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# Innovations from a leading global supplier of fluid connectors

## Supertuff cover hydraulic hose helps reduce downtime

In order to help customers significantly reduce downtime costs created by the need to replace hoses on hydraulic equipment as a result of premature failure due to wire reinforcement exposure, ALFAGOMMA has developed Supertuff, a new cover material.

All of the hydraulic hoses illustrated in this catalog are available with the new Supertuff cover. Contact Kuriyama of America for details.

Supertuff dramatically increases resistance to external damage from both the working environment and routing of hoses in areas which can be exposed to severe abrasion or impact.

Supertuff's abrasion resistance is derived from a low coefficient of friction allowing it to slide over rough surfaces. Tests made to European and US specifications show that Supertuff outperforms standard rubber covers as well as polyurethane covers by a huge margin. These and other technical details are available upon request.

ALFAGOMMA Supertuff should be of interest to manufacturers of machinery that utilizes flexible hydraulic lines that are exposed to extreme external conditions. Even standard hose installations which have previously used a plastic spiral strip over the hose cover can benefit from using a hose with a Supertuff cover.

A few of the many typical applications where this new product can prolong the life expectancy of hydraulic hose are:

APPLICATION	BENEFITS OF SUPERTUFF COVER
Mining & Earthmoving Equipment	Supertuff resists abrasion
Forestry Equipment	Supertuff resists impact damage
Offshore Oil Rigs	Supertuff resists high ozone & UV exposure
Sub Sea Applications	Supertuff is water repellent — no absorption
Equipment for the Chemical Process Industries	Supertuff resists most chemicals*

\* A chemical resistance chart is available on pages 183 - 198.

Loosely applied protective coverings that have traditionally been used can expose weak points and become detached during impulse, abrasion or impact. Supertuff is not a separate layer of material added to an existing hose. It is an integrally bonded part of the hose itself. The cover adhesion levels of Supertuff exceed European Norms and, because it is bonded, Supertuff will contract and expand under impulse pressure together with the rest of the hose without becoming detached.



ALFAGOMMA's Hydraulic Hose South Plant,  
Castelnuovo Vomano (Teramo), Italy.



ALFAGOMMA's Alfatechnology Plant,  
Bellusco (Milan), Italy.

## New Economical Alternative for High Abrasion Applications

MINETUFF is a special cover for hydraulic hose, which dramatically increase resistance to environmental and severe application damages.

### Features:

- Excellent abrasion resistance (25 times higher than EN-ISO 6945 requirements)
- Reduces the need for any protective sleeve in applications requiring high abrasion resistance
- UV and ozone resistance (hose ageing reduction)

### Applications:

- Mining and earth-moving machines (MINETUFF is abrasion resistant)
- Machineries for forestry (MINETUFF is resistant to impact-caused damage)
- Offshore applications (MINETUFF is ozone and UV resistant)
- Machineries for chemical plants (MINETUFF is resistant to most of the chemical agents)

### Abrasion Resistance:

Tests according to EN-ISO 6945 norms (weight 50+/-5N) state that the maximum allowed loss of weight is 0.5g:

- Standard cover: 0.15g after 2,000 cycles
- MINETUFF cover: 0.02g after 2,000 cycles

### Flame Resistance:

MINETUFF cover is MSHA (US MSHA 152/10) approved for flame resistance.

### UV Rays and Chemicals:

MINETUFF cover is resistant to UV, animal fats, acids, and any other environmental stress.



Tests run according to EN-ISO, DIN and SAE specs show that MINETUFF can guarantee performances, highly superior to the standards.

Futhermore, MINETUFF was developed to be flame resistant, and it passed the Mine Safety and Health Administration severe tests.

MINETUFF is the solution that, together with the ALFATECH range, will help satisfy any demand for elevated performances and diameters.



Like any other product, hydraulic hose is only as good as the material from which it is made. Up until now, progress in improving the service life of hydraulic hose at elevated temperatures has been extremely slow. Although there have been major advances in reinforcing techniques and materials, a major drawback has been the lack of availability of a superior elastomer that combines high retention of physical properties at elevated temperatures and long-term resistance to degradation by the fluids used in hydraulic service.

All of this has changed with the introduction of TEMP TECH, by ALFAGOMMA. This revolutionary hydraulic hose is fabricated with an inner tube made from a new, superior elastomeric material specifically developed for use in hydraulic hoses by a team of ALFAGOMMA chemists over a number of years.

## TEMP TECH hydraulic hose provides a wide variety of benefits:

**Resistance to degradation** — TEMP TECH withstands long exposure to nearly every type of hydraulic fluid, lubricating oil or fuel commonly used in industry today, including fire-resistant hydraulic fluids. Unlike many conventional elastomers, the chemical nature of the elastomer used in the manufacture of TEMP TECH hydraulic hose is such that physical property changes due to continuing chemical reactions of ingredients do not occur.

**Reduced downtime and maintenance costs** — TEMP TECH hydraulic hose's superior performance and longer life helps minimize equipment maintenance and downtime, and improve profitability.

**Longer service life** — Laboratory and field tests have demonstrated that this unique hydraulic hose can outlast conventional hydraulic hose under extreme temperature and pressure conditions by as much as 500% (see sidebar).

**Longer shelf life** — TEMP TECH hydraulic hose resists the effects of ozone and other oxidizing agents present in the air at many industrial locations . . . property changes due to shelf aging are practically non-existent.

**Reduced inventory costs** — There is no need to stock hoses with an assortment of tube stocks for use with petroleum and phosphate-based fluids . . . stock only TEMP TECH hydraulic hose, with its wider diversity of fluid-resistance.

**Ease of use** — TEMP TECH hydraulic hose requires no special fittings for assembly. TEMP TECH uses standard crimped fittings.



### ABOUT OUR LABORATORY TESTS

In laboratory tests, TEMP TECH hydraulic hose withstood 1,000,000 impulse cycles at continuous +300°F (+150°C) fluid temperature at standard SAE 100R2A – EN 853 2ST test pressures in all sizes.

It should be stressed that while certain other SAE 100R2A – EN 853 2ST hose constructions, under the same test conditions, will sometimes approach 1,000,000 cycles, the tubes of these hoses by then have become brittle and hardened. Flexing these hoses will produce cracks in the tubes.

The TEMP TECH hydraulic hose, after withstanding 1,000,000 impulse cycles at +300°F (+150°C) only gains a few points of hardness, retaining its elastic qualities.



Have you been looking for a one-piece crimp fitting that can be used on 1-wire braid, 2-wire braid and 4-spiral 100R12?

## Your Search is Over!

ALFAGOMMA sets the world standard for hydraulic connector innovation once again with the AlfaCrimp system.

In response to customer requests for a product that aids in inventory management and still performs to the highest industry standards, ALFAGOMMA developed a fitting that exceeded all expectations.

Features	Benefits
Non-Skive, "Bite-the-wire" up to 2".	Saves assembly time while the metal-to-wire contact ensures impulse-test results that far exceed industry rating benchmarks.
One style of coupling works with several styles of hose.	Simplifies and reduces inventory...no need to stock separate fittings for wire braid and wire spiral.
Ferrule and insert are pre-mated and pre-crimped.	Reduces steps in assembly and potential for errors on the part of the assembler.
Several terminations available to plumb nearly every connection.	Reduces the need for costly adapters.
Tested to meet the world's highest performance standards.	"Peace of mind" for the customer — knowing that the ALFAGOMMA products they selected were also selected by many of the world's most demanding original equipment builders.



Use only the specified combination of ALFAGOMMA hoses with the AlfaCrimp system to assure the integrity of your assemblies.

## DESIGN

Throughout the world, the name ALFAGOMMA has become synonymous with quality, a reputation based on first class products, a commitment to research and development and ongoing capital investment.

ALFAGOMMA's development and product engineering staff continues to provide fluid conveying product innovations that assure better performance and cost savings for customers.

ALFAGOMMA hose and couplings are designed to work together as a system for problem free performance, no matter what machine you operate. The performance of all ALFAGOMMA products exceeds SAE, DIN, and JIS requirements and some hoses meet the MSHA and LOBA flame resistance requirement, as well.

## LEADERSHIP IN HYDRAULIC HOSE AND COUPLING COMPONENTS

ALFAGOMMA has become a world-leading manufacturer of fluid power and fluid system components. A positive attitude toward the demands from new equipment, using the latest technology, has allowed ALFAGOMMA to introduce many outstanding new hydraulic hose types. These hoses have found acceptance in a wide range of industries. Some examples are:

Mining	Earthmoving	Molding
Logging	Agriculture	Drilling
Petroleum	Waste/Refuse	Crane
Railroad	Manufacturing	
Construction	Pulp and Plywood Mills	

## OUR COMMITMENT

By remaining alert to customer's needs, ALFAGOMMA is constantly engineering new products for tomorrow's markets as well as modifying them for even higher performances. ALFAGOMMA's commitment to innovation and service makes the company's products known throughout the world for quality, reliability and leadership. When you need quality hose and couplings, use the best available. Now you can count on ALFAGOMMA for all your needs.

## TESTING

ALFAGOMMA's laboratories are fully equipped to carry out tests according to international standards like SAE, DIN and JIS. New products are also subjected to laboratory simulation of actual service prior to being released on the market.

## WORLD CLASS QUALITY

ALFAGOMMA is working to comply with internationally recognized quality programs requiring stringent standards. Many of our customers are demanding ISO qualification or its equivalent as a prerequisite for purchasing. This standard is an assurance of consistent quality. For ALFAGOMMA this is just the start of "doing it right from the beginning".

## IMPORTANT NOTE FOR USERS

Hose assemblies require caution in use not only to ensure that they provide long service life but also to guard against potentially dangerous failure. Serious injury, death and destruction of property can result from the rupture or blowing-apart of a hydraulic hose assembly that is damaged, worn out, badly assembled or installed incorrectly.

Users should follow good maintenance practices. Avoid expensive downtime by establishing a program of inspection, testing and replacement of hose assemblies before failure occurs; taking into account such factors as severity of application, frequency of equipment use, and past performance of hose assemblies. Document your maintenance, inspections and testing.

Only properly trained persons should inspect, test or service hose assemblies and this training should be updated regularly.

Users should carefully observe the precautions listed below (under "Be aware that . . .") and they should also closely follow our suggestions for the proper selection of hose and couplings. In addition, care should be taken not to exceed the minimum bend radius listed for each hose size and type. Maximum operating pressure should not exceed the pressures listed. Instructions for assembling fittings to different hoses should be followed carefully to ensure the safe performance of the complete assembly.

## IMPORTANT NOTE FOR USERS (Continued)

By following the recommendations on hose assembly routing and installation, improved safety and longer service life of any hose installation will result.

Hydraulic fluid under pressure can be potentially dangerous! An explosive burst or stream of escaping fluid can cause damage to equipment as well as serious injury to persons nearby.

### Be aware that . . .

1. Highly pressurized fluid escaping from a small pinhole can be almost invisible, and yet exert extreme force capable of penetrating the skin and other body tissues, causing possible severe injury.
2. Hot fluids or chemicals can cause severe burns. Pressurized fluids, if released uncontrolled, can exert a tremendous explosive force.
3. All hydraulic hoses listed in this price list are electrically conductive.
4. Some hydraulic fluids are highly flammable.

### and . . .

1. Always position a shield between you and any pressurized hydraulic lines when working next to them, or, better yet, release the pressure in the lines.
2. Wear safety glasses.
3. Do not use your hands to check for leaks. Instead, use a piece of cardboard. Do not touch a pressurized hydraulic hose assembly with any part of your body, if fluid punctures the skin, even if no pain is felt, a serious emergency exists. Obtain medical assistance immediately. Failure to do so can result in loss of the injured body part or death.
4. Stay out of hazardous areas while testing hose assemblies under pressure. Use proper safety protection.
5. If an injury or reaction occurs, get medical attention immediately.
6. Use only non-conductive thermoplastic hoses where electrical conductivity is not desired, for example for use with equipment working near electrical power lines.

ALFAGOMMA hose and fittings are designed, engineered and tested to be used together in an assembly.

The use of ALFAGOMMA fittings on other manufacturer's hose or the use of ALFAGOMMA hose with other manufacturer's fittings may result in the production of unreliable or unsafe assemblies. It is neither recommended nor authorized by ALFAGOMMA.

ALFAGOMMA recommends only those hose and coupling combinations specified in the ALFAGOMMA Hydraulic Products Catalogs.

ALFAGOMMA disclaims any liability for any hose assemblies that have not been produced in conformance with ALFAGOMMA assembly recommendations and current crimp data charts.

Extensive impulse testing has been performed by ALFAGOMMA to verify the recommendations contained in this catalogue. A simple burst or pressure test cannot determine a hose and coupling combination.

Any claim for defects must be made in writing on the appropriate ISO9000 complaint form within 8 days from receipt of the product. ALFAGOMMA will have a reasonable opportunity thereafter to examine and investigate the alleged defect.

The customer's exclusive remedy with respect to any claim of any kind whatsoever shall be refund of the purchase price or replacement of the product at the option of ALFAGOMMA and in no event shall ALFAGOMMA be liable for any incidental or consequential damages whatsoever.

## MAXIMUM RECOMMENDED OPERATING PRESSURES

The table below is intended as a guide in the selection of hose by operating pressure. It is not a guarantee. The final selection is also dependent upon the type of fluid, ambient temperature, concentration of agent, intermittent or continuous exposure, etc.

For further details on a specific hose see the respective catalog pages or consult your local ALFAGOMMA or Piranhaflex Sales Engineer or ALFAGOMMA S.p.A.

### Maximum Operating Pressure (PSI)

Kuriyama Series	Hose Series Name	Diameter											
		inches	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	2
		DN	5	6	8	10	12	16	20	25	32	38	50
		Size	-3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32
T604AA	FLEXOR 4								300	250	200	150	100
T806AA	FLEXOR 6			400	400	400	400	350	300	250			
T870AA	FLEXOR 3			1250	1200	1125	1000	875	750	565	377		
PF354 PF354NC	PIRANHAFLEX		3000	2750	2500	2250	2000		1250				
PF367 PF367NC	PIRANHAFLEX		3000	2750	2500	2250	2000		1250				
PF628 PF628NC	PIRANHAFLEX			5000		4000	3500		2250				
T836AA	FLEXOR 1AT/1SN		3630	3270	3120	2610	2320	1890	1530	1280	920	730	580
T814AE	TEMP TECH 1SN					2610	2320		1530	1280			
T846AA	FLEXOR 2AT/2SN		6000	5800	5000	4800	4000	3630	3120	2400	1820	1310	1160
T828AE	TEMP TECH 2SN		6000	5800	5000	4800	4000	3630	3120	2400	1820	1310	1160
T813AA	FLEXOPAK 16			5000	4240	4000	3500	2750	2250	2000	1620		
T822AA, T8E6AA	FLEXOPAK 2/2LT			5850	5500	5000	4500	4000	3500	2700			
T898AB	FLEXOR 12					4000	4000	4000	4000	4000	3000	2500	2500
T809AH	FLEXOR 13								5000	5000	5000	5000	5000
T850AA	FLEXOR 4SP			6550		6450	6000	5000	5000	4000			
T855AA	FLEXOR 4SH								6000	5500	4700	4200	3650
T804AA	FLEXOR 2HBT					5000	5000	5000	4000	3000	2320		
AT833AA, AT833MT, AT833ST	ALFATECH 3000, ALFATECH 3000 MINETUFF, ALFATECH 3000 SUPERTUFF			3000	3000	3000	3000	3000	3000	3000			
AT894AA, AT894MT, AT894ST	ALFATECH 4000, ALFATECH 4000 MINETUFF, ALFATECH 4000 SUPERTUFF						4000	4000	4000	4000	4000	4000	4000
AT896AA, AT8A3AA, AT896MT, AT896ST	ALFATECH 5000, ALFATECH 5000 MINETUFF, ALFATECH 5000 SUPERTUFF					5000	5000	5000	5000	5000	5000	5000	5000
AT897AA, AT897MT, AT897ST	ALFATECH 6000, ALFATECH 6000 MINETUFF, ALFATECH 6000 SUPERTUFF						6000	6000	6000	6000	6000	6000	6000
T8B3AA, T8B3AE	ALFAJET 210			3000	3000	3000	3000						
T8B4AA, T8B4AE	ALFAJET 400			5800	5800	5800	4500						

### Flexor 5 100R5 Reduced Bore Sizes and Working Pressures

Kuriyama Series	Series Name	Diameter											
		inches Dash Size		3/16	1/4	5/16	13/32	1/2	5/8	7/8	1 1/8	1 3/8	1 13/16
				-4	-5	-6	-8	-10	-12	-16	-20	-24	-32
T805AA	FLEXOR 5			3000	3000	2250	2000	1750	1500	800	625	500	350



# Hose Selection Guide

## MAXIMUM RECOMMENDED OPERATING PRESSURES

The table below is intended as a guide in the selection of hose by operating pressure. It is not a guarantee. The final selection is also dependent upon the type of fluid, ambient temperature, concentration of agent, intermittent or continuous exposure, etc.

For further details on a specific hose see the respective catalog pages or consult your local ALFAGOMMA or Piranhaflex Sales Engineer or ALFAGOMMA S.p.A.

### Maximum Operating Pressure (MPa)

Kuriyama Series	Hose Series Name	Diameter											
		inches	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	2
		DN	5	6	8	10	12	16	20	25	32	38	50
		Size	-3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32
T604AA	FLEXOR 4								2.1	1.7	1.4	1	0.7
T806AA	FLEXOR 6			2.8	2.8	2.8	2.8	2.4	2.1	1.7			
T870AA	FLEXOR 3			8.6	8.3	7.8	7	6	5.2	3.9	2.6		
PF354 PF354NC	PIRANHAFLEX		20.7	19	17.2	15.5	13.8		8.6				
PF367 PF367NC	PIRANHAFLEX		20.7	19	17.2	15.5	13.8		8.6				
PF628 PF628NC	PIRANHAFLEX			34.5		27.6	24.1		15.5				
T836AA	FLEXOR 1AT/1SN		25	22.5	21.5	18	16	13	10.5	8.8	6.3	5	4
T814AE	TEMP TECH 1SN					18	16	13	10.5	8.8			
T846AA	FLEXOR 2AT/2SN		42	40	35	33	28	25	21.5	16.5	12.5	9	8
T828AE	TEMP TECH 2SN		42	40	35	33	28	25	21.5	16.5	12.5	9	8
T813AA	FLEXOPAK 16			34.5	29.3	27.6	24.1	19	15.5	13.8	11.2		
T822AA T8E6AA	FLEXOPAK 2/2LT			40	37.5	35	31	28	24	18.5			
T898AB	FLEXOR 12					28	28	28	28	28	21	17.5	17.5
T809AH	FLEXOR 13								35	35	35	35	35
T850AA	FLEXOR 4SP			45		44.5	42	35	35	28	21	18.5	17.5
T855AA	FLEXOR 4SH								42	38	32.5	29	25
T804AA	FLEXOR 2HBT					35	35	35	28	21	16		
AT833AA, AT833MT, AT833ST	ALFATECH 3000, ALFATECH 3000 MINETUFF, ALFATECH 3000 SUPERTUFF			21	21	21	21	21	21	21			
AT894AA, AT894MT, AT894ST	ALFATECH 4000, ALFATECH 4000 MINETUFF, ALFATECH 4000 SUPERTUFF						28	28	28	28	28	28	28
AT896AA, AT8A3AA, AT896MT, AT896ST	ALFATECH 5000, ALFATECH 5000 MINETUFF, ALFATECH 5000 SUPERTUFF					35	35	35	35	35	35	35	35
AT897AA, AT897MT, AT897ST	ALFATECH 6000, ALFATECH 6000 MINETUFF, ALFATECH 6000 SUPERTUFF						42	42	42	42	42	42	42
T8B3AA, T8B3AE	ALFAJET 210			21	21	21	21						
T8B4AA, T8B4AE	ALFAJET 400			40	40	40	30						

### Flexor 5 100R5 Reduced Bore Sizes and Pressures

Kuriyama Series	Hose Series Name	Diameter											
		inches		3/16	1/4	5/16	13/32	1/2	5/8	7/8	1 1/8	1 3/8	1 13/16
		Dash Size		-4	-5	-6	-8	-10	-12	-16	-20	-24	-32
T805AA	FLEXOR 5			21	21	15.5	14	12.1	10.3	5.5	4.3	3.4	2.4

All ALFAGOMMA Hydraulic Hose listed has a minimum burst pressure of at least four (4) times the working pressures shown

## AGENCY SPECIFICATIONS

The listings below are intended only as guides in identifying which ALFAGOMMA or Piranhaflex hoses comply with requirements of various agencies.

**SAE** – Society of Automotive Engineers

**DIN** – Deutsche Institute Normen

**EN** – European Norme

**ISO** – International Organization for Standardization

**DNV** – Det Norske Veritas

**ABS** – American Bureau of Shipping

**GIG** – Glowny Instytut Gornietwa

**GL** – Germanischer Lloyd

**BV** – Bureau Veritas

**NKK** – Nippon Kaiji Kyokai

**RINA** – Registro Navale Italiano

**MSHA (US)** – Mining Safety and Health Administration

**USDOT** – U.S. Department of Transportation

HOSE TYPE			AGENCY													
Kuriyama Series Number	(use) Hose Type	Page No.	SAE J517	DIN	EN	ISO	ALFAGOMMA Proprietary Hose	DNV‡	ABS	GIG	GL	BV	NKK	RINA	MSHA	USDOT
T604AA	FLEXOR 4	16	100 R4									X			X	
T806AA	FLEXOR 6	17	100 R6		854 R6											
T870AA	FLEXOR 3	18	100 R3		854 R3											
T805AA	FLEXOR 5	19	100 R5													X
PF354 PF354NC	PIRANHAFLEX	20	100 R7													
PF367 PF367NC	PIRANHAFLEX	21	100 R7													
PF628 PF628NC	PIRANHAFLEX	23	100 R8													
T836AA	FLEXOR 1AT/1SN	24	100 R1AT	20022 1SN	853 1SN	1436		X	X		X	X	X	X		
T814AE	TEMP TECH 1SN	25	100 R1AT		853 1SN		X								X	
T846AA	FLEXOR 2AT/2SN	26	100 R2AT	20022 2SN	853 2SN	1436		X	X	X	X	X	X	X		
T828AE	TEMP TECH 2SN	27	100 R2AT		853 2SN		X									
T813AA	FLEXOPAK 16	28	100 R16													
T822AA, T8E6AA	FLEXOPAK 2/2LT	29/30	100 R16		857 2SC	11237		X		X		X		X		
T898AB	FLEXOR 12	31	100 R12			3862		X					X	X	X	
T809AH	FLEXOR 13	32	100 R13		856	3862		X				X	X	X	X	
T850AA	FLEXOR 4SP	33		20023 4SP	856 4SP	3862		X		X		X	X	X	X	
T855AA	FLEXOR 4SH	34		20023 4SH	856 4SH	3862		X			X	X	X	X	X	
AT833AA	ALFATECH 3000	35	100 R17		857	11237	X								X	
T894AA	ALFATECH 4000	36				3862	X								X	
T896AA, T8A3AA	ALFATECH 5000	37	100 R13			3862	X								X	
T897AA	ALFATECH 6000	38	100 R15			3862	X	X	X			X		X	X	
T8B3AA, T8B3AE	ALFAJET 210	39					X									
T8B4AA, T8B4AE	ALFAJET 400	40					X									

‡ Det Norske Veritas (DNV) approvals are with permanent (crimp) type fittings only

¶ Hose with MSHA (Mine Safety and Health Administration) approved cover will be accordingly on the layline

Listing may vary by hose style and size, for current and complete information, contact ALFAGOMMA or Piranhaflex for details.

\* DOT Type All approval up to size -12

## Safety Guide and Basic Factors for Selecting, Installing & Maintaining Hose and Hose Assemblies

Hydraulic hose (and hose assemblies) has a limited life dependent on service conditions to which it is applied. Subjecting hose (and hose assemblies) to conditions more severe than the recommended limits significantly reduce service life. Exposure to combinations of recommended limits (i.e., continuous use at maximum rated working pressure, maximum recommended operating temperature and minimum bend radius) will also reduce service life.

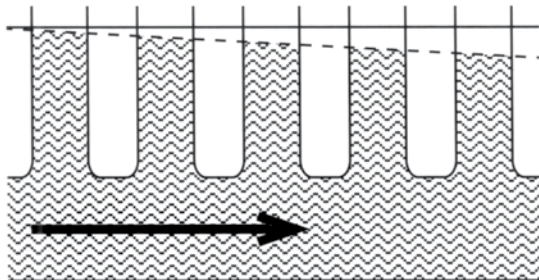
**WARNING: FAILURE TO FOLLOW PROPER SELECTION, INSTALLATION AND MAINTENANCE PROCEDURES MAY RESULT IN PREMATURE FAILURES, BODILY INJURY, AND DAMAGE TO PROPERTY.**

**1. SELECTION** — The following is a list of factors which must be considered before the selection of a hose can be made:

### 1.1 Line size:

In order to achieve maximum efficiency in a hydraulic system, it is necessary to keep pressure losses (resistance to the volumetric flow) to a minimum when a fluid is conveyed by the different types of flow lines.

When a fluid flows through a flow line, heat is generated by friction. Thus part of the energy is lost as heat energy, which results in a pressure loss.



These pressure losses depend upon:

- Flow velocity (for a given volumetric flow, the fluid flow velocity increases with a decrease in the cross sectional area of a flow line and vice versa) · length of the flow line
- The viscosity of the fluid flowing
- The density of the fluid flowing
- The type of flow (laminar or turbulent)

**Types of flow** — The type of flow changes from laminar to turbulent at a certain flow velocity. This velocity is given by the Reynold's Number Re.

For cylindrical flow lines the following formula applies:

$$Re = \frac{v \cdot d}{\nu}$$

where  $v$  = velocity (m/s)

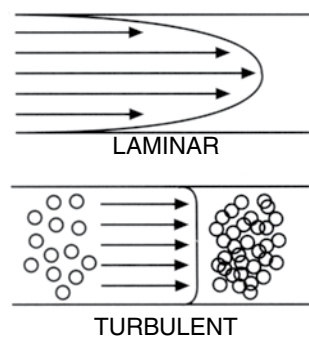
$d$  = flow line internal dia. (m)

$\nu$  = kinematic viscosity (m<sup>2</sup>/s)

As soon as the value for Re exceeds 2300, the laminar flow changes to turbulent flow.

**Laminar flow** — In laminar flow, the individual fluid particles move up to certain speeds in uniform layers alongside each other. They scarcely disturb or influence each other.

**Turbulent flow** — If the value for Re exceeds 2300, flow becomes whirling and turbulent. The individual particles no longer move in one direction in an orderly fashion, but influence and hinder each other.



Certain fluid flow velocities have proved to be most suitable for hydraulic flow lines.

### Recommended flow velocities:

Suction lines: 0.5..... 1.2 m/s	1.6.... 4 feet/s
Return lines: 2 ..... 3 m/s	6.5.. 10 feet/s
Pressure lines: 4 ..... 7.5 m/s	.13... 25 feet/s

It is therefore important to calculate correctly the required flow line sizes. Undersized pressure lines result in high fluid velocity causing an excessive pressure drop, and heat build up, which impair overall system performance. Undersized suction lines can cause cavitation at the hydraulic pump inlet, affecting performance, shortening pump life, and creating excessive noise levels.

The flow capacity nomogram on page 14 is an aid to determine the correct hose internal diameter size, desired flow rate and recommended velocity. By the use of any two known factors, the third can be determined.

### 1.2 Pressure:

After determining the system pressure for a hydraulic system, hose selection must be made so that the recommended maximum operating pressure specified by a given hose, is equal or greater than the system pressure. Dynamic pressure is common for all hydraulic systems.

Pressure surges which exceed the maximum working pressure (pressure relief valve setting) affect the service life of system components, including a hose assembly and therefore need to be taken into consideration. Hoses used for suction lines must be selected to ensure the hose will withstand the negative pressure of the system.

### 1.3 Temperature:

Care must be taken to ensure that the operating temperature of the fluid being conveyed and ambient temperatures, do not exceed the limitations of the hose. Special care must be taken when routing near hot manifolds or molten metal.

### 1.4 Fluid Compatibility:

Hose selection must assure compatibility of the hose tube, cover, reinforcement, and fittings with the fluid used. Additional caution must be observed in hose selection for gaseous applications. Some fire resistant fluids require the same hose as petroleum oil. Some use a special hose, while a few fluids will not work with any hose at all.

### 1.5 Permeation:

Permeation (that is, seepage through the hose) will occur from inside the hose to outside when hose is used with gases, liquid and gas fuels, and refrigerants (including but not limited to such materials such as helium, fuel oil, natural gas or freon). This permeation may result in high concentrations of vapors which are potentially flammable, explosive, or toxic, and in loss of fluid.

Even though the fluid compatibility is acceptable, you must take into account the fact that permeation will occur and could be hazardous. Permeation of moisture from outside the hose to inside the hose will also occur. If this moisture permeation would have detrimental effects (particularly but not limited to refrigeration and air conditioning systems), incorporation of sufficient drying capacity in the system or other appropriate system safeguards should be selected and used.

### 1.6 Routing:

Attention must be given to optimum routing to minimize inherent problems. Restrain, protect or guide hose with the use of clamps if necessary to minimize risk or damage due to excessive flexing, whipping or contact with other moving parts or corrosives. Determine hose lengths and configurations that will result in proper routing and protection from abrasion, snagging or kinking and provide leak resistant connections.

### 1.7 Environment:

Care must be taken to ensure that the hose and fittings are either compatible with or protected from the environment to which they are exposed. Environmental conditions including but not limited to ultraviolet light, heat, ozone, moisture, water, salt water, chemicals, and air pollutants can cause degradation and premature failure and, therefore, must be considered.

### 1.8 Mechanical Loads:

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

### 1.9 Abrasion:

While a hose is designed with a reasonable level of abrasion resistance, care must be taken to protect the hose from excessive abrasion which can result in erosion, snagging, and

cutting of the hose cover. Exposure of the reinforcement will significantly accelerate hose failure.

### 1.10 Proper End Fitting:

Care must be taken to ensure proper compatibility exists between the hose and coupling selected based on the manufacturer's recommendations substantiated by testing to industry standards such as

SAE J517  
DIN 20024, JIS B 8360.

### 1.11 Length:

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

### 1.12 Specifications and Standards:

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

### 1.13 Hose Cleanliness:

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

### 1.14 Welding and Brazing:

Heating of plated parts, including hose fittings and adaptors, above 232° C (450° F) such as during welding, brazing, or soldering may emit deadly gases.

### 1.15 Electrical Conductivity:

Certain applications require that a hose be non-conductive to prevent electrical current flow. Other applications require the hose to be sufficiently conductive to drain off static electricity.

Extreme care must be exercised when selecting hose and fittings for these or any other applications in which electrical conductivity or non-conductivity is a factor.

For applications that require hose to be electrically non-conductive, including but not limited to applications near high voltage electric lines, only special non-conductive hose can be used.

The manufacturer of the equipment in which the non-conductive hose is to be used must be consulted to be certain that the hose and fittings that are selected are proper for the application.

Do not use any ALFAGOMMA hose or fitting for any application requiring non-conductive hose, including but not limited to applications near high voltage electric lines, unless the application is expressly approved in the ALFAGOMMA technical publication for the product, the hose is both orange in color and marked "non-conductive," and the manufacturer of the equipment on which the hose is to be used specifically approves the particular ALFAGOMMA hose and fitting for such use.

ALFAGOMMA does not supply any hose or fittings for conveying paint in airless paint spraying or similar applications and therefore should not be used. A special hose and fitting assembly is required for this application, to avoid static electricity buildup which could cause a spark that may result in an explosion and/or fire.

The electrical conductivity or non-conductivity of hose and fittings is dependant upon many factors and may be susceptible to change. These factors include but are not limited to the various materials used to make the hose and the fittings, manufacturing methods (including moisture control), how the fittings contact the hose, age and amount of deterioration of damage or others changes, moisture content of the hose at a particular time, and other factors.

**2. INSTALLATION** — After the selection of the correct hose, the following factors must be considered prior to hose and fitting assembly and installation.

### 2.1 Pre-Installation Inspection:

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

### 2.2 Hose and Fitting Assembly:

Do not assemble an ALFAGOMMA fitting on an ALFAGOMMA hose that is not specified by ALFAGOMMA for that hose. Do not assemble ALFAGOMMA fittings on another manufacturer's hose or an ALFAGOMMA hose on another manufacturer's fitting unless ALFAGOMMA approves the assembly in writing, and the user verifies the assembly and the application through analysis and testing. The ALFAGOMMA published hose assembly instructions must be followed for assembling the fittings on the hose.

### 2.3 Related Accessories:

Crimp or swage ALFAGOMMA hose or fittings only with ALFAGOMMA approved swage or crimp machines and in accordance with the ALFAGOMMA published hose assembly instructions.

### 2.4 Parts:

Do not use any ALFAGOMMA hose fitting part (including but not limited to sockets, or inserts) except with the correct ALFAGOMMA mating parts, in accordance with ALFAGOMMA published hose assembly instructions, unless authorized in writing by ALFAGOMMA.

### 2.5 Reusable/Permanent:

Do not reuse any reusable hose coupling that has blown or pulled off a hose. Do not reuse an ALFAGOMMA permanent (that is, crimped or swaged) hose fitting or any part thereof.

### 2.6 Minimum Bend Radius:

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

### 2.7 Twist Angle and Orientation:

Hose installations must be such that relative motion of machine components does not produce twisting.

### 2.8 Hose Restraints:

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

### 2.9 Proper Connection of Parts:

Proper physical installation of the hose requires a correctly installed port connection while ensuring that no twist or torque is transferred to the hose.

### 2.10 External Damage:

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

### 2.11 System Checkout:

After completing the installation all air entrapment must be eliminated and the system pressurized to the maximum system pressure and checked for proper function without any leaks. Personnel must stay out of potential hazardous areas while testing.

## 3. HOSE AND FITTING MAINTENANCE INSTRUCTIONS

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

### 3.1 Visual Inspection Hose/Fitting:

Any of the following conditions require immediate shutdown and replacement of the hose assembly:

- Fitting slippage on hose.
- Damaged, cut or abraded cover (any reinforcement exposed).
- Hard, stiff, heat cracked, or charred hose.
- Cracked, damaged, or badly corroded fittings.
- Leaks at fitting or in hose.
- Kinked, crushed, flattened or twisted hose.
- Blistered, soft, degraded, or loose cover.

### 3.2 Other Visual Inspection:

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

- Leaking port conditions.
- Remove excess dirt build-up.
- Clamp, guards, shields.
- System fluid level, fluid type and any air entrapment.

### 3.3 Functional Test:

Operate the system at maximum operating pressure and check for possible malfunctions and freedom from leaks. Personnel must stay out of potential hazardous areas while testing.

### 3.4 Replacement Intervals:

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



## Hydraulic Hose Coupling Color Guide

Use the colored “Coupling Recommendation” box as your guide when matching a hydraulic hose with the appropriate family of ALFAGOMMA® or Piranhaflex™ hose couplings!

Color	Part Number Family	Characteristics/Instructions
Yellow	C121XXXXX-XXXX, C122XXXXX-XXXX, C124XXXXX-XXXX, or C126XXXXX-XXXX	Alfacrimp One-piece fittings. <b>No skiving is required.</b>
Blue	H1200202-XX ferrule (sizes -05 through -16, -24 and -32 are “Dual Non-Skive” – can be used for R1AT and R2AT and several other styles. -04 and -20 are for R2AT only.)	Ferrule used for two-piece fitting option - used on several different braided hose styles. <b>No skiving is required.</b>
Blue	H1200204-XX ferrule for Flexor 12	Heavy-duty ferrule used for two-piece option on SAE 100R12. <b>No skiving is required.</b>
Green	H1200101-XX, H1200102-XX, H1200103-XX and H1200203 ferrules, as well as the PFR-XX ferrule for 100R7 and 100R8	Light-duty ferrule used for two-piece fitting option on certain sizes of 1-wire braided hose, compact hoses or textile reinforced hoses. <b>No skiving is required.</b>
Red	H1100204-XX	Versatile “Universal” skive ferrule that can be used on several different styles of braided and spiral hose. <b>Hose cover must be skived when using this ferrule†.</b>
Tan	H1400200-XX, H1400301-XX	Interlock style ferrules. <b>USE ONLY WITH INTERLOCK STYLE INSERTS.</b> Internal and external skiving is required when using these fittings
Gold	H1400300-32	Special Interlock ferrule for 2" ID 100R13 and AT5000 for use in the KD200 crimper. <b>USE ONLY WITH INTERLOCK STYLE INSERTS.</b>

†Note: Do not skive when using on textile reinforced hoses

# Flexor 4 Hydraulic Hose



## Flexor T604AA - SAE 100 R4 Oil Return Hose



**T604AA —**  
Textile reinforced with four spiral wire helix to  
prevent collapsing  
Meets or exceeds SAE 100 R4

### Construction:

**Tube** — Black, conductive NBR.

**Reinforcement** — Textile reinforced with four spiral wire helix to prevent collapsing.

**Cover** — Black CR... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type or combination nipples with bands.

Note: Hose cover does not need to be removed before attaching couplings.

**Branding** — ALFAGOMMA — Italy — T604 (PSI) - SAE 100 R4 - (SIZE) - Date

### Application:

Low pressure return lines or suction lines with half the bend radius requirements of SAE J517 100 R4, service with petroleum based hydraulic fluids, water-glycol and water-fire resistant hydraulic fluids, oil, lubricants, crude oil, fuel oils and water.

MSHA accepted cover available on request.

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (+125° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psl)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
T604AA	075	3/4	19	1.14	29	300	2.2	57	41	N/A	H1200203-12
T604AA	100	1	25	1.38	35	250	3	76	50	N/A	H1200203-16
T604AA	125	1 1/4	32	1.65	42	200	3.8	95	61	N/A	H1200203-20
T604AA	150	1 1/2	38	1.89	48	150	4.5	114	69	N/A	H1200203-24
T604AA	200	2	51	2.40	61	100	6	152	89	N/A	H1200203-32

Note: For sizes larger than 2", please refer to Kuriyama's Industrial Rubber Hose catalog, Type T605AA.

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

## Textile-reinforced hydraulic hose with one braid



**T806AA —**  
**One High Tensile Textile Braid**  
 Meets or exceeds SAE 100 R6 - EN 864 R6 - DN

### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — One High Tensile Textile Braid.

**Cover** — Synthetic rubber, black... hydrocarbon, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type.

**Branding** — ALFAGOMMA FLEXOR 6 ID... -WP... MPa (... PSI) - SAE 100R6-EN854 R6 -DN... Q/yr

### Application:

Low pressure hydraulic lines, fuel oil, antifreeze solutions, air and water. Excellent for hydraulic return line hose where high temperatures are encountered for air or gas applications above 1.7 MPa (250 psi); the cover should be pin-pricked.

MSHA accepted cover available on request.

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 160° F (70° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
T806AA	04	1/4	6	.05	12.7	400	2.6	64	9	N/A	H110004-04*
T806AA	05	5/16	8	0.56	14.3	400	3	76	9	N/A	H110004-05*
T806AA	06	3/8	10	0.63	15.9	400	3	76	11	N/A	H110004-06*
T806AA	08	1/2	13	0.78	19.8	400	4.1	102	15	N/A	H110004-08*
T806AA	10	5/8	16	0.91	23	350	4.3	107	18	N/A	H110004-10*
T806AA	12	3/4	19	1.06	26.9	300	6.1	152	25	N/A	H110004-12*
T806AA	16	1	25	1.31	33.4	250	8.1	203	33	N/A	H110004-16*

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

\*Do Not Skive

# Flexor 3 Hydraulic Hose



## Textile-reinforced hydraulic hose with two braids



**T870AA —  
Two High Tensile Textile Braids**  
Meets or exceeds SAE 100 R3 - EN 854 R3 - DN

### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Two High Tensile Textile Braid (2B).

**Cover** — Synthetic rubber, black... hydrocarbon, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type.

**Branding** — ALFAGOMMA FLEXOR 3 ID... -WP... MPa (... PSI) - SAE 100R3-EN854 R3 -DN... Q/yr

### Application:

Medium pressure hydraulic lines, fuel oil, antifreeze solutions, air and water. Not recommended for diver air hose. For air or gas applications above 1.7 MPa (250 PSI); the cover should be pin-pricked.

MSHA accepted cover available on request.

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 160° F (70° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
T870AA	04	1/4	6	0.56	14.3	1250	3	76	12	N/A	H1200203-04
T870AA	05	5/16	8	0.69	17.5	1200	4.1	102	16	N/A	H1200203-05
T870AA	06	3/8	10	0.75	19.1	1125	4.1	102	17	N/A	H1200203-06
T870AA	08	1/2	13	0.94	23.8	1000	5.1	127	25	N/A	H1200203-08
T870AA	10	5/8	16	1.06	27	875	5.6	140	31	N/A	H1200203-10
T870AA	12	3/4	19	1.25	31.8	750	6.1	152	42	N/A	H1200203-12
T870AA	16	1	25	1.5	38.1	565	8.1	203	51	N/A	H1200203-16
T870AA	20	1 1/4	32	1.77	45	377	10.2	254	63	N/A	H1200203-20

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

## One-wire braid hydraulic hose



### Construction:

**Tube** — Oil-resistant synthetic rubber.

**Reinforcement** — One high tensile steel braid.

**Cover** — Polyester textile braid.

**Couplings** — Screw-type reusable non-skive type and crimp-on permanent type.

**Branding** — ALFAGOMMA FLEXOR 5 ID ...WP ...MPa (...PSI) SAE 100 R5\*

Note: Hose cover does not need to be removed before attaching couplings.

### Application:

Medium pressure service hydraulic petroleum-based oil line in impulse applications; gasoline, lube oil, fuel lines and oil for Bio-diesel; applications such as air brakes, power steering, fuel filters, turbocharger oil supplies, tilt cab cylinders, transmission coolant, engine coolant and filtration lines. Meets or exceeds requirements of SAE 100 R5 for traditional hydraulic applications.

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 160° F (70° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psl)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
T805AA	04	3/16	4.8	.52	13.2	3,000	3.04	76	15	N/A	H1200203-03
T805AA	05	1/4	6.4	.58	14.8	3,000	3.44	86	18	N/A	H1200203-04
T805AA	06	5/16	7.9	.68	17.3	2,250	4.06	102	23	N/A	H1200203-05
T805AA	08	13/32	10.3	.77	19.5	2,000	4.68	117	30	N/A	H1200203-06
T805AA	10	1/2	12.7	.92	23.4	1,750	5.60	140	37	N/A	H1200203-08
T805AA	12	5/8	15.9	1.08	27.4	1,500	6.60	165	45	N/A	H1200203-10
T805AA	16	7/8	22.2	1.24	31.4	800	7.48	187	48	N/A	H1200203-12
T805AA	20	1 1/8	28.6	1.50	38.1	625	9.16	229	54	N/A	H1200203-16
T805AA	24	1 3/8	34.9	1.75	44.5	500	10.68	267	60	N/A	H1200203-20
T805AA	32	1 13/16	46.0	2.22	56.4	350	13.48	337	90	N/A	H1100104-32*

† Minimum burst pressure 4-to-1 safety factor.

\* Sizes -04 through -12 are DOT Type AII approved and branded.

Note: 3/16" through 1" ID hoses supplied on reels.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

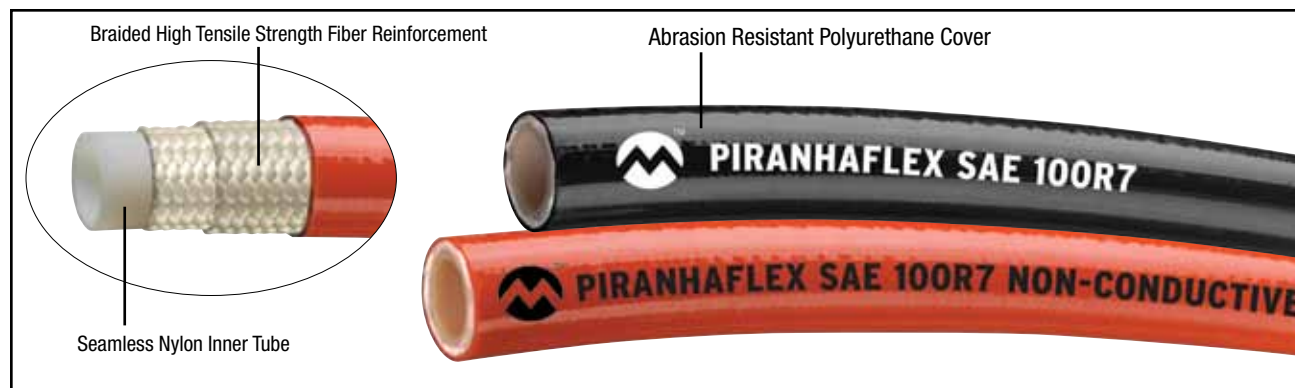
\*Do Not Skive



**NEW  
PRODUCT**

# Piranhaflex™ 100R7

## Series PF354/PF354NC



### Construction:

Piranhaflex™ Series PF354 & PF354NC consist of three individual components bonded to ensure maximum performance.

**Tube** — Seamless **nylon** inner tube.

**Reinforcement** — Braided high tensile strength fiber reinforcement.

**Cover** — Series PF354 has a **black** abrasion resistant polyurethane pin picked cover; **Series PF354NC has an Orange non-conductive, non-pin pricked cover.**

### Features:

- Meets or exceeds SAE J517 Standards
- Exceeds 100R7 impulse requirements
- Light weight and flexible
- Ideal for general hydraulic services

### Applications:

Piranhaflex™ Series PF354 and PF354NC (for non-conductive applications) are ideal for medium pressure hydraulic hose applications for hydraulic oil and lubrication lines.

(-02 and -16 MTO are available upon request)

(Twin/Multi Line MTO are available upon request)

### Packaging:

- Hoses supplied in 250 ft. reels & 50 ft. box lengths.

**Temperature Range:** -40° F (-40° C) to +200° F (+93° C) for petroleum based hydraulic fluids.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psl)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
PF354/PF354NC	03	3/16	4.8	0.415	10.5	3,000	0.75	19	5	N/A	PFR-03
PF354/PF354NC	04	1/4	6.4	0.496	12.6	2,750	1.50	38	6	N/A	PFR-04
PF354/PF354NC	05	5/16	8.1	0.580	14.7	2,500	1.75	44	8	N/A	PFR7-05
PF354/PF354NC	06	3/8	9.7	0.650	16.5	2,250	2.00	50	11	N/A	PFR-06
PF354/PF354NC	08	1/2	13.1	0.834	21.2	2,000	3.00	75	16	N/A	PFR-08
PF354/PF354NC	12	3/4	19.1	1.050	26.7	1,250	6.00	150	22	N/A	PFR-12

† Minimum burst pressure 4-to-1 safety factor.

## Series PF367/PF367NC



### Construction:

Piranhaflex™ Series PF367 & PF367NC consist of three individual components bonded to ensure maximum performance.

**Tube** — Seamless **polyester** inner tube.

**Reinforcement** — Braided high tensile strength fiber reinforcement.

**Cover** — Series PF367 has a **black** abrasion resistant polyurethane pin picked cover; **Series PF367NC has an Orange non-conductive, non-pin pricked cover.**

### Features:

- Meets or exceeds SAE J517 Standards
- Exceeds 100R7 impulse requirements
- Light weight and flexible
- Ideal for general hydraulic services

### Applications:

Piranhaflex™ Series PF367 and PF367NC (for non-conductive applications) are ideal for medium pressure hydraulic hose applications for hydraulic oil and lubrication lines.

(-02 and -16 MTO are available upon request)

(Twin/Multi Line MTO are available upon request)

### Packaging:

- Hoses supplied in 250 ft. reels & 50 ft. box lengths.

**Temperature Range:** -40° F (-40° C) to +200° F (+93° C) for petroleum based hydraulic fluids.  
-40° F (-40° C) to +140° F (+60° C) for water-based and phosphate-ester based fluids.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
PF367/PF367NC	03	3/16	4.8	0.415	10.5	3,000	0.75	19	5	N/A	PFR-03
PF367/PF367NC	04	1/4	6.4	0.496	12.6	2,750	1.50	38	6	N/A	PFR-04
PF367/PF367NC	05	5/16	8.1	0.580	14.7	2,500	1.75	44	8	N/A	PFR7-05
PF367/PF367NC	06	3/8	9.7	0.650	16.5	2,250	2.00	50	11	N/A	PFR-06
PF367/PF367NC	08	1/2	13.1	0.834	21.2	2,000	3.00	75	16	N/A	PFR-08
PF367/PF367NC	12	3/4	19.1	1.050	26.7	1,250	6.00	150	22	N/A	PFR-12

† Minimum burst pressure 4-to-1 safety factor.

**NEW  
PRODUCT**

# Piranhaflex™ 100R8

## Series PF628/PF628NC



### Construction:

Piranhaflex™ Series PF628 & PF628NC consist of three individual components chemically bonded to ensure maximum performance.

**Tube** — Extruded seamless **polyester** inner tube.

**Reinforcement** — Aramid fiber reinforcement.

**Cover** — Series PF628 has a **black** highly abrasion resistant polyurethane pin picked cover; **Series PF628NC has an Orange non-conductive, non-pin pricked cover.**

### Features:

- Extremely durable
- Good kink resistance
- Lightweight-less than about half that of comparable rubber/wire hose.
- Meets or exceeds SAE 100R8 impulse requirements at half of SAE recommended bend radius standards
- Will not swell or degrade in contact with most hydraulic fluids or oils

- Highly abrasion resistant
- Inner tube will not chip or peel in service, eliminating the possibility of system contamination.
- Linear change +/-3% under typical operating pressure.

### Applications:

Piranhaflex™ Series PF628 is ideal for general purpose high pressure hydraulic applications with working pressures of 2,250 to 5,000 psi (depending on size). This hose is commonly used in industrial hydraulic construction, material handling, and agricultural equipment. Piranhaflex™ Series 628NC has an orange, non pin-pricked cover ideal for use in applications where a non-conductive high pressure hydraulic hose is required. Typical applications include: hydraulic tools, lubrication lines and man lifts.

(-03 MTO is available upon request)

(Twin/Multi Line MTO are available upon request)

### Packaging:

- Hoses supplied in 250 ft. reels & 50 ft. box lengths.

**Temperature Range:** -40° F (-40° C) to +200° F (+93° C) for petroleum based hydraulic fluids.  
-40° F (-40° C) to +140° F (+60° C) for water-based and phosphate-ester based fluids.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
PF628/PF628NC	04	1/4	6.5	0.485	12.3	5,000	2.00	50	7	N/A	PFR-04
PF628/PF628NC	06	3/8	9.7	0.630	16.0	4,000	2.50	64	10	N/A	PFR-06
PF628/PF628NC	08	1/2	12.9	0.820	20.8	3,500	3.50	88.9	17	N/A	PFR-08
PF628/PF628NC	12	3/4	19.1	1.050	26.7	2,250	4.50	114.3	20	N/A	PFR-12

† Minimum burst pressure 4-to-1 safety factor.

## Single wire braid hydraulic hose on easy-to-handle reels

### T835AA — Single wire braid

Meets or exceeds  
SAE 100 R1AT - EN 853 1SN

The T835AA hoses on this page will be available only while supplies last. They have been replaced by our new T836AA hoses with MSHA cover shown on page 24.



### Construction:

**Tube** — Seamless synthetic rubber, black... oil-resistant.

**Reinforcement** — High tensile steel wire braid.

**Cover** — Synthetic rubber, black... weather, oil, fuel, ozone and abrasion-resistant.

**Couplings** — Standard fittings and AlfaCrimp.

**Branding** — ALFAGOMMA FLEXOR 1SN ID ...WP ...MPa  
(...PSI) — SAE 100 R1AT — EN 853 1SN ...Q/YR DN ...

### Application:

Medium pressure service with high temperature petroleum-based hydraulic fluids, hot oil, grease, lubricants and crude oils, air and water. For air or gas application above 250 PSI (1.7 MPa) the cover should be pin-pricked.

**MSHA IC-152/8** accepted cover available on request (Part No.836AA-XX).

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 160° F (70° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	Skive Option (Two Piece)
T835AA	03	3/16	4.8	.46	11.8	3,630	3.5	90	11	N/A	H1200203-03	H1200203-03
T835AA	04	1/4	6.4	.52	13.4	3,270	4.0	100	15	C122XXXX-04	H1200102-04	H1100204-04
T835AA	05	5/16	7.9	.59	15.0	3,120	4.5	115	17	C122XXXX-05	H1200202-05	H1100204-05
T835AA	06	3/8	9.5	.68	17.4	2,610	5.0	130	22	C122XXXX-06	H1200202-06	H1100204-06
T835AA	08	1/2	12.7	.81	20.6	2,320	7.0	180	28	C122XXXX-08	H1200202-08	H1100204-08
T835AA	10	5/8	15.9	.93	23.7	1,890	8.0	200	34	C122/124XXXX-10	H1200202-10	H1100204-10
T835AA	12	3/4	19.0	1.09	27.7	1,530	9.5	240	44	C122/124XXXX-12	H1200202-12	H1100204-12
T835AA	16	1	25.4	1.40	35.6	1,280	12.0	300	70	C122/124XXXX-16	H1200202-16	H1100204-16
T835AA	20	1 1/4	31.8	1.71	43.5	920	16.5	420	80	C124XXXX-20	H1200102-20	H1100104-20
T835AA	24	1 1/2	38.1	1.99	50.6	730	20.0	500	108	C124XXXX-24	H1200202-24	H1100104-24
T835AA	32	2	50.8	2.52	64.0	580	25.0	630	138	C124XXXX-32	H1200202-32	H1100104-32
T815AA	40	2 1/2	63.5	3.11	79.0	720	30.0	760	194	Consult KOA	Consult KOA	
T815AA	48	3	76.2	3.62	92.0	500	35.0	900	230	Consult KOA	Consult KOA	

† Minimum burst pressure 4-to-1 safety factor.

Note: 3/16" through 1" ID hoses supplied on reels.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

# Flexor 1SN/R1AT Hydraulic Hose



## Single wire braid hydraulic hose on easy-to-handle reels

### T836AA — Single wire braid

Meets or exceeds  
SAE 100 R1AT - EN 853 1SN  
MSHA IC-152/8 approved



### Construction:

**Tube** — Seamless synthetic rubber, black... oil-resistant.

**Reinforcement** — High tensile steel wire braid.

**Cover** — Synthetic rubber, black... weather, oil, fuel, ozone and abrasion-resistant.

**Couplings** — Standard fittings and AlfaCrimp.

**Branding** — ALFAGOMMA FLEXOR 1SN ID ...WP ...MPa  
(...PSI) — SAE 100 R1AT — EN 853 1SN MSHA IC-152/8...  
Q/YR DN ...

### Application:

Medium pressure service with high temperature petroleum-based hydraulic fluids, hot oil, grease, lubricants and crude oils, air and water. For air or gas application above 250 PSI (1.7 Mpa) the cover should be pin-pricked.

**MSHA IC-152/8** accepted cover on T836AA hose style.

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 160° F (70° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	Skive Option (Two Piece)
T836AA	03	3/16	4.8	.46	11.8	3,630	3.5	90	11	N/A	H1200203-03	H1200203-03
T836AA	04	1/4	6.4	.52	13.4	3,270	4.0	100	15	C122XXXX-04	H1200102-04	H1100204-04
T836AA	05	5/16	7.9	.59	15.0	3,120	4.5	115	17	C122XXXX-05	H1200202-05	H1100204-05
T836AA	06	3/8	9.5	.68	17.4	2,610	5.0	130	22	C122XXXX-06	H1200202-06	H1100204-06
T836AA	08	1/2	12.7	.81	20.6	2,320	7.0	180	28	C122XXXX-08	H1200202-08	H1100204-08
T836AA	10	5/8	15.9	.93	23.7	1,890	8.0	200	34	C122/124XXXX-10	H1200202-10	H1100204-10
T836AA	12	3/4	19.0	1.09	27.7	1,530	9.5	240	44	C122/124XXXX-12	H1200202-12	H1100204-12
T836AA	16	1	25.4	1.40	35.6	1,280	12.0	300	70	C122/124XXXX-16	H1200202-16	H1100204-16
T836AA	20	1 1/4	31.8	1.71	43.5	920	16.5	420	80	C124XXXX-20	H1200102-20	H1100104-20
T836AA	24	1 1/2	38.1	1.99	50.6	730	20.0	500	108	C124XXXX-24	H1200202-24	H1100104-24
T836AA	32	2	50.8	2.52	64.0	580	25.0	630	138	C124XXXX-32	H1200202-32	H1100104-32
T815AA	40	2 1/2	63.5	3.11	79.0	720	30.0	760	194	Consult KOA	Consult KOA	
T815AA	48	3	76.2	3.62	92.0	500	35.0	900	230	Consult KOA	Consult KOA	

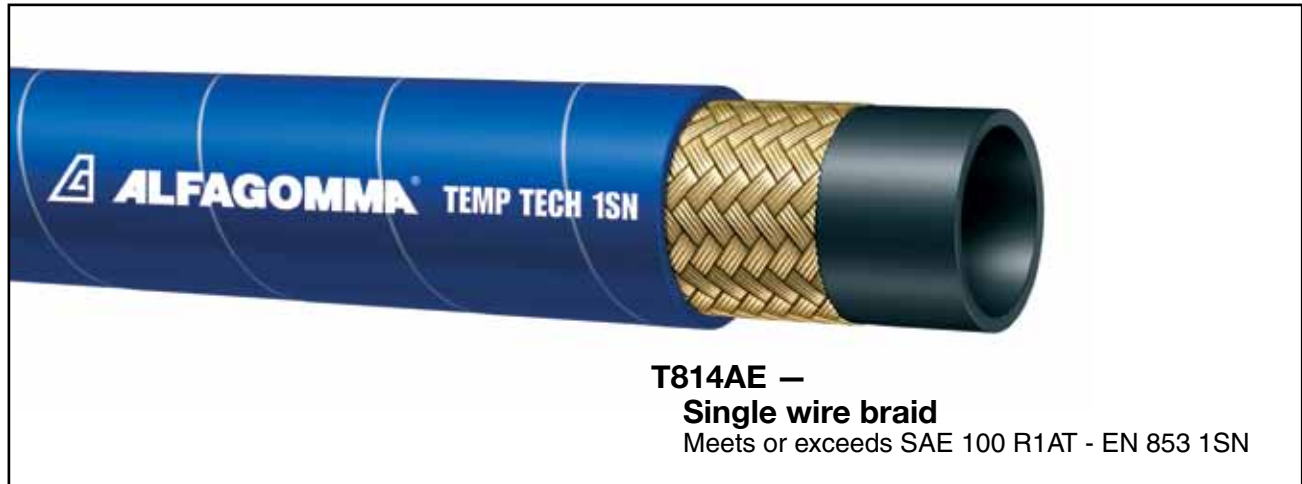
† Minimum burst pressure 4-to-1 safety factor.

Note: 3/16" through 1" ID hoses supplied on reels.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.



## Single wire braid high temperature hydraulic hose (Up to 300° F.)



### Construction:

**Tube** — Black tube, specifically compounded for temperature and chemical resistance, oil-resistant.

**Reinforcement** — One high tensile steel wire braid.

**Cover** — Synthetic rubber, blue... weather, oil, fuel, ozone and abrasion-resistant.

**Couplings** — Standard fittings and AlfaCrimp.

**Branding** — ALFAGOMMA TEMP TECH 1AT/1SN ID ... WP ...Mpa (...PSI) – SAE 100R1AT - EN 853 1SN DN ... Q/YR

### Application:

Wherever low or continuous high temperatures or fluid compatibility is a problem, this high quality, high performance hose solves the problem. Also ideal for use where greatly extended service life under "normal" conditions is desired.

**Meets or exceeds the requirement of SAE J517 100R1 Type AT – EN 853 1SN**

**Temperature Range:** -40° F (-40° C) to 300° F (150° C) constant operation.

**Maximum operating temperature:** 300° F (150° C). **Air maximum temperature:** 250° F (121° C).

**Note:** Operating temperatures in excess of 300° F (150° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	Skive Option (Two Piece)
T814AE	04	1/4	6	0.53	13.4	3,260	4.0	100	15	C122XXXX-04XX	H1200102-04	H1100204-04
T814AE	06	3/8	9.5	0.69	17.4	2,610	5.2	130	22	C122XXXX-06	H1200102-04	H1100204-06
T814AE	08	1/2	12.7	0.81	20.6	2,320	7.2	180	28	C122XXXX-08	H1200202-08	H1100204-08
T814AE	12	3/4	19.0	1.09	27.7	1,530	9.6	240	41	C122/124XXXX-12	H1200202-12	H1100204-12
T814AE	16	1	25.4	1.40	35.6	1,280	12.0	300	62	C122/124XXXX-16	H1200202-16	H1100204-16
T814AE	20	1 1/4	31.8	1.71	43.5	920	16.5	420	80	C124XXXX-20	H1200102-20	H1100104-20
T814AE	24	1 1/2	38	1.99	50.6	730	20.0	500	109	C124XXXX-24XX	H1200202-24	H1100104-24
T814AE	32	2	51	2.52	64.0	580	25.2	630	134	C124XXXX-32XX	H1200202-32	H1100104-32

† Minimum burst pressure 4-to-1 safety factor.

Note: These hoses supplied on reels.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

# Flexor 2SN/R2AT Hydraulic Hose



## Double wire braid hydraulic hose on easy-to-handle reels

### T846AA —

#### Double wire braid

Meets or exceeds

SAE 100 R2AT - EN 853 2SN

MSHA IC-152/8 approved

### T841AA —

#### Double wire braid

Meets or exceeds SAE 100 R2A



### Construction:

**Tube** — Seamless synthetic rubber, black... oil-resistant.

**Reinforcement** — High tensile steel wire braid.

**Cover** — Synthetic rubber, black... weather, oil, fuel, ozone and abrasion-resistant.

**Couplings** — Standard fittings and AlfaCrimp.

**Branding** — ALFAGOMMA FLEXOR 2SN ID ...WP

...MPa (...PSI) — SAE 100R2AT - EN 853 2SN DN ...Q/YR

### Application:

Medium pressure service with high temperature petroleum-based hydraulic fluids, hot oil, grease, lubricants and crude oils, air and water. For air or gas application above 250 PSI (1.7 Mpa) the cover should be pin-pricked.

**MSHA IC-152/8** accepted cover on T846AA hose style.

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 160° F (70° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure† (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	Skive Option (Two Piece)
T846AA	03	3/16	4.8	.52	13.4	6,000	3.5	90	19	N/A	H1200203-03	H1200203-03
T846AA	04	1/4	6.4	.59	15.0	5,800	4.0	100	24	C122XXXXX-04	H1200202-04	H1100204-04
T846AA	05	5/16	7.9	.65	16.7	5,000	4.5	115	26	C122XXXXX-05	H1200202-05	H1100204-05
T846AA	06	3/8	9.5	.75	19.1	4,800	5.0	125	34	C122XXXXX-06	H1200202-06	H1100204-06
T846AA	08	1/2	12.7	.87	22.2	4,000	7.0	175	42	C122XXXXX-08	H1200202-08	H1100204-08
T846AA	10	5/8	15.9	1.00	25.4	3,630	8.0	200	51	C122/124XXXXX-10	H1200202-10	H1100204-10
T846AA	12	3/4	19.0	1.15	29.3	3,120	9.5	240	65	C122/124XXXXX-12	H1200202-12	H1100204-12
T846AA	16	1	25.4	1.50	38.1	2,400	12.0	300	102	C122/124XXXXX-16	H1200202-16	H1100204-16
T846AA	20	1 1/4	31.8	1.90	48.3	1,820	16.5	420	126	C124XXXXX-20	H1200202-20	H1100204-20
T846AA	24	1 1/2	38.1	2.15	54.6	1,310	20.0	500	145	C124XXXXX-24	H1200202-24	H1100204-24
T846AA	32	2	50.8	2.65	67.4	1,160	25.0	630	199	C124XXXXX-32	H1200202-32	H1100204-32
T841AA	40	2 1/2	63.5	3.27	83.0	1,000	30.0	760	266	Consult KOA	Consult KOA	
T841AA	48	3	76.2	3.78	96.0	800	35.0	900	332	Consult KOA	Consult KOA	

† Minimum burst pressure 4-to-1 safety factor.

Note: 3/16" through 1" ID hoses supplied on reels.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

## Double wire braid high temperature hydraulic hose (Up to 300° F.)



### Construction:

**Tube** — Black tube, specifically compounded for temperature and chemical resistance, oil-resistant.

**Reinforcement** — Two high tensile steel wire braids.

**Cover** — Synthetic rubber, blue... weather, oil, fuel, ozone and abrasion-resistant.

**Couplings** — Standard fittings and AlfaCrimp.

**Branding** — ALFAGOMMA TEMP TECH 2AT/2SN ID ... WP ...MPa (...PSI)  
— SAE 100R2AT - EN 853 2SN DN ... Q/YR

### Application:

Wherever low or continuous high temperatures or fluid compatibility is a problem, this high quality, high performance hose solves the problem. Also ideal for use where greatly extended service life under "normal" conditions is desired.

**Meets or exceeds the requirement of SAE J517 100R2Type AT – EN 853 2SN**

**Temperature Range:** -40° F (-40° C) to 300° F (150° C) constant operation.

**Maximum operating temperature:** 300° F (150° C). **Air maximum temperature:** 250° F (121° C).

**Note:** Operating temperatures in excess of 300° F (150° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	Skive Option (Two Piece)
T828AE	04	1/4	6.4	.59	15.0	5,800	4.0	100	24	C122XXXX-04	H1200202-04	H1100204-04
T828AE	06	3/8	9.5	.75	19.1	4,800	5.0	125	34	C122XXXX-06	H1200202-06	H1100204-06
T828AE	08	1/2	12.7	.87	22.2	4,000	7.0	175	43	C122XXXX-08	H1200202-08	H1100204-08
T828AE	10	5/8	15.9	1.00	25.4	3,630	8.0	200	50	C122/124XXXX-10	H1200202-10	H1100204-10
T828AE	12	3/4	19.0	1.15	29.3	3,120	9.6	240	61	C122/124XXXX-12	H1200202-12	H1100204-12
T828AE	16	1	25.4	1.50	38.1	2,400	12.0	300	88	C122/124XXXX-16	H1200202-16	H1100204-16
T828AE	20	1 1/4	31.8	1.90	48.3	1,820	16.8	420	129	C124XXXX-20	H1200202-20	H1100204-20
T828AE	24	1 1/2	38.1	2.15	54.6	1,310	20.0	500	161	C124XXXX-24	H1200202-24	H1100204-24
T828AE	32	2	50.8	2.65	67.4	1,160	25.2	630	198	C124XXXX-32	H1200202-32	H1100204-32

† Minimum burst pressure 4-to-1 safety factor.

Note: 1/4" through 1" ID hoses supplied on reels.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

# Flexopak 16 Hydraulic Hose



## Double compact wire braid hydraulic hose



**T813AA —**  
**Double wire braid**  
 Meets or exceeds SAE 100 R16 - EN 857 2SC

### Construction:

**Tube** — Synthetic rubber, black... low temperature, oil-resistant.

**Reinforcement** — Two high tensile steel compact wire braids.

**Cover** — Synthetic rubber, black... weather, oil, ozone, abrasion and low temperature-resistant.

**Couplings** — Consult fittings catalog.

**Branding** — ALFAGOMMA FLEXOPAK 16 ID ...WP  
 ...MPa (...PSI) – EXCEEDS SAE 100R16 ...Q/YR

### Application:

High pressure service hose with tight bending radius for applications with petroleum-based hydraulic fluids, water/glycol, water- and fire-resistant hydraulic fluids, hot oil, grease, lubricants, crude oil, fuel oils, air and water. Excellent impulse performance, exceeding 1,000,000 cycles when tested with appropriate ALFAGOMMA couplings. For air or gas application above 250 PSI (1.7 Mpa) the cover should be pin-pricked.

MSHA accepted cover available on request.

**Temperature Range:** -40° F (-50° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 160° F (70° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
T813AA	04	1/4	6	.52	13.2	5,000	2	51	17	C122XXXXX-04	H1200102-04
T813AA	05	5/16	8	.57	14.5	4,240	2.3	57	20	C122XXXXX-05	H1200202-05
T813AA	06	3/8	10	.67	17	4,000	2.6	64	24	C122XXXXX-06	H1200202-06
T813AA	08	1/2	13	.8	20.3	3,500	3.6	90	31	C122XXXXX-08	H1200202-08
T813AA	10	5/8	16	.94	23.9	2,750	4	101	36	C122XXXXX-10	H1200202-10
T813AA	12	3/4	19	1.09	27.7	2,250	4.8	121	50	C122XXXXX-12	H1200202-12
T813AA	16	1	25	1.36	34.6	2,000	6.1	152	67	C122XXXXX-16	H1200202-16

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

## Double compact wire braid hydraulic hose on easy-to-handle reels



### Construction:

**Tube** — Synthetic rubber, black.

**Reinforcement** — Two high tensile steel wire braids, separated by a layer of synthetic rubber.

**Cover** — Synthetic rubber, black... weather, oil, fuel, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type.

**Branding** — ALFAGOMMA FLEXOPAK 2 ID ...WP ... MPa (... PSI) — EXCEEDS SAE 100 R16 — EN 857 2SC ...DN ...Q/YR

### Application:

High pressure service with tight bends with petroleum-based hydraulic fluids, water/glycol, water- and fire-resistant hydraulic fluids, hot oil, grease, lubricants, crude oil, fuel oils, air and water. Excellent impulse performance, exceeding 1,000,000 cycles when tested with appropriate ALFAGOMMA couplings. For air or gas application above 250 PSI (1.7 Mpa) the cover should be pin-pricked.

MSHA accepted cover available on request.

**\*Flexopak 2 is also available with our new SuperTuff cover.**

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 160° F (70° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Series Number with SuperTuff Cover	Size Code	Nominal ID Nominal OD				Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
			(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	Skive Option (Two Piece)
T822AA	T822ST	04	1/4	6.4	.53	13.4	5,850	2.0	51	18	C122XXXXX-04	H1200102-04	H1100204-04
T822AA	T822ST	06	3/8	9.5	.69	17.4	5,000	2.5	64	28	C122XXXXX-06	H1200202-06	H1100204-06
T822AA	T822ST	08	1/2	12.7	.81	20.6	4,500	3.5	90	37	C122XXXXX-08	H1200202-08	H1100204-08
T822AA	T822ST	10	5/8	15.9	.93	23.7	4,000	4.0	101	41	C122XXXXX-10	H1200202-10	H1100204-10
T822AA	T822ST	12	3/4	19.0	1.09	27.7	3,500	4.7	121	59	C122XXXXX-12	H1200202-12	H1100204-12
T822AA	T822ST	16	1	25.4	1.41	35.6	2,700	6.0	152	86	C122XXXXX-16	H1200202-16	H1100204-16

† Minimum burst pressure 4-to-1 safety factor.

‡ Note: The AlfaCrimp C122XXXXX-XXXX fitting for FXP2 sizes -12 and -16 are not shown in this catalog.

Please call your nearest KOA warehouse for details.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.



# Flexopak 2 LT Low Temp Hydraulic Hose



## Double compact wire braid hydraulic hose



**T8E6AA —**  
**Double wire braid**  
 Meets or exceeds SAE 100 R16 - EN 857 2SC

### Construction:

**Tube** — Synthetic rubber, black... low temperature, oil-resistant.

**Reinforcement** — Two high tensile steel compact wire braids.

**Cover** — Synthetic rubber, black... weather, oil, ozone, abrasion and low temperature-resistant.

**Couplings** — Consult fittings catalog.

**Branding** — ALFAGOMMA FLEXOPAK 2 LT ID ...WP ...MPa (...PSI) – LOW TEMPERATURE -50° C – EXCEEDS SAE 100R16 - EN 857 2SC DN ...Q/YR

### Application:

Low temperature hose.

High pressure service hose with tight bending radius for low temperature applications with petroleum-based hydraulic fluids, water/glycol, water- and fire-resistant hydraulic fluids, hot oil, grease, lubricants, crude oil, fuel oils, air and water. Excellent impulse performance, exceeding 1,000,000 cycles when tested with appropriate ALFAGOMMA couplings. For air or gas application above 250 PSI (1.7 Mpa) the cover should be pin-pricked.

MSHA accepted cover available on request.

**Temperature Range:** -58° F (-50° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 160° F (70° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	Skive Option (Two Piece)
T8E6AA	04	1/4	6.4	.53	13.4	5,850	2.56	64	17	C122XXXXX-04	H1200102-04	H1100204-04
T8E6AA	06	3/8	9.5	.70	17.9	5,000	3.60	90	27	C122XXXXX-06	H1200202-06	H1100204-06
T8E6AA	08	1/2	12.7	.81	20.6	4,500	4.60	115	35	C122XXXXX-08	H1200202-08	H1100204-08
T8E6AA	10	5/8	15.9	.96	24.3	4,000	5.08	127	41	C122XXXXX-10	H1200202-10	H1100204-10
T8E6AA	12	3/4	19	1.09	27.7	3,500	6.08	152	54	C122XXXXX-12	H1200202-12	H1100204-12
T8E6AA	16	1	25.4	1.41	35.7	2,700	7.60	190	82	C122XXXXX-16	H1200202-16	H1100204-16

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

## Four layer wire spiral reinforced hydraulic hose



### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Four layers of spirally wrapped high tensile steel wire, separated by synthetic rubber over a fabric layer.

**Cover** — Synthetic rubber, grey non-marking... weather, oil, fuel, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type. Non-skive up to Size 20.

**Branding** — ALFAGOMMA FLEXOR 12 ID ...WP ... MPa (...PSI) — SAE 100R12 — EN 856 R12 DN ...MSHA IC-152/2 - Q/YR

### Application:

Very high pressure service with tight bends with petroleum-based hydraulic fluids. Extraordinary flexibility, excellent bend radii properties, and exceptional impulse life, with over 1,000,000 impulse cycles at 250° F (121° C) and 133% of rated working pressure (at SAE 100 R12 conditions) when tested with appropriate ALFAGOMMA-interlock couplings.

MSHA accepted cover available on request.

**Temperature Range:** -40° F (-40° C) to 250° F (121° C) constant operation.

**Maximum operating temperature:** 257° F (125° C).

**Note:** Operating temperatures in excess of 257° F (125° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
T898AB	06	3/8	9.5	.80	20.3	4,000	5.0	127	44	C124XXXXX-06	H1200204-06
T898AB	08	1/2	12.7	.94	23.8	4,000	7.0	178	55	C124XXXXX-08	H1200204-08
T898AB	12	3/4	19.0	1.21	30.7	4,000	9.5	241	82	C124XXXXX-12	H1200204-12
T898AB	16	1	25.4	1.50	38.0	4,000	12.0	305	128	C124XXXXX-16	H1200204-16
T898AB	20	1 1/4	31.8	1.85	47.0	3,000	16.5	419	176	C124XXXXX-20	H1200204-20
T898AB	24	1 1/2	38.1	2.10	53.5	2,500	20.0	508	218	C124XXXXX-24	H1100204-24
T898AB	32	2	50.8	2.62	66.7	2,500	25.0	635	285	C124XXXXX-32	H1100204-32

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

# Flexor 13 Hydraulic Hose



## Four or six layer wire spiral reinforced hydraulic hose

### T809AH —

#### Four or six wire spiral

Meets or exceeds  
SAE 100R13 - EN 856 R13  
and ISO 3862

Meets flame resistance  
acceptance designation  
US MSHA IC-152/3



### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Four or six layers of spirally wrapped, high tensile steel wire reinforcement, separated by synthetic rubber over a fabric layer.

**Cover** — Synthetic rubber, red... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Interlock crimp-on permanent type or C126 series non-skive. Note: For Interlock style, hose cover and portion of tube needs to be removed before attaching couplings.

**Branding** — ALFAGOMMA FLEXOR 13 ID ...WP 35 MPa (5000 PSI) — SAE 100R13 — EN 856 R13 DN ...MSHA IC-152/3 — Q/YR

### Application:

Extremely high pressure service with petroleum based hydraulic fluids. Extraordinary flexibility, bend radius properties and exceptional impulse life over 1,000,000 impulse cycles at 250° F (121° C) and at 120% of rated working pressure when tested with ALFAGOMMA Interlock coupling.

MSHA accepted cover available on request.

**Temperature Range:** -40° F (-40° C) to 250° F (120° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 250° F (121° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
T809AH	12	3/4	19.0	1.26	32.1	5,000	9.5	240	113	C126XXXXX-12	H1400200-12
T809AH	16	1	25.4	1.52	38.7	5,000	12.0	305	135	C126XXXXX-16	H1400200-16
T809AH	20	1 1/4	31.8	1.96	49.8	5,000	16.5	420	241	C12RXXXXX-20	H1400301-20
T809AH	24	1 1/2	38.1	2.26	57.3	5,000	20.0	510	321	C126XXXXX-24	H1400301-24
T809AH	32	2	50.8	2.79	70.9	5,000	25.0	635	444	Consult KOA	H1400301-32

† Minimum burst pressure 4-to-1 safety factor.

‡ Special ferrule for KD200. Call Kuriyama for details.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

H1400300-32\*  
For use with  
KD-200

## Four layer wire spiral reinforced hydraulic hose



### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Four layers of spirally wrapped, high tensile steel wire reinforcement, separated by synthetic rubber over a fabric layer.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type.

Note: Hose cover needs to be removed before attaching couplings.

**Branding** — ALFAGOMMA FLEXOR 4SP ID ...WP ...MPa (...PSI) – EN 856 4SP DN ...MSHA IC 152/8 - Q/YR

### Application:

Very high pulsating pressure service with petroleum based hydraulic fluids. Excellent flexibility and bend radius, allowing superior impulse life.

MSHA accepted cover available on request.

**Temperature Range:** -40° F (-40° C) to 250° F (121° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
T850AA	04	1/4	6.4	0.70	17.9	6,550	6.0	150	42	N/A	H1100404-04
T850AA	06	3/8	9.5	0.84	21.4	6,450	7.0	180	53	N/A	H1100404-06
T850AA	08	1/2	12.7	0.97	24.6	6,000	9.0	230	65	N/A	H1100404-08
T850AA	10	5/8	15.9	1.11	28.2	5,000	10.0	250	77	N/A	H1100404-10
T850AA	12	3/4	19.0	1.27	32.2	5,000	12.0	300	105	N/A	H1100404-12
T850AA	16	1	25.4	1.56	39.7	4,000	13.5	340	133	N/A	H1100204-16

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

# Flexor 4SH Hydraulic Hose



## Four layer wire spiral reinforced hydraulic hose



### T855AA —

#### Four wire spiral

Meets or exceeds EN 856 4SH and ISO 3862

Meets flame resistance acceptance designation  
US MSHA IC-152/8

### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Four layers of spirally wrapped high tensile steel wire reinforcement, separated by synthetic rubber over a fabric layer.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Interlock crimp-on permanent type or C126 series non-skive.

**Branding** — ALFAGOMMA FLEXOR 4SH ID ...WP ...MPa  
(...PSI) — EN 856 4SH DN ....MSHA IC 152/8 - Q/YR

### Application:

Extremely high pulsating pressure service with petroleum based hydraulic fluids. Specially designed to achieve long impulse life together with an excellent flexibility at the most severe high pulsating working pressure and temperature conditions.

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working <sup>†</sup> Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
T855AA	12	3/4	19.0	1.27	32.2	6,000	11.0	280	114	C126XXXX-12	H1400200-12
T855AA	16	1	25.4	1.52	38.7	5,500	13.5	340	144	C126XXXX-16	H1400200-16
T855AA	20	1 1/4	31.8	1.79	45.5	4,700	18.0	460	171	Consult KOA	H1400200-20
T855AA	24	1 1/2	38.1	2.11	53.5	4,200	22.0	560	230	C126XXXX-24	H1400200-24
T855AA	32	2	50.8	2.68	68.1	3,650	27.5	700	331	C12HXXXX-32	H1400200-32

<sup>†</sup> Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.



# ALFAGOMMA Alfatech Hoses Make Hydraulic Hose Selection Easier

The proprietary Alfatech Series of hoses from ALFAGOMMA, designed with the application engineer in mind, greatly simplifies system routing by offering the same working pressure ratings for all sizes of the respective hose. Additionally, Alfatech hoses offer several performance advantages, including:

**Greater design and installation flexibility** — identical working pressure ratings for all sizes of a given series makes for easier design and installation.

**Extraordinary flexibility** — excellent bend radius properties... makes installation easier.

**Requires less hose footage** — tighter bends mean less hose is needed for a typical job.

**Reduced inventory requirements** — reduced hose usage and continuity of working pressure ratings throughout each series means reduced inventory requirements.

**Exceptionally long service life** — superior performance under flex-impulse conditions... tested with ALFAGOMMA couplings for more than 1,000,000 impulse cycles at a minimum of 120% of rated working pressure at 250° F. (121° C).

**Clear branding and coding** — makes selection and identification easier.



# Alfatech 3000 Hydraulic Hose



## Single and double compact wire braid hydraulic hose

### AT833AA — Single or double wire braid

Meets or exceeds SAE 100 R17,  
meets or exceeds EN 857 1SC  
(Sizes -04 and -06)



### Construction:

**Tube** — Synthetic rubber, black.

**Reinforcement** — One or two layer high tensile steel wire braid.

**Cover** — Synthetic rubber, black... weather, oil, fuel, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type.

**Branding** — ALFAGOMMA ALFATECH 3000 ID ...WP ... MPa  
(...PSI) – SAE 100R17 – DN ...Q/YR

Note: Sizes -04 and -06 include “EN 857 1SC” on layline.

### Application:

Medium pressure service with petroleum-based hydraulic fluids, hot oil, grease, lubricants and crude oils, air and water. For air or gas application above 250 PSI (1.7 Mpa) the cover should be pinpricked.

MSHA accepted cover available on request.

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 160° F (70° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working <sup>†</sup> Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	New Ferrules (Two Piece)
AT833AA	04	1/4	6.4	.48	12.1	3,250	2.0	50	10	C121XXXXX-04	H1200103-04	H1200101-04
AT833AA	06	3/8	9.5	.61	15.6	3,000	2.5	65	18	C121XXXXX-06	H1200103-06	H1200101-06
AT833AA	08	1/2	12.7	.77	19.5	3,000	3.5	90	28	C121XXXXX-08	H1200103-08	H1200101-08
AT833AA①	12	3/4	19.0	1.09	27.7	3,000	5.0	125	59	C122XXXXX-12	H1200202-12	
AT833AA①	16	1	25.4	1.50	38.1	3,000	6.0	150	105	C122XXXXX-16	H1200202-16	

<sup>†</sup> Minimum burst pressure 4-to-1 safety factor.

① Double steel wire braid . . . all others are single wire braid.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

## Two wire braid or four wire spiral reinforced hydraulic hose



### AT822AA, AT894AA — Double wire braid and Four wire spiral

Specification Reference:  
 EN 857 2SC (1/2),  
 SAE 100 R12 (5/8, 3/4, 1),  
 EN 456 4SP (1 1/4),  
 EN 456 4SH (1 1/2, 2)  
 – Meets flame resistance acceptance  
 designation US MSHA IC-152/8.

### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Double high tensile steel wire compact braid or four layers of spirally wrapped high tensile steel wire reinforcement separated by synthetic rubber cushion on a fabric layer.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type or Interlock.  
 Note: For Interlock style, hose cover and portion of tube needs to be removed before attaching couplings.

**Branding** — ALFAGOMMA ALFATECH 4000 ID...WP  
 28 MPa BP 112 MPa MSHA IC 152/8 – Q/YR

### Application:

High pulsating pressure service with petroleum based hydraulic fluids. Developed to withstand punishing conditions and to meet increasing pressure pulsing, flexing and temperature demands not currently covered by International specifications.

MSHA accepted cover available on request.

Features extraordinary flexibility, excellent bend radii properties, superior performance under flex-impulse conditions, and exceptional long life. Tested over 1,000,000 impulse cycles at 133% of rated working pressure at 250° F (121° C).

**Temperature Range:** -40° F (-40° C) to 250° F (121° C) constant operation.

**Maximum operating temperature:** 250° F (121° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 250° F (121° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	New Ferrules (Two Piece)
AT822AA①	08	1/2	12.7	0.81	20.6	4,500	3.5	90	35	N/A	H1200202-08	H1100204-8
AT894AA	10	5/8	15.9	1.08	27.4	4,000	4.0	100	74	N/A	H1200204-10	H1400200-10
AT894AA	12	3/4	19.0	1.21	30.7	4,000	5.0	125	87	N/A	H1200204-12	H1400200-12
AT894AA	16	1	25.4	1.50	38.0	4,000	6.0	150	128	N/A	H1200204-16	H1400200-16
AT894AA	20	1 1/4	31.8	1.87	47.5	4,000	9.0	230	181	N/A		H1400200-20
AT894AA	24	1 1/2	38.1	2.10	53.5	4,000	17.7	450	222	N/A		H1400200-24
AT894AA	32	2	50.8	2.68	68.1	4,000	23.4	595	323	N/A		H1400200-32

① Double steel wire braid. All others are four wire spiral reinforced.

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

# Alfatech 5000 Hydraulic Hose



## Two wire braid and four or six wire spiral reinforced hydraulic hose

**AT822AA/AT804AA — Double wire braid**

**AT896AA/T8A3AA — Four wire spiral**

**AT896AA — Six wire spiral**

Specification Reference:

EN 857 2SC ( $\frac{3}{8}$ ), EN 456 4SP ( $\frac{5}{8}$ ,  $\frac{3}{4}$ ),

EN 456 4SH ( $1\frac{1}{4}$ ), SAE 100 R13 ( $1\frac{1}{4}$ ,  $1\frac{1}{2}$ , 2)

– Meets flame resistance acceptance designation US  
MSHA IC-152/8.



### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Double high tensile steel wire braid or four or six layers of spirally wrapped high tensile steel wire reinforcement separated by synthetic rubber cushion on a fabric layer.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type (Interlock size -10 and up). Note: For Interlock style, hose cover and portion of tube needs to be removed before attaching couplings.

**Branding** — ALFAGOMMA ALFATECH 5000 ID...WP  
35 MPa BP 140 MPa MSHA IC 152/8 Q/YR

### Application:

Extremely high pulsating pressure service with petroleum based hydraulic fluids. Developed to withstand punishing conditions and to meet increasing pressure pulsing, flexing and temperature demands not currently covered by International specifications.

MSHA accepted cover available on request.

Features extraordinary flexibility, excellent bend radii properties, superior performance under flex-impulse conditions, and exceptional long life. Tested over 1,000,000 impulse cycles at 120% of rated working pressure at 250° F (121° C).

**Temperature Range:** -40° F (-40° C) to 250° F (121° C) constant operation.

**Maximum operating temperature:** 250° F (121° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 250° F (121° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
AT822AA①	06	3/8	9.5	0.59	15.0	5,000	2.2	57	23	N/A	H1200202-06
AT804AA①	08	1/2	12.7	0.87	22.2	5,000	6.0	150	52	N/A	H1100204-08
AT896AA②	10	5/8	15.9	1.11	28.2	5,000	5.0	125	75	N/A	H1400200-10
AT896AA②	12	3/4	19.0	1.27	32.2	5,000	5.5	140	108	N/A	H1400200-12
AT896AA②	16	1	25.4	1.53	38.7	5,000	7.5	190	135	N/A	H1400200-16
AT8A3AA②	20	1¼	31.8	1.79	45.5	5,000	18.0	460	171	N/A	H1400301-20
AT896AA	24	1½	38.1	2.26	57.3	5,000	18.7	475	325	N/A	H1400301-24
AT896AA	32	2	50.8	2.80	71.1	5,000	21.5	545	457	N/A	H1400301-32 or H1400300-32 ‡

① Double wire braid. ② Four wire spiral reinforced. All others are six wire spiral reinforced.

† Minimum burst pressure 4-to-1 safety factor.

‡ Special ferrule for KD200. Call Kuriyama for details.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.





## Four and six wire spiral reinforced hydraulic hose



### AT897AA — Four and six wire spiral

All Alfatech 6000 hydraulic hose meets or exceeds the working and burst pressure requirements of SAE 100 R15  
– Meets flame resistance acceptance designation US MSHA IC-152/8.

#### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Four or six layers of spirally wrapped high tensile steel wire reinforcement separated by synthetic rubber cushion on a fabric layer.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Interlock crimp-on permanent type.  
Note: For Interlock style, hose cover and portion of tube needs to be removed before attaching couplings.

**Branding** — ALFAGOMMA ALFATECH 6000 ID...WP  
42 MPa BP 168 MPa MSHA IC 152/8 Q/YR

#### Application:

Extremely high pressure high impulse service with petroleum based hydraulic fluids such as hydrostatic transmissions. Developed to withstand punishing conditions and to meet increasing pressure pulsing, flexing and temperature demands not currently covered by International specifications.

MSHA accepted cover available on request.

Features extraordinary flexibility, excellent bend radii properties, superior performance under flex-impulse conditions, and exceptional long life. Tested over 1,000,000 impulse cycles at 120% of rated working pressure at 250° F (121° C).

**Temperature Range:** -40° F (-40° C) to 250° F (121° C) constant operation.

**Maximum operating temperature:** 250° F (121° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 250° F (121° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
AT850AA①	08	1/2	12.7	0.97	24.6	6,000	9.2	230	59	N/A	H1100404-08
AT897AA①	10	5/8	15.9	11.14	28.6	6,000	10.0	250	88	N/A	H1400200-10
AT897AA①	12	3/4	19.0	1.27	32.2	6,000	10.5	267	108	N/A	H1400200-12
AT897AA①	16	1	25.4	1.52	38.7	6,000	11.0	280	135	N/A	H1400200-16
AT897AA	20	1 1/4	31.8	1.96	49.8	6,000	11.0	280	237	N/A	H1400301-20
AT897AA	24	1 1/2	38.1	2.26	57.3	6,000	12.5	315	329	N/A	H1400301-24

① Four wire spiral reinforced. All others are six wire spiral reinforced.

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.



# Alfatech 3000 Minetuff Hydraulic Hose



## One and two wire braid reinforced hydraulic hose with Minetuff Cover

### AT833MT — One and two wire spiral

Meets or exceeds the working and burst pressure requirements of SAE 100 R17 —  
Meets or exceeds EN 857 1SC  
(Sizes 04 and 06)



### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — One or two layers of high tensile steel wire braid reinforcement.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type.

**Branding** — ALFAGOMMA AT3K MINETUFF ID...WP  
MPa... MPa... SAE 100R17 - DN... Q/YR

### Application:

Medium pressure service with petroleum based hydraulic fluids such as hot oil, grease, lubricants, and crude oils, air and water. Developed to withstand punishing conditions and to meet increasing pressure pulsing, flexing and temperature demands not currently covered by International specifications.

MSHA accepted cover available on request.

Features extraordinary flexibility, excellent bend radii properties, superior performance under flex-impulse conditions, and exceptional long life. Tested over 1,000,000 impulse cycles at 120% of rated working pressure.

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 250° F (121° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working <sup>†</sup> Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	New Ferrules (Two Piece)
AT833MT	04	1/4	6	0.48	12.1	3,250	2	50	11	C121XXXXX-04	H1200103-04	H1200101-04
AT833MT	05	5/16	8	0.56	14.1	3,100	2.2	55	13	C121XXXXX-05	H1200103-05	H1200101-05
AT833MT	06	3/8	10	0.61	15.6	3,000	2.6	65	17	C121XXXXX-06	H1200103-06	H1200101-06
AT833MT	08	1/2	13	0.77	19.5	3,000	3.6	90	24	C121XXXXX-08	H1200103-08	H1200101-08
AT833MT	10	5/8	16			3,000	4.2	105	41	C122XXXXX-10	H1200202-10	
AT833MT	12	3/4	19	1.09	27.7	3,500	5	125	53	C122XXXXX-12	H1200202-12	
AT833MT	16	1	25	1.4	35.6	3,000	6	150	83	C122XXXXX-16	H1200202-16	

<sup>†</sup> Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

## Two wire braid and four spiral wire reinforced hydraulic hose with Minetuff cover



### AT894MT — Two wire braid, four wire spiral

Specification Reference:  
SAE 100 R16 ( $\frac{5}{16}$ ,  $\frac{3}{8}$ ),  
EN 857 2SC ( $\frac{1}{2}$ ,  $\frac{5}{8}$ ),  
SAE 100 R12 ( $\frac{3}{4}$ , 1),  
EN 456 4SP ( $\frac{1}{4}$ ),  
EN 456 4SH ( $\frac{1}{2}$ , 2),  
– Meets flame resistance  
acceptance designation US MSHA  
IC-152/8.

### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Two high-tensile steel braids or four high-tensile steel spirals.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type. Note: For Interlock style, hose cover and portion of tube needs to be removed before attaching interlock couplings.

**Branding** — ALFAGOMMA AT4K MINETUFF ID...WP MPa... MPa... MSHA IC 152/8 Q/YR

### Application:

Extremely high pressure high impulse service with petroleum based hydraulic fluids such as hydrostatic transmissions. Developed to withstand punishing conditions and to meet increasing pressure pulsing, flexing and temperature demands not currently covered by International specifications.

Features extraordinary flexibility, excellent bend radii properties, superior performance under flex-impulse conditions, and exceptional long life. Tested over 1,000,000 impulse cycles at 120% of rated working pressure.

**Temperature Range:** -40°F (-40°C) to 250°F (100°C) constant operation, 212°F (100°C) for braided hoses.

**Maximum operating temperature:** 250° F (121° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 250° F (121° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	Skive Option (Two Piece)
AT894MT	05	5/16	8	0.57	14.5	4,240	2.3	57	20	N/A	H1200202-05	H1100204-05
AT894MT	06	3/8	10	0.67	17	4,000	2.6	64	24	N/A	H1200202-06	H1100204-06
AT894MT	08	1/2	13	0.81	20.6	4,500	3.6	90	35	N/A	H1200202-08	H1100204-08
AT894MT	10	5/8	16	0.93	23.7	4,000	4	101	41	N/A	H1200204-10	H1400200-10
AT894MT	12	3/4	19	1.21	30.7	4,000	5.2	130	80	N/A	H1200204-12	H1400200-12
AT894MT	16	1	25	1.5	38	4,000	6	150	119	N/A	H1200204-16	H1400200-16
AT894MT	20	1 1/4	32	1.87	47.5	4,000	9.2	230	178	N/A	N/A	H1400200-20
AT894MT	24	1 1/2	38	2.11	53.5	4,200	18	450	221	N/A	N/A	H1400200-24
AT894MT	32	2	51	2.68	68.1	4,000	23.6	590	315	N/A	N/A	H1400200-32

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

# Alfatech 5000 Minetuff Hydraulic Hose



## Two wire braid and four or six wire spiral reinforced hydraulic hose with Minetuff cover

### AT896MT —

#### Two wire braid, four or six wire spirals

Specification Reference:

SAE 100 R16 (1/4),

EN 857 2SC (5/16, 3/8),

EN 456 4SP (5/8, 3/4),

EN 456 4SH (1, 1 1/4),

SAE 100 R13 (1 1/2, 2)

— Meets flame resistance acceptance designation

US MSHA IC-152/8.



### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Four or six layers of spirally wrapped high tensile steel wire reinforcement separated by synthetic rubber cushion on a fabric layer.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Interlock crimp-on permanent type.

Note: For Interlock style, hose cover and portion of tube needs to be removed before attaching couplings.

**Branding** — ALFAGOMMA AT5K MINETUFF ID...WP

MPa MSHA IC 152/8 Q/YR

### Application:

Extremely high pressure high impulse service with petroleum based hydraulic fluids such as hydrostatic transmissions. Developed to withstand punishing conditions and to meet increasing pressure pulsing, flexing and temperature demands not currently covered by International specifications.

Features extraordinary flexibility, excellent bend radii properties, superior performance under flex-impulse conditions, and exceptional long life. Tested over 1,000,000 impulse cycles at 120% of rated working pressure.

**Temperature Range:** -40°F (-40°C) to 250°F (121°C) constant operation, 212°F (100°C) for braided hoses.

**Maximum operating temperature:** 250° F (121° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 250° F (121° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psl)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
AT896MT ①	04	1/4	6	0.52	13.2	5,000	2	51	17	N/A	H1200202-04
AT896MT ①	05	5/16	8	0.59	15	5,000	2.3	57	21	N/A	H1200202-05
AT896MT ①	06	3/8	10	0.69	17.4	5,000	2.6	64	26	N/A	H1200202-06
AT896MT ①	08	1/2	13	0.81	20.7	5,000	4	101	53	N/A	H1400200-08
AT896MT ②	10	5/8	16	1.11	28.2	5,000	5	125	71	N/A	H1400200-10
AT896MT ②	12	3/4	19	1.27	32.2	5,510	5.6	140	97	N/A	H1400200-12
AT896MT ②	16	1	25	1.52	38.7	5,510	7.6	190	132	N/A	H1400200-16
AT896MT ②	20	1 1/4	32	1.79	45.5	5,000	9.6	240	166	N/A	H1400301-20
AT896MT	24	1 1/2	38	2.26	57.3	5,000	19	475	325	N/A	H1400301-24
AT896MT	32	2	51	2.8	71.1	5,000	21.8	545	441	N/A	H1400301-32 or H1400300-32 ‡

① Double wire braid. ② Four wire spiral reinforced. All others are six wire spiral reinforced.

† Minimum burst pressure 4-to-1 safety factor.

‡ Special ferrule for KD200. Call Kuriyama for details.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.



## One wire spiral reinforced hydraulic hose with Minetuff cover



### AT897MT — Four and six wire spirals

All Alfatech 6000 hydraulic hose meets or exceeds the working and burst pressure requirements of SAE 100 R15 – Meets flame resistance acceptance designation US MSHA IC-152/8.

### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Four or six layers of spirally wrapped high tensile steel wire reinforcement separated by synthetic rubber cushion on a fabric layer.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Interlock crimp-on permanent type.  
Note: For Interlock style, hose cover and portion of tube needs to be removed before attaching couplings.

**Branding** — ALFAGOMMA AT6K MINETUFF ID...WP 42 MPa BP 168 MPa MSHA IC 152/8 Q/YR

### Application:

Extremely high pressure high impulse service with petroleum based hydraulic fluids such as hydrostatic transmissions. Developed to withstand punishing conditions and to meet increasing pressure pulsing, flexing and temperature demands not currently covered by International specifications.

MSHA accepted cover available on request.

Features extraordinary flexibility, excellent bend radii properties, superior performance under flex-impulse conditions, and exceptional long life. Tested over 1,000,000 impulse cycles at 120% of rated working pressure at 250° F (121° C).

**Temperature Range:** -40° F (-40° C) to 250° F (121° C) constant operation.

**Maximum operating temperature:** 250° F (121° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 250° F (121° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psl)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
AT897MT①	12	3/4	19	1.27	32.2	6,000	10.7	267	107	N/A	H1400200-12
AT897MT①	16	1	25	1.52	38.7	6,000	11.2	280	142	N/A	H1400200-16
AT897MT	20	1¼	32	1.96	49.8	6,000	11.2	280	166	N/A	H1400301-20
AT897MT	24	1½	38	2.26	57.3	6,000	12.6	315	325	N/A	H1400301-24

① Four wire spiral reinforced. All others are six wire spiral reinforced.

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.



# Alfatech 3000 Supertuff Hydraulic Hose



## Single and double compact wire braid hydraulic hose with Supertuff cover

### AT833AA — Single or double wire braid

Meets or exceeds SAE 100 R17,  
meets or exceeds EN 857 1SC  
(Sizes -04 and -06)



### Construction:

**Tube** — Synthetic rubber, black.

**Reinforcement** — One or two layer high tensile steel wire braid.

**Cover** — Synthetic rubber, black... weather, oil, fuel, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type.

**Branding** — ALFAGOMMA AT3K SUPERTUFF ID ...WP ... MPa  
(...PSI) – SAE 100R17 – DN ...Q/YR

Note: Sizes -04 and -06 include “EN 857 1SC” on layline.

### Application:

Medium pressure service with petroleum-based hydraulic fluids, hot oil, grease, lubricants and crude oils, air and water. For air or gas application above 250 PSI (1.7 Mpa) the cover should be pinpricked.

MSHA accepted cover available on request.

**Temperature Range:** -40° F (-40° C) to 212° F (100° C) constant operation.

**Maximum operating temperature:** 257° F (125° C). **Air maximum temperature:** 160° F (70° C).

**Note:** Operating temperatures in excess of 212° F (100° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working <sup>†</sup> Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	New Ferrules (Two Piece)
AT833ST	04	1/4	6.4	.48	12.1	3,250	2.0	50	10	C121XXXXX-04	H1200103-04	H1200101-04
AT833ST	06	3/8	9.5	.61	15.6	3,000	2.5	65	18	C121XXXXX-06	H1200103-06	H1200101-06
AT833ST	08	1/2	12.7	.77	19.5	3,000	3.5	90	28	C121XXXXX-08	H1200103-08	H1200101-08
AT833ST <sup>①</sup>	12	3/4	19.0	1.09	27.7	3,000	5.0	125	59	C122XXXXX-12	H1200202-12	
AT833ST <sup>①</sup>	16	1	25.4	1.50	38.1	3,000	6.0	150	105	C122XXXXX-16	H1200202-16	

<sup>†</sup> Minimum burst pressure 4-to-1 safety factor.

<sup>①</sup> Double steel wire braid . . . all others are single wire braid.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.





## Two wire braid or four wire spiral reinforced hydraulic hose with Supertuff cover



### AT822AA, AT894AA — Double wire braid and Four wire spiral

Specification Reference:  
EN 857 2SC (1/2),  
SAE 100 R12 (5/8, 3/4, 1),  
EN 456 4SP (1 1/4),  
EN 456 4SH (1 1/2, 2)  
— Meets flame resistance acceptance  
designation US MSHA IC-152/8.

### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Double high tensile steel wire compact braid or four layers of spirally wrapped high tensile steel wire reinforcement separated by synthetic rubber cushion on a fabric layer.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type or Interlock.  
Note: For Interlock style, hose cover and portion of tube needs to be removed before attaching couplings.

**Branding** — ALFAGOMMA AT4K SUPERTUFF ID...WP  
28 MPa BP 112 MPa MSHA IC 152/8 — Q/YR

### Application:

High pulsating pressure service with petroleum based hydraulic fluids. Developed to withstand punishing conditions and to meet increasing pressure pulsing, flexing and temperature demands not currently covered by International specifications.

MSHA accepted cover available on request.

Features extraordinary flexibility, excellent bend radii properties, superior performance under flex-impulse conditions, and exceptional long life. Tested over 1,000,000 impulse cycles at 133% of rated working pressure at 250° F (121° C).

**Temperature Range:** -40° F (-40° C) to 250° F (121° C) constant operation.

**Maximum operating temperature:** 250° F (121° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 250° F (121° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations		
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)	New Ferrules (Two Piece)
AT822ST <sup>①</sup>	08	1/2	12.7	0.81	20.6	4,500	3.5	90	35	N/A	H1200202-08	H1100204-8
AT894ST	10	5/8	15.9	1.08	27.4	4,000	4.0	100	74	N/A	H1200204-10	H1400200-10
AT894ST	12	3/4	19.0	1.21	30.7	4,000	5.0	125	87	N/A	H1200204-12	H1400200-12
AT894ST	16	1	25.4	1.50	38.0	4,000	6.0	150	128	N/A	H1200204-16	H1400200-16
AT894ST	20	1 1/4	31.8	1.87	47.5	4,000	9.0	230	181	N/A		H1400200-20
AT894ST	24	1 1/2	38.1	2.10	53.5	4,000	17.7	450	222	N/A		H1400200-24
AT894ST	32	2	50.8	2.68	68.1	4,000	23.4	595	323	N/A		H1400200-32

<sup>①</sup> Double steel wire braid. All others are four wire spiral reinforced.

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

# Alfatech 5000 Supertuff Hydraulic Hose



## Two wire braid and four or six wire spiral reinforced hydraulic hose with Supertuff cover

**AT822AA/AT804AA — Double wire braid**

**AT896AA/T8A3AA — Four wire spiral**

**AT896AA — Six wire spiral**

Specification Reference:

EN 857 2SC ( $\frac{3}{8}$ ), EN 456 4SP ( $\frac{5}{8}$ ,  $\frac{3}{4}$ ),

EN 456 4SH ( $1\frac{1}{4}$ ), SAE 100 R13 ( $1\frac{1}{4}$ ,  $1\frac{1}{2}$ , 2)

– Meets flame resistance acceptance designation US MSHA IC-152/8.



### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Double high tensile steel wire braid or four or six layers of spirally wrapped high tensile steel wire reinforcement separated by synthetic rubber cushion on a fabric layer.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Crimp-on permanent type (Interlock size -10 and up). Note: For Interlock style, hose cover and portion of tube needs to be removed before attaching couplings.

**Branding** — ALFAGOMMA AT5K SUPERTUFF ID...WP  
35 MPa BP 140 MPa MSHA IC 152/8 Q/YR

### Application:

Extremely high pulsating pressure service with petroleum based hydraulic fluids. Developed to withstand punishing conditions and to meet increasing pressure pulsing, flexing and temperature demands not currently covered by International specifications.

MSHA accepted cover available on request.

Features extraordinary flexibility, excellent bend radii properties, superior performance under flex-impulse conditions, and exceptional long life. Tested over 1,000,000 impulse cycles at 120% of rated working pressure at 250° F (121° C).

**Temperature Range:** -40° F (-40° C) to 250° F (121° C) constant operation.

**Maximum operating temperature:** 250° F (121° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 250° F (121° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
AT822ST❶	06	3/8	9.5	0.59	15.0	5,000	2.2	57	23	N/A	H1200202-06
AT804ST❶	08	1/2	12.7	0.87	22.2	5,000	6.0	150	52	N/A	H1100204-08
AT896ST❷	10	5/8	15.9	1.11	28.2	5,000	5.0	125	75	N/A	H1400200-10
AT896ST❷	12	3/4	19.0	1.27	32.2	5,000	5.5	140	108	N/A	H1400200-12
AT896ST❷	16	1	25.4	1.53	38.7	5,000	7.5	190	135	N/A	H1400200-16
AT8A3ST❷	20	1¼	31.8	1.79	45.5	5,000	18.0	460	171	N/A	H1400301-20
AT896ST	24	1½	38.1	2.26	57.3	5,000	18.7	475	325	N/A	H1400301-24
AT896ST	32	2	50.8	2.80	71.1	5,000	21.5	545	457	N/A	H1400301-32 or H1400300-32 ‡

❶ Double wire braid. ❷ Four wire spiral reinforced. All others are six wire spiral reinforced.

† Minimum burst pressure 4-to-1 safety factor.

‡ Special ferrule for KD200. Call Kuriyama for details.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

## Four and six wire spiral reinforced hydraulic hose with Supertuff cover



### AT897AA — Four and six wire spiral

All Alfatech 6000 hydraulic hose meets or exceeds the working and burst pressure requirements of SAE 100 R15  
– Meets flame resistance acceptance designation US MSHA IC-152/8.

### Construction:

**Tube** — Synthetic rubber, black... oil-resistant.

**Reinforcement** — Four or six layers of spirally wrapped high tensile steel wire reinforcement separated by synthetic rubber cushion on a fabric layer.

**Cover** — Synthetic rubber, black... oil, fuel, weather, ozone and abrasion-resistant.

**Couplings** — Interlock crimp-on permanent type.  
Note: For Interlock style, hose cover and portion of tube needs to be removed before attaching couplings.

**Branding** — ALFAGOMMA AT6K SUPERTUFF ID...WP  
42 MPa BP 168 MPa MSHA IC 152/8 Q/YR

### Application:

Extremely high pressure high impulse service with petroleum based hydraulic fluids such as hydrostatic transmissions. Developed to withstand punishing conditions and to meet increasing pressure pulsing, flexing and temperature demands not currently covered by International specifications.

MSHA accepted cover available on request.

Features extraordinary flexibility, excellent bend radii properties, superior performance under flex-impulse conditions, and exceptional long life. Tested over 1,000,000 impulse cycles at 120% of rated working pressure at 250° F (121° C).

**Temperature Range:** -40° F (-40° C) to 250° F (121° C) constant operation.

**Maximum operating temperature:** 250° F (121° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 250° F (121° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
AT897ST ①	10	5/8	15.9	11.14	28.6	6,000	10.0	250	88	N/A	H1400200-10
AT897ST ①	12	3/4	19.0	1.27	32.2	6,000	10.5	267	108	N/A	H1400200-12
AT897ST ①	16	1	25.4	1.52	38.7	6,000	11.0	280	135	N/A	H1400200-16

① Four wire spiral reinforced. All others are six wire spiral reinforced.

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

# Alfajet 210 Pressure Washer Hose



**Single wire braid light weight  
cleaning hose on easy-to-handle reels**



## Construction:

**Tube** — Synthetic rubber, black... hot water-resistant.

**Reinforcement** — High tensile steel wire braid.

**Cover** — Synthetic rubber, black or blue, non-marking... weather, oil, ozone and abrasion-resistant.

**Couplings** — Standard fittings and AlfaCrimp.

**Branding** — ALFAGOMMA ALFAJET 210 ID ...DN ...  
210 Bar WP - 155° C

## Application:

High pressure cleaning hose. For heavy duty use with hot and cold water and detergent fluids, and high pressure cleaning equipment. Extremely flexible, light weight and easy to handle. Use bend restrictors to extend service life.

Not recommended for steam service.

Special identification with embossed layline.

AA = Black Cover

AE = Blue Cover

**Temperature Range:** -40° F (-40° C) to 300° F (155° C) constant operation.

**Maximum operating temperature:** 300° F (155° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 300° F (155° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working† Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
T8B3AA	04	1/4	6.4	.48	12.1	3,000	2.0	50	11	N/A	H1200101-04
T8B3AA	05	5/16	7.9	.56	14.1	3,000	2.4	60	13	N/A	H1200101-05*
T8B3AA	06	3/8	9.5	.61	15.6	3,000	2.6	65	17	N/A	H1200101-06
T8B3AA	08	1/2	12.7	.77	19.5	3,000	3.6	90	27	N/A	H1200101-08
T8B3AE	04	1/4	6.4	.48	12.1	3,000	2.0	50	11	N/A	H1200101-04
T8B3AE	05	5/16	7.9	.56	14.1	3,000	2.4	60	13	N/A	H1200101-05*
T8B3AE	06	3/8	9.5	.61	15.6	3,000	2.6	65	17	N/A	H1200101-06
T8B3AE	08	1/2	12.7	.77	19.5	3,000	3.6	90	27	N/A	H1200101-08

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.

## Double wire braid light weight cleaning hose on easy-to-handle reels



### Construction:

**Tube** — Synthetic rubber, black... hot water-resistant.

**Reinforcement** — Two high tensile steel wire braids.

**Cover** — Synthetic rubber, black or blue... weather, oil, ozone and abrasion-resistant.

**Couplings** — Standard fittings and AlfaCrimp.

**Branding** — ALFAGOMMA ALFAJET 400 ID ...DN ...  
Bar WP - 155° C

### Application:

High pressure cleaning hose. For heavy duty use with hot and cold water and detergent fluids, and high pressure cleaning equipment. Extremely flexible, light weight and easy to handle. Use bend restrictors to extend service life.

Not recommended for steam service.

Special identification with embossed layline.

AA = Black Cover

AE = Blue Cover

**Temperature Range:** -40° F (-40° C) to 300° F (155° C) constant operation.

**Maximum operating temperature:** 300° F (155° C). **Air maximum temperature:** 175° F (80° C).

**Note:** Operating temperatures in excess of 300° F (155° C) may materially reduce the life of the hose.

## Nominal Specifications

Series Number	Size Code	Nominal ID		Nominal OD		Max. Working Pressure (psi)	Min. Bend. Radius		Approx. Weight (lbs/100ft)	Coupling Recommendations	
		(In)	(mm)	(In)	(mm)		(In)	(mm)		AlfaCrimp (One Piece)	Ferrules (Two Piece)
T8B4AA	04	1/4	6.4	.53	13.4	5,800	2.8	70	18	N/A	H1200102-04
T8B4AA	05	5/16	7.9	.59	15.0	5,800	3.0	76	21	N/A	H1200202-05
T8B4AA	06	3/8	9.5	.69	17.4	5,800	3.6	90	27	N/A	H1200202-06
T8B4AA	08	1/2	12.7	.81	20.6	5,800	4.6	115	36	N/A	H1200202-08
T8B4AE	04	1/4	6.4	.53	13.4	5,800	2.8	70	18	N/A	H1200102-04
T8B4AE	05	5/16	7.9	.59	15.0	5,800	3.0	76	21	N/A	H1200202-05
T8B4AE	06	3/8	9.5	.69	17.4	5,800	3.6	90	27	N/A	H1200202-06
T8B4AE	08	1/2	12.7	.81	20.6	5,800	4.6	115	36	N/A	H1200202-08

† Minimum burst pressure 4-to-1 safety factor.

**Freight:** Hydraulic Hose can be combined with other KOA products for qualifying prepaid freight orders.