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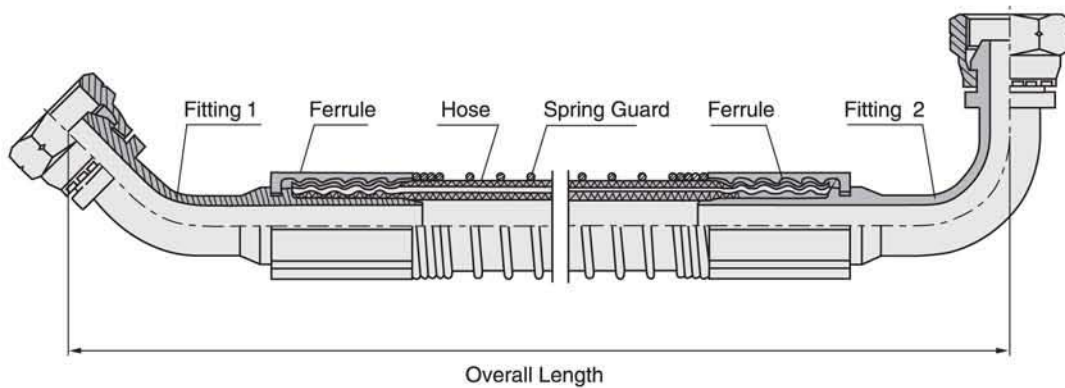
Hydraulic Hose
Fitting
Hydraulic / Pneumatic Tube
Piston Rod
Machines for Hose Assembly

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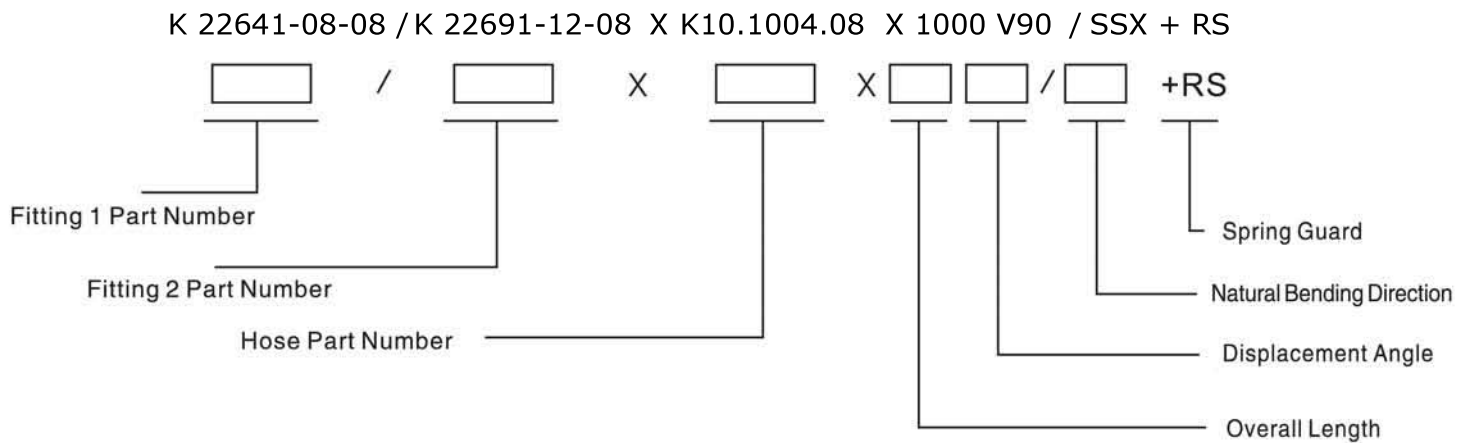
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How to Order Hose Assembly



As the above fig, the hydraulic hose assembly consists of hose, fitting1, fitting2 and ferrule. The fitting1 may be the same or different as the fitting2. They can be straight or elbow. The spring guard may not be used.

Hose Assembly Part Number:



Example 1: K 22641-08-08 / K 22691-12-08 X K10.1004.08 X 1000 V90 / SSX + RS

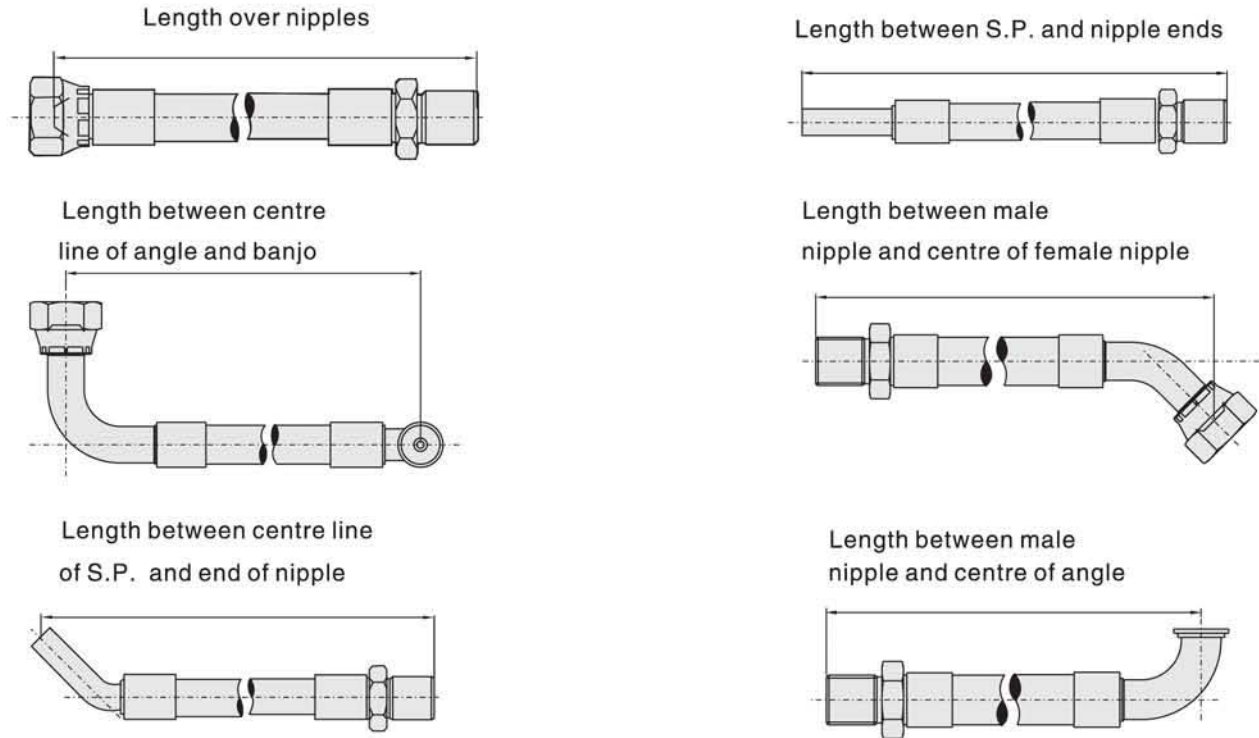
Without displacement angle, natural bending direction or spring guard, these part number may be omitted.

Example 2: The assembly with two fittings of the same part number is called out with only one fitting part number.

K 22691-12-08 X K10.1004.08 X 1000 V90

How to Measure Hose Assembly

The overall length of the hose assembly is measured to the sealing surface of straight fittings or to the centreline of elbow fittings. As the following:

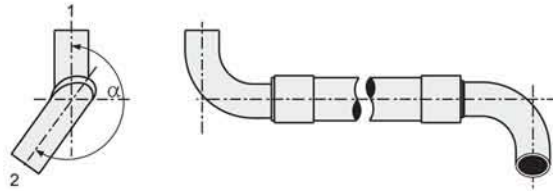


Length Tolerance For Hose Assembly

Length Of Hose Assembly(mm)	Tolerance		
	≤ 25	Hose DN≤50	>50
630	+7mm -3mm	+12mm -4mm	+25mm -6mm
630<Assembly Length ≤ 1250	+12mm -4mm	+20mm -6mm	
1250<Assembly Length ≤ 2500	+20mm -6mm	+25mm -6mm	
2500<Assembly Length ≤ 8000	+1.5% -0.5%		
>8000	+3% -1%		

How to Measure Displacement Angle

Specified only if two elbow fittings are used. To measure displacement angle of a hose assembly, point one end of coupling "1" to a vertical position upward. The angle can then be measured from the centreline of coupling "1" in a clockwise direction to the centreline of coupling "2" As shown:

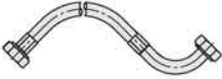
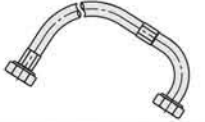


Bending Direction of the Assembly

Hoses are packed in bundle. So the hose is difficult to draw to straight when it is assembled. When one end fitting of the assembly is elbow, it exists natural bending direction.

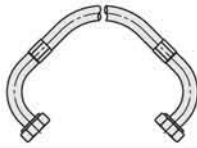
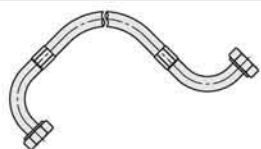
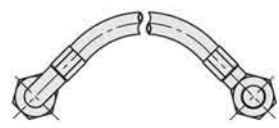
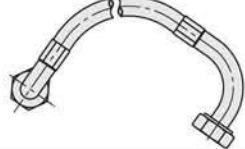
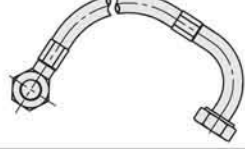
Set hose natural putting plane as horizontal plane.

When one fitting is elbow, the other fitting is straight, as shown:

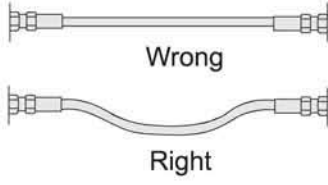
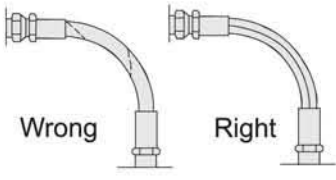
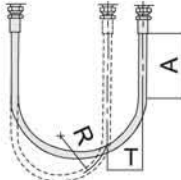
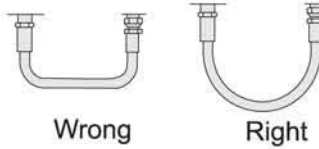
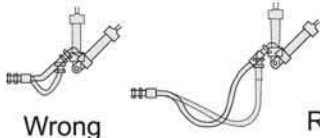
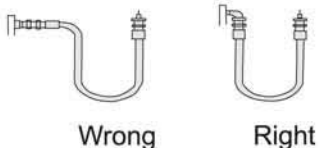
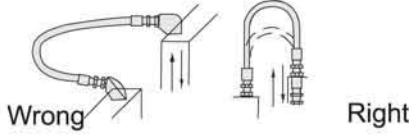
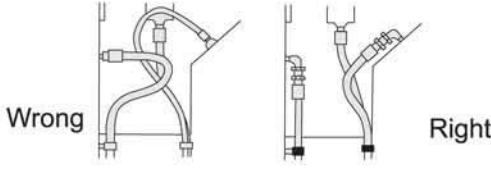
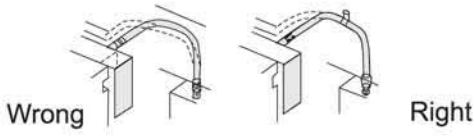
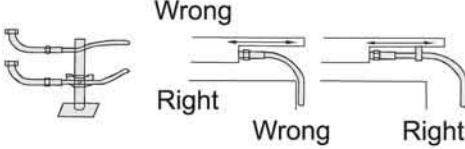
Fig.	Description	Code
	One End Vertical Outward	DCW
	One End Vertical Inward	DCN
	One End Horizontal Upward	DSS
	One End Horizontal Downward	DSX

Bending Direction of the Assembly

When two fittings of the assembly are both elbow, as shown:

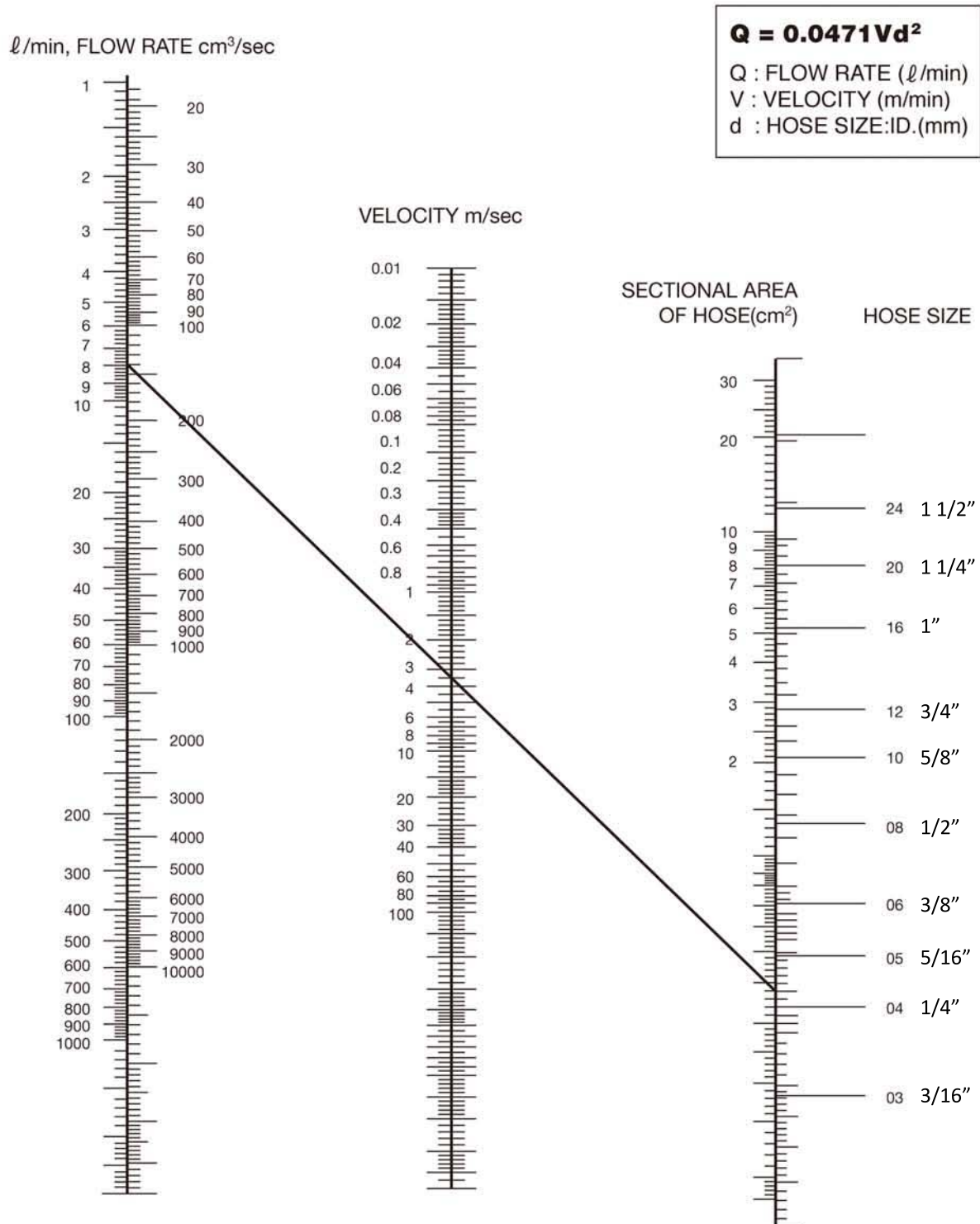
Fig.	Description	Code
	Two Ends Horizontal Downward	SSX
	Two Ends Horizontal Upward	SSS
	Two Ends in the Different Direction Fitting 1 Downward, Fitting 2 Upward	SSY
	Two Ends in the Same Direction Two Ends Vertical Outward	STC
	Two Ends in the Different Direction Fitting 1 Outward, Fitting 2 Inward	SYC1
	Two Ends in the Different Direction Fitting 1 Inward, Fitting 2 Outward	SYC2
	Fitting 1 Vertical Inward Fitting 2 Horizontal Upward	YNES
	Fitting 1 Vertical Outward Fitting 2 Horizontal Upward	YWES
	Fitting 1 Vertical Inward Fitting 2 Horizontal Downward	YNEX
	Fitting 1 Vertical Outward Fitting 2 Horizontal Downward	YWEX

Hose Installation Guide

 Since hose may change in length from +2% to -4% under the surge of high pressure, provide sufficient slack for expansion and contraction.	 Hose should not be twisted. Hose is weakened when installed in twisted position. Also pressure in twisted hose tends to loosen fitting connections. Design so that machine motion produces bending rather than twisting.
 Never use a bending radius less than the minimum shown in the hose specification tables. The bending radius of the hose should be far away from the hose fitting ($A > 1.5R$).	 Leave proper length when the hose is connected.
 Hose bending radius is bigger when it is in motion.	 Choice proper fittings, avoid too small bending radius and excess force.
 Choice proper fittings, avoid twisting in hose lines bent in two planes.	 Choice proper fittings, avoid excessive hose length.
 Avoid twisting in hose by using clamp properly.	 Reduce friction, avoid hose touching the object directly or far away from the object.

Relational Table of Flow Rate

Example : The flow rate of your system requirement is 150cm³ per second. Connect your straight edge from the 150cm³ per second flow rate column to the recommended velocity range for pressure lines of 4 meters per second. The straight edge intersects at 04, so the recommended hose size is 04



Hose



1 LAYER STEEL BRAID STEAM HOSE



Construction : EN 853 1SN for dimensional & pressure reference

Applications : For conveying saturated steam and superheated water continually at a temperature below 150°C or intermittently at a temperature below 160°C

W/B	I.D		O.D	W.P		B.P		Min B.R
	mm	Inch	mm	Mpa	Psi	Mpa	Psi	mm
1W	6.3	1/4	14.1	22.5	3260	90	13050	100
	8	55/16	15.7	21.5	3120	85	12325	115
	10	3/8	18.1	18	2610	72	10440	130
	12.5	1/2	21.4	16	2320	64	9280	180
	16	5/8	24.5	13	1885	52	7540	200
	19	3/4	28.5	10.5	1520	42	6090	240
	25	1	36.6	8.8	1280	35	5075	300
	31.5	1-1/4	44.8	6.3	910	25	3625	420
	38	1-1/2	52.1	5	725	20	2900	500
	51	2	65.5	4	580	16	2320	630

1 WIRE PRESSURE WASHER HOSE 220 Bar



Inner Tube : Seamless hot water resistant synthetic rubber

Reinforcement : 1 High tensile steel wire braid

Outer Tube : Black / Blue / Grey, oil weather and abrasion pin-pricked resistant synthetic rubber

Safety factor : 4 : 1

Application : High temperature and high pressure cleaning professional equipments

Temperature Range : 0°C (+32°F) + 155°C (+311°F)

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	bar	PSI	bar	PSI	mm	inch	
K10.1WJ0.04	1/4"	- 4	6,3	0.25	11,7	0.46	220	3190	880	12760	100	3.9	0,26
K10.1WJ0.05	5/16"	- 5	8,0	0.31	15,0	0.59	220	3190	880	12760	110	4.4	0,30
K10.1WJ0.06	3/8"	- 6	9,5	0.38	17,4	0.69	220	3190	880	12760	120	4.8	0,36

SINGLE STEEL BRAIDED YELLOW AIR HOSE

Inner Tube : Seamless hot water resistant synthetic rubber

Reinforcement : 1 High tensile steel wire braid

Outer Tube : Yellow, weather and abrasion pin-pricked resistant synthetic rubber

Safety factor : 4 : 1

Application : Very heavy works on mining, construction, steel plants, perforation and quarries

Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)

Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)

Max temperature recommended for air : +60°C (+140°F)



part number	Ø nom	dash size	Ø internal		Ø external *		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1242.032	1.1/4"	- 20	32,0	1.25	41,0	1.61	4.5	650	18.0	2610	419	16.5	2,14
K10.1242.040	1.1/2"	- 24	38,0	1.50	48,0	1.89	4.5	650	18.0	2610	500	19.7	2,55
K10.1242.050	2"	- 32	50,8	2.00	62,0	1.57	4.5	650	18.0	2610	630	24.8	3,30
K10.1242.063	2.1/2"	- 40	63,5	2.50	77,5	3.05	3.0	435	12.0	1740	760	30.4	2,89
K10.1242.075	3"	- 48	76,2	3.00	89,0	3.50	2.5	365	10.0	1450	900	36.0	3,43
K10.1242.100	4"	- 64	101,6	4.00	118,0	4.65	2.0	290	8.0	1160	1100	43.3	4,90

2 LAYER STEEL BRAID STEAM HOSE



Construction : EN 853 2SN for dimensional & pressure reference

Applications : For conveying saturated steam and superheated water continually at a temperature below 150°C or intermittently at a temperature below 160°C

W/B	I.D		O.D		W.P		B.P		Min B.R
	mm	Inch	mm		Mpa	Psi	Mpa	Psi	mm
2W	6.3	1/4	15.7		40	5800	160	23200	100
	8	55/16	17.3		35	5075	140	20300	115
	10	3/8	19.7		33	4785	132	19140	130
	12.5	1/2	23.0		27.5	3990	110	15950	180
	16	5/8	26.2		25	3625	100	14500	200
	19	3/4	30.1		21.5	3120	85	12325	240
	25	1	38.9		16.5	2390	65	9425	300
	31.5	1-1/4	49.5		12.5	1810	50	7250	420
	38	1-1/2	55.9		9	1305	36	5220	500
	51	2	68.6		8	1160	32	4640	630

2 WIRE PRESSURE WASHER HOSE 400 Bar

Inner Tube : Seamless hot water resistant synthetic rubber

Reinforcement : 2 High tensile steel wire braid

Outer Tube : Black / Blue / Grey, oil weather and abrasion pin-pricked resistant synthetic rubber

Safety factor : 4 : 1

Application : High temperature and high pressure cleaning professional equipments

Temperature Range : 0°C (+32°F) + 155°C (+311°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	bar	PSI	bar	PSI	mm	inch	kg/m
K10.2WJ0.04	1/4"	- 4	6,3	0.25	11,7	0.46	400	5800	1600	23200	100	3.9	0,38
K10.2WJ0.05	5/16"	- 5	8,0	0.31	15,0	0.59	400	5800	1600	23200	110	4.4	0,45
K10.2WJ0.06	3/8"	- 6	9,5	0.38	17,4	0.69	400	5800	1600	23200	120	4.8	0,53

2 LAYER STEEL WIRE BRAID YELLOW AIR HOSE

Inner Tube : Seamless hot water resistant synthetic rubber

Reinforcement : 2 High tensile steel wire braid

Outer Tube : Yellow, weather and abrasion pin-pricked resistant synthetic rubber

Safety factor : 4 : 1

Application : Very heavy works on mining, construction, steel plants, perforation and quarries

Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)

Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)

Max temperature recommended for air : +60°C (+140°F)



part number	Ø nom	dash size	Ø internal		Ø external *		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	kg/m
K10.1243.032	1.1/4"	- 20	32,0	1.25	45,0	1.77	12.5	1810	50.0	7240	419	16.5	2,14
K10.1243.040	1.1/2"	- 24	38,0	1.50	50,0	1.97	9.0	1300	36.0	5200	500	19.7	2,55
K10.1243.050	2"	- 32	50,8	2.00	63,0	2.48	8.0	1160	32.0	4640	630	24.8	3,30
K10.1243.063	2.1/2"	- 40	63,5	2.50	78,0	3.07	4.5	650	18.0	2610	760	30.4	3,96
K10.1243.075	3"	- 48	76,2	3.00	88,0	3.46	4.5	650	18.0	2610	900	36.0	4,96
K10.1243.100	4"	- 64	101,6	4.00	118,0	4.65	4.5	650	18.0	2610	1100	43.3	6,01

DIN EN 857 1SC

Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 1 High tensile steel wire braid
 Outer Tube : Black, oil and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids



Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)
 Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)
 Max temperature recommended for air : +60°C (+140°F)

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	Kg./m
10.1017.													
K10.1017.04	1/4"	- 4	6,3	0.25	12,7	0.50	22.5	3260	90.0	13040	51	2.0	0.22
K10.1017.05	5/16"	- 5	8,0	0.31	15,0	0.59	21.0	3000	84.0	12000	60	2.4	0.27
K10.1017.06	3/8"	- 6	9,5	0.38	16,5	0.65	21.0	3000	84.0	12000	64	2.5	0.34
K10.1017.08	1/2"	- 8	12,7	0.50	20,8	0.82	21.0	3000	84.0	12000	89	3.5	0.42
10.1018.													
K10.1018.10	5/8"	- 10	15,9	0.63	23,0	0.90	13.0	1885	52.0	7540	102	4.0	0.51
K10.1018.12	3/4"	- 12	19,0	0.75	26,7	1.05	10.5	1523	42.0	6090	122	4.8	0.63
K10.1018.16	1"	- 16	25,4	1.00	34,9	1.37	8.8	1276	35.2	5104	152	6.0	1.00

DIN EN 853 1SN / SAE 100R1AT

Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 1 High tensile steel wire braid
 Outer Tube : Black, oil and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids



Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)
 Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)
 Max temperature recommended for air : +60°C (+140°F)

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1002.03	3/16"	- 3	4,8	0.19	11,8	0.47	25.0	3625	100.0	14500	89	3.5	0,23
K10.1002.04	1/4"	- 4	6,3	0.25	13,4	0.53	22.5	3260	90.0	13040	100	3.9	0,26
K10.1002.05	5/16"	- 5	8,0	0.31	15,0	0.59	21.5	3115	85.0	12460	114	4.5	0,30
K10.1002.06	3/8"	- 6	9,5	0.38	17,4	0.69	18.0	2610	72.0	10440	127	5.0	0,36
K10.1002.08	1/2"	- 8	12,7	0.50	20,7	0.81	16.0	2320	64.0	9280	178	7.0	0,46
K10.1002.10	5/8"	- 10	16,0	0.63	23,8	0.93	13.0	1885	52.0	7540	200	7.9	0,56
K10.1002.12	3/4"	- 12	19,0	0.75	27,8	1.09	10.5	1520	42.0	6080	240	9.4	0,74
K10.1002.16	1"	- 16	25,4	1.00	35,9	1.40	8.8	1275	35.0	5100	300	11.8	1,06
K10.1002.20	1.1/4"	- 20	32,0	1.25	43,8	1.71	6.3	910	25.0	3640	419	16.5	1,36
K10.1002.24	1.1/2"	- 24	38,0	1.50	51,1	1.99	5.0	725	20.0	2900	500	19.7	1,65
K10.1002.32	2"	- 32	50,8	2.00	64,5	2.52	4.0	580	16.0	2320	630	24.8	2,05
K10.1002.40	2.1/2"	- 40	63,5	2.50	79,0	3.11	3.0	435	12.0	1740	760	30.4	2,89
K10.1002.48	3"	- 48	76,2	3.00	92,0	3.62	2.0	290	8.0	1160	900	36.0	3,43

Hose



DIN EN 853 1ST / SAE 100R1A

Inner Tube : Seamless oil resistant synthetic rubber

Reinforcement : 1 High tensile steel wire braid

Outer Tube : Black, oil and abrasion resistant synthetic rubber

Safety factor : 4 : 1

Application : Petroleum base hydraulic fluids

Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)

Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)

Max temperature recommended for air : +60°C (+140°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1001.04	1/4"	- 4	6,3	0.25	15,5	0.61	22.5	3260	90.0	13040	100	3.94	0,29
K10.1001.05	5/16"	- 5	8,0	0.31	17,1	0.67	21.5	3115	85.0	12460	115	4.53	0,34
K10.1001.06	3/8"	- 6	9,5	0.38	19,4	0.76	18.0	2610	72.0	10440	130	5.12	0,42
K10.1001.08	1/2"	- 8	12,7	0.50	22,6	0.89	16.0	2320	64.0	9280	180	7.09	0,51
K10.1001.10	5/8"	- 10	16,0	0.63	25,8	1.02	13.0	1885	52.0	7540	200	7.87	0,59
K10.1001.12	3/4"	- 12	19,0	0.75	29,8	1.17	10.5	1520	42.0	6080	240	9.45	0,73
K10.1001.16	1"	- 16	25,4	1.00	37,6	1.48	8.8	1275	35.0	5100	300	11.81	1,05
K10.1001.20	1.1/4"	- 20	32,0	1.25	45,0	1.77	6.3	910	25.0	3640	420	16.54	1,36
K10.1001.24	1.1/2"	- 24	38,0	1.50	51,4	2.02	5.0	725	20.0	2900	500	19.68	1,56
K10.1001.32	2"	- 32	50,8	2.00	66,4	2.61	4.0	580	16.0	2320	630	24.80	2,30

DIN EN 857 2SC

Inner Tube : Seamless oil resistant synthetic rubber

Reinforcement : 2 High tensile steel wire braid

Outer Tube : Black, oil, weather and abrasion resistant synthetic rubber

Safety factor : 4 : 1

Application : Petroleum base hydraulic fluids

Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)

Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)

Max temperature recommended for air : +60°C (+140°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1019.04	1/4"	- 4	6,3	0.25	13,3	0.52	40.0	5800	160.0	23200	50	2.0	0.27
K10.1019.05	5/16"	- 5	8,0	0.31	15,0	0.59	35.0	5075	140.0	20300	57	2.2	0,30
K10.1019.06	3/8"	- 6	9,5	0.38	17,1	0.67	33.0	4785	132.0	19140	65	2.6	0,42
K10.1019.08	1/2"	- 8	12,7	0.50	20,6	0.81	27.6	4000	110.4	16000	90	3.5	0,52
K10.1019.10	5/8"	- 10	15,9	0.63	23,7	0.93	25.0	3625	100.0	14500	100	3.9	0,63
K10.1019.12	3/4"	- 12	19,0	0.75	27,7	1.09	21.5	3118	86.0	12472	120	4.7	0,80
K10.1019.16	1"	- 16	25,4	1.00	35,8	1.41	16.5	2393	66.0	9572	150	5.9	1.22

DIN EN 853 2SN / SAE 100R2AT

Inner Tube : Seamless oil resistant synthetic rubber

Reinforcement : 2 High tensile steel wire braid

Outer Tube : Black, oil weather and abrasion resistant synthetic rubber

Safety factor : 4 : 1

Application : Petroleum base hydraulic fluids

Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)

Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)

Max temperature recommended for air : +60°C (+140°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1004.03	3/16"	- 3	4,8	0.19	13,4	0.53	41.5	6015	165.0	24060	89	3.5	0,32
K10.1004.04	1/4"	- 4	6,3	0.25	15,0	0.59	40.0	5800	160.0	23200	100	3.9	0,38
K10.1004.05	5/16"	- 5	8,0	0.31	16,6	0.65	35.0	5075	140.0	20300	114	4.5	0,45
K10.1004.06	3/8"	- 6	9,5	0.38	19,0	0.75	33.0	4785	132.0	19140	127	5.0	0,53
K10.1004.08	1/2"	- 8	12,7	0.50	22,2	0.87	27.5	3985	110.0	15940	178	7.0	0,65
K10.1004.10	5/8"	- 10	16,0	0.63	25,5	1.00	25.0	3625	100.0	14500	200	7.9	0,76
K10.1004.12	3/4"	- 12	19,0	0.75	29,4	1.15	21.5	3120	86.0	12480	240	9.4	1,00
K10.1004.16	1"	- 16	25,4	1.00	37,9	1.50	16.5	2390	65.0	9560	300	11.8	1,48
K10.1004.20	1.1/4"	- 20	32,0	1.25	48,5	1.90	12.5	1810	50.0	7240	419	16.5	2,14
K10.1004.24	1.1/2"	- 24	38,0	1.50	54,7	2.15	9.0	1300	36.0	5200	500	19.7	2,55
K10.1004.32	2"	- 32	50,8	2.00	67,4	2.65	8.0	1160	32.0	4640	630	24.8	3,30
K10.1004.40	2.1/2"	- 40	63,5	2.50	83,0	3.27	7.0	1015	28.0	4060	760	30.4	3,96
K10.1004.48	3"	- 48	76,2	3.00	96,0	3.78	5.5	798	22.0	3192	900	36.0	4,96

DIN EN 853 2ST / SAE 100R2A

Inner Tube : Seamless oil resistant synthetic rubber

Reinforcement : 2 High tensile steel wire braid

Outer Tube : Black, oil weather and abrasion resistant synthetic rubber

Safety factor : 4 : 1

Application : Petroleum base hydraulic fluids

Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)

Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)

Max temperature recommended for air : +60°C (+140°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1003.04	1/4"	- 4	6,3	0.25	17,1	0.67	40.0	5800	160.0	23200	100	3.94	0,45
K10.1003.05	5/16"	- 5	8,0	0.31	18,7	0.74	35.0	5075	140.0	20300	115	4.53	0,52
K10.1003.06	3/8"	- 6	9,5	0.38	21,0	0.83	33.0	4785	132.0	19140	130	5.12	0,64
K10.1003.08	1/2"	- 8	12,7	0.50	24,2	0.95	27.5	3985	110.0	15940	180	7.09	0,75
K10.1003.10	5/8"	- 10	16,0	0.63	27,4	1.08	25.0	3625	100.0	14500	200	7.87	0,88
K10.1003.12	3/4"	- 12	19,0	0.75	31,4	1.24	21.5	3120	86.0	12480	240	9.45	1,08
K10.1003.16	1"	- 16	25,4	1.00	39,0	1.54	16.5	2390	65.0	9560	300	11.81	1,46
K10.1003.20	1.1/4"	- 20	32,0	1.25	49,8	1.96	12.5	1810	50.0	7240	420	16.54	2,17
K10.1003.24	1.1/2"	- 24	38,0	1.50	56,2	2.21	9.0	1300	36.0	5200	500	19.69	2,43
K10.1003.32	2"	- 32	50,8	2.00	68,8	2.71	8.0	1160	32.0	4640	630	24.80	3,09

DIN EN 856 4SH

Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 4 Spiral of very high tensile steel wire braid
 Outer Tube : Black, oil weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)
 Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)
 Max temperature recommended for air : +60°C (+140°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1009.12	3/4"	- 12	19,0	0.75	33,0	1.30	42.0	6090	168.0	24360	280	11.0	1,56
K10.1009.16	1"	- 16	25,4	1.00	38,7	1.52	38.0	5510	152.0	22040	340	13.4	2,09
K10.1009.20	1.1/4"	- 20	32,0	1.25	45,5	1.79	32.5	4713	130.0	18852	460	18.1	2,57
K10.1009.24	1.1/2"	- 24	38,0	1.50	53,5	2.11	29.0	4205	116.0	16820	560	22.0	3,44
K10.1009.32	2"	- 32	50,8	2.00	68,1	2.68	25.0	3625	100.0	14500	700	27.6	4,90

DIN EN 856 4SP

Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 4 Spiral of very high tensile steel wire braid
 Outer Tube : Black, oil weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)
 Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)
 Max temperature recommended for air : +60°C (+140°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1008.04	1/4"	- 4	6,3	0.25	17,9	0.70	50.0	7250	200.0	29000	120	4.7	0,70
K10.1008.06*	3/8"	- 6	9,5	0.38	21,4	0.84	44.5	6453	178.0	25812	130	5.1	0,80
K10.1008.08*	1/2"	- 8	12,7	0.50	24,6	0.97	42.0	6000	168.0	24000	180	7.1	1,15
K10.1008.10	5/8"	- 10	16,0	0.63	28,2	1.11	35.0	5075	140.0	20300	225	8.9	1,26
K10.1008.12	3/4"	- 12	19,0	0.75	32,2	1.27	35.0	5075	140.0	20300	280	11.0	1,44
K10.1008.16	1"	- 16	25,4	1.00	39,7	1.56	28.0	4060	112.0	16240	355	14.0	2,15
K10.1008.20	1.1/4"	- 20	32,0	1.25	50,8	2.00	21.0	3045	84.0	12180	460	18.1	2,75
K10.1008.24	1.1/2"	- 24	38,0	1.50	57,2	2.25	18.5	2683	74.0	10732	560	22.0	3,35
K10.1008.32	2"	- 32	50,8	2.00	69,8	2.75	16.5	2393	66.0	9572	710	28.0	4,60

Hose



SAE 100R3

Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 2 High resistance fiber braids
 Outer Tube : Black, oil weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F)



Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)

Max temperature recommended for air : +50°C (+122°F)

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	kg/m
K10.1220.03	3/16"	- 3	4,8	0.19	12,8	0.50	16.0	2320	64.0	9280	40	1.57	0,13
K10.1220.04	1/4"	- 4	6,3	0.25	14,5	0.57	14.5	2100	58.0	8400	45	1.77	0,18
K10.1220.05	5/16"	- 5	8,0	0.31	17,0	0.67	13.0	1885	52.0	7540	55	2.17	0,25
K10.1220.06	3/8"	- 6	9,5	0.38	18,5	0.73	11.0	1595	44.0	6380	70	2.76	0,28
K10.1220.08	1/2"	- 8	12,7	0.50	21,8	0.86	9.3	1350	37.2	5400	85	3.35	0,44
K10.1220.10	5/8"	- 10	16,0	0.63	26,0	1.02	8.0	1160	32.0	4640	105	4.13	0,49
K10.1220.12	3/4"	- 12	19,0	0.75	29,0	1.14	7.0	1015	28.0	4060	130	5.12	0,68
K10.1220.16	1"	- 16	25,4	1.00	36,0	1.42	5.5	797	22.0	3188	150	5.91	0,69
K10.1220.20	1.1/4"	- 20	32,0	1.25	42,0	1.65	4.5	650	18.0	2600	190	7.48	0,88
K10.1220.24	1.1/2"	- 24	38,0	1.50	49,5	1.95	4.0	580	16.0	2320	240	9.45	1,27
K10.1220.32	2"	- 32	50,8	2.00	62,2	2.45	3.3	480	13.2	1920	300	11.81	1,35

SAE 100R4

Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : Textile braids and 1 high strength steel wire helix
 Outer Tube : Black, oil weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Suction, delivery, return & discharge of petroleum base hydraulic fluids



Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)

Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)

Max temperature recommended for air : +60°C (+140°F)

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	kg/m
K10.1219.12	3/4"	- 12	19,0	0.75	34,9	1.38	2.1	315	8.4	1260	127	5.0	0,75
K10.1219.16	1"	- 16	25,4	1.00	41,3	1.63	1.7	255	6.8	1020	152	6.0	0,93
K10.1219.20	1.1/4"	- 20	31,8	1.25	50,8	2.00	1.4	210	5.6	840	203	8.0	1,25
K10.1219.24	1.1/2"	- 24	38,1	1.50	57,2	2.25	1.05	157.5	4.2	630	254	10.0	1,54
K10.1219.32	2"	- 32	50,8	2.00	69,9	2.75	0.7	105	2.8	420	305	12.0	2,00
K10.1219.40	2.1/2"	- 40	63,5	2.50	82,6	3.25	0.4	60	1.6	240	356	14.0	2,50
K10.1219.48	3"	- 48	76,2	3.00	95,3	3.75	0.4	60	1.6	240	457	18.0	3,20
K10.1219.56	3.1/2"	- 56	88,9	3.50	108	4.25	0.3	45	1.2	180	533	21.0	4,03
K10.1219.64	4"	- 64	101,6	4.00	121	4.75	0.25	37.5	1.0	150	610	24.0	5,04

Hose

KOBE*flex*

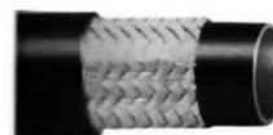
SAE 100R5



Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 2 high resistance synthetic textile braids with an intermediate high tensile steel wire braid
 Outer Tube : Impregnation of the outer textile braids with black, oil, weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)
 Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)
 Max temperature recommended for air : +60°C (+140°F)

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1007.04	3/16"	- 4	4,8	0.19	13,2	0.52	20.7	3000	82.8	12000	76	3.00	0,19
K10.1007.05	1/4"	- 5	6,3	0.25	14,8	0.60	20.7	3000	82.8	12000	86	3.38	0,27
K10.1007.06	5/16"	- 6	8,0	0.31	17,2	0.68	15.5	2250	62.0	9000	102	4.00	0,29
K10.1007.08	13/32"	- 8	10,4	0.41	19,5	0.77	13.8	2000	55.2	8000	117	4.62	0,36
K10.1007.10	1/2"	- 10	12,7	0.50	23,4	0.92	12.1	1755	48.3	7020	140	5.50	0,45
K10.1007.12	5/8"	- 12	16,0	0.63	27,4	1.08	10.3	1495	41.4	5980	165	6.50	0,56
K10.1007.16	7/8"	- 16	22,2	0.88	31,4	1.24	5.5	800	22.1	3200	187	7.38	0,78
K10.1007.20	1.1/8"	- 20	28,6	1.13	38,1	1.50	4.3	625	17.2	2500	229	9.00	1,06
K10.1007.24	1.3/8"	- 24	34,9	1.38	44,5	1.75	3.4	500	13.8	2000	267	10.50	1,45
K10.1007.32	1.13/16"	- 32	46,0	1.81	56,4	2.22	2.4	350	9.7	1400	337	13.20	1,70
K10.1007.40	2.3/8"	- 40	60,3	2.38	73,0	2.87	2.4	350	9.7	1400	610	24.00	2,15
K10.1007.48	3"	- 48	76,2	3.00	90,5	3.56	1.4	200	5.5	800	838	33.00	3,08

SAE 100R6



Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 1 high resistance synthetic fiber braid
 Outer Tube : Black, oil, weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F)
 Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)
 Max temperature recommended for air : +50°C (+122°F)

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1216.03	3/16"	- 3	4,8	0.19	11,1	0.44	3.4	500	13.8	2000	51	2.0	0,10
K10.1216.04	1/4"	- 4	6,3	0.25	12,5	0.49	2.8	400	11.0	1600	64	2.5	0,12
K10.1216.05	5/16"	- 5	8,0	0.31	14,0	0.55	2.8	400	11.0	1600	76	3.0	0,15
K10.1216.06	3/8"	- 6	9,5	0.38	16,0	0.63	2.8	400	11.0	1600	76	3.0	0,16
K10.1216.08	1/2"	- 8	12,7	0.50	19,8	0.78	2.8	400	11.0	1600	102	4.0	0,24
K10.1216.10	5/8"	- 10	16,0	0.63	23,0	0.91	2.4	350	9.7	1400	127	5.0	0,28
K10.1216.12	3/4"	- 12	19,0	0.75	26,2	1.03	2.1	300	8.3	1200	152	7.0	0,41
K10.1216.14	7/8"	- 14	22,0	0.87	31,3	1.23	2.2	310	8.8	1240	200	7.9	0,56
K10.1216.16	1"	- 16	25,4	1.00	32,5	1.28	1.7	250	6.8	1000	203	8.0	0,58

1 LAYER POLYESTER BRAIDED THERMOPLASTIC HOSE SAE 100R7

Inner Tube : Seamless oil resistant thermoplastic
 Reinforcement : 1 High tensile polyester braids
 Outer Tube : Black, oil and weather resistant thermoplastic
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F)



Max temperature recommended for water base hydraulic fluids: +65°C (+149°F)

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1030.02	1/8"	- 2	3,0	0.12	8,1	0.32	28.0	4060	112.0	16240	50	2.00	0,05
K10.1030.03	3/16"	- 3	4,8	0.19	10,3	0.41	21.0	3045	84.0	12180	75	2.95	0,07
K10.1030.04	1/4"	- 4	6,3	0.25	12,4	0.49	19.0	2755	76.0	11020	100	3.94	0,09
K10.1030.05	5/16"	- 5	8,0	0.31	14,2	0.56	19.0	2755	76.0	11020	114	4.49	0,13
K10.1030.06	3/8"	- 6	9,5	0.38	15,7	0.62	16.0	2320	64.0	9280	127	5.00	0,16
K10.1030.08	1/2"	- 8	12,7	0.50	19,3	0.76	14.0	2030	56.0	8120	178	7.00	0,22
K10.1030.10	5/8"	- 10	16,0	0.63	23,1	0.91	10.5	1523	42.0	6092	203	7.99	0,28
K10.1030.12	3/4"	- 12	19,0	0.75	26,4	1.04	9.0	1305	36.0	5220	254	10.00	0,33
K10.1030.16	1"	- 16	25,4	1.00	33,3	1.31	7.0	1015	28.0	4060	305	12.00	0,40

1 STEEL WIRE BRAIDED THERMOPLASTIC HOSE SAE 100R7

Inner Tube : Seamless oil resistant thermoplastic
 Reinforcement : 1 High tensile steel wire braids
 Outer Tube : Black, oil and weather resistant thermoplastic
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F)



Max temperature recommended for water base hydraulic fluids: +65°C (+149°F)

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1031.02	1/8"	- 2	3,0	0.12	6,9	0.27	35.0	5075	140.0	20300	25	1.00	0,10
K10.1031.03	3/16"	- 3	4,8	0.19	10,0	0.39	30.0	4350	120.0	17400	30	1.18	0,13
K10.1031.04	1/4"	- 4	6,3	0.25	11,9	0.47	27.5	3988	110.0	15952	40	1.57	0,17
K10.1031.05	5/16"	- 5	8,0	0.31	14,0	0.55	24.0	3480	96.0	13920	50	1.96	0,22
K10.1031.06	3/8"	- 6	9,5	0.38	16,0	0.63	22.0	3190	88.0	12790	60	2.36	0,26
K10.1031.08	1/2"	- 8	12,7	0.50	20,5	0.81	17.5	2538	70.0	10152	75	2.95	0,39
K10.1031.10	5/8"	- 10	16,0	0.63	23,3	0.92	14.0	2030	56.0	8120	110	4.33	0,41
K10.1031.12	3/4"	- 12	19,0	0.75	25,0	0.98	11.5	1668	46.0	6672	150	5.90	0,45
K10.1031.16	1"	- 16	25,4	1.00	32,5	1.28	10.0	1450	40.0	5800	230	9.06	0,62

2 POLYESTER BRAIDED THERMOPLASTIC HOSE SAE 100R8

Inner Tube : Seamless oil resistant thermoplastic
 Reinforcement : 2 High tensile polyester braids
 Outer Tube : Black, oil and weather resistant thermoplastic
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F)



Max temperature recommended for water base hydraulic fluids: +65°C (+149°F)

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1032.03	3/16"	- 3	4,8	0.19	12,4	0.49	35.0	5075	140.0	20300	35	1.38	0,09
K10.1032.04	1/4"	- 4	6,3	0.25	16,1	0.63	35.0	5075	140.0	20300	50	1.96	0,10
K10.1032.05	5/16"	- 5	8,0	0.31	16,7	0.66	29.0	4205	116.0	16820	60	2.36	0,13
K10.1032.06	3/8"	- 6	9,5	0.38	18,5	0.73	28.0	4060	112.0	16240	80	3.15	0,18
K10.1032.08	1/2"	- 8	12,7	0.50	22,6	0.89	24.5	3553	98.0	14212	95	3.74	0,22
K10.1032.10	5/8"	- 10	16,0	0.63	25,6	1.01	19.0	2755	76.0	11020	125	4.92	0,31
K10.1032.12	3/4"	- 12	19,0	0.75	28,9	1.14	15.5	2250	62.0	9000	150	5.90	0,36
K10.1032.16	1"	- 16	25,4	1.00	36,1	1.42	14.0	2030	56.0	8120	200	7.87	0,51

SAE 100R9

Tube : Seamless, oil resistant, black synthetic rubber
 Reinforcement : 4 Layers of alternated, spiraled, high tensile steel wire over a layer of fabrics
 Cover : Black synthetic rubber with resistance to abrasion, oil, fuel, and weather
 Temperature : -40°C to +100°C
 Application : Generally used for conveying hydraulic fluids, such as alcohol, hydraulic oil, fuel oil, lubricating oil, emulsion, hydrocarbon, and so on.
 Meets requirements of SAE 100R9, and in line with flame resistance acceptance designation US MSHA IC-111/1



Nominal Diameter		Inside Diameter		Reinforcement		Outside Diameter		Working Pressure	Proof Pressure	Burst Pressure	Min. Bend Radius	Weight
mm	inch	min	max	min	max	min	max	MPa	Mpa	Mpa	mm	kg/m
6.40	1/4	6.20	7.00	14.20	15.20	17.20	18.40	50.00	100.00	200.00	120.00	0.64
9.50	3/8	9.30	10.10	16.90	18.00	20.60	22.20	31.50	63.00	126.00	130.00	0.75
12.70	1/2	12.30	13.50	20.30	21.20	23.80	25.40	28.00	56.00	112.00	180.00	0.89
19.00	3/4	18.60	19.80	27.40	28.80	31.20	32.80	21.00	42.00	84.00	280.00	1.50
26.40	1	25.00	26.40	34.80	35.80	38.50	40.90	21.00	42.00	84.00	355.00	2.00
31.80	1.1/4	31.40	33.40	42.40	44.00	46.30	48.70	17.50	35.00	70.00	460.00	2.80
38.10	1.1/2	37.70	39.70	48.70	50.30	52.30	54.70	14.00	28.00	56.00	560.00	3.40
50.80	2	50.40	52.40	62.20	63.80	65.80	68.20	14.00	28.00	56.00	710.00	4.25

EN 856 R12 / SAE 100R12

Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 4 Spirals of high tensile steel wire
 Outer Tube : Black, oil, weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)
 Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)
 Max temperature recommended for air: +60°C (+140°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	kg/m
K10.1012.06	3/8"	- 6	9,5	0.38	20,3	0.80	27.6	4000	110.0	16000	125	5.0	0,80
K10.1012.08	1/2"	- 8	12,7	0.50	23,6	0.93	27.6	4000	110.0	16000	180	7.0	1,15
K10.1012.10	5/8"	- 10	16,0	0.63	27,4	1.08	27.6	4000	110.0	16000	205	8.0	1,26
K10.1012.12	3/4"	- 12	19,0	0.75	30,7	1.21	27.6	4000	110.0	16000	240	9.5	1,44
K10.1012.16	1"	- 16	25,4	1.00	38,1	1.50	27.6	4000	110.0	16000	305	12.0	2,15
K10.1012.20	1.1/4"	- 20	32,0	1.25	47,0	1.85	20.7	3000	82.7	12000	420	16.5	2,75
K10.1012.24	1.1/2"	- 24	38,0	1.50	53,6	2.11	17.2	2500	69.0	10000	510	20.0	3,35
K10.1012.32	2"	- 32	50,8	2.00	66,8	2.63	17.2	2500	69.0	10000	635	25.0	4,60

SAE 100R13 - 5000 PSI

Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 4 or 6 Spirals of high tensile steel wire
 Outer Tube : Black, oil, weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)
 Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)
 Max temperature recommended for air: +60°C (+140°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	kg/m
K10.1009.12 *	3/4"	- 12	19,0	0.75	33,0	1.30	42.0	6090	168.0	24360	280	11.0	1,56
K10.1009.16 *	1"	- 16	25,4	1.00	38,7	1.52	38.0	5510	152.0	22040	340	13.4	2,09
K10.1014.20	1.1/4"	- 20	32,0	1.25	49,8	1.96	34.5	5000	138.0	20000	420	16.5	3,90
K10.1014.24	1.1/2"	- 24	38,0	1.50	57,4	2.26	34.5	5000	138.0	20000	500	20.0	4,96
K10.1014.32	2"	- 32	50,8	2.00	71,1	2.80	34.5	5000	138.0	20000	635	25.0	7,09

SAE 100 R14 WITH CORRUGATED PTFE HOSE

Inner Tube : Seamless corrugated polytetrafluorethylene (PTFE)
 Reinforcement : 1 stainless steel wire braid
 Outer Tube : Black, oil, weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Water base, petroleum base, corrosive and high temperature gases or fluids
 Temperature Range : -50°C (-58°F) + 200°C (+392°F)



part number	Ø nom	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.2010.06	3/8"	- 6	10,0	0.39	15,0	0.59	12.0	1740	48.0	6960	20	0.79	0,13
K10.2010.08	1/2"	- 8	13,0	0.51	18,0	0.71	11.0	1595	44.0	6380	25	0.98	0,15
K10.2010.10	5/8"	- 10	16,0	0.63	22,0	0.87	8.0	1160	32.0	4640	50	1.97	0,16
K10.2010.12	3/4"	- 12	19,5	0.77	26,0	1.02	7.0	1015	28.0	4060	65	2.56	0,21
K10.2010.16	1"	- 16	25,5	1.00	33,0	1.30	5.0	725	20.0	2900	89	3.50	0,26
K10.2010.20	1.1/4"	- 20	31,5	1.24	38,0	1.50	4.5	653	18.0	2610	110	4.33	0,32
K10.2010.24	1.1/2"	- 24	37,5	1.48	44,5	1.75	4.0	580	16.0	2320	120	4.72	0,36
K10.2010.32	2"	- 32	50,5	1.99	57,0	2.24	3.0	435	14.0	2030	120	4.72	0,45

SAE 100 R14 WITH SMOOTH PTFE HOSE

Inner Tube : Seamless smooth polytetrafluorethylene (PTFE)
 Reinforcement : 1 stainless steel wire braid
 Outer Tube : Black, oil, weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Water base, petroleum base or synthetic base hydraulic fluids, corrosive, food liquids and high temperature gases and liquids
 Temperature Range : -50°C (-58°F) + 200°C (+392°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.2001.03	1/8"	- 3	3,2	0.13	6,3	0.25	27.5	3900	110.0	15600	40	1.57	0,07
K10.2000.04	3/16"	- 4	4,8	0.19	7,6	0.30	19.0	2755	76.0	11020	55	1.97	0,07
K10.2000.05	1/4"	- 5	6,3	0.25	8,8	0.35	18.0	2610	72.0	10440	75	2.95	0,09
K10.2000.06	5/16"	- 6	8,0	0.31	11,0	0.43	17.5	2538	70.0	10152	100	3.94	0,13
K10.2000.08	13/32"	- 8	10,3	0.41	13,0	0.51	14.2	2059	56.8	8236	120	4.72	0,16
K10.2000.10	1/2"	- 10	12,7	0.50	15,7	0.62	12.0	1740	48.0	6960	140	5.51	0,21
K10.2000.12	5/8"	- 12	16,0	0.63	19,3	0.76	10.5	1523	42.0	6092	165	6.50	0,26
K10.2000.16	7/8"	- 16	22,0	0.88	26,1	1.03	6.8	970	27.2	3880	240	9.45	0,36
K10.2000.20	1.1/8"	- 20	28,6	1.13	32,6	1.28	4.4	638	17.6	2552	330	13.0	0,53

SAE 100R15 - 6000PSI

Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 4 or 6 spirals of high tensile steel wire
 Outer Tube : Black, oil, weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)
 Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)
 Max temperature recommended for air : +60°C (+140°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1008.06*	3/8"	- 6	9,5	0.38	21,4	0.84	44.5	6453	178.0	25812	130	5.1	0,80
K10.1008.08*	1/2"	- 8	12,7	0.50	24,6	0.97	42.0	6000	168.0	24000	180	7.1	1,15
K10.1009.12**	3/4"	- 12	19,0	0.75	33,0	1.30	42.0	6000	168.0	24000	267	10.5	1,56
K10.1016.16	1"	- 16	25,4	1.00	42,9	1.69	42.0	6000	168.0	24000	330	13.0	2,10
K10.1016.20	1.1/4"	- 20	32,0	1.25	51,5	2.03	42.0	6000	168.0	24000	445	17.5	3,65
K10.1016.24	1.1/2"	- 24	38,0	1.50	59,6	2.32	42.0	6000	168.0	24000	533	21.0	5,00

SAE 100R16

Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 2 high tensile steel wire braids
 Outer Tube : Black, oil, weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)
 Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)
 Max temperature recommended for air : +60°C (+140°F)



part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	
K10.1019.04	1/4"	- 4	6,3	0.25	13,3	0.52	40.0	5800	160.0	23200	50	2.0	0,27
K10.1019.05	5/16"	- 5	8,0	0.31	15,0	0.59	35.0	5075	140.0	20300	57	2.2	0,30
K10.1019.06	3/8"	- 6	9,5	0.38	17,1	0.67	33.0	4785	132.0	19140	65	2.6	0,42
K10.1019.08	1/2"	- 8	12,7	0.50	20,6	0.81	27.6	4000	110.4	16000	90	3.5	0,52
K10.1019.10	5/8"	- 10	16,0	0.63	23,7	0.93	25.0	3625	100.0	14500	100	3.9	0,63
K10.1019.12	3/4"	- 12	19,0	0.75	27,7	1.09	21.5	3118	86.0	12472	120	4.7	0,80
K10.1019.16	1"	- 16	25,4	1.00	35,8	1.41	16.5	2393	66.0	9572	150	5.9	1,22

SAE 100R17



Inner Tube : Seamless oil resistant synthetic rubber
 Reinforcement : 1 high tensile steel wire braid on sizes 1/4", 5/6", 3/8" and 1/2"
 2 braids on sizes 5/8", 3/4" and 1"
 Outer Tube : Black, oil, weather and abrasion resistant synthetic rubber
 Safety factor : 4 : 1
 Application : Petroleum base hydraulic fluids
 Temperature Range : -40°C (-40°F) + 100°C (+212°F); intermittent service: +120°C (+248°F)
 Max temperature recommended for water base hydraulic fluids: +70°C (+158°F)
 Max temperature recommended for air : +60°C (+140°F)

part number	Ø nom.	dash size	Ø internal		Ø external		working pressure		min. burst pressure		min. bend radius		weight
			mm	inch	mm	inch	MPa	PSI	MPa	PSI	mm	inch	Kg./m
1 Wire Braid													
K10.1017.04	1/4"	- 4	6,3	0.25	12,7	0.50	22.5	3260	90.0	13040	51	2.0	0.22
K10.1017.05	5/16"	- 5	8,0	0.31	15,0	0.59	21.0	3000	84.0	12000	60	2.4	0.27
K10.1017.06	3/8"	- 6	9,5	0.38	16,5	0.65	21.0	3000	84.0	12000	64	2.5	0.34
K10.1017.08	1/2"	- 8	12,7	0.50	20,8	0.82	21.0	3000	84.0	12000	89	3.5	0.42
2 Wire Braid													
K10.1017.10	5/8"	- 10	15,9	0.63	24,7	0.97	25.0	3625	100.0	14500	102	4.0	0.51
K10.1017.12	3/4"	- 12	19,0	0.75	28,6	1.13	21.5	3120	86.0	12480	122	4.8	0.63
K10.1017.16	1"	- 16	25,4	1.00	36,6	1.48	20.7	3000	82.8	12000	152	6.0	1.00

Air & Water Hose 2.0MPa / 300PSI



Tube : Black, smooth, synthetic SBR
 Reinforcement : High tensile polyester fiber braids
 Cover : Black, smooth/cloth impressed, abrasion, ozone and weather resistant synthetic rubber
 Temperature : -30°C to +75°C

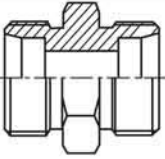
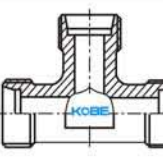
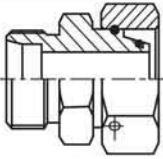
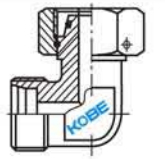
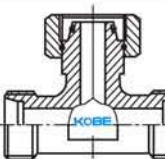
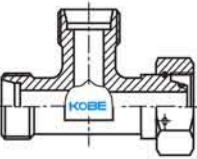
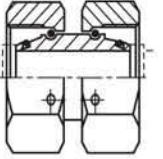
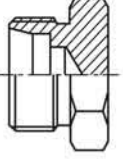
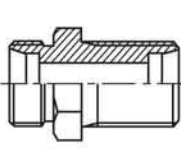
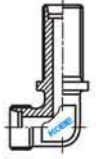
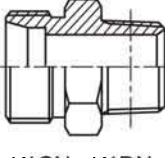
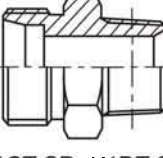
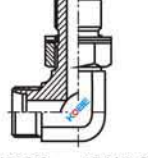
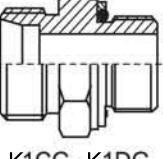
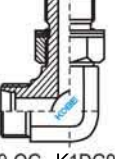
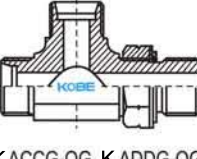
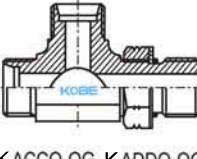
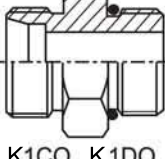
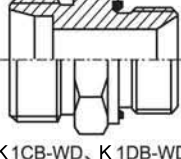
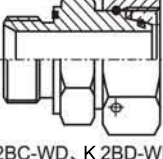
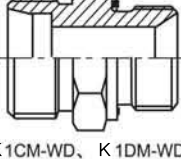
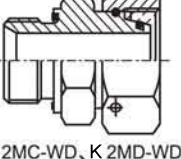
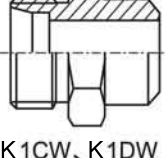
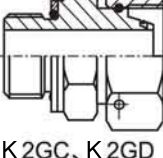
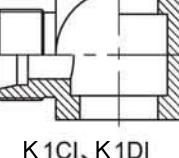
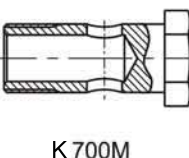
Specification	I.D	O.D	Working Pressure	Burst Pressure	Bend Radius	Weight
Inch	mm	mm	Mpa	Mpa	mm	kg/m
1/4"	6	15.5	2	6	102	0.308
5/16"	8	17.5	2	6	114	0.324
3/8"	10	19.5	2	6	127	0.4
1/2"	13	23	2	6	178	0.548
5/8"	16	26	2	6	203	0.6
3/4"	19	30.5	2	6	241	0.76
1"	25	38	2	6	305	1.08
1-1/4"	32	46	2	6	419	1.28
1-1/2"	38	56	2	6	500	1.72
2"	51	70	2	6	630	2.9

Note: 1/4" - 1" smooth surface

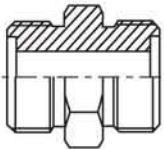
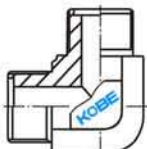
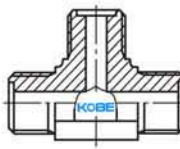
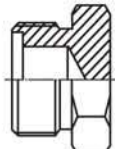
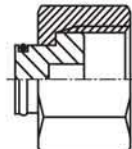
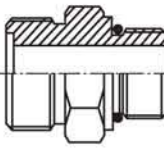
Swaged Hose Fitting

Swaged Hose Fitting	Ferrule	K00100 P12 K00110 P12 K00110-A P13 K00200 P13 K00210 P14 K03310 P14 K00400 P15 K00401 P15 K00402 P16 K00403 P16
		K00405 P17 K00TF0 P17 K00018 P17 K01100 P18 K01200 P18 01300 P19 K01400 P19 K01401 P20 K01402 P20 K00620 P21 K00710 P21
	Flat/Multi-Seal	K 20111, K 20112 P22 K 20141, K 20142 P23 K 20191, K 20192 P24 K 20241, K 20242 P25 K 20211, K 20212 P26 K 20291, K 20292 P27
	74° Cone Seal	K 20711, K 20712 P28 K 20741, K 20742 P29 K 20791, K 20792 P29
	24° Cone O-Ring Seal L.T.	K10411, K10412 P30 K20411, K20412 P31 K20441, K20442 P32 K20491, K20492 P33
	24° Cone O-Ring Seal H.T.	K10511, K10512 P34 K20511, K20512 P35 K20541, K20542 P36 K20591, K20592 P37
	BSPT	K13011-SP, K13012-SP P38
	BSP Multiseal	K 22111, K 22112 P39 K 22141, K 22142 P40 K 22191, K 22192 P41
	BSP60° Cone Seal	K 22611, K 22612 P42 K 22641, K 22642 P43 K 22691, K 22692 P44
	NPT	K15611, K15612 P45
	JIC 74° Cone Seal	K16711, K16712 P46 K26711, K26712 P47 K26741, K26742 P48 K26791, K26792 P49
	SAE Flange L.T.	K87311, K87312 P50 K87341, K87342 P51 KFL P51 K87391, K87392 P52
	SAE Flange H.T.	K87611, K87612 P53 K87641, K87642 P53 K87691, K87692 P54 KFS P54

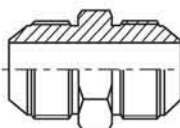
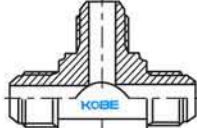
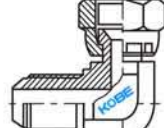
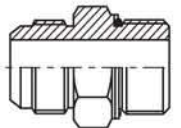
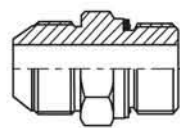
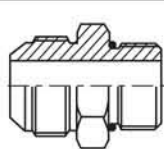
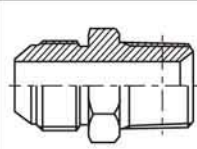
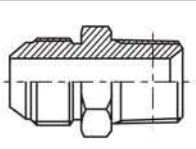
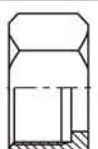
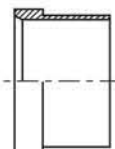
Metric Thread Bite Type Tube Fittings

 K1C, K1D P62	 K1C9, K1D9 P63	 KAC, KAD P64	 K2C, K2D P65/66	 K2C9, K2D9 P68	 KBC, KBD P69
 KCC, KCD P70	 K3C, K3D P71	 K4C, K4D P72	 K9C, K9D P73	 K6C, K6D P74	 K6C9, K6D9 P75
 K1CN, K1DN P76	 K1CN9, K1DN9 P77	 K1CT-SP, K1DT-SP P78	 K1CT9-SP, K1DT9-SP P79	 K1CH, K1DH P80/81	 K1CH9-OG, K1DH9-OG P82
 KACCH-OG, KADDH-OG P83	 K1CG, K1DG P84	 K1CG9-OG, K1DG9-OG P85	 KACCG-OG, KADDG-OG P86	 K1C9-OG, K1D9-OG P87	 KACCO-OG, KADDO-OG P88
 K1CO, K1DO P89	 K1CB-WD, K1DB-WD P90	 K2BC-WD, K2BD-WD P91	 K1CM-WD, K1DM-WD P92	 K2MC-WD, K2MD-WD P93	 K1CJ, K1DJ P94
 K1CW, K1DW P95	 K2GC, K2GD P96	 K1CI, K1DI P97	 KNL, KNS P98	 KRL-S, KRS-S P99	 K700M P100
 K1CFL, K1DFS P100	 K1CFL9, K1DFS9 P101				

Metric Thread O-Ring Face Seal Fittings

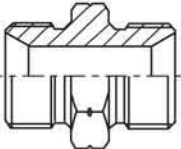
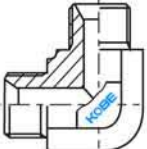
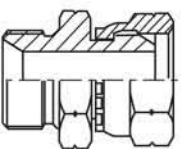
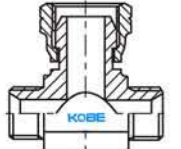
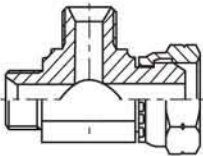
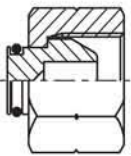
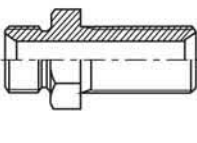
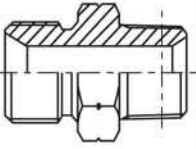
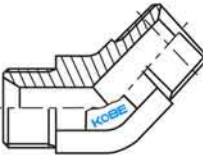
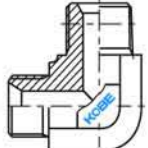
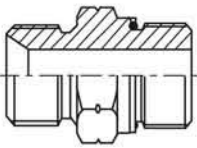
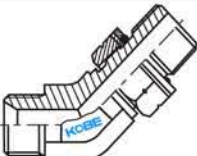
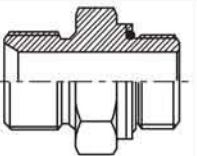
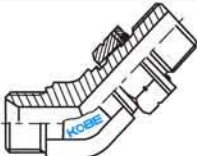
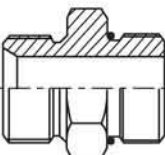
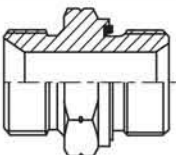
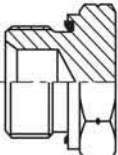
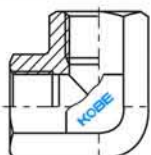
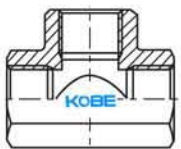
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 K1EH P60	 K1EH9-OG P60				

Metric Thread 74° Cone Flared Tube Fittings

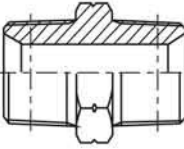
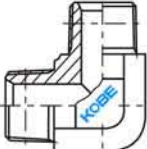
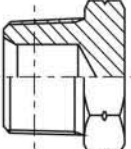
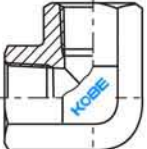
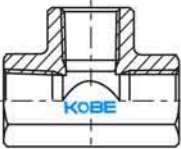
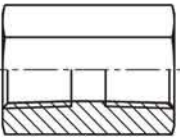
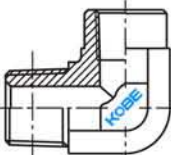
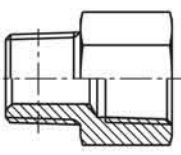
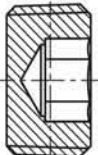
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 K1QG9-OG P107	 K1QO P108	 K1QO9-OG P108	 K1QN P109	 K1QT-SP P110	 KNB200-Q P111
 K NB500-Q P111					

Hose Fitting

BSP Thread 60° Cone Fittings

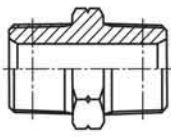
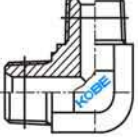
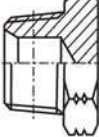
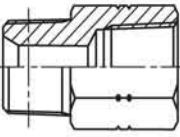
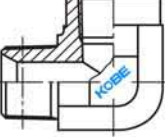
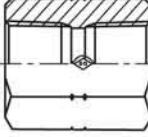
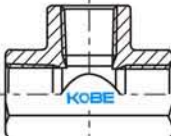
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 KCB P118	 K9B P118	 K6B P119	 K6B9 P119	 K1BT-SP P120	 K1BT4-SP P121
 K1BT9-SP P122	 K1BG P123	 K1BG4-OG P124	 K1BG9-OG P124	 K1BH P125	 K1BH4-OG P126
 K1BH9-OG P127	 K1BO P128	 K1B-WD P129	 K4BN-WD P130	 K4B-WD P130	 K7B9-PK P131
 KGB-PK P131					

BSPT Thread Fittings

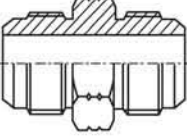
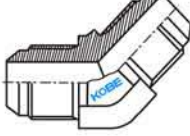
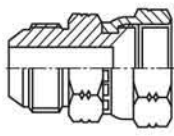
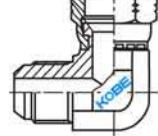
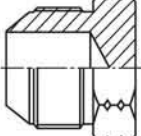
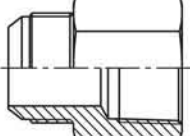
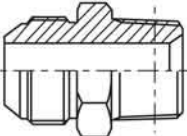
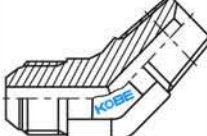
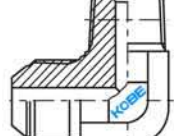
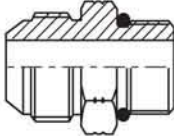
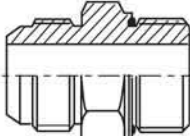
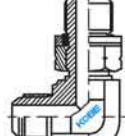
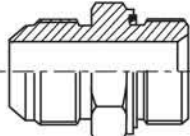
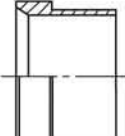
 K1T-SP P133	 K1T9-SP P134	 K4T-SP P134	 K7T9-PK P135	 KGT-PK P135	 K7T P136
 K5T9 P136	 K5T P137	 K4TN P138			

Hose Fitting

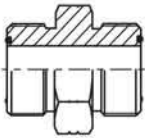
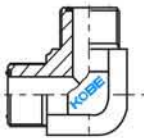
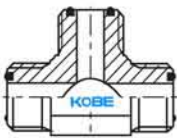
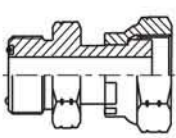
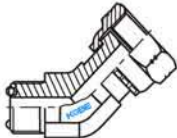
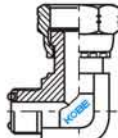
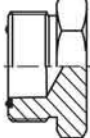
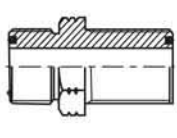
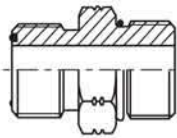
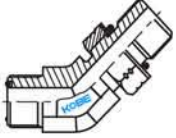
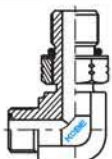
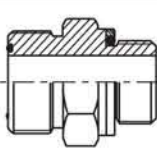
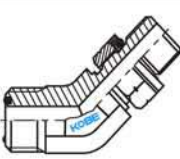
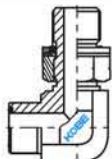
NPT Thread Fittings

 K1N P140	 K1N9 P141	 K4N P141	 K5N P142	 K5N9 P143	 K7N P144
 KGN-PK P144	 K4NN P145				

JIC 74° Cone Flared Tube Fitting

 K1J P147	 K1J4 P148	 K1J9 P149	 KAJ P150	 K2J P151	 K2J9 P152
 K4J P153	 K5JT P154	 K1JT-SP P155	 K1JT4-SP P156	 K1JT9-SP P157	 K1JO P158
 KAJOJ-OG P159	 K1JO4-OG P160	 K1JO9-OG P161	 K1JG P162	 K1JG4-OG P163	 K1JG9-OG P164
 KAJGJ-OG P165	 K1JB-WD P166	 KNB200 P167	 KNB300 P168	 KNB500 P168	

ORFS Fittings

 K1F P170	 K1F9 P171	 KAF P171	 K2F P172	 K2F4 P173	 K2F9 P173
 KCF P174	 K4F P174	 K6F P175	 K6F9 P175	 K1FO P176	 K1FO4-OG P177
 K1FO9-OG P178	 K1FG P179	 K1FG4-OG P180	 K1FG9-OG P181		

DIN Black and Phosphated Hydraulic Tube with High Precision



Main Norm : DIN2391-94/C DIN1630 EN10305 DIN2445
 ASTM A179 SAE7524 JIS G3445
Main Steel Grade : ST35/E235 ST37.4 ST45/E255 ST52/E355
Delivery Condition : NBK (+N) GBK (+C) BKW (+LC) BKS (+SR)

Synopsis of Process Routing : DIN highly accurate, cold drawn and bright seamless steel tube is used as the tube to be phosphated. The phosphated is realized with the imported chemical fluid to form a black film. The antirust oil is absorbed by means of the micropore on the film to prevent from the rust. The caps are covered at two ends of tube to prevent from the dust.

Main Features : Bright black. Color is homogeneously distributed on the tube surface. The tube has good property of antirust.

Main Application : Used in hydraulic system



Available Sizes for Hydraulic Tube:

Size	Size	Size	Size	Size
4×0.5	15×1.0	22×2.5	32×2.0	42×2.0
4×1.0	15×1.5	22×3.0	32×2.5	42×3.0
5×1.0	15×2.0	22×3.5	32×3.0	42×3.5
6×1.0	15×2.5	22×4.0	32×4.0	42×4.0
6×1.5	15×3.0	22×5.0	34×2.0	42×4.5
6×2.0	16×1.0	24×2.0	34×2.5	42×5.0
6.35×1.6	16×1.5	25×2.0	34×3.0	42×6.0
6.35×2.0	16×2.0	25×2.5	34×3.5	45×3.0
8×1.0	16×2.5	25×3.0	34×4.0	45×6.0
8×1.5	16×3.0	25×4.0	34×4.5	48×3.0
8×2.0	18×1.0	27×3.0	34×5.0	48×3.5
8×2.5	18×1.5	27×3.5	35×1.5	48×5.0
9×1.5	18×2.0	27×4.0	35×2.0	50×5.0
10×1.0	18×2.5	28×1.5	35×2.5	50×6.0
10×1.5	18×3.0	28×2.0	35×3.0	60×3.0
10×2.0	19×2.0	28×2.5	35×3.5	60×5.0
10×3.5	20×1.0	28×3.0	35×4.0	60×6.0
12×1.0	20×1.5	28×3.5	35×4.5	60×7.0
12×1.5	20×2.0	28×4.0	35×5.0	60×8.0
12×2.0	20×2.5	30×1.5	38×2.5	65×5.0
12×2.5	20×3.0	30×2.0	38×3.0	65×8.0
14×1.0	20×3.5	30×2.5	38×3.5	70×4.0
14×1.5	20×4.0	30×3.0	38×4.0	70×5.0
14×2.0	22×1.0	30×3.5	38×5.0	70×8.0
14×2.5	22×1.5	30×4.0	38×6.0	90×5.0
14×3.0	22×2.0	30×5.0	40×4.0	114×4.0



Hard Chrome Plated Steel Bar (Piston Rod)

Diameter (range for metric size)	: 6-200 mm
Diameter (range for imperial sizes):	1/4"-8"
Steel grades	: C35 E; Ck45 42CrMo4V 20MnV6 (*); 38MnVS6 - * Impact value: on request
Tolerance	: ISO f7 (ISO h7 or other - on request)
Roundness	: maximum 1/2 IT
Standard lengths	: 6000 ±300 mm
Special lengths	: on request
Fixed or cut lengths can be supplied on request.	
Surface roughness	: Ra - max. 0,20 µm (normally in the range 0,10-0,15 µm)
Chrome thickness	: < Ø 20 = min. 15 µm ≥ Ø 20 = min. 20 µm
Chrome micro hardness	: min. 900 HV0.1
Straightness	: Ø > Ø 16 mm = max 0.2 mm/m Ø ≤ Ø 16 mm = max 0.3 mm/m



Induction Hardened and Hard Chrome Plated Steel Bar

Diameter (range for metric size)	: 6-160 mm
Diameter (range for imperial sizes):	1/4"-6"
Steel grades	: C35 E; Ck45 42CrMo4V 20MnV6 (*); 38MnVS6 - * Impact value: on request
Tolerance	: ISO f7 (ISO h7 or other - on request)
Roundness	: max 1/2 tolerance interval of diameter
Standard lengths	: 6000 ±300 mm
Special lengths	: on request
Fixed or cut lengths can be supplied on request.	
Surface roughness	: Ra - max. 0,20 µm (normally in the range 0,10-0,15 µm)
Hardening depth	: 0.5 - 4.0 depending on diameter
Chrome thickness	: < Ø 20 = min. 15 µm ≥ Ø 20 = min. 20 µm
Chrome micro hardness	: min. 900 HV0.1
Straightness	: Ø > Ø 16mm = max 0.2 mm/m Ø ≤ Ø 16mm = max 0.3 mm/m



Piston Rod

Available Size for Hard Chrome Plated Steel Bar (Piston Rod)
Induction Hardened and Hard Chrome Plated Steel Bar

Diameter	Diameter	Weight	Diameter	Diameter	Weight
Inch	mm	Kg/m	Inch	mm	Kg/m
	6	0,22	2"	50,8	15,90
	8	0,39		55	18,64
3/8"	9,525	0,56		56	19,32
	10	0,62	2 1/4"	57,15	20,13
	12	0,89		60	22,18
1/2"	12,7	0,99		63	24,46
	14	1,21	2 1/2"	63,5	24,85
	15	1,39		65	26,03
5/8"	15,875	1,55		70	30,19
	16	1,58		75	34,66
	18	2,00	3"	76,2	35,78
3/4"	19,05	2,24		80	39,44
	20	2,46	3 1/4"	82,55	41,99
	22	2,98		85	44,52
	24	3,55	3 1/2"	88,9	48,70
	25	3,85		90	49,91
1"	25,4	3,98		95	55,61
	28	4,83		100	61,62
	30	5,55	4"	101,6	63,61
1 1/4"	31,75	6,21		105	67,94
	32	6,31		110	74,56
	34,925	7,52	4 1/2"	114,3	80,50
	35	7,55		115	81,49
	36	7,99		120	88,73
	38	8,90		125	96,28
1 1/2"	38,1	8,94	5"	127	99,39
	40	9,86		130	104,14
	42	10,87	5 1/2"	139,7	120,26
1 3/4"	44,45	12,17		140	120,78
	45	12,48		150	138,65
	50	15,41	6"	152,4	143,12
				160	157,75



Honed Tube



Supply Condition : Cold drawn seamless steel tubes, stress relieved in
Ready to honed/skived roller burnished and honed/skive roller
burnished condition

Standard : GB/T8713-88

Size : 40mm ~ 800mm

Length : Max. 14 Meters

Tolerance on Wall Thickness : < Ø120 mm +/- 5% of wall thickness
≥ Ø120 mm +/- 5% of wall thickness

OD Tolerance : < Ø 40 mm +/- 0.2 mm
≥ Ø 40 mm < 100 mm +/- 0.3 mm
≥ Ø 100 +/- 0.5 mm



Available Sizes:

No.	OD	ID	Length m
	mm	mm	Max.
1	50.00	40.00	3.0
2	55.00	40.00	3.0
3	60.00	50.00	3.0
4	60.80	50.80	3.0
5	63.00	50.00	3.0
6	63.50	50.80	3.0
7	65.00	50.00	3.0
8	70.00	50.00	3.0
9	73.50	63.50	4.0
10	75.00	60.00	4.0
11	76.00	63.00	4.0
12	78.00	65.00	4.0
13	83.00	63.00	4.0
14	83.00	70.00	4.0
15	86.00	70.00	4.0
16	86.20	76.20	4.0
17	88.90	76.20	4.0
18	93.00	80.00	5.8
19	95.00	80.00	5.8
20	98.90	88.90	5.8

No.	OD	ID	Length m
	mm	mm	Max.
21	101.60	88.90	5.8
22	100.00	80.00	8.5
23	102.00	80.00	8.5
24	104.00	90.00	8.5
25	105.00	90.00	8.5
26	108.00	90.00	8.5
27	108.00	100.00	8.5
28	108.00	80.00	8.5
29	110.00	90.00	8.5
30	111.00	101.60	8.5
31	114.00	90.00	8.5
32	114.00	100.00	8.5
33	115.00	100.00	8.5
34	114.30	101.60	8.5
35	121.00	100.00	8.5
36	127.00	100.00	8.5
37	127.00	114.30	8.5
38	130.00	110.00	8.5
39	133.00	110.00	8.5
40	135.00	125.00	8.5

No.	OD	ID	Length m
	mm	mm	Max.
41	135.00	120.00	8.5
42	140.00	110.00	8.5
43	140.00	120.00	8.5
44	140.00	125.00	8.5
45	140.00	127.00	8.5
46	146.00	120.00	8.5
47	146.00	125.00	8.5
48	148.00	125.00	8.5
49	152.00	125.00	8.5
50	152.00	130.00	8.5
51	152.00	140.00	8.5
52	159.00	125.00	8.5
53	159.00	130.00	8.5
54	159.00	135.00	8.5
55	159.00	140.00	8.5
56	160.00	150.00	8.5
57	166.00	140.00	8.5
58	168.00	140.00	8.5
59	168.00	152.40	8.5
60	170.00	150.00	8.5

No.	OD	ID	Length m
	mm	mm	Max.
61	170.00	160.00	8.5
62	172.00	160.00	8.5
63	184.00	160.00	8.5
64	186.00	160.00	8.5
65	188.00	160.00	8.5
66	190.00	160.00	8.5
67	194.00	160.00	8.5
68	194.00	175.00	8.5
69	194.00	180.00	8.5
70	203.00	180.00	8.5
71	210.00	180.00	8.5
72	214.00	180.00	8.5
73	214.00	200.00	8.5
74	230.00	200.00	8.5
75	219.00	180.00	8.5
76	245.00	220.00	8.5
77	245.00	220.00	8.5
78	273.00	220.00	8.5
79	273.00	250.00	8.5
80	299.00	250.00	8.5

The length is based on the S & R length. Honing length max.12m.

The sizes with blocked color are able to delivered skiving & roller burnishing condition.

Tube Feature:

Equivalent Roundness of I.D

Air Cylinder has straight and equivalent round I.D, makes it has long life. The extrusion tube has +/- 5% of mean wall thickness and prevents air leakage.

Appearance

Product with the care of color and its appearance will not gather stain or scratches from other materials when being put together.

I.D

The tolerance of perfect seal ecoentric load ecoentric abrasion.

Allowable deviation from straight

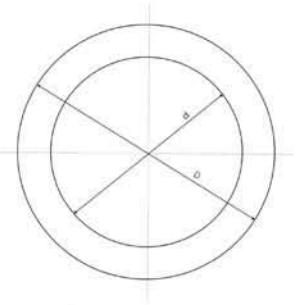
Adapting oil press system from chain system for driving power of drawing which is the key process and stable straightness enabled us to double the stable abrasion and life time.

Roughness

The roughness has an important effect on life time of sealing. We have started the process of hard anodizing and acquired more stable roughness.

Anodic coating film

Anodic coating film is 25 over hardness is HV400 over an AL TUBE has high prevention of wear



Available Size:

Diameter d	Diameter D	Wall thickness		Diameter d	Diameter D	Wall thickness
Ø16	Ø20	2		Ø80	Ø86.4	3.2
Ø20	Ø25	2.5		Ø80	Ø87	3.5
Ø20	Ø26	3		Ø80	Ø89	4.5
Ø25	Ø30	2.5		Ø100	Ø106	3
Ø25	Ø31	3		Ø100	Ø106.4	3.2
Ø30	Ø36	3		Ø100	Ø107	3.5
Ø32	Ø37	2.5		Ø100	Ø110	5
Ø40	Ø45	2.5		Ø125	Ø133	4
Ø40	Ø46	3		Ø125	Ø135	5
Ø50	Ø54	2		Ø140	Ø150	5
Ø50	Ø55	2.5		Ø150	Ø160	5
Ø50	Ø56	3		Ø160	Ø170	5
Ø63	Ø72	4.5		Ø180	Ø192	6
Ø63	Ø68	2.5		Ø200	Ø210	5
Ø63	Ø69	3		Ø250	Ø262	6
Ø60	Ø65	2.5		Ø300	Ø316	8
Ø70	Ø76	3		Ø320	Ø336	8
Ø80	Ø86	3				

Stainless Steel Pipe



Features : Internal and external roughness Ra0.2 - 0.4, inside and outside the tolerance zone by up to 0.03mm; no pressure inside and outside surface pits, scratched, peeling, cracks of any defects, non-oil tracks, oil debris.

Usage : This series of product for pneumatic cylinder, electrical components, spindles spinning wing, fiber hot-box, instrument, medical equipment and other mechanical components of the special tube specification from $\phi 3$ - $\phi 60$ mm, wall thickness 0.2 - 4mm.



No	Product Name	Specifications and requirements							
		Diameter	Tolerance	OD	Tolerance	Wall Thickness	Roundness	Straightness	Wall Finish
1	$\phi 6 \times \phi 7$	6	0.04/0	7	± 0.05	0.5	0.03	1.5mm/m	Ra $\leq 0.4\mu\text{m}$
2	$\phi 8 \times \phi 9$	8	0.04/0	9	± 0.05	0.5	0.03	1.5mm/m	Ra $\leq 0.4\mu\text{m}$
3	$\phi 10 \times \phi 11$	10	0.04/0	11	± 0.05	0.5	0.03	1.2mm/m	Ra $\leq 0.4\mu\text{m}$
4	$\phi 10 \times \phi 11.25$	10	0.04/0	11.25	± 0.05	0.63	0.03	1.2mm/m	Ra $\leq 0.4\mu\text{m}$
5	$\phi 10 \times \phi 11.8$	10	0.07/0	11.8	± 0.1	0.9	0.03	1.2mm/m	Ra $\leq 0.4\mu\text{m}$
6	$\phi 11.8 \times \phi 13.8$	11.8	0.07/0	13.8	± 0.1	1	0.03	1.2mm/m	Ra $\leq 0.4\mu\text{m}$
7	$\phi 12 \times \phi 13.4$	12	0.05/0	13.4	± 0.05	0.7	0.03	1.2mm/m	Ra $\leq 0.4\mu\text{m}$
8	$\phi 14.3 \times \phi 16.3$	14.3	0.07/0	16.3	± 0.1	1	0.03	1mm/m	Ra $\leq 0.4\mu\text{m}$
9	$\phi 16 \times \phi 17.4$	16	0.05/0	17.4	± 0.05	0.7	0.03	1mm/m	Ra $\leq 0.4\mu\text{m}$
10	$\phi 20 \times \phi 21.4$	20	0.06/0	21.4	± 0.05	0.7	0.04	1mm/m	Ra $\leq 0.4\mu\text{m}$
11	$\phi 25 \times \phi 26.4$	25	0.06/0	26.4	± 0.05	0.7	0.04	1mm/m	Ra $\leq 0.4\mu\text{m}$
12	$\phi 32 \times \phi 33.6$	32	0.07/0	33.6	± 0.05	0.8	0.05	1mm/m	Ra $\leq 0.4\mu\text{m}$
13	$\phi 40 \times \phi 41.6$	40	0.07/0	41.6	± 0.05	0.8	0.05	1mm/m	Ra $\leq 0.4\mu\text{m}$
14	$\phi 50 \times \phi 52$	50	0.06/0	52	± 0.07	1	0.05	1mm/m	Ra $\leq 0.4\mu\text{m}$
15	$\phi 63 \times \phi 65$	63	0.06/0	65	± 0.07	1	0.05	1mm/m	Ra $\leq 0.4\mu\text{m}$



Model	Max. Crimping Range	Picture	Main Technical Parameters
HCM-01	<i>Hose cutting machine</i> 1/4-2" 6-51mm		Outside measurement: 650×410×450mm Voltage: 380V/220V/415 50Hz 60HZ Power: 3Kw Maximum inside diameter of cutting hose: Φ51 mm Slice: Φ350×3×Φ32 mm Protection class : IP54
HSM-01	<i>Hose skiving machine</i> 1/4-2" 6-51mm		The inner diameter of the peeled hose: φ6~φ51mm Power: 1.1KW Overall dimension: 710×480×1010 (mm) Weight: 80Kg
NCM-01	<i>Nut crimping machine</i> 1/8-2" 3-51mm		Push force: 500T Motor power:3-4Kw Voltage: 380V/220V/415V Related pressure: 31.5Mpa Nut range:1/8"~ 2" Oil tank capacity:64L Overall dimension: 600×500×1000mm Dies: 10sets
HPT-01	<i>Hose pressure test machine</i> 1/8-2" 3-51mm		Maximum Pressure: 320Mpa (under the air pressure of 0.75MPa) Maximum Rate of Flow: 0.5 L/min Technical Parameter of Driving Pressure and Rate of Flow for Test Bed (Auxiliary Driving Force) Pressure: 0.3—0.9Mpa; Rate of Flow: 1.2m3/min. The air can be allowed to enter into the pneumatic hydraulic booster pump only after air must be filtrated and oil is filled. Normally Operational Temperature Range of Test Bed: -35°C<T<80°C

KOBE-27	4-27mm 1/8-1" Manual power		Hose ID:4-27(mm)- Crimping Force:160 (T) Max Pressure: 31.5(MPa) Die Opening & Closing:±20 (mm) Dies: 4 (PCS) Weight: 52 (Kg)
KOBE-27A	4-27mm 1/8-1" Electricity power		Max opening (mm): 90 mm power of motor:3kw Master die D/L (mm) is 65//80mm(or customize) voltage:380V/220V/415V/230V or customize Crimping force: 400T Rular precision: 0.02mm Noise level:70dB Protection class: IP54 Tank: 50L Dies: 7sets((1/8, 1/4, 3/8, 1/2, 5/8" 3/4, 1,))
KOBE-382	FP20 4-38mm 1/8-1.1/2"		Bucklingrange:Φ4—Φ38mm 1.1/2" power of motor:3kw crimping force:400T Oil pump displacement:220V/380V or customized Max mouth opening:100mm Scale accuracy:0.02mm Noise level:70dB Protection class: IP54 Dies:9 sets (1/8,1/4, 3/8, 1/2, 5/8, 3/4,1, 1-1/4,1-1/2)
KOBE-501	4-51mm 1/8"-2"		Buckling range: (4-51mm) (2") 4 wire Rated pressure: 31.5 MPa power of motor:3kw Oil pump displacement:220V/380V Scale accuracy:0.1mm Noise level:75dB weight:200kg Dies:9sets

Machines for Hose Assembly

KOBE-502	4-51mm 1/8"-2"		crimping range: 4-51mm(1/8-2") 4wire crimping force: 450T Scale accuracy:0.02mm Maximal mouth opening:100mm Dies:10sets (16.19.23.26.31.36.41.47.55.64) Noise level:70dB gross weight:250kg Voltage :220V/240V8380V/415V 50HZ 60HZ;
KOBE-503	6-51mm 1/4"-2"		Crimping size of hose: $\phi 6 \sim \phi 51$ mm 6wire Scale accuracy: 0.02mm rate of work: 3kw~4Kw Noise level:70dB Max crimp pressure: 530TON Dies:10sets oil pump displaceme:2.5ml/rad~.5ml/rad.~10ml/rad rotating speed: 1400r/min Voltage :220V/240V380V/415V 50HZ 60HZ;
KOBE-504	FP 32 4-51mm 1/8"-2"		crimping range: 4-51mm(1/8-2") 4wire crimping force: 500T Scale accuracy: 0.01mm Noise level:65dB Maximal mouth opening:120mm Dies:11sets gross weight:250kg Oil pump displacement: 10ml/rad (piston pumps);
KOBE-505	FP 6-51mm 1/8"-2"		Buckling range: $\Phi 4 \sim \Phi 51$ mm:1/4"-2" 6wire Crimping force :520T Scale accuracy: 0.01mm Noise level:60dB Rated pressure: 31.5 MPa Oil pump displacement: 5ml/rad (380V); 2.5ml/rad (220V) Voltage :220V/240V8380V/415V 50HZ 60HZ; dies:12sets
KOBE-506	6-51mm manual operation		Buckling range: $\Phi 6 \sim \Phi 51$ mm:1/4"-2" Crimping force :500T Scale accuracy: 0.02mm Rated pressure: 31.5 MPa Oil pump displacement: 5ml/rad (380V); 2.5ml/rad (220V) dies:10sets

KOBE-509	6-51 mm 1/8" - 2" with quick change tool and dies bench		Hose size: 6~51mm or 1/4" to 2" (up to 4-wire) Max opening (mm): 114 mm Master die D/L (mm) is 55/75/90/110mm(or customize) Rated pressure: 31.5mpa Noise level:60dB voltage:380V/220V/415V/230V or customize The largest crimping pressure: 500T Rular precision: 0.02 mm Oil pump out-let quantity: 2.5ml 5ml 10ml/rad Dimension: 650mm*400mm*1400mm Weight: 750kg Tank: 50-60L
KOBE-52M	<i>Multi-functional Crimp and skive hose</i>		crimping range: 6-51mm 2" crimping force: 500T Motor power:4kw Motor Speed(r/min):1500r/min Oil Pump Capacity (ml/r):10ml/r Scaleaccuracy:0.02mm Noiselevel:70dB
KOBE-53M	<i>Multi-functional Crimp and skive and cut hose</i>		Crimping and cut range: 6-51mm 2" Motor voltage: 380V 50HZ Motor power: 6KW Noise level:60dB Weight: 550Kg Over dimension: 1.5*0.85*1.7m

KOBEm64	4-64mm 1/4-2.5"		crimpng size:1/4-2.5"(6-64mm) voltage: 380V/220V Motor power:3KW/4KW Maximal mouth opening:125mm Buckle pressure: 530T Noise level:70dB Dies: 12sets Weight: 250KG Overall dimensions: 880×590×1400mm Fuel tank capacity:60L
KOBEm76	4-76mm 1/8-3"		crimpng size:1/4-3."(6-76mm) voltage: 380V/220v motor power:4KW Maximal mouth opening:150mm Noise level:65dB Buckle pressure: 600T Dies: 13sets Weight: 350KG Fuel tank capacity:60L
KOBEm102	4-102mm 1/8-4"		crimpng size:1/4-4" (6-102mm) Voltage: 7.5KW Maximal mouth opening: 180mm Buckle pressure: 950T Dies: 14sets Noise level:65dB Specifiedpressure: 31..5MPa Weight: 400KG Overall dimensions: 590×860×1300 Fuel tank capacity: 100L
KOBEm170	4-170mm 1/8-6"		Crimping SIZE: 1/4-6"(6-170mm) Crimping force:1100T Specified pressure:31.5mpa Electric motor power: 7.5KW Noise level:65dB Fuel tank capacity 120L voltage:380V/50Hz Package dimension:800*590*1400mm

