.

Accidents involving injection injuries can occur when using any type of pressurized equipment. Two common cases in which petroleum products may be involved are accidents with pressurized grease guns or with hydraulic systems.

Pressurized grease guns are commonly used in service stations, garages and industrial plants. Typically, most service stations have grease guns operating at 500-1.000 kPa (90-150 psi) air pressure. Most modern industrial hydraulic systems operate in the range of 13 to 35 MPa (2,000 to 5,000 psi). A stream of oil ejected from a nozzle or leak under pressure of this magnitude has a velocity comparable to the muzzle velocity of a rifle bullet.

The most common sites of injury are the fingers or hand. However, any part of the body can be involved. With grease guns, especially, accidents usually occur when the injured person wipes the tip of the nozzle with his finger or the nozzle slips off the grease fitting while being held in place.

Grease may also be injected into the body from a leak in the grease line. In **hydraulic system accidents**, a leak in a hydraulic line can emit a high-velocity stream of oil and cause injury if it strikes a person. Workers are commonly injured when they try to stop the leak by covering it with their hand or finger.

Chemical irritation is not a major problem with most petroleum products because hydraulic oils and greases are generally non-irritating and low toxicity to skin. However, the resulting bacterial infection can be a problem because of the damaged tissue and circulation in the wound, even though it has been surgically opened and the foreign material removed. One of the dangers from this type of injury is that it is not recognized quickly by the injured person as being serious. Often the initial wound may be very small and essentially painless. The injured person may even continue working. However, in every case in which a person receives this type of injury, he or she should stop work and get immediate medical treatment.

The following are some basic rules that must be observed:

DON'T

- ✗ Play around with or use a grease gun for practical jokes;
- ✗ Touch the end of a grease gun;
- ✗ Use any part of the body to test a grease gun for grease flow;
- ✗ Use any part of the body to stop a leak in a hydraulic line.

DO

- ✓ Routinely check all hoses for wear and possible weak spots;
- ✓ Handle a grease gun with respect for its power;
- ✓ Take special care when starting up a new hydraulic system to be sure that every part of the system can withstand the operating pressure.

IN CASE OF A GREASE GUN ACCIDENT, SEEK IMMEDIATE MEDICAL TREATMENT. Identify the grease or oil involved in the accident. Contact the supplier or the manufacturer to obtain the product's Material Safety Data Sheet (MSDS) about possible toxicity if a physician or hospital needs more information.

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HYDRAULIC HOSE AND ELECTROCUTION

Although it is a mercifully infrequent occurrence, workers have been burned or electrocuted when using metal-reinforced hoses on aerial bucket trucks near energized power lines. Hydraulic hose, fluid and power lines are a deadly combination. Electrical contact between two power line phases through a metal-reinforced hydraulic hose can generate sufficient heat to rupture the hose and cause a fire. In addition, an electrocution hazard can be created if a metal-reinforced hose on the boom of a truck contacts an energized power line and allows current to flow through the truck chassis. Either scenario can quickly result in serious injury or death.

OSHA standards require that all hydraulic tools used on or near energized power lines or equipment be supplied with non-conducting hoses with sufficient strength for normal operating pressures. NIOSH recommends that the following precautions be taken to control the hazards associated with hydraulic hoses used on aerial bucket trucks:

- *Employers should not install metal-reinforced hydraulic hoses on any part of the boom, aerial bucket or hydraulic attachments of aerial bucket trucks used near energized power lines;*
- *Employers should remove any metal-reinforced hoses currently installed on any part of the boom, aerial bucket or hydraulic attachments of aerial bucket trucks used to work near energized power lines. Before work begins, employers should require a competent person to conduct an initial and daily job site survey and inspect all equipment to identify hazards and implement appropriate controls;*
- *Employers should stress the importance of adherence to established safe work procedures. These include covering energized power lines in the immediate work area with insulating hoses or blankets, or de-energizing and grounding the lines before work begins. Workers should test de-energized power lines to verify that they have actually been de-energized;*
- *Employers should provide all workers with task-specific training that shows how each step controls the identified hazard;*
- *Employers should install all hydraulic hoses used in aerial buckets so that the flow of hydraulic fluid can be stopped immediately by the worker in the bucket. This objective can be achieved by incorporating a control valve into the hydraulic system in the aerial bucket. Manufacturers should continue research into the development of hydraulic fluids that are non-flammable and non-conducting.*
- *Employers should encourage equipment and tool manufacturers to design an independent coupling system to prevent the use of unsuitable hydraulic hoses on booms, aerial buckets or aerial bucket attachments. Labelling or colour coding hoses may also help workers who service this equipment.*

These Guidelines reflect common practice procedures to be held for a Safe use of Hydraulic Fluid Power.

In no event shall Balflex® have any liability whatsoever to any person for any special, punitive, incidental or consequential damages been caused by mishandling of Hydraulic Fluid Power systems.

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Balflex® Hydraulic Hoses

Balflex® Cross-reference for Hydraulic Hoses

Showing **Balflex®** hose type with corresponding competitor's hose type

Balflex® Hydraulic Hose 10 Series type	R6 1TE 1216	R3 3TE 1220	R1AT 1SN 1002	R2AT 2SN 1004	R17 1017	R5 1007	R12 1012	4SP 1008	4SH 1009	R13 1014	R15 1016
Aeroquip		2583	GH663	GH793	FC639	1503	GH493		GH506		FC606
Eaton							FC659		FC254		
Dayco	A6	D1	MX	BXX	D6	Y9	M7/CZ	N3		NH/N6	N2
Gates	C6	C3	C1T	C2AT	M3K	C5C	C12			C13	G6K
GoodYear	9060		9015	9025	9291	9050	9120			9130	
Imperial			E7	J4	HR1C	Y9A	M6			N5	
Eastman					HFS		M7			N6	
Parker	7517	601	422 481	381	451TC	201 261	77C	701	731	78C 792	791
Weatherhead	H009	H017	H104	H425	H300	H066	H430			H470	

Balflex® Hydraulic Hose 10 Series type	R4 1219	R7 1030	R7 NON CONDUCTIVE 1030L	R8 1032	PREMIUM 2SC – R16 1019	2-MAX JACK 1029	R14 BALFLON 2000 / 3
Aeroquip	FC318	FC372	FC373	FC374	FC310	FC579	2807
Eaton	FC619						
Dayco	C	S7	S7E	S8			TS
Gates	GMV	C7S	C7SNC	C8S	M2T	J2AT	C14
GoodYear	9040	9070	9075	9080			
Imperial		HR7	HR70	HR8			T1
Eastman		D5A	D4A				
Parker	881	540N	510A / 518A	520N	431	JK	919
Weatherhead	H039	H436	H435	H336			H243

The information provided by this Cross-reference chart is intended as a reference guide only. These hoses are similar but not exactly equal in all technical data and performances. Refer to hydraulic hose specifications to assure that the suggested hydraulic hose will attend the required application.

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Balflex® – The European Technology

Balflex® Hydraulic Hoses



Table 1a: Nominal working pressure at + 68°F (+ 20°C) of Balflex® hydraulic hoses

MPa / PSI

		3/16" - 3	1/4" - 4	5/16" - 5	3/8" - 6	1/2" - 8	5/8" - 10	3/4" - 12	1" - 16	1.1/4" - 20	1.1/2" - 24	2" - 32
Balflex®	Standards											
2TE	ISO 4079 - 2 EN 854 2TE	<u>8.0</u> 1160	<u>7.5</u> 1087	<u>6.8</u> 985	<u>6.3</u> 913	<u>5.8</u> 840	<u>5.0</u> 725	<u>4.5</u> 650	<u>4.0</u> 580			
R3 / 3TE	ISO 4079 - 3 EN 854 3TE SAE 100R3	<u>16.0</u> 2320	<u>14.5</u> 2100	<u>13.0</u> 1885	<u>11.0</u> 1595	<u>9.3</u> 1350	<u>8.0</u> 1160	<u>7.0</u> 1015	<u>5.5</u> 797	<u>4.5</u> 650	(b) <u>4.0</u> 580	(b) <u>3.3</u> 480
R1T / 1SN	ISO 1436 EN 853 type 1 SAE 100R1	<u>25.0</u> 3625	<u>22.5</u> 3260	<u>21.5</u> 3115	<u>18.0</u> 2610	<u>16.0</u> 2320	<u>13.0</u> 1885	<u>10.5</u> 1520	<u>8.8</u> 1275	<u>6.3</u> 910	<u>5.0</u> 725	<u>4.0</u> 580
R2T / 2SN	ISO 1436 EN 853 type 2 SAE 100R2	<u>41.5</u> 6015	<u>40.0</u> 5800	<u>35.0</u> 5075	<u>33.0</u> 4785	<u>27.5</u> 3985	<u>25.0</u> 3625	<u>21.5</u> 3120	<u>16.5</u> 2390	<u>12.5</u> 1810	<u>9.0</u> 1300	<u>8.0</u> 1160
BALPAC PREMIUM 2SC-R16	ISO 11237 EN 857 - 2SC SAE 100R16		<u>40.0</u> 5800	<u>35.0</u> 5075	<u>33.0</u> 4785	<u>27.6</u> 4000	<u>25.0</u> 3625	<u>21.5</u> 3118	<u>16.5</u> 2393			
BALPAC 3000 R17	ISO 11237 EN 857 SAE 100R17		<u>22.5</u> 3260	<u>21.0</u> 3000	<u>21.0</u> 3000	<u>21.0</u> 3000	<u>25.0</u> 3625	<u>21.5</u> 3120	<u>21.0</u> 3000			
R12	ISO 3862 EN 856 R12 SAE 100R12				<u>27.6</u> 4000	<u>27.6</u> 4000	<u>27.6</u> 4000	<u>27.6</u> 4000	<u>27.6</u> 4000	<u>20.7</u> 3000	<u>17.2</u> 2500	<u>17.2</u> 2500
4SP	ISO 3862 EN 856 4SP		<u>50.0</u> 7250		<u>44.5</u> 6453	<u>41.5</u> 6018	<u>35.0</u> 5075	<u>35.0</u> 5075	<u>28.0</u> 4060	<u>21.0</u> 3045	<u>18.5</u> 2683	<u>16.5</u> 2393
4SH	ISO 3862 EN 856 4SH							<u>42.0</u> 6090	<u>38.0</u> 5510	<u>32.5</u> 4713	<u>29.0</u> 4205	<u>25.0</u> 3625
R13	ISO 3862 EN 856 R13 SAE 100R13							<u>42.0</u> 6090	<u>38.0</u> 5510	<u>34.5</u> 5000	<u>34.5</u> 5000	<u>34.5</u> 5000
R15	ISO 3862 SAE 100R15				<u>42.0</u> 6000	<u>42.0</u> 6000		<u>42.0</u> 6000	<u>42.0</u> 6000	<u>42.0</u> 6000	<u>42.0</u> 6000	
2-MAX JACK	a)		<u>70.0</u> 10000		<u>70.0</u> 10000	<u>55.2</u> 8000						
3-MAX	a)				<u>50.0</u> 7200	<u>47.0</u> 6800						

a) according to Balflex® specifications

b) not included in the standards

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Balflex® Hydraulic Hoses

Table 1b: Nominal working pressure at + 68°F (+ 20°C) of Balflex® hydraulic hoses **MPa / PSI**

		3/16" - 4	1/4" - 5	5/16" - 6	13/32" - 8	1/2" - 10	5/8" - 12	7/8" - 16	1.1/8" - 20	1.3/8" - 24	1.13/16" - 32	2.3/8" - 40	3" - 48
Balflex®	Standards												
R5	SAE 100R5 SAE J1402 All	<u>20.7</u> 3000	<u>20.7</u> 3000	<u>15.5</u> 2250	<u>13.8</u> 2000	<u>12.1</u> 1755	<u>10.3</u> 1495	<u>5.5</u> 800	<u>4.3</u> 625	<u>3.4</u> 500	<u>2.4</u> 350	<u>2.4</u> 350	<u>1.4</u> 200

Table 1c: Nominal working pressure at + 68°F (+ 20°C) of Balflex® hydraulic hoses **MPa / PSI**

		1/8" - 2	3/16" - 3	1/4" - 4	5/16" - 5	3/8" - 6	1/2" - 8	5/8" - 10	3/4" - 12	1" - 16
Balflex®	Standards									
R7	ISO 3949 EN 855 R7 SAE 100R7	(b) <u>28.0</u> 4060	<u>21.0</u> 3045	<u>19.0</u> 2755	<u>19.0</u> 2755	<u>16.0</u> 2320	<u>14.0</u> 2030	<u>10.5</u> 1523	<u>9.0</u> 1305	<u>7.0</u> 1015
R7 NON CONDUCTIVE	ISO 3949 EN 855 R7 SAE 100R7	(b) <u>28.0</u> 4060	<u>21.0</u> 3045	<u>19.0</u> 2755	<u>19.0</u> 2755	<u>16.0</u> 2320	<u>14.0</u> 2030	<u>10.5</u> 1523	<u>9.0</u> 1305	<u>7.0</u> 1015
R7 STEELFLEX	a)	<u>35.0</u> 5075	<u>30.0</u> 4350	<u>27.5</u> 3988	<u>24.0</u> 3480	<u>22.0</u> 3190	<u>17.5</u> 2538	<u>14.0</u> 2030	<u>11.5</u> 1668	<u>10.0</u> 1450
R8 (10.1032.)	ISO 3949 EN 855 R8 SAE 100R8		<u>35.0</u> 5075	<u>35.0</u> 5075	<u>29.0</u> 4205	<u>28.0</u> 4060	<u>24.5</u> 3553	<u>19.0</u> 2755	<u>15.5</u> 2250	<u>14.0</u> 2030
R8 (10.1033.)	ISO 3949 EN 855 R8 SAE 100R8		<u>35.0</u> 5075	<u>35.0</u> 5075	<u>30.0</u> 4350	<u>28.0</u> 4060	<u>24.5</u> 3553	<u>20.0</u> 2900	<u>16.5</u> 2393	<u>14.0</u> 2030
ULTRAFLEX R9	a)					<u>38.0</u> 5510	<u>34.5</u> 5000			

a) according to Balflex® specifications

b) not included in the standards

Table 1d: Nominal working pressure at + 68°F (+ 20°C) of Balflex® hydraulic hoses **MPa / PSI**

		3/16" - 3	1/4" - 4	5/16" - 5	3/8" - 6	1/2" - 8	5/8" - 10	3/4" - 12	7/8" - 14	1" - 16
Balflex®	Standards									
R6 / 1TE	ISO 4079 - 1 EN 854 1TE SAE 100R6	<u>3.4</u> 500	<u>2.8</u> 400	<u>2.8</u> 400	<u>2.8</u> 400	<u>2.8</u> 400	<u>2.4</u> 350	<u>2.1</u> 300	<u>2.2</u> 310	<u>1.7</u> 250

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Table 2: Pressure Conversion

bar	0,00134	0,0025	0,0339	0,069	0,098	1,00	1,01	10,0	100
PSI	0,0194	0,036	0,492	1,001	1,421	14,504	14,69	145,04	1450,38
MPa	-	-	0,003	0,007	0,0098	0,10	0,101	1,00	10,00
1 atm	0,001	0,0025	0,0335	0,068	0,097	0,987	1,00	9,87	98,69
m H ₂ O (20°C)	0,014	0,026	0,346	0,704	1,000	10,207	10,34	102,074	1020,736
in Hg (20°C)	0,0396	0,074	1,001	2,04	2,89	29,53	29,91	295,30	2953
in H ₂ O (20°C)	0,538	1,005	13,623	27,73	39,38	401,86	407,09	4018,65	40186,47
mm Hg (20°C)	1,005	1,88	25,43	51,75	73,51	750,06	759,81	7500,62	75006,17

Example: 1 MPa = 145,04 PSI ; 1 Mpa = 10,0bar

Table 3: Conversion Factors

Unit	Factor	Converted Unit
1 m (meter)	1000	mm (millimeter)
1 m (meter)	1,09362	yard
1 m (meter)	3,28084	foot
1 mm (millimeter)	0,001	m (meter)
1 mm (millimeter)	0,03937	Inch
1 inch	25,4	mm (millimeter)
1 inch	0,0254	m (meter)
1 foot	0,3048	m (meter)
1 yard	0,9144	m (meter)
F°	C° x 1,8 + 32	F° (Fahrenheit)
C°	(F° - 32): 1,8	C° (Celsius)

Example: 1 m = 3,28084 feet ; 1 inch = 25,4mm
 Example: + 100°C = + 212°F

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Balflex® Hydraulic Hoses

Selection of hydraulic hoses

Working pressure:

When selecting a hose it should be considered that its working pressure should be higher than the maximum operating pressure of the system. For determination of the maximum operating pressure the system engineer should always consider possible pressure peaks during start up and inversion. Pressure peaks may be so short that they are only measurable with electronic devices. In suction applications, the capacity of the hose to withstand negative pressure is a decisive factor. Working pressures are given for working temperature of + 68°F (+ 20°C). For increased temperatures a de-rating factor should be considered. The rated working pressures of Balflex® hydraulic hoses are summarized in table 1.

Note: Only an accurate knowledge of the pressure history of the service cycles of the equipment should lead to a sub-dimensioning of the hose by the engineer, bearing in mind the recommendations of SAE J 1927 standards.

Temperature:

Excessive temperature is one of the main limitations of rubber and induces accelerated aging. Fluid temperature, either in motion or with the equipment stopped, should not exceed the maximum working temperature recommended for each hose. Likewise, surrounding temperature should be considered, specially when resulting from heat sources in the proximity of the hose assembly.

Fluid compatibility:

Fluid compatibility with the hose and the coupling should be verified. Fluids that chemically attack the hose can lead to the contamination and obstruction of the hydraulic system and to premature failure of the hose. Handling gases requires special attention. As an orientation, the Balflex® Hydraulic Hose Fluid Compatibility Chart gives a classification of compatibility with some fluids. Consult Balflex® for compatibility of other fluids and rubber compounds. Whenever in doubt test before application.

Dimensioning:

Dimensioning of all components should guarantee that pressure loss is kept at a minimum, in order not to reduce power transmission and to avoid overheating or turbulence of the fluid that might lead to deterioration of the lining.

Assembly geometry:

Installation should guarantee that the minimum bend radius of the hose is respected and that bending occurs only in one plane. Hose length may suffer a variation between – 4% and + 2%, when submitted to pressure. The assembly length should provide enough margin for this change in length. Torsion and traction of the assembly must be avoided and protection and restraint of the assembly should be considered if there are obstacles to avoid. Mechanical loads acting on the assembly, including vibration, should be kept at a minimum. Free swivelling connectors should be used whenever torsion is present. Whenever hose failure may result in whipping (for example in gas applications) restraint through a steel cable to the connecting parts should be considered. When connecting a moving part, the free movement of the assembly without touching any surface should be assured. Minimize the risks of bodily injury and equipment damage through spillage or fluid ejection when positioning of the assembly. Table 4 shows some correct and incorrect installation situations.

Environmental compatibility:

The hose and couplings compatibility with the working environment factors, as temperature, fire hazard, UV light, ozone, chemicals and electrical charges should be considered. External protection sleeves require an adequate assembly.

Air and Gaseous applications:

Hose assemblies that are to be used in air and other gaseous applications should be pin-pricked, through the cover, prior to use.

These micro perforations allow gas that has permeated the inner tube of the hose to escape into the atmosphere. This prevents gases from accumulating and blistering the hose cover.

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Balflex® Hydraulic Hoses



Electrical conductivity:

Electrical conductivity,

To minimize the risk of Explosion or Electrocutation from electrical discharge through the assembly due to static electricity build up or non-conductivity. Whenever the hose is not unequivocally branded either non-conductive or anti-static, its electrical characteristics should always be considered as not controlled..

Permeability:

All hoses present a certain degree of permeability, especially with gases and highly volatile liquids. The designer should consider the possibility that this permeability results in system or environment contamination.

Abrasion:

Accelerated external abrasion, through contact in motion or exposure to projected particles drastically reduces hose life and leads to premature failure through exposure of the reinforcement. For special applications Balflex® recommends hoses with special abrasion resistant rubber compounds or protection through adequate sleeves.

Couplings selection:

Couplings are a fundamental part of the geometry of hose assemblies. The compatibility of sealing and securement of the couplings to the system ports should be verified. The recommended coupling series for each hose should be used and the assembly instructions carefully followed. Inadequate couplings may damage the hose and lead to a premature failure.

Table 4: Examples of installation of hoses assemblies

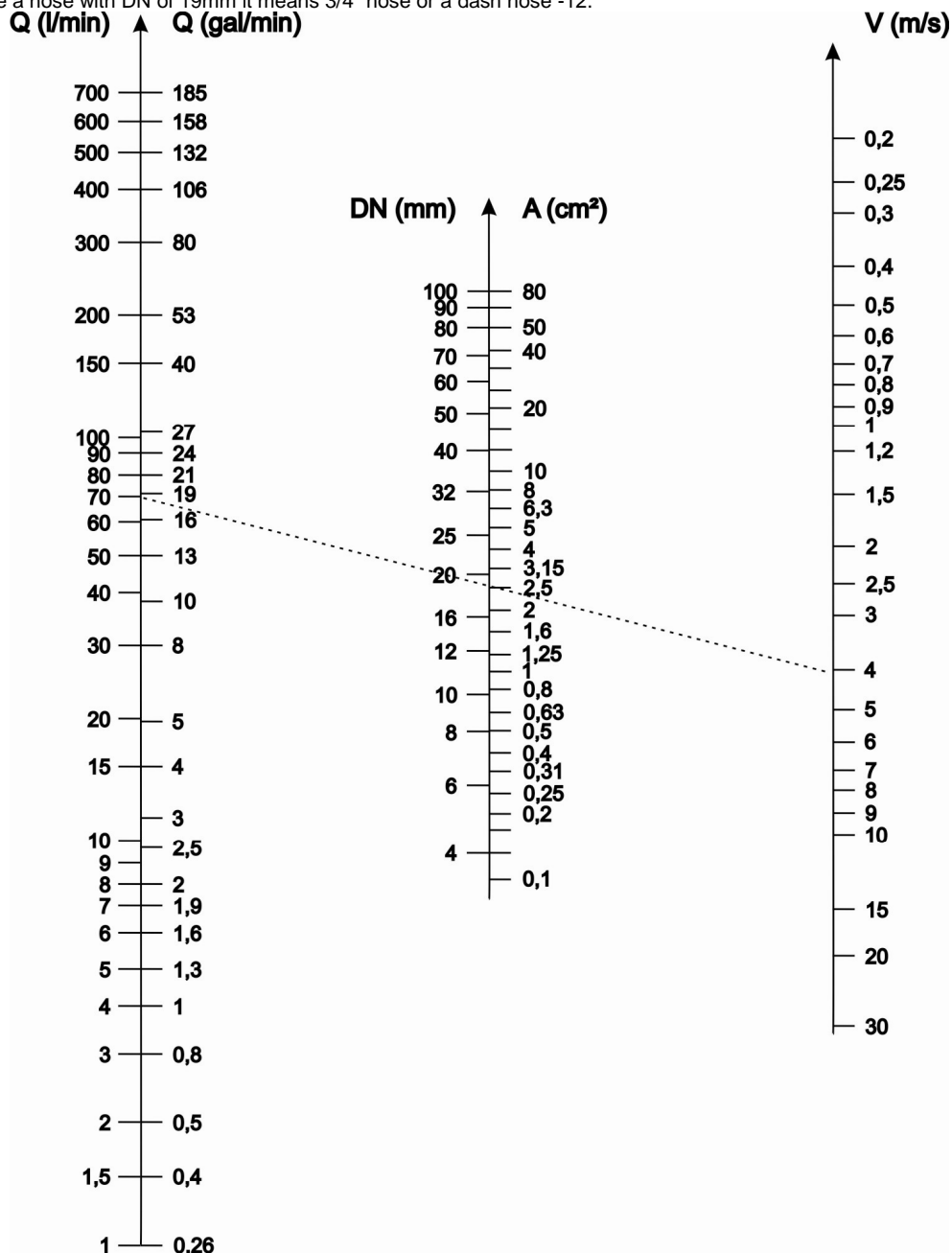
Incorrect	Correct	Incorrect	Correct
			</



Balflex® Hydraulic Hoses

Balflex® Hose Selection Chart

This graphic helps finding the Nominal Hose Diameter-DN (mm) or the Dash Size. Firstly, one must know the Flow Rate and Fluid Velocity values that are being used. These two pieces of information must be found in the outer graphic lines. Then by linking these two values with a straight line, one should obtain the Nominal Hose Diameter-DN (mm) or the Gauge Diameter-A (cm²). The example below shows that for a fluid velocity of 4 meters per second and a flow rate of 70 liters per minute or 19 gallons per minute, one should choose a hose with DN of 19mm it means 3/4" hose or a dash hose -12.



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Balflex® DIN 1TE / SAE 100R6 – DIN 2TE



Balflex® DIN EN 854 1TE / SAE 100R6 – 10.1216.

According to **ISO 4079** type 1 / **DIN EN 854** type **1TE** / **SAE J517** type **SAE 100R6**

Medium pressure, single textile braid reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	1 high resistance synthetic fiber braid
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 122°F (+ 50°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20.107. series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
1TE-R6-03	3/16"	- 3	4,8	0.19	11,1	0.44	3.4	500	13.8	2000	51	2.0	0.085
1TE-R6-04	1/4"	- 4	6,3	0.25	12,5	0.49	2.8	400	11.0	1600	64	2.5	0.094
1TE-R6-05	5/16"	- 5	8,0	0.31	14,0	0.55	2.8	400	11.0	1600	76	3.0	0.118
1TE-R6-06	3/8"	- 6	9,5	0.38	16,0	0.63	2.8	400	11.0	1600	76	3.0	0.128
1TE-R6-08	1/2"	- 8	12,7	0.50	19,8	0.78	2.8	400	11.0	1600	102	4.0	0.184
1TE-R6-10	5/8"	- 10	16,0	0.63	23,0	0.91	2.4	350	9.7	1400	127	5.0	0.208
1TE-R6-12	3/4"	- 12	19,0	0.75	26,2	1.03	2.1	300	8.3	1200	152	7.0	0.288
1TE-R6-14	7/8"	- 14	22,0	0.87	31,3	1.23	2.2	310	8.8	1240	200	7.9	0.394
1TE-R6-16	1"	- 16	25,4	1.00	32,5	1.28	1.7	250	6.8	1000	203	8.0	0.395

Note: Sizes - 14 (DN 22) 7/8" and - 16 (DN 25) 1" not included in the standards.

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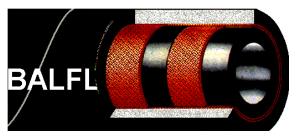


Balflex® DIN EN 854 3TE / SAE 100R3

Balflex® DIN EN 854 3TE / SAE 100R3 – 10.1220.

According to **ISO 4079** type 3 / **DIN EN 854** type **3TE** / **SAE J517** type **SAE 100R3**

Medium pressure, double textile braid reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	2 high resistance synthetic fiber braids
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 122°F (+ 50°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20.201. series on sizes 1/4", 5/16", 3/8", 1", 1.1/4", 1.1/2" and 2", and 20.202. series on sizes 1/2", 5/8" and 3/4".

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R3-03	3/16"	- 3	4,8	0.19	12,8	0.50	16.0	2320	64.0	9280	40	1.57	0.087
R3-04	1/4"	- 4	6,3	0.25	14,5	0.57	14.5	2100	58.0	8400	45	1.77	0.121
R3-05	5/16"	- 5	8,0	0.31	17,0	0.67	13.0	1885	52.0	7540	55	2.17	0.168
R3-06	3/8"	- 6	9,5	0.38	18,5	0.73	11.0	1595	44.0	6380	70	2.76	0.188
R3-08	1/2"	- 8	12,7	0.50	21,8	0.86	9.3	1350	37.2	5400	85	3.35	0.296
R3-10	5/8"	- 10	16,0	0.63	26,0	1.02	8.0	1160	32.0	4640	105	4.13	0.329
R3-12	3/4"	- 12	19,0	0.75	29,0	1.14	7.0	1015	28.0	4060	130	5.12	0.470
R3-16	1"	- 16	25,4	1.00	36,0	1.42	5.5	797	22.0	3188	150	5.91	0.531
R3-20	1.1/4"	- 20	32,0	1.25	42,0	1.65	4.5	650	18.0	2600	190	7.48	0.591
R3-24	1.1/2"	- 24	38,0	1.50	49,5	1.95	4.0	580	16.0	2320	240	9.45	0.853
R3-32	2"	- 32	50,8	2.00	62,2	2.45	3.3	480	13.2	1920	300	11.81	1.092

Note: Sizes - 24 (1.1/2") and - 32 (2") not included in the standards.

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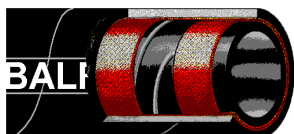
Balflex® SAE 100R4



Balflex® SAE 100R4 – 10.1219.

According to **SAE J517** type **SAE 100R4**

Suction & Delivery hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	textile braids and 1 high strength steel wire helix
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	suction, delivery, return & discharge of petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® fittings 23 series up to 2" and 44 series from 3" up to 4" with clamps

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R4-12	3/4"	- 12	19,0	0.75	34,9	1.38	2.1	315	8.4	1260	127	5.0	0.504
R4-16	1"	- 16	25,4	1.00	41,3	1.63	1.7	255	6.8	1020	152	6.0	0.625
R4-20	1.1/4"	- 20	31,8	1.25	50,8	2.00	1.4	210	5.6	840	203	8.0	0.840
R4-24	1.1/2"	- 24	38,1	1.50	57,2	2.25	1.05	157.5	4.2	630	254	10.0	1.035
R4-32	2"	- 32	50,8	2.00	69,9	2.75	0.7	105	2.8	420	305	12.0	1.344
R4-40	2.1/2"	- 40	63,5	2.50	82,6	3.25	0.4	60	1.6	240	356	14.0	1.680
R4-48	3"	- 48	76,2	3.00	95,3	3.75	0.4	60	1.6	240	457	18.0	2.150
R4-56	3.1/2"	- 56	88,9	3.50	108	4.25	0.3	45	1.2	180	533	21.0	2.708
R4-64	4"	- 64	101,6	4.00	121	4.75	0.25	37.5	1.0	150	610	24.0	3.387

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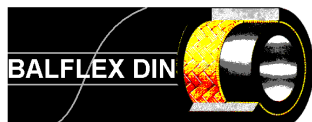


Balflex® DIN EN 853 1SN / SAE 100R1AT

Balflex® DIN EN 853 1SN / SAE 100R1AT – 10.1002.

According to *ISO 1436 / DIN EN 853 type 1SN / SAE J517 type SAE 100R1 AT*

High pressure, single steel braid reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	1 high tensile steel wire braid
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series. Multicrimp P23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R1AT-03	3/16"	- 3	4,8	0.19	11,8	0.47	25.0	3625	100.0	14500	89	3.5	0.151
R1AT-04	1/4"	- 4	6,3	0.25	13,4	0.53	22.5	3260	90.0	13040	100	3.9	0.153
R1AT-05	5/16"	- 5	8,0	0.31	15,0	0.59	21.5	3115	85.0	12460	114	4.5	0.195
R1AT-06	3/8"	- 6	9,5	0.38	17,4	0.69	18.0	2610	72.0	10440	127	5.0	0.224
R1AT-08	1/2"	- 8	12,7	0.50	20,7	0.81	16.0	2320	64.0	9280	178	7.0	0.280
R1AT-10	5/8"	- 10	16,0	0.63	23,8	0.93	13.0	1885	52.0	7540	200	7.9	0.349
R1AT-12	3/4"	- 12	19,0	0.75	27,8	1.09	10.5	1520	42.0	6080	240	9.4	0.434
R1AT-16	1"	- 16	25,4	1.00	35,9	1.40	8.8	1275	35.0	5100	300	11.8	0.672
R1AT-20	1.1/4"	- 20	32,0	1.25	43,8	1.71	6.3	910	25.0	3640	419	16.5	0.874
R1AT-24	1.1/2"	- 24	38,0	1.50	51,1	1.99	5.0	725	20.0	2900	500	19.7	1.092
R1AT-32	2"	- 32	50,8	2.00	64,5	2.52	4.0	580	16.0	2320	630	24.8	1.344
R1AT-40	2.1/2"	- 40	63,5	2.50	79,0	3.11	3.0	435	12.0	1740	760	30.4	1.579
R1AT-48	3"	- 48	76,2	3.00	92,0	3.62	2.0	290	8.0	1160	900	36.0	1.714

Note: Sizes - 40 (2.1/2") and - 48 (3") not included in the standards.

Balflex® hydraulic hose **DIN EN 853 1SN / SAE 100R1AT** has a very superior working and burst pressure compared with only **SAE 100R1AT**

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Balflex® – The European Technology

Balflex® DIN EN 853 2SN / SAE 100R2AT



Balflex® DIN EN 853 2SN / SAE 100R2AT – 10.1004.

According to *ISO 1436 / DIN EN 853 type 2SN / SAE J517 type SAE 100R2 AT*

High pressure, double steel braid reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	2 high tensile steel wire braids
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series. Multicrimp P23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	Lbs per foot
R2AT-03	3/16"	- 3	4,8	0.19	13,4	0.53	41.5	6015	165.0	24060	89	3.5	0.210
R2AT-04	1/4"	- 4	6,3	0.25	15,0	0.59	40.0	5800	160.0	23200	100	3.9	0.235
R2AT-05	5/16"	- 5	8,0	0.31	16,6	0.65	35.0	5075	140.0	20300	114	4.5	0.282
R2AT-06	3/8"	- 6	9,5	0.38	19,0	0.75	33.0	4785	132.0	19140	127	5.0	0.329
R2AT-08	1/2"	- 8	12,7	0.50	22,2	0.87	27.5	3985	110.0	15940	178	7.0	0.420
R2AT-10	5/8"	- 10	16,0	0.63	25,5	1.00	25.0	3625	100.0	14500	200	7.9	0.511
R2AT-12	3/4"	- 12	19,0	0.75	29,4	1.15	21.5	3120	86.0	12480	240	9.4	0.618
R2AT-16	1"	- 16	25,4	1.00	37,9	1.50	16.5	2390	65.0	9560	300	11.8	0.933
R2AT-20	1.1/4"	- 20	32,0	1.25	48,5	1.90	12.5	1810	50.0	7240	419	16.5	1.394
R2AT-24	1.1/2"	- 24	38,0	1.50	54,7	2.15	9.0	1300	36.0	5200	500	19.7	1.646
R2AT-32	2"	- 32	50,8	2.00	67,4	2.65	8.0	1160	32.0	4640	630	24.8	2.150
R2AT-40	2.1/2"	- 40	63,5	2.50	83,0	3.27	7.0	1015	28.0	4060	760	30.4	2.218
R2AT-48	3"	- 48	76,2	3.00	96,0	3.78	5.5	798	22.0	3192	900	36.0	2.486

Note: Size - 48 (3") not included in the standards.

Balflex® hydraulic hose **DIN EN 853 2SN / SAE 100R2AT** has a very superior working and burst pressure compared with only **SAE 100R2AT**

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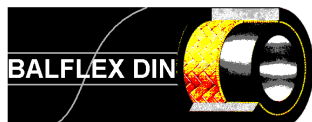


Balflex® DIN EN 853 1ST / SAE 100R1A

Balflex® DIN EN 853 1ST / SAE 100R1A – 10.1001.

According to ISO 1436 / DIN EN 853 type 1ST / SAE J517 type SAE 100R1 A

THICK COVER - High pressure, single steel braid reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	1 high tensile steel wire braid
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series. Multicrimp P23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	Lbs per foot
R1A-04	1/4"	- 4	6,3	0.25	15,5	0.61	22.5	3260	90.0	13040	100	3.94	0.195
R1A-05	5/16"	- 5	8,0	0.31	17,1	0.67	21.5	3115	85.0	12460	115	4.53	0.228
R1A-06	3/8"	- 6	9,5	0.38	19,4	0.76	18.0	2610	72.0	10440	130	5.12	0.282
R1A-08	1/2"	- 8	12,7	0.50	22,6	0.89	16.0	2320	64.0	9280	180	7.09	0.343
R1A-10	5/8"	- 10	16,0	0.63	25,8	1.02	13.0	1885	52.0	7540	200	7.87	0.396
R1A-12	3/4"	- 12	19,0	0.75	29,8	1.17	10.5	1520	42.0	6080	240	9.45	0.491
R1A-16	1"	- 16	25,4	1.00	37,6	1.48	8.8	1275	35.0	5100	300	11.81	0.706
R1A-20	1.1/4"	- 20	32,0	1.25	45,0	1.77	6.3	910	25.0	3640	420	16.54	0.914
R1A-24	1.1/2"	- 24	38,0	1.50	51,4	2.02	5.0	725	20.0	2900	500	19.68	1.048
R1A-32	2"	- 32	50,8	2.00	66,4	2.61	4.0	580	16.0	2320	630	24.80	1.546

Note: usually not available in stock, only by order.

Balflex® hydraulic hose **DIN EN 853 1ST / SAE 100R1A** has a very superior working and burst pressure compared with only **SAE 100R1A**

COVER: U.S. MSHA APPROVED

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Balflex® DIN EN 853 2ST / SAE 100R2A



Balflex® DIN EN 853 2ST / SAE 100R2A – 10.1003.

According to ISO 1436 / DIN EN 853 type 2ST / SAE J517 type SAE 100R2 A

THICK COVER - High pressure, double steel braid reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	2 high tensile steel wire braids
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series. Multicrimp P23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	Lbs per foot
R2A-04	¼"	- 4	6,3	0.25	17,1	0.67	40.0	5800	160.0	23200	100	3.94	0.302
R2A-05	5/16"	- 5	8,0	0.31	18,7	0.74	35.0	5075	140.0	20300	115	4.53	0.349
R2A-06	3/8"	- 6	9,5	0.38	21,0	0.83	33.0	4785	132.0	19140	130	5.12	0.430
R2A-08	½"	- 8	12,7	0.50	24,2	0.95	27.5	3985	110.0	15940	180	7.09	0.504
R2A-10	5/8"	- 10	16,0	0.63	27,4	1.08	25.0	3625	100.0	14500	200	7.87	0.591
R2A-12	¾"	- 12	19,0	0.75	31,4	1.24	21.5	3120	86.0	12480	240	9.45	0.726
R2A-16	1"	- 16	25,4	1.00	39,0	1.54	16.5	2390	65.0	9560	300	11.81	0.981
R2A-20	1.1/4"	- 20	32,0	1.25	49,8	1.96	12.5	1810	50.0	7240	420	16.54	1.458
R2A-24	1.1/2"	- 24	38,0	1.50	56,2	2.21	9.0	1300	36.0	5200	500	19.69	1.633
R2A-32	2"	- 32	50,8	2.00	68,8	2.71	8.0	1160	32.0	4640	630	24.80	2.076

Note: usually not available in stock, only by order.

Balflex® hydraulic hose **DIN EN 853 2ST / SAE 100R2A** has a very superior working and burst pressure compared with only **SAE 100R2A**

COVER: U.S. MSHA APPROVED

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Balflex® DIN EN 853 1SN / SAE 100R1AT

Balflex® DIN EN 853 1SN / SAE 100R1AT SMOOTH COVER – 10.10S2.

According to ISO 1436 / DIN EN 853 type 1SN / SAE J517 type SAE 100R1 AT

SMOOTH COVER

High pressure, smooth cover, single steel braid reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	1 high tensile steel wire braid
Outer tube:	black, oil, weather and abrasion smooth resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series. Multicrimp P23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R1AT-04-SC	1/4"	- 4	6,3	0.25	13,4	0.53	22.5	3260	90.0	13040	100	3.9	0.153
R1AT-05-SC	5/16"	- 5	8,0	0.31	15,0	0.59	21.5	3115	85.0	12460	114	4.5	0.195
R1AT-06-SC	3/8"	- 6	9,5	0.38	17,4	0.69	18.0	2610	72.0	10440	127	5.0	0.224
R1AT-08-SC	1/2"	- 8	12,7	0.50	20,7	0.81	16.0	2320	64.0	9280	178	7.0	0.280
R1AT-10-SC	5/8"	- 10	16,0	0.63	23,8	0.93	13.0	1885	52.0	7540	200	7.9	0.349
R1AT-12-SC	3/4"	- 12	19,0	0.75	27,8	1.09	10.5	1520	42.0	6080	240	9.4	0.434
R1AT-16-SC	1"	- 16	25,4	1.00	35,9	1.40	8.8	1275	35.0	5100	300	11.8	0.672

Note: usually not available in stock, only by order.

Balflex® hydraulic hose **DIN EN 853 1SN / SAE 100R1AT** has a very superior working and burst pressure compared with only **SAE 100R1AT**

COVER: U.S. MSHA APPROVED

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Balflex® DIN EN 853 2SN / SAE 100R2AT



Balflex® DIN EN 853 2SN / SAE 100R2AT SMOOTH COVER – 10.10S4.

According to ISO 1436 / DIN EN 853 type 2SN / SAE J517 type SAE 100R2 AT

SMOOTH COVER

High pressure, smooth cover, double steel braid reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	2 high tensile steel wire braids
Outer tube:	black, oil, weather and abrasion smooth resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series. Multicrimp P23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R2AT-04-SC	1/4"	- 4	6,3	0.25	15,0	0.59	40.0	5800	160.0	23200	100	3.9	0.235
R2AT-05-SC	5/16"	- 5	8,0	0.31	16,6	0.65	35.0	5075	140.0	20300	114	4.5	0.282
R2AT-06-SC	3/8"	- 6	9,5	0.38	19,0	0.75	33.0	4785	132.0	19140	127	5.0	0.329
R2AT-08-SC	1/2"	- 8	12,7	0.50	22,2	0.87	27.5	3985	110.0	15940	178	7.0	0.420
R2AT-10-SC	5/8"	- 10	16,0	0.63	25,5	1.00	25.0	3625	100.0	14500	200	7.9	0.511
R2AT-12-SC	3/4"	- 12	19,0	0.75	29,4	1.15	21.5	3120	86.0	12480	240	9.4	0.618
R2AT-16-SC	1"	- 16	25,4	1.00	37,9	1.50	16.5	2390	65.0	9560	300	11.8	0.933

Note: usually not available in stock, only by order.

Balflex® hydraulic hose DIN EN 853 2SN / SAE 100R2AT has a very superior working and burst pressure compared with only SAE 100R2AT

COVER: U.S. MSHA APPROVED

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Balflex® TROPIC 1 HIGH TEMPERATURE

Balflex® TROPIC 1 DIN EN 853 1SN / SAE 100R1AT – 10.1002.--HT

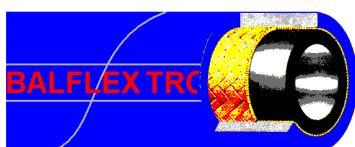
According to ISO 1436 / DIN EN 853 type 1SN / SAE J517 type SAE 100R1 AT

High pressure, single steel braid reinforced hydraulic hose

HIGH TEMPERATURE

+ 302°F (+ 150°C) intermittent service

+ 275°F (+ 135°C) continuous service



Inner tube:	seamless oil resistant synthetic rubber resistant to high temperature
Reinforcement:	1 high tensile steel wire braid
Outer tube:	pin-pricked blue, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	intermittent: - 40°F (- 40°C) + 302°F (+ 150°C); continuous service: + 275°F (+ 135°C) Max. temperature recommended for water base hydraulic fluids: + 248°F (+ 120°C) Max. temperature recommended for air: + 275°F (+ 135°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series. Multicrimp P23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R1AT-03-HT	3/16"	- 3	4,8	0.19	11,8	0.47	25.0	3625	100.0	14500	89	3.5	0.151
R1AT-04-HT	1/4"	- 4	6,3	0.25	13,4	0.53	22.5	3260	90.0	13040	100	3.9	0.153
R1AT-05-HT	5/16"	- 5	8,0	0.31	15,0	0.59	21.5	3115	85.0	12460	114	4.5	0.195
R1AT-06-HT	3/8"	- 6	9,5	0.38	17,4	0.69	18.0	2610	72.0	10440	127	5.0	0.224
R1AT-08-HT	1/2"	- 8	12,7	0.50	20,7	0.81	16.0	2320	64.0	9280	178	7.0	0.280
R1AT-10-HT	5/8"	- 10	16,0	0.63	23,8	0.93	13.0	1885	52.0	7540	200	7.9	0.349
R1AT-12-HT	3/4"	- 12	19,0	0.75	27,8	1.09	10.5	1520	42.0	6080	240	9.4	0.434
R1AT-16-HT	1"	- 16	25,4	1.00	35,9	1.40	8.8	1275	35.0	5100	300	11.8	0.672
R1AT-20-HT	1.1/4"	- 20	32,0	1.25	43,8	1.71	6.3	910	25.0	3640	419	16.5	0.874
R1AT-24-HT	1.1/2"	- 24	38,0	1.50	51,1	1.99	5.0	725	20.0	2900	500	19.7	1.092
R1AT-32-HT	2"	- 32	50,8	2.00	64,5	2.52	4.0	580	16.0	2320	630	24.8	1.344

Balflex® hydraulic hose **DIN EN 853 1SN / SAE 100R1AT** has a very superior working and burst pressure compared with only **SAE 100R1AT**

COVER: U.S. MSHA APPROVED

WARNING: THIS HOSE IS A HIGH TEMPERATURE HYDRAULIC HOSE BUT CANNOT BE USED WITH PHOSPHATE-ESTER BASED OILS AND CANNOT BE USED IN AIRCRAFTS

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Balflex® TROPIC 2 HIGH TEMPERATURE



Balflex® TROPIC 2 DIN EN 853 2SN / SAE 100R2AT – 10.1004.--HT

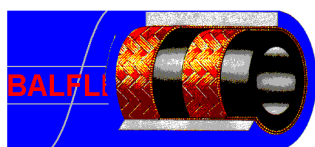
According to *ISO 1436 / DIN EN 853 type 2SN / SAE J517 type SAE 100R2 AT*

High pressure, double steel braid reinforced hydraulic hose

HIGH TEMPERATURE

+ 302°F (+ 150°C) intermittent service

+ 275°F (+ 135°C) continuous service



Inner tube:	seamless oil resistant synthetic rubber resistant to high temperature
Reinforcement:	2 high tensile steel wire braids
Outer tube:	pin-pricked blue, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	intermittent: - 40°F (- 40°C) + 302°F (+ 150°C); continuous service: + 275°F (+ 135°C) Max. temperature recommended for water base hydraulic fluids: + 248°F (+ 120°C) Max. temperature recommended for air: + 275°F (+ 135°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series. Multicrimp P23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R2AT-03-HT	3/16"	- 3	4,8	0.19	13,4	0.53	41.5	6015	165.0	24060	89	3.5	0.210
R2AT-04-HT	1/4"	- 4	6,3	0.25	15,0	0.59	40.0	5800	160.0	23200	100	3.9	0.235
R2AT-05-HT	5/16"	- 5	8,0	0.31	16,6	0.65	35.0	5075	140.0	20300	114	4.5	0.282
R2AT-06-HT	3/8"	- 6	9,5	0.38	19,0	0.75	33.0	4785	132.0	19140	127	5.0	0.329
R2AT-08-HT	1/2"	- 8	12,7	0.50	22,2	0.87	27.5	3985	110.0	15940	178	7.0	0.420
R2AT-10-HT	5/8"	- 10	16,0	0.63	25,5	1.00	25.0	3625	100.0	14500	200	7.9	0.511
R2AT-12-HT	3/4"	- 12	19,0	0.75	29,4	1.15	21.5	3120	86.0	12480	240	9.4	0.618
R2AT-16-HT	1"	- 16	25,4	1.00	37,9	1.50	16.5	2390	65.0	9560	300	11.8	0.933
R2AT-20-HT	1.1/4"	- 20	32,0	1.25	48,5	1.90	12.5	1810	50.0	7240	419	16.5	1.394
R2AT-24-HT	1.1/2"	- 24	38,0	1.50	54,7	2.15	9.0	1300	36.0	5200	500	19.7	1.646
R2AT-32-HT	2"	- 32	50,8	2.00	67,4	2.65	8.0	1160	32.0	4640	630	24.8	2.150

Balflex® hydraulic hose *DIN EN 853 2SN / SAE 100R2AT* has a very superior working and burst pressure compared with only *SAE 100R2AT*

COVER: U.S. MSHA APPROVED

WARNING: THIS HOSE IS A HIGH TEMPERATURE HYDRAULIC HOSE BUT CANNOT BE USED WITH PHOSPHATE-ESTER BASED OILS. AND CANNOT BE USED IN AIRCRAFT

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Balflex® BALPAC PREMIUM SAE 100R16

Balflex® BALPAC PREMIUM SAE 100R16 – 10.1019.

According to **SAE J517** Norm type / **SAE 100R16** / **ISO 11237 –1** Norm type **R16**

Exceeds SAE 100R16 - High Pressure, double steel wire reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	2 high tensile steel wire braids
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series. Multicrimp P23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R16-04	1/4"	- 4	6,3	0.25	13,3	0.52	40.0	5800	160.0	23200	50	2.0	0.181
R16-05	5/16"	- 5	8,0	0.31	15,0	0.59	35.0	5075	140.0	20300	57	2.2	0.202
R16-06	3/8"	- 6	9,5	0.38	17,1	0.67	33.0	4785	132.0	19140	65	2.6	0.282
R16-08	1/2"	- 8	12,7	0.50	20,6	0.81	27.6	4000	110.4	16000	90	3.5	0.349
R16-10	5/8"	- 10	16,0	0.63	23,7	0.93	25.0	3625	100.0	14500	100	3.9	0.423
R16-12	3/4"	- 12	19,0	0.75	27,7	1.09	21.5	3118	86.0	12472	120	4.7	0.538
R16-16	1"	- 16	25,4	1.00	35,8	1.41	16.5	2393	66.0	9572	150	5.9	0.820

COVER: U.S. MSHA APPROVED

Balflex® BALPAC PREMIUM SAE 100R16 SMOOTH COVER – 10.1S19.

According to **SAE J517** Norm type / **SAE 100R16** / **ISO 11237 –1** Norm type **R16**



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R16-04-SC	1/4"	- 4	6,3	0.25	13,3	0.52	40.0	5800	160.0	23200	50	2.0	0.181
R16-05-SC	5/16"	- 5	8,0	0.31	15,0	0.59	35.0	5075	140.0	20300	57	2.2	0.202
R16-06-SC	3/8"	- 6	9,5	0.38	17,1	0.67	33.0	4785	132.0	19140	65	2.6	0.282
R16-08-SC	1/2"	- 8	12,7	0.50	20,6	0.81	27.6	4000	110.4	16000	90	3.5	0.349
R16-10-SC	5/8"	- 10	16,0	0.63	23,7	0.93	25.0	3625	100.0	14500	100	3.9	0.423
R16-12-SC	3/4"	- 12	19,0	0.75	27,7	1.09	21.5	3118	86.0	12472	120	4.7	0.538
R16-16-SC	1"	- 16	25,4	1.00	35,8	1.41	16.5	2393	66.0	9572	150	5.9	0.820

COVER: U.S. MSHA APPROVED

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Balflex® BALPAC 3000 SAE 100R17



Balflex® BALPAC 3000 SAE 100R17 – 10.1017.

According to **SAE J517** Norm type / **SAE 100R17** / **ISO 11237 –1** Norm type **R17**

High pressure, single or double steel braid reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	1 high tensile steel wire braid on sizes 1/4", 5/16", 3/8" and 1/2" and 2 braids on sizes 5/8", 3/4" and 1"
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings series 23 with ferrules series 20.204 (2 wires) & 20.205 (1 wire). Multicrimp P23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
1 Wire Braid													
R17-04	1/4"	- 4	6,3	0.25	12,7	0.50	22.5	3260	90.0	13040	51	2.0	0.148
R17-05	5/16"	- 5	8,0	0.31	15,0	0.59	21.0	3000	84.0	12000	60	2.4	0.181
R17-06	3/8"	- 6	9,5	0.38	16,5	0.65	21.0	3000	84.0	12000	64	2.5	0.228
R17-08	1/2"	- 8	12,7	0.50	20,8	0.82	21.0	3000	84.0	12000	89	3.5	0.282
2 Wire Braid													
R17-10	5/8"	- 10	15,9	0.63	24,7	0.97	25.0	3625	100.0	14500	102	4.0	0.343
R17-12	3/4"	- 12	19,0	0.75	28,6	1.13	21.5	3120	86.0	12480	122	4.8	0.423
R17-16	1"	- 16	25.4	1.00	36.6	1.48	20.7	3000	82.8	12000	152	6.0	0.672

COVER: U.S. MSHA APPROVED

Balflex® BALPAC 3000 SAE 100R17 SMOOTH COVER – 10.1S17.



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
1 Wire Braid													
R17-04-1SC	1/4"	- 4	6,3	0.25	12,7	0.50	22.5	3260	90.0	13040	51	2.0	0.148
R17-05-1SC	5/16"	- 5	8,0	0.31	15,0	0.59	21.0	3000	84.0	12000	60	2.4	0.181
R17-06-1SC	3/8"	- 6	9,5	0.38	16,5	0.65	21.0	3000	84.0	12000	64	2.5	0.228
R17-08-1SC	1/2"	- 8	12,7	0.50	20,8	0.82	21.0	3000	84.0	12000	89	3.5	0.282
2 Wire Braid													
R17-10-1SC	5/8"	- 10	15,9	0.63	24,7	0.97	25.0	3625	100.0	14500	102	4.0	0.343
R17-12-1SC	3/4"	- 12	19,0	0.75	28,6	1.13	21.5	3120	86.0	12480	122	4.8	0.423
R17-16-1SC	1"	- 16	25.4	1.00	36.6	1.48	20.7	3000	82.8	12000	152	6.0	0.672

COVER: U.S. MSHA APPROVED

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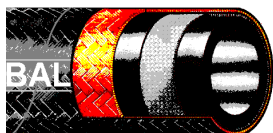


Balflex® SAE 100R5 / SAE J 1402 All

Balflex® SAE 100R5 / SAE J 1402 All – 10.1007.

According to **SAE J517** type **SAE 100R5** / **SAE J 1402** type **All**

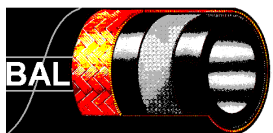
High pressure hydraulic hose with steel and textile braids reinforcement with rubber impregnated textile cover



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	2 high resistance synthetic textile braids with an intermediate high tensile steel wire braid
Outer tube:	impregnation of the outer textile braid with black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings P25 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R5-04	3/16"	- 4	4,8	0.19	13,2	0.52	20.7	3000	82.8	12000	76	3.00	0.161
R5-05	1/4"	- 5	6,3	0.25	14,8	0.60	20.7	3000	82.8	12000	86	3.38	0.175
R5-06	5/16"	- 6	8,0	0.31	17,2	0.68	15.5	2250	62.0	9000	102	4.00	0.220
R5-08	13/32"	- 8	10,4	0.41	19,5	0.77	13.8	2000	55.2	8000	117	4.62	0.260
R5-10	1/2"	- 10	12,7	0.50	23,4	0.92	12.1	1755	48.3	7020	140	5.50	0.370
R5-12	5/8"	- 12	16,0	0.63	27,4	1.08	10.3	1495	41.4	5980	165	6.50	0.472
R5-16	7/8"	- 16	22,2	0.88	31,4	1.24	5.5	800	22.1	3200	187	7.38	0.503
R5-20	1.1/8"	- 20	28,6	1.13	38,1	1.50	4.3	625	17.2	2500	229	9.00	0.610
R5-24	1.3/8"	- 24	34,9	1.38	44,5	1.75	3.4	500	13.8	2000	267	10.50	0.749
R5-32	1.13/16"	- 32	46,0	1.81	56,4	2.22	2.4	350	9.7	1400	337	13.20	0.828
R5-40	2.3/8"	- 40	60,3	2.38	73,0	2.87	2.4	350	9.7	1400	610	24.00	1.445
R5-48	3"	- 48	76,2	3.00	90,5	3.56	1.4	200	5.5	800	838	33.00	2.070

High pressure hydraulic hose with steel and textile braids reinforcement with rubber cover



Balflex® SAE 100R5R – 10.1006.

SAE 100R5 hydraulic hose with rubber cover

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Balflex® SAE 100R5R HEATMASTER



Balflex® HEATMASTER SAE 100R5R 150°C / 302°F – 10.1006.--HT

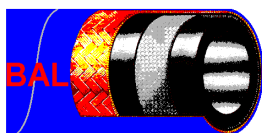
According to **SAE J517** type **SAE 100R5**

High pressure HIGH TEMPERATURE hydraulic hose with steel and textile braid reinforcement with blue pin-pricked rubber cover

HIGH TEMPERATURE

+ 302°F (+ 150°C) intermittent service

+ 275°F (+ 135°C) continuous service



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	2 high resistance synthetic textile braids with an intermediate high tensile steel wire braid
Outer tube:	blue, pin-pricked, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids and hot air in compressors
Temperature range:	intermittent: - 40°F (- 40°C) + 302°F (+ 150°C); continuous service + 275°F (+ 135°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 275°F (+ 135°C)
Couplings:	Balflex® crimped fittings P25 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	Lbs per foot
R5-04-HT	3/16"	- 4	4,8	0.19	13,2	0.52	20.7	3000	82.8	12000	76	3.00	0.161
R5-05-HT	1/4"	- 5	6,3	0.25	14,8	0.60	20.7	3000	82.8	12000	86	3.38	0.175
R5-06-HT	5/16"	- 6	8,0	0.31	17,2	0.68	15.5	2250	62.0	9000	102	4.00	0.220
R5-08-HT	13/32"	- 8	10,4	0.41	19,5	0.77	13.8	2000	55.2	8000	117	4.62	0.260
R5-10-HT	1/2"	- 10	12,7	0.50	23,4	0.92	12.1	1755	48.3	7020	140	5.50	0.370
R5-12-HT	5/8"	- 12	16,0	0.63	27,4	1.08	10.3	1495	41.4	5980	165	6.50	0.472
R5-16-HT	7/8"	- 16	22,2	0.88	31,4	1.24	5.5	800	22.1	3200	187	7.38	0.503
R5-20-HT	1.1/8"	- 20	28,6	1.13	38,1	1.50	4.3	625	17.2	2500	229	9.00	0.610
R5-24-HT	1.3/8"	- 24	34,9	1.38	44,5	1.75	3.4	500	13.8	2000	267	10.50	0.749
R5-32-HT	1.13/16"	- 32	46,0	1.81	56,4	2.22	2.4	350	9.7	1400	337	13.20	0.828
R5-40-HT	2.3/8"	- 40	60,3	2.38	73,0	2.87	2.4	350	9.7	1400	610	24.00	1.445
R5-48-HT	3"	- 48	76,2	3.00	90,5	3.56	1.4	200	5.5	800	838	33.00	2.070

COVER: U.S. MSHA APPROVED

WARNING: THIS HOSE IS A HIGH TEMPERATURE HYDRAULIC HOSE BUT CANNOT BE USED WITH PHOSPHATE-ESTER BASED OILS. AND CANNOT BE USED IN AIRCRAFTS

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Balflex® 2 – MAX JACK

Balflex® 2 – MAX JACK 1/4" 3/8" 10.000PSI and 1/2" 8000PSI – 10.1029.

High pressure, double steel braid reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	2 high tensile steel wire braids
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	2.3: 1 (1/4") and 2: 1 (3/8" and 1/2")
Application:	hydraulic jacks
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series. Multicrimp P23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
2-MAX-04	1/4"	- 4	6,3	0.25	15,0	0.59	70.0	10000	160.0	23200	100	3.9	0.235
2-MAX-06	3/8"	- 6	9,5	0.38	19,0	0.75	70.0	10000	140.0	20000	127	5.0	0.329
2-MAX-08	1/2"	- 8	12,7	0.50	22,2	0.87	55.2	8000	110.4	16000	178	7.0	0.420

COVER: U.S. MSHA APPROVED



Balflex® 3 – MAX

Balflex® 3 - MAX – 10.1005.

Very high pressure, triple steel braid reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	3 high tensile steel wire braids
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings 23 series or 24 with ferrules 20 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		Weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
3-MAX-06	3/8"	- 6	9,5	0.38	21,4	0.84	50.0	7200	200.0	28800	150	5.9	0.470
3-MAX-08	1/2"	- 8	12,7	0.50	24,6	0.97	47.0	6800	188.0	27200	200	7.9	0.538

The Balflex® 3 – MAX hydraulic hose is a hose developed by Balflex® with special technical specification to attend higher working pressures.

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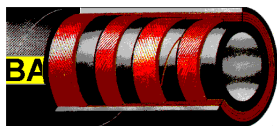
Balflex® BALMASTER SAE 100R12



Balflex® BALMASTER EN 856 R12 / SAE 100R12 – 10.1012.

According to ISO 3862 / EN 856 type R12 / SAE J517 type SAE 100R12

High pressure, four steel wire spirals reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	4 spirals of high tensile steel wire
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings 23 or 24 series with ferrules 20 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R12-06	3/8"	- 6	9,5	0.38	20,3	0.80	27.6	4000	110.0	16000	125	5.0	0.492
R12-08	1/2"	- 8	12,7	0.50	23,6	0.93	27.6	4000	110.0	16000	180	7.0	0.605
R12-10	5/8"	- 10	16,0	0.63	27,4	1.08	27.6	4000	110.0	16000	205	8.0	0.822
R12-12	3/4"	- 12	19,0	0.75	30,7	1.21	27.6	4000	110.0	16000	240	9.5	1.067
R12-16	1"	- 16	25,4	1.00	38,1	1.50	27.6	4000	110.0	16000	305	12.0	1.361
R12-20	1.1/4"	- 20	32,0	1.25	47,0	1.85	20.7	3000	82.7	12000	420	16.5	1.882
R12-24	1.1/2"	- 24	38,0	1.50	53,6	2.11	17.2	2500	69.0	10000	510	20.0	2.218
R12-32	2"	- 32	50,8	2.00	66,8	2.63	17.2	2500	69.0	10000	635	25.0	2.940

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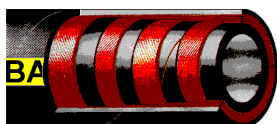
Balflex® BALMASTER DIN EN 856 4SP

Balflex® BALMASTER EN 856 4SP – 10.1008.

Balflex® POWERSPIR EN 856 4SP / SAE 100R15 – 10.1008.06 / 08

According to **ISO 3862 / EN 856 type 4SP**

Very high pressure, four steel wire spirals reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	4 spirals of high tensile steel wire
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings series 24 with ferrules 20 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
4SP-04	1/4"	- 4	6,3	0.25	17,9	0.70	50.0	7250	200.0	29000	120	4.7	0.425
4SP-06*	3/8"	- 6	9,5	0.38	21,4	0.84	44.5	6453	178.0	25812	130	5.1	0.526
4SP-08*	1/2"	- 8	12,7	0.50	24,6	0.97	42.0	6000	168.0	24000	180	7.1	0.627
4SP-10	5/8"	- 10	16,0	0.63	28,2	1.11	35.0	5075	140.0	20300	225	8.9	0.828
4SP-12	3/4"	- 12	19,0	0.75	32,2	1.27	35.0	5075	140.0	20300	280	11.0	0.996
4SP-16	1"	- 16	25,4	1.00	39,7	1.56	28.0	4060	112.0	16240	355	14.0	1.428
4SP-20	1.1/4"	- 20	32,0	1.25	50,8	2.00	21.0	3045	84.0	12180	460	18.1	1.882
4SP-24	1.1/2"	- 24	38,0	1.50	57,2	2.25	18.5	2683	74.0	10732	560	22.0	2.218
4SP-32	2"	- 32	50,8	2.00	69,8	2.75	16.5	2393	66.0	9572	710	28.0	2.940

*On sizes – 6 (3/8") and - 8 (1/2") the **Balflex® BALMASTER DIN EN 856 4SP** and **Balflex® POWERSPIR SAE 100R15** hoses are the same, and they are branded **Balflex® POWERSPIR**.

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Balflex® POWERSPIR DIN EN 856 4SH



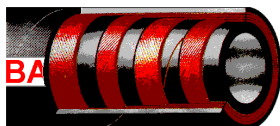
Balflex® POWERSPIR EN 856 4SH – 10.1009.

Balflex® POWERSPIR EN 856 4SH / SAE 100R13 / R15 – 10.1009.12

Balflex® POWERSPIR EN 856 4SH / SAE 100R13 – 10.1009.16

According to **ISO 3862 / EN 856 type 4SH**

Very high pressure, four steel wire spirals reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	4 spirals of very high tensile steel wire
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings series 26 with ferrules 20.406. (3/4" and 1") and 20.405. (1.1/4", 1.1/2" and 2") series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
4SH-12-R13-R15*	¾"	- 12	19,0	0.75	33,0	1.30	42.0	6090	168.0	24360	280	11.0	1.176
4SH-16-R13*	1"	- 16	25,4	1.00	38,7	1.52	38.0	5510	152.0	22040	340	13.4	1.546
4SH-20	1.1/4"	- 20	32,0	1.25	45,5	1.79	32.5	4713	130.0	18852	460	18.1	2.486
4SH-24	1.1/2"	- 24	38,0	1.50	53,5	2.11	29.0	4205	116.0	16820	560	22.0	3.360
4SH-32	2"	- 32	50,8	2.00	68,1	2.68	25.0	3625	100.0	14500	700	27.6	4.563

* On sizes – 12 (¾") and – 16 (1") the **Balflex® POWERSPIR DIN EN 856 4SH** and **SAE 100R13** hoses are the same. The working pressure of **Balflex® POWERSPIR DIN EN 856 4SH SAE 100R13 ¾"** and **Balflex® POWERSPIR DIN EN 856 4SH SAE 100R13 1"** are higher than standard SAE 100R13.

* On size – 12 (¾") the **Balflex® POWERSPIR DIN EN 856 4SH**, **SAE 100R13** and **SAE 100R15** hoses are the same

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Balflex® POWERSPIR SAE 100R13

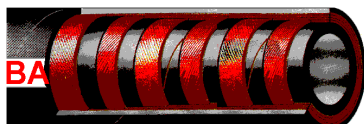
Balflex® POWERSPIR EN 856 4SH / SAE 100R13 / R15 – 10.1009.12

Balflex® POWERSPIR EN 856 4SH / SAE 100R13 – 10.1009.16

Balflex® POWERSPIR SAE 100R13 – 5000PSI – 10.1009.* - 10.1014.

According to **ISO 3862 / EN 856** type **R13** / **SAE J517** type **R13**

Very high pressure, four or six steel wire spirals reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	4 or 6 spirals of high tensile steel wire
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings series 26 with ferrules 20.406 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
4SH-12 –R13-R15*	¾"	- 12	19,0	0.75	33,0	1.30	42,0	6090	168,0	24360	280	11,0	1.176
4SH-16-R13 *	1"	- 16	25,4	1.00	38,7	1.52	38,0	5510	152,0	22040	340	13,4	1.546
R13-20	1.1/4"	- 20	32,0	1.25	49,8	1.96	34,5	5000	138,0	20000	420	16,5	2.520
R13-24	1.1/2"	- 24	38,0	1.50	57,4	2.26	34,5	5000	138,0	20000	500	20,0	3.420
R13-32	2"	- 32	50,8	2.00	71,1	2.80	34,5	5000	138,0	20000	635	25,0	4.452

Note: According to **ISO 3862 / EN 856** type **R13** / **SAE J517** type **R13**, the **Balflex® POWERSPIR SAE 100R13** hose is of 4 steel wire spirals on sizes – 12 (3/4") and – 16 (1") and of 6 steel wire spirals on sizes – 20 (1.1/4"), – 24 (1.1/2") and – 32 (2").

* On sizes – 12 (3/4") and – 16 (1") the **Balflex® POWERSPIR DIN EN 856 4SH** and **SAE 100R13** hoses are the same. The working pressure of **Balflex® POWERSPIR DIN EN 856 4SH SAE 100R13 3/4"** and **Balflex® POWERSPIR DIN EN 856 4SH SAE 100R13 1"** are higher than standard SAE 100R13.

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Balflex® POWERSPIR SAE 100R15



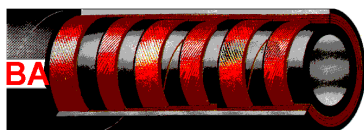
Balflex® POWERSPIR EN 856 4SP / SAE 100R15 – 10.1008.06 / 08

Balflex® POWERSPIR EN 856 4SH / SAE 100R13 / R15 – 10.1009.12

Balflex® POWERSPIR SAE 100R15 – 6000PSI – 10.1016.

According to **ISO 3862** / **EN 856** type **R15** / **SAE J517** type **R15**

Very high pressure, four or six steel wire spirals reinforced hydraulic hose



Inner tube:	seamless oil resistant synthetic rubber
Reinforcement:	4 or 6 spirals of high tensile steel wire
Outer tube:	black, oil, weather and abrasion resistant synthetic rubber
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°C) + 212°F (+ 100°C); Intermittent service: + 248°F (+ 120°C) Max. temperature recommended for water base hydraulic fluids: + 158°F (+ 70°C) Max. temperature recommended for air: + 140°F (+ 60°C)
Couplings:	Balflex® crimped fittings series 26 with ferrules 20 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
4SP-06*	3/8"	- 6	9,5	0.38	21,4	0.84	44.5	6453	178.0	25812	130	5.1	0.526
4SP-08*	1/2"	- 8	12,7	0.50	24,6	0.97	42.0	6000	168.0	24000	180	7.1	0.627
4SH-12-R13-R15**	3/4"	- 12	19,0	0.75	33,0	1.30	42.0	6000	168.0	24000	267	10.5	1.176
R15-16	1"	- 16	25,4	1.00	42,9	1.69	42.0	6000	168.0	24000	330	13.0	1.411
R15-20	1.1/4"	- 20	32,0	1.25	51,5	2.03	42.0	6000	168.0	24000	445	17.5	2.453
R15-24	1.1/2"	- 24	38,0	1.50	59,6	2.32	42.0	6000	168.0	24000	533	21.0	3.360

Note: According to **ISO 3862** / **EN 856** type **R15** / **SAE J517** type **R15**, the **Balflex® POWERSPIR SAE 100R15** hose is of 4 steel wire spirals on sizes – 6 (3/8"), 8 (1/2"), – 12 (3/4") and – 16 (1") and of 6 steel wire spirals on sizes – 20 (1.1/4") and – 24 (1.1/2").

According to **ISO 3862** / **SAE J517** type **R15** doesn't exist the size – 32 (2").

*On sizes – 6 (3/8") and - 8 (1/2") the **Balflex® POWERSPIR DIN EN 856 4SP** and **SAE 100R15** hoses are the same

On size – 12 (3/4") the **Balflex® POWERSPIR DIN EN 856 4SH and **SAE 100R15** hoses are the same

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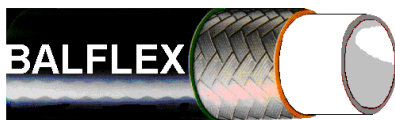


Balflex® EN 855 R7 / SAE 100R7

Balflex® EN 855 R7 / SAE 100R7 – 10.1030.

According to ISO 3949 / EN 855 type R7 / SAE J517 type SAE 100R7

High pressure, synthetic polyester braid reinforced thermoplastic hydraulic hose



Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	1 high tensile polyester braid
Outer tube:	black, oil and weather resistant thermoplastic
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C) Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20.107. series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R7-02	1/8"	- 2	3,0	0.12	8,1	0.32	28.0	4060	112.0	16240	50	2.00	0.034
R7-03	3/16"	- 3	4,8	0.19	10,3	0.41	21.0	3045	84.0	12180	75	2.95	0.047
R7-04	1/4"	- 4	6,3	0.25	12,4	0.49	19.0	2755	76.0	11020	100	3.94	0.060
R7-05	5/16"	- 5	8,0	0.31	14,2	0.56	19.0	2755	76.0	11020	114	4.49	0.087
R7-06	3/8"	- 6	9,5	0.38	15,7	0.62	16.0	2320	64.0	9280	127	5.00	0.108
R7-08	1/2"	- 8	12,7	0.50	19,3	0.76	14.0	2030	56.0	8120	178	7.00	0.148
R7-10	5/8"	- 10	16,0	0.63	23,1	0.91	10.5	1523	42.0	6092	203	7.99	0.188
R7-12	3/4"	- 12	19,0	0.75	26,4	1.04	9.0	1305	36.0	5220	254	10.00	0.222
R7-16	1"	- 16	25,4	1.00	33,3	1.31	7.0	1015	28.0	4060	305	12.00	0.269

Note: Size - 2 (1/8") not included in the standards.

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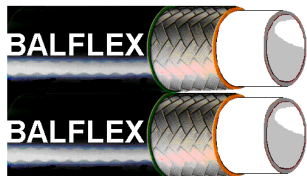
Balflex® EN 855 R7 / SAE 100R7 TWIN



Balflex® EN 855 R7 / SAE 100R7 TWIN – 10.1034.

According to ISO 3949 / EN 855 type R7 / SAE J517 type SAE 100R7

High pressure, synthetic polyester braid reinforced thermoplastic hydraulic twin line hose



Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	1 high tensile polyester braid
Outer tube:	black, oil and weather resistant thermoplastic
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C) Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20.107. series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	Lbs per foot
R7-03BT	3/16"	- 3	4,8	0.19	10,3	0.41	21.0	3045	84.0	12180	75	2.95	0.047
R7-04BT	1/4"	- 4	6,3	0.25	12,4	0.49	19.0	2755	76.0	11020	100	3.94	0.060
R7-05BT	5/16"	- 5	8,0	0.31	14,2	0.56	19.0	2755	76.0	11020	114	4.49	0.087
R7-06BT	3/8"	- 6	9,5	0.38	15,7	0.62	16.0	2320	64.0	9280	127	5.00	0.108
R7-08BT	1/2"	- 8	12,7	0.50	19,3	0.76	14.0	2030	56.0	8120	178	7.00	0.148
R7-10BT	5/8"	- 10	16,0	0.63	23,1	0.91	10.5	1523	42.0	6092	203	7.99	0.188
R7-12BT	3/4"	- 12	19,0	0.75	26,4	1.04	9.0	1305	36.0	5220	254	10.00	0.222
R7-16BT	1"	- 16	25,4	1.00	33,3	1.31	7.0	1015	28.0	4060	305	12.00	0.269

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Balflex® EN 855 R7/SAE 100R7 NONCONDUCTIVE

Balflex® EN 855 R7 / SAE 100R7 NON CONDUCTIVE – 10.1030.L

According to ISO 3949 / EN 855 type R7 / SAE J517 type SAE 100R7

High pressure, synthetic fiber braid reinforced thermoplastic NON CONDUCTIVE hydraulic hose



Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	1 high tensile polyester braid
Outer tube:	orange, oil and weather resistant polyurethane
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C) Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20.107. series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R7-02LNC	1/8"	- 2	3,0	0.12	8,1	0.32	28.0	4060	112.0	16240	50	2.00	0.034
R7-03LNC	3/16"	- 3	4,8	0.19	10,3	0.41	21.0	3045	84.0	12180	75	2.95	0.047
R7-04LNC	1/4"	- 4	6,3	0.25	12,4	0.49	19.0	2755	76.0	11020	100	3.94	0.060
R7-05LNC	5/16"	- 5	8,0	0.31	14,2	0.56	19.0	2755	76.0	11020	114	4.49	0.087
R7-06LNC	3/8"	- 6	9,5	0.38	15,7	0.62	16.0	2320	64.0	9280	127	5.00	0.108
R7-08LNC	1/2"	- 8	12,7	0.50	19,3	0.76	14.0	2030	56.0	8120	178	7.00	0.148
R7-10LNC	5/8"	- 10	16,0	0.63	23,1	0.91	10.5	1523	42.0	6092	203	7.99	0.188
R7-12LNC	3/4"	- 12	19,0	0.75	26,4	1.04	9.0	1305	36.0	5220	254	10.00	0.222
R7-16LNC	1"	- 16	25,4	1.00	33,3	1.31	7.0	1015	28.0	4060	305	12.00	0.269

Note: Size - 2 (1/8") not included in the standards.

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Balflex® EN 855 R7/SAE 100R7 NONCONDUCTIVE TWIN



Balflex® EN 855 R7 / SAE 100R7 NON CONDUCTIVE TWIN – 10.1034.L

According to ISO 3949 / EN 855 type R7 / SAE J517 type SAE 100R7

High pressure, synthetic fiber braid reinforced thermoplastic NON CONDUCTIVE hydraulic twin line hose



Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	1 high tensile polyester braid
Outer tube:	orange, oil and weather resistant polyurethane
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C) Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20.107. series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R7-03LNC	3/16"	- 3	4,8	0.19	10,3	0.41	21.0	3045	84.0	12180	75	2.95	0.047
R7-04LNC	1/4"	- 4	6,3	0.25	12,4	0.49	19.0	2755	76.0	11020	100	3.94	0.060
R7-05LNC	5/16"	- 5	8,0	0.31	14,2	0.56	19.0	2755	76.0	11020	114	4.49	0.087
R7-06LNC	3/8"	- 6	9,5	0.38	15,7	0.62	16.0	2320	64.0	9280	127	5.00	0.108
R7-08LNC	1/2"	- 8	12,7	0.50	19,3	0.76	14.0	2030	56.0	8120	178	7.00	0.148
R7-10LNC	5/8"	- 10	16,0	0.63	23,1	0.91	10.5	1523	42.0	6092	203	7.99	0.188
R7-12LNC	3/4"	- 12	19,0	0.75	26,4	1.04	9.0	1305	36.0	5220	254	10.00	0.222
R7-16LNC	1"	- 16	25,4	1.00	33,3	1.31	7.0	1015	28.0	4060	305	12.00	0.269

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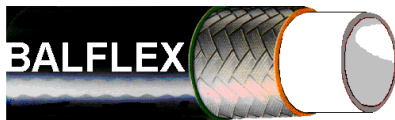
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Balflex® R7 SteelFlex

Balflex® R7 SteelFlex – 10.1031.

High pressure, steel wire braid reinforced thermoplastic hydraulic hose



Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	1 high tensile steel wire braid
Outer tube:	black, oil and weather resistant thermoplastic
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C)
Couplings:	Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C) Balflex® crimped fittings 23 series with ferrules 20.107. series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R7-02S	1/8"	- 2	3,0	0.12	6,9	0.27	35.0	5075	140.0	20300	25	1.00	0.067
R7-03S	3/16"	- 3	4,8	0.19	10,0	0.39	30.0	4350	120.0	17400	30	1.18	0.087
R7-04S	1/4"	- 4	6,3	0.25	11,9	0.47	27.5	3988	110.0	15952	40	1.57	0.114
R7-05S	5/16"	- 5	8,0	0.31	14,0	0.55	24.0	3480	96.0	13920	50	1.96	0.148
R7-06S	3/8"	- 6	9,5	0.38	16,0	0.63	22.0	3190	88.0	12790	60	2.36	0.175
R7-08S	1/2"	- 8	12,7	0.50	20,5	0.81	17.5	2538	70.0	10152	75	2.95	0.262
R7-10S	5/8"	- 10	16,0	0.63	23,3	0.92	14.0	2030	56.0	8120	110	4.33	0.276
R7-12S	3/4"	- 12	19,0	0.75	25,0	0.98	11.5	1668	46.0	6672	150	5.90	0.302
R7-16S	1"	- 16	25,4	1.00	32,5	1.28	10.0	1450	40.0	5800	230	9.06	0.417

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Balflex® R7 SteelFlex Duo



Balflex® R7 SteelFlex Duo – 10.1043.

High pressure, double steel wire braid reinforced thermoplastic hydraulic hose



Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	2 high tensile steel wire braid
Outer tube:	black, oil and weather resistant polyurethane
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C) Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C)
Couplings:	Balflex® crimped fittings 23 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R7-03-SD	3/16"	- 3	4,8	0.19	11,7	0.46	45.0	6500	180.0	26000	80	3.20	0.134
R7-04-SD	1/4"	- 4	6,3	0.25	13,7	0.54	43.0	6250	172.0	25000	100	4.00	0.195
R7-05-SD	5/16"	- 5	8,0	0.31	15,2	0.60	38.0	5500	152.0	22000	110	4.40	0.235
R7-06-SD	3/8"	- 6	9,5	0.38	17,5	0.69	33.0	4800	132.0	19200	127	5.10	0.282
R7-08-SD	1/2"	- 8	12,7	0.50	21,1	0.83	27.0	3900	108.0	15600	178	7.10	0.403
R7-10-SD	5/8"	- 10	16,0	0.63	24,8	0.98	21.0	3000	84.0	12000	203	8.10	0.444
R7-12-SD	3/4"	- 12	19,0	0.75	28,4	1.12	17.5	2500	70.0	10000	250	10.00	0.531
R7-16-SD	1"	- 16	25,4	1.00	34,5	1.36	15.0	2200	60.0	8800	305	12.20	0.706

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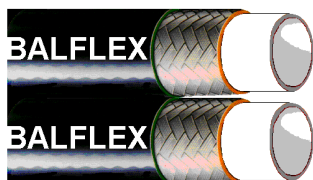
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Balflex® R7 SteelFlex Twin

Balflex® R7 SteelFlex TWIN – 10.1035.

High pressure, wire steel braid reinforced thermoplastic hydraulic twin line hose



Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	1 high tensile steel wire braid
Outer tube:	black, oil and weather resistant thermoplastic
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C) Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20.107. series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R7-03-ST	3/16"	- 3	4,8	0.19	10,0	0.39	30.0	4350	120.0	17400	30	1.18	0.087
R7-04-ST	1/4"	- 4	6,3	0.25	11,9	0.47	27.5	3988	110.0	15952	40	1.57	0.114
R7-05-ST	5/16"	- 5	8,0	0.31	14,0	0.55	24.0	3480	96.0	13920	50	1.96	0.148
R7-06-ST	3/8"	- 6	9,5	0.38	16,0	0.63	22.0	3190	88.0	12790	60	2.36	0.175
R7-08-ST	1/2"	- 8	12,7	0.50	20,5	0.81	17.5	2538	70.0	10152	75	2.95	0.262
R7-10-ST	5/8"	- 10	16,0	0.63	23,3	0.92	14.0	2030	56.0	8120	110	4.33	0.276
R7-12-ST	3/4"	- 12	19,0	0.75	25,0	0.98	11.5	1668	46.0	6672	150	5.90	0.302
R7-16-ST	1"	- 16	25,4	1.00	32,5	1.28	10.0	1450	40.0	5800	230	9.06	0.417

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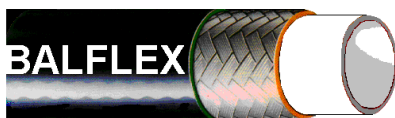
Balflex® EN 855 R8 / SAE 100R8



Balflex® EN 855 R8 / SAE 100R8 – 10.1033.

According to ISO 3949 / EN 855 type R8 / SAE J517 type SAE 100R8

High pressure, single aramidic braid reinforced thermoplastic hydraulic hose

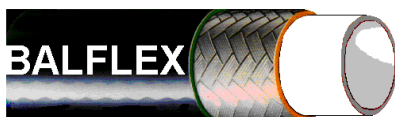


Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	1 high tensile aramidic fiber braid
Outer tube:	black, oil and weather resistant thermoplastic
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C) Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R8-03	3/16"	- 3	4,8	0.19	10,3	0.41	35.0	5075	140.0	20300	35	1.38	0.060
R8-04	1/4"	- 4	6,3	0.25	12,4	0.49	35.0	5075	140.0	20300	50	1.96	0.067
R8-05	5/16"	- 5	8,0	0.31	14,2	0.55	30.0	4350	120.0	17400	60	2.36	0.087
R8-06	3/8"	- 6	9,5	0.38	15,7	0.62	28.0	4060	112.0	16240	80	3.15	0.121
R8-08	1/2"	- 8	12,7	0.50	19,3	0.76	24.5	3553	98.0	14212	95	3.74	0.148
R8-10	5/8"	- 10	16,0	0.63	23,1	0.91	20.0	2900	80.0	11600	125	4.92	0.208
R8-12	3/4"	- 12	19,0	0.75	26,4	1.04	16.5	2393	66.0	9572	150	5.90	0.242
R8-16	1"	- 16	25,4	1.00	33,3	1.31	14.0	2030	56.0	8120	200	7.87	0.343

Balflex® Ultraflex R9 – 10.1038.

High pressure, single aramidic braid reinforced thermoplastic hydraulic hose



Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	1 high tensile aramidic fiber braid
Outer tube:	black, oil and weather resistant thermoplastic
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C) Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R9-06	3/8"	- 6	9,5	0.38	16,0	0.63	38.0	5510	152.0	22040	80	3.15	0.121
R9-08	1/2"	- 8	12,7	0.50	20,3	0.80	34.5	5000	138.0	20000	95	3.74	0.148

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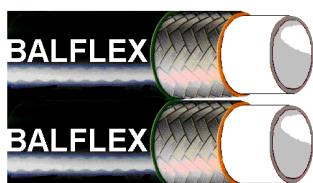


Balflex® EN 855 R8 / SAE 100R8 TWIN

Balflex® EN 855 R8 / SAE 100R8 TWIN – 10.1036.

According to ISO 3949 / EN 855 type R8 / SAE J517 type SAE 100R8

High pressure, single aramidic braid reinforced thermoplastic hydraulic twin line hose



Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	1 high tensile aramidic fiber braid
Outer tube:	black, oil and weather resistant thermoplastic
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C)
	Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R8-03-T	3/16"	- 3	4,8	0.19	10,3	0.41	35.0	5075	140.0	20300	35	1.38	0.121
R8-04-T	1/4"	- 4	6,3	0.25	12,4	0.49	35.0	5075	140.0	20300	50	1.96	0.134
R8-05-T	5/16"	- 5	8,0	0.31	14,2	0.55	30.0	4350	120.0	17400	60	2.36	0.175
R8-06-T	3/8"	- 6	9,5	0.38	15,7	0.62	28.0	4060	112.0	16240	80	3.15	0.242
R8-08-T	1/2"	- 8	12,7	0.50	19,3	0.76	24.5	3553	98.0	14212	95	3.74	0.296
R8-10-T	5/8"	- 10	16,0	0.63	23,1	0.91	20.0	2900	80.0	11600	125	4.92	0.417
R8-12-T	3/4"	- 12	19,0	0.75	26,4	1.04	16.5	2393	66.0	9572	150	5.90	0.484
R8-16-T	1"	- 16	25,4	1.00	33,3	1.31	14.0	2030	56.0	8120	200	7.87	0.685

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Balflex® EN 855 R8/SAE 100R8_{NONCONDUCTIVE}



Balflex® EN 855 R8 / SAE 100R8 NON CONDUCTIVE – 10.1033.--L

According to ISO 3949 / EN 855 type R8 / SAE J517 type SAE 100R8

High pressure, single aramidic braid reinforced thermoplastic hydraulic hose



Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	1 high tensile aramidic fiber braid
Outer tube:	orange, oil and weather resistant thermoplastic
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C)
	Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R8-03LNC	3/16"	- 3	4,8	0.19	10,3	0.41	35.0	5075	140.0	20300	35	1.38	0.060
R8-04LNC	1/4"	- 4	6,3	0.25	12,4	0.49	35.0	5075	140.0	20300	50	1.96	0.067
R8-05LNC	5/16"	- 5	8,0	0.31	14,2	0.55	30.0	4350	120.0	17400	60	2.36	0.087
R8-06LNC	3/8"	- 6	9,5	0.38	15,7	0.62	28.0	4060	112.0	16240	80	3.15	0.121
R8-08LNC	1/2"	- 8	12,7	0.50	19,3	0.76	24.5	3553	98.0	14212	95	3.74	0.148
R8-10LNC	5/8"	- 10	16,0	0.63	23,1	0.91	20.0	2900	80.0	11600	125	4.92	0.208
R8-12LNC	3/4"	- 12	19,0	0.75	26,4	1.04	16.5	2393	66.0	9572	150	5.90	0.242
R8-16LNC	1"	- 16	25,4	1.00	33,3	1.31	14.0	2030	56.0	8120	200	7.87	0.343

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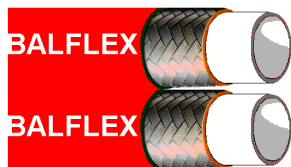
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Balflex® EN 855 R8/SAE 100R8 NONCONDUCTIVE TWIN

Balflex® EN 855 R8 / SAE 100R8 TWIN NON CONDUCTIVE – 10.1036.--L

According to *ISO 3949* / *EN 855* type *R8* / *SAE J517* type *SAE 100R8*



Inner tube:	seamless oil resistant thermoplastic
Reinforcement:	1 high tensile aramidic fiber braid
Outer tube:	black, oil and weather resistant thermoplastic
Safety factor:	4: 1
Application:	petroleum base hydraulic fluids
Temperature range:	- 40°F (- 40°F) + 212°F (+ 100°C) Max. temperature recommended for water base hydraulic fluids: + 149°F (+ 65°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules 20 series

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R8-03TNC	3/16"	- 3	4,8	0.19	10,3	0.41	35.0	5075	140.0	20300	35	1.38	0.121
R8-04TNC	1/4"	- 4	6,3	0.25	12,4	0.49	35.0	5075	140.0	20300	50	1.96	0.134
R8-05TNC	5/16"	- 5	8,0	0.31	14,2	0.55	30.0	4350	120.0	17400	60	2.36	0.175
R8-06TNC	3/8"	- 6	9,5	0.38	15,7	0.62	28.0	4060	112.0	16240	80	3.15	0.242
R8-08TNC	1/2"	- 8	12,7	0.50	19,3	0.76	24.5	3553	98.0	14212	95	3.74	0.296
R8-10TNC	5/8"	- 10	16,0	0.63	23,1	0.91	20.0	2900	80.0	11600	125	4.92	0.417
R8-12TNC	3/4"	- 12	19,0	0.75	26,4	1.04	16.5	2393	66.0	9572	150	5.90	0.484
R8-16TNC	1"	- 16	25,4	1.00	33,3	1.31	14.0	2030	56.0	8120	200	7.87	0.685

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Sewer jet cleaning hose



		Inner tube:		internal core in polyester									
		Reinforcement:		2 high tensile aramidic fiber braids									
		Outer tube:		orange polyurethane high abrasion resistance									
		Safety factor:		2.5: 1									
		Application:		sewer cleaning with high pressure water									
		Temperature range:		- 40°F (- 40°F) + 149°F (+ 65°C)									
		Couplings:		crimped Balflex® Jetclean coupling series									
part number	Ø nom	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	Lbs per foot
10.1039.08	1/2"	- 8	13,0	0.51	20,3	0.80	24.1	3500	60.3	8750	100	4.0	0.141
10.1039.10	5/8"	- 10	16,0	0.63	25,6	1.01	20.7	3000	51.7	7500	125	5.0	0.235
10.1039.12	3/4"	- 12	19,0	0.75	29,8	1.17	20.7	3000	51.8	7500	125	5.0	0.323
10.1039.16	1"	- 16	25,4	1.00	36,5	1.44	20.7	3000	51.8	7500	150	6.0	0.390

The **Balflex®** Sewer JETCLEAN hose can be supplied in different lengths

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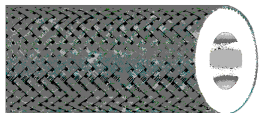


Balflex® Balfon SAE 100R14

Balflex® BALFLON SAE 100R14 – AMERICAN SIZE – 10.2000.

According to **SAE J517** type **SAE 100R14 A**

High pressure, single steel wire reinforced hydraulic hose with smooth PTFE lining



Inner tube:	seamless smooth polytetrafluorethylene (PTFE)
Cover:	1 stainless steel wire braid
Safety factor:	4: 1
Application:	water base, petroleum base or synthetic base hydraulic fluids, corrosive, food liquids and high temperature gases and liquids.
Temperature range:	- 58°F (- 50°C) + 500°F (+ 260°C)
Couplings:	Balflex® crimped fittings 23 series with ferrules series 20.107.

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R14-03	1/8"	- 3	3,2	0.13	6,3	0.25	27.5	3900	110.0	15600	40	1.57	0.047
R14-04	3/16"	- 4	4,8	0.19	7,6	0.30	19.0	2755	76.0	11020	55	1.97	0.047
R14-05	1/4"	- 5	6,3	0.25	8,8	0.35	18.0	2610	72.0	10440	75	2.95	0.060
R14-06	5/16"	- 6	8,0	0.31	11,0	0.43	17.5	2538	70.0	10152	100	3.94	0.087
R14-08	13/32"	- 8	10,3	0.41	13,0	0.51	14.2	2059	56.8	8236	120	4.72	0.108
R14-10	1/2"	- 10	12,7	0.50	15,7	0.62	12.0	1740	48.0	6960	140	5.51	0.141
R14-12	5/8"	- 12	16,0	0.63	19,3	0.76	10.5	1523	42.0	6092	165	6.50	0.175
R14-16	7/8"	- 16	22,0	0.88	26,1	1.03	6.8	970	27.2	3880	240	9.45	0.242
R14-20	1.1/8"	- 20	28,6	1.13	32,6	1.28	4.4	638	17.6	2552	330	13.0	0.356

Balflex® BALFLON SAE 100R14 – EUROPEAN SIZE – 10.2003.

According to **SAE J517** type **SAE 100R14 A**

Inner tube:	seamless smooth polytetrafluorethylene (PTFE)
Cover:	1 stainless steel wire braid
Safety factor:	4: 1
Application:	water base, petroleum base or synthetic base hydraulic fluids, corrosive, food liquids and high temperature gases and liquids.
Temperature range:	- 58°F (- 50°C) + 500°F (+ 260°C)
Couplings:	Balflex® crimped fittings series 23 with ferrules series 20.107.

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
R14-02	1/8"	- 2	3,2	0.13	6,3	0.25	27.5	3900	110.0	15600	40	1.57	0.047
R14-03TB	3/16"	- 3	4,8	0.19	7,6	0.30	19.0	2755	76.0	11020	55	1.97	0.047
R14-04TB	1/4"	- 4	6,3	0.25	8,8	0.35	18.0	2610	72.0	10440	75	2.95	0.060
R14-05TB	5/16"	- 5	8,0	0.31	11,0	0.43	17.5	2538	70.0	10152	100	3.94	0.087
R14-06TB	3/8"	- 6	9,5	0.38	12,1	0.48	16.5	2393	66.0	9572	110	4.33	0.101
R14-08TB	1/2"	- 8	12,7	0.50	15,7	0.62	12.0	1740	48.0	6960	140	5.51	0.141
R14-10TB	5/8"	- 10	16,0	0.63	19,3	0.76	10.5	1523	42.0	6092	165	6.50	0.175
R14-12TB	3/4"	- 12	19,0	0.75	22,2	0.87	8.6	1247	34.4	4988	200	7.87	0.215
R14-16TB	1"	- 16	25,4	1.00	29,1	1.15	6.0	870	24.0	3480	300	11.8	0.302

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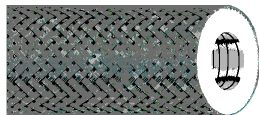
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Balflex® Balflon Corrugated PTFE



Balflex® BALFLON CORRUGATED – 10.2010.

High pressure, single Stainless Steel wire braid reinforced corrugated PTFE hose



Inner tube:	seamless corrugated polytetrafluorethylene (PTFE)
Cover:	1 stainless steel wire braid
Safety factor:	4: 1
Application:	water base, petroleum base, corrosive and high temperature gases or fluids
Temperature range:	- 58°F (- 50°C) + 500°F (+ 260°C)

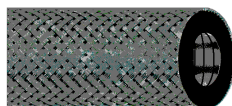
part number	Ø nom	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
10.2010.06	3/8"	- 6	10,0	0.39	15,0	0.59	12,0	1740	48,0	6960	20	0.79	0.087
10.2010.08	1/2"	- 8	13,0	0.51	18,0	0.71	11,0	1595	44,0	6380	25	0.98	0.101
10.2010.10	5/8"	- 10	16,0	0.63	22,0	0.87	8,0	1160	32,0	4640	50	1.97	0.108
10.2010.12	3/4"	- 12	19,5	0.77	26,0	1.02	7,0	1015	28,0	4060	65	2.56	0.141
10.2010.16	1"	- 16	25,5	1.00	33,0	1.30	5,0	725	20,0	2900	89	3.50	0.175
10.2010.20	1.1/4"	- 20	31,5	1.24	38,0	1.50	4,5	653	18,0	2610	110	4.33	0.215
10.2010.24	1.1/2"	- 24	37,5	1.48	44,5	1.75	4,0	580	16,0	2320	120	4.72	0.242
10.2010.32	2"	- 32	50,5	1.99	57,0	2.24	3,0	435	14,0	2030	120	4.72	0.302



Balflex® Black Balflon Corrugated PTFE

Balflex® BLACK CONDUCTIVE BALFLON CORRUGATED – 10.2010.--B

High pressure, single Stainless Steel wire braid reinforced black conductive corrugated PTFE hose



Inner tube:	seamless black conductive corrugated polytetrafluorethylene (PTFE)
Cover:	1 high resistance stainless steel wire braid
Safety factor:	4: 1
Application:	water base, petroleum base, corrosive and high temperature gases or fluids
Temperature range:	- 58°F (- 50°C) + 500°F (+ 260°C)

part number	Ø nom	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
10.2010.06B	3/8"	- 6	10,0	0.39	15,0	0.59	12,0	1740	48,0	6960	20	0.79	0.087
10.2010.08B	1/2"	- 8	13,0	0.51	18,0	0.71	11,0	1595	44,0	6380	25	0.98	0.101
10.2010.10B	5/8"	- 10	16,0	0.63	22,0	0.87	8,0	1160	32,0	4640	50	1.97	0.108
10.2010.12B	3/4"	- 12	19,5	0.77	26,0	1.02	7,0	1015	28,0	4060	65	2.56	0.141
10.2010.16B	1"	- 16	25,5	1.00	33,0	1.30	5,0	725	20,0	2900	89	3.50	0.175
10.2010.20B	1.1/4"	- 20	31,5	1.24	38,0	1.50	4,5	653	18,0	2610	110	4.33	0.215
10.2010.24B	1.1/2"	- 24	37,5	1.48	44,5	1.75	4,0	580	16,0	2320	120	4.72	0.242
10.2010.32B	2"	- 32	50,5	1.99	57,0	2.24	3,0	435	14,0	2030	120	4.72	0.302

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Balflex® – The European Technology



Balflex[®] Flat HDPE Spring Guard

Balflex[®] HYDRAULIC AND INDUSTRIAL HOSE FLAT GUARD – 11.103.

High Density Polyethylene Protection Spring Guard



Raw Material :	high density polyethylene resistant to abrasion and UV rays
Color :	black or yellow
Temperature range :	- 4°F (- 20°C) + 203°F (+ 95°C)
Application :	protection of external rubber layer of hydraulic and industrial hoses, against the early wearing due to abrasion

Part number	Ø nom
	mm
11.103.012	12
11.103.013	13
11.103.016	16
11.103.020	20
11.103.024	24
11.103.025	25
11.103.027	27
11.103.030	30
11.103.032	32
11.103.035	35
11.103.044	44
11.103.050	50
11.103.055	55
11.103.070	70
11.103.100	100

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Balflex® Nylon Protective Guard



Balflex® Nylon Protective Guard – 11.400.

Textile Hose Protection Guard

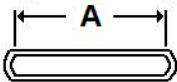
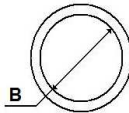


Easy-to-install, textile protection guard

When used in hoses, protective guard protects people nearby a breaking hose and meets the requirements of standards EN 12999 and EN ISO 3457.

*The recommended temperature range is - 40°F (- 40°F) + 176°F(+ 80°C)
UV-protected and has a very low conductivity of electricity.*

Abrasion resistance very good.

		
Balflex® Part Number	Flat I.D. (mm)	Round I.D. (mm)
11.400.027	27	17
11.400.031	31	20
11.400.036	36	23
11.400.039	39	25
11.400.042	42	27
11.400.049	49	31
11.400.050	52	33
11.400.054	54	36
11.400.063	63	40
11.400.069	69	44
11.400.074	74	47
11.400.083	83	53
11.400.086	86	55
11.400.094	94	60
11.400.104	104	66
11.400.115	115	73
11.400.146	146	93
11.400.176	176	112
11.400.202	202	127

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Balflex® Hydraulic Hoses

FLUID COMPATIBILITY AND RESISTANCE CHART



RECOMMENDED



RECOMMENDED WITH
RESTRICTIONS



NOT RECOMMENDED

Fluids	Hose Types			
	SAE 100R6 / DIN 1TE DIN 2TE SAE 100R3 / DIN 3TE SAE 100R1AT / DIN 1SN SAE 100R2AT / DIN 2SN SAE 100R17 DIN EN 857 1SC DIN EN 857 2SC SAE 100R5 2-MAX JACK 3-MAX	SAE 100R12 DIN EN 856 4SP DIN EN 856 4SH SAE 100R13 SAE 100R15	SAE 100R7 R7 NON CONDUCTIVE SAE 1007 STEELFLEX SAE 100R8	BALFLON
Acetic Acid				
Acetic Acid (30%)				
Acetone				
Acetylene				
Ammonia, Gas (Hot)				
Ammonia, Liquid				
Ammoniumchloride				
Amyl Acetate				
Aniline				
Animal Oils				
Benzol / Benzene				
Butane				
Butyl Acetate				
Butyl Alcohol / Butanol				
Calcium Chloride Solutions				
Carbon Dioxide				
Carbon Disulfide				
Carbonates				
Caustic Soda				
Chlorinated Solvents				
Chlorine				
Chloroform				

These chart informations are based on Balflex® knowledge and experience and is intended as a guide and not as a guarantee. We cannot assure the perfect performance of the hoses as that depends on many factors as working pressure, pressure picks, fluid, ambient temperature, fluid temperature, concentration, duration of exposure, etc...

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Fluids	Hose Types			
	SAE 100R6 / DIN 1TE DIN 2TE SAE 100R3 / DIN 3TE SAE 100R1AT / DIN 1SN SAE 100R2AT / DIN 2SN SAE 100R17 DIN EN 857 1SC DIN EN 857 2SC SAE 100R5 2-MAX JACK 3-MAX	SAE 100R12 DIN EN 856 4SP DIN EN 856 4SH SAE 100R13 SAE 100R15	SAE 100R7 R7 NON CONDUCTIVE SAE 1007 STEELFLEX SAE 100R8	BALFLON
Citric and Solutions				
Compressed Air				
Cyclohexane				
Crude Petroleum Oil				
Diethyl Phthalate				
Diesel Fuel				
Ethers				
Ethyl Acetate				
Ethyl Alcohol				
Ethyl Chloride				
Ethyl Glycol				
Ethyleneoxide				
Fluorine				
Formaldehyde				
Formaldehyde 40%				
Fuel Oil				
Gaseous Hydrogen				
Gasoline				
Glycerin / Glycerol				
Glycol to 66° C				
Hexane				
Hydraulic Oil				

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Fluids	Hose Types				BALFLON
	SAE 100R6 / DIN 1TE DIN 2TE SAE 100R3 / DIN 3TE SAE 100R1AT / DIN 1SN SAE 100R2AT / DIN 2SN SAE 100R17 DIN EN 857 1SC DIN EN 857 2SC SAE 100R5 2-MAX JACK 3-MAX	SAE 100R12 DIN EN 856 4SP DIN EN 856 4SH SAE 100R13 SAE 100R15	SAE 100R7 R7 NON CONDUCTIVE SAE 1007 STEELFLEX SAE 100R8		
Hydrochloric Acid 37%					
Hydroger Peroxide (Dil.)					
Hydroger Peroxide (Conc.)					
Isocyanates					
Isopropil Alcohol					
Kerosene					
Liquid Oxygen					
LPG					
Lubricating Oils					
Mercury					
Methyl Alcohol / Methanol					
Methyl Chloride (Cold)					
Methyl Ethyl Khetone					
Mineral Oils					
Naphtha					
Naphthalene					
Natural Gas					
Nitric Acid (Dil.)					
Nitric Acid (Conc.)					
Nitrobenzen					
Oil of Turpentine					
Oleic Acid					

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Balflex® Hydraulic Hoses

FLUID COMPATIBILITY AND RESISTANCE CHART



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NOT RECOMMENDED

Fluids	Hose Types			
	SAE 100R6 / DIN 1TE DIN 2TE SAE 100R3 / DIN 3TE SAE 100R1AT / DIN 1SN SAE 100R2AT / DIN 2SN SAE 100R17 DIN EN 857 1SC DIN EN 857 2SC SAE 100R5 2-MAX JACK 3-MAX	SAE 100R12 DIN EN 856 4SP DIN EN 856 4SH SAE 100R13 SAE 100R15	SAE 100R7 R7 NON CONDUCTIVE SAE 1007 STEELFLEX SAE 100R8	BALFLON
Oxalic Acid				
Perchloroethylene				
Phenol				
Phosphoric Acid (10%)				
Phosphoric Acid (70%)				
Phosphate Ester Base Oil				
Saturated Steam				
Sea Water				
Silicone Oils				
Soap Solutions				
Soda				
Sodium Chloride Solutions				
Sodium Hydroxide 20%				
Sodium Hypochloride 10%				
Sulphur				
Sulphur Dioxide				
Sulphuric Acid up to 50%				
Sulphuric Acid above 50%				
Toluene				
Trichloroethylene				
Vegetable Greases				
Water				
Xylene				

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