JK Fenner

Powered by Innovation, Driven by excellence

70 YEARS

FLUID TRANSFER SOLUTIONS

CATALOGUE

JK Pioneer

ABOUT US

JK ORGANISATION

Diversified Business House with over **140 Years Heritage**

Multi-Business, Multi-Product, Multi-Location operations with **Annual Revenue $ 5 Bn**

Group Companies aggregate more than

500,000 shareholders and employ over 40,000 people

Strong nationwide sales and service network of over

10,000 distributors and large number of retailers and service centres

Group companies are governed by

Independent Board of Directors, headed by professional Chief Executives

ABOUT US

JK Fenner
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70 YEARS

J.K. Fenner (India) Limited, a part of the renowned JK Organisation since 1987, is a leading provider of fluid transmission, mechanical power transmission, and sealing solutions. With **70+ years of experience**, the company has built a strong legacy in manufacturing, sales, and distribution across both **Industrial** and **Automotive segments.**

In the Industrial segment, J.K. Fenner supports a wide range of applications with an extensive portfolio that includes **Hoses, Power Transmission Belts, Gearboxes, Geared Motors, Pulleys, Oil Seals, and Moulded Rubber Products.** These solutions cater to critical industries such as **Construction & Mining, Steel, Cement, Power, Sugar, Textiles, and Agriculture, both in India and internationally.**

In the Automotive segment, the company delivers advanced solutions such as **FEAD Systems, Belt Tensioners, Oil Seals, and EV-specific components**, making it a trusted partner to leading automotive OEMs.

With operations in over **50 countries,** supported by **9 world-class manufacturing facilities** and **4 advanced R&D centres**, J.K. Fenner continues to deliver reliable, efficient, and innovative solutions. Its focus on quality, performance, and customer satisfaction has firmly established it as a market leader in **Fluid Transmission Solutions in India,** and a preferred supplier in both **industrial and automotive domains.**

JK Fenner continues to set benchmarks in performance, service, and sustainability.

OUR SUSTAINABILITY PILLARS

We at JK Fenner focus on Environment, Society, and Compliance and they form the three pillars. The LEAN tool is used for resource consumption reduction to take care of the environment, the 3R tool is used for resource management and the abatement of CO_2 emissions to reduce net GHG emissions to achieve our sustainability goals.

Resource Management

- Energy Efficiency
- Water Conservation
- Material Reduction, Recycling
- Product innovations

Green House Gas (GHG)

- Abatement
- Renewable Energy
- Emission Reductions

Pollutant Reduction

- Green Materials
- Green Technology
- Green Supply Chain
- Compliance

OUR SUSTAINABILITY INITIATIVES

At the heart of our operations lies a deep commitment to sustainability and responsible growth. We strive to minimize our environmental footprint while creating lasting value for our stakeholders. Our sustainability initiatives reflect our continuous efforts to innovate, conserve resources, and empower communities. These focus areas guide us on our journey toward a greener, more sustainable future.

SUSTAINABILITY INITIATIVES

Renewable Energy
30 years of Green Energy Leadership

Energy Efficiency
A Way of Life

Water
Being water-wise, Saving every drop

People and Community
Standing Together

GHG Management
Being Climate Conscious

Management and Compliance
Plan, Do, Check and Act

Product Sustainability and Innovation
Enhance Product Life Cycle, Green Raw Material

MANUFACTURING UNITS

9 Plants

4 R&D Facilities

Madurai - 1
R&D, Manufacturing
Industrial Belts and Hoses

Madurai - 2
Manufacturing
Automotive Belts and Hoses

Madurai - 3
Manufacturing
Hydraulic Hoses

Chennai (Sriperumbudur)
R&D, Manufacturing
Oil Seal

Hyderabad - 1
Manufacturing
Oil Seals and Belts

Hyderabad - 2
R&D, Manufacturing
Mechanical Products

Faridabad
Manufacturing
Hose Assembly

Bangalore
Manufacturing
Precision Machining

Salem
R&D, Manufacturing
Textiles

SEGMENTS THAT WE CATER TO

- Steel
- Cement
- Power
- Engineering
- Manufacturing
- Agriculture
- Mining
- Paper
- Sugar
- Oil and Gas
- Construction
- Machine Tool
- Original Equipment Manufacturers

DASH, DN, INCH CONVERSION TABLE

DASH EXPRESSION	INCH SIZE	DN EXPRESSION
-3	3/16	5
-4	1/4	6
-5	5/16	8
-6	3/8	10
-8	1/2	12
-10	5/8	16
-12	3/4	19
-14	7/8	22
-16	1	25
-18	1-1/8	28/29*
-20	1-1/4	31
-24	1-1/2	38
-32	2	51
-40	2-1/2	63
-48	3	76
-64	4	102

CERTIFICATIONS

CTPAT™ YOUR SUPPLY CHAIN'S STRONGEST LINK

Score 2019 : 99% ***(By SGS)***

VDA 6.3

(By Class),
Social Audit ***(By TUV)***

U.S. Department of Labor MSHA Mine Safety & Health Administration

Material Compliance to
ROHS and REACH

TABLE OF CONTENT

Hydraulic Hose

Spiral hose

Hose – Industrial

Technical

HOSE VISUAL INDEX

SECTION - A
HYDRAULIC HOSES

EN 853 1SN

SAE 100 R1 AT

EN 853 1SN

RHINOTUFF COVER SAE 100R1 AT

EN 853 2SN

SAE 100 R2 AT

EN 853 2SN

RHINOTUFF COVER SAE 100 R2 AT

SAE 100 R3

SAE 100 R6

SAE 100 R6 (HI-TEMP)

EN 857 2SC

COMPACT HOSE SAE 100 R16

EN 857 2SC

RHINOTUFF COVER COMPACT HOSE SAE 100 R16

FXFT SAE 100 R16

ISO11237

CONSTANT PRESSURE COMPACT HOSE SAE 100 R17

ISO11237 SAE 100 R17

RHINOTUFF COVER CONSTANT PRESSURE COMPACT HOSE

ISO11237 SAE 100 R19

CONSTANT PRESSURE COMPACT HOSE

ISO11237 SAE 100 R19

RHINOTUFF COVER CONSTANT PRESSURE COMPACT HOSE

JACK HOSE IJ100

AGROTROLLEY 1-WIRE HYDRAULIC HOSE

AGROTROLLEY 2-WIRE HYDRAULIC HOSE

EN857 1SC

RHINOTUFF COVER COMPACT HOSES

EN 857 1SC

COMPACT HOSE

SAE 100 R1 AT/ EN 853 1SN

1-WIRE BRAID HYDRAULIC HOSE
FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded oil-resistant NBR (Black)
Reinforcement:
One Braid of high-tensile steel wire
Cover:
Oil and ozone resistance NBR/PVC - Black (CR cover available on request) MSHA certified.
Temperature range:
-40°C to +100°C, continuous operation. For air max temperature = +70°C

Main applications:
Medium-pressure hydraulic liness, fuel oil, antifreeze solutions, air and water. Conforms to SAE 100 R1/ EN853 1SN and ISO 1436-1 standards. Cover finish Available from 1/4" to 3/4" ID in smooth and wrap finish. Sizes from 1" to 2" will be available in wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 R1	1/4	6.3	13	10.9	3250	225	13060	900	100
5 R1	5/16	8.0	14.4	12.3	3100	215	12480	860	115
6 R1	3/8	9.5	17.1	15.2	2600	180	10400	720	125
8 R1	1/2	12.5	20.1	17.9	2320	160	9280	640	180
10 R1	5/8	15.9	23.2	21.0	1885	130	7540	520	205
12 R1	3/4	19.0	27.3	25.3	1525	105	6100	420	240
16 R1	1	25.0	35.3	33	1275	88	5100	352	300
20 R1	1-1/4	31.5	43.1	40.5	915	63	3660	248	420
24 R1	1-1/2	38.0	49.2	46.5	725	50	2900	200	500
32 R1	2	51.0	62.6	60	580	40	2320	160	630

RHINOTUFF COVER
SAE 100R1 AT/EN 853 1SN

1-WIRE BRAID HYDRAULIC HOSE
FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded oil-resistant NBR (Black)

Reinforcement:
One Braid of high-tensile Steel wire.

Cover:
High abrasion resistance, oil and ozone resistance synthetic rubber - MSHA certified.

Temperature range:
-40 °C to +100 °C, continuous operation. For air max Temperature = +70 °C.

Main applications:
Medium-pressure hydraulic liness, fuel oil, antifreeze solutions, air and water. Conforms to SAE100R1 / EN853 1SN and ISO 1436-1 Specifications. Cover Finish available from 1/4" to 3/4" ID in smooth and wrap finish. Sizes from 1" to 2" will be available in wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 R1 Rhinotuff	1/4	6.3	13	10.9	3250	225	13060	900	100
5 R1 Rhinotuff	5/16	8.0	14.4	12.3	3100	215	12480	860	115
6 R1 Rhinotuff	3/8	9.5	17.1	15.2	2600	180	10440	720	125
8 R1 Rhinotuff	1/2	12.5	20.1	17.9	2320	160	9280	640	180
10 R1 Rhinotuff	5/8	15.9	23.2	21	1885	130	7540	520	205
12 R1 Rhinotuff	3/4	19.0	27.3	25.3	1525	105	6100	420	240
16 R1 Rhinotuff	1	25.0	35.3	33	1275	88	5100	352	300
20 R1 Rhinotuff	1-1/4	31.5	43.1	40.5	915	63	3660	248	420
24 R1 Rhinotuff	1-1/2	38.0	49.2	46.5	725	50	2900	200	500
32 R1 Rhinotuff	2	51.0	62.6	60	580	40	2320	160	630

SAE 100 R2 AT / EN 853 2SN

2-WIRE BRAID HYDRAULIC HOSE
FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded oil-resistant NBR (Black)

Reinforcement:
Two Braid of high-tensile steel wire

Cover:
Oil and ozone resistance NBR/PVC- Black (CR cover available on request) MSHA certified.

Temperature range:
-40°C to +100°C, , continuous operation. For air max temperature = +70°C

Main applications:
High pressure hydraulic lines, fuel oil, antifreeze solutions, air and water. Conforms to SAE 100 R2/ EN853 2SN and ISO 1436-2 Specifications. Cover Finish available from 1/4" to 3/4" ID in smooth and wrap finish. Sizes from 1" to 2" will be available in wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 R2	1/4	6.3	14.7	12.8	5800	400	23200	1600	100
5 R2	5/16	8	16.4	14.2	5075	350	20300	1400	115
6 R2	3/8	9.5	18.5	16.4	4785	330	19140	1320	125
8 R2	1/2	12.5	21.8	19.9	4000	275	16000	1100	180
10 R2	5/8	15.9	25	22.7	3625	250	14500	1000	205
12 R2	3/4	19	28.9	26.9	3120	215	12480	860	240
16 R2	1	25	36.8	34.6	2395	165	9580	660	300
20 R2	1-1/4	31.5	46.4	43.8	1815	125	7260	500	420
24 R2	1-1/2	38	52.8	50.1	1305	90	5220	360	500
32 R2	2	51	64.8	62.2	1160	80	4640	320	630

RHINOTUFF COVER
SAE 100R2 AT / EN 853 2SN

2-WIRE BRAID HYDRAULIC HOSE
FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded oil resistance NBR (Black)

Reinforcement:
Two braid of high tensile steel wire.

Cover:
High abrasion resistance, oil and ozone resistance synthetic rubber - MSHA certified.

Temperature range:
-40°C to +100°C, continuous operation. For air max temperature = +70°C

Main applications:
High pressure hydraulic lines, fuel oil, antifreeze solutions, air and water. Conforms to SAE100R2/EN 853 2SN and ISO 1436-2 Specifications. Cover Finish available from 1/4" to 3/4" ID in smooth and wrap finish. Sizes from 1" to 2" will be available in wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 R2 Rhinotuff	1/4	6.3	14.7	12.8	5800	400	23200	1600	100
5 R2 Rhinotuff	5/16	8	16.4	14.2	5075	350	20300	1400	115
6 R2 Rhinotuff	3/8	9.5	18.5	16.4	4785	330	19140	1320	125
8 R2 Rhinotuff	1/2	12.5	21.8	19.9	4000	275	16000	1100	180
10 R2 Rhinotuff	5/8	15.9	25	22.7	3625	250	14500	1000	205
12 R2 Rhinotuff	3/4	19	28.9	26.9	3120	215	12480	860	240
16 R2 Rhinotuff	1	25	36.8	34.6	2395	165	9580	660	300
20 R2 Rhinotuff	1-1/4	31.5	46.4	43.8	1815	125	7260	500	420
24 R2 Rhinotuff	1-1/2	38	52.8	50.1	1305	90	5220	360	500
32 R2 Rhinotuff	2	51	64.8	62.2	1160	80	4640	320	630

SAE 100R3

2-YARN BRAID HYDRAULIC HOSE

Tube:

Specially compounded oil-resistant NBR (Black)

Reinforcement:

Two Braid of high tenacity yarn.

Cover:

Oil and ozone resistance NBR/PVC-Black. (CR cover available on request)

Temperature range:

From -40°C to +100°C, , continuous operation. For Air max T=+70°C

Main applications:

Hydraulic Applications in Low pressure lines, return lines and drain lines. Fuel oil, antifreeze solutions, air and water. Conforms to SAE100 R3 Specification.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
4 R3	1/4	6.3	15	1262	87	5046	348	75
5 R3	5/16	8	17.8	1200	83	4800	332	100
6 R3	3/8	9.5	18.8	1125	78	4500	312	100
8 R3	1/2	12.5	23.4	1000	69	4000	276	125
10 R3	5/8	15.9	27	875	61	3500	244	140
12 R3	3/4	19	31.7	750	52	3000	208	150
16 R3	1	25	38.5	565	39	2260	156	200
20 R3	1-1/4	31.5	44.4	375	26	1500	104	250
24 R3	1-1/2	38	51	300	21	1200	84	400

SAE 100R6

1-YARN BRAID HYDRAULIC HOSE

Tube:

Specially compounded oil-resistant NBR (Black)

Reinforcement:

One Braid of high tenacity yarn

Cover:

Oil and ozone resistance NBR/PVC-Black (CR cover available on request)

Temperature range:

From -40 °C to +100 °C , continuous operation. For air max T = +70 °C

Main applications:

Hydraulic Applications in Low pressure lines, return lines and drain lines. Fuel oil antifreeze solutions, air and water. Conforms to SAE 100R6 Specification

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
4 R6	1/4	6.3	12.8	400	28	1600	112	65
5 R6	5/16	8	14	400	28	1600	112	75
6 R6	3/8	9.5	16	400	28	1600	112	75
8 R6	1/2	12.5	19.7	400	28	1600	112	100
10 R6	5/8	15.9	23.2	350	24	1400	96	125
12 R6	3/4	19	26.4	300	21	1200	84	150
16 R6	1	25	33.5	205	14	820	56	200

SAE 100R6 (HI-TEMP)

1-YARN BRAID HYDRAULIC HOSE

Tube:

Specially compounded oil-resistant NBR (Black)

Reinforcement:

One Braid of high tenacity yarn.

Cover:

Oil and ozone resistance with CR cover.

Temperature range:

From -40 °C to +135 °C , continuous operation.

For air max T = +100 °C.

Main applications:

Hydraulic Applications in Low pressure lines, return lines and drain lines. Fuel oil, antifreeze solutions, air and water. Conforms to SAE 100 R6 Specification.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
4 R6HT	1/4	6.3	12.8	400	28	1600	112	65
5 R6HT	5/16	8	14	400	28	1600	112	75
6 R6HT	3/8	9.5	15.8	400	28	1600	112	75
8 R6HT	1/2	12.5	19.5	400	28	1600	112	100
10 R6HT	5/8	15.9	23	350	24	1400	96	125
12 R6HT	3/4	19	26.4	300	21	1200	84	150
16 R6HT	1	25	33.5	205	14	820	56	200

SAE 100R16 / EN 857 2SC

2-WIRE BRAID HYDRAULIC HOSE
FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded oil-resistant NBR (Black)

Reinforcement:
Two Braid of high-tensile Steel wire.

Cover:
Oil and ozone resistance NBR/PVC-Black (CR cover available on request) MSHA Certified.

Temperature range:
-40 °C to +100 °C , continuous operation. For air max Temperature = +70 °C

Main applications:
High pressure hydraulic lines, fuel oil, antifreeze solutions air and water. Conforms to SAE 100 R16/ EN857 2SC Specifications UP TO 1-1/4". Rest two sizes 1-1/2"-2" JK Proprietary specifications. Cover finish available from 1/4" to 3/4" ID in smooth and wrap finish. Sizes from 1" to 2" will be available in wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 2SC	1/4	6.3	13.6	11.9	5800	400	23200	1600	75
5 2SC	5/16	8	15.1	13.1	5075	350	20300	1400	85
6 2SC	3/8	9.5	17.1	15.5	4785	330	19120	1320	90
8 2SC	1/2	12.5	20.4	18.2	4000	275	16000	1100	90
10 2SC	5/8	15.9	23.8	22.2	3625	250	14500	1000	100
12 2SC	3/4	19	27.6	25.2	3120	215	12480	860	120
16 2SC	1	25	35	32.9	2395	165	9580	660	150
20 2SC	1-1/4	31.5	42.5	40.1	1810	125	7240	500	210
24 2SC	1-1/2	38	51.3	48	1450	100	5800	400	300
32 2SC	2	50	63.8	61.6	1305	90	5220	360	400

RHINOTUFF COVER COMPACT HOSE
SAE 100R16 / EN 857 2SC

2-WIRE BRAID HYDRAULIC HOSE
FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded Oil resistance NBR-Black.

Reinforcement:
Two Braid of High Tensile Steel wire.

Cover:
High Abrasion resistance, Oil & Ozone resistance Synthetic Rubber- MSHA certified.

Temperature range:
-40°C to +100°C continuous operation. For Air max temperature = +70°C.

Main applications:
High pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.
Conforms to SAE100R16/EN857 2SC Specifications up to 1-1/4"
Rest two sizes 1-1/2"-2" JK Proprietory spec. Cover Finish available from 1/4" to 3/4" ID in smooth & Wrap finish. Sizes 1" up to 2" will be available in Wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 2SC Rhinotuff	1/4	6.3	13.6	11.9	5800	400	23200	1600	75
5 2SC Rhinotuff	5/16	8	15.1	13.1	5075	350	20300	1400	85
6 2SC Rhinotuff	3/8	9.5	17.1	15.5	4785	330	19120	1320	90
8 2SC Rhinotuff	1/2	12.5	20.4	18.2	4000	275	16000	1100	90
10 2SC Rhinotuff	5/8	15.9	23.8	22.2	3625	250	14500	1000	100
12 2SC Rhinotuff	3/4	19	27.6	25.2	3120	215	12480	860	120
16 2SC Rhinotuff	1	25	35	32.9	2395	165	9580	660	150
20 2SC Rhinotuff	1-1/4	31.5	42.5	40.5	1810	125	7240	500	210
24 2SC Rhinotuff	1-1/2	38	51.3	48	1450	100	5800	400	300
32 2SC Rhinotuff	2	50	63.8	61.6	1305	90	5220	360	400

FXFT SAE 100R16 / EN 857 2SC

2-WIRE BRAID HYDRAULIC HOSE

Tube:

Specially compounded oil-resistance NBR (Black)

Reinforcement:

Two Braid of high-tensile Steel wire.

Cover:

Oil and ozone resistance, NBR/PVC - Black.

Temperature range:

-40°C to +100°C, , continuous operation. For air max Temperature = +70°C.

Main applications:

High performance hose with 600000 Impulse cycles. High pressure hydraulic lines, fuel oil, anti - freeze solution air and water. Conforms to SAE 100R16/ EN 857 2SC Specifications. Sizes available from 1/4" to 1" in wrap finish.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
4 FXFT	1/4	6.3	14.3	6090	420	24360	1680	75
6 FXFT	3/8	9.5	17.5	5075	350	20300	1400	90
8 FXFT	1/2	12.5	20.3	4060	280	16240	1120	90
10 FXFT	5/8	15.9	24.2	3770	260	15080	1040	100
12 FXFT	3/4	19	27.8	3250	225	13050	900	120
16 FXFT	1	25	35.2	2530	175	10150	700	150

CONSTANT PRESSURE COMPACT HOSE SAE 100R17/ISO11237

R17 WIRE BRAID HYDRAULIC HOSE FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded oil-resistant NBR (Black)

Reinforcement:
One or Two Braid of high-tensile Steel wire.

Cover:
Oil, Abrasion and Ozone resistance NBR/PVC-Black. (CR cover available on request) MSHA Certified

Temperature range:
From -40 °C to +100 °C , continuous operation.
For air max Temperature = +70 °C

Main applications:
Medium-pressure hydraulic lines. Suitable for petroleum-based hydraulic fluids, synthetic ester, biodegradable hydraulic fluids, water-glycol based fluids and lubricating oil. Conforms to SAE 100 R17/ ISO11237 R17 Specifications. Cover Finish available from 1/4" to 1" in wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 R17	1/4	6.3	12.6	10.6	3050	210	12200	840	50
5 R17	5/16	8	14.5	12.3	3050	210	12200	840	55
6 R17	3/8	9.5	16.2	14.2	3050	210	12200	840	65
8 R17	1/2	12.5	20	17.9	3050	210	12200	840	90
10 R17	5/8	15.9	24.3	22.6	3050	210	12200	840	100
12 R17	3/4	19	28	26.2	3050	210	12200	840	120
16 R17	1	25	36.3	34	3050	210	12200	840	150

RHINOTUFF COVER CONSTANT PRESSURE COMPACT HOSE SAE 100R17/ISO11237

R17 WIRE BRAID HYDRAULIC HOSE FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded oil-resistant NBR (Black)

Reinforcement:
One or two braids of high-tensile Steel wire.

Cover:
High abrasion resistance, oil and ozone resistance synthetic rubber - MSHA certified.

Temperature range:
From -40°C to +100°C, continuous operation. For maximum air temperature of approximately +70 °C

Main applications:
Medium-pressure hydraulic lines. Suitable for petroleum-based hydraulic fluids, synthetic ester, biodegradable hydraulic fluids, water-glycol based fluids and lubricating oil. Conforms to SAE 100R17/ISO11237 R17 specifications. Cover Finish available from 1/4" to 1" in wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 R17 Rhinotuff	1/4	6.3	12.6	10.6	3050	210	12200	840	50
5 R17 Rhinotuff	5/16	8	14.5	12.3	3050	210	12200	840	55
6 R17 Rhinotuff	3/8	9.5	16.2	14.2	3050	210	12200	840	65
8 R17 Rhinotuff	1/2	12.5	20	17.9	3050	210	12200	840	90
10 R17 Rhinotuff	5/8	15.9	24.3	22.6	3050	210	12200	840	100
12 R17 Rhinotuff	3/4	19	28	26.2	3050	210	12200	840	120
16 R17 Rhinotuff	1	25	36.3	34	3050	210	12200	840	150

CONSTANT PRESSURE COMPACT HOSE
SAE 100R19/ISO11237

R19 WIRE BRAID HYDRAULIC HOSE
FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded oil-resistant NBR (Black)

Reinforcement:
Two Braid of high-tensile Steel wire.

Cover:
Oil, Abrasion and Ozone resistance NBR/PVC-Black. (CR cover available on request) MSHA Certified.

Temperature range:
From -40°C to +100°C, , continuous operation.
For air Temperature = +70°C.

Main applications:
Medium-pressure hydraulic lines. Suitable for petroleum-based hydraulic fluids, synthetic ester, biodegradable hydraulic fluids, water-glycol based fluids and lubricating oil. Conforms to SAE 100R19 Specifications. Cover Finish available from 1/4" to 1" in wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 R19	1/4	6.3	14.1	12	4050	280	16200	1120	50
5 R19	5/16	8	15.1	13.1	4050	280	16200	1120	55
6 R19	3/8	9.5	17.1	15.2	4050	280	16200	1120	65
8 R19	1/2	12.5	21.1	19	4050	280	16200	1120	90
10 R19	5/8	15.9	25.2	23.4	4050	280	16200	1120	100
12 R19	3/4	19	27.7	25.8	4050	280	16200	1120	120
16 R19	1	25.0	38.2	34.2	4050	280	16200	1120	150

RHINOTUFF COVER CONSTANT PRESSURE COMPACT HOSE SAE 100R19/ISO11237

R19 WIRE BRAID HYDRAULIC HOSE FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded oil-resistant NBR (Black)

Reinforcement:
Two Braid of high-tensile Steel wire.

Cover:
Oil, Abrasion and Ozone resistance NBR/PVC-Black. (CR cover available on request) MSHA Certified.

Temperature range:
From -40°C to +100°C, , continuous operation. For air max Temperature +70°C.

Main applications:
Medium-pressure hydraulic lines. Suitable for petroleum-based hydraulic fluids, synthetic ester, biodegradable hydraulic fluids, water-glycol based fluids and lubricating oil. Conforms to SAE 100R19 Specifications. Sizes available from ¼ " to 1 " ID in wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 R19 Rhinotuff	1/4	6.3	14.1	12	4050	280	16200	1120	50
5 R19 Rhinotuff	5/16	8	15.1	13.1	4050	280	16200	1120	55
6 R19 Rhinotuff	3/8	9.5	17.1	15.2	4050	280	16200	1120	65
8 R19 Rhinotuff	1/2	12.5	21.1	19	4050	280	16200	1120	90
10 R19 Rhinotuff	5/8	15.9	25.2	23.4	4050	280	16200	1120	100
12 R19 Rhinotuff	3/4	19	27.7	25.8	4050	280	16200	1120	120
16 R19 Rhinotuff	1	25.0	38.2	34.2	4050	280	16200	1120	150

JACK HOSE IJ100

2- WIRE BRAID HYDRAULIC HOSE FLAME RESISTANCE 'MSHA' COVER

Tube:

Specially compounded oil-resistant NBR (Black)

Reinforcement:

Two Braid of high-tensile Steel wire

Cover:

Oil, Abrasion and Ozone resistance NBR/PVC-Black. MSHA Certified.

Temperature range:

From -40°C to +100°C, , continuous operation. For air max Temperature = +70°C

Main applications:

- Industrial jack application
- Conforms to IJ100 R17 Specifications
- Cover Finish available in smooth and wrap finish

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 JACK	1/4	6.3	14.7	12.9	10500	725	21000	1450	100
6 JACK	3/8	9.5	18.1	16.4	10500	725	21000	1450	125

AGROTROLLEY HOSE

1- WIRE BRAID HYDRAULIC HOSE

Tube:

Specially compounded oil-resistant NBR (Black)

Reinforcement:

One Braid of high-tensile Steel wire.

Cover:

Oil and ozone resistance NBR/PVC-Black.

Temperature range:

-40°C to +100°C,, continuous operation

Main applications:

Tractor Trolley Application

Caution:

Don't use this hose as a replacement of SAE100R1 Hose.

Cover Finish available ID in smooth and wrap finish

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
6 AGT-1WIRE	3/8	9.5	17	15	2450	170	7350	510	125
8 AGT-1WIRE	1/2	12.5	20	18	2000	140	6000	420	180

AGROTROLLEY HOSE

2-WIRE BRAID HYDRAULIC HOSE

Tube:

Specially compounded oil-resistant NBR (Black)

Reinforcement:

Two Braid of high-tensile Steel wire.

Cover:

Oil and ozone resistance NBR/PVC-Black.

Temperature range:

-40°C to +100°C, , continuous operation

Main applications:

Tractor Trolley Application

Caution:

Don't use this hose as a replacement of SAE100R2 Hose.

Cover Finish available ID in smooth and wrap finish

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
6 AGT-2WIRE	3/8	9.5	17.9	15.7	3500	245	8750	615	125
8 AGT-2WIRE	1/2	12.5	21.2	19	3500	245	8750	615	180

COMPACT HOSE EN 857 1SC

1-WIRE BRAID HYDRAULIC HOSE
FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded oil-resistant NBR (Black)

Reinforcement:
One Braid of high-tensile Steel wire.

Cover:
Oil and ozone resistance NBR/PVC-Black. (CR cover available on request) MSHA certified.

Temperature range:
-40°C to +100°C,, continuous operation. For air max Temperature ≈ +70°C

Main applications:
Medium-pressure hydraulic liness, fuel oil, antifreeze solutions, air and water. Conforms to EN 857 1SC Specifications. Cover Finish available from 1/4" to 3/4" ID in smooth and wrap finish. Sizes from 1" to 2" will be available in wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 1SC	1/4	6.3	12.4	10.3	3265	225	13000	900	75
5 1SC	5/16	8	13.9	11.7	3100	215	12400	860	85
6 1SC	3/8	9.5	15.8	13.8	2610	180	10440	720	90
8 1SC	1/2	12.5	19.1	17.1	2320	160	9280	640	130
10 1SC	5/8	15.9	22.3	20.3	1885	130	7540	520	150
12 1SC	3/4	19	25.6	23.7	1525	105	6100	420	180
16 1SC	1	25	33.2	31.1	1275	88	5100	352	230
20 1SC	1-1/4	31.5	40.9	38.7	915	63	3660	252	315
24 1SC	1-1/2	38	46.8	44.3	725	50	2900	200	375
32 1SC	2	50	61	58	580	40	2320	160	475

RHINOTUFF COVER COMPACT HOSES EN857 1SC

1- WIRE BRAID HYDRAULIC HOSE FLAME RESISTANCE 'MSHA' COVER

Tube:
Specially compounded oil-resistant NBR (Black)

Reinforcement:
One Braid of high-tensile Steel wire.

Cover:
High abrasion resistance, oil and ozone resistance synthetic rubber - MSHA certified.

Temperature range:
-40 °C to +100 °C , continuous operation. For air max Temperature = +70 °C.

Main applications:
Medium-pressure hydraulic liness, fuel oil, antifreeze solutions, air and water. Conforms to EN 857 1SC Specifications up to 1". Rest three sizes 1-1/4" - 2" JK Proprietary spec. Cover Finish available from 1/4" to 3/4" ID in smooth and wrap finish. Sizes from 1" to 2" will be available in wrap finish only.

Product	Hose ID		NOM.HOSE OD	WIRE BRAID OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	MM	PSI	BAR	PSI	BAR	NM
4 1SC RHINOTUFF	1/4	6.3	12.4	10.3	3265	225	13000	900	75
5 1SC RHINOTUFF	5/16	8	13.9	11.7	3100	215	12400	860	85
6 1SC RHINOTUFF	3/8	9.5	15.8	13.8	2610	180	10440	720	90
8 1SC RHINOTUFF	1/2	12.5	19.1	17.1	2320	160	9280	640	130
10 1SC RHINOTUFF	5/8	15.9	22.3	20.3	1885	130	7540	520	150
12 1SC RHINOTUFF	3/4	19	25.6	23.7	1525	105	6100	420	180
16 1SC RHINOTUFF	1	25	33.2	31.1	1275	88	5100	352	230
20 1SC RHINOTUFF	1-1/4	31.5	40.9	38.7	915	63	3660	252	315
24 1SC RHINOTUFF	1-1/2	38	46.8	44.3	725	50	2900	200	375
32 1SC RHINOTUFF	2	50	61	58	580	40	2320	160	475

SECTION - B
SPIRAL HOSES

4SH SERIES

4SP SERIES

Note: R12, R14, R15 Hoses are under validation stage

4SH SERIES

Construction:

The hose consists of an inner tube of oil synthetic rubber, four or six layers of spiral wire reinforcement, an oil and weather resistance rubber cover.

Application:

Suitable for conveying hydraulic fluids such as glycol, mineral oil, lubrication, emulsion, hydrocarbons etc. Should not be used for conveying phosphate easter group.

Temperature range:

-40°F to +212°F (-40°C to +100°C,)

Impluse Test:

Specified – 4,00,000 Cycles

Tested up to – 8,00,000 Cycles

(Impulse test conducted with JK Fenner designed fittings)

Product	Hose ID			NOMINAL HOSE OD		MAX. WORKING PRESSURE		MINIMUM BURST PRESSURE		MINIMUM BEND RADIUS		APPROX. WEIGHT
	DASH	MM	INCH	MM	INCH	MPA	PSI	MPA	PSI	MM	INCH	KG/M
3/4" 4SH	-12	19	3/4	32.1	1.26	42	6090	168	24360	280	11.02	1.63
1" 4SH	-16	25	1	38.4	1.51	38.5	5580	154	22330	340	13.38	2.12
1-1/4" 4SH	-20	32	1-1/4	45.4	1.79	32.5	4710	130	18850	460	18.11	2.77
1-1/2" 4SH	-24	38	1-1/2	53.4	2.1	29	4200	116	16820	560	22.05	3.6
2" 4SH	-32	51	2	68.2	2.68	25	3625	100	14500	700	27.56	4.9

4SP SERIES

Construction:

The Hose Consists of an Inner Tube of Oil synthetic rubber, four or six Layers of Spiral Wire Reinforcement, an Oil and Weather Resistance Rubber Cover

Application:

Suitable for conveying Hydraulic Fluids such as Glycol, Mineral Oil, Lubrication, Emulsion, Hydrocarbons etc. Should not be used for conveying phosphate easter group.

Temperature range:

-40°F to +212°F (-40°C to +100°C,)

Impluse Test:

Specified – 4,00,000 Cycles

Tested Up to – 8,00,000 Cycles

(Impulse Test conducted with JK Fenner designed fittings)

Product	Hose ID			NOMINAL HOSE OD		MAX. WORKING PRESSURE		MINIMUM BURST PRESSURE		MINIMUM BEND RADIUS		APPROX. WEIGHT
	DASH	MM	INCH	MM	INCH	MPA	PSI	MPA	PSI	MM	INCH	KG/M
1/2" 4SP	-8	13	1/2	24.8	0.97	42.5	6160	170	24650	230	9.1	0.9
5/8" 4SP	-10	16	5/8	27.9	1.1	35	5075	140	20300	250	9.84	1.06
3/4" 4SP	-12	19	3/4	32.0	1.26	35	5075	140	20300	300	11.81	1.61
1" 4SP	-16	25	1	39.7	1.56	28	4060	112	16240	340	13.38	2.07
1-1/4" 4SP	-20	32	1-1/4	51	2	21	3045	84	12180	460	18.11	3.1

HOSE VISUAL INDEX

SECTION - C
INDUSTRIAL HOSES


AIR WATER IS:444 TYPE 2


CARBON FREE HOSE


WELDING HOSE


PNEUMATIC TOOL HOSE IS:446 TYPE 2


ROCKDRILL HOSE IS:446 TYPE 3


HD AIRDRILL HOSE


MILD CHEMICAL HOSE


AGRICULTURE SPRAY HOSE


HI STEAM HOSE


CAR WASH HOSE


HARD WALL PETROL/DIESEL DISPENSING HOSE


HI TEMP AIR DRILL


COMPRESSOR HOSE FOR HOT AIR


FIRE EXTINGUISHER HOSE FOR CO2 APPLICATION


SAND BLAST HOSE


SUPREME SAND BLAST HOSE


CNG HOSE SAEJ30R6 AND IS:15722


HEATER HOSE


NITRO EXPLOSIVE HOSE


GENERAL PURPOSE HOSE


EXTREME HEAT HOSE

AIR WATER HOSE IS:444 TYPE 2

Tube:

Synthetic rubber - Modified SBR-Black

Reinforcement:

One or Two Braid of high tenacity yarn.

Cover:

Weather and abrasion resistance NBR-PVC-Black.

Temperature range:

From -30°C to +70°C , continuous operation.

Main applications:

An economical Air and water hose, for a wide range of industrial, workshops, construction and agricultural and Irrigation etc.

Meet Exceeds performance requirement of IS:444 Type 2

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
8 AW	1/2	12.5	20	175	12	525	36	125
12 AW	3/4	20	28	175	12	525	36	150
16 AW	1	25	35.9	175	12	525	36	200
20 AW	1-1/4	31.5	42.9	175	12	525	36	250
24 AW	1-1/2	38	49.6	175	12	525	36	300
28 AW	1-3/4	45	57.5	175	12	525	36	300
32 AW	2	50	62.3	175	12	525	36	425

CARBON FREE HOSE

Tube:

Specially No carbon compounded NBR-Off White

Reinforcement:

One or two braids of high tenacity yarn.

Cover:

Weather and abrasion resistance NBR-PVC-Green

Temperature range:

From -40°C to +70°C , continuous operation.

Main applications:

in Induction furnace cable cooling application in steel Industries, and other non-conductive applications. Specially developed Tube, Cover and Hose composite meets service requirement of Low leakage current (Less than 20 micro amps current @6000 Volt DC).

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
6 CF	3/8	10	17.5	250	17.5	1015	70	75
8 CF	1/2	12.5	21.5	250	17.5	1015	70	100
12 CF	3/4	20	30.3	250	17.5	1015	70	150
16 CF	1	25	36.6	250	17.5	1015	70	150
20 CF	1-1/4	31.5	44.6	250	17.5	1015	70	195
24 CF	1-1/2	38	52	250	17.5	1015	70	250
32 CF	2	50	65.5	250	17.5	1015	70	300

WELDING HOSE (RED AND BLUE COVER) IS: 447

Tube:

Synthetic rubber - Black

Reinforcement:

One Braid of high tenacity yarn

Cover:

synthetic rubber - Blue and Red

Temperature range:

From -30°C to +70°C , continuous operation

Main applications:

A lightweight, economical hose for use in welding equipment carrying Oxygen and Acetylene Gas. Red Cover is used for Acetylene or other fuel gases. Blue Cover is used for Oxygen or other non-combustible gases. Meets or exceeds performance requirement of IS:447

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
5 WELDING	5/16	8	15	250	17.5	1000	70	95
6 WELDING	3/8	10	17	250	17.5	1000	70	100

PNEUMATIC TOOL HOSE IS:446 TYPE 2

Tube:

Synthetic rubber-Modified SBR-Black

Reinforcement:

One or Two Braid of high tenacity yarn

Cover:

Weather and abrasion resistance NBR-PVC-Black

Temperature range:

From -30°C to +70°C , continuous operation

Main applications:

These Hoses are intended to be used on all types of Pneumatic Tools for compressed air in different Industries.

Meets or exceeds the performance requirements of IS:446-Type 2

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
4 PT	1/4	6.3	13.6	200	14	800	56	75
5 PT	5/16	8	15.2	200	14	800	56	95
6 PT	3/8	10	17	200	14	800	56	100
8 PT	1/2	12.5	20.4	200	14	800	56	125
10 PT	5/8	16	23.4	200	14	800	56	140
12 PT	3/4	20	28.5	200	14	800	56	150
16 PT	1	25	35.8	200	14	800	56	200
20 PT	1-1/4	31.5	43.6	200	14	800	56	250
24 PT	1-1/2	38	50	200	14	800	56	300
32 PT	2	50	62.8	200	14	800	56	425

ROCKDRILL HOSE IS:446 TYPE 3

Tube:

Synthetic rubber - Modified SBR-Black

Reinforcement:

One or two braids of high tenacity yarn.

Cover:

Weather and abrasion resistance NBR-PVC-Black.

Temperature range:

From -30°C to +70°C , continuous operation.

Main applications:

Used For air supply in Industrial construction and mining in Air Drills.

Meets or exceeds performance requirement of IS:446 Type 3.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
8 RD	1/2	12.5	22	300	21	1200	84	125
12 RD	3/4	20	28.3	300	21	1200	84	150
16 RD	1	25	38	300	21	1200	84	200
20 RD	1-1/4	31.5	43.5	300	21	1200	84	250
24 RD	1-1/2	38	52	300	21	1200	84	300
32 RD	2	50	65.5	300	21	1200	84	300

HD AIRDRILL HOSE

Tube:

Synthetic rubber - Modified SBR-Black

Reinforcement:

One Braid of Brass coated high-tensile steel wire.

Cover:

Weather and abrasion resistance NBR-PVC-Black. All sizes come with perforated cover.

Temperature range:

From -30°C to +70°C , continuous operation.

Main applications:

Used for High Pressure Air supply in Industrial construction and mines.

Meets or exceeds the performance requirements of IS:446 Type 3

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
8 HDAD	1/2	12.5	22.6	575	40	2300	160	70
12 HDAD	3/4	20	28.8	575	40	2300	160	100
16 HDAD	1	25	37	575	40	2300	160	120
20 HDAD	1-1/4	31.5	43.8	575	40	2300	160	175
24 HDAD	1-1/2	38	50	575	40	2300	160	200
32 HDAD	2	50	63.7	575	40	2300	160	300

MILD CHEMICAL HOSE

Tube:

Synthetic rubber-modified EPDM (Black)

Reinforcement:

One or two braids of high tenacity yarn

Cover:

Weather and abrasion resistance EPDM Black

Temperature range:

From -30°C to +100°C , continuous operation

Main applications:

For conveying dilute chemicals such as Hydraulic acid, Sulphuric acid, Alums liquor, Caustic Soda, Methyl/Ethyl/Butyl Alcohol, etc.

Note:

Contact JK Pioneer Representative for any particular chemical use. Meets or exceeds the performance requirements of IS:7654 Type 1 and 2.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
8 CH	1/2	12.5	22.5	145	10	580	40	125
12 CH	3/4	20	30	145	10	580	40	150
16 CH	1	25	37.2	145	10	580	40	200
20 CH	1-1/4	31.5	44	145	10	580	40	250
24 CH	1-1/2	38	51.8	145	10	580	40	300
32 CH	2	50	64	145	10	580	40	300

AGRICULTURE SPRAY HOSE

Tube:

Synthetic rubber-Modified NBR (Black)

Reinforcement:

One or two braids of high tenacity yarn

Cover:

Oil and Abrasion resistance Modified NBR (Black)

Temperature range:

From -30°C to +70°C , continuous operation

Main applications:

A lightweight, economical high-pressure hose for carrying air, water and water-based pesticides spray solutions in agricultural applications.

Note:

Not to be used for paint spray application. Meet Exceeds performance requirement of IS: 1677 Type-C

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
6 AG SPRAY	3/8	9.5	20.2	798	55	3192	220	100
8 AG SPRAY	1/2	12.5	24	798	55	3192	220	125

HI STEAM HOSE

Tube:
Extreme Heat resistance EPDM Black
Reinforcement:
One or two braids of brass coated high-tensile steel wire
Cover:
Extreme heat and weather resistance EPDM Black
Temperature range:
From -40°C to +205°C , continuous operation
Main applications:
For steam - saturated and super saturated up to 250 PSI and 205°C application. It is used in refineries, shipyards, chemical plants, steel mills, foundries and heavy industrial applications, Tire curing bagomatic press etc.
Note:
Don't alternate change between steam and hot water.
Meet or exceeds the performance requirements of IS 10655 Type 3 and BS 5342 Type 2

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
8 STEAM	1/2	12.5	23.4	245	17	2465	170	150
12 STEAM	3/4	20	30.5	245	17	2465	170	200
16 STEAM	1	25	36.8	245	17	2465	170	250
20 STEAM	1-1/4	31.5	45.6	245	17	2465	170	300
24 STEAM	1-1/2	38	53.4	245	17	2465	170	400
32 STEAM	2	50	67	245	17	2465	170	625

CAR WASH HOSE

Tube:

Synthetic rubber-modified NBR (Black)

Reinforcement:

One or two braids of high tencity yarn

Cover:

Oil and abrasion resistance modified NBR (Black)

Temperature range:

From -30°C to +70°C , continuous operation

Main applications:

A light weight, economical high-pressure hose for carrying air, water for car washing and Pressure Washing applications in Garage, Service stations and Industries.

Meet or exceeds the performance requirements of IS 444 Type-3B

Note:

* For high pressure, reinforced with wire braid (HD Car Wash).

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
6 CW	3/8	9.5	19.5	400	28	1160	80	100
8 CW	1/2	12.5	22	400	28	1160	80	125
6 HDCW *	3/8	9.5	19	1100	75	2175	150	100

HARD WALL PETROL/DIESEL DISPENSING HOSE

Tube:

Specially compounded Fuel resistance NBR (Black)

Reinforcement:

One Braid of Brass coated high-tensile steel wire.

Cover:

Weather, oil and Abrasion resistance NBR-PVC-Black.

Temperature range:

From -30°C to +55°C , continuous operation

Main applications:

For dispensing all types of Petrol and Diesel Fuels at Service station Pumps. Heavy Duty wire braided construction not collapse in reel use or, behind the Nozzle in demanding service conditions. Meet Exceeds performance requirement of EN 1360 Grade M, Type 3.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
12 PD	3/4	19	28.2	250	17	750	51	100
16 PD	1	25	34.7	250	17	750	51	150

HI-TEMP AIR DRILL

Tube:

Oil-resistant synthetic rubber-Modified NBR (Black)

Reinforcement:

One Braid of Brass coated high-tensile steel wire.

Cover:

Weather and abrasion resistance NBR-PVC-Black.

All sizes come with perforated cover.

Temperature range:

From -30°C to +110°C, continuous operation.

Main applications:

Used for High Pressure Air supply in Industrial construction and mines. This hose is designed to work at higher temperature in Waterwell Rig Segment.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
20 HTAD	1-1/4	31.5	44	500	35	2000	140	200
24 HTAD	1-1/2	38	49.5	500	35	2000	140	250
32 HTAD	2	50	63.5	500	35	2000	140	350

COMPRESSOR HOSE FOR HOT AIR

Tube:

Oil-resistant synthetic rubber-CPE-Black

Reinforcement:

Two Braid of Brass coated high-tensile steel wire.

Cover:

Heat, Weather and abrasion resistance synthetic rubber-Black. All sizes come with perforated cover.

Main applications:

Used for High Pressure and High temperature air supply in Heavy Duty compressors used in Ground Drilling for construction, Mines and General industry. Compounds are designed to withstand high air temperature up to 135°C in heavy duty drill rig compressor up to 1100 CFM capacity.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
24 COMPRESSOR HOSE	1-1/2	38	53	1250	86	5220	344	500
32 COMPRESSOR HOSE	2	50	66	1160	80	4640	320	600

FIRE EXTINGUISHER HOSE

FOR CO2 APPLICATION – 1 WIRE BRAID

Tube:

Specially compounded synthetic rubber - Black

Reinforcement:

One Braid of high-tensile Steel wire

Cover:

Weather and abrasion resistance EPDM Rubber - Black. Also available in NBR Tube and NBR Cover

Temperature range:

From -40°C to +100°C, , continuous operation

Main applications:

Use in CO2 Based Fire extinguisher Application.

Safety factor 1:2.5

Caution:

Don't use this hose as in Hydraulic or, Tractor trolley application.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
6 CO2	3/8	9.5	17.2	2450	170	7350	510	125

SAND BLAST HOSE

Tube:

Highly abrasion-resistant, synthetic rubber-black

Reinforcement:

One or two braids of high tenacity synthetic yarn. Two copper wires in opposite directions.

Cover:

Abrasion-resistant, NR-SBR-Black

Temperature range:

From -30°C to +70°C , continuous operation.

Main applications:

For conveying abrasive material like sand or shot blasting, mineral ores and other abrasive materials. Extra thick tube of 5.00 mm thickness for long service life in application. Two copper flexible wires woven in cross directions ensure the static charge dissipation. Meets or exceeds the performance requirements of IS 5894.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
12 SB	3/4	20	38.5	145	10	435	30	200
16 SB	1	25	45.2	145	10	435	30	300
20 SB	1-1/4	31.5	52.6	145	10	435	30	400
24 SB	1-1/2	38	59	145	10	435	30	450
32 SB	2	50	72.5	145	10	435	30	500

SUPREME SAND BLAST HOSE

Tube:
Highly abrasion-resistant, and conducting synthetic rubber-black

Reinforcement:
One or two braids of High tenacity synthetic Yarn

Cover:
Abrasion-resistant, NR-SBR-Black

Temperature range:
From -30°C to +70°C, continuous operation.

Main applications:
These are compact Hoses for conveying abrasive material like Sand or, Shot blasting, Mineral ores and other abrasive materials where Working pressure requirement is 14 Bar. Tube is conducting in nature, so need for Copper wire is not required. Bend Radius is tighter than Sandblast Hose which ensures it remain more flexible compared to same size Sandblast Hose

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
12 SSB	3/4	20	33.3	200	14	800	56	175
16 SSB	1	25	39.6	200	14	800	56	225
20 SSB	1-1/4	31.5	48.5	200	14	800	56	250
24 SSB	1-1/2	38	55.8	200	14	800	56	300
32 SSB	2	50	67.5	200	14	800	56	400

CNG HOSE SAEJ30R6 AND IS:15722

Tube:
Specially compounded oil-resistant NBR (Black)

Reinforcement:
One Braid of high tenacity yarn

Cover:
Oil and ozone resistance NBR/PVC-Black

Temperature range:
From -40°C to +100°C, continuous operation

Main applications:
These Hoses are intended to be used on motor vehicles, 2-wheeler, and construction equipment's (CEV) as a flexible low-pressure CNG Fuel system component having service pressure not exceeding 21.5 Bar.

Caution:
This is not to be used in Liquefied Natural Gas (LNG) fuel system components located upstream of and in a vaporizer, Fuel containers, stationary gas engines, or CNG fuel systems for marine craft propulsion. Conforms to SAE J30 R6 and IS 15722 specifications.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
4 CNG	1/4	6.3	12.8	305	21	1220	84	75
5 CNG	5/16	8	14	305	21	1220	84	90
6 CNG	3/8	10	15.7	305	21	1220	84	100
8 CNG	1/2	12.5	19.8	305	21	1220	84	125
10 CNG	5/8	16	23.8	305	21	1220	84	150
12 CNG	3/4	20	28.5	305	21	1220	84	150
16 CNG	1	25	34.5	305	21	1220	84	200

HEATER HOSE

Tube:

Specially compounded oil-resistant NBR (Black)

Reinforcement:

One Braid of high tenacity yarn

Cover:

Oil and ozone resistance NBR/PVC-Black (CR cover available on request)

Temperature range:

From -40°C to 100°C , continuous operation.
For air max T = +70°C

Main applications:

Transferring hot coolant or water, particularly in engine cooling systems and heater systems. Conforms to SAE J20 Specification

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
8 HH	1/2	12.5	20.5	60	4.1	249	17.2	125
10 HH	5/8	16.0	23.8	60	4.1	249	17.2	150
12 HH	3/4	20.0	27.0	60	4.1	249	17.2	150

NITRO EXPLOSIVE HOSE

Tube:

NBR/SBR – Oil- and abrasion-resistant synthetic rubber

Reinforcement:

One layer of high-tensile steel wire braid

Cover:

MSHA approved Synthetic Black Rubber with high abrasion, ozone and weather resistance

Temperature range:

From -40°C to 100°C

Main applications:

Emulsion Dispensing Hose application takes place at the blasting site in a drilled pit from a mobile delivery unit. Size available in 1–½" wrap finish

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
24 HIGH POWER EXPLOSIVE	1-1/2	38	50.7	580	40	2320	160	500

GENERAL PURPOSE HOSE

Tube:

Specially Compounded synthetic rubber – EPDM Black

Reinforcement:

One Braid of high tenacity yarn

Cover:

Weather and Abrasion Resistance EPDM

Temperature range:

From -40°C to 100°C

Main applications:

High flexing conditions, wide variety of fluid exchange • ½" to ¾" – Black and Red Cover Wrap and Smooth Finish.

Note:

Sizes are available as per customer requirement.

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
8 GPH	1/2	12.5	20.9	200	14	800	56	125
12 GPH	3/4	19	28.5	200	14	800	56	150

EXTREME HEAT HOSE

Tube:

Long Life oil-resistant Tube

Reinforcement:

High-tensile Steel Wire Braid

Cover:

Abrasion Resistance Cover with Pin Pricked

Temperature range:

From -40°C to 135°C

Main applications:

Air Compressor delivery lines / Pressurized oil, specially designed for Water Well Drilling Rigs and Equipment that supports operations. Sizes available are 1-1/2" and 2" wrap finish

Product	Hose ID		NOM.HOSE OD	MAX WORKING PRESSURE		MIN BURST PRESSURE		MIN BEND RADIUS
	INCH	MM	MM	PSI	BAR	PSI	BAR	NM
24	1-1/2	38	54.6	1250	86	5220	360	500
32	2	50	65.8	1160	80	4640	320	630

NOMOGRAM

Determination of Nominal Diameter

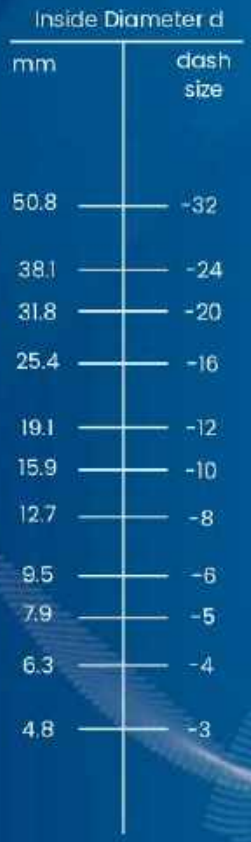
The nomogram can be used as an aid to select the nominal diameters of hose and pipe assemblies.

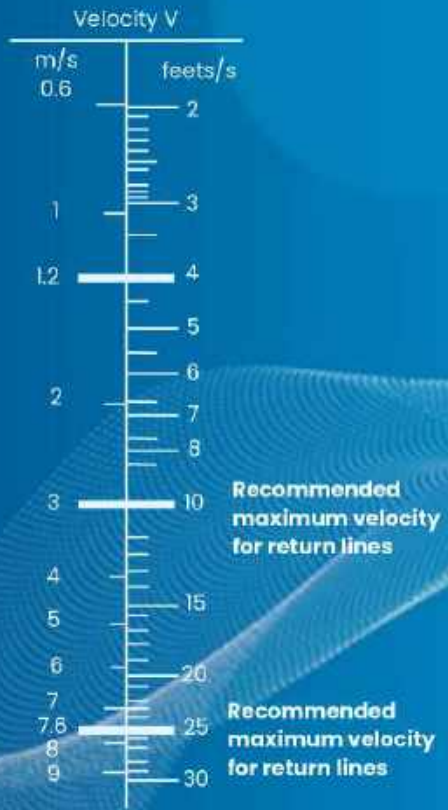
Example:

Rate of flow Q = 50 L/min (left-hand scale), chosen speed V = approx. 4m/sec. (Right-hand scale). The point of intersection on the middle scale gives a nominal diameter of 19.1mm. Other parameters of the installation, such as length of hose assemblies, number of valves, viscosity of the oil and maximum permissible pressure loss, must be taken into account when determining final nominal diameters. The nominal diameter can also be determined using the formula.

$$DN = \frac{Q \times 400}{\sqrt{V \times 3.14 \times 16}}$$

Where Q and V must be inserted as above. The values of the nomogram are based on hydraulic oils with maximum viscosity of S.S.U. (9°E) at +38°C (+100°F) at an operation temperature of between +18° (+65°F) and +68° (+155°F).





TROUBLESHOOTING

Typical Hose Failure modes

Failure Mode	Possible Causes
Improper application	• Overload - pressure • Overload - mechanical • Deterioration of hose material • Twisting damage • Too sharp bends
Outer sheath wear	• Too sharp bends • Inadequate abrasion protection • Incorrect material selection
Improper assembly & installation	• Overload - pressure • Overload - mechanical • Incorrect material selection • General wear and age maturity • Fatigue and cyclic loading
Fitting corrosion	• Inadequate corrosion protection • Incorrect material selection
Reinforcement wire corrosion	• Inadequate abrasion protection • Incorrect material selection
Hose / fitting separation	• Compression set of hose material • Loss of compression pressure on hose • Overload - pressure • Overload - mechanical • Mismatched components • Poor assembly practices
Outer layer's of the hose got damaged	• Abrasion damage of hose due to foreign material • Hoses rubbing with each other • Inadequate hose cover material
De-lamination of inner hose	• Excessive vacuum conditions • Hose working under excessive & prolonged vacuum conditions • Material degradation
Fatigue failure of reinforcing mesh	• Incorrectly selected hose causing too high velocity (refer nomograph) • Cyclic/random bending of hose • Cyclic/random pressure changes
Hose deterioration	• Fluid/material compatibility • Ultraviolet radiation • Temperature • Ozone • Environmental surrounding hose • Solvents

HOSE IN-SERVICE INSPECTION CHECK LIST

For the hose in-service checks, one should look for

- Visual evidence of leaks along the hose or around the hose ends.
- Degraded hose, hard, stiff, charred, blistered, soft, heat cracked hose.
- Exposed, damaged, corroded or broken outer braid wires.
- Wear & abrasion.
- Bulges, blistered, soft, degraded or loose outer covers.
- Outer cover sheath damage, cuts in the hose cover or cracked and heat affected.
- Kinked, crushed, flattened or twisted hose.
- Wrong bend radius.
- Incorrect hose routing.
- Incorrect length of the hose.
- Permanent or physical damage to the hose.
- Hoses too close to heat emitting sources.
- Hoses tangled with moving parts.
- Cracked, damaged, or badly corroded hose ends or adaptors.
- Unsecured or loose hoses & fittings.
- Damaged fitting threads.
- Inspection of staples (broken, twisting, cracked or "walking out").
- Any other sign of deterioration.
- Hose exceeding shelf life before installation.
- Hose exceeding its designed service life.
- Visual evidence of hose and endfitting.

SAFETY CONSIDERATION

Following are some potential conditions that can lead to personal injury and cause damage to the property.

1. As certain fluids may permeate the hose cover, the area where hose is used should be adequately ventilated.
2. Hydraulic systems generally operate at very high pressure. Any leak of pressurised fluid can prostrate the human skin, causing severe tissue damage and burns. Consider the use of guards or shields around the hose assembly to reduce the risk of any injury.
3. Hydraulic fluids are flammable and can explode with a source of ignition. To avoid possible injury or property damage, care should be taken to eliminate ignition sources and to properly route the hose assembly to minimize the chance of any combustion.
4. Hoses are conductive in nature. In some cases a non-conductive hose is required. To avoid electrocution or other serious mishap, the hose with correct specifications, either conductive or non-conductive, should be used.
5. In case hose assembly fails, loss of hydraulic pressure will affect the operation of the equipment. Care should be taken that a sudden power loss of the equipment will not cause any personal injury.
6. When air or gaseous materials are being conveyed, it is necessary to use a pin-pricked-cover hose. The pricking of the cover will prevent permeated gases from blistering and accumulating on the surface of the hose.
7. Extreme care should be taken while operating hand held hydraulic tools where the operator is in the proximity of hydraulic hose assembly.

Following precautions should be taken to avoid any injury.

a) Use strain relievers on each end of the hose to prevent kinking, excessive bending, or stress on the hose at the couplings.

b) Never use the hose assembly to pull or carry the tool.

c) Exposed hose near the operator should be guarded so that he remains safe from high pressure or high temperature fluids, in case the hose assembly fails.

d) Operator of the tool should be protected with the required safety clothing considering the job and fluid being used.

e) The hose should be protected against any external damage.

f) Hose assemblies should be properly routed to avoid strain and the possibility of hose bursting. Proper routing will also protect the assembly against flex fatigue, excessive heat & abrasion.

HOSE MAINTENANCE AND STORAGE

Maintenance:

- It is advised to carry visual inspection and hydrostatic test at periodic intervals to check whether the hose is suitable for continued service or not.
- A visual inspection of the hose should be done for damaged covers, kinks, bulges or soft spots, which might indicate failures in the structure.
- The periodic inspection should include a hydrostatic test for one minute at 150% of the recommended hose working pressure.
- During the test, the hose has to be laid straight, it should not be in a coiled or in kinked position. Water is the usual test medium and after the test, hose can be flushed with alcohol to remove the traces of moisture. A regular schedule for testing should be followed and inspection records should be maintained.
- Never use air or compressed gas to test the hose as the hose may explode. Such failure might result in serious body injury or damage the equipment or property around.
- Air should be removed from the hose by bleeding it through an outer valve while the hose is being filled.
- Hose to be tested must be restrained by placing proper steel containers in order to minimise the impact of "whipping" if a failure occurs. The hose has to be free for easy movement during test.
- The hose outlet has to be cupped in order to prevent any fitting blown-out.
- Sufficient care should be taken to protect the person engaged in testing. He should never stand in front or at the back of the ends of the hose which is being tested.
- When gasoline, oil, solvent or any other hazardous fluids are used as a test fluid, precautions must be taken to prevent fire or physical damage in case the hose fails. The test fluid is likely to spread and catch fire.

Storage:

- Rubber products if stored for a prolonged period are likely to be adversely affected by excessive temperature, humidity, ozone, sunlight, oils, solvents, corrosive liquids, smoke, insects, rodents and radioactive materials. The appropriate method for storing hose, depends to a great extent on its size, the quantity to be stored, and the way in which it is packed.
- Hose should not be piled or stacked too high. The weight of the piled hoses can cause serious damage to the hoses kept at the bottom.
- Hose with thin walls will not support as much as a hose having a heavy wire reinforcement. Hose which is shipped in coils should be stored in order that coils are in a horizontal plane.
- If possible, rubber hose products should be stored in their original shipping containers, especially when such containers are wooden spools or cardboard cartons which provide some protection against action of oils, solvents and corrosive liquids; and also renders them for some protection against ozone and sunlight also.
- The ideal temperature for the storage of rubber products ranges from 10-20°C (50-70°F), with a maximum limit of 40°C (105°F).
- If stored below 0°C (32°F), some rubber products become stiff and would require warming before being placed in service.
- Rubber products should not be stored near the sources of heat, such as radiators, heaters, etc., nor should they be stored under conditions of high humidity, or high ozone or near electric motors.

FOR YOUR SAFETY

It is required that machinery is designed, manufactured and maintained in accordance with international directives such as 2006 42/EC that ensures components of the machinery are suitable for use.

WARNING: Never underestimate the risks of hydraulic hose failure.

There are seven recognised risk factors associated with hydraulic power- Fluid Injection, Pressure, Fire, Electrical, Environmental, Temperature and Mechanical. To avoid injury to yourself and others please adhere to (BS / EN) ISO 4413-2010 when specifying, producing, fitting and using hydraulic hose assemblies.

Serious injury, damage to equipment, or fatal accidents can occur from rupture or blowout of a hydraulic hose that is

✅ Worn or damaged ✅ Incorrectly installed or assembled ✅ Not suited for the application

SAFETY GUIDELINES

Get trained with JK Fenner experts.

JK Fenner offer a range of training opportunities for those designing, assembling, fitting or using hydraulic hose assemblies which provide information on international legislation, the correct choice of components for each application, the production of correct hose assemblies and their safe fitting to machinery.

Use only JK Fenner certified hose and matched end fittings.

Never mix and match different brands. ISO 4413-2010 – "Hoses and hose assemblies shall comply with minimum performance requirements and will have been validated to international standards via testing".

Hydraulic Hose Replacement.

ISO 4413-2010 "Hose Assemblies shall NOT be constructed from hoses which have been previously used as part of a hose assembly, Repair (re-joining) hose assemblies is strictly forbidden".

If you suspect a leak in the hydraulic system.

Turn off the machine and isolate power, wait for the system to cool down, look for pools of oil – don't feel for them! If you suspect that you have received a fluid injection injury seek urgent medical attention.

Select and install hose assemblies with care

Do's ✅

- **Choose the correct hose** for the application, ensuring it can withstand the internal and external stresses (ISO 4413/2010 9.5.1).
- **Ensure correct hose routing** to minimise risks such as hose whipping, oil projection, twisting, sharp bends, pulling, heat exposure, abrasion, or aggressive environments (ISO 4413/2010 9.5.2).
- **Follow manufacturer crimp data** and written instructions when assembling hoses (ISO 4413/2010 & ISO 413/2010).
- **Replace hoses** showing signs of wear, bulges, leaks, or damage.
- **Respect storage and service time limits** recommended by the hose manufacturer (ISO 4413/2010 9.5.1).
- **Ensure pressure ratings** of hoses and connectors meet or exceed the system's requirements.
- **Use replacement parts** that are equal to or better than the original in terms of pressure, temperature, and fluid compatibility (ISO 4413/2010 9.5.1 / 8.1.2.1).
- **Conduct risk assessments** to identify hazards, determine who might be harmed, evaluate risks, and decide on precautions.

Don't's ❌

- **Don't use hoses** that are not designed or constructed for the expected stresses.
- **Don't route hoses** in ways that cause excessive twisting, sharp bends, pulling, or expose them to heat, abrasion, or aggressive environments.
- **Don't ignore manufacturer assembly instructions** or use incorrect crimp data.
- **Don't re-crimp** hoses that have been previously used (ISO 4413/2010 9.5.1).
- **Don't reuse damaged hoses** or hose assemblies.
- **Don't use hoses or connectors** with a lower pressure rating than the system.
- **Don't replace parts** with lower quality or incompatible components.
- **Don't neglect** regular inspection and risk assessment.

Follow Good Maintenance Practices

Establish an inspection schedule.

Check assemblies before each use.

Replace hoses showing signs of damage or degradation.

Keep records of service intervals and replacement dates.

AVOID INJECTION INJURIES

- A small pinhole leak under pressure can inject fluid into the body.
- Do not use hands to check for leaks.
- Use a cardboard or a wood sheet instead.
- If injured, seek emergency care immediately. Delay can lead to severe complications or amputation.

OTHER SAFETY INFORMATION

- JK Fenner recommends referring to ISO 4413 and SAE J1273 for guidelines on hydraulic hose use.
- Always use genuine JK Fenner hoses, fittings, and tools to ensure compatibility and performance.

For crimping data and support, **Contact the JK Fenner technical team**

JK Fenner shall not be liable for injuries, equipment damage, or losses due to the misuse, unauthorized reassembly, or improper application of hose assemblies. Always follow product-specific installation and handling instructions.

HOSE INSTALLATION & MAINTENANCE

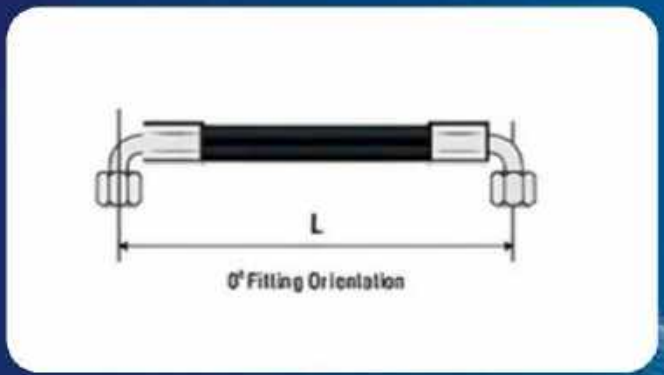
SAE Recommended Practices for Hydraulic Hose and Hose Assemblies

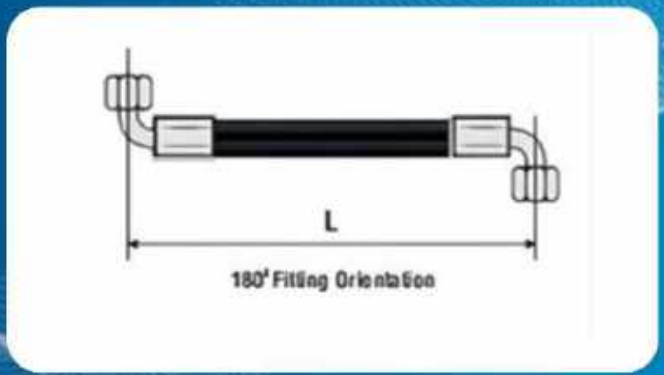
The SAE J1273 guidelines recommend practices while selecting, routing, fabricating, installing, replacing, maintaining and storing hoses for Fluid Power Systems. SAE J1273 standard recommends following good practices which can increase life of the hose assembly.

These recommended practices take into account safety of human and systems, maximizing life of hose and its assemblies.

- Select proper hose for the application. Simply matching ID/OD is not enough but it should be along with type of hose.
- Hydraulic components selection should also be based on application temperature, pressure and bend radius. Don't exceed recommended component limits.
- Hose must not be stretched, kinked, crushed or twisted while installing or during its use.
- Hose must not be bent to less than its recommended minimum bend radius.

Assembly Orientation & Length Notification: Correct Assembly Length



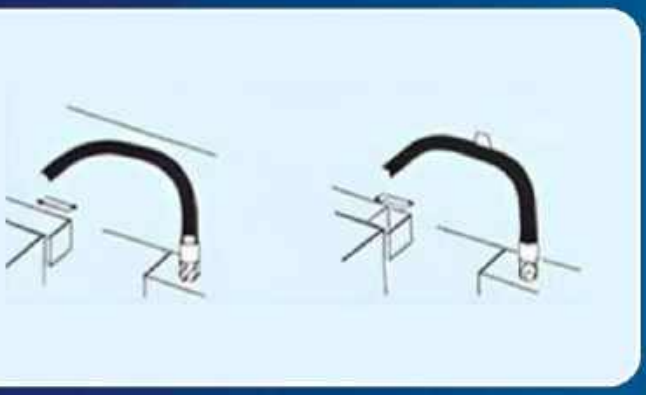


HOSE INSTALLATION & MAINTENANCE

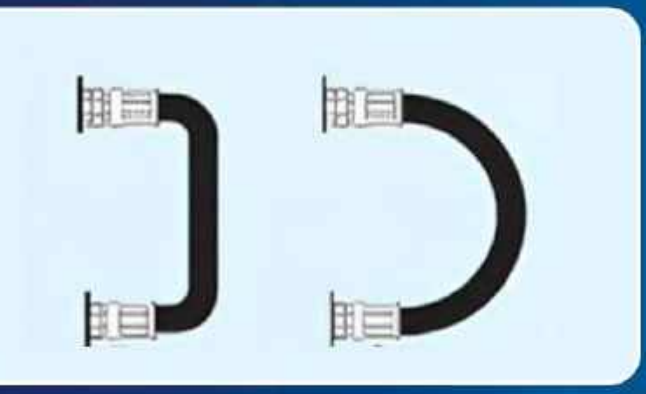
270° Fitting Orientation

90° Fitting Orientation

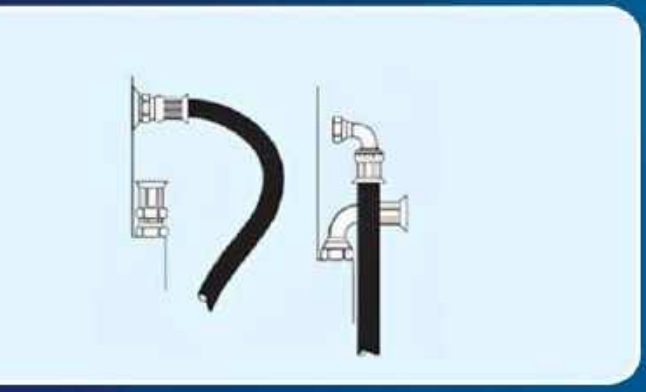
HOSE INSTALLATION & MAINTENANCE



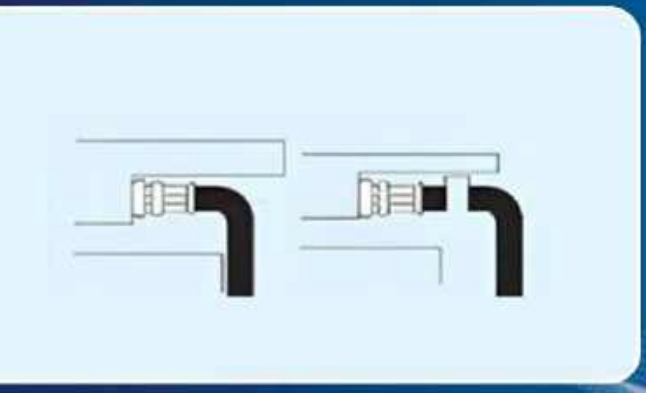
Avoid the twisting of hose lines, bend in two planes by clamping hose at the change of the plane.



To avoid hose-collapse and flow restrictions, keep the hose bend radius as large as possible.



Elbows and adaptors should be used to relieve strain on the assembly and to provide neater installations in order to facilitate inspection and maintenance at an ease.



Run the hose so as to avoid rubbing and abrasion. Often clamps are required to support longer hose runs or to keep hose away from moving objects. Use clamps of the correct size. Too large clamps allow hose to move inside the clamp causing abrasion.

STAMPED

S Size of hose

The hose I.D must minimize pressure loss and prevent damages from heat generation caused by excessive turbulence.

T Temperature

The hose must be capable of withstanding the system's minimum and maximum fluid and ambient temperature.

A Application

Determine where or how the hose assembly will be used.

M Material to be conveyed

The hose tube, cover and coupling must be compatible with the fluid being conveyed.

P Pressure

Published hose working pressure must equal or exceed the normal system pressure, including spikes.

E Ends of coupling

Identify the sealing methods the system uses and select the proper coupling and adapters.

D Delivery

Determine the hose size needed to deliver the required fluid volume without losing pressure or adding unnecessary weight.

HOW LONG WILL A HYDRAULIC HOSE ASSEMBLY LAST?

CAUTION

It depends on how it's used. This catalog and other JK Fenner literature show the recommended limits for our assemblies (and also the hoses and couplings used to make these assemblies). These limits include installation, maintenance, and conditions of use. These limits MUST be followed or the assembly can fail resulting in personal injury or property damage.

Hose assemblies in use should be inspected regularly for leaks, kinks, cover blisters, gouges, abrasion, and other damage. Damaged or worn assemblies must be replaced immediately.

You can increase assembly life if you do the following:

HOSE ASSEMBLY INSTALLATION

Hydraulic hose assembly installations should comply with hydraulic hose routing and plumbing standards per SAE J1273 for the proper application of hose assemblies.

PRESSURE

The hydraulic system pressure should not exceed the rated working pressure of the hose. Pressure surges or peaks exceeding the rated working pressure are destructive and must be taken into account when selecting a hose.

BURST PRESSURE

Burst pressure is the maximum internal pressure a hydraulic rubber hose can withstand before rupture. Usually it as a multiple of the rated working (maximum operating) pressure.
Burst pressure = 4×W.P

TEMPERATURE RANGE

Do not expose hose to internal or external temperatures exceeding the recommended limits. Consult additional technical data when hydraulic fluids contain emulsions or solutions. The fluid manufacturer's maximum operating recommended temperature for any given fluid must not be exceeded, regardless of that temperature range.

FLUID COMPATIBILITY

The hydraulic assembly (tube, cover, reinforcement, and couplings) must be fluid compatible. The correct hose must be used because phosphate ester and petroleum-based hydraulic fluids have drastically different chemical characteristics. Many hoses are compatible with one or the other, but not all fluids.

HOW LONG WILL A HYDRAULIC HOSE ASSEMBLY LAST?

MINIMUM BEND RADIUS

Do not bend or flex hose to a radius smaller than the minimum recommended and do not subject the hose to tension or torque. This can place excessive stress on the reinforcement and severely reduce the ability of the hose to withstand pressure.

HOSE SIZE

Hose size (internal diameter) must be capable of handling the required flow volume. Too small an I.D. for a given volume of flow results in excessive fluid pressure and heat generation which can result in tube damage.

HOSE ROUTING

Restrain, protect or guide hose, with clamps if necessary, to minimize the risk of damage due to excessive flexing, whipping contact with other moving parts, corrosives, or abrasive surfaces. Determine hose lengths and configurations that protect against abrasion, snagging, or kinking, and ensure leak-resistant connections.

HOSE LENGTH

Correct hose length should include considerations for length changes under pressure, machine vibration and motion, and hose assembly routing.

HOSE APPLICATIONS

Select the proper hose for the application.

Hose Shelf Life

Storage environment and rubber materials can influence shelf life. Shelf life is difficult to quantify as many variables affect the hose. Proper storage can extend shelf life to a minimum of three to five years. Beyond this time there can be significant service life decrease, depending on variables like storage environment.

PRESSURE CONVERSION CHART

METRIC TO PSI (1 kPa = .145 psi)

Kilo Pascals (kPa)	Mega Pascals (MPa)	Bar (Bar)	Pounds per Square Inch (psi)
100	0.1	1	14.5
200	0.2	2	29
300	0.3	3	43.5
400	0.4	4	58
500	0.5	5	72.5
600	0.6	6	87
700	0.7	7	101.5
800	0.8	8	116
900	0.9	9	130.5
1000	1	10	145
2000	2	20	290.1
3000	3	30	435.1
4000	4	40	580.2
5000	5	50	725.2
6000	6	60	870.2
7000	7	70	1015
8000	8	80	1160
9000	9	90	1305
10000	10	100	1450
20000	20	200	2901
30000	30	300	4351
40000	40	400	5802
50000	50	500	7252
60000	60	600	8702
70000	70	700	10153
80000	80	800	11603
90000	90	900	13053
100000	100	1000	14504
200000	200	2000	29008
300000	300	3000	43511

PRESSURE CONVERSION CHART

PSI TO METRIC (1 psi = 6.89 kPa)

Pounds per Square Inch (psi)	Kilo Pascals (kPa)	Mega Pascals (MPa)	Bar (Bar)
10	68.9	0.07	0.7
20	137.9	0.14	1.4
30	206.8	0.21	2.1
40	275.8	0.28	2.8
50	344.7	0.34	3.4
60	413.7	0.41	4.1
70	482.6	0.48	4.8
80	551.6	0.55	5.5
90	620.5	0.62	6.2
100	689	0.7	6.9
200	1379	1.4	13.8
300	2068	2.1	20.7
400	2758	2.8	27.6
500	3447	3.4	34.5
600	4137	4.1	41.4
700	4826	4.8	48.3
800	5516	5.5	55.2
900	6205	6.2	62.1
1000	6895	6.9	68.9
2000	13790	13.8	147.9
3000	20684	20.7	206.8
4000	27579	27.8	275.8
5000	34474	34.5	344.7
6000	41369	41.4	413.7
7000	48263	48.3	482.6
8000	55158	55.2	551.6
9000	62053	62.1	620.5
10000	68948	68.9	689
20000	137895	137.9	1379
30000	206853	206.8	2068
40000	275790	275.8	2758

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DESIGN & DEVELOPMENT INPUT CHECK LIST (Hose)

Customer name:
Hose Description:
Date:

Input description	Remark
1.Application requirements:	
a.Application area	
b.Temperature (including time-span)	
Maximum/ Minimum	
Average	
c.Material to be conveyed	
d.Material flow rate	
e.Average workinghours	
2.Pressure requirements:	
a.Working pressure	
b.Test pressure (proof pressure),test duration, test medium	
c.Burst pressure	
d.Surge pressure /peak pressure	
3.Ambient condition :	
a.Temperature	
b.Humidity	
c.Others (oil / chemical /dusty /water/marine/ozone&cold)	
4.Dimensional requirements:	
a.Outer diameter	
b.Reinforcement diameter	
c.Internal diameter	
d.Concentricity B.R to O.D	
e.Concentricity I.D to O.D	
f.Minimum bend radius	
g.Avg weight per meter	
h.Specificlength /coillengthtodispatch	
5.Functional & performance requirements:	
a.Required impulsecycle	
b.Average expected life	
c.Customer specific performance requirement	
d.Customer specific test requirement	
e.Traceabilityrequirement	
6.Reference specification:	
a.Standard &Drawings	
b.Customer sample/Competitor product (if needed):	
c. Competitor name (If Any)	
d. Brand name	
e. Sample available?	
f. Analysis report	
g. Competitor'scatalogue	
7.Miscellaneous requirements:	
a . Mostcommon failuremode	
b. Consequences of failure c. Expected business volume d. Specific color requirement e. Expected cost of product or material cost f. Expected time of realization of product	
g. Business opportunityinamount (INR/Month)	
8.Statutory & regulatory requirements:	
9.Branding requirements:	
10.Packaging requirements:	

Notes

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