

HOSES | FITTINGS | ADAPTERS
ENGINEERING INFORMATION



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주식회사 센텍



Introduction to SENTEC

센텍은 오늘을 넘어
더 큰 미래의 꿈을 향해 나아갑니다.

센텍은 1984년 1월 안산시 반월공단내에 호스 제조공장을 신설하여 고압고무호스와 산업용호스를 생산, 판매하고 있으며, Hose Ass'y 제품을 국내 유수의 중장비 업체 및 자동차 업체에 공급하고 있습니다.

무한경쟁의 환경에 대응과 고품질 제품 및 생산공정 개발/개선을 위해 4스파이럴, RB II, PPX 등 고압호스의 제조설비를 도입, 각고의 연구개발을 통해 국가공인기관 및 국내업체로부터 제품성능을 인정 받은바 있으며, 첨단 고압호스 내구성 품질시험설비인 임펄스테스터를 도입하여 품질 향상과 신제품 개발에 박차를 가하고 있습니다.

센텍 전 임직원은 그간 축적된 기술과 경험을 바탕으로 고품질의 우수한 제품을 생산 공급하는데 최선을 하고 있으며, 앞으로도 연구개발 및 최신설비투자로 고객의 기대에 부응하고자 합니다.

오늘의 센텍이 있기까지 그동안 성원해 주신 여러분께 감사드리며, 그 성원과 격려에 보답할 수 있도록 배전의 노력을 다할 것을 다짐합니다.

Since Sentec was established at Banwoel's industrial complex in Ansan city, Korea in 1984, it has produced Hydraulic Rubber Hoses and other industrial Rubber Hoses, and supplied the hose assemblies to the leading manufacturers of Construction Equipment and Factory Automation machinery in Korea.

To cope with the frenzied competition and to improve its quality and production process, we have been equipped with the latest and quality machines for 4-spiral, RB II, PPX, etc, and top notch engineers and researchers have been devoted to developing the latest technologies. Thereby the products have been approved by Korean Government Agencies for certification. We also have been equipped with Impulse Tester through which its quality is assured and the advanced technologies are developed.

We continuously have been trying our best to supply its quality products produced by our multiple years of experience and technologies and to support customers to their satisfaction by R&D and investment into the latest machines.

We appreciate that all these accomplishment would not be achieved without the patronage and support from customers and in return, we will do our utmost to meet their requirements.



Company History

● 1976 동양상사 설립

● 1984 반월공장 준공

● 1987 (주)동양고압고무로 법인 전환

● 1989 본사 및 제1공장 완공

● 1990 (주)천지화학으로 상호 변경

● 2003 (주)센텍으로 상호 변경

- 1976. 1 동양상사 설립
- 1982. 6 동양고압고무로 상호 변경
- 1986. 4 한국공업규격 K.S 획득(고압고무호스)
- 1987. 1 (주)동양고압고무로 법인 전환
- 1987. 2 일본 요코하마 에어로킵사와 기술제휴
- 1990. 8 (주)천지화학으로 상호 변경
- 1990. 12 예산공장 준공 (CMB 제조)
- 1999. 7 KSA9002/ISO9002 품질시스템 인증
- 2000. 1 소방용 흡수관 형식 승인 (호칭 100)
- 2003. 4 (주)센텍으로 상호 변경
- 2006. 11 한국 선급 협회 고압 고무호스 제품 인증
- 2012. 10 MSHA IC-286 미국 광산 규격 인증 취득 (1,2W)
- 2016. 4 MSHA IC-286 미국 광산 규격 인증 취득 (4S)
- 2016. 5 LR 인증 취득 (Lloyd)
- 2016. 6 ABS 선급 인증 취득

- 1976. 1 Established under the name of company "Dong Yang Trading Company"
- 1982. 6 The name of company had been changed to "Dong Yang High Pressure Rubber Company"
- 1986. 4 Acquired the approval of KS for High Pressure Rubber Hose from Industrial Advancement Administration
- 1987. 1 Incorporated to "Dong Yang High Pressure Rubber Co., Ltd"
- 1987. 2 Reached to the technical license with "Yokohama Aeroquip" of Japan
- 1990. 8 The name of company had been changed to "Chunji Chemical Co., Ltd"
- 1990. 12 Completion of Factory at Yesan for Production of CMB compounds
- 1999. 7 Acquired KSA9002 and ISO9002 Q.A. system
- 2000. 1 Acquired the model approval of fire-fighting suction hose (model 100) from KFEIC
- 2003. 4 The name of company had been changed to "SENTEC IND. CO., LTD"
- 2006. 11 For Type Approval Certificate of Korean Register of Shipping
- 2012. 10 Acquired MSHA IC 286 (1,2W) US Mine Safety & Health Admin.
- 2016. 4 Acquired MSHA IC 286 (4S) US Mine Safety & Health Admin.
- 2016. 5 Acquired LR certification for shipping industry (Lloyd)
- 2016. 6 Acquired ABS certification for shipping industry

Sentec Ind. co.,Ltd.

HOSES & ENGINEERING INFORMATION



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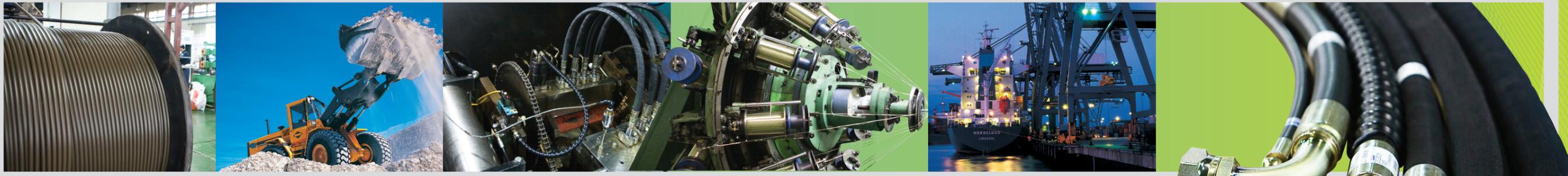


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주식회사 센텍

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DIN EN 853 1SN / SAE 100R1 AT - NO SKIVE TYPE

Sentec H101

고압고무호스 SINGLE WIRE BRAIDED HOSE



- 내면고무
- 보강층
- 외면고무
- 용도

내유성, 내수성 합성고무
고 장력 강선(1회 편조)
내유성, 내후성 및 내마모성 합성고무
광물성 작동유, 수성계 작동유, 난연성 작동유, 탄화수소계 합성 윤활유 라인
(공기에 사용할 때는 외면고무에 핀 프리킹한 것을 사용하여 주십시오)
특장차, 지게차, 중장비, 세척기, 농기계, 유압 배관 라인(공작기계, 사출기)
-40°C ~ +100°C (-40°F ~ +212°F)

- 사용장비
- 사용온도범위



- INNER TUBE
- REINFORCEMENT
- OUTER COVER
- APPLICATION

HYDRAULIC OIL AND WATER RESISTANT SYNTHETIC RUBBER
HIGH TENSILE STEEL WIRE SINGLE BRAID
OIL, WEATHER AND ABRASION RESISTANT SYNTHETIC RUBBER
FOR HIGH PRESSURE HYDRAULIC CIRCUIT SYSTEM FOR EQUIPMENT OR VEHICLE
(FOR AIR APPLICATION, THE OUTER COVER SHALL BE PIN-PRICKED)
SPECIALLY EQUIPPED VEHICLE, FORK LIFT, HEAVY EQUIPMENT, SYRINGE
AGRICULTURAL MACHINES, HYDRAULIC PIPING LINE(MACHINE TOOL, CATAPULT)

- EQUIPMENT

- THE RANGE OF TEMPERATURE -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム
- 補強層
- 外被ゴム
- 使用用途

耐油性, 耐水性 合成ゴム
高張力 鋼線 (1回編組)
耐油性, 耐候性及び耐磨耗性 合成ゴム
鉱物性 作動油, 水性系 作動油を使用する油圧装置及び油圧回路に使用
(AIR用として外面ゴムにフィンフリッキング製品も有る)
建設機械(フォークリフト)、重装備、洗浄機、農機械、油圧配管ライン(工作機械など)
-40°C ~ +100°C (-40°F ~ +212°F)

- 使用装備
- 使用温度

Part no	Hose ID		Hose OD		max operating		Min burst		Min bend radius		Weight
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
	H101-04	1/4"	6.4	0.52	13.2	22.6	3,270	90.4	13,080	3.94	
H101-05	5/16"	7.9	0.59	15	21.5	3,120	86.0	12,480	4.53	115	0.28
H101-06	3/8"	9.5	0.67	17.1	18.0	2,610	72.0	10,440	4.92	125	0.30
H101-08	1/2"	12.7	0.80	20.3	16.0	2,320	64.0	9,280	7.09	180	0.39
H101-10	5/8"	15.9	0.94	23.8	13.0	1,890	52.0	7,560	8.07	205	0.50
H101-12	3/4"	19.0	1.08	27.5	10.5	1,520	42.0	6,080	9.45	240	0.64
H101-16	1"	25.4	1.38	35.2	8.8	1,280	35.2	5,120	11.81	300	0.83
H101-20	1-1/4"	31.8	1.71	43.4	6.3	900	25.2	3,600	16.53	420	1.20
H101-24	1-1/2"	38.1	1.95	49.5	5.1	740	20.4	2,960	19.69	500	1.50
H101-32	2"	50.8	2.45	62.2	4.1	580	16.4	2,320	24.80	630	1.95

* APPROVALS : LR, ABS, KR, MSHA

DIN EN 853 2SN / SAE 100R2 AT - NO SKIVE TYPE

고압고무호스 DOUBLE WIRE BRAID HOSE

Sentec H201



- 내면고무: 내유성, 내수성 합성고무
- 보강층: 고 장력 강선(2회 편조)
- 외면고무: 내유성, 내후성 및 내마모성 합성고무
- 용도: 광물성 작동유, 수성계 작동유, 난연성 작동유, 탄화수소계 합성 윤활유를 사용하는 유압라인 (공기에 사용할 때는 외면고무에 핀 프리킹(PIN PRICKING)한 것을 사용하여 주십시오)
- 사용장비: 트랙차, 지게차, 중장비, 세척기, 농기계, 유압 배관 라인(공작기계, 사출기)
- 사용온도범위: -40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE: HYDRAULIC OIL AND WATER RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT: HIGH TENSILE STEEL WIRE DOUBLE BRAID
- OUTER COVER: OIL, ABRASION AND WEATHER RESISTANT SYNTHETIC RUBBER
- APPLICATION: FOR HYDRAULIC SYSTEM SERVICE WITH PETROLEUM AND WATER BASE FLUIDS (FOR AIR APPLICATION, THE OUTER COVER SHALL BE PIN-PRICKED)
- EQUIPMENT: SPECIALLY EQUIPPED VEHICLE, FORK LIFT, HEAVY EQUIPMENT, SYRINGE AGRICULTURAL MACHINES, HYDRAULIC PIPING LINE(MACHINE TOOL, CATAPULT)
- THE RANGE OF TEMPERATURE: -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム: 耐油性, 耐水性 合成ゴム
- 補強層: 高張力 鋼線(2回編組)
- 外被ゴム: 耐油性, 耐候性及び耐摩耗性 合成ゴム
- 使用用途: 鉱物性 作動油, 水性系 作動油を使用する油圧装置及び油圧回路に使用
- 使用装備: 建設機械(フォークリフト)、重装備、洗浄機、農機械、油圧配管ライン(工作機械など)
- 使用温度: -40°C ~ +100°C (-40°F ~ +212°F)

Part no	Hose ID		Hose OD		max operating		Min burst		Min bend radius		Weight
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
H201-04	1/4"	6.4	0.57	14.6	40.0	5,800	160.0	23,200	3.94	100	0.34
H201-05	5/16"	7.9	0.66	16.7	35.0	5,080	140.0	20,320	4.53	115	0.40
H201-06	3/8"	9.5	0.74	18.7	33.0	4,790	132.0	19,160	4.92	125	0.45
H201-08	1/2"	12.7	0.87	22.0	27.5	3,990	110.0	15,960	7.09	180	0.62
H201-10	5/8"	15.9	1	25.3	25.0	3,630	100.0	14,520	8.07	205	0.74
H201-12	3/4"	19.0	1.14	29.0	21.5	3,120	86.0	12,480	9.45	240	0.90
H201-16	1"	25.4	1.46	37.0	16.5	2,390	66.0	9,560	11.81	300	1.22
H201-20	1-1/4"	31.8	1.78	45.2	12.7	1,840	50.8	7,360	16.53	420	1.72
H201-24	1-1/2"	38.1	2.03	51.5	9.1	1,320	36.4	5,280	19.69	500	2.10
H201-32	2"	50.8	2.52	64.0	8.1	1,170	32.4	4,680	24.80	630	2.60

* APPROVALS : LR, ABS, KR, MSHA

DIN EN 853 1SN / 1ST - NO SKIVE TYPE

고압고무호스 SINGLE WIRE BRAID HOSE

Sentec H301



- 내면고무: 내유성 합성고무
- 보강층: 고 장력 강선(1회 편조)
- 외면고무: 내유성, 내후성 및 내마모성 합성고무
- 용도: 광물성 작동유, 수성계 작동유, 난연성 작동유, 탄화수소계 합성 윤활유 공기에 사용할 때는 외면고무에 핀 프리킹(PIN PRICKING)한 것을 사용하여 주십시오
- 사용온도범위: -40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE: HYDRAULIC OIL RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT: HIGH TENSILE STEEL WIRE SINGLE BRAID
- OUTER COVER: OIL, WEATHER AND ABRASION RESISTANT SYNTHETIC RUBBER
- APPLICATION: FOR HYDRAULIC SYSTEM SERVICE WITH PETROLEUM AND WATER BASE FLUIDS SERVICE LINE(FOR AIR APPLICATION, THE OUTER COVER SHALL BE PIN-PRICKED)
- THE RANGE OF TEMPERATURE: -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム: 耐油性 合成ゴム
- 補強層: 高張力 鋼線(1回編組)
- 外被ゴム: 耐油性, 耐候性及び耐摩耗性 合成ゴム
- 使用用途: 鉱物性 作動油, 水性系 作動油, 難燃性 作動油, 炭化水素系 合成 潤滑油.
- 使用温度: -40°C ~ +100°C (-40°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight
	inch	mm	inch	mm	kg/cm ²	psi	kg/cm ²	psi	inch	mm	
H301-04	1/4"	6.4	0.52	13.2	225	3,220	900	12,880	2.95	75	0.23
H301-05	5/16"	7.9	0.59	15.0	215	3,070	860	12,280	3.35	85	0.28
H301-06	3/8"	9.5	0.67	17.1	180	2,570	720	10,280	3.94	100	0.31
H301-08	1/2"	12.7	0.80	20.3	160	2,285	640	9,140	4.33	110	0.40
H301-10	5/8"	15.9	0.94	23.8	130	1,860	520	7,440	5.11	130	0.52
H301-12	3/4"	19.0	1.07	27.2	105	1,500	420	6,000	7.09	180	0.66
H301-16	1"	25.4	1.40	35.5	90	1,290	360	5,160	9.06	230	0.85

* APPROVALS : MSHA

DIN EN 853 2SN / 2ST - NO SKIVE TYPE

고압고무호스 DOUBLE WIRE BRAID HOSE

Sentec H302



- 내면고무 내유성, 내수성 합성고무
- 보강층 고 장력 강선(2회 편조)
- 외면고무 내유성, 내후성 및 내마모성 합성고무
- 용도 광물성 작동유, 수성계 작동유, 난연성 작동유, 탄화수소계 합성 윤활유를 사용하는 유압라인
- 사용온도범위 -40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE HYDRAULIC OIL AND WATER RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT HIGH TENSILE STEEL WIRE DOUBLE BRAID
- OUTER COVER OIL, WEATHER AND ABRASION RESISTANT SYNTHETIC RUBBER
- APPLICATION FOR HYDRAULIC SYSTEM SERVICE WITH PETROLEUM AND WATER BASE FLUIDS SERVICE LINE (FOR AIR APPLICATION, THE OUTER COVER SHALL BE PIN-PRICKED)
- THE RANGE OF TEMPERATURE -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム 耐油性, 耐水性 合成ゴム
- 補強層 高張力 鋼線(2回編組)
- 外被ゴム 耐油性, 耐候性及び耐摩耗性 合成ゴム
- 使用用途 鉱物性 作動油, 水性系 作動油を使用する油圧装置及び油圧回路に使用
- 使用温度 -40°C ~ +100°C (-40°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight
	inch	mm	inch	mm	kg/cm ²	psi	kg/cm ²	psi	inch	mm	
H302-04	1/4"	6.4	0.57	14.6	400	5,715	1,600	22,860	2.95	75	0.35
H302-05	5/16"	7.9	0.66	16.7	350	5,000	1,400	20,000	3.35	85	0.42
H302-06	3/8"	9.5	0.74	18.7	330	4,720	1,340	18,880	3.94	100	0.46
H302-08	1/2"	12.7	0.87	22.0	280	4,000	1,120	16,000	4.33	110	0.63
H302-10	5/8"	15.9	1.00	25.3	250	3,575	1,000	14,300	5.11	130	0.76
H302-12	3/4"	19.0	1.14	29.0	215	3,075	880	12,300	7.09	180	0.94
H302-16	1"	25.4	1.46	37.0	165	2,360	670	9,440	9.06	230	1.20

* APPROVALS : MSHA

COMPACT TYPE

컴팩트 고압고무호스 SINGLE WIRE BRAID HOSE

Sentec H161



- 내면고무 내유성, 내수성 합성고무
- 보강층 고장력 강선(1회 편조)
- 외면고무 내유성, 내후성 및 내마모성 합성고무
- 용도 광물성 작동유, 수성계 작동유, 난연성 작동유, 탄화수소계 합성 윤활유를 사용하는 유압라인 공기에 사용할 때는 외면고무에 핀 프리킹(PIN PRICKING)한 것을 사용하여 주십시오
- 사용장비 트랙터, 농기계, 유압 배관 라인(공작기계, 사출기)
- 사용온도범위 -40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE HYDRAULIC OIL AND WATER RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT HIGH TENSILE STEEL WIRE SINGLE BRAID
- OUTER COVER OIL, ABRASION AND WEATHER RESISTANT SYNTHETIC RUBBER
- APPLICATION FOR HYDRAULIC SYSTEM SERVICE WITH PETROLEUM AND WATER BASE FLUIDS (FOR AIR APPLICATION, THE OUTER COVER SHALL BE PIN-PRICKED)
- EQUIPMENT SPECIALLY EQUIPPED VEHICLE, FORK LIFT, HEAVY EQUIPMENT, SYRINGE AGRICULTURAL MACHINES, HYDRAULIC PIPING LINE(MACHINE TOOL, CATAPULT)
- THE RANGE OF TEMPERATURE -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム 耐油性, 耐水性 合成ゴム
- 補強層 高張力 鋼線編組(1回編組)
- 外被ゴム 耐油性, 耐候性及び耐摩耗性 合成ゴム
- 使用用途 鉱物性 作動油, 水性系 作動油を使用する油圧装置及び油圧回路に使用 (AIR用として外面ゴムにフィンフリッキングした製品も有る)
- 使用장備 建設機械(フォークリフト), 洗浄機, 農機械, 油圧配管ライン(工作機械など)
- 使用温度 -40°C ~ +100°C (-40°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
H161-04	1/4"	6.4	0.43	11.5	13.7	1,990	54.8	7,960	1.97	50	0.20
H161-04	1/4"	6.4	0.43	11.5	21.0	3,000	84.0	12,000	1.97	50	0.20
H161-05	5/16"	7.9	0.51	13.0	17.3	2,510	69.2	10,040	2.17	55	0.24
H161-06	3/8"	9.5	0.61	15.5	15.5	2,250	62.0	9,000	2.56	65	0.27
H161-08	1/2"	12.7	0.74	18.7	13.7	1,990	54.8	7,960	3.54	90	0.35
H161-10	5/8"	15.9	0.91	23.0	10.3	1,490	41.2	5,960	3.94	100	0.45
H161-12	3/4"	19.0	1.05	26.7	8.8	1,280	35.2	5,120	4.72	120	0.58
H161-16	1"	25.4	1.38	35.0	6.9	1,000	27.6	4,000	5.91	150	0.75

* APPROVALS : MSHA

COMPACT TYPE

컴팩트 고압고무호스 DOUBLE WIRE BRAID HOSE

Sentec H162



- 내면고무 내유성, 내수성 합성고무
- 보강층 고장력 강선(2회 편조)
- 외면고무 내유성, 내후성 및 내마모성 합성고무
- 용도 광물성 작동유, 수성계 작동유, 난연성 작동유, 탄화수소계 합성 윤활유를 사용하는 유압라인
- 사용장비 트랙차, 농기계, 유압 배관 라인(공작기계, 사출기)
- 사용온도범위 -40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE HYDRAULIC OIL AND WATER RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT HIGH TENSILE STEEL DOUBLE WIRE BRAID
- OUTER COVER OIL, ABRASION AND WEATHER RESISTANT SYNTHETIC RUBBER
- APPLICATION FOR HYDRAULIC SYSTEM SERVICE WITH PETROLEUM AND WATER BASE FLUIDS (FOR AIR APPLICATION, THE OUTER COVER SHALL BE PIN-PRICKED)
- EQUIPMENT SPECIALLY EQUIPPED VEHICLE, FORK LIFT, HEAVY EQUIPMENT, SYRINGE AGRICULTURAL MACHINES, HYDRAULIC PIPING LINE(MACHINE TOOL, CATAPULT)
- THE RANGE OF TEMPERATURE -40°C ~ +100°C (-40°F ~ +212°F)



- 내관고무 내유성, 내수성 합성고무
- 보강층 고장력 강선(2회 편조)
- 외피고무 내유성, 내후성 및 내마모성 합성고무
- 사용용도 금속성 작동유, 수성계 작동유를 사용하는 유압장치 및 유압회로에 사용
- 사용장비 건설기계(포크리프트),洗浄機, 農機, 油圧配管ライン(工作機械など)
- 사용온도 -40°C ~ +100°C (-40°F ~ +212°F)

Part no	Hose ID		Hose OD		max operating		Min burst		Min bend radius		Weight
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
	H162-04	1/4"	6.4	0.52	13.2	34.3	4,970	137.2	19,880	1.97	
H162-05	5/16"	7.9	0.61	15.5	29.4	4,260	117.6	17,040	2.17	55	0.37
H162-06	3/8"	9.5	0.68	17.3	27.5	3,990	110.0	15,960	2.56	65	0.40
H162-08	1/2"	12.7	0.85	21.5	24.7	3,580	98.8	14,320	3.54	90	0.55
H162-10	5/8"	15.9	1.00	25.3	18.6	2,700	74.4	10,800	3.94	100	0.68
H162-12	3/4"	19.0	1.14	29.0	15.7	2,280	62.8	9,120	4.72	120	0.80
H162-16	1"	25.4	1.44	36.5	13.7	1,990	54.8	7,960	5.91	150	1.00

* APPROVALS : MSHA

DIN EN 856 4SP / DIN EN 856 R13 / SAE 100R13 SERIES

고압고무호스 4 Spiral Hose

Sentec H131



- 내면고무 내유성, 내수성 합성고무
- 보강층 고장력 강선(4S)
- 외면고무 내유성, 내후성 및 내마모성 합성고무
- 용도 광물성 작동유, 수성계 작동유, 난연성 작동유, 탄화수소계 합성 윤활유를 사용하는 유압라인
- 사용장비 지게차, 중장비, 프레스, 유압 배관 라인(사출기)
- 사용온도범위 -40°C ~ +121°C (-40°F ~ +250°F)



- INNER TUBE HYDRAULIC OIL AND WATER RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT HIGH TENSILE STEEL 4 SPIRAL
- OUTER COVER OIL, WEATHER AND ABRASION RESISTANT SYNTHETIC RUBBER
- APPLICATION FOR HYDRAULIC SYSTEM SERVICE WITH PETROLEUM AND WATER BASE FLUIDS FORK LIFT, HEAVY EQUIPMENT, PRESS, HYDRAULIC PIPING LINE(CATAPULT)
- EQUIPMENT
- THE RANGE OF TEMPERATURE -40°C ~ +121°C (-40°F ~ +250°F)



- 내관고무 내유성, 내수성 합성고무
- 보강층 고장력 강선(4회 편조)
- 외피고무 내유성, 내후성 및 내마모성 합성고무
- 사용용도 금속성 작동유, 수성계 작동유를 사용하는 유압장치 및 유압회로에 사용
- 사용장비 건설기계(포크리프트), 重裝備, プレス, 油圧配管ライン(工作機械など)
- 사용온도 -40°C ~ +121°C (-40°F ~ +250°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
	H131-08	1/2"	12.7	0.91	23.1	41.5	6,020	166.0	24,080	9.06	
H131-10	5/8"	15.9	1.04	26.4	35.0	5,080	140.0	20,320	9.45	240	1.18
H131-12	3/4"	19.0	1.23	31.2	35.0	5,080	140.0	20,320	9.84	250	1.50
H131-16	1"	25.4	1.52	38.5	35.0	5,080	140.0	20,320	11.81	300	2.20
H131-20	1-1/4"	31.8	1.82	46.3	35.0	5,080	140.0	20,320	16.53	420	2.65

* APPROVALS : LR, ABS, KR, MSHA

SAE 100R5

망고압고무호스 TEXTILE COVERED HOSE

Sentec H501



- 내면고무 내유성, 내수성 합성고무
- 보강층 고 장력 강선 (1회 편조)
- 외면 고장력 합성 섬유사 (1회 편조)
- 용도 광물성 작동유, 수성계 작동유, 연료유, 윤활유 및 에어 공급 라인
- 사용장비 자동차 배관라인, 유압 배관 라인
- 사용온도범위 -40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE HYDRAULIC OIL AND WATER RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT HIGH TENSILE STEEL WIRE SINGLE BRAID AND TEXTILE SINGLE BRAID
- APPLICATION FOR HYDRAULIC FLUID, FUEL, AND AIR SERVICE LINE
- EQUIPMENT AUTOMOBILE PIPING LINE, HYDRAULIC PIPING LINE
- THE RANGE OF TEMPERATURE -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム 耐油性, 耐水性 合成ゴム
- 補強層 高張力 鋼線 (1회 編組)
- 外被ゴム 高張力 合成 纖維系 (1회 編組)
- 使用用途 鉱物性 作動油, 水性系 作動油, 燃料油とエアを使用する供給装置及び回路に使用
- 使用裝備 自動車配管ライン、油圧配管ライン
- 使用温度 -40°C ~ +100°C (-40°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight kg/m
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
H501-05	1/4"	6.4	0.50	12.7	21.0	3,050	84.0	12,200	3.15	80	0.17
H501-06	5/16"	7.9	0.58	14.8	17.5	2,540	70.0	10,160	3.94	100	0.22
H501-08	3/8"	9.5	0.65	16.4	16.0	2,320	64.0	9,280	4.33	110	0.24
H501-10	1/2"	12.7	0.77	19.6	14.0	2,030	56.0	8,120	4.72	120	0.30
H501-12	5/8"	15.9	0.90	23.0	10.5	1,520	42.0	6,080	5.90	150	0.40
H501-14	3/4"	19.0	1.09	27.6	9.0	1,310	36.0	5,240	6.69	170	0.52
H501-18	1"	25.4	1.35	34.4	7.0	1,020	28.0	4,080	7.87	200	0.60
H501-23	1-1/4"	31.8	1.64	41.6	4.5	650	18.0	2,600	9.84	250	1.00
H501-28	1-1/2"	38.1	1.90	48.3	4.0	580	16.0	2,320	11.81	300	1.22

* Hose Outer Diameter Dimension's Smaller Than SAE 100R5.

EXCEEDS SAE 100R6

중압고무호스 MEDIUM PRESSURE HOSE

Sentec H601



- 내면고무 내유성 합성고무
- 보강층 고장력 합성 섬유사
- 외면고무 내유성, 내후성 및 내마모성 합성고무
- 용도 광물성 작동유, 수성계 작동유, 난연성 작동유, 탄화수소계 합성 윤활유를 사용하는 유압라인 공기에 사용할 때는 외면고무에 핀 프리킹한 제품을 사용하여 주십시오
- 사용장비 유압 배관 라인
- 사용온도범위 -40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE OIL RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT HIGH TENSILE TEXTILE BRAID
- OUTER COVER HYDRAULIC OIL, WEATHER AND ABRASION RESISTANT SYNTHETIC RUBBER
- APPLICATION FOR HYDRAULIC SYSTEM SERVICE WITH PETROLEUM AND WATER BASE FLUIDS, FOR GENERAL INDUSTRIAL SERVICE LINE. (FOR AIR APPLICATION, THE OUTER COVER SHALL BE PIN-PRICKED)
- EQUIPMENT HYDRAULIC PIPING LINE
- THE RANGE OF TEMPERATURE -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム 耐油性, 耐水性 合成ゴム
- 補強層 高張力 合成 纖維系
- 外被ゴム 耐油性, 耐候성 及び 耐摩耗性 合成ゴム
- 使用用途 鉱物性 作動油, 水性系 作動油を使う液圧装置及び液圧回路にご使用 (AIR用としては外面ゴムにフィンフリッキング製品を使用すること)
- 使用裝備 油圧配管ライン
- 使用温度 -40°C ~ +100°C (-40°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight kg/m
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
H601-04	1/4"	6.4	0.52	13.2	4.0	580	16.0	2,320	2.56	65	0.17
H601-05	5/16"	7.9	0.59	15.0	4.0	580	16.0	2,320	2.95	75	0.19
H601-06	3/8"	9.5	0.65	16.6	4.0	580	16.0	2,320	2.95	75	0.22
H601-08	1/2"	12.7	0.79	20.0	3.5	510	14.0	2,040	3.94	100	0.30
H601-10	5/8"	15.9	0.94	23.9	3.5	510	14.0	2,040	4.92	125	0.32
H601-12	3/4"	19.0	1.10	28.0	3.5	510	14.0	2,040	5.91	150	0.44
H601-16	1"	25.4	1.39	35.5	3.5	510	14.0	2,040	6.69	170	0.58

HIGH ABRASION RESISTANT

내마모 고압호스 ABRASION RESISTANT WIRE BRAID HOSE

Sentec H701, H702



- 내면고무 내유성, 내수성 합성고무
- 보강층 고 장력 강선(1회, 2회 편조)
- 외면고무 내후성, 내마모성 합성고무 및 수지
- 용도 광물성 작동유 및 유압라인 (내마모성이 요구되는 배관에 탁월한 장점을 갖고 있다)
- 사용온도범위 -40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE HYDRAULIC OIL AND WATER RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT HIGH TENSILE STEEL WIRE BRAID
- OUTER COVER WEATHER, ABRASION RESISTANT SYNTHETIC RUBBER AND UHMWPE FILM
- APPLICATION FOR HYDRAULIC EQUIPMENT AND CIRCUIT SYSTEM (THIS HOSE WORKS VERY EXCELLENTLY WHEN HIGH ABRASION RESISTANCE IS REQUIRED)
- THE RANGE OF TEMPERATURE -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム 耐油性, 耐水性 合成ゴム
- 補強層 高張力鋼線(1回, 2回 編組)
- 外被ゴム 耐候性, 耐摩耗性 合成ゴム及び樹脂
- 使用用途 一般作動油を使う液圧装置及び液圧回路にご使用してください。(特に干渉でホース外面ゴムの磨耗防止をために所で効果が大きい。)
- 使用温度 -40°C ~ +100°C (-40°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight
	inch	mm	inch	mm	kg/cm ²	psi	kg/cm ²	psi	inch	mm	
H701-04	1/4"	6.4	0.54	13.6	22.6	3,270	90.4	13,080	3.94	100	0.22
H701-05	5/16"	7.9	0.61	15.4	21.5	3,120	86.0	12,480	4.53	115	0.28
H701-06	3/8"	9.5	0.69	17.5	18.0	2,610	72.0	10,440	4.92	125	0.30
H701-08	1/2"	12.7	0.81	20.7	16.0	2,320	64.0	9,280	7.09	180	0.39
H701-10	5/8"	15.9	0.95	24.2	13.0	1,890	52.0	7,560	8.07	205	0.50
H701-12	3/4"	19.0	1.09	27.6	10.5	1,520	42.0	6,080	9.45	240	0.64
H701-16	1"	25.4	1.41	35.9	8.8	1,280	35.2	5,120	11.81	300	0.83
H702-04	1/4"	6.4	0.59	15.0	40.0	5,800	160.0	23,200	3.94	100	0.22
H702-05	5/16"	7.9	0.67	17.1	35.0	5,080	140.0	20,320	4.53	115	0.28
H702-06	3/8"	9.5	0.75	19.1	33.0	4,790	132.0	19,160	4.92	125	0.30
H702-08	1/2"	12.7	0.88	22.4	27.5	3,990	110.0	15,960	7.09	180	0.39
H702-10	5/8"	15.9	1.01	25.7	25.0	3,630	100.0	14,520	8.07	205	0.50
H702-12	3/4"	19.0	1.16	29.4	21.5	3,120	86.0	12,480	9.45	240	0.64
H702-16	1"	25.4	1.47	37.4	16.5	2,390	66.0	9,560	11.81	300	0.83

OIL STAND HOSE

주유기 호스 GASOLINE/DIESEL HOSE

Sentec OSH101



- 내면고무 내유성 합성고무
- 보강층 고 장력 강선(1회 편조)
- 외면고무 내후성, 내후성 및 내마모성 합성고무
- 용도 가솔린(휘발유) 또는 디젤유(경유)
- 사용장비 주유소 탱크로리 차량 및 주유기 전용
- 사용온도범위 -40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE HYDRAULIC OIL AND WATER RESISTANT SYNTHETIC RUBBER.
- REINFORCEMENT HIGH TENSILE STEEL WIRE SINGLE BRAID
- OUTER COVER OIL, WEATHER AND ABRASION RESISTANT SYNTHETIC RUBBER
- APPLICATION FOR GASOLINE, DIESEL AND WATER BASE FLUIDS LINE
- EQUIPMENT GASOLINE(DIESEL) TANK LORRY VEHICLE, LUBRICATOR
- THE RANGE OF TEMPERATURE -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム 耐油性, 耐水性 合成ゴム
- 補強層 高張力 鋼線(1회 編組)
- 外被ゴム 耐油性, 耐候性及び耐摩耗性 合成ゴム
- 使用用途 가솔린及びディーゼル
- 使用장비 가솔린スタンド용, 탱크로리어及び油圧配管ライン
- 使用温度 -40°C ~ +100°C (-40°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
OSH101-12	3/4"	19.0	1.10	28.0	1.05	150	30.00	4,300	5.31	135	0.60
OSH101-16	1"	25.4	1.38	35.0	1.05	150	20.00	2,850	6.69	170	0.70

AIR COMPRESSOR HOSE

에어 고압고무호스 WIRE BRAID AIR HOSE

Sentec AH101, AH201



- 내면고무 합성고무
- 보강층 고장력 강선(1W/B 또는 2W/B)
- 외면고무 내후성 및 내마모성 합성고무
- 용도 광산, 토목, 건설현장 및 공압 공급 라인
- 사용장비 건설, 토목, 펌프라인
- 사용온도범위 -40°C ~ +70°C (-40°F ~ +160°F)



- INNER TUBE SYNTHETIC RUBBER
- REINFORCEMENT HIGH TENSILE SINGLE OR DOUBLE WIRE BRAID
- OUTER COVER WEATHER AND ABRASION RESISTANT SYNTHETIC RUBBER (PIN PRICK)
- APPLICATION FOR MINE EQUIPMENT AND CONSTRUCTION AIR SERVICE LINE
- EQUIPMENT CONSTRUCTION, CIVIL ENGINEERING, PUMP LINE
- TEMPERATURE RANGE -40°C ~ +70°C (-40°F ~ +160°F)



- 内管ゴム 合成ゴム
- 補強層 高張力鋼線編組 (1회와 2회)
- 外被ゴム 耐候性及び耐磨耗性 合成ゴム
- 使用用途 鉱山裝備, 建設現場 及び 에어供給ライン
- 使用裝備 建設, 土木, パンプライン
- 使用温度 -40°C ~ +70°C (-40°F ~ +160°F)

Part Number	Reinforcement	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight
		inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
AH101-16	1W/B	1	25.4	1.42	36.2	6.9	1,000	27.6	4,000	9.05	230	0.85
AH101-20	1W/B	1-1/4	31.8	1.76	44.6	3.9	570	15.6	2,280	12.20	310	1.25
AH101-24	1W/B	1-1/2	38.1	2.00	50.8	2.9	420	11.6	1,680	13.78	350	1.55
AH101-32	1W/B	2	50.8	2.42	61.5	3.4	490	13.6	1,960	16.93	430	2.00
AH201-16	2W/B	1	25.4	1.50	38.2	9.3	1,350	37.2	5,400	9.05	230	1.25
AH201-20	2W/B	1-1/4	31.8	1.75	44.5	4.9	710	19.6	2,840	12.20	310	1.53
AH201-24	2W/B	1-1/2	38.1	2.04	51.7	4.4	640	17.6	2,560	13.78	350	1.90
AH201-32	2W/B	2	50.8	2.55	64.3	5.5	800	22.0	3,200	16.93	430	2.60

※ 최고사용압력과 최소파열압력은 정적인 내압력임.
 ※ Maxoperating pressure & min burst pressure are hydrostatic pressure.
 ※ 最高使用圧力と最小破裂圧力は静的試験圧力です.

* COVER COLOR : BLACK AND YELLOW

HIGH PRESSURE STEAM HOSE

스팀 고압고무호스 WIRE BRAID STEAM HOSE

Sentec SH101, SH201



- 내면고무 내열성 합성고무
- 보강층 고장력 강선(1W/B 또는 2W/B)
- 외면고무 내후성 합성고무
- 용도 고압 증기 및 예열 공급 라인
- 사용장비 스팀 세척 장비
- 사용온도범위 -40°C ~ +230°C (-40°F ~ +446°F)
(※ 150°C 이상의 온도에서는 단속적으로 사용하여 주십시오)



- INNER TUBE HEAT RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT SINGLE OR DOUBLE HIGH TENSILE STEEL WIRE BRAIDS.
- OUTER COVER WEATHER RESISTANT SYNTHETIC RUBBER(BLACK RED COLORS)
- APPLICATION FOR STEAM AND HEATING SERVICE LINE
- EQUIPMENT STEAM CLEANING EQUIPMENT
- THE RANGE OF TEMPERATURE -40°C ~ +230°C (-40°F ~ +446°F)
(THIS HOSE SHALL BE USED INTERMITTENTLY FOR USE UP TO 150°C)



- 内管ゴム 耐熱성 合成ゴム
- 補強層 高張力 鋼線 1회와 2회 編組
- 外被ゴム 耐候성 合成ゴム(色数: 黑色, 오렌지색)
- 使用用途 高圧蒸氣及び予熱供給라인
- 使用裝備 스팀洗浄裝備
- 使用温度 -40°C ~ +230°C (-40°F ~ +446°F)
(※ 150°C 以上の高温蒸氣に使用する時は 断続的に使用してください)

Part Number	Reinforcement	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight
		inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
SH101-12	1W/B	3/4	19.0	1.18	30.0	1.4	200	14.0	2,030	8.26	210	0.87
SH101-16	1W/B	1	25.4	1.39	35.4	1.4	200	14.0	2,030	9.84	250	1.15
SH101-20	1W/B	1-1/4	31.8	1.83	46.6	1.4	200	14.0	2,030	13.00	330	1.56
SH101-24	1W/B	1-1/2	38.1	2.01	51.1	1.4	200	14.0	2,030	13.78	350	1.98
SH101-32	1W/B	2	50.8	2.62	66.6	1.4	200	14.0	2,030	18.11	460	2.39
SH201-12	2W/B	3/4	19.0	1.22	30.9	1.7	250	14.0	2,030	8.26	210	1.16
SH201-16	2W/B	1	25.4	1.42	36.0	1.7	250	14.0	2,030	9.84	250	1.50
SH201-20	2W/B	1-1/4	31.8	1.91	48.6	1.7	250	14.0	2,030	13.38	340	2.05
SH201-24	2W/B	1-1/2	38.1	2.18	55.5	1.7	250	14.0	2,030	14.97	380	2.46
SH201-32	2W/B	2	50.8	2.69	68.2	1.7	250	14.0	2,030	18.50	470	3.05

* COVER COLOR : BLACK AND RED

PAINT SPRAY HOSE

페인트 스프레이 호스 AIRLESS PAINT SPRAY HOSE

Sentec PSH



- 내면고무 나일론
- 보강층 고 장력 강선(1회 편조)
- 외면고무 우레탄 수지
- 용도 페인트, 솔벤트 등의 유기용제 및 오일
- 사용온도범위 -20°C ~ +80°C (-5°F ~ +180°F)



- INNER TUBE NYLON
- REINFORCEMENT HIGH TENSILE SINGLE WIRE BRAID
- OUTER COVER POLYURETHANE
- APPLICATION FOR PAINT SPRAY EQUIPMENT AND HYDRAULIC FLUIDS SERVICE
- THE RANGE OF TEMPERATURE -20°C ~ +80°C (-5°F ~ +180°F)



- 内管ゴム ナイロン
- 補強層 高張力鋼線(1회 編造)
- 外被ゴム ポリウ레탄
- 使用用途 페인트塗裝, 一般作動油, 有機溶劑など
- 使用温度 -20°C ~ +80°C (-5°F ~ +180°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight kg/m
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
PSH1-04	1/4"	6.4	0.48	12.3	42.2	6,120	126.6	18,360	3.15	80	0.17
PSH1-06	3/8"	9.5	0.61	15.4	32.4	4,690	97.2	14,070	3.94	100	0.22

에어 호스

TEXTILE BRAID AIR HOSE

Sentec TAH



- 내면고무 합성고무
- 보강층 고강력 폴리에스터(1T/B)
- 외면고무 내후성 합성고무
- 용도 공압 및 일반에어 배관, 토목, 건설용
- 사용장비 저압용 에어 배관, 송수 장비
- 사용온도범위 -30°C ~ +70°C (-22°F ~ +158°F)



- INNER TUBE SYNTHETIC RUBBER
- REINFORCEMENT HIGH TENSILE POLYESTERE(1T/B)
- OUTER COVER SYNTHETIC RUBBER OF WEATHER RESISTANT
- APPLICATION FOR MINE CRUSH, CONSTRUCTION, AIR SERVICE
- EQUIPMENT LOW PRESSURE AIR PIPING, WATER SUPPLY EQUIPMENT
- THE RANGE OF TEMPERATURE -30°C ~ +70°C (-22°F ~ +158°F)



- 内管ゴム 合成ゴム
- 補強層 高強力ポリエステル
- 外被ゴム 耐候性 合成ゴム
- 使用用途エア, 配管, 土木, 建設用
- 使用장비 低圧用エア配管, 送水장비
- 使用温度 -30°C ~ +70°C (-22°F ~ +158°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight kg/m
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
TAH1-12	3/4"	19.0	1.18	30.0	2.0	283	5.9	850	7.9	200	0.6
TAH1-16	1"	25.4	1.42	36.0	1.6	237	4.9	710	9.8	250	0.7
TAH1-20	1-1/4"	31.8	1.69	42.8	1.3	190	3.9	570	11.8	300	0.8
TAH1-24	1-1/2"	38.1	1.93	49.1	1.3	190	3.9	570	13.8	350	1.0

오일 호스

TEXTILE BRAID OIL HOSE

Sentec **TOH**



- 내면고무: 내유성 합성고무
- 보강층: 고장력 합성 섬유사
- 외면고무: 내유성, 내후성 및 내마모성 합성고무
- 용도: 광물성 작동유, 수성계 작동유, 난연성 작동유, 탄화수소계 합성 윤활유를 사용하는 유압라인. 공기에 사용할 때는 외면고무에 핀 프리킹한 제품을 사용하여 주십시오.
- 사용온도범위: -40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE: OIL RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT: HIGH TENSILE TEXTILE BRAID
- OUTER COVER: HYDRAULIC OIL, WEATHER AND ABRASION RESISTANT SYNTHETIC RUBBER
- APPLICATION: FOR HYDRAULIC SYSTEM SERVICE WITH PETROLEUM AND WATER BASE FLUIDS, FOR GENERAL INDUSTRIAL SERVICE LINE (FOR AIR APPLICATION, THE OUTER COVER SHALL BE PIN-PRICKED)
- THE RANGE OF TEMPERATURE: -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム: 耐油性, 耐水性 合成ゴム
- 補強層: 高張力 合成 纖維系
- 外被ゴム: 耐油性, 耐候性 及び 耐磨耗性 合成ゴム
- 使用用途: 鉸物性 作動油, 水性系 作動油を使う 液圧装置 及び 液圧回路 にご使用 ください。 (空気に 使 する 時は 外面 ゴム に フィン フリ キング 製品 を ご 使用 して くだ さい。)
- 使用温度: -40°C ~ +100°C (-40°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	kg/m
TOH1-12	3/4"	19.0	1.11	28.2	2.0	283	5.9	850	7.9	200	0.4
TOH1-16	1"	25.4	1.40	35.6	1.6	237	4.9	710	9.8	250	0.6
TOH1-20	1-1/4"	31.8	1.69	42.8	1.3	190	3.9	570	11.8	300	0.8
TOH1-24	1-1/2"	38.1	1.96	49.9	1.3	190	3.9	570	13.8	350	1.0

에어 호스(편상)

AIR HOSE (BRAID)

Sentec **BAH**



- 내면고무: 합성고무
- 보강층: 합성 섬유사
- 외면고무: 내후성 합성고무
- 용도: 공압 및 에어배관, 에어공구, 토목, 건설현장
- 사용온도범위: -30°C ~ +70°C (-30°F ~ +158°F)



- INNER TUBE: SYNTHETIC RUBBER
- REINFORCEMENT: TEXTILE 1 BRAID
- OUTER COVER: WEATHER RESISTANT SYNTHETIC RUBBER
- APPLICATION: FOR AIR AND WATER SERVICE SMALL AIR TOOLS
- THE RANGE OF TEMPERATURE: -30°C ~ +70°C (-30°F ~ +158°F)



- 内管ゴム: 合成ゴム
- 補強層: 合成纖維
- 外被ゴム: 耐候性 合成ゴム
- 使用用途: エア 及び エア 配管, エア 工具, 土木, 建設現場
- 使用温度: -30°C ~ +70°C (-30°F ~ +158°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Weight	Standard Length
	inch	mm	inch	mm	bar	psi	bar	psi	kg/m	M
BAH1-04	1/4"	6.4	0.51	13.0	20	280	60	850	0.17	100
BAH1-05	5/16"	7.9	0.57	14.5	20	280	60	850	0.20	100
BAH1-06	3/8"	9.5	0.67	17.0	20	280	60	850	0.27	100
BAH1-08	1/2"	12.7	0.87	22.0	20	280	60	850	0.43	100
BAH1-10	5/8"	15.9	1.02	26.0	20	280	60	850	0.56	50
BAH1-12	3/4"	19.0	1.14	29.0	20	280	60	850	0.63	50
BAH1-16	1"	25.4	1.38	35.0	20	280	60	850	0.70	30

오일 호스(편상)

OIL & FUEL HOSE

Sentec **BOH**



- 내면고무 내유성 합성고무
- 보강층 합성 섬유사
- 외면고무 내유성 및 내후성 합성고무
- 용도 오일, 가솔린, 디젤
- 사용온도범위 -40°C ~ 100°C (-40°F ~ +212°F)



- INNER TUBE OIL RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT TEXTILE 1 BRAID
- OUTER COVER WEATHER AND OIL RESISTANT SYNTHETIC RUBBER
- APPLICATION FOR GASOLINE OIL AND DIESEL FUEL
- THE RANGE OF TEMPERATURE -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム 耐油性合成ゴム
- 補強層 合成纖維
- 外被ゴム 耐候性及び耐油性合成ゴム
- 使用用途 오일, 가솔린, 데이-젤
- 使用温度 -40°C ~ +100°C (-40°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Weight	Standard Length
	inch	mm	inch	mm	bar	psi	bar	psi	kg/m	M
	BOH1-04	1/4"	6.4	0.51	13.0	20	280	60	850	0.16
BOH1-05	5/16"	7.9	0.59	15.0	20	280	60	850	0.19	100
BOH1-06	3/8"	9.5	0.67	17.0	20	280	60	850	0.24	100
BOH1-08	1/2"	12.7	0.83	21.0	20	280	60	850	0.33	100
BOH1-10	5/8"	15.9	0.94	24.6	20	280	60	850	0.42	50
BOH1-12	3/4"	19.0	1.10	28.0	20	280	60	850	0.58	50
BOH1-16	1"	25.4	1.38	35.0	20	280	60	850	0.68	30

히터 호스(편상)

HEATER HOSE (BRAID)

Sentec **BHH**



- 내면고무 내열성 합성고무
- 보강층 고강력 폴리에스터(1B)
- 외면고무 내열, 내후성 합성고무
- 용도 일반 스팀 이송(예열용)
- 사용온도범위 -30°C ~ +100°C (-22°F ~ +212°F)



- INNER TUBE SYNTHETIC RUBBER OF HEAT RESISTANT
- REINFORCEMENT HIGH TENSILE POLYESTERE(1B)
- OUTER COVER SYNTHETIC RUBBER OF HEAT, WEATHER RESISTANCE
- APPLICATION FOR GENERAL SATURATED STEAM AND HOT WATER SERVICE
- THE RANGE OF TEMPERATURE -30°C ~ +100°C (-22°F ~ +212°F)



- 内管ゴム 耐熱성合成ゴム
- 補強層 高강력폴리에스타 (1B)
- 外被ゴム 耐熱, 耐候性合成ゴム
- 使用用途 스팀용予熱用
- 使用温度 -30°C ~ +100°C (-22°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Weight	Standard Length
	inch	mm	inch	mm	bar	psi	bar	psi	kg/m	M
	BHH1-08	1/2"	13.0	0.79	20.0	10	150	30	450	0.31
BHH1-10	5/8"	16.0	0.93	23.5	10	150	30	450	0.39	50

산소, 아세틸렌, CO₂ 호스

OXYGEN, ACETYLENE, CO₂ HOSE

Sentec *BOX, BAC, BCO*



- 내면고무 내가스성 합성고무
- 보강층 합성 섬유사
- 외면고무 내후성 합성고무
- 용도 용접, 절단용
- 색상 산소(녹색), 아세틸렌(적색), CO₂(청색)
- 사용온도범위 -30°C ~ 50°C (-22°F ~ 120°F)



- INNER TUBE SYNTHETIC RUBBER
- REINFORCEMENT TEXTILE 1 BRAID
- OUTER COVER WEATHER RESISTANT SYNTHETIC RUBBER
- APPLICATION WELDING AND CUTTING
- COLOR O₂(GREEN), A/C(RE), CO₂(BLUE)
- THE RANGE OF TEMPERATURE -30°C ~ 50°C (-22°F ~ 120°F)



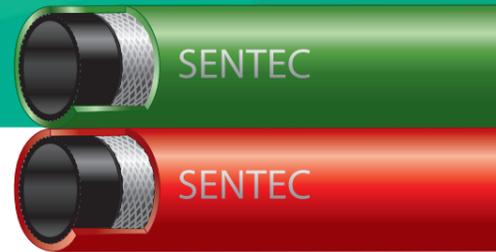
- 内管ゴム 耐ガス성 合成ゴム
- 補強層 合成 纖維
- 外被ゴム 耐후성 合成ゴム
- 使用用途 용접, 切断用
- 識別色 酸素 - 綠, 아세틸렌 - 赤, CO₂ - 青
- 使用温度 -30°C ~ 50°C (-22°F ~ 120°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		NAME	COLOR
	inch	mm	inch	mm	bar	psi	bar	psi		
	BOX1-05	5/16"	7.9	0.59	15.0	14	200	42		
BAC1-05	5/16"	7.9	0.59	15.0	14	200	42	600	ACETYLENE	RED ●
BCO1-05	5/16"	7.9	0.63	16.0	14	200	42	600	CARBON DIOXID	BLUE ●

트윈 호스

TWINLINE WELDING HOSE

Sentec *BTW1*



- 내면고무 내가스성 합성고무
- 보강층 합성 섬유사
- 외면고무 내후성 합성고무
- 용도 용접, 절단용
- 색상 산소(녹색), 아세틸렌(적색)
- 사용온도범위 -30°C ~ 50°C (-22°F ~ 120°F)



- INNER TUBE SYNTHETIC RUBBER
- REINFORCEMENT TEXTILE 1 BRAID
- OUTER COVER WEATHER RESISTANT SYNTHETIC RUBBER
- APPLICATION WELDING AND CUTTING
- COLOR O₂(GREEN), A/C(RE)
- THE RANGE OF TEMPERATURE -30°C ~ 50°C (-22°F ~ 120°F)



- 内管ゴム 耐ガス성 合成ゴム
- 補強層 合成 纖維
- 外被ゴム 耐후성 合成ゴム
- 使用用途 용접, 切断用
- 識別色 酸素 - 綠, 아세틸렌 - 赤
- 使用温度 -30°C ~ 50°C (-22°F ~ 120°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		NAME	COLOR
	inch	mm	inch	mm	bar	psi	bar	psi		
	BTW1-0303	3/16"	4.8	0.45	11.5	14	200	42		
BTW1-0505	5/16"	7.9	0.59	15.0	14	200	42	600	산소, 아세틸렌	O ₂ ● C ₂ H ₂ ●

에어 호스

MULTI PLY AIR HOSE



오일 호스

GENERAL PURPOSE OIL HOSE



- 내면고무 합성고무
- 보강층 고강력 폴리에스터(3CP~5CP)
- 외면고무 내후성 합성고무
- 용도 공압 및 일반에어 배관, 토목, 건설용
- 사용온도범위 -30°C ~ +100°C (-22°F ~ +212°F)



- INNER TUBE SYNTHETIC RUBBER
- REINFORCEMENT HIGH TENSILE POLYESTERE(3CP-5CP)
- OUTER COVER SYNTHETIC RUBBER OF WEATHER RESISTANT
- APPLICATION FOR MINE CRUSH, CONSTRUCTION, AIR SERVICE
- THE RANGE OF TEMPERATURE -30°C ~ +100°C (-22°F ~ +212°F)



- 内管ゴム 合成ゴム
- 補強層 高強力ポリエステル
- 外被ゴム 耐候性 合成ゴム
- 使用用途エア, 配管, 土木, 建設用
- 使用温度 -30°C ~ +100°C (-22°F ~ +212°F)



- 내면고무 내유성 합성고무
- 보강층 고강력 폴리에스터(2~3CP)
- 외면고무 내유성 및 내후성 합성고무
- 용도 오일 이송 라인
- 사용온도범위 -40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE OIL RESISTANT SYNTHETIC RUBBER
- REINFORCEMENT HIGH TENSILE POLYESTERE CORD OR TIRE CORD
- OUTER COVER WEATHER AND OIL RESISTANT SYNTHETIC RUBBER
- APPLICATION FOR HYDRAULIC AND WATER PETROLEUM BASE OIL
- THE RANGE OF TEMPERATURE -40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム 耐油性 合成ゴム
- 補強層 高強力ポリエステル (2~3CP)
- 外被ゴム 耐候성 及び 耐油性 合成ゴム
- 使用用途 오일용
- 使用温度 -40°C ~ +100°C (-40°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Weight	Standard Length
	inch	mm	inch	mm	MPa	psi	MPa	psi	kg/m	M
	PAH3-12	3/4"	19.0	1.20	30.6	1.0	140	3.0	420	1.0
PAH3-16	1"	25.4	1.50	38.0	1.0	140	3.0	420	1.3	20
PAH3-20	1-1/4"	31.8	1.76	44.8	0.8	110	2.4	330	1.6	20
PAH3-24	1-1/2"	38.1	2.04	51.7	0.8	100	2.4	300	1.8	20
PAH3-32	2"	50.8	2.54	64.4	0.6	80	1.8	240	1.4	20
PAH3-40	2-1/2"	63.5	3.04	77.1	0.6	80	1.8	240	1.8	20
PAH3-48	3"	76.2	3.54	89.8	0.5	70	1.5	210	2.2	20
PAH3-64	4"	101.6	4.57	116.2	0.4	50	1.2	150	3.0	20

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Weight	Standard Length
	inch	mm	inch	mm	MPa	psi	MPa	psi	kg/m	M
	POH3-12	3/4"	19.0	1.20	30.6	1.2	170	3.6	510	1.0
POH2-13	13/16"	20.5	1.21	30.7	0.8	110	2.4	330	0.9	20
POH2-14	7/8"	22.0	1.27	32.3	0.8	110	2.4	330	1.0	20
POH3-16	1"	25.4	1.50	38.0	1.2	170	3.6	510	1.5	20
POH2-18	1-1/8"	28.0	1.56	39.6	0.8	110	2.4	330	1.3	20
POH3-20	1-1/4"	31.8	1.79	45.4	0.8	110	2.4	330	1.6	20
POH3-24	1-1/2"	38.1	2.04	51.7	1.0	140	3.0	420	1.8	20
POH3-26	1-5/8"	42.0	2.19	55.6	1.0	140	3.0	420	1.5	20
POH3-30	1-7/8"	48.0	2.43	61.6	1.0	140	3.0	420	1.6	20
POH3-32	2"	50.8	2.54	64.4	1.0	140	3.0	420	1.7	20
POH3-38	2-3/8"	60.0	2.90	73.6	1.0	140	3.0	420	2.0	20
POH3-40	2-1/2"	63.5	3.06	77.7	0.8	110	2.4	330	2.3	20
POH3-48	3"	76.2	3.54	89.8	0.8	110	2.4	330	2.5	20
POH3-64	4"	101.6	4.57	116.2	0.5	70	1.5	210	3.5	20
POH3-72	4-1/2"	114.0	5.06	128.6	0.3	40	0.9	120	3.8	20

스팀 호스

MULTI PLY STEAM HOSE

Sentec *PSH*



- 내면고무 내열성 합성고무
- 보강층 고강력 폴리에스터(4CP~9CP)
- 외면고무 내열, 내후성 합성고무
- 용도 일반 스팀 이송
- 사용온도범위 -30℃ ~ +150℃ (-22°F ~ +303°F)



- INNER TUBE SYNTHETIC RUBBER OF HEAT RESISTANT
- REINFORCEMENT HIGH TENSILE POLYESTERE(4CP~9CP)
- OUTER COVER SYNTHETIC RUBBER OF HEAT, WEATHER RESISTANT
- APPLICATION FOR GENERAL SATURATED STEAM AND HOT WATER SERVICE
- THE RANGE OF TEMPERATURE -30℃ ~ +150℃ (-22°F ~ +303°F)



- 内管ゴム 耐熱性合成ゴム
- 補強層 高強力ポリエステル (4CP~9CP)
- 外被ゴム 耐熱、耐候性合成ゴム
- 使用用途 スチーム用
- 使用温度 -30℃ ~ +150℃ (-22°F ~ +303°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Weight	Standard Length
	inch	mm	inch	mm	MPa	psi	MPa	psi	kg/m	M
PSH4-12	3/4"	19.0	1.34	34.0	0.5	70	1.5	210	0.7	20
PSH5-16	1"	25.4	1.65	41.8	0.5	70	1.5	210	1.0	20
PSH6-20	1-1/4"	31.8	2.06	52.2	0.5	70	1.5	210	1.4	20
PSH7-24	1-1/2"	38.1	2.37	60.3	0.5	70	1.5	210	1.8	20
PSH9-32	2"	50.8	3.02	76.8	0.5	70	1.5	210	2.5	20

절연 호스

NON-CONDUCTIVE HOSE

Sentec *NCH*



- 내면고무 절연성 합성고무
- 보강층 절연성 섬유포(특수사양 제외)
- 외면고무 내후성 및 절연성 합성고무
- 용도 전기로 절연 배관, 고압 선로 단락 보호
- 사용온도범위 -40℃ ~ +66℃ (-40°F ~ +150°F)
- 절연전압 상용 - 22.9Kv(노화전), 최대 - 65.0Kv(노화전)



- INNER TUBE NON-CONDUCTIVE SYNTHETIC RUBBER
- REINFORCEMENT NON-CONDUCTIVE TEXTILE CORD
- OUTER COVER SYNTHETIC RUBBER OF WEATHER RESISTANCE AND NON-CONDUCTIVITY
- APPLICATION FOR ELECTRONIC FURNACE TO BE NON CONDUCTIVE AND PROTECTED FROM SHORTAGE OF HIGH VOLTAGE CABLE
- THE RANGE OF TEMPERATURE -40℃ ~ +66℃ (-40°F ~ +150°F)
- THE VOLTAGE OF NON-CONDUCTIVITY CONSTANT(v) : 22.9Kv(UNAGED), MAX(v) : 65.0Kv(UNAGED)



- 内管ゴム 絶縁性合成ゴム
- 補強層 絶縁性纖維 (特殊仕様除外)
- 外被ゴム 耐候性及び絶縁性合成ゴム
- 使用用途 電気炉絶縁配管、高圧線路段落保護
- 使用温度 -40℃ ~ +66℃ (-40°F ~ +150°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Weight	Standard Length
	inch	mm	inch	mm	MPa	psi	MPa	psi	kg/m	M
NCH3-08	1/2"	12.7	1.04	26.3	1.0	140	3.0	420	0.6	20
NCH3-12	3/4"	19.0	1.28	32.6	1.4	190	4.0	570	0.7	20
NCH3-16	1"	25.4	1.54	39.0	1.1	150	3.0	450	0.9	20
NCH3-20	1-1/4"	31.8	1.83	46.4	0.9	120	2.7	360	1.5	20
NCH3-24	1-1/2"	38.1	2.28	58.0	0.9	120	2.7	360	1.5	20
NCH3-32	2"	50.8	2.69	68.4	0.6	80	1.8	240	2.5	20

내마모 샌드 호스

SAND BLAST HOSE

Sentec SBH



- 내면고무
 - 보강층
 - 외면고무
 - 용도
 - 사용장비
 - 사용온도범위
- 내마모성 합성고무
고강력 폴리에스터, 타이어코드지
내후, 내마모성 합성고무
모래이송 및 샌드블라스팅
조경 기계 장비
-40°C ~ +66°C (-40°F ~ +150°F)



- INNER TUBE
 - REINFORCEMENT
 - OUTER COVER
 - APPLICATION
 - EQUIPMENT
 - THE RANGE OF TEMPERATURE
- SYNTHETIC RUBBER OF ABRASION RESISTANT
HIGH TENSILE POLYESTERE, TIRE CORD
SYNTHETIC RUBBER OF WEATHER ABRASION RESISTANT
FOR SAND SUPPLY AND SAND BLASTING
LANDSCAPE MACHINERY
-40°C ~ +66°C (-40°F ~ +150°F)



- 内管ゴム
 - 補強層
 - 外被ゴム
 - 使用用途
 - 使用장비
 - 使用温度
- 내마모성 합성고무
고강력 폴리에스터, 타이어코드지
내후, 내마모성 합성고무
모래이송 및 샌드블라스팅
조경 기계 장비
-40°C ~ +66°C (-40°F ~ +150°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Weight	Standard Length
	inch	mm	inch	mm	MPa	psi	MPa	psi		
	SBH4-08	1/2"	12.7	1.08	27.5	1.0	140	3.0	420	0.7
SBH4-12	3/4"	19.0	1.38	35.0	1.0	140	3.0	420	1.4	20
SBH4-16	1"	25.4	1.71	43.4	1.0	140	3.0	420	1.8	20
SBH4-20	1-1/4"	31.8	2.04	51.8	1.0	140	3.0	420	2.3	20
SBH4-24	1-1/2"	38.1	2.33	59.1	0.8	110	2.4	330	2.8	20
SBH4-32	2"	50.8	2.87	72.8	0.8	110	2.4	330	2.3	20
SBH2-40	2-1/2"	63.5	3.33	84.7	0.5	70	1.5	210	3.0	20
SBH4-48	3"	76.2	4.26	108.2	0.5	70	1.5	210	5.0	20
SBH2-20	1-1/4"	31.8	1.76	44.8	1.0	140	3.0	420	1.0	20

※ SBH2-20 : TEXTILE 2 BRAID.

* COVER COLOR : RED & YELLOW

오일 흡션 호스

OIL SUCTION & DISCHARGE HOSE

Sentec OHSU



- 내면고무
 - 보강층
 - 외면고무
 - 용도
 - 사용온도범위
- 내유성 합성고무
고강력 타이어코드지, 고장력 강선
내유성 및 내후성 합성고무
오일이송 및 배출용
-40°C ~ +100°C (-40°F ~ +212°F)



- INNER TUBE
 - REINFORCEMENT
 - OUTER COVER
 - APPLICATION
 - THE RANGE OF TEMPERATURE
- OIL RESISTANT SYNTHETIC RUBBER
HIGH TENSILE TIRE CORD, HELIX WIRE
WEATHER AND OIL RESISTANT SYNTHETIC RUBBER
FOR OIL SERVICE
-40°C ~ +100°C (-40°F ~ +212°F)



- 内管ゴム
 - 補強層
 - 外被ゴム
 - 使用用途
 - 使用温度
- 내유성 합성고무
고강력 타이어코드지, 고장력 강선
내유성 및 내후성 합성고무
오일이송 및 배출용
-40°C ~ +100°C (-40°F ~ +212°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	
	OHSU-24	1-1/2"	38.1	1.93	49.1	1.0	140	3.0	420	9.8	250
OHSU-32	2"	50.8	2.62	66.6	1.0	140	3.0	420	11.8	300	2.0
OHSU-40	2-1/2"	63.5	3.26	82.7	1.0	140	3.0	420	13.8	350	2.7
OHSU-48	3"	76.2	3.65	92.8	1.0	140	3.0	420	15.7	400	3.0
OHSU-64	4"	101.6	4.86	123.4	1.0	140	3.0	420	19.7	500	4.6

내마모 삭션 호스

ABRASION RESISTANT SUCTION HOSE

Sentec ARSU



- 내면고무 내마모성 합성고무
- 보강층 고강력 타이어코드지, 고정력 강선
- 외면고무 내후, 내마모성 합성고무
- 용도 샌드, 콘크리트 이송용
- 사용온도범위 -40℃ ~ +66℃ (-40°F ~ +150°F)



- INNER TUBE SYNTHETIC RUBBER OF ABRASION RESISTANT
- REINFORCEMENT HIGH TENSILE TIRE CORD, HELIX WIRE
- OUTER COVER SYNTHETIC RUBBER OF WEATHER ABRASION RESISTANT
- APPLICATION FOR CONCRETE, SAND SERVICE
- THE RANGE OF TEMPERATURE -40℃ ~ +66℃ (-40°F ~ +150°F)



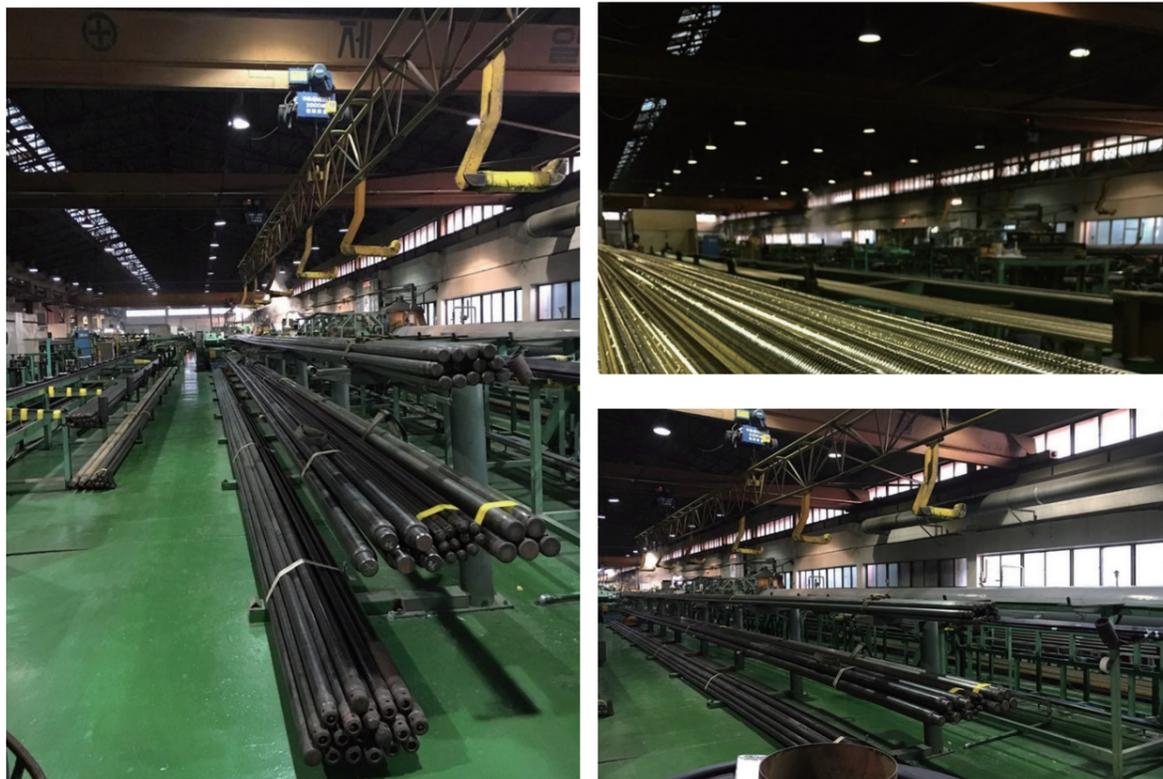
- 内管ゴム 耐摩耗性 合成ゴム
- 補強層 高強力タイヤ補強層、高張力鋼線
- 外被ゴム 耐候性及 ゴム
- 使用用途 砂 サンド, 콘크리트
- 使用温度 -40℃ ~ +66℃ (-40°F ~ +150°F)

Part Number	Hose I.D.		Hose O.D.		Max Operating		Min burst		Min bend Radius		Weight
	inch	mm	inch	mm	MPa	psi	MPa	psi	inch	mm	kg/m
	ARSU-32	2"	50.8	2.87	73.0	1.0	140	3.0	420	15.7	400
ARSU-48	3"	76.2	3.99	101.4	1.0	140	3.0	420	19.7	500	4.2
ARSU-64	4"	101.6	5.06	128.5	0.5	70	1.5	210	25.6	650	5.8
ARSU-80	5"	127.0	6.13	155.7	0.5	70	1.5	210	29.5	750	7.8

COMPANY INFORMATION

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Production Facilities (Hose Plant) / 생산 설비 현황 (안산 호스 공장)



Production Facilities (Hose Assembly Line) / 생산 설비 현황 (안산 호스 조립 라인)



● CUTTING MACHINE (절단기)



● ASSEMBLY MACHINE (스웨징기)

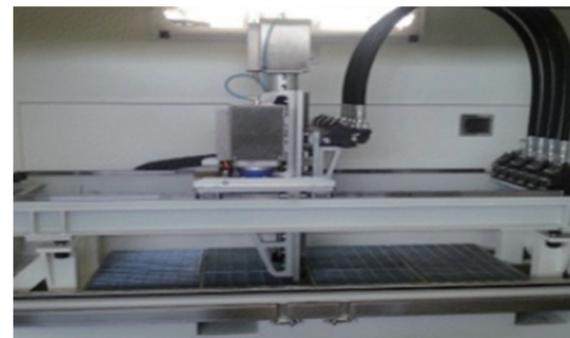


● SKIVING MACHINE (스카이빙기)



● HOSE INNER TUBE CLEAN MACHINE (호스내면고무 세정기)

Test Equipment (Hose Plant) / 시험 설비 현황 (안산 호스 공장)



● IMPULSE TEST MACHINE 1 (임펄스시험기 1호기)



● IMPULSE TEST MACHINE 2 (임펄스시험기 2호기)

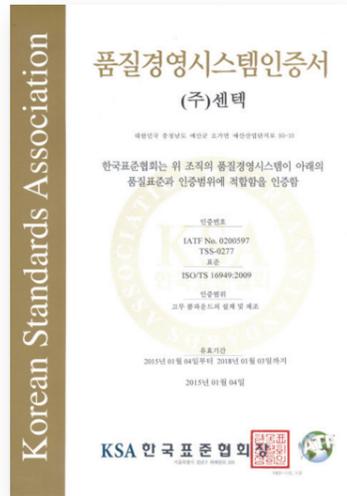
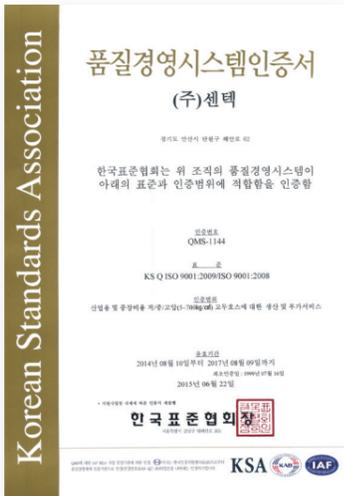


● BURST PRESSURE TEST MACHINE(파열압 시험기)



● ANTI-ABRAION TEST MACHINE(내마모 시험기)

National Certification / 국내 인증 현황



• 품질경영시스템 인증 (ISO 9001)

• 품질경영시스템 인증 (ISO/TS 16949)

• 한국 KR 선급
- Korean Register of shipping

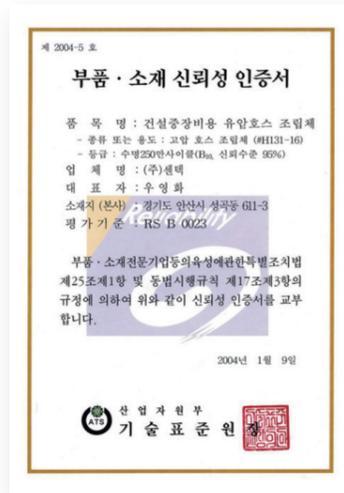
International Certification / 해외 인증 현황



• ABS 인증
- ABS Certificate



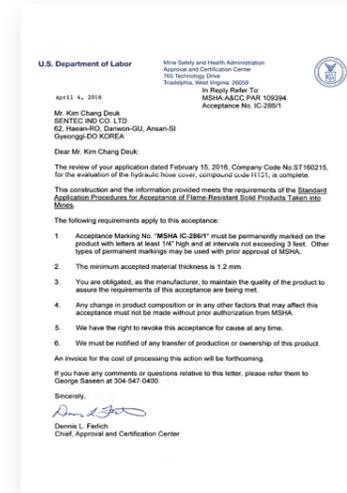
• Lloyd's 인증
- Lloyd's Certificate



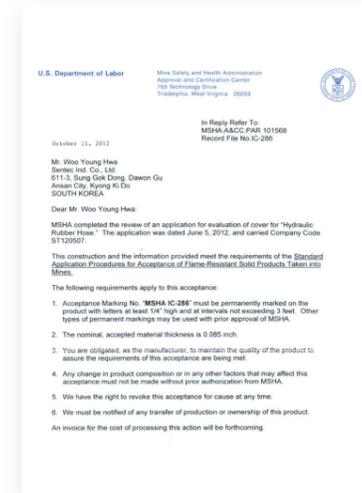
• 부품, 소재 신뢰성 인증
- Reliability Certificate for Hydraulic Hose



• 기업부설 연구소 인정서
- Certificate for R&D center



• MSHA 인증 [4 Sprial Hose]
- MSHA Certificate [4 Sprial Hose]



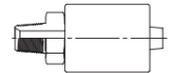
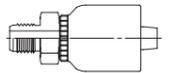
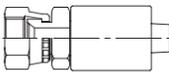
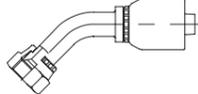
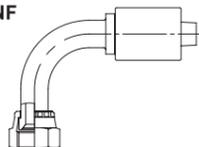
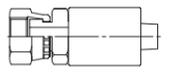
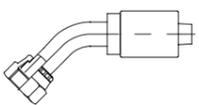
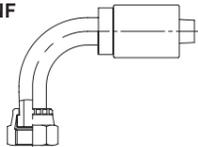
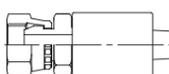
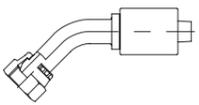
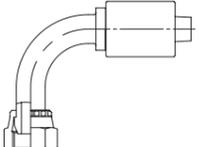
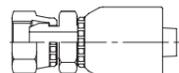
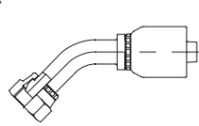
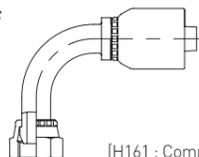
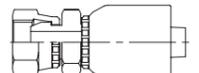
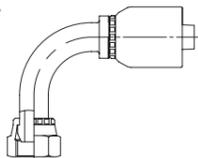
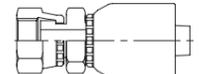
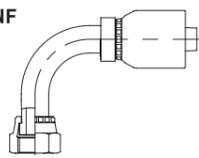
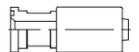
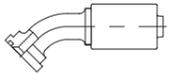
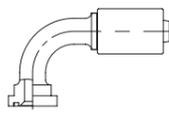
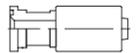
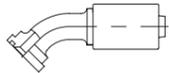
• MSHA 인증 [1W,2W Hydraulic Rubber Hose]
- MSHA Certificate [1,2W Hydraulic Rubber Hose]

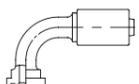
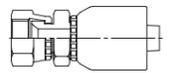
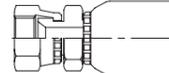
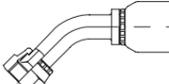
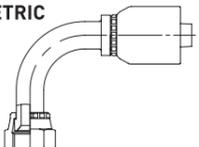
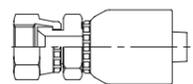
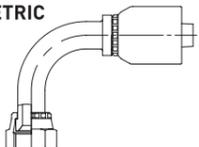
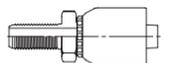
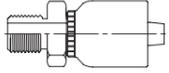
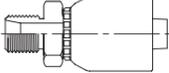
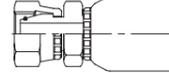
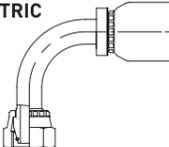
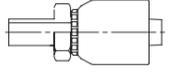
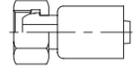
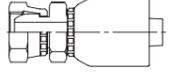
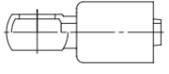
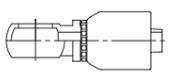
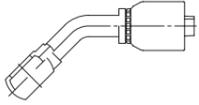
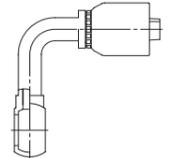
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1. JIS/BSP Male	48
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Straight Flange	59
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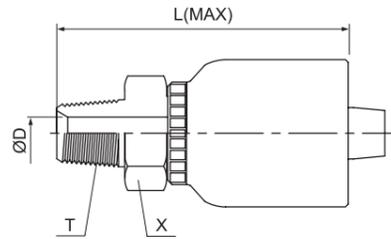
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금구 일람표

P2010/P4010	E2010/E4010	C2020	C2040/C4040
PT 	NPTF 	UNF 	UNF 
JIS/BSP Male	SAE NPTF Male	JIC 37° Male	JIC 37° Female
C2440	C2940/C4940	E2030/E4030	E2430/E4430
UNF 	UNF 	UNF 	UNF 
JIC 37° Female -45° Elbow	JIC 37° Female Swivel-90° Elbow	Female Straight O-Ring Face Seal	Female-45° Elbow O-Ring Face Seal
E2930/E4930	P2050/P4050	P2450/P4450	P2950/P4950
UNF 	PF 	PF 	PF 
Female-90° Elbow O-Ring Face Seal	JIS/BSP Female Straight(60° Cone)	JIS/BSP Female 45° Elbow(60° Cone)	JIS/BSP Female 90° Elbow(60° Cone)
PC050/P2050	PC450/P2450	PC950/P2950	PM050
PF 	PT 	PF 	PF 
[H161 : Compact] JIS/BSP Female Straight(60° Cone)	[H161 : Compact] JIS/BSP Female 45° Elbow(60° Cone)	[H161 : Compact] JIS/BSP Female 90° Elbow(60° Cone)	JIS/BSP Female Straight(60° Cone)
PM950	EM030	EM930	F40S0
PF 	UNF 	UNF 	
JIS/BSP Female 90° Elbow(60° Cone)	Female Straight O-Ring Face Seal	Female-90° Elbow O-Ring Face Seal	SAE Flange Straight(Code 61)
F44S0	F49S0	F40H0	F44H0
			
SAE Flange 45° Elbow(Code 61)	SAE Flange 90° Elbow(Code 61)	SAE Flange Straight(Code 62)	SAE Flange 45° Elbow(Code 62)

F49H0	S2050	K2060	K2460
	PF 	METRIC 	METRIC 
SAE Flange 90° Elbow(Code 62)	JIS Female Straight(30° Flare)	Female KOMATSU Straight(30° Flare)	Female KOMATSU 45° Elbow(30° Flare)
K2960	S2060	S2960	MF2060
METRIC 	METRIC 	METRIC 	METRIC 
KOMATSU Female 90° Elbow-(30° Flare)	JIS Female Straight(45° Flare)	JIS Female 90° Elbow (45° Flare)	JIS Automatic Male Long(45° Flare)
E20A0	N20C0	D2060	D2960
UNF 	METRIC 	METRIC 	METRIC 
SAE Male with O-Ring Boss	Male Metric Stud (DIN 24° Flare)	Female Metric (DIN 24° Flare)	Female Metric-90° Elbow(DIN 24° Flare)
N20P0	NG0R0	N2R0	NG0B0
	METRIC 		
Male Stand pipe Straight	Female Spherical (Low Pressure)	Female Spherical (High Pressure)	Banjo Union (Low Pressure)
N20B0	N24B0	N29B0	
			
Banjo Union (High Pressure)	Banjo Union-45° Elbow (High Pressure)	Banjo Union-90° Elbow (High Pressure)	

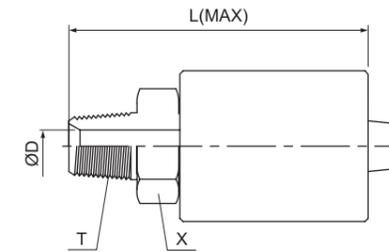
P2010 JIS/BSP Male Taper Thread



Part Number	Hose (inch)	T (PT)	ØD	L	X
P2010-04-04	1/4	1/4-19	4.0	49.0	17.0
P2010-06-04	1/4	3/8-19	4.0	51.3	19.0
P2010-04-06	3/8	1/4-19	6.2	56.0	19.0
P2010-06-06	3/8	3/8-19	6.2	58.0	19.0
P2010-08-06	3/8	1/2-14	6.2	61.0	22.0
P2010-06-08	1/2	3/8-19	9.2	62.0	24.0
P2010-08-08	1/2	1/2-14	9.2	65.0	24.0
P2010-12-12	3/4	3/4-14	14.0	75.0	32.0
P2010-16-16	1	1-11	19.0	87.0	41.0

- P2010 Style - For use with wire braid hoses

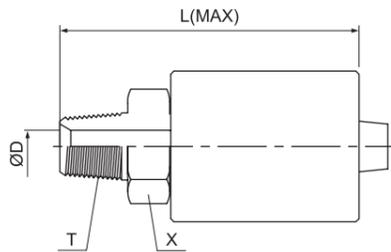
E2010/E4010 SAE Male Taper Thread



Part Number	Hose (inch)	T (NPTF)	ØD	L	X
E2010-20-20	1 1/4	1 1/4-11.5	23.0	103.0	46.0
E2010-24-24	1 1/2	1 1/2-11.5	29.0	111.0	50.0
E2010-32-32	2	2-11.5	43.0	117.0	65.0
E4010-08-08	1/2	1/2-14	9.2	66.0	24.0
E4010-12-12	3/4	3/4-14	14.0	84.0	32.0
E4010-16-16	1	1-11.5	19.0	97.0	41.0
E4010-20-20	1 1/4	1 1/4-11.5	23.0	114.0	46.0
E4010-24-24	1 1/2	1 1/2-11.5	29.0	112.0	50.0
E4010-32-32	2	2-11.5	43.0	119.0	65.0

- E2010 Style - For use with braid hose and 2pieces type
- E4010 Style - For use with four wire spiral reinforced hoses and 2pieces type

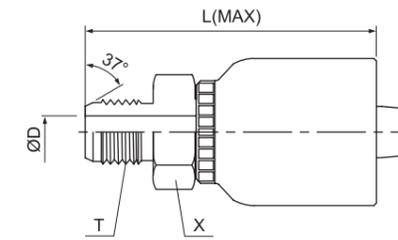
P2010/P4010 JIS/BSP Male Taper Thread



Part Number	Hose (inch)	T (PT)	ØD	L	X
P2010-20-20	1 1/4	1 1/4-11	23.0	90.0	46.0
P2010-24-24	1 1/2	1 1/2-11	29.0	110.0	55.0
P2010-32-32	2	2-11	43.0	116.0	65.0
P4010-08-08	1/2	1/2-14	9.2	65.0	24.0
P4010-12-12	3/4	3/4-14	14.0	84.0	32.0
P4010-16-16	1	1-11	19.0	97.0	41.0
P4010-20-20	1 1/4	1 1/4-11	23.0	110.0	46.0
P4010-24-24	1 1/2	1 1/2-11	29.0	111.0	55.0
P4010-32-32	2	2-11	43.0	112.0	65.0

- P2010 Style - For use with braid hoses and 2pieces type
- P4010 Style - For use with four wire spiral reinforced hoses and 2pieces type

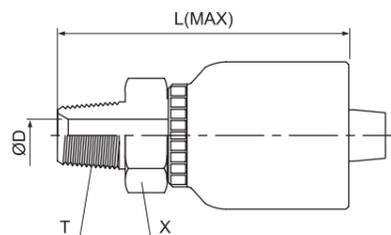
C2020 JIC 37° Male Unified Thread



Part Number	Hose (inch)	T (UNF)	ØD	L	X
C2020-07-04	1/4	7/16-20	4.0	50.0	17.0
C2020-08-05	5/16	1/2-20	5.0	56.0	17.0
C2020-09-06	3/8	9/16-18	6.2	57.0	19.0
C2020-12-08	1/2	3/4-16	9.2	63.0	24.0
C2020-14-10	5/8	7/8-14	12.0	74.0	27.0
C2020-17-12	3/4	1 1/16-12	14.5	76.0	32.0
C2020-21-16	1	1 5/16-12	19.5	88.0	36.0
C2020-26-20	1 1/4	1 5/8-12	23.0	102.0	46.0

- C2020 Style - For use with wire braid hoses

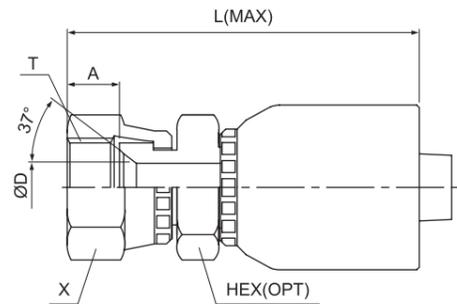
E2010 SAE Male Taper Thread



Part Number	Hose (inch)	T (NPTF)	ØD	L	X
E2010-02-04	1/4	1/8-27	4.0	45.3	17.0
E2010-04-04	1/4	1/4-18	4.0	49.3	17.0
E2010-04-06	3/8	1/4-18	6.2	56.7	22.0
E2010-06-06	3/8	3/8-18	6.2	57.5	19.0
E2010-08-08	1/2	1/2-14	9.2	65.3	24.0
E2010-12-12	3/4	3/4-14	14.0	73.2	32.0
E2010-16-16	1	1-11.5	19.0	86.9	41.0

- E2010 Style - For use with wire braid hoses

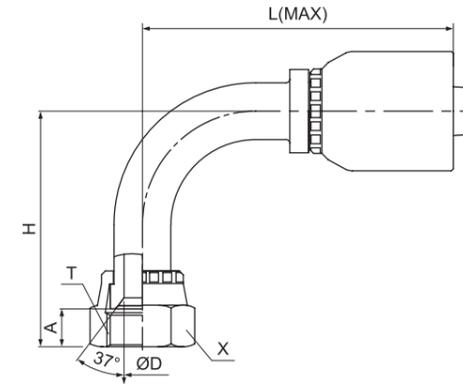
C2040 JIC 37° Female Unified thread



Part Number	Hose (inch)	T (UNF)	A	ØD	L	X	HEX
C2040-07-04	1/4	7/16-20	9.0	4.0	55.0	17.0	17.0
C2040-08-04	1/4	1/2-20	9.0	4.0	55.0	19.0	17.0
C2040-09-04	1/4	9/16-18	9.0	4.0	55.0	19.0	17.0
C2040-09-06	3/8	9/16-18	9.5	6.2	63.0	19.0	19.0
C2040-12-06	3/8	3/4-16	10.0	6.2	64.0	24.0	19.0
C2040-12-08	1/2	3/4-16	10.0	9.2	68.0	24.0	24.0
C2040-14-08	1/2	7/8-14	12.5	9.2	72.0	27.0	24.0
C2040-14-10	5/8	7/8-14	12.5	12.0	70.0	27.0	27.0
C2040-17-12	3/4	1-1/16-12	14.0	14.0	84.0	36.0	32.0
C2040-21-12	3/4	1-5/16-12	15.5	14.0	86.0	41.0	38.0
C2040-21-16	1	1-5/16-12	16.0	19.0	95.0	41.0	38.0

• C2040 Style - For use with wire braid hoses

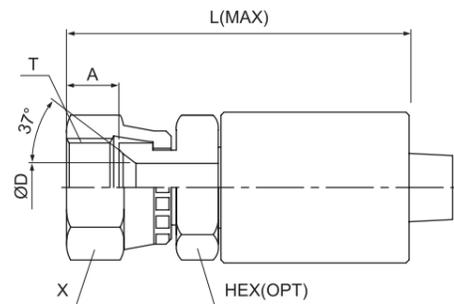
C2940 JIC 37° Female Unified thread 90° Elbow



Part Number	Hose (inch)	T (UNF)	A	ØD	H	L	X
C2940-07-04	1/4	7/16-20	9.0	4.0	44.0	61.0	17.0
C2940-08-04	1/4	1/2-20	9.0	4.0	44.0	61.0	19.0
C2940-09-04	1/4	9/16-18	9.0	4.0	44.0	61.0	19.0
C2940-09-05	5/16	9/16-18	9.5	5.0	52.5	52.0	19.0
C294M-09-06	3/8	9/16-18	9.5	6.2	99.5	70.0	19.0
C294M-09-06	3/8	9/16-18	9.5	6.2	79.5	70.0	19.0
C2940-09-06	3/8	9/16-18	9.5	6.2	45.0	70.0	19.0
C2940-12-06	3/8	3/4-16	10.0	6.2	45.0	70.0	24.0
C294M-12-06	3/8	3/4-16	10.0	6.2	53.0	70.0	24.0
C2940-12-08	1/2	3/4-16	10.0	9.2	55.0	77.0	24.0
C2940-14-08	1/2	7/8-14	12.5	9.2	57.5	77.0	27.0
C2940-17-12	3/4	1-1/16-12	14.0	14.0	76.0	100.0	36.0
C2940-21-16	1	1-5/16-12	16.0	19.0	86.0	113.0	41.0

• C2940 Style - For use with wire braid hoses

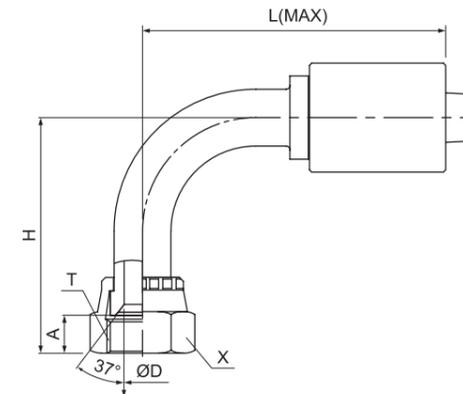
C2040/C4040 JIC 37° Female Unified thread



Part Number	Hose (inch)	T (UNF)	A	ØD	L	X	HEX
C2040-26-20	1 1/4	1-5/8-12	17.5	23.0	94.0	50.0	46.0
C2040-30-24	1 1/2	1-7/8-12	18.0	29.0	117.0	57.0	57.0
C2040-40-32	2	2-1/2-12	18.5	40.0	123.0	70.0	70.0
C4040-12-08	1/2	3/4-16	10.0	9.2	68.0	24.0	24.0
C4040-17-12	3/4	1-1/16-12	14.0	14.0	93.0	36.0	32.0
C4040-21-16	1	1-5/16-12	16.0	19.0	105.0	41.0	38.0
C4040-26-20	1 1/4	1-5/8-12	17.5	23.0	105.0	50.0	46.0

• C2040 Style - For use with wire braid hoses and 2pieces type
 • C4040 Style - For use with four wire spiral reinforced hoses and 2pieces type

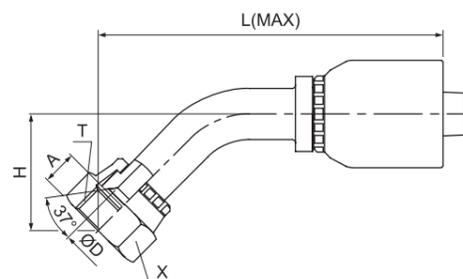
C2940/C4940 JIC 37° Female Unified thread 90° Elbow



Part Number	Hose (inch)	T (UNF)	A	ØD	H	L	X
C2940-26-20	1 1/4	1-5/8-12	17.5	23.0	107.5	129.0	50.0
C2940-30-24	1 1/2	1-7/8-12	18.0	29.0	124.0	194.0	57.0
C2940-40-32	2	2-1/2-12	18.5	40.0	155.0	196.0	70.0
C4940-12-08	1/2	3/4-16	10.0	9.2	55.0	77.0	24.0
C4940-17-12	3/4	1-1/16-12	14.0	14.0	76.0	106.0	36.0
C4940-21-16	1	1-5/16-12	16.0	19.0	86.0	121.0	41.0
C4940-26-20	1 1/4	1-5/8-12	17.5	23.0	107.0	136.0	50.0

• C2940 Style - For use with wire braid hoses and 2pieces type
 • C4940 Style - For use with four wire spiral reinforced hoses and 2pieces type

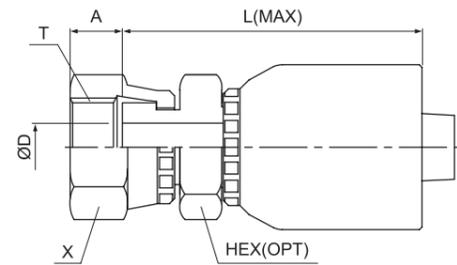
C2440 JIC 37° Female Unified thread 45° Elbow



Part Number	Hose (inch)	T (UNF)	A	ØD	H	L	X
C2440-07-04	1/4	7/16-20	9.0	4.0	27.0	60.1	17.0
C2440-08-04	1/4	1/2-20	9.0	4.0	27.0	60.1	19.0
C2440-09-04	1/4	9/16-18	9.0	4.0	27.0	60.1	19.0
C2440-12-06	3/8	3/4-16	10.0	6.2	32.0	91.4	24.0
C2440-12-08	1/2	3/4-16	10.0	9.2	35.0	110.5	24.0
C2440-14-08	1/2	7/8-14	12.5	9.2	37.0	113.1	27.0
C2440-17-12	3/4	1-1/16-12	14.0	14.0	50.0	129.3	36.0
C2440-21-16	1	1-5/16-12	16.0	19.0	57.0	154.2	41.0

• C2440 Style - For use with wire braid hoses

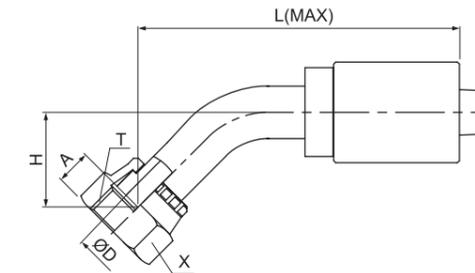
E2030 Female Swivel(O-Ring Face Seal) Straight



Part Number	Hose (inch)	T (UNF)	A	ØD	L	X	HEX (OPT)
E2030-09-04	1/4	9/16-18	8.0	4.0	45.3	19.0	17.0
E2030-11-06	3/8	11/16-16	9.5	6.2	52.2	21.0	19.0
E2030-13-08	1/2	13/16-16	10.5	9.2	57.3	24.0	24.0
E2030-16-10	5/8	1-14	12.0	12.0	64.2	30.0	24.0
E2030-19-12	3/4	1-3/16-12	14.0	14.0	65.7	36.0	32.0
E2030-23-16	1	1-7/16-12	15.0	19.0	77.4	41.0	38.0

- E2030 Type - For use with wire braid hoses

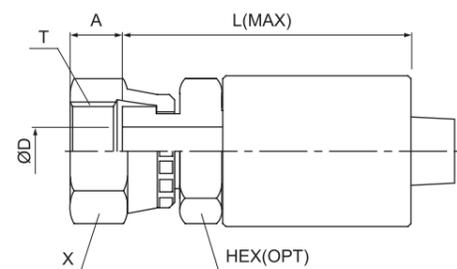
E2430/E4430 Female Swivel(O-Ring Face Seal) 45° Elbow



Part Number	Hose (inch)	T (UNF)	A	ØD	H	L	X
E2430-27-20	1 1/4	1-11/16-12	15.5	23.0	26.0	169.0	50.0
E4430-13-08	1/2	13/16-16	10.5	9.2	15.0	97.0	24.0
E4430-19-12	3/4	1-3/16-12	14.0	14.0	21.0	112.0	36.0
E4430-19-12	3/4	1-3/16-12	14.0	14.0	33.0	124.0	36.0
E4430-23-16	1	1-7/16-12	15.0	19.0	21.0	137.0	41.0
E4430-27-20	1 1/4	1-11/16-12	15.5	23.0	26.0	172.0	50.0

- E2430 Style - For use with wire braid hoses and 2piece type
- E4430 Style - For use with four wire spiral reinforced hoses and 2pieces type

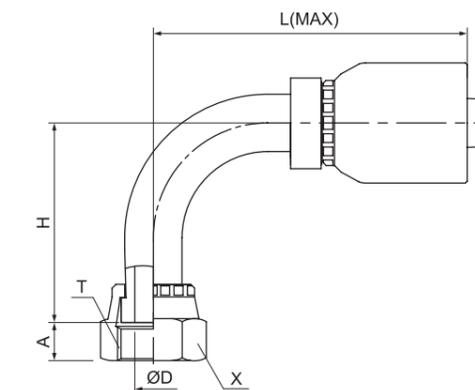
E2030/E4030 Female Swivel(O-Ring Face Seal) Straight



Part Number	Hose (inch)	T (UNF)	A	ØD	L	X	HEX (OPT)
E2030-27-20	1 1/4	1-11/16-12	15.5	23.0	90.0	50.0	41.0
E4030-13-08	1/2	13/16-16	10.5	9.2	58.0	24.0	24.0
E4030-16-10	5/8	1-14	12.0	12.0	69.0	30.0	24.0
E4030-19-12	3/4	1-3/16-12	14.0	14.0	78.0	36.0	32.0
E4030-23-16	1	1-7/16-12	15.0	19.0	87.0	41.0	38.0
E4030-27-20	1 1/4	1-11/16-12	15.0	23.0	98.0	50.0	41.0

- E2030 Style - For use with wire braid hoses and 2pieces type
- E4030 Style - For use with four spiral reinforced hoses and 2pieces type

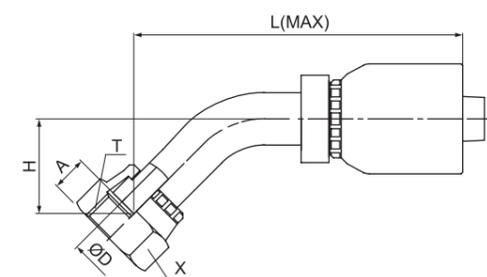
E2930 Female Swivel(O-Ring Face Seal) 90° Long Elbow



Part Number	Hose (inch)	T (UNF)	A	ØD	H	L	X
E2930-09-04	1/4	9/16-18	8.0	4.0	19.0	62.0	19.0
E293M-09-04	1/4	9/16-18	8.0	4.0	37.0	61.0	19.0
E2930-11-06	3/8	11/16-16	9.5	6.2	23.0	65.0	20.6
E293L-11-06	3/8	11/16-16	9.5	6.2	54.0	65.0	20.6
E2930-13-08	1/2	13/16-16	11.5	9.2	29.0	80.0	24.0
E293M-13-08	1/2	13/16-16	11.5	9.2	32.0	80.0	24.0
E293L-13-08	1/2	13/16-16	11.5	9.2	54.0	80.0	28.6
E2930-16-10	5/8	1-14	12.0	12.0	33.0	85.0	28.6
E293L-16-10	5/8	1-14	12.0	12.0	64.0	85.0	28.6
E2930-19-12	3/4	1-3/16-12	14.0	14.0	48.0	100.0	36.0
E2930-23-16	1	1-7/16-12	15.0	19.0	54.0	122.0	41.0
E293L-23-16	1	1-7/16-12	15.0	19.0	65.0	122.0	41.0

- E2930 Style - For use with wire braid hoses

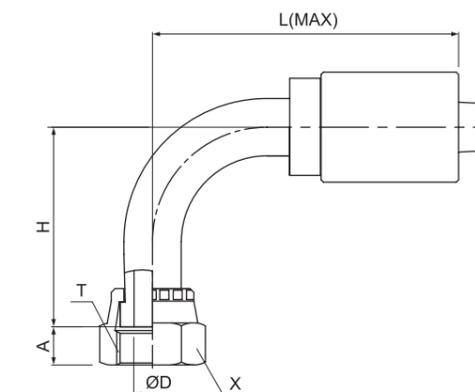
E2430 Female Swivel(O-Ring Face Seal) 45° Elbow



Part Number	Hose (inch)	T (UNF)	A	ØD	H	L	X
E2430-09-04	1/4	9/16-18	8.0	4.0	10.0	57.0	19.0
E2430-11-06	3/8	11/16-16	9.5	6.2	11.0	73.0	21.0
E2430-13-08	1/2	13/16-16	10.5	9.2	15.0	95.0	24.0
E243M-13-08	1/2	13/16-16	10.5	9.2	40.0	120.0	24.0
E2430-16-10	5/8	1-14	12.5	12.0	16.5	100.0	30.0
E2430-19-12	3/4	1-3/16-12	14.0	14.0	29.0	113.0	36.0
E243M-19-12	3/4	1-3/16-12	14.0	14.0	33.0	117.0	36.0
E2430-23-16	1	1-7/16-12	15.0	19.0	33.0	150.0	41.0

- E2430 Style - For use with wire braid hoses

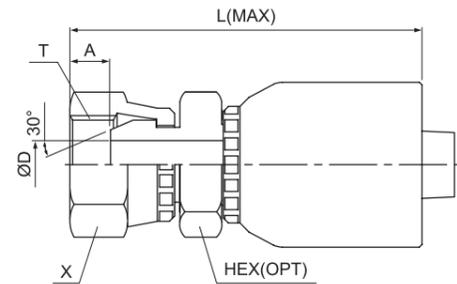
E2930/E4930 Female Swivel(O-Ring Face Seal) 90° Long Elbow



Part Number	Hose (inch)	T (UNF)	A	ØD	H	L	X
E2930-27-20	1 1/4	1-11/16-12	15.5	23.0	62.0	143.0	50.0
E4930-13-08	1/2	13/16-16	11.5	9.2	29.0	79.0	24.0
E4930-19-12	3/4	1-3/16-12	14.0	14.0	48.0	106.0	36.0
E493L-19-12	3/4	1-3/16-12	14.0	14.0	96.0	106.0	36.0
E4930-23-16	1	1-7/16-12	15.0	19.0	54.0	132.0	41.0
E493L-23-16	1	1-7/16-12	15.0	19.0	65.0	122.0	41.0
E4930-27-20	1 1/4	1-11/16-12	15.5	23.0	62.0	150.0	50.0

- E2930 Style - For use with wire braid hoses and 2pieces type
- E4930 Style - For use with four wire spiral reinforced hoses and 2pieces type

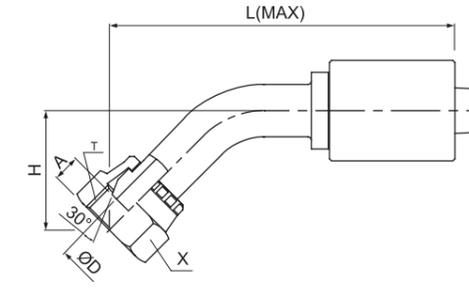
P2050 JIS/BSP Female Swivel Straight(60° Cone)



Part Number	Hose (inch)	T (PF)	A	ØD	L	X	HEX (OPT)
P2050-04-04	1/4	1/4-19	5.4	4.0	52.3	19.0	19.0
P2050-06-04	1/4	3/8-19	7.0	4.0	55.0	22.0	19.0
P2050-06-06	3/8	3/8-19	7.0	6.3	63.6	22.0	22.0
P2050-08-08	1/2	1/2-14	9.2	9.2	70.7	27.0	27.0
P2050-08-08Y	1/2	1/2-14	9.7	9.5	71.2	27.0	22.0
P2050-12-10	5/8	3/4-14	9.0	12.0	71.0	32.0	32.0
P2050-12-12	3/4	3/4-14	9.0	14.0	80.0	36.0	36.0
P2050-16-16	1	1-11	10.5	19.5	91.0	41.0	41.0

- P2050 Style - For use with wire braid hoses

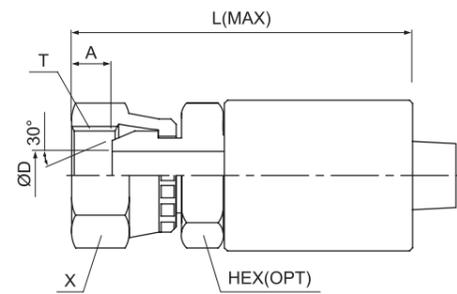
P2450/P4450 JIS/BSP Female Swivel 45° Elbow(60° Cone)



Part Number	Hose (inch)	T (PF)	A	ØD	H	L	X
P2450-20-20	1 1/4	1 1/4-11	13.7	25.0	55.0	188.0	50.0
P4450-08-08	1/2	1/2-14	9.0	9.2	35.0	112.0	27.0
P4450-12-12	3/4	3/4-14	9.0	14.0	50.5	127.0	36.0
P4450-12-12Y	3/4	3/4-14	9.0	14.3	25.9	97.0	36.0
P4450-16-16	1	1-11	10.5	19.5	51.5	157.0	41.0
P4450-20-20	1 1/4	1 1/4-11	13.7	25.0	55.0	196.0	50.0

- P2450 Style - For use with wire braid hoses and 2pieces type
- P4450 Style - For use with four wire spiral reinforced hoses and 2pieces type

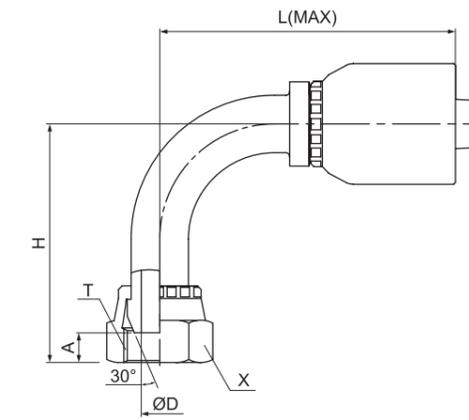
P2050/P4050 JIS/BSP Female Swivel Straight(60° Cone)



Part Number	Hose (inch)	T (PF)	A	ØD	L	X	HEX (OPT)
P2050-20-20	1 1/4	1 1/4-11	13.7	25.0	109.0	50.0	46.0
P2050-24-24	1 1/2	1 1/2-11	14.5	29.0	107.0	55.0	55.0
P2050-32-32	2	2-11	16.0	43.0	128.0	70.0	70.0
P2050-32-48	3	3-11	16.5	68.5	155.0	100.0	95.0
P4050-08-08	1/2	1/2-14	9.0	9.2	69.0	27.0	27.0
P4050-12-12	3/4	3/4-14	9.0	14.0	89.0	36.0	32.0
P4050-12-12Y	3/4	3/4-14	9.0	14.3	81.4	36.0	30.0
P4050-16-16	1	1-11	10.5	19.5	101.0	41.0	38.0
P4050-20-20	1 1/4	1 1/4-11	13.7	25.0	116.0	50.0	46.0
P4050-24-24	1 1/2	1 1/2-11	14.5	29.0	108.0	55.0	X

- P2050 Style - For use with wire braid hoses and 2pieces type
- P4050 Style - For use with four wire spiral reinforced hoses and 2pieces type

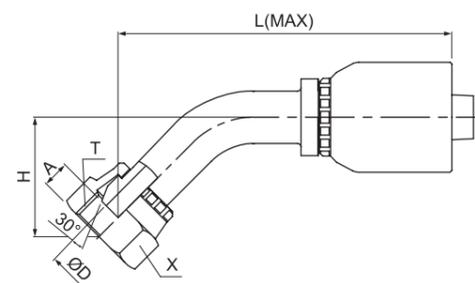
P2950 JIS/BSP Female Swive 90° Elbow(60° Cone)



Part Number	Hose (inch)	T (PF)	A	ØD	H	L	X
P2950-04-04	1/4	1/4-19	5.4	4.0	34.4	45.3	19.0
P2950-06-06	3/8	3/8-19	7.0	6.3	40.0	57.5	22.0
P2950-08-08	1/2	1/2-14	9.2	9.2	50.1	68.0	27.0
P2950-12-08	1/2	3/4-14	9.0	9.2	68.0	92.0	36.0
P2950-12-10	5/8	3/4-14	9.0	12.0	65.5	90.0	36.0
P2950-12-12	3/4	3/4-14	9.0	14.0	59.0	102.0	36.0
P2950-16-16	1	1-11	10.5	19.5	84.0	115.0	41.0

- P2950 Style - For use with wire braid hoses

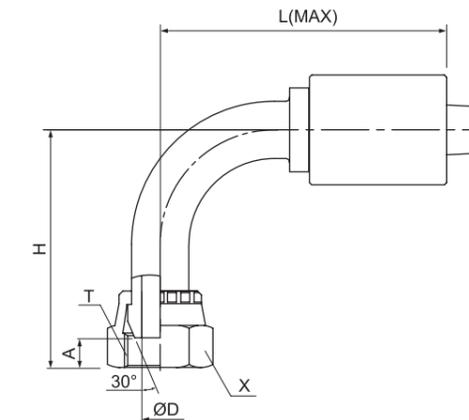
P2450 JIS/BSP Female Swivel 45° Elbow(60° Cone)



Part Number	Hose (inch)	T (PF)	A	ØD	H	L	X
P2450-04-04	1/4	1/4-19	5.4	4.0	19.8	56.0	19.0
P2450-06-06	3/8	3/8-19	7.0	6.3	22.0	66.9	22.0
P2450-08-08	1/2	1/2-14	9.2	9.2	27.6	70.1	27.0
P2450-12-12	3/4	3/4-14	9.0	14.0	50.4	140.0	36.0
P2450-16-16	1	1-11	10.5	19.5	51.4	149.0	41.0

- P2450 Style - For use with wire braid hoses

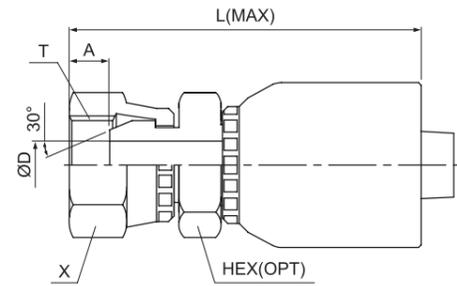
P2950/P4950 JIS/BSP Female Swivel 90° Elbow(60° Cone)



Part Number	Hose (inch)	T (PF)	A	ØD	H	L	X
P2950-20-20	1 1/4	1 1/4-11	13.7	25.0	101.7	134.0	50.0
P2950-24-24	1 1/2	1 1/2-11	14.5	29.0	108.0	160.0	55.0
P2950-32-32	2	2-11	16.5	40.0	150.0	172.0	70.0
P4950-08-08	1/2	1/2-14	9.0	9.2	53.0	78.0	27.0
P4950-12-12	3/4	3/4-14	9.0	14.0	65.0	101.0	36.0
P4950-12-12Y	3/4	3/4-14	9.0	14.3	64.0	87.7	36.0
P4950-16-16	1	1-11	10.5	19.5	84.0	121.0	41.0
P4950-20-20	1 1/4	1 1/4-11	11.0	25.0	101.7	141.0	50.0
P4950-24-24	1 1/2	1 1/2-11	14.5	29.0	108.0	161.0	55.0

- P2950 Style - For use with wire braid hoses and 2pieces type
- P4950 Style - For use with four wire spiral reinforced hoses and 2pieces type

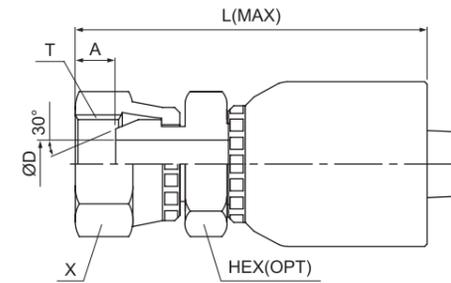
PC050 JIS/BSP Female Swivel Straight(60° Cone)



Part Number	Hose(inch)	T(PF)	A	ØD	L	X	HEX(OPT)
PC050-04-04	1/4	1/4-19	6.0	4.0	53.0	19.0	19.0
PC050-04-04Y	1/4	1/4-19	6.3	4.0	50.8	19.0	17.0
PC050-06-06	3/8	3/8-19	7.0	6.2	56.0	22.0	19.0
PC050-06-06Y	3/8	3/8-19	7.0	7.6	56.6	22.0	19.0
PC050-08-08	1/2	1/2-14	9.0	9.2	64.0	27.0	27.0

• PC050 Style - For use with H161 Series hoses

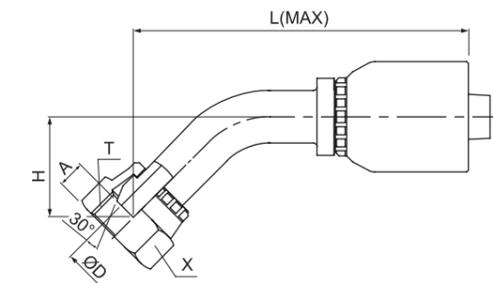
PM050 JIS/BSP Female Swivel(60° Cone) Straight - Low pressure



Part Number	Hose(inch)	T(PF)	A	ØD	L	X	HEX(OPT)
PM050-06-06	3/8	3/8-19	7.0	6.2	58.0	22.0	22.0
PM050-08-08	1/2	1/2-14	9.0	9.2	66.0	27.0	27.0
PM050-12-12	3/4	3/4-14	9.0	14.0	83.0	36.0	32.0
PM050-16-16	1	1-11	10.5	19.0	91.0	41.0	38.0

• PM050 Style - For use low pressure with textile braid hoses

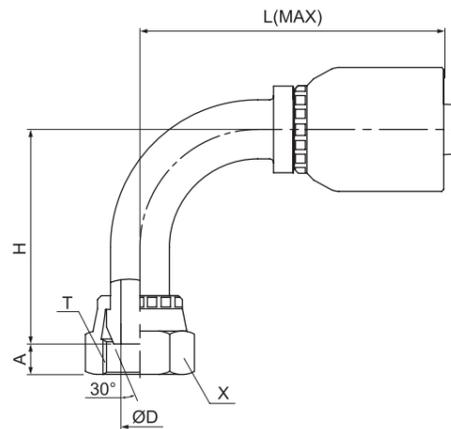
PC450 JIS/BSP Female Swivel 45° Elbow(60° Cone)



Part Number	Hose(inch)	T(PF)	A	ØD	H	L	X
PC450-04-04	1/4	1/4-19	6.0	4.0	15.0	56.0	19.0
PC450-04-04Y	1/4	1/4-19	6.3	4.0	24.0	63.0	19.0
PC450-06-06	3/8	3/8-19	7.0	6.2	7.0	58.0	22.0
PC450-06-06Y	3/8	3/8-19	7.0	7.6	26.0	71.4	22.0
PC450-08-08	1/2	1/2-14	9.0	9.2	21.0	72.0	27.0

• PC450 Style - For use with H161 Series hoses

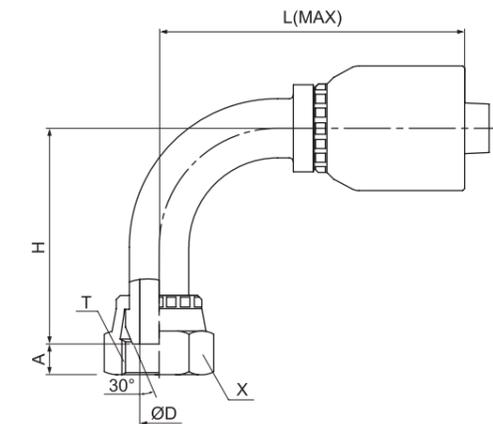
PM950 JIS/BSP Female Swivel(60° Cone) 90° Elbow - Low pressure



Part Number	Hose(inch)	T(PF)	A	ØD	H	L	X
PM950-06-06	3/8	3/8-19	7.0	6.2	33.0	56.0	22.0
PM950-08-08	1/2	1/2-14	9.0	9.2	41.0	65.0	27.0
PM950-06-06	3/4	3/4-14	9.0	14.0	50.0	97.0	36.0
PM950-16-16	1	1-11	10.5	19.0	73.5	113.0	41.0

• PM950 Style - For use low pressure with textile braid hoses

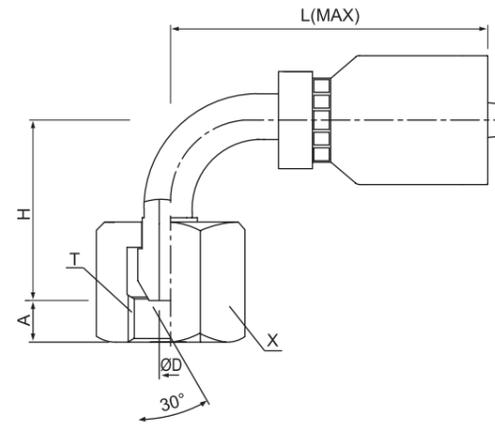
PC950 JIS/BSP Female Swivel 90° Elbow(60° Cone)



Part Number	Hose(inch)	T(PF)	A	ØD	H	L	X
PC950-04-04	1/4	1/4-19	6.0	4.0	28.0	49.0	19.0
PC950-04-04	1/4	1/4-19	6.0	4.0	44.0	45.0	19.0
PC950-04-04Y	1/4	1/4-19	6.3	4.0	26.0	45.0	19.0
PC950-06-06	3/8	3/8-19	7.0	6.2	33.0	54.0	22.0
PC950-06-06Y	3/8	3/8-19	7.0	7.6	38.0	53.0	22.0
PC950-08-08	1/2	1/2-14	9.0	9.2	41.0	59.0	27.0

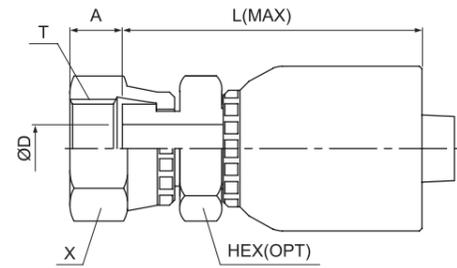
• PC950 Style - For use with H161 Series hoses

PC950SL JIS/BSP Female Swivel 90° Elbow (60° Cone) - Slipon type



Part Number	Hose(inch)	T(PF)	A	ØD	H	L	X
PC950SL-04-04	1/4	1/4-19	5.8	4.0	29.0	59.0	19.0

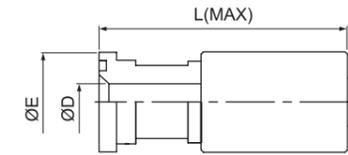
EM030 Female Swivel Straight - Low pressure(O-Ring Face Seal)



Part Number	Hose (inch)	T (UNF)	A	ØD	L	X	HEX(OPT)
EM030-11-06	3/8	11/16-16	9.5	6.2	58.0	20.6	19.0
EM030-13-08	1/2	13/16-16	10.5	9.2	65.0	24.0	24.0
EM030-19-12	3/4	1-3/16-12	14.0	14.0	85.0	36.0	32.0
EM030-23-16	1	1-7/16-12	15.0	19.0	93.0	41.0	36.0

- EM030 Style - For use low pressure with textile braid hoses

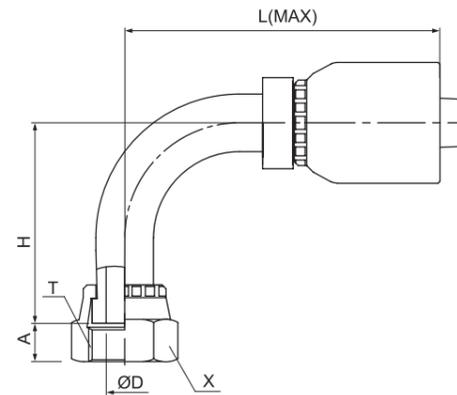
F40S0 SAE Flange Straight(Code 61)



Part Number	Hose (inch)	ØD	ØE	L	Remarks
F40S0-08-08	1/2	9.2	31.18	86.6	
F40S0-12-12	3/4	14.0	38.10	100.0	
F40S0-16-12	3/4	14.0	44.45	100.0	
F40S0-12-16	1	14.0	38.10	109.5	
F40S0-16-16	1	19.0	44.45	112.0	
F40S0-20-20	1	23.0	50.80	109.5	
F40S0-20-20	1 1/4	23.0	50.80	109.5	
F40S0-20-24	1 1/2	29.0	50.80	109.5	
F40S0-24-24	1 1/2	29.0	60.33	109.5	
F40S0-32-32	2	40.0	71.42	139.5	

- F40S0 - For use with four wire spiral reinforced hoses and 2pieces type

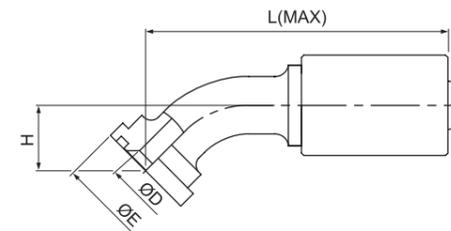
EM930 Female Swivel 90° Long Elbow - Low pressure(O-Ring Face Seal)



Part Number	Hose (inch)	T (UNF)	A	ØD	H	L	X
EM930-11-06	3/8	11/16-16	9.5	6.2	33.0	60.7	20.6
EM930-13-08	1/2	13/16-16	11.5	9.2	39.5	72.8	24.0
EM930-19-12	3/4	1-3/16-12	14.0	14.0	62.0	101.7	36.0
EM930-23-16	1	1-7/16-12	15.0	19.0	69.0	121.5	41.0

- EM930 Style - For use low pressure with textile braid hoses

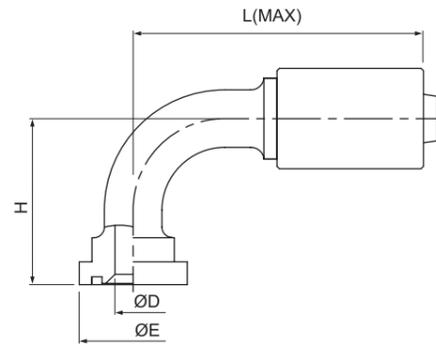
F44S0 SAE Flange-45° Elbow(Code 61)



Part Number	Hose (inch)	ØD	ØE	H	L
F44S0-08-08	1/2	9.2	30.18	21.5	88.1
F44S0-12-12	3/4	14.0	38.10	25.0	110.6
F44S0-16-12	3/4	14.0	44.45	32.0	117.6
F44S0-16-16	1	19.0	44.45	40.0	140.5
F44S0-20-16	1	19.0	50.80	38.0	143.6
F44S0-20-20	1 1/4	23.0	50.80	45.0	160.5
F44S0-24-20	1 1/4	23.0	60.33	48.0	168.5
F44S0-24-24	1 1/2	29.0	60.33	45.0	191.0
F44S0-32-32	2	40.0	71.42	52.0	220.2

- F44S0 - For use with four wire spiral reinforced hoses and 2pieces type

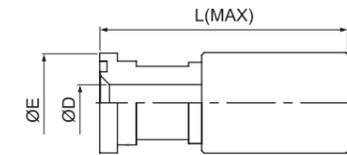
F49S0 SAE Flange-90° Elbow(Code 61)



Part Number	Hose	ØD	ØE	H	L
F49S0-08-08	1/2	9.2	30.18	43.0	81.3
F49S0-12-12	3/4	14.0	38.10	63.5	106.0
F49SM-12-12	3/4	14.0	38.10	110.0	106.0
F49SL-12-12	3/4	14.0	38.10	130.0	106.0
F49SL-16-12	3/4	14.0	44.45	70.0	106.0
F49S0-12-16	1	19.0	38.10	58.0	120.4
F49S0-16-16	1	19.0	44.45	70.0	130.5
F49SL1-16-16	1	19.0	44.45	90.0	130.5
F49SL2-16-16	1	19.0	44.45	130.0	130.5
F49SL3-16-16	1	19.0	44.45	150.0	130.5
F49SL4-16-16	1	19.0	44.45	180.0	130.5
F49S0-20-16	1	19.0	50.80	83.0	130.5
F49SL1-20-16	1	19.0	50.80	100.0	130.5
F49SL2-20-16	1	19.0	50.80	180.0	130.5
F49S0-20-20	1 1/4	23.0	50.80	85.0	155.5
F49SL-20-20	1 1/4	23.0	50.80	130.0	155.5
F49S0-24-20	1 1/4	23.0	60.33	100.0	155.5
F49S0-24-24	1 1/2	29.0	60.33	100.0	161.3
F49S0-32-32	2	40.0	71.42	120.0	213.2

- F49S0 - For use with four wire spiral reinforced hoses and 2pieces type

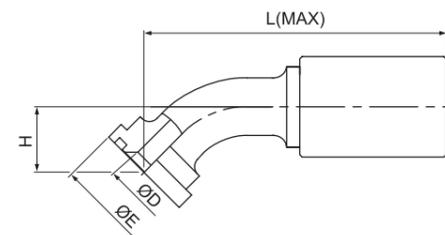
F40H0 SAE Flange Straight(Code 62)



Part Number	Hose (inch)	A	ØD	ØE	L	Remarks
F40H0-08-08	1/2	14.0	9.2	31.75	77.6	
F40H0-12-12	3/4	18.0	14.0	41.28	104.0	
F40H0-16-12	3/4	21.0	14.0	47.63	107.0	
F40H0-16-16	1	21.0	19.0	47.63	116.5	
F40H0-20-16	1	25.0	19.0	47.63	120.5	
F40H0-20-20	1 1/4	25.0	23.0	47.63	120.5	
F40H0-20-20	1 1/4	25.0	23.0	53.98	120.5	
F40H0-24-24	1 1/2	30.0	29.0	63.50	151.0	
F40H0-32-32	2	38.0	40.0	79.38	162.7	

- F40H0 - For use with four wire spiral reinforced hoses and 2pieces type

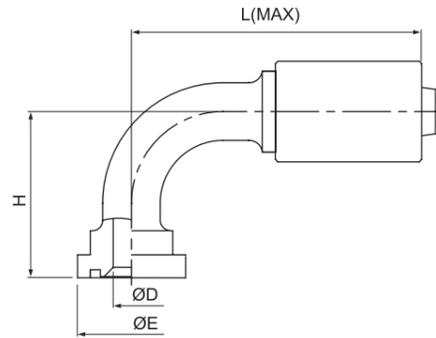
F44H0 SAE Flange-45° Elbow(Code 62)



Part Number	Hose (inch)	A	ØD	ØE	H	L
F44H0-08-08	1/2	14.0	9.2	31.75	21.5	89.1
F44H0-12-12	3/4	18.0	14.0	41.28	40.0	126.0
F44HL-12-12	3/4	18.0	14.0	41.28	70.0	156.0
F44H0-16-12	3/4	21.0	14.0	47.63	32.0	118.0
F44H0-12-16	1	18.0	19.0	41.28	50.0	143.6
F44H0-16-16	1	21.0	19.0	47.63	40.0	140.4
F44H0-20-16	1	25.0	19.0	53.98	45.0	151.0
F44H0-16-20	1 1/4	21.0	23.0	47.63	40.0	150.5
F44H0-20-20	1 1/4	25.0	23.0	53.98	45.0	161.0
F44HL-20-20	1 1/4	25.0	23.0	53.98	90.0	206.0
F44H0-24-24	1 1/2	25.0	29.0	63.50	40.0	192.5
F44H0-32-32	2	38.0	40.0	79.38	52.0	216.7

- F44H0 - For use with four wire spiral reinforced hoses and 2pieces type

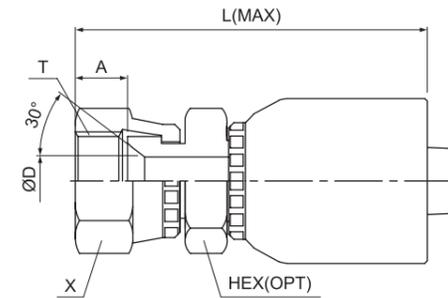
F49H0 SAE Flange-90° Elbow(Code 62)



Part Number	Hose(inch)	A	ØD	ØE	H	L
F49H0-08-08	1/2	14.0	9.2	31.75	40.0	74.0
F49H0-12-12	3/4	18.0	14.0	41.28	63.5	106.0
F49HL-12-12	3/4	18.0	14.0	41.28	130.0	106.0
F49H0-16-12	3/4	21.0	14.0	47.63	63.5	106.0
F49H0-16-16	1	21.0	19.0	47.63	70.0	130.5
F49HL1-16-16	1	21.0	19.0	47.63	79.6	130.5
F49HL2-16-16	1	21.0	19.0	47.63	130.0	130.5
F49HL3-16-16	1	21.0	19.0	47.63	150.0	130.5
F49HL4-16-16	1	25.0	19.0	47.63	180.0	130.5
F49H0-20-16	1	25.0	19.0	53.98	150.0	130.5
F49H0-20-20	1 1/4	25.0	23.0	53.98	85.0	155.5
F49HM-24-20	1 1/4	25.0	23.0	63.50	100.0	155.5
F49HL-24-20	1 1/4	25.0	23.0	63.50	145.0	155.5
F49HM-24-24	1 1/2	30.0	29.0	63.50	100.0	151.0

• F49H0 - For use with four wire spiral reinforced hoses and 2pieces type

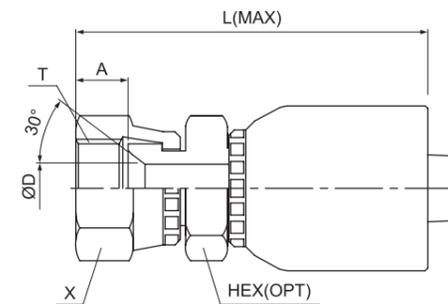
S2050 Female JIS/Metric Swivel Straight(30° Flare)



Part Number	Hose(inch)	T	A	ØD	L	X	HEX(OPT)
S2050-04-04	1/4	PF-1/4	7.5	4.0	53.0	19.0	17.0
S2050-06-06	3/8	PF-3/8	9.5	6.2	63.0	22.0	19.0
S2050-08-08	1/2	PF-1/2	11.0	9.2	64.0	27.0	24.0
S2050-12-12	3/4	PF-3/4	11.5	14.0	80.0	36.0	32.0
S2050-16-16	1	PF-1	12.5	19.0	94.0	41.0	38.0
S2050-20-20	1 1/4	PF-1 1/4	17.0	23.0	108.0	50.0	46.0

• S2050 - For use with wire braid hose

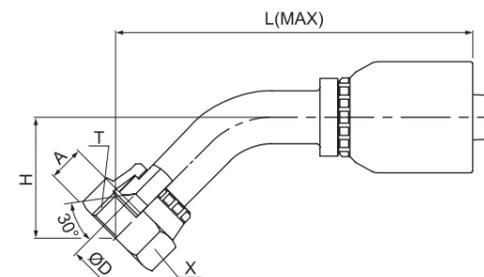
K2060 Female Komatsu Metric Swivel Straight(30° Flare)



Part Number	Hose(inch)	T	A	ØD	L	X	HEX(OPT)
K2060-14-04	1/4	M14x1.5P	9.0	4.0	55.0	19.0	17.0
K2060-16-06	3/8	M16x1.5P	8.5	6.2	63.0	22.0	19.0
K2060-18-06	3/8	M18x1.5P	9.5	6.2	64.0	24.0	19.0
K2060-20-06	3/8	M20x1.5P	10.5	6.2	64.0	24.0	19.0
K2060-20-08	1/2	M20x1.5P	11.0	9.2	69.0	27.0	24.0
K2060-22-08	1/2	M22x1.5P	12.5	9.2	71.5	27.0	24.0
K2060-22-10	5/8	M22x1.5P	10.0	12.0	78.5	27.0	27.0
K2060-24-10	5/8	M24x1.5P	12.3	12.0	82.0	32.0	27.0
K2060-30-12	3/4	M30x1.5P	11.8	14.0	83.0	36.0	32.0
K2060-32-16	1	M32x1.5P	15.0	19.0	95.0	41.0	36.0
K2060-36-20	1 1/4	M36x1.5P	16.5	23.0	112.0	46.0	41.0

• K2060 Style - For use with wire braid hoses

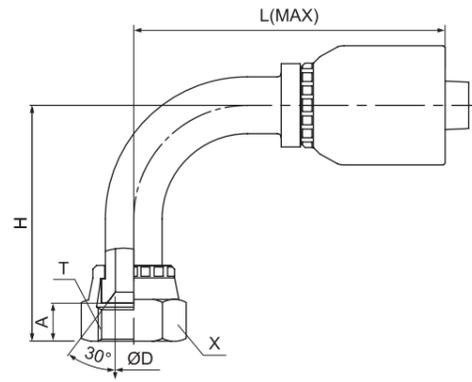
K2460 Female Komatsu Metric Swivel 45° Elbow(30° Flare)



Part Number	Hose(inch)	T	A	ØD	H	L	X
K2460-14-04	1/4	M14x1.5P	9.0	4.0	22.0	81.7	19.0
K2460-18-06	3/8	M18x1.5P	9.5	6.2	30.0	92.3	24.0
K2460-22-08	1/2	M22x1.5P	12.5	9.2	37.0	116.1	27.0

• K2460 Style - For use with wire braid hoses

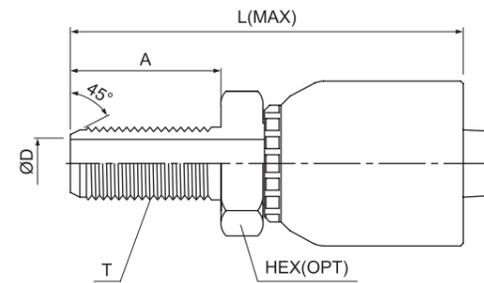
K2960 Female Komatsu Metric Swivel 90° Elbow(30° Flare)



Part Number	Hose (inch)	T	A	ØD	H	L	X
K2960-14-04	1/4	M14x1.5P	9.0	4.0	44.0	60.3	19.0
K296L-14-04	1/4	M14x1.5P	9.0	4.0	55.0	60.3	22.0
K2960-18-06	3/8	M18x1.5P	9.5	6.2	52.5	62.7	24.0
K2960-22-08	1/2	M22x1.5P	12.5	9.2	57.5	79.3	27.0

• K2960 Style - For use with wire braid hoses

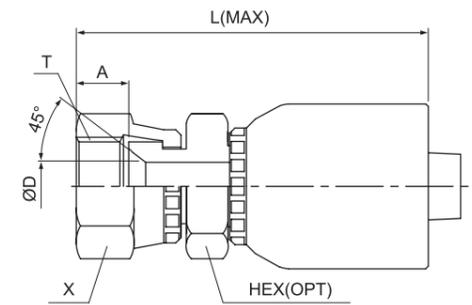
MF2060 JIS Male 45° Long Thread



PART NO	Hose (inch)	T	A	ØD	L	HEX(OPT)
MF2060-14-04	1/4	M14x1.5P	34.0	4.0	69.5	17.0
MF2060-16-06	3/8	M16x1.5P	38.0	6.2	81.0	22.0
MF2060-20-06	3/8	M20x1.5P	38.0	6.2	81.0	24.0
MF2061-20-06	3/8	M20x1.5P	33.0	6.2	76.0	24.0
MF2060-20-08	1/2	M20x1.5P	38.0	9.2	84.5	27.0
MF206M-20-08	1/2	M20x1.5P	41.0	9.2	87.5	27.0
MF206L-20-08	1/2	M20x1.5P	51.0	9.2	97.5	27.0
MF2060-22-08	1/2	M22x1.5P	41.0	9.2	87.5	27.0
MF2060-22-10	5/8	M22x1.5P	54.0	12.0	110.5	27.0

• MF2060 Style - For use with wire braid hoses

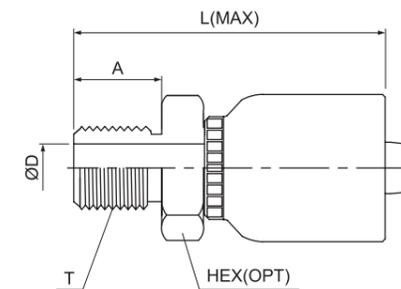
S2060 JIS/Female Metric Swivel Straight(45° Flare)



Part Number	Hose (inch)	T	A	ØD	L	X	HEX(OPT)
S2060-16-06	3/8	M16x1.5P	8.5	6.2	62.2	22.0	19.0
S2060-20-06	3/8	M20x1.5P	9.5	6.2	63.7	24.0	19.0
S2060-20-08	1/2	M20x1.5P	11.0	9.2	68.3	27.0	24.0
S2060-32-10	5/8	M22x1.5P	10.0	12.0	110.2	27.0	27.0

• S2060 Style - For use with wire braid hoses

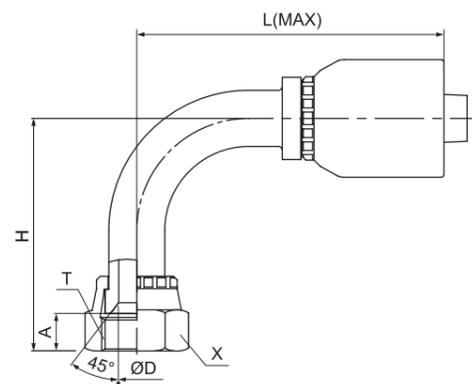
E20A0 SAE Male Straight Thread with O-Ring Boss



PART NO	Hose (inch)	T	A	ØD	L	HEX(OPT)
E20A0-07-04	1/4	7/16-20UNF	9.2	4.0	44.0	17.0
E20A0-08-05	5/16	1/2-20UNF	9.2	5.0	50.0	17.0
E20A0-09-06	3/8	9/16-18UNF	9.9	6.2	52.0	19.0
E20A0-12-08	1/2	3/4-16UNF	11.1	9.2	57.5	24.0
*E20A0-14-10	5/8	7/8-14UNF	12.7	12.0	69.0	27.0
*E20A0-17-12	3/4	1 1/16-12UNF	15.1	14.5	74.0	32.0
*E20A0-21-16	1	1 5/16-12UNF	15.1	19.5	83.5	36.0
*E20A0-26-20	1 1/4	1 5/8-12UNF	15.1	23.0	95.0	46.0

• E20A0 Style - For use with wire braid hoses

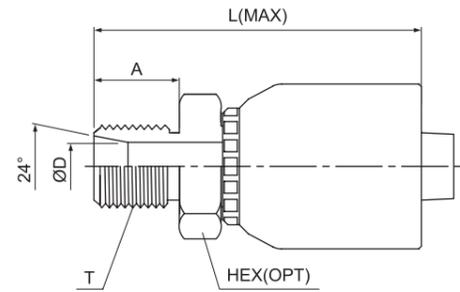
S2960 JIS/Female Metric Swivel 90° Elbow(45° Flare)



Part Number	Hose (inch)	T	A	ØD	H	L	X
S2960-14-04	1/4	M14x1.5P	9.0	4.0	44.0	60.5	17.0
S2960-16-06	3/8	M16x1.5P	8.5	6.2	43.5	63.0	22.0
S2960-20-08	1/2	M20x1.5P	11.0	9.2	46.0	79.5	27.0

• S2960 Style - For use with wire braid hoses

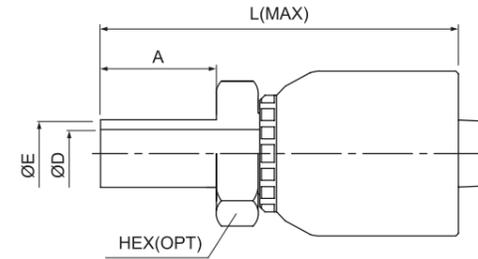
N20C0 Male Metric Stud(DIN 24°)



Part Number	Hose (inch)	T	A	ØD	L	HEX(OPT)
N20C0-16-04	1/4	M16x1.5P	12.0	4.0	47.0	19.0
N20C0-18-06	3/8	M18x1.5P	12.0	6.2	54.0	22.0
N20C0-24-08	1/2	M24x1.5P	13.0	9.2	59.5	27.0
N20C0-26-10	5/8	M26x1.5P	13.0	12.0	69.0	27.0
N20C0-36-12	3/4	M36x2P	18.0	14.0	77.0	41.0
N20C0-42-16	1	M42x2P	20.0	19.0	86.5	46.0

• N20C0 Style - For use with wire braid hoses

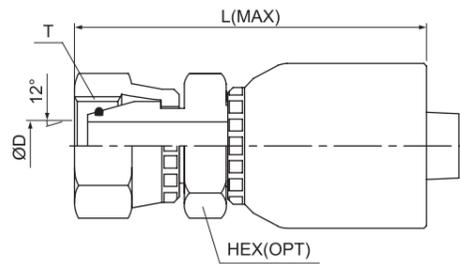
N20P0 Male Stand pipe(High Pressure)



Part Number	Hose (inch)	A	ØD	ØE	L	X
N20P0-06-04	1/4	19.0	4.0	6.35	52.5	19.0
N20P0-08-04	1/4	33.5	4.0	8.0	68.5	17.0
N20P0-10-06	3/8	25.0	6.2	10.0	67.0	19.0
N20P0-12-06	3/8	26.0	6.2	12.0	68.0	19.0
N20P0-20-06	1/2	25.0	9.2	20.0	71.5	24.0
N20P0-12-08	1/2	28.0	9.2	12.0	74.5	24.0
N20P0-18-10	5/8	20.0	12.0	18.0	76.0	27.0
N20PM-18-10	5/8	25.0	12.0	18.0	81.0	27.0
N20P0-18-12	3/4	20.0	14.5	18.0	77.0	32.0
N20P0-25-16	1	35.0	19.5	25.0	101.5	38.0

• N20P0 - For use with wire braid hoses

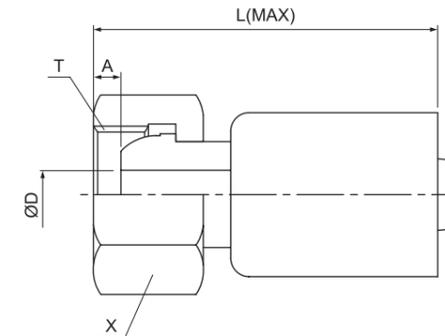
D2060 Female Metric Swivel Straight(DIN 24°)



Part Number	Hose (inch)	T	ØD	L	HEX(OPT)
D2060-14-04	1/4	M14x1.5P	4.0	19.0	17.0
D2060-18-04	1/4	M18x1.5P	4.0	24.0	19.0
D2060-18-06	3/8	M18x1.5P	6.2	24.0	17.0
D2060-20-06	3/8	M20x1.5P	6.2	27.0	19.0
D2060-22-06	3/8	M22x1.5P	6.2	27.0	22.0
D2060-18-08	1/2	M18x1.5P	9.2	24.0	24.0
D2060-22-08	1/2	M22x1.5P	9.2	27.0	24.0
D2060-24-08	1/2	M24x1.5P	9.2	30.0	24.0
D2060-26-10	5/8	M26x1.5P	12.0	32.0	27.0
D2060-36-12	3/4	M36x2.0P	14.0	46.0	36.0

• D2060 Style - For use with wire braid hoses

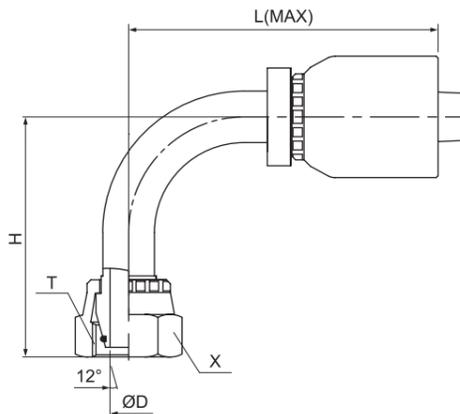
NGOR0 Female Spherical(Low Pressure)



Part Number	Hose (inch)	T	A	ØD	L	X
NGOR0-12-04	1/4	M12x1.5P	4.5	4.0	37.0	17.0
NGOR0-14-04	1/4	M14x1.5P	4.5	4.0	36.0	19.0
NGOR0-14-05	5/16	M14x1.5P	3.0	4.0	38.0	17.0
NGORM-14-05	5/16	M14x1.5P	3.5	4.0	41.0	17.0
NGOR0-14-06	3/8	M14x1.5P	7.0	6.0	36.0	17.0
NGOR0-16-06	3/8	M16x1.5P	3.5	6.0	34.0	19.0

• NGOR0 - For use with textile braid hoses

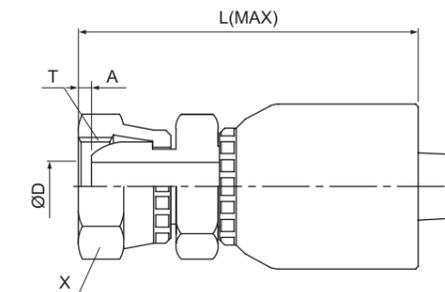
D2960 Female Metric Swivel 90° Elbow(DIN 24°)



Part Number	Hose (inch)	T	H	ØD	L	X
D2960-18-06	3/8	M18x1.5P	37.0	6.2	70.0	24.0
D2960-20-06	3/8	M20x1.5P	43.0	6.2	70.0	27.0
D2960-22-08	1/2	M22x1.5P	52.0	9.2	81.5	27.0
D2960-26-10	5/8	M26x1.5P	45.0	12.0	79.5	32.0
D2960-30-10	5/8	M30x1.5P	67.0	12.0	89.5	36.0

• D2960 - For use with wire braid hoses

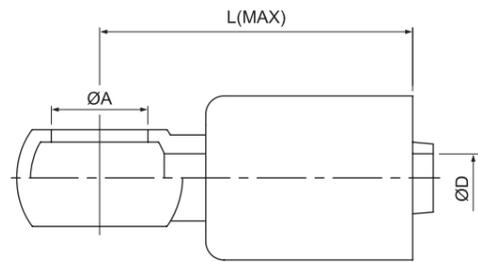
N2R0 Female Spherical(High Pressure)



Part Number	Hose (inch)	T	A	ØD	L	X
N2R0-14-03	3/16	M14x1.5P	5.0	2.5	40.0	17.0
N2R0-14-04	1/4	M14x1.5P	7.0	4.0	43.5	17.0
N2R0-14-05	5/16	M14x1.5P	5.0	5.0	49.5	17.0
N2R0-20-05	5/16	M20x1.5P	8.0	5.0	55.0	27.0
N2R0-16-06	3/8	M16x1.5P	4.0	6.2	58.0	22.0
N2R0-22-08	1/2	M22x1.5P	4.0	9.2	62.5	27.0

• N2R0 - For use with wire braid hoses

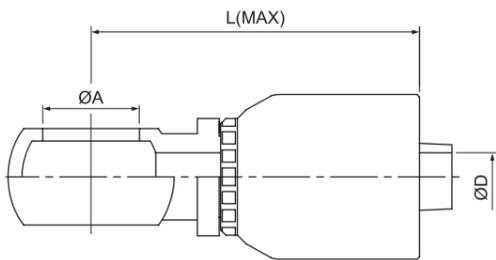
NGOB0 Banjo Union(Low Pressure)



Part Number	Hose(inch)	ØA	ØD	L
NGOB0-08-03	3/16	8.0	2.5	30.0
NGOB0-08-04	1/4	8.2	4.0	33.0
NGOB0-10-04	1/4	10.2	4.0	33.0
NGOB0-12-04	1/4	12.0	4.0	33.0
NGOB0-10-05	5/16	10.2	5.0	35.0
NGOB0-12-05	5/16	12.0	5.0	35.0
NGOB0-14-05	5/16	14.0	5.0	35.0
NGOB0-16-05	5/16	16.0	6.2	35.0
NGOB0-14-06	3/8	14.2	6.2	45.0
NGOB0-18-06	3/8	18.0	6.2	45.0
NGOB0-14-08	1/2	14.0	9.2	46.0
NGOB0-18-08	1/2	18.0	9.2	46.0
NGOB0-18-10	5/8	18.0	12.0	81.0
NGOB0-22-10	5/8	22.0	12.0	81.0
NGOB0-26-10	5/8	26.0	12.0	82.0
NGOB0-28-10	5/8	28.0	12.0	83.0
NGOB0-30-10	5/8	30.0	12.0	85.0

• **NGOB0** - For use with textile braid hoses

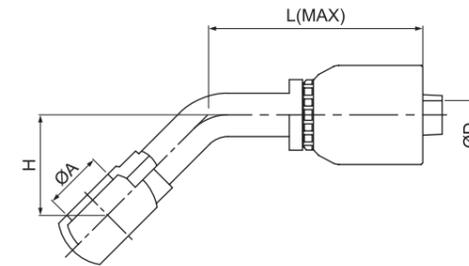
N20B0 Banjo Union Straight(High Pressure)



Part Number	Hose(inch)	ØA	ØD	L
N20B0-08-03	3/16	8.0	2.0	32.0
N20B0-10-04	1/4	10.2	4.0	37.0
N20B0-12-04	1/4	12.0	4.0	45.5
N20B0-10-05	5/16	10.2	5.0	70.5
N20BL-14-05	5/16	14.0	5.0	93.0
N20B0-14-05	5/16	14.0	5.0	65.0
N20B0-18-06	3/8	18.0	6.4	61.0
N20B0-18-08	1/2	18.5	9.4	64.5
N20B0-16-08	1/2	16.0	9.4	65.5
N20B0-18.2-10	5/8	18.2	12.0	80.5
N20B0-18.5-10	5/8	18.5	12.0	80.5
N20B0-22-10	5/8	22.0	12.0	75.5
N20B0-30-10	5/8	30.0	12.0	73.0

• **N20B0** - For use with wire braid hoses

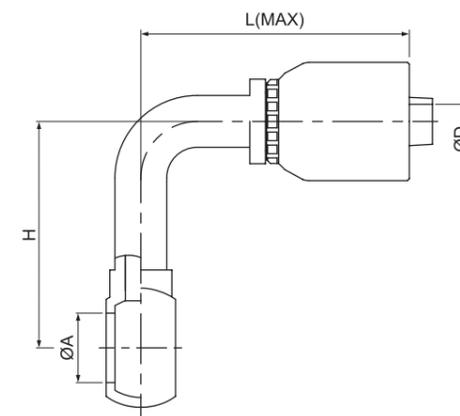
N24B0 Banjo Union 45° Elbow(High Pressure)



Part Number	Hose(inch)	ØA	ØD	L	H
N24B0-10-04	1/4	10.2	4.0	69.5	18.0
N24B0-14-05	5/16	14.2	5.0	84.0	20.0
N24B0-14-05	5/16	14.2	5.0	80.5	25.0
N24B0-14-06	3/8	14.2	5.0	81.5	25.0

• **N24B0** - For use with wire braid hoses

N29B0 Banjo Union 90° Elbow(High Pressure)



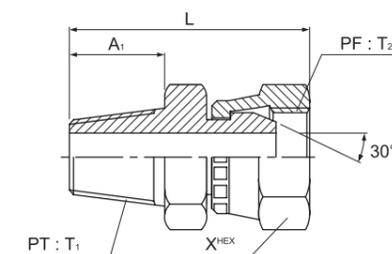
Part Number	Hose(inch)	ØA	ØD	L	H
N29B0-14-04	1/4	14.0	4.0	49.5	50.0
N29B0-12-04	1/4	12.0	4.0	49.5	50.0
N29B0-14-05	5/16	14.2	5.0	62.5	56.0
N29B0-14-06	3/8	14.0	6.2	68.5	57.0
N29B0-22-10	5/8	22.0	12.0	99.0	92.0

• **N29B0** - For use with wire braid hoses

ADAPTER

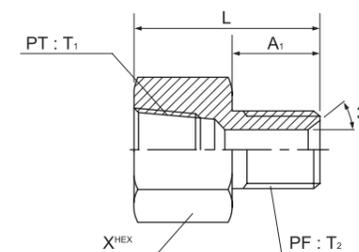
- | | |
|--|--|
| <p>1. PART NO. A06(JAPAN 1006)
SWIVEL MALE CONNECTOR 71</p> <p>2. PART NO. A07(JAPAN 1007)
PIPE MALE THREAD 71</p> <p>3. PART NO. A08(JAPAN 1008)
SWIVEL FEMALE CONNECTOR 71</p> <p>4. PART NO. A09(JAPAN 1010)
SWIVEL UNION - BOTH END 71</p> <p>5. PART NO. A10(JAPAN 1009)
STRAIGHT/JIS 30° FLARE 72</p> <p>6. PART NO. A11(JAPAN 1011)
STRAIGHT/MALE PIPE - JIS 30° FLARE 72</p> <p>7. PART NO. A12(JAPAN 1013)
STRAIGHT/JIS 30° CONE 72</p> <p>8. PART NO. A13(JAPAN 1033)
90° ELBOW/JIS 30° CONE 73</p> <p>9. PART NO. A14(JAPAN 1034)
90° ELBOW/JIS 30° FLARE 73</p> <p>10. PART NO. A15(JAPAN 1036)
45° ELBOW/JIS 30° FLARE 73</p> | <p>11. PART NO. A16(JAPAN 1035)
45° ELBOW/JIS 30° CONE 73</p> <p>12. PART NO. A17
STRAIGHT/JIC 37° CONE 74</p> <p>13. PART NO. A18
45° ELBOW/JIC 37° CONE 74</p> <p>14. PART NO. A19
90° ELBOW/JIC 37° CONE 74</p> |
|--|--|

A06(JAPAN 1006) SWIVEL MALE CONNECTOR



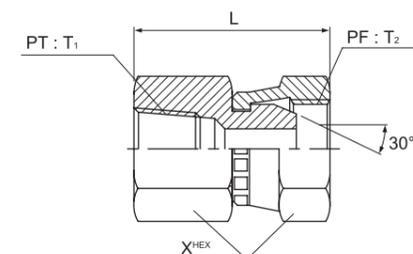
PART NO	SIZE	T ₁	T ₂	I-D	A ₁	L	X _{HEX}
A06-04	04	1/4	1/4	5.0	13.0	39.0	19.0
A06-06	06	3/8	3/8	8.0	15.0	43.0	22.0
A06-08	08	1/2	1/2	10.0	18.0	50.5	27.0
A06-12	12	3/4	3/4	16.0	20.0	56.5	36.0
A06-16	16	1	1	21.5	22.0	62.5	41.0
A06-20	20	1 1/4	1 1/4	27.5	25.0	72.5	50.0
A06-24	24	1 1/2	1 1/2	33.0	25.0	77.5	60.0
A06-32	32	2	2	44.0	29.0	90.0	70.0

A07(JAPAN 1007) PIPE MALE THREAD



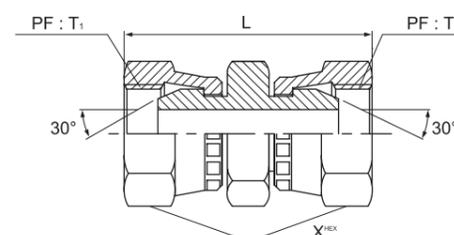
PART NO	SIZE	T ₁	T ₂	I-D	A ₁	L	X _{HEX}
A07-04	04	1/4	1/4	5.0	13.0	30.0	19.0
A07-06	06	3/8	3/8	8.0	15.0	34.0	22.0
A07-08	08	1/2	1/2	10.0	18.0	40.0	27.0
A07-12	12	3/4	3/4	16.0	20.0	45.0	36.0
A07-16	16	1	1	21.5	22.0	49.0	41.0
A07-20	20	1 1/4	1 1/4	27.5	25.0	55.0	50.0
A07-24	24	1 1/2	1 1/2	33.0	25.0	55.0	60.0
A07-32	32	2	2	44.0	29.0	66.0	70.0

A08(JAPAN 1008) SWIVEL FEMALE CONNECTOR



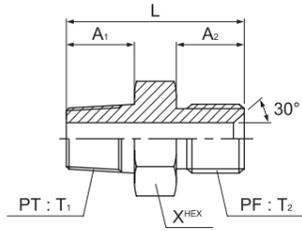
PART NO	SIZE	T ₁	T ₂	I-D	L	X _{HEX}
A08-04	04	1/4	1/4	5.0	30.5	19.0
A08-06	06	3/8	3/8	8.0	39.0	22.0
A08-08	08	1/2	1/2	10.0	44.5	27.0
A08-12	12	3/4	3/4	16.0	49.5	36.0
A08-16	16	1	1	21.5	53.5	41.0
A08-20	20	1 1/4	1 1/4	27.5	60.5	50.0
A08-24	24	1 1/2	1 1/2	33.0	62.0	60.0
A08-32	32	2	2	44.0	74.0	70.0

A09(JAPAN 1010) SWIVEL UNION



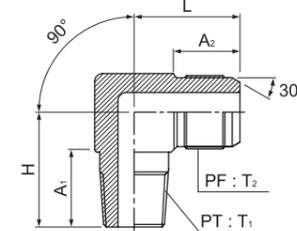
PART NO	SIZE	T ₁	T ₂	I-D	L	X _{HEX}
A09-04	04	1/4	1/4	5.0	42.0	19.0
A09-06	06	3/8	3/8	8.0	47.0	22.0
A09-08	08	1/2	1/2	10.0	54.0	27.0
A09-12	12	3/4	3/4	16.0	65.0	36.0
A09-16	16	1	1	21.5	74.0	41.0
A09-20	20	1 1/4	1 1/4	27.5	77.0	50.0
A09-24	24	1 1/2	1 1/2	33.0	85.0	60.0
A09-32	32	2	2	43.0	102.0	70.0

A10(JAPAN 1009) STRAIGHT/JIS 30° FLARE



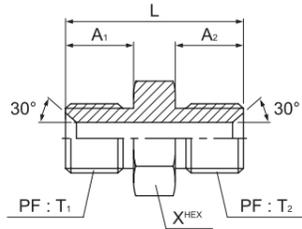
PART NO	SIZE	T ₁	T ₂	I-D	A ₁	A ₂	L	X _{HEX}
A10-04	04	1/4	1/4	5.0	13.0	13.0	34.0	14.0
A10-06	06	3/8	3/8	8.0	15.0	15.0	38.0	19.0
A10-08	08	1/2	1/2	11.0	18.0	18.0	46.0	22.0
A10-12	12	3/4	3/4	16.0	20.0	20.0	52.0	27.0
A10-16	16	1	1	22.0	22.0	22.0	56.0	36.0
A10-20	20	1 1/4	1 1/4	28.0	25.0	25.0	64.0	41.0
A10-24	24	1 1/2	1 1/2	34.0	25.0	25.0	65.0	46.0
A10-32	32	2	2	46.0	29.0	29.0	76.0	60.0

A13(JAPAN 1033) 90° ELBOW/JIS 30° CONE



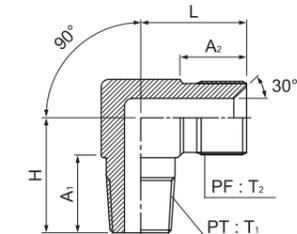
PART NO	SIZE	T ₁	T ₂	I-D	A ₁	A ₂	H	L
A13-04	04	1/4	1/4	5.0	17.0	16.0	26.0	25.0
A13-06	06	3/8	3/8	8.0	20.0	18.0	30.0	28.0
A13-08	08	1/2	1/2	11.0	24.0	20.0	36.0	32.0
A13-12	12	3/4	3/4	16.0	28.0	22.0	43.0	37.0
A13-16	16	1	1	22.0	32.0	24.0	50.0	42.0
A13-20	20	1 1/4	1 1/4	28.0	35.0	27.0	58.0	50.0
A13-24	24	1 1/2	1 1/2	34.0	38.0	27.0	63.0	52.0
A13-32	32	2	2	46.0	42.0	30.0	75.0	63.0

A11(JAPAN 1011) STRAIGHT/MALE PIPE -30° FLARE



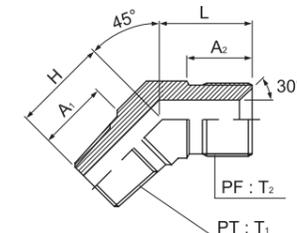
PART NO	SIZE	T ₁	T ₂	I-D	A ₁	A ₂	L	X _{HEX}
A11-04	04	1/4	1/4	5.0	13.0	13.0	34.0	14.0
A11-06	06	3/8	3/8	8.0	15.0	15.0	38.0	19.0
A11-08	08	1/2	1/2	11.0	18.0	18.0	46.0	22.0
A11-12	12	3/4	3/4	16.0	20.0	20.0	52.0	27.0
A11-16	16	1	1	22.0	22.0	22.0	56.0	36.0
A11-20	20	1 1/4	1 1/4	28.0	25.0	25.0	64.0	41.0
A11-24	24	1 1/2	1 1/2	34.0	25.0	25.0	65.0	46.0
A11-32	32	2	2	46.0	29.0	29.0	76.0	60.0

A14(JAPAN 1034) 90° ELBOW/JIS 30° FLARE



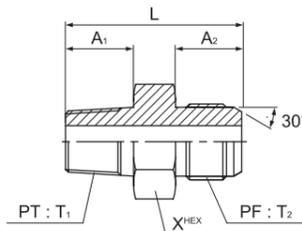
PART NO	SIZE	T ₁	T ₂	I-D	A ₁	A ₂	H	L
A14-04	04	1/4	1/4	5.0	17.0	13.0	26.0	22.0
A14-06	06	3/8	3/8	8.0	20.0	15.0	30.0	25.0
A14-08	08	1/2	1/2	11.0	24.0	18.0	36.0	30.0
A14-12	12	3/4	3/4	16.0	28.0	20.0	43.0	35.0
A14-16	16	1	1	22.0	32.0	22.0	50.0	40.0
A14-20	20	1 1/4	1 1/4	28.0	35.0	25.0	58.0	48.0
A14-24	24	1 1/2	1 1/2	34.0	38.0	25.0	63.0	50.0
A14-32	32	2	2	46.0	42.0	29.0	75.0	62.0

A15(JAPAN 1036) 45° ELBOW/JIS 30° FLARE



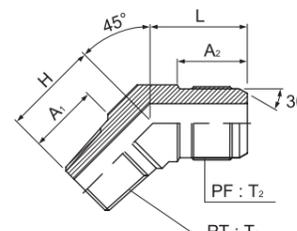
PART NO	SIZE	T ₁	T ₂	I-D	A ₁	A ₂	H	L
A15-04	04	1/4	1/4	5.0	13.0	13.0	19.0	19.0
A15-06	06	3/8	3/8	8.0	15.0	15.0	22.0	22.0
A15-08	08	1/2	1/2	11.0	18.0	18.0	26.0	26.0
A15-12	12	3/4	3/4	16.0	20.0	20.0	30.0	30.0
A15-16	16	1	1	22.0	22.0	22.0	34.0	34.0
A15-20	20	1 1/4	1 1/4	28.0	25.0	25.0	40.0	40.0
A15-24	24	1 1/2	1 1/2	34.0	25.0	25.0	44.0	44.0
A15-32	32	2	2	46.0	29.0	29.0	50.0	50.0

A12(JAPAN 1013) STRAIGHT/JIS 30° CONE



PART NO	SIZE	T ₁	T ₂	I-D	A ₁	A ₂	L	X _{HEX}
A12-04	04	1/4	1/4	5.0	13.0	16.0	37.0	14.0
A12-06	06	3/8	3/8	8.0	15.0	18.0	41.0	19.0
A12-08	08	1/2	1/2	11.0	18.0	20.0	48.0	22.0
A12-12	12	3/4	3/4	16.0	20.0	22.0	54.0	27.0
A12-16	16	1	1	22.0	22.0	24.0	58.0	36.0
A12-20	20	1 1/4	1 1/4	28.0	25.0	27.0	66.0	41.0
A12-24	24	1 1/2	1 1/2	34.0	25.0	27.0	67.0	46.0
A12-32	32	2	2	46.0	30.0	29.0	77.0	60.0

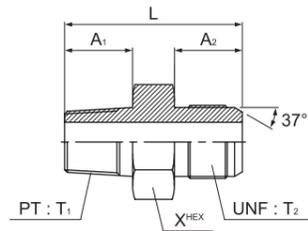
A16(JAPAN 1035) 45° ELBOW/JIS 30° CONE



PART NO	SIZE	T ₁	T ₂	I-D	A ₁	A ₂	H	L
A16-04	04	1/4	1/4	5.0	13.0	16.0	19.0	22.0
A16-06	06	3/8	3/8	8.0	15.0	18.0	22.0	25.0
A16-08	08	1/2	1/2	11.0	18.0	20.0	26.0	28.0
A16-12	12	3/4	3/4	16.0	20.0	22.0	30.0	32.0
A16-16	16	1	1	22.0	22.0	24.0	34.0	36.0
A16-20	20	1 1/4	1 1/4	28.0	25.0	27.0	40.0	42.0
A16-24	24	1 1/2	1 1/2	34.0	25.0	27.0	44.0	43.0
A16-32	32	2	2	46.0	29.0	30.0	50.0	51.0

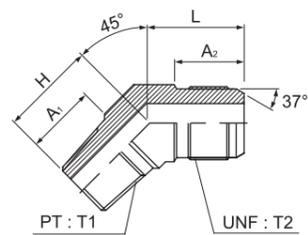
ADAPTER

A17 STRAIGHT/JIC 37° CONE



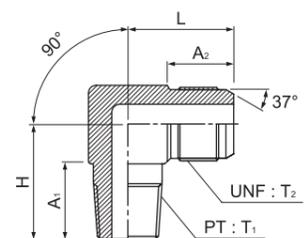
PART NO	SIZE	T ₁	T ₂	A ₁	A ₂	L	X _{HEX}
A17-02	02	1/8	7/16-20	11.0	14.0	31.0	12.0
A17-04	04	1/4	9/16-18	13.0	14.1	36.3	14.0
A17-06	06	3/8	3/4-16	15.0	16.7	38.9	19.0
A17-08	08	1/2	7/8-14	18.0	19.3	48.0	22.0
A17-12	12	3/4	1 1/16-12	20.0	21.9	52.3	27.0
A17-16	16	1	1 5/16-12	22.0	23.1	58.4	36.0
A17-20	20	1 1/4	1 5/8-12	25.0	24.3	62.2	41.0
A17-24	24	1 1/2	1 7/8-12	25.0	27.5	68.1	46.0
A17-32	32	2	2 1/2-12	29.0	33.9	79.0	60.0

A18 45° ELBOW/JIC 37° CONE



PART NO	SIZE	T ₁	T ₂	A ₁	A ₂	H	L
A18-02	02	1/8	7/16-20	11.0	14.0	16.3	18.5
A18-04	04	1/4	9/16-18	13.0	14.1	21.8	21
A18-06	06	3/8	3/4-16	15.0	16.7	24.1	25
A18-08	08	1/2	7/8-14	18.0	19.3	29.7	28.0
A18-12	12	3/4	1 1/16-12	20.0	21.9	30.5	32.5
A18-16	16	1	1 5/16-12	22.0	23.1	37.6	37.5
A18-20	20	1 1/4	1 5/8-12	25.0	24.3	42.4	40.5
A18-24	24	1 1/2	1 7/8-12	25.0	27.5	45.0	45.0
A18-32	32	2	2 1/2-12	29.0	33.9	53.6	56.5

A19 90° ELBOW/JIC 37° CONE



PART NO	SIZE	T ₁	T ₂	A ₁	A ₂	H	L
A19-02	02	1/8	7/16-20	11.0	14.0	19.8	22.5
A19-04	04	1/4	9/16-18	17.0	14.1	27.7	27.0
A19-06	06	3/8	3/4-16	20.0	16.7	31.0	32.0
A19-08	08	1/2	7/8-14	24.0	19.3	37.3	37.0
A19-12	12	3/4	1 1/16-12	28.0	21.9	40.4	42.0
A19-16	16	1	1 5/16-12	32.0	23.1	50.0	46.0
A19-20	20	1 1/4	1 5/8-12	35.0	24.3	60.5	52.5
A19-24	24	1 1/2	1 7/8-12	38.0	27.5	67.1	59.0
A19-32	32	2	2 1/2-12	42.0	33.9	76.2	77.5

ENGINEERING INFORMATION

기술자료



ENGINEERING INFORMATION

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1. HOSE의 선정조건 THE SELECTION OF HOSE

HOSE는 유·공압 장치 배관의 일부로서 대단히 중요한 역할을 하고 있으므로 규격과 사양의 차이에 의하여 그 종류는 다양합니다. 사용조건에 적합한 HOSE와 금구를 선택하여 원하는 사용조건에 맞도록 고려할 필요가 있습니다.

1) 압력(PRESSURE)

정적인 압력의 경우는 사용압력에 적합한 것을 쉽게 선택할 수 있지만 실제 정적 압력으로 사용되는 경우는 적어도 유압회로상의 개폐에 따르는 순간적인 압력상승(충격압력)이 반복 가압되는 경우가 빈번히 발생한다. 이처럼 충격압력을 받으면 HOSE의 보강층이 피로하여 수명감소 등의 대단한 영향을 끼치게 되므로 CATALOG에서 적합한 HOSE의 선정이 필요합니다.

2) 내경(INNER DIA)

필요한 유량이 HOSE의 내부로 흐르므로 적합한 HOSE 내경을 선정할 필요가 있습니다. 내경이 적은 경우는 유속이 빠르고, 유체 마찰이 증대되며 압력 강하가 생기게 되기 때문에 유체가 과열되는 현상이 있습니다. 유속은 최대 8m/sec를 초과하지 않도록 HOSE 내경을 선정하여 사용함이 바람직합니다.

3) 사용온도(OPERATING TEMPERATURE)

일반적으로 온도 조건이 높은 경우는 고무의 열화가 촉진되며, 저온에서는 강성이 증가하여 경직되어 절손이 쉽게 되는 성질이 있으므로 CATALOG 내의 사용온도 범위를 참고하여 선정하여 주십시오. 주위 온도가 높은 경우나 복사열 등이 작용하는 경우 등에는 HOSE 외면에 단열재를 끼워서 사용하여 주십시오.

4) 곡률반경(BEND RADIUS)

HOSE 및 HOSE Ass'y품의 성능이 저하 없이 사용되는 HOSE 굽힘 반지름의 최소치로 HOSE는 구부림에 의하여 보강층의 각도가 변화하기 때문에 내압력도 변합니다. 굽힘 반경이 적어지게 되면 내압력의 저하가 생기므로 CATALOG 내에서 최소 곡률반경(MIN BEND RADIUS)를 참고하여 선정하십시오.

5) 비틀림(TWISTING)

HOSE를 3차원적으로 배관하면 압력이 가하여 질 때 비틀림이 발생하며 이 부분의 피로가 크게 되어 조기 파손을 일으키기 쉽기 때문에 사용상 이 점을 참고하여 회전 가능한 금구와 병행하여 선정함이 바람직합니다.

6) 보호(PROTECT)

HOSE가 프레임, 및 타 부품과의 간섭으로 HOSE의 외면 손상이 발생하는 경우는 보호재로 COIL SPRING, PLASTIC GUARD, SLEEVE 등이 사용되고 있다.

2. 금구(NUT)의 조임토크

HOSE의 조립체를 조립할 때, NUT는 적절한 조임토크가 필요합니다. 조임 토크에 따라 누유 또는 금구 파손의 원인이 되므로 아래의 표를 참고하여 주십시오.

구 분	1/4	3/8	1/2	3/4	1	1·1/4	1·1/2	2
관용나사(kg-m)	4.0	6.0	8.0	15.0	20.0	23.0	25.0	30.0
유니파이나사(kg-m)	4.0	5.0	6.0	15.0	18.0	20.0	25.0	30.0

3. HOSE ASSEMBLY의 길이 허용차

ASSEMBLY의 길이(mm)	허용차(mm)
500미만	+10~0
500~1000미만	+15~0
1000~2000미만	+20~0
2000~5000미만	+1.0%~0
5000이상	+2.0%~0

4. HOSE 및 HOSE ASSEMBLY의 시험

1) 내압시험(PROOF TEST)

호스를 상온에서 최고사용압력의 2배의 압력으로 1분간 가압하였을 때, 호스의 파열 및 조립부 누유 등을 측정하는 시험이다.

2) 길이변화시험(CHANGE IN LENGTH TEST)

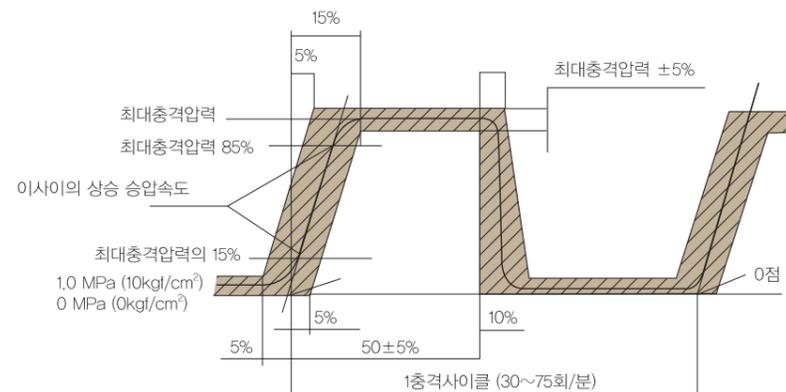
HOSE 길이를 500mm~1000mm 시료에 표선 간의 거리를 표시하고 호스 시료를 자유상태로 한 후, 최고사용압력으로 1분간 가압하였을 때, 표선 간의 거리 변화를 측정하는 시험.

3) 파열압력시험(BURST PRESSURE TEST)

시료를 자유길이 300mm이상으로 유체(물 또는 기름)로 규정하는 최소 파열 압력으로 가압하여 1분 이상 경과 시 HOSE의 파열, 금구이탈 등의 이상 유무를 시험

4) 충격압력시험(IMPULSE TEST)

HOSE의 수명을 확인하기 위한 충격성능시험으로써 1" 이하는 U자형으로 1" 이상은 L자형으로 장착한다. 최고 사용압력의 120%~133%의 충격압력으로 분당 30~75회 충격을 가하며, 호스의 등급에 따라 15만회~50만회 또는 그 이상의 충격회수가 요구된다. 이 때 HOSE 및 금구의 조립부 누유 또는 그 밖의 성능을 측정하는 내구성 시험이다.



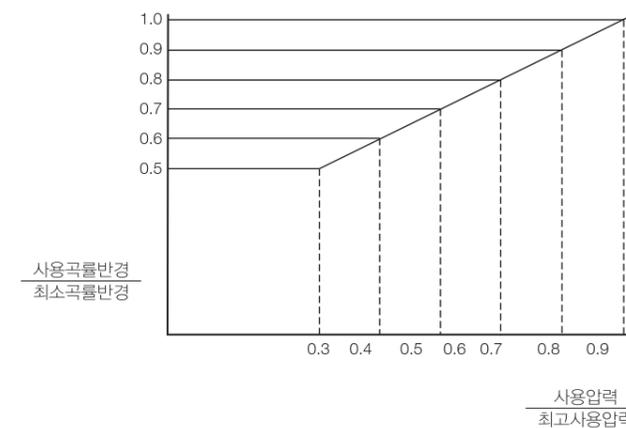
5. HOSE의 곡률반경과 내압력

1) 최소 곡률반경(MIN BEND RADIUS)

HOSE를 최소 곡률반경 상태로 최고사용압력을 가압하여 요구성능을 만족함을 의미하며, 구부린 호스의 내측 반경 값을 말한다.

2) 최소곡률반경과 내압력

HOSE는 압력을 보강하는 강선 간의 일정한 편조각도(BRAID ANGLE)로 되어있으므로 설치 시 최소곡률반경보다 적은 반경으로 정착하면 내압력이 저하와 수명 감소의 영향이 나타납니다. (배관 상 피할 수 없는 경우는 오른쪽의 최소곡률반경과 내압력 그래프를 참고하여 선정하여 주십시오.)



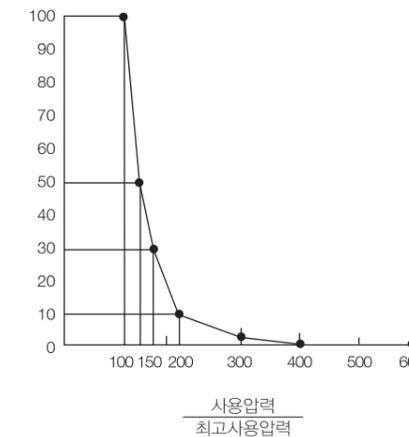
6. 고압호스의 사용압력과 수명과의 관계

호스는 최고사용압력 범위 내에서 사용되어야 하며, 실제 그 이상의 압력으로 사용하는 경우는 아래의 관계도표와 같이 호스피로에 의한 수명감소가 나타납니다.

(예1) 실사용 압력이 최고 상용압력(정격압력)의 124%일 때 수명은 50%이며,

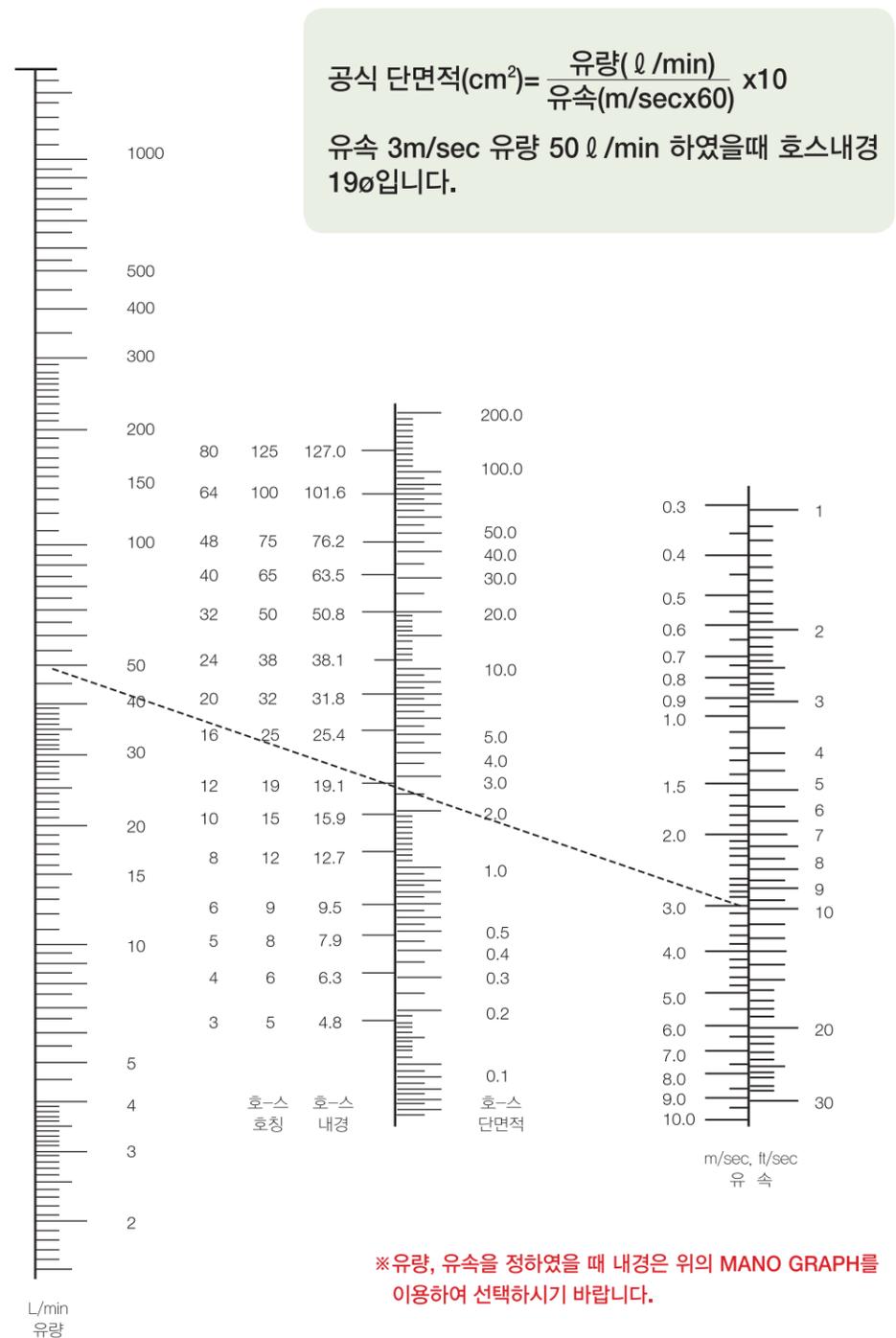
(예2) 150%일 때는 30%, 200%일 때는 10%정도의 수명밖에 보장할 수 없습니다.

압력변화의 요인을 분석하면 자체 내에서 발생하는 경우와 외부충격에 의하여 발생하는 경우가 있으므로 HOSE의 수명을 연장시키기 위해서는 일정한 압력이 고르게 작용할 수 있도록 조치하여야 하며 충격에서 보호하기 위해서 릴리프 밸브를 사용하시어 예방하여야 합니다.



7. 유량, 유속, 호스내경 선정방법

THE SELECTION METHOD OF HOSES
(HOSE INNER DIAMETER, VELOCITY, QUANTITY)



8. 스팀온도와 스팀압력 변환표

CONVERSION TABLE - STEAM TEMPERATURES AND PRESSURES

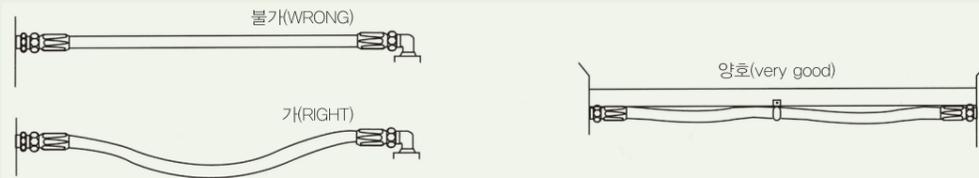
PRESSURE (압력)		DEGREE (온도)		PRESSURE (압력)		DEGREE (온도)	
kg/cm ²	P.S.I	°C	°F	kg/cm ²	P.S.I	°C	°F
0.01	0.14	10	50	5.30	75.37	160	320
0.02	0.28	20	68	8.08	114.90	170	338
0.04	0.57	30	86	10.22	145.33	180	356
0.07	1.07	40	104	12.80	182.02	190	374
0.12	1.79	50	122	15.86	225.53	200	392
0.20	2.84	60	140	19.46	276.70	210	410
0.32	4.55	70	158	23.66	336.45	220	428
0.48	6.83	80	176	28.53	405.70	230	446
0.71	10.10	90	194	34.14	485.47	240	464
1.03	14.65	100	212	40.56	576.76	250	482
1.46	20.76	110	230	47.87	680.71	260	500
2.02	28.72	120	248	56.14	798.31	270	518
2.75	39.10	130	266	65.46	930.84	280	536
3.68	52.33	140	274	75.92	1079.58	290	554
4.85	68.97	150	302				

※REFERENCE : STEAM HEAT IS HOTTER THAN 212°F(BOILING WATER : 100°C) AND INCREASES IN TEMPERATURE AS PRESSURE INCREASES

9. HOSE 배관방법 HOSE INSTALLATION

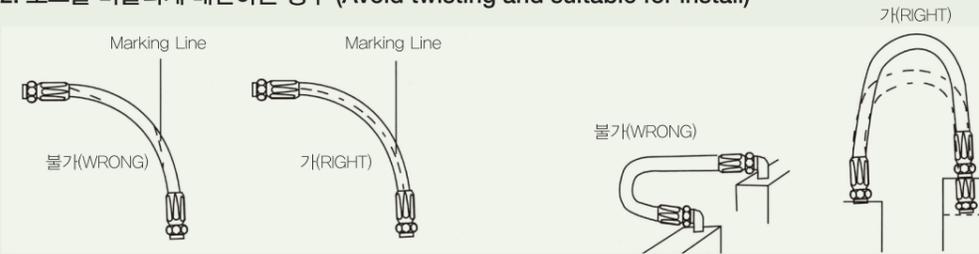
호스가 압력을 받을 때는 +2 ~ -4%사이의 길이변화가 일어납니다. 올바른 배관방법을 선택하시어 호스 수명을 연장하시기 바랍니다.

1. 호스를 직선으로 배관 시 고려 (Provide for length change)



호스가 압력이 가해지면 길이변화가 +2 ~ -4% 발생하므로 길이변화를 흡수할 수 있도록 전체길이를 감안하여 결정하고 배관길이가 길어지는 경우 중간에 클램프 등으로 고정시켜준다.

2. 호스를 비틀리게 배관하는 경우 (Avoid twisting and suitable for install)



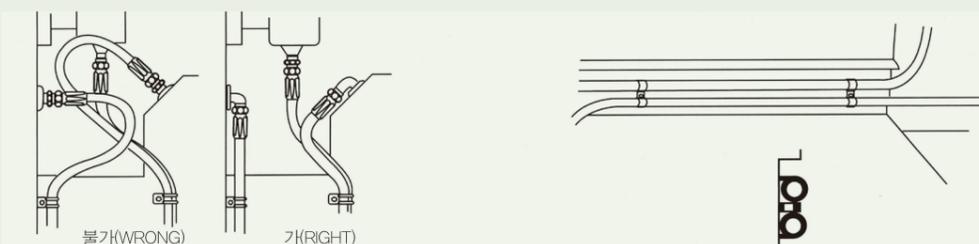
호스가 비틀리지 않도록 배관하여야 한다. 배관이 비틀리면 성능저하 및 금구이탈 등의 원인으로 수명이 급감한다.

3. 호스와 금구의 조립부분이 굴곡이 되지 않게 배관 (Use proper bend radius)

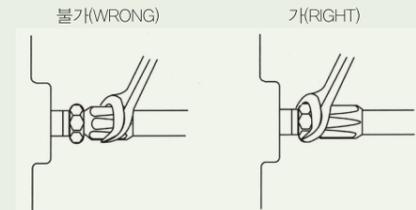


호스를 과도하게 굴곡시켜 배관하여 사용하면 조기피로 및 파열의 원인이 되어 최소 굴곡반경 이상으로 배관

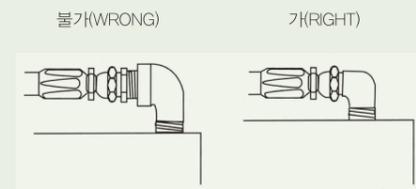
4. 불필요한 호스길이나 간섭을 고려한 적절한 어댑터로 선정하여 단순한 배관을 감안한다.



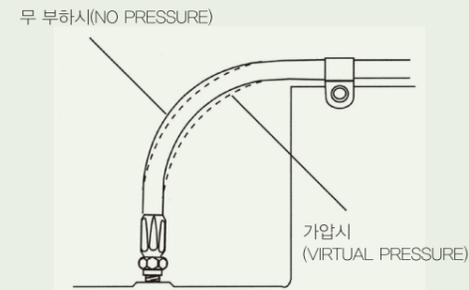
5. 호스의 조립 장착 시 니플의 육각부위를 조여야 하며 스웨징한 CAP부분을 조이면 호스의 비틀림 및 스웨징 부분의 누유 및 파열의 원인이 됩니다.



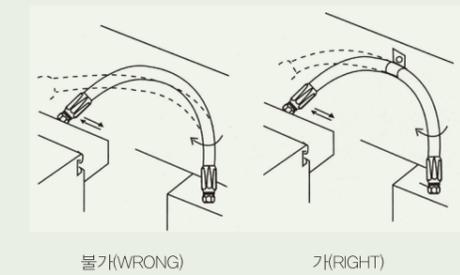
6. 적절한 어댑터를 선정하여 최소한의 개수로 단순하게 배관을 고려하여 작업시간과 비용을 줄이며 누유개소를 줄여준다.



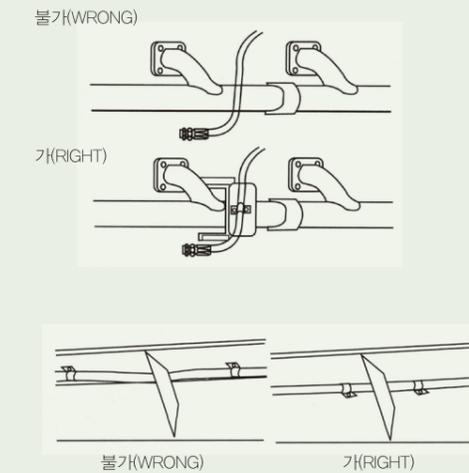
7. 호스 배관이 각도를 주는 경우는 가압 시 호스길이 변화를 감안하여 배관하고 클램프를 장착할 때는 구부러지는 개소에는 설치하지 마십시오.



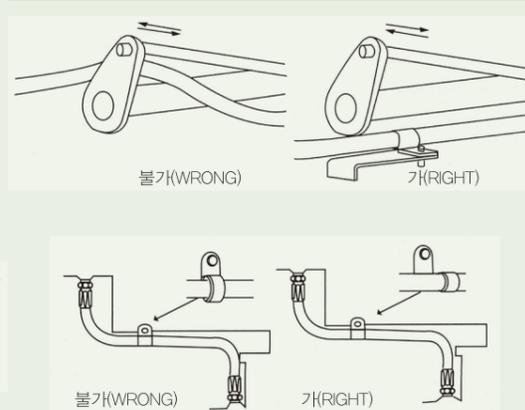
8. 양측의 금구가 서로 다른 평면운동을 하는 경우는 적절한 클램프로 고정시켜 동일 평면에서만 운동이 되게 배관한다.



9. 호스가 다른 물체와 접촉되는 경우는 브라케트를 설치하고 클램프로 고정하십시오. 이는 호스가 가압 시 생기는 요동이 다른 물체와 호스가 접촉되어 손상을 입게 되므로 수명 단축이 됩니다.



운동하는 기구와 호스가 접촉되지 않도록 하십시오.



10. 호스의 내유체성 FLUID COMPATIBILITY

아래 표는 이송 유체에 대한 HOSE 선택을 위한 지침으로 호스 내면층의 내유체성은 호스 사용 시 매우 중요한 사항이므로 충분한 고려가 필요하며 호스의 선정 시 이 표를 참고하여 주십시오.
단, 유체의 온도 및 농도에 따라 조건이 변할 수 있으므로 주의해야 합니다.

기호	호스 내면층
◎	거의 영향 받지 않으므로 안전하게 사용가능
○	다소 영향을 받을 수 있으나 사용가능
△	비교적 큰 영향을 받으므로 사용하지 않는 편이 좋다
×	현저히 영향을 받으므로 사용불가

1	2	3	4	5	6
고압, 망고압, 중압호스 주유기, JACK, OIL, FUEL	고압호스 (4S)	AIR HOSE WATER HOSE	EPDM STEAM HOSE	IIR STEAM HOSE	TEFLON HOSE

No	적용 유체	1	2	3	4	5	6	
1	Acetic Acid	초산(10%)	△	△	△	△	○	◎
2	Acetic Acid	초산(100%)	×	×	×	×	△	◎
3	Acetone	아세톤	×	△	△	○	○	◎
4	Acetylene	아세틸렌	○	○	○	◎	◎	◎
5	Air	공기	◎	◎	◎	◎	◎	◎
6	Alcohol(Ethyl)	에틸알콜	○	○	◎	◎	◎	◎
7	Alcohol(Methyl)	메틸알콜	△	○	◎	◎	◎	◎
8	Ammonia gas(cold)	암모니아가스(냉)	△	○	○	○	◎	◎
9	Ammonia gas(hot)	암모니아가스(열)	×	△	△	△	◎	◎
10	Ammonia gas(Liquid)	암모니아액상	△	△	△	○	◎	◎
11	Ammonium chloride	염화 암모늄	○	○	○	○	◎	○
12	Aniline	아닐린	×	△	△	△	△	◎
13	Asphalt	아스팔트	○	○	×	×	×	◎
14	Beer	맥주	○	○	◎	◎	◎	◎
15	Benzene	벤젠	×	×	×	×	×	◎
16	Butane	부탄	△	△	×	×	×	◎
17	Calcium Chloride	염화칼슘	○	○	○	○	◎	◎
18	Carbon Dioxide	이산화탄소	○	○	◎	◎	◎	◎
19	Carbon Monoxide	일산화탄소	△	△	△	△	○	◎
20	Calcium Tetrachloride	사염화탄소	×	×	×	×	×	◎
21	Chlorine Gas(dry)	염소가스(dry)	×	×	×	×	×	○
22	Chlorine Gas(wet)	염소가스(wet)	×	×	×	×	×	○
23	Chloroform	클로로포름	×	×	×	×	△	◎
24	Cresol	크레졸	×	×	×	×	×	◎
25	Diesel Fuel	경유, 중유	○	○	×	×	×	◎
26	Enamel	에나멜	△	△	×	×	△	◎
27	Ether	에테르	△	△	△	×	×	◎
28	Ethlene Glycol	에틸렌글리콜	△	○	○	◎	◎	◎
29	Formaldehyde	포름알데히드	○	△	○	◎	◎	◎

No	적용 유체	1	2	3	4	5	6	
30	Formaldehyde(40% 수용액)	포르말린	△	○	○	◎	◎	◎
31	Formic Acid	포름산(개미산)	×	○	×	○	◎	◎
32	Freon 12	프레온 12	○	○	×	○	×	◎
33	Freon 22	프레온 22	△	○	×	○	○	◎
34	Fuel oil	연료유(가솔린)	◎	○	×	×	×	◎
35	Gas(Natural)	천연가스	◎	○	×	×	×	◎
36	Glycerine	글리세린	◎	◎	◎	◎	○	◎
37	Grease	그리스	◎	◎	×	×	×	◎
38	Hexane	헥산	○	○	×	×	×	◎
39	Heptane	헵탄	○	○	×	×	×	◎
40	HFC	신냉매(R134a)	×	×	×	○	○	△
41	Hydraulic Fluid(Petroleum Base)	작동유(석유계)	◎	◎	×	×	×	◎
42	Hydraulic Fluid(Water/Glycol Base)	작동유(물/글리콜계)	◎	◎	◎	◎	○	◎
43	Hydraulic Fluid(Phosphate Ester Base)	작동유(인산에스테르계)	×	×	×	△	○	◎
44	Hydrogen	수소	◎	◎	◎	◎	◎	◎
45	Isooctane	이소옥탄	◎	○	×	×	△	◎
46	Keton2	케톤	×	×	×	×	×	◎
47	Lacquer	락카	×	×	×	×	×	◎
48	L.P.G	액화 석유가스	○	○	×	×	×	◎
49	Mercury	수은	○	○	○	○	○	◎
50	Methyl Ethyl Keton	M.E.K	×	×	△	○	○	◎
51	Naptha	나프타	○	○	×	×	×	◎
52	Nitric Acid	질산	×	×	×	×	△	◎
53	Nitrobenzene	니트로벤젠	×	×	×	△	×	◎
54	Nitrogen	질소	◎	◎	◎	◎	◎	◎
55	Oleic Acid	올레인산	○	○	△	○	◎	◎
56	Oxygen	산소	◎	◎	○	◎	◎	◎
57	Petroleum oil	석유(원유)	○	○	×	×	×	◎
58	Phenol	페놀	×	△	×	○	○	◎
59	Phosphate Ester	인산에스테르	×	×	×	×	×	◎
60	Propane	프로판	○	○	×	×	×	◎
61	Sea Water	해수	◎	◎	◎	○	◎	◎
62	Soap Solution	비누액	◎	◎	◎	◎	◎	◎
63	Sodium Carbonate	탄산나트륨	○	○	×	◎	◎	◎
64	Sodium Chloride	염화나트륨	○	○	○	◎	◎	◎
65	Sodium Hydroxide(NaOH)	가성소다(양잿물)	×	×	×	△	○	◎
66	Steam	스팀	△	△	△	○	◎	◎
67	Sulfur	황	○	○	○	○	◎	◎
68	Sulfuric Acid	황산	×	×	×	×	△	◎
69	Toluene	톨루엔	×	×	×	×	×	◎
70	Trichloroethylene	트리클로로 에틸렌	×	×	×	×	×	◎
71	Vinegar	식초	△	△	○	○	○	◎
72	Water	물	◎	◎	◎	◎	◎	◎
73	Xylene	크실렌	×	×	×	×	×	◎

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