

ENGINEERING  
TOMORROW



Synflex and Synflex Optimum by Danfoss - EMEA

# Design **reimagined**

Thermoplastic hydraulic hoses and fittings



Synflex by Danfoss 3TMH

Synflex by Danfoss 3TMH

Synflex Optimum by Danfoss 3TR7

Synflex Optimum by Danfoss 3TR8N

Synflex Optimum by Danfoss 3TR8



R7

R8

R18

R1 & R19

37B0 / 3TR7 / 3TR7N Non-conductive

3TR8 / 3TR8N Non-conductive

3TB0 / 3TR18CT

3TMH



**UV / Ozone protection**

The thermoplastic polyurethane and polyester outer-cover resists ozone, ultraviolet light, and aging



**Chemical resistance**

Thermoplastic composition paired with nylon lining prevents absorption of most oils and hydraulic fluids



**Easier routing and installation**

Reformulated nonstick cover requires 50% less routing force, improved kink resistance, and compact fittings for improved routing



**Flexible design**

Lightweight hose design drives performance efficiencies, reducing vehicle power requirements



**Temperature resistance**

Improved hose functionality over a wide temperature range from -40 °C (-40 °F) to +100 °C (+212 °F)



**Lighter weight**

Synthetic reinforced thermoplastic hoses are about 2x lighter than equivalent wire-braided rubber hoses



**Custom thermoforming**

Ability to mold into configurations that match system design



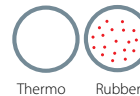
**Bonding capabilities**

Synflex thermoplastic hoses can be permanently joined without the use of any mechanical devices



**Higher abrasion resistance**

The new TPU and polyester cover increases abrasion resistance by 10%



**System cleanliness**

Thermoplastic hose will not degrade or create contaminants in filters and valves helping you maintain a clean system



**Powerful performance**

Lift and handle heavy loads with hose power ranges extending from 70 bar to 350 bar



**Noise reduction**

Special reinforcements on the thermoplastic hoses help reduce machine noise



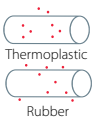
**Longer Lasting**

Abrasion resistance improvement of 10% that exceeds the requirements set by forklift and telehandler manufacturers



**Long lengths**

Synflex thermoplastic hoses can be manufactured in longer lengths compared to rubber wire braided hoses-up to 500 m for large ID and up to 1,500 m for smaller sizes. Longer lengths mean less scrap and less coupling junctions



**Permeation resistance**

Thermoplastic hose deliver better permeation resistance against gases compared to rubber hoses

## Premium 4T-Series



### Features:

- **Over 500+ combinations** of terminal ends
- **Seamless compatibility**  
Synflex Optimum fittings are optimized to work together with Synflex Optimum thermoplastic hydraulic hoses
- **Single piece design**  
Synflex Optimum 4TA fittings follow a simple one-piece design that reduces matching errors during assembly, eliminates brazing failure risks, and lowers assembly time
- **Smaller profile**  
They have a compact design and smaller profile making it easier for routing and assembly installation, especially in tight spaces

100R7 100R8 100R18

## Premium 1A-Series



### Features:

- New **DURA-KOTE™** plating technology for up to 1,000 hours of corrosion resistance
- Bite the wire technology for best in class connection and sealing
- Class zero leakage SAE J1176 on approved hose styles

R1 and R19

## Standard Two-piece Winner



### Features:

- Non-skive, two-piece crimp fitting
- Clear silver hexavalent chromium-free plating
- Carbon steel material

100R7 100R8 R1 and R19









# Empowering without limitations

Higher performing. More configurations.

**Synflex Optimum** by Danfoss **3TR7N**



Synflex Optimum by Danfoss' thermoplastic hydraulic hoses and fittings empower OEMs to reimagine design. Our system engineered portfolio offers streamlined product configurations that make it easy to find the perfect combination for every application. Our commitment to innovation includes the design and technical support needed to develop more efficient, safe, and productive systems.

## 3TR7



## 3TR7N Non-conductive



92.2 ANSI (-4 thru -10)

#	HOSE SIZE INFO													
	Hose I.D.		Hose O.D. (nominal)		Working Pressure				Min. Burst Pressure		Min. Bend Radius		Weight	
	mm	in	mm	in	SAE		ANSI		bar	psi	mm	in	kg/m	lbs/ft
					bar	psi	bar	psi						
<b>3TR7-02-250BX</b>	3.2	0.12	8.5	0.33	210	3,050			840	12,200	12.7	0.50	0.04	0.03
<b>3TR7-03-250BX</b>	4.8	0.19	10.8	0.43	210	3,050			840	12,200	19.0	0.75	0.07	0.05
<b>3TR7N-03-250BX</b>					210	3,050	210	3,050						
<b>3TR7-04-250BX</b>	6.4	0.25	12.5	0.49	210	3,050			759	11,000	31.8	1.25	0.09	0.06
<b>3TR7N-04-250BX</b>					210	3,050	210	3,050						
<b>3TR7-05-250BX</b>	7.9	0.31	14.6	0.57	175	2,550			690	10,000	38.1	1.50	0.13	0.08
<b>3TR7N-05-250BX</b>					175	2,550	207	3,000						
<b>3TR7-06-250BX</b>	9.8	0.39	16.5	0.65	157	2,300			621	9,000	50.8	2.00	0.15	0.10
<b>3TR7N-06-250BX</b>					157	2,300	207	3,000						
<b>3TR7-08-250BX</b>	12.7	0.50	20.8	0.82	140	2,050			621	9,000	69.9	2.75	0.21	0.14
<b>3TR7N-08-250BX</b>					140	2,050	207	3,000						
<b>3TR7-10-250BX</b>	16.0	0.63	23.6	0.93	105	1,525			421	6,100	101.6	4.00	0.24	0.16
<b>3TR7N-10-250BX</b>					105	1,525	140	2,050						
<b>3TR7-12-250BX</b>	19.0	0.75	26.4	1.04	86	1,250			348	5,000	127.0	5.00	0.26	0.17
<b>3TR7N-12-250BX</b>					86	1,250								
<b>3TR7-16-250BX</b>	25.4	1.00	33.7	1.33	69	1,000			280	4,000	190.5	7.50	0.40	0.27
<b>3TR7N-16-250BX</b>					69	1,000								

### Operating temperature

**For oil-based fluids:** -40 °C to +100 °C (-40 °F to +212 °F)

**For water-based fluids:** -40 °C to +66 °C (-40 °F to +150 °F)

### Approved fittings



### 3TR7 supersedes

3130, 3160, 3DH0, 3CH0

### 3TR7N supersedes

3740, 37AL

### Inner tube

Nylon

### Reinforcement

1 textile braid

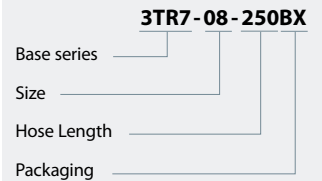
### Cover

Nonstick polyurethane

### Typical platforms

- Material handling
- Agriculture
- Horticulture
- Chemical transfer
- Foam system
- Food processing
- Forestry delimeter
- General construction
- General hydraulic systems
- Lubrication systems
- Marine steering
- Utility vehicles and pickers
- Rescue apparatus and tools
- Water jetter drain/sewer

### How to order/ part # structure



**BC:** continuous length in box (76 m)

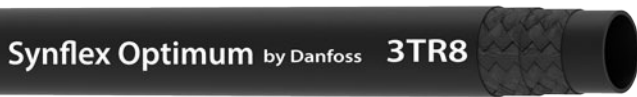
**BX:** minimum 6.5 m lengths, with up to 3 random lengths, cover 76 m

### Options on demand

**RL:** random length reel

**R:** continuous length on reel

## 3TR8



## 3TR8N Non-conductive



#	HOSE SIZE INFO											
	Hose I.D.		Hose O.D. (nominal)		Working Pressure		Min. Burst Pressure		Min. Bend Radius		Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
<b>3TR8-04-250BX</b> <b>3TR8N-04-250BX</b>	6.4	0.25	15.0	0.59	350	5,100	1,400	20,400	38.1	1.50	0.16	0.11
<b>3TR8-06-250BX</b> <b>3TR8N-06-250BX</b>	9.5	0.38	19.0	0.75	280	4,500	1,120	16,200	57.2	2.25	0.23	0.15
<b>3TR8-08-250BX</b> <b>3TR8N-08-250BX</b>	12.7	0.50	22.8	0.90	245	3,550	980	14,200	76.2	3.00	0.29	0.20
<b>3TR8-12-250BX</b> <b>3TR8N-12-250BX</b>	19.0	0.75	28.8	1.13	157	2,300	628	9,200	114.3	4.50	0.38	0.25
<b>3TR8-16-250BX</b> <b>3TR8N-16-250BX</b>	25.4	1.00	36.2	1.43	140	2,050	560	8,200	196.9	7.75	0.57	0.38

### Operating temperature

**For oil-based fluids:** -40 °C to +100 °C (-40 °F to +212 °F)

**For water-based fluids:** -40 °C to +66 °C (-40 °F to +150 °F)

### 3TR8 supersedes

3R80 and 3800

### 3TR8N supersedes

3E80

### Approved fittings



### Inner tube

Nylon

### Reinforcement

2 textile braid

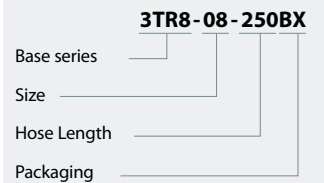
### Cover

Nonstick polyurethane

### Typical platforms

- Material handling
- Air tools
- Cooling/misting/dust suppression
- Forestry delimeter
- General construction
- General hydraulic
- High pressure chemical transfer
- Marine steering
- Mobile machinery
- Utility vehicles
- Recreational vehicles
- Rescue tools and equipment

### How to order/ part # structure



**BC:** continuous length in box (76 m)

**BX:** minimum 6.5 m lengths, with up to 3 random lengths, cover 76 m

### Options on demand

**RL:** random length reel

**R:** continuous length on reel



## 3TR18CT



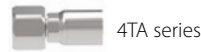
PART #	HOSE SIZE INFO											
	Hose I.D.		Hose O.D. (nominal)		Working Pressure		Min. Burst Pressure		Min. Bend Radius		Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
<b>3TR18CT-04-250BX</b>	6.4	0.25	12.2	0.48	210	3,050	840	12,200	31.8	1.25	0.09	0.06
<b>3TR18CT-05-250BX</b>	7.9	0.31	14.8	0.58	210	3,050	840	12,200	38.1	1.50	0.15	0.10
<b>3TR18CT-06-250BX</b>	9.5	0.38	16.8	0.66	210	3,050	840	12,200	50.8	2.00	0.16	0.11
<b>3TR18CT-08-250BX</b>	12.7	0.50	21.6	0.85	210	3,050	840	12,200	69.9	2.75	0.25	0.17
<b>3TR18CT-10-250BX</b>	15.9	0.62	26.8	1.06	210	3,050	840	12,200	101.6	4.00	0.41	0.28

### Operating temperature

**For oil-based fluids:** -54 °C to +94 °C (-65 °F to +200 °F)

**For water-based fluids:** -54 °C to +66 °C (-65 °F to +150 °F)

### Approved fittings



4TA series

### 3TR18CT supersedes

30CT

### Inner tube

Polyester

### Reinforcement

2 textile braid

### Cover

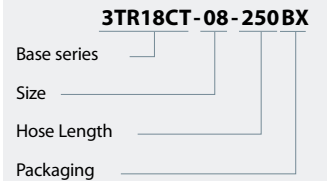
Nonstick polyester

3TR18CT perforated

### Typical platforms

- Agriculture
- Horticulture
- Chemical and gas transfer
- Forestry delimeter
- Forklifts
- Freezer applications
- General construction
- General hydraulics
- Lubrication systems
- Machine tools and robotics
- Portable hydraulic tools

### How to order/ part # structure



**BC:** continuous length in box (76 m)

**BX:** minimum 6.5 m lengths, with up to 3 random lengths, cover 76 m

### Options on demand

**RL:** random length reel

**R:** continuous length on reel

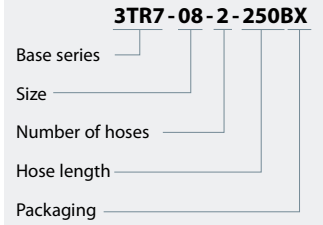


## 3TR7 Twin-line



PART			HOSE SIZE INFO											
#	Hose Series	Number of hoses	Hose I.D.		Hose O.D.		Working Pressure		Min. Burst Pressure		Min. Bend Radius		Weight	
			mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
3TR7-04-2-250BX	3TR7	2	6.4	0.25	12.5	0.49	192	2,800	759	11,000	31.8	1.25	0.09	0.06
3TR7-05-2-250BX	3TR7	2	7.9	0.31	14.6	0.57	175	2,550	690	10,000	38.1	1.50	0.13	0.08
3TR7-06-2-250BX	3TR7	2	9.5	0.38	16.5	0.65	157	2,300	621	9,000	50.8	2.00	0.15	0.10
3TR7-08-2-250BX	3TR7	2	12.7	0.50	20.8	0.82	140	2,050	621	9,000	69.9	2.75	0.21	0.14

### How to order/ part # structure



**BC:** continuous length in box (76 m)

**BX:** minimum 6.5 m lengths, with up to 3 random lengths, cover 76 m

### Options on demand

**RL:** random length reel

**R:** continuous length on reel

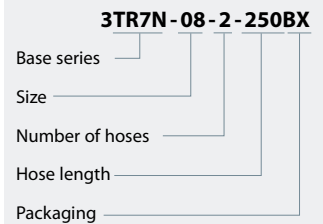
## 3TR7N Twin-Line Non-conductive



92.2 ANSI (-4 thru -10)

PART			HOSE SIZE INFO													
#	Hose Series	# of hoses	Hose I.D.		Hose O.D.		Working Pressure				Min. Burst Pressure		Min. Bend Radius		Weight	
			mm	in	mm	in	SAE		ANSI		bar	psi	mm	in	kg/m	lbs/ft
							bar	psi	bar	psi						
3TR7N-04-2-250BX	3TR7	2	6.4	0.25	12.5	0.49	192	2,800	207	11,000	759	11,000	31.8	1.25	0.09	0.06
3TR7N-06-2-250BX	3TR7	2	9.5	0.38	16.5	0.65	175	2,550	207	9,000	621	9,000	50.8	2.00	0.15	0.10
3TR7N-08-2-250BX	3TR7	2	12.7	0.50	20.8	0.82	175	2,300	207	9,000	621	9,000	69.9	2.75	0.21	0.14

### How to order/ part # structure



**BC:** continuous length in box (76 m)

**BX:** minimum 6.5 m lengths, with up to 3 random lengths, cover 76 m

### Options on demand

**RL:** random length reel

**R:** continuous length on reel



## 37B0



#	HOSE SIZE INFO												
	DN	Hose I.D.		Hose O.D. max.		Max. Operating Pressure		Burst Pressure		Min. Bend Radius		Weight	
		mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
<b>37B0-03-250BX</b>	5	4.8	0.19	10.8	0.43	165	2,390	660	9,560	20	0.79	0.10	0.07
<b>37B0-04-250BX</b>	6	6.4	0.25	13.1	0.52	175	2,535	700	10,140	32	1.26	0.14	0.09
<b>37B0-05-250BX</b>	8	7.9	0.31	14.9	0.59	155	2,250	620	9,000	45	1.77	0.14	0.09
<b>37B0-06-250BX</b>	10	9.5	0.37	16.6	0.65	155	2,250	620	9,000	51	2.01	0.17	0.11

### Operating temperature

-54 °C to +100 °C (-65 °F to +212 °F)

### Approved fittings



4T series

### Inner tube

Polyurethane

### Reinforcement

1 textile braid

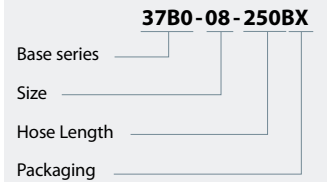
### Cover

Black polyester

### Typical platforms

- Forklift working in cold storage areas
- Material handling
- Agriculture
- Chemical transfer
- Foam systems
- Food processing
- Forestry delimeter
- General hydraulic systems
- Lubrication systems
- Marine steering
- Utility vehicles and pickers
- Rescue apparatus and tools
- Water jetter drain/sewer

### How to order/ part # structure



**BC:** continuous length in box (76 m)

**BX:** minimum 6.5 m lengths, with up to 3 random lengths, cover 76 m

### Options on demand

**RL:** random length reel

**R:** continuous length on reel

## 3TBO



#	HOSE SIZE INFO												
	DN	Hose I.D.		Hose O.D. max.		Max. Operating Pressure		Burst Pressure		Min. Bend Radius		Weight	
		mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
<b>3TBO-06-250BX</b>	10	9.7	0.37	17.0	0.67	270*	3,920	840	15,680	52	2.05	0.18	0.12
<b>3TBO-08-250BX</b>	12	13.0	0.50	21.6	0.85	270*	3,920	840	15,680	89	3.50	0.25	0.17
<b>3TBO-10-250BX</b>	16	16.2	0.63	27.0	1.06	270*	3,920	840	15,680	102	4.00	0.41	0.28

\* 270 bar operating pressure possible with 3:1 safety factor

### Operating temperature

-40 °C to +93 °C (-40 °F to +200 °F)

### Approved fittings



4T series



9MN

### Inner tube

Polyester lined

### Reinforcement

2 textile braid

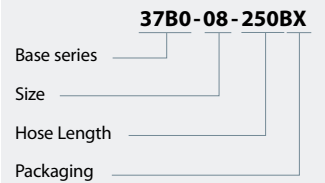
### Cover

Nonstick perforated polyurethane

### Typical platforms

- Telehandler (telescopic boom)
- Forklifts
- Material handling
- Agriculture
- Chemical transfer
- Foam systems
- Food processing
- Forestry delimeter
- General hydraulic systems
- Lubrication systems
- Marine steering
- Utility vehicles and pickers
- Rescue apparatus and tools
- Water jetter drain/sewer

### How to order/ part # structure



**BC:** continuous length in box (76 m)

**BX:** minimum 6.5 m lengths, with up to 3 random lengths, cover 76 m

### Options on demand

**RL:** random length reel

**R:** continuous length on reel



## 3TMH



PART #	HOSE SIZE INFO												
	DN	Hose I.D.		Hose O.D. max.		Operating Pressure		Min. Burst Pressure		Bend Radius		Weight	
		mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
<b>3TMH-06</b>	10	9.5	0.37	17.00	0.66	235	3,408	940	13,664	70	2.76	0.380	0.25
<b>3TMH-08</b>	12	12.7	0.50	20.60	0.81	245	3,553	980	14,200	80	3.14	0.495	0.32
<b>3TMH-10</b>	16	15.9	0.63	25.00	0.98	280	4,061	1,120	16,200	90	3.54	0.790	0.53

### Operating Temperature

-40°C to 100°C  
(-40°F to +212°F)

### Type of fittings



Winner 2 piece  
(EMEA only)



Danfoss 1A/Z

### Option

Electrical cable  
(with min. 3 lines)



### Inner tube

Synthetic rubber

### Reinforcement

Single or double wire

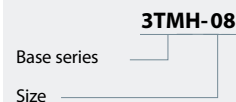
### Cover

Polyurethane

### Typical platforms

- Material handling
  - Telehandler
  - Forklifts
  - Telescopic booms
- Agriculture
- Horticulture
- Forestry delimited
- General construction
- Utility vehicles and pickers

### How to order/ part # structure



### Packaging:

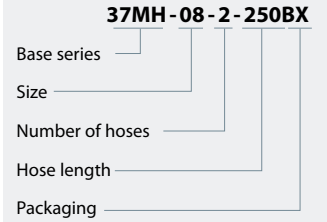
Continues length: single line  
76.2 m, multiline up to 60 m  
Random length: 1 or 2 pieces

## 3TMH Thermoplastic hose



PART		HOSE SIZE INFO		
#	Number of hoses	Hose I.D.		Length
		mm	in	meters
3TMH-06-2-250BX	2	19.0	0.74	76
3TMH-08-2-250BX	2	25.4	1.00	76
3TMH-10-2-250BX	2	31.8	1.25	76

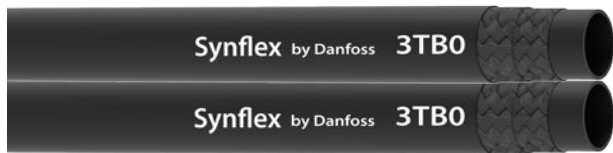
### How to order/ part # structure



#### Packaging:

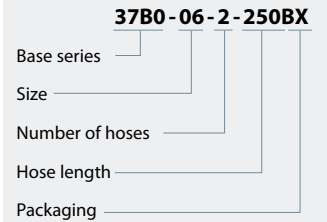
Continues length: single line 76.2 m, multiline up to 60 m with up to 3 random lengths, cover 76 m or 60 m

## 3TBO Constant pressure hose



PART			HOSE SIZE INFO		
#	Hose size	Number of hoses	Hose I.D.		Length
			mm	in	meters
3TBO-06-2-250BX	3TBO-06	2	9.7	0.37	75
3TBO-08-2-250BX	3TBO-08	2	13.0	0.50	75
3TBO-10-2-250BX	3TBO-10	2	16.2	0.63	75

### How to order/ part # structure



**BC:** continuous length in box (76 m)

**BX:** minimum 6.5 m lengths, with up to 3 random lengths, cover 76 m

#### Options on demand

**RL:** random length reel

**R:** continuous length on reel

## 37B0 Medium pressure hose



PART			HOSE SIZE INFO		
#	Hose size	Number of hoses	Hose I.D.		Length
			mm	in	meters
37B0-03-2-250BX	37B0-03	2	4.8	0.19	75
37B0-04-2-250BX	37B0-04	2	6.4	0.25	75
37B0-05-2-250BX	37B0-05	2	7.9	0.31	75
37B0-06-2-250BX	37B0-06	2	9.5	0.37	75

\* Contact Danfoss customer service for twin-line, tri-line, and multi-line configuration options.



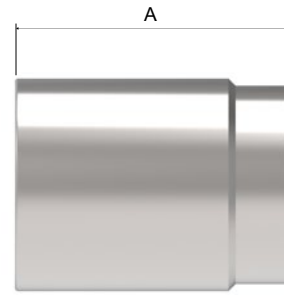




## 3TMH

Sockets

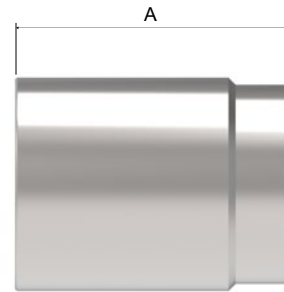
#	HOSE SIZE INFO		DIMENSIONS				WEIGHT	
	DN	Dash size	A		OD		Weight	
			mm	in	mm	in	kg	lb
<b>11349454</b>	10	-06	32.0	1.25	23.6	0.93	0.03	0.07
<b>11349436</b>	12	-08	34.0	1.34	29.0	1.14	0.05	0.10
<b>03310-10AEWZD</b>	16	-10	35.0	1.38	34.5	1.36	0.06	0.14



## Synflex

Optimum Sockets

#	HOSE SIZE INFO		DIMENSIONS				WEIGHT	
	DN	Dash size	A		OD		Weight	
			mm	in	mm	in	kg	lb
<b>000T8-02EWZD</b>	3	-02	20.5	0.81	12.05	0.47	0.02	0.05
<b>000T8-03EWZD</b>	5	-03	23.0	0.91	17.15	0.68	0.02	0.06
<b>000T8-04EWZD</b>	6	-04	30.5	1.20	20.98	0.83	0.03	0.06
<b>000T8-05EWZD</b>	8	-05	30.0	1.18	22.00	0.87	0.03	0.07
<b>000T8-06EWZD</b>	10	-06	32.0	1.26	24.43	0.96	0.04	0.08
<b>000T8-08EWZD</b>	12	-08	34.0	1.34	27.76	1.09	0.05	0.10
<b>000T8-10EWZD</b>	16	-10	37.0	1.46	34.62	1.36	0.06	0.13
<b>000T8-12EWZD</b>	19	-12	42.0	1.65	33.32	1.31	0.08	0.17
<b>000T8-16EWZD</b>	25	-16	51.0	2.01	44.75	1.76	0.13	0.28





# Winner hose fittings

## 10411

DIN 24° Male Rigid  
(DKO Light)



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
10411-12-04Z	-12	M12x1.5	6	-04
10411-14-04Z	-14	M14x1.5	6	-04
10411-14-05Z	-14	M14x1.5	8	-05
10411-16-04Z	-16	M16x1.5	6	-04
10411-16-05Z	-16	M16x1.5	8	-05
10411-16-06Z	-16	M16x1.5	10	-06
10411-18-04Z	-18	M18x1.5	6	-04
10411-18-05Z	-18	M18x1.5	8	-05
10411-18-06Z	-18	M18x1.5	10	-06
10411-18-08Z	-18	M18x1.5	12	-08
10411-22-06Z	-22	M22x1.5	10	-06
10411-22-08Z	-22	M22x1.5	12	-08
10411-26-08Z	-26	M26x1.5	12	-08
10411-26-10Z	-26	M26x1.5	16	-10
10411-30-12Z	-30	M30x2	20	-12
10411-36-12Z	-36	M36x2	20	-12
10411-36-16Z	-36	M36x2	25	-16

## 20411

DIN 24° Female Swivel  
(DKO Light)



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
20411-12-04WZ**	-12	M12X1.5	6	-04
20411-14-04TZ**	-14	M14X1.5	6	-04
20411-14-05WZ**	-14	M14X1.5	8	-05
20411-14-06WZ**	-14	M14X1.5	10	-06
20411-16-04TZ*	-16	M16X1.5	6	-04
20411-16-05TZ**	-16	M16X1.5	8	-05
20411-16-06WZ**	-16	M16X1.5	10	-06
20411-18-04TZ*	-18	M18X1.5	6	-04
20411-18-05TZ*	-18	M18X1.5	8	-05
20411-18-06TZ*	-18	M18X1.5	10	-06
20411-18-08WZ**	-18	M18X1.5	12	-08
20411-22-10WZ**	-22	M22X1.5	16	-10
20411-22-04TZ*	-22	M22X1.5	6	-04
20411-22-05TZ*	-22	M22X1.5	8	-05
20411-22-06TZ*	-22	M22X1.5	10	-06
20411-22-08TZ*	-22	M22X1.5	12	-08
20411-26-10TZ*	-26	M26X1.5	16	-10
20411-26-12WZ**	-26	M26X1.5	20	-12
20411-26-08TZ*	-26	M26X1.5	12	-08
20411-30-10TZ*	-30	M30X2	16	-10
20411-30-12TZ*	-30	M30X2	20	-12
20411-30-16WZ**	-30	M30X2	25	-16
20411-36-12TZ*	-36	M36X2	20	-12
20411-36-16WZ**	-36	M36X2	25	-16
20411-45-16TZ*	-45	M45X2	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

## 20441

DIN 24° Female 45°  
Elbow (DKO Light)



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
20441-12-04WZ**	-12	M12X1.5	6	-04
20441-14-04TZ**	-14	M14X1.5	6	-04
20441-16-04TZ*	-16	M16X1.5	6	-04
20441-16-05TZ**	-16	M16X1.5	8	-05
20441-16-06WZ**	-16	M16X1.5	10	-06
20441-18-05TZ*	-18	M18X1.5	8	-05
20441-18-06TZ*	-18	M18X1.5	10	-06
20441-18-08WZ**	-18	M18X1.5	12	-08
20441-22-10WZ**	-22	M22X1.5	16	-10
20441-22-06TZ*	-22	M22X1.5	10	-06
20441-22-08TZ*	-22	M22X1.5	12	-08
20441-26-10TZ*	-26	M26X1.5	16	-10
20441-26-12WZ**	-26	M26X1.5	20	-12
20441-26-08TZ*	-26	M26X1.5	12	-08
20441-30-10TZ*	-30	M30X2	16	-10
20441-30-12TZ*	-30	M30X2	20	-12
20441-36-12TZ*	-36	M36X2	20	-12
20441-36-16WZ**	-36	M36X2	25	-16
20441-45-16TZ*	-45	M45X2	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

## 20491

DIN 24° Female 90°  
Elbow (DKO Light)



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
20491-12-04WZ**	-12	M12X1.5	6	-04
20491-14-04Z**	-14	M14X1.5	6	-04
20491-14-05WZ**	-14	M14X1.5	8	-05
20491-14-06WZ**	-14	M14X1.5	10	-06
20491-16-04TZ*	-16	M16X1.5	6	-04
20491-16-05TZ**	-16	M16X1.5	8	-05
20491-16-06WZ**	-16	M16X1.5	10	-06
20491-18-04TZ*	-18	M18X1.5	6	-04
20491-18-05TZ*	-18	M18X1.5	8	-05
20491-18-06TZ*	-18	M18X1.5	10	-06
20491-18-08WZ**	-18	M18X1.5	12	-08
20491-22-10WZ**	-22	M22X1.5	16	-10
20491-22-05TZ*	-22	M22X1.5	8	-05
20491-22-06TZ*	-22	M22X1.5	10	-06
20491-22-08TZ*	-22	M22X1.5	12	-08
20491-26-10TZ*	-26	M26X1.5	16	-10
20491-26-12WZ**	-26	M26X1.5	20	-12
20491-26-08TZ*	-26	M26X1.5	12	-08
20491-30-10TZ*	-30	M30X2	16	-10
20491-30-12TZ*	-30	M30X2	20	-12
20491-30-16WZ*	-30	M30x2	25	-16
20491-36-10TZ*	-36	M36X2	16	-10
20491-36-12TZ*	-36	M36X2	20	-12
20491-36-16WZ**	-36	M36X2	25	-16
20491-45-16TZ*	-45	M45X2	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

## 10511

DIN 24° Male Rigid  
(DKO Heavy)



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
10511-14-04Z	-14	M14x1.5	6	-04
10511-16-04Z	-16	M16x1.5	6	-04
10511-18-04Z	-18	M18x1.5	6	-04
10511-18-06Z	-18	M18x1.5	10	-06
10511-20-05Z	-20	M20x1.5	8	-05
10511-20-06Z	-20	M20x1.5	10	-06
10511-22-06Z	-22	M22x1.5	10	-06
10511-22-08Z	-22	M22x1.5	12	-08
10511-24-08Z	-24	M24x1.5	12	-08
10511-30-10Z	-30	M30x2	16	-10
10511-30-12Z	-30	M30x2	20	-12
10511-36-12Z	-36	M36x2	20	-12
10511-36-16Z	-36	M36x2	25	-16
10511-42-16Z	-42	M42x2	25	-16

## 20511

DIN 24° Female Swivel  
(DKO Heavy)



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
20511-14-04WZ**	-14	M14X1.5	6	-04
20511-16-04TZ*	-16	M16X1.5	6	-04
20511-16-05WZ**	-16	M16X1.5	8	-05
20511-16-06WZ**	-16	M16X1.5	10	-06
20511-18-04TZ*	-18	M18X1.5	6	-04
20511-18-05TZ*	-18	M18X1.5	8	-05
20511-18-06TZ*	-18	M18X1.5	10	-06
20511-20-04TZ*	-20	M20X1.5	6	-04
20511-20-05TZ*	-20	M20X1.5	8	-05
20511-20-06TZ*	-20	M20X1.5	10	-06
20511-20-08WZ**	-20	M20X1.5	12	-08
20511-22-06TZ*	-22	M22X1.5	10	-06
20511-22-08TZ*	-22	M22X1.5	12	-08
20511-24-10WZ**	-24	M24X1.5	16	-10
20511-24-06TZ*	-24	M24X1.5	10	-06
20511-24-08TZ*	-24	M24X1.5	12	-08
20511-30-10TZ*	-30	M30X2	16	-10
20511-30-12TZ*	-30	M30X2	20	-12
20511-30-08TZ*	-30	M30X2	12	-08
20511-36-12TZ*	-36	M36X2	20	-12
20511-36-16WZ**	-36	M36X2	25	-16
20511-42-12TZ*	-42	M42X2	20	-12
20511-42-16TZ*	-42	M42X2	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

## 20541

DIN 24° Female 45°  
Elbow (DKO Heavy)



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
20541-16-04TZ*	-16	M16X1.5	6	-04
20541-18-04TZ*	-18	M18X1.5	6	-04
20541-18-06TZ*	-18	M18X1.5	10	-06
20541-20-06TZ*	-20	M20X1.5	10	-06
20541-22-08TZ*	-22	M22X1.5	12	-08
20541-22-06TZ	-22	M22x1.5	10	-06
20541-24-06TZ*	-24	M24X1.5	10	-06
20541-24-08TZ*	-24	M24X1.5	12	-08
20541-30-10TZ*	-30	M30X2	16	-10
20541-30-12TZ*	-30	M30X2	20	-12
20541-36-12TZ*	-36	M36X2	20	-12
20541-36-16WZ**	-36	M36X2	25	-16
20541-42-16TZ*	-42	M42X2	25	-16

## 20591

DIN 24° Female 90° Elbow  
(DKO Heavy)



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
20591-14-04WZ**	-14	M14X1.5	6	-04
20591-16-04TZ*	-16	M16X1.5	6	-04
20591-16-05WZ**	-16	M16X1.5	8	-05
20591-16-06WZ**	-16	M16X1.5	10	-06
20591-18-04TZ*	-18	M18X1.5	6	-04
20591-18-05TZ*	-18	M18X1.5	8	-05
20591-18-06TZ*	-18	M18X1.5	10	-06
20591-20-05TZ*	-20	M20X1.5	8	-05
20591-20-06TZ*	-20	M20X1.5	10	-06
20591-20-08WZ**	-20	M20X1.5	12	-08
20591-22-06TZ*	-22	M22X1.5	10	-06
20591-22-08TZ*	-22	M22X1.5	12	-08
20591-24-06TZ*	-24	M24X1.5	10	-06
20591-24-08TZ*	-24	M24X1.5	12	-08
20591-30-08TZ*	-30	M30X2	12	-08
20591-30-10TZ*	-30	M30X2	16	-10
20591-30-12TZ*	-30	M30X2	20	-12
20591-36-12TZ*	-36	M36X2	20	-12
20591-36-16WZ**	-36	M36X2	25	-16
20591-42-16TZ*	-42	M42X2	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

## 87311

Code 61 Flange Straight



PART #	HOSE SIZE INFO		
	Terminal End Dash size	Hose Size DN   Dash size	
<b>87311-08-08Z</b>	-08	12	-08
<b>87311-12-08Z</b>	-12	12	-08
<b>87311-12-10Z</b>	-12	16	-10
<b>87311-12-12Z</b>	-12	20	-12
<b>87311-12-16Z</b>	-12	25	-16
<b>87311-16-12Z</b>	-16	20	-12
<b>87311-16-16Z</b>	-16	25	-16
<b>87311-20-16Z</b>	-20	25	-16

## 87341

Code 61 Flange 45° Elbow



PART #	HOSE SIZE INFO		
	Terminal End Dash size	Hose Size DN   Dash size	
<b>87341-08-08Z</b>	-08	12	-08
<b>87341-12-08Z</b>	-12	12	-08
<b>87341-12-12Z</b>	-12	20	-12
<b>87341-12-16Z</b>	-12	25	-16
<b>87341-16-12Z</b>	-16	20	-12
<b>87341-16-16Z</b>	-16	25	-16
<b>87341-20-16Z</b>	-20	25	-16

## 87391

Code 61 Flange 90° Elbow



PART #	HOSE SIZE INFO		
	Terminal End Dash size	Hose Size DN   Dash size	
<b>87391-08-08Z</b>	-08	12	-08
<b>87391-12-08Z</b>	-12	12	-08
<b>87391-12-10Z</b>	-12	16	-10
<b>87391-12-12Z</b>	-12	20	-12
<b>87391-12-16Z</b>	-12	25	-16
<b>87391-16-12Z</b>	-16	20	-12
<b>87391-16-16Z</b>	-16	25	-16
<b>87391-20-12Z</b>	-20	20	-12
<b>87391-20-16Z</b>	-20	25	-16
<b>87391-24-16Z</b>	-24	25	-16

## 16711

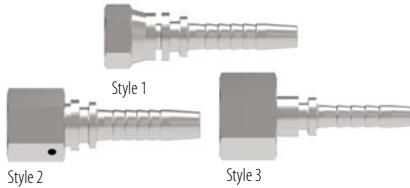
JIC 37° Male Rigid



PART #	HOSE SIZE INFO			
	Terminal End Dash size	Thread	Hose Size DN   Dash size	
<b>16711-04-04Z</b>	-04	7/16"-20	6	-04
<b>16711-04-08Z</b>	-04	7/16"-20	12	-08
<b>16711-05-04Z</b>	-05	1/2"-20	6	-04
<b>16711-05-05Z</b>	-05	1/2"-20	8	-05
<b>16711-05-06Z</b>	-05	1/2"-20	10	-06
<b>16711-06-04Z</b>	-06	9/16"-18	6	-04
<b>16711-06-05Z</b>	-06	9/16"-18	8	-05
<b>16711-06-06Z</b>	-06	9/16"-18	10	-06
<b>16711-06-08Z</b>	-06	9/16"-18	12	-08
<b>16711-08-04Z</b>	-08	3/4"-16	6	-04
<b>16711-08-06Z</b>	-08	3/4"-16	10	-06
<b>16711-08-08Z</b>	-08	3/4"-16	12	-08
<b>16711-10-06Z</b>	-10	7/8"-14	10	-06
<b>16711-10-08Z</b>	-10	7/8"-14	12	-08
<b>16711-10-10Z</b>	-10	7/8"-14	16	-10
<b>16711-10-12Z</b>	-10	7/8"-14	20	-12
<b>16711-12-08Z</b>	-12	1.1/16"-12	12	-08
<b>16711-12-10Z</b>	-12	1.1/16"-12	16	-10
<b>16711-12-12Z</b>	-12	1.1/16"-12	20	-12
<b>16711-12-16Z</b>	-12	1.1/16"-12	25	-16
<b>16711-14-12Z</b>	-14	1.3/16"-12	20	-12
<b>16711-16-12Z</b>	-16	1.5/16"-12	20	-12
<b>16711-16-16Z</b>	-16	1.5/16"-12	25	-16
<b>16711-20-16Z</b>	-20	1.5/8"-12	25	-16

## 26711

JIC 37° Female Swivel



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
26711-04-03Z*	-04	7/16"-20	5	-03
26711-04-04Z*	-04	7/16"-20	6	-04
26711-04-05Z*	-04	7/16"-20	8	-05
26711-04-06Z*	-04	7/16"-20	10	-06
26711-05-04Z*	-05	1/2"-20	6	-04
26711-05-05Z*	-05	1/2"-20	8	-05
26711-05-06Z*	-05	1/2"-20	10	-06
26711-06-04Z*	-06	9/16"-18	6	-04
26711-06-05Z*	-06	9/16"-18	8	-05
26711-06-06Z*	-06	9/16"-18	10	-06
26711-06-08Z*	-06	9/16"-18	12	-08
26711-08-04TZ***	-08	3/4"-16	6	-04
26711-08-06Z*	-08	3/4"-16	10	-06
26711-08-08Z*	-08	3/4"-16	12	-08
26711-08-10Z*	-08	3/4"-16	16	-10
26711-08-12Z*	-08	3/4"-16	20	-12
26711-10-06TZ***	-10	7/8"-14	10	-06
26711-10-08Z*	-10	7/8"-14	12	-08
26711-10-10Z*	-10	7/8"-14	16	-10
26711-10-12Z*	-10	7/8"-14	20	-12
26711-12-08TZ***	-12	1.1/16"-12	12	-08
26711-12-10Z*	-12	1.1/16"-12	16	-10
26711-12-12Z*	-12	1.1/16"-12	20	-12
26711-12-16Z*	-12	1.1/16"-12	25	-16
26711-14-12Z*	-14	1.3/16"-12	20	-12
26711-14-16Z*	-14	1.3/16"-12	25	-16
26711-16-12TZ***	-16	1.5/16"-12	20	-12
26711-16-16Z*	-16	1.5/16"-12	25	-16
26711-20-16TZ***	-20	1.5/8"-12	25	-16

## 26711D

JIC 37° Female Swivel



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
26711D-04-04Z*	-04	7/16"-20	6	-04
26711D-04-04SMZ*	-04	7/16"-20	6	-04
26711D-06-04Z*	-06	9/16"-18	6	-04
26711D-06-04SMZ*	-06	9/16"-18	6	-04
26711D-06-05Z*	-06	9/16"-18	8	-05
26711D-06-06Z*	-06	9/16"-18	10	-06
26711D-06-06SMZ*	-06	9/16"-18	10	-06
26711D-08-04Z*	-08	3/4"-16	6	-04
26711D-08-06Z*	-08	3/4"-16	10	-06
26711D-08-06SMZ*	-08	3/4"-16	10	-06
26711D-08-08Z*	-08	3/4"-16	12	-08
26711D-08-08SMZ*	-08	3/4"-16	12	-08
26711D-10-08Z*	-10	7/8"-14	12	-08
26711D-10-08SMZ*	-10	7/8"-14	12	-08
26711D-10-10Z*	-10	7/8"-14	16	-10
26711D-10-10SMZ*	-10	7/8"-14	16	-10
26711D-12-08SMZ*	-12	1.1/16"-12	12	-08
26711D-12-10Z*	-12	1.1/16"-12	16	-10
26711D-12-12Z*	-12	1.1/16"-12	20	-12
26711D-12-12SMZ*	-12	1.1/16"-12	20	-12
26711D-16-16Z*	-16	1.5/16"-12	25	-16
26711D-16-16SMWZ**	-16	1.5/16"-12	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

1. Same nipple configuration as 26711 with back up hex



## 26741

JIC 37° Female  
45° Elbow



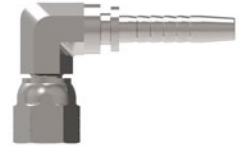
#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
26741-04-03Z*	-04	7/16"-20	5	-03
26741-04-04Z*	-04	7/16"-20	6	-04
26741-04-06Z*	-04	7/16"-20	10	-06
26741-05-04Z*	-05	1/2"-20	6	-04
26741-05-05Z*	-05	1/2"-20	8	-05
26741-06-04Z*	-06	9/16"-18	6	-04
26741-06-05Z*	-06	9/16"-18	8	-05
26741-06-06Z*	-06	9/16"-18	10	-06
26741-06-08Z*	-06	9/16"-18	12	-08
26741-06-10Z*	-06	9/16"-18	16	-10
26741-08-06Z*	-08	3/4"-16	10	-06
26741-08-08Z*	-08	3/4"-16	12	-08
26741-08-10Z*	-08	3/4"-16	16	-10
26741-10-06Z*	-10	7/8"-14	10	-06
26741-10-08Z*	-10	7/8"-14	12	-08
26741-10-10Z*	-10	7/8"-14	16	-10
26741-10-12Z*	-10	7/8"-14	20	-12
26741-12-08Z*	-12	1.1/16"-12	12	-08
26741-12-10Z*	-12	1.1/16"-12	16	-10
26741-12-12Z*	-12	1.1/16"-12	20	-12
26741-12-16Z*	-12	1.1/16"-12	25	-16
26741-14-12Z*	-14	1.3/16"-12	20	-12
26741-16-12Z*	-16	1.5/16"-12	20	-12
26741-16-16Z*	-16	1.5/16"-12	25	-16
26741-20-16WZ**	-20	1.5/8"-12	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

## 26791

JIC 37° Female  
90° Elbow



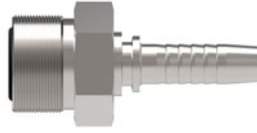
#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
26791-04-03Z*	-04	7/16"-20	5	-03
26791-04-04Z*	-04	7/16"-20	6	-04
26791-04-05Z*	-04	7/16"-20	8	-05
26791-04-06Z*	-04	7/16"-20	10	-06
26791-05-04Z*	-05	1/2"-20	6	-04
26791-05-05Z*	-05	1/2"-20	8	-05
26791-05-06Z*	-05	1/2"-20	10	-06
26791-06-04Z*	-06	9/16"-18	6	-04
26791-06-05Z*	-06	9/16"-18	8	-05
26791-06-06Z*	-06	9/16"-18	10	-06
26791-06-08Z*	-06	9/16"-18	12	-08
26791-08-04Z*	-08	3/4"-16	6	-04
26791-08-06Z*	-08	3/4"-16	10	-06
26791-08-08Z*	-08	3/4"-16	12	-08
26791-08-10Z*	-08	3/4"-16	16	-10
26791-08-12Z*	-08	3/4"-16	20	-12
26791-10-06Z*	-10	7/8"-14	10	-06
26791-10-08Z*	-10	7/8"-14	12	-08
26791-10-10Z*	-10	7/8"-14	16	-10
26791-10-12Z*	-10	7/8"-14	20	-12
26791-12-08Z*	-12	1.1/16"-12	12	-08
26791-12-10Z*	-12	1.1/16"-12	16	-10
26791-12-12Z*	-12	1.1/16"-12	20	-12
26791-12-16Z*	-12	1.1/16"-12	25	-16
26791-14-12Z*	-14	1.3/16"-12	20	-12
26791-16-12Z*	-16	1.5/16"-12	20	-12
26791-16-16Z*	-16	1.5/16"-12	25	-16
26791-20-16WZ**	-20	1.5/8"-12	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

## 14211

ORS Male Rigid



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
14211-04-04Z	-04	9/16"x18	6	-04
14211-06-04Z	-06	11/16"x16	6	-04
14211-06-06Z	-06	11/16"x16	10	-06
14211-08-06Z	-08	13/16"x16	10	-06
14211-08-08Z	-08	13/16"x16	12	-08
14211-10-08Z	-10	1"x14	12	-08
14211-10-10Z	-10	1"x14	16	-10
14211-12-08Z	-12	1.3/16"x12	12	-08
14211-12-10Z	-12	1.3/16"x12	16	-10
14211-12-12Z	-12	1.3/16"x12	20	-12
14211-16-12Z	-16	1.7/16"x12	20	-12
14211-16-16Z	-16	1.7/16"x12	25	-16

## 24211D

ORS Female Swivel



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
24211D-04-04SMZ	-04	9/16"x18	6	-04
24211D-06-06SMZ	-06	11/16"x16	10	-06
24211D-08-08SMZ	-08	13/16"x16	12	-08
24211D-10-10SMZ	-10	1"x14	16	-10
24211D-12-12SMZ	-12	1.3/16"x12	20	-12
24211D-16-16SMZ	-16	1.7/16"x12	25	-16

## 24211

ORS Female Swivel



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
24211-04-04Z*	-04	9/16"x18	6	-04
24211-04-06Z*	-04	9/16"x18	10	-06
24211-06-04TZ**	-06	11/16"x16	6	-04
24211-06-05TZ**	-06	11/16"x16	8	-05
24211-06-06Z*	-06	11/16"x16	10	-06
24211-08-06TZ**	-08	13/16"x16	10	-06
24211-08-08Z*	-08	13/16"x16	12	-08
24211-10-08TZ**	-10	1"x14	12	-08
24211-10-10Z*	-10	1"x14	16	-10
24211-10-12Z*	-10	1"x14	20	-12
24211-12-08TZ**	-12	1.3/16"x12	12	-08
24211-12-10TZ**	-12	1.3/16"x12	16	-10
24211-12-12Z*	-12	1.3/16"x12	20	-12
24211-12-16Z*	-12	1.3/16"x12	25	-16
24211-16-12TZ**	-16	1.7/16"x12	20	-12
24211-16-16TZ**	-16	1.7/16"x12	25	-16
24211-20-16TZ***	-20	1.11/16"x12	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

\*\*\* Denotes Style 3 crimp nut design

1. Same nipple configuration as 24211D without back up hex

## 24241

ORS Female 45° Elbow



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
24241-04-04Z*	-04	9/16"x18	6	-04
24241-04-06Z*	-04	9/16"x18	10	-06
24241-06-04TZ**	-06	11/16"x16	6	-04
24241-06-06Z*	-06	11/16"x16	10	-06
24241-06-08Z*	-06	11/16"x16	12	-08
24241-08-06TZ**	-08	13/16"x16	10	-06
24241-08-08Z*	-08	13/16"x16	12	-08
24241-10-08TZ**	-10	1"x14	12	-08
24241-10-10Z*	-10	1"x14	16	-10
24241-10-12Z*	-10	1"x14	20	-12
24241-12-08TZ**	-12	1.3/16"x12	12	-08
24241-12-12Z*	-12	1.3/16"x12	20	-12
24241-12-16TZ*	-12	1.3/16"x12	25	-16
24241-16-16TZ*	-16	1.7/16"x12	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

## 24291

ORS Female 90° Elbow



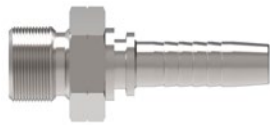
#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
<b>24291-04-04Z*</b>	-04	9/16"x18	6	-04
<b>24291-06-04TZ**</b>	-06	11/16"x16	6	-04
<b>24291-06-06Z*</b>	-06	11/16"x16	10	-06
<b>24291-06-08Z*</b>	-06	11/16"x16	10	-06
<b>24291-08-06TZ**</b>	-08	13/16"x16	10	-06
<b>24291-08-08Z*</b>	-08	13/16"x16	12	-08
<b>24291-10-08TZ**</b>	-10	1"x14	12	-08
<b>24291-10-10Z*</b>	-10	1"x14	16	-10
<b>24291-10-12Z*</b>	-10	1"x14	20	-12
<b>24291-12-12Z*</b>	-12	1.3/16"x12	20	-12
<b>24291-12-08TZ**</b>	-12	1.3/16"x12	12	-8
<b>24291-16-12TZ**</b>	-16	1.7/16"x12	20	-12
<b>24291-16-16TZ**</b>	-16	1.7/16"x12	25	-16
<b>24291-20-16TZ**</b>	-20	1.11/16"x12	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

## 12611A

BSP 60° Cone Male Rigid



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
<b>12611A-02-04Z</b>	-02	G1/8"x28	6	-04
<b>12611A-04-04Z</b>	-04	G1/4"x19	6	-04
<b>12611A-06-04Z</b>	-06	G3/8"x19	6	-04
<b>12611A-06-05Z</b>	-06	G3/8"x19	8	-05
<b>12611A-06-06Z</b>	-06	G3/8"x19	10	-06
<b>12611A-06-08Z</b>	-06	G3/8"x19	12	-08
<b>12611A-08-06Z</b>	-08	G1/2"x14	10	-06
<b>12611A-08-08Z</b>	-08	G1/2"x14	12	-08
<b>12611A-10-10Z</b>	-10	G5/8"x14	16	-10
<b>12611A-12-12Z</b>	-12	G3/4"x14	20	-12
<b>12611A-16-12Z</b>	-16	G1"x11	20	-12
<b>12611A-16-16Z</b>	-16	G1"x11	25	-16

## 22611D

BSP 60° Cone Female Swivel



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
<b>22611D-04-04Z</b>	-04	G1/4"X19	6	-04
<b>22611D-06-06Z</b>	-06	G3/8"X19	10	-06
<b>22611D-08-08Z</b>	-08	G1/2"X14	12	-08
<b>22611D-12-12Z</b>	-12	G3/4"X14	20	-12
<b>22611D-16-16Z</b>	-16	G1"X11	25	-16

1. Same nipple configuration as 26611 with back up hex

## 22611

BSP 60° Cone Female Swivel



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
<b>22611-04-04Z*</b>	-04	G1/4"X19	6	-04
<b>22611-04-05Z*</b>	-04	G1/4"X19	8	-05
<b>22611-04-06Z*</b>	-04	G1/4"X19	10	-06
<b>22611-06-04TZ**</b>	-06	G3/8"X19	6	-04
<b>22611-06-05Z*</b>	-06	G3/8"X19	8	-05
<b>22611-06-06Z*</b>	-06	G3/8"X19	10	-06
<b>22611-06-08Z*</b>	-06	G3/8"X19	12	-08
<b>22611-08-06TZ**</b>	-08	G1/2"X14	10	-06
<b>22611-08-08Z*</b>	-08	G1/2"X14	12	-08
<b>22611-08-10Z*</b>	-08	G1/2"X14	16	-10
<b>22611-10-08Z*</b>	-10	G5/8"X14	12	-08
<b>22611-10-10Z*</b>	-10	G5/8"X14	16	-10
<b>22611-12-08TZ**</b>	-12	G3/4"X14	12	-08
<b>22611-12-10Z*</b>	-12	G3/4"X14	16	-10
<b>22611-12-12Z*</b>	-12	G3/4"X14	20	-12
<b>22611-16-12TZ**</b>	-16	G1"X11	20	-12
<b>22611-16-16Z*</b>	-16	G1"X11	25	-16
<b>22611-20-16TZ**</b>	-20	G1.1/4"X11	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

1. Same nipple configuration as 22611D without back up hex

## 22641

BSP 60° Cone Female 45° Elbow



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
<b>22641-04-04Z*</b>	-04	G1/4"X19	6	-04
<b>22641-06-04Z*</b>	-06	G3/8"X19	6	-04
<b>22641-06-06Z*</b>	-06	G3/8"X19	10	-06
<b>22641-08-06Z</b>	-06	G1/2"X14	10	-06
<b>22641-08-08Z*</b>	-08	G1/2"X14	12	-08
<b>22641-10-10Z*</b>	-10	G5/8"X14	16	-10
<b>22641-12-12Z*</b>	-12	G3/4"X14	20	-12
<b>22641-16-16Z*</b>	-16	G1"X11	25	-16

\* Denotes Style 1 design

## 22691

BSP 60° Cone Female 90° Elbow



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
22691-04-04Z*	-04	G1/4"X19	6	-04
22691-04-05Z*	-04	G1/4"X19	8	-05
22691-04-06Z*	-04	G1/4"X19	10	-06
22691-06-04TZ*	-06	G3/8"X19	6	-04
22691-06-06Z*	-06	G3/8"X19	10	-06
22691-06-08Z*	-06	G3/8"X19	12	-08
22691-08-06TZ*	-08	G1/2"X14	10	-06
22691-08-08Z*	-08	G1/2"X14	12	-08
22691-10-08Z*	-10	G5/8"X14	12	-08
22691-10-10Z*	-10	G5/8"X14	16	-10
22691-12-10Z*	-12	G3/4"X14	16	-10
22691-12-12Z*	-12	G3/4"X14	20	-12
22691-16-12TZ**	-16	G1"X11	20	-12
22691-16-16Z*	-16	G1"X11	25	-16

\* Denotes Style 1 design

\*\* Denotes Style 2 wire nut design

## 15611

NPTF Male Rigid



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
15611-F02-04Z	-02	1/8"x27	6	-04
15611-F04-04Z	-04	1/4"x18	6	-04
15611-F04-05Z	-04	1/4"x18	8	-05
15611-F04-06Z	-04	1/4"x18	10	-06
15611-F06-04Z	-06	3/8"x18	6	-04
15611-F06-05Z	-06	3/8"x18	8	-05
15611-F06-06Z	-06	3/8"x18	10	-06
15611-F06-08Z	-06	3/8"x18	12	-08
15611-F08-04Z	-08	1/2"x14	6	-04
15611-F08-06Z	-08	1/2"x14	10	-06
15611-F08-08Z	-08	1/2"x14	12	-08
15611-F08-10Z	-08	1/2"x14	16	-10
15611-F08-12Z	-08	1/2"x14	20	-12
15611-F12-08Z	-12	3/4"x14	12	-08
15611-F12-10Z	-12	3/4"x14	16	-10
15611-F12-12Z	-12	3/4"x14	20	-12
15611-F12-16Z	-12	3/4"x14	25	-16
15611-F16-12Z	-16	1"x11.5	20	-12
15611-F16-16Z	-16	1"x11.5	25	-16
15611-F20-16Z	-20	1.1/4"x11.5	25	-16

## 15611SW

NPTF Male Swivel



#	HOSE SIZE INFO			
	Terminal End	Thread	Hose Size	
	Dash size		DN	Dash size
15611SW-F04-04SZ	-04	1/4"x18	6	-04
15611SW-F06-06SZ	-06	3/8"x18	10	-06
15611SW-F08-06SZ	-08	1/2"x14	10	-06
15611SW-F08-08SZ	-08	1/2"x14	12	-08
15611SW-F12-12SZ	-12	3/4"x14	20	-12
15611SW-F16-16SZ	-16	1"x11.5	25	-16

## 60011

Male DN Series D Type



# Branded	HOSE SIZE INFO	
	Hose Size	
	DN	Dash size
60011-04-04DZ	4	-04
60011-06-06DZ	6	-06
60011-08-08DZ	8	-06
60011-10-10DZ	10	-08
60011-12-12DZ	12	-12
60011-16-16DZ	16	-16



# 1A Fittings

## BF

BSP 60° Cone  
Female Swivel (BF)



PART	HOSE SIZE INFO		
	Terminal end	Hose size	Thd.
1A part #			
<b>1A6BF6</b>	-06	-06	G 3/8"
<b>1A8BF6</b>	-08	-06	G 1/2"
<b>1A8BF8</b>	-08	-08	G 1/2"
<b>1A10BF8</b>	-10	-08	G 5/8"
<b>1A8BF10</b>	-08	-10	G 1/2"
<b>1A12BF8</b>	-12	-08	G 3/4"
<b>1A10BF10</b>	-10	-10	G 5/8"
<b>1A12BF10</b>	-12	-10	G 3/4"

## BFA

BSP 60° Cone  
Female Swivel - 45° Elbow (BFA)



PART	HOSE SIZE INFO		
	Terminal end	Hose size	Thd.
1A part #			
<b>1A6BFA6</b>	-06	-06	G 3/8"
<b>1A8BFA6</b>	-08	-06	G 1/2"
<b>1A8BFA8</b>	-08	-08	G 1/2"
<b>1A10BFA10</b>	-10	-10	G 5/8"

## BFB

BSP 60° Cone  
Female Swivel - 90° Elbow (BFB)



PART	HOSE SIZE INFO		
	Terminal end	Hose size	Thd.
1A part #			
<b>1A6BFB6</b>	-06	-06	G 3/8"
<b>1A8BFB6</b>	-08	-06	G 1/2"
<b>1A8BFB8</b>	-08	-08	G 1/2"
<b>1A10BFB8</b>	-10	-08	G 5/8"
<b>1A10BFB10</b>	-10	-10	G 5/8"
<b>1A12BFB10</b>	-12	-10	G 3/4"

## BP

BSP 60° Cone  
Male Parallel (BP)



PART	HOSE SIZE INFO		
	Terminal end	Hose size	Thd.
1A part #			
<b>1A6BP6</b>	-06	-06	G 3/8" - 19
<b>1A8BP6</b>	-08	-06	G 1/2" - 14
<b>1A8BP8</b>	-08	-08	G 1/2" - 15
<b>1A10BP10</b>	-10	-10	G 5/8" - 14

## BT

BSP 60° Cone  
Male Tapered (BT)



PART	HOSE SIZE INFO		
	Terminal end	Hose size	Thd.
1A part #			
<b>1A6BT6</b>	-06	-06	R 3/8" - 19
<b>1A8BT6</b>	-08	-06	R 1/2" - 14
<b>1A6BT8</b>	-06	-08	R 3/8" - 19
<b>1A8BT8</b>	-08	-08	R 1/2" - 14
<b>1A8BT10</b>	-08	-10	R 1/2" - 14
<b>1A12BT10</b>	-12	-10	R 3/4" - 14

## GG

Gaz Globeseal  
Female Swivel (GG)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A13GG6</b>	13.25	-06	M20 x 1.5
<b>1A17GG8</b>	16.75	-08	M24 x 1.5
<b>1A21GG10</b>	21.25	-10	M30 x 1.5

## MG

Gaz Male (MG)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A13MG6</b>	13.25	-06	M20 x 1.5
<b>1A17MG8</b>	16.75	-08	M24 x 1.5
<b>1A21MG10</b>	21.25	-10	M30 x 1.5

## FJ

JIC 37° Female  
Swivel (FJ)



PART	HOSE SIZE INFO		
	Terminal end	Hose size	Thd.
1A part #			
<b>1A5FJ6</b>	-05	-06	1/2" - 20
<b>1A6FJ6</b>	-06	-06	9/16" - 18
<b>1A8FJ6</b>	-08	-06	3/4" - 16
<b>1A8FJ8</b>	-08	-08	3/4" - 16
<b>1A10FJ8</b>	-10	-08	7/8" - 14
<b>1A10FJ10</b>	-10	-10	7/8" - 14
<b>1A12FJ10</b>	-12	-10	1 1/16" - 12

## FJA

JIC 37° Female  
Swivel - 45° Elbow (FJA)



PART	HOSE SIZE INFO		
	Terminal end	Hose size	Thd.
1A part #			
<b>1A6FJA6</b>	-06	-06	9/16" - 18
<b>1A8FJA6</b>	-08	-06	3/4" - 16
<b>1A8FJA8</b>	-08	-08	3/4" - 16
<b>1A10FJA8</b>	-10	-08	7/8" - 14
<b>1A10FJA10</b>	-10	-10	7/8" - 14
<b>1A12FJA10</b>	-12	-10	1 1/16" - 12

## FJB

JIC 37° Female  
Swivel - 90° Elbow (FJB)



PART	HOSE SIZE INFO		
	Terminal end	Hose size	Thd.
1A part #			
<b>1A6FJB6</b>	-06	-06	9/16" - 18
<b>1A8FJB6</b>	-08	-06	3/4" - 16
<b>1A8FJB8</b>	-08	-08	3/4" - 16
<b>1A10FJB8</b>	-10	-08	7/8" - 14
<b>1A10FJB10</b>	-10	-10	7/8" - 14
<b>1A12FJB10</b>	-12	-10	1 1/16" - 12

# 1A Fittings

## JF

JIS Female Swivel (JF)



PART	HOSE SIZE INFO		
	Terminal end	Hose size	Thd.
1A part #			
<b>1A6JF6</b>	-06	-06	G 3/8"
<b>1A8JF8</b>	-08	-08	G 1/2"

## KF

Komatsu Female Swivel (KF)



PART	HOSE SIZE INFO		
	Terminal end	Hose size	Thd.
1A part #			
<b>1A6KF6</b>	-06	-06	M18 x 1.5
<b>1A8KF8</b>	-08	-08	M22 x 1.5
<b>1A10KF10</b>	-10	-10	M24 x 1.5

## DL

DIN 24° DKO Light Female Swivel (DL)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A8DL6</b>	10	-06	M16 x 1.5
<b>1A10DL6</b>	12	-06	M18 x 1.5
<b>1A12DL8</b>	15	-08	M22 x 1.5
<b>1A16DL10</b>	18	-10	M26 x 1.5

## DLA

DIN 24° DKO Light Female Swivel - 45° Elbow (DLA)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A8DLA6</b>	10	-06	M16 x 1.5
<b>1A10DLA6</b>	12	-06	M18 x 1.5
<b>1A12DLA8</b>	15	-08	M22 x 1.5
<b>1A16DLA10</b>	18	-10	M26 x 1.5

## DLB

DIN 24° DKO Light Female Swivel - 90° Elbow (DLB)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A8DLB6</b>	10	-06	M16 x 1.5
<b>1A10DLB6</b>	12	-06	M18 x 1.5
<b>1A12DLB8</b>	15	-08	M22 x 1.5
<b>1A16DLB10</b>	18	-10	M26 x 1.5

## DK

DIN 24° DKO Light Male (DK)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A8DK6</b>	10	-06	M16 x 1.5
<b>1A10DK6</b>	12	-06	M18 x 1.5
<b>1A10DK8</b>	12	-08	M18 x 1.5
<b>1A12DK8</b>	15	-08	M22 x 1.5
<b>1A16DK10</b>	18	-10	M26 x 1.5

## DS

DIN 24° DKO Heavy Female Swivel (DS)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A8DS6</b>	12	-06	M20 x 1.5
<b>1A10DS6</b>	14	-06	M22 x 1.5
<b>1A10DS8</b>	14	-08	M22 x 1.5
<b>1A12DS8</b>	16	-08	M24 x 1.5
<b>1A16DS10</b>	20	-10	M30 x 2.0

## DSA

DIN 24° DKO Heavy Female Swivel - 45° Elbow (DSA)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A8DSA6</b>	12	-06	M20 x 1.5
<b>1A10DSA6</b>	14	-06	M22 x 1.5
<b>1A12DSA8</b>	16	-08	M24 x 1.5
<b>1A16DSA10</b>	20	-10	M30 x 2.0

## DSB

DIN 24° DKO Heavy Female Swivel - 90° Elbow (DSB)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A8DSB6</b>	12	-06	M20 x 1.5
<b>1A10DSB6</b>	14	-06	M22 x 1.5
<b>1A12DSB8</b>	16	-08	M24 x 1.5
<b>1A16DSB10</b>	20	-10	M30 x 2.0

## EK

DIN 24° DKO Heavy Male (EK)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A8EK6</b>	12	-06	M20 x 1.5
<b>1A10EK6</b>	14	-06	M22 x 1.5
<b>1A12EK8</b>	16	-08	M24 x 1.5
<b>1A16EK10</b>	20	-10	M30 x 2.0

## LG

Gaz Standpipe (LG)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A13LG6</b>	10	-06	-
<b>1A17LG8</b>	12	-08	-
<b>1A21LG10</b>	16	-10	-

## MM

Millimetric Male (MM)



PART	HOSE SIZE INFO		
	Tube O.D.	Hose size	Thd.
1A part #			
<b>1A12MM6</b>	12	-06	M18 x 1.5
<b>1A14MM6</b>	14	-06	M20 x 1.5
<b>1A15MM8</b>	15	-08	M22 x 1.5
<b>1A16MM8</b>	16	-08	M24 x 1.5
<b>1A18MM10</b>	18	-10	M27 x 1.5

# 1A Fittings

## GM

Millimetrique  
Globeseal Female Swivel (GM)



PART	HOSE SIZE INFO			
	1A part #	Tube O.D.	Hose size	Thd.
<b>1A12GM6</b>	12	-06	M18 x 1.5	
<b>1A14GM6</b>	14	-06	M20 x 1.5	
<b>1A15GM8</b>	15	-08	M22 x 1.5	
<b>1A16GM8</b>	16	-08	M24 x 1.5	
<b>1A18GM10</b>	18	-10	M27 x 1.5	
<b>1A20GM10</b>	20	-10	M27 x 1.5	

## MP

Male Pipe (MP)



PART	HOSE SIZE INFO			
	1A part #	Tube O.D.	Hose size	Thd.
<b>1A4MP6</b>	-04	-06	1/4" - 18	
<b>1A6MP6</b>	-06	-06	3/8" - 18	
<b>1A8MP6</b>	-08	-06	1/2" - 14	
<b>1A6MP8</b>	-06	-08	3/8" - 18	
<b>1A8MP8</b>	-08	-08	1/2" - 14	
<b>1A8MP10</b>	-08	-10	1/2" - 14	
<b>1A12MP10</b>	-12	-10	3/4" - 14	

## FR

ORS Female Swivel (FR)



PART	HOSE SIZE INFO			
	1A part #	Tube O.D.	Hose size	Thd.
<b>1A6FR6</b>	-06	-06	11/16" - 16	
<b>1A8FR6</b>	-08	-06	13/16" - 16	
<b>1A8FR8</b>	-08	-08	13/16" - 16	
<b>1A10FR8</b>	-10	-08	1" - 14	
<b>1A10FR10</b>	-10	-10	1" - 14	

## FRA

ORS Female Swivel - 45° Elbr



PART	HOSE SIZE INFO			
	1A part #	Tube O.D.	Hose size	Thd.
<b>1A6FRA6</b>	-06	-06	11/16" - 16	
<b>1A8FRA6</b>	-06	-06	13/16" - 16	
<b>1A8FRA8</b>	-08	-08	13/16" - 16	
<b>1A10FRA10</b>	-10	-10	1" - 14	

## FRB

ORS Female Swivel - 90° Elbow- Short Drop (FRB)



PART	HOSE SIZE INFO			
	1A part #	Tube O.D.	Hose size	Thd.
<b>1A6FRB6</b>	-06	-06	11/16" - 16	
<b>1A8FRB6</b>	-08	-06	13/16" - 16	
<b>1A8FRB8</b>	-08	-08	13/16" - 16	
<b>1A10FRB10</b>	-10	-10	1" - 14	

## FRC

ORS Female Swivel - 90° Elbow - Long Drop (FRC)



PART	HOSE SIZE INFO			
	1A part #	Tube O.D.	Hose size	Thd.
<b>1A6FRC6</b>	-06	-06	11/16" - 16	
<b>1A8FRC8</b>	-08	-08	13/16" - 16	
<b>1A10FRC10</b>	-10	-10	1" - 14	

## MR

ORS Male (MR)



PART	HOSE SIZE INFO			
	1A part #	Tube O.D.	Hose size	Thd.
<b>1A6MR6</b>	-06	-06	11/16" - 16UN	
<b>1A8MR6</b>	-08	-06	13/16" - 16UN	
<b>1A10MR8</b>	-10	-08	1" - 14UN	
<b>1A12MR10</b>	-12	-10	1 3/16" - 12UN	

## FL

SAE CODE 61  
Flange (FL)



PART	HOSE SIZE INFO		
	1A part #	Flange size	Hose size
<b>1A8FL8</b>	1/2"	-08	
<b>1A12FL10</b>	3/4"	-10	

## FLA

SAE CODE 61  
Flange - 45° Elbow (FLA)



PART	HOSE SIZE INFO		
	1A part #	Flange size	Hose size
<b>1A8FLA8</b>	1/2"	-08	
<b>1A12FLA8</b>	3/4"	-08	

## FLB

SAE CODE 61  
Flange - 90° Elbow (FLB)



PART	HOSE SIZE INFO		
	1A part #	Flange size	Hose size
<b>1A8FLB8</b>	1/2"	-08	

## FH

SAE CODE 62  
Flange (FH)



PART	HOSE SIZE INFO		
	1A part #	Flange size	Hose size
<b>1A8FH8</b>	1/2"	-08	

## Designed for efficiency

Over 500+ combinations  
of terminal ends



## Best-in-class features come standard

### Seamless compatibility

Synflex Optimum fittings are optimized to work together with Synflex Optimum thermoplastic hydraulic hoses

### Single piece design

Synflex Optimum 4TA fittings follow a simple one-piece design that reduces matching errors during assembly, eliminates brazing failure risks, and lowers assembly time

### Captive nut

A captive nut eliminates the weak spots found in other fittings and it evenly distributes the force applied during assembly, helping prevent cracks and leaks that halt workflows and lead to unplanned downtime

### Easy assembly

Easier insertion, less force needed during assembly to push fitting onto hose

### More configurations

Over 500+ combinations of terminal ends

## Designed for ease of use

### Smaller profile

They have a compact design and smaller profile making it easier for routing and assembly installation, especially in tight spaces

New compact design  
and smaller profile



### Easy identification

Part numbers printed on fittings for easy identification

4706FJ8  
OPTIMUM  
19619

## Designed to last

### Corrosion resistance

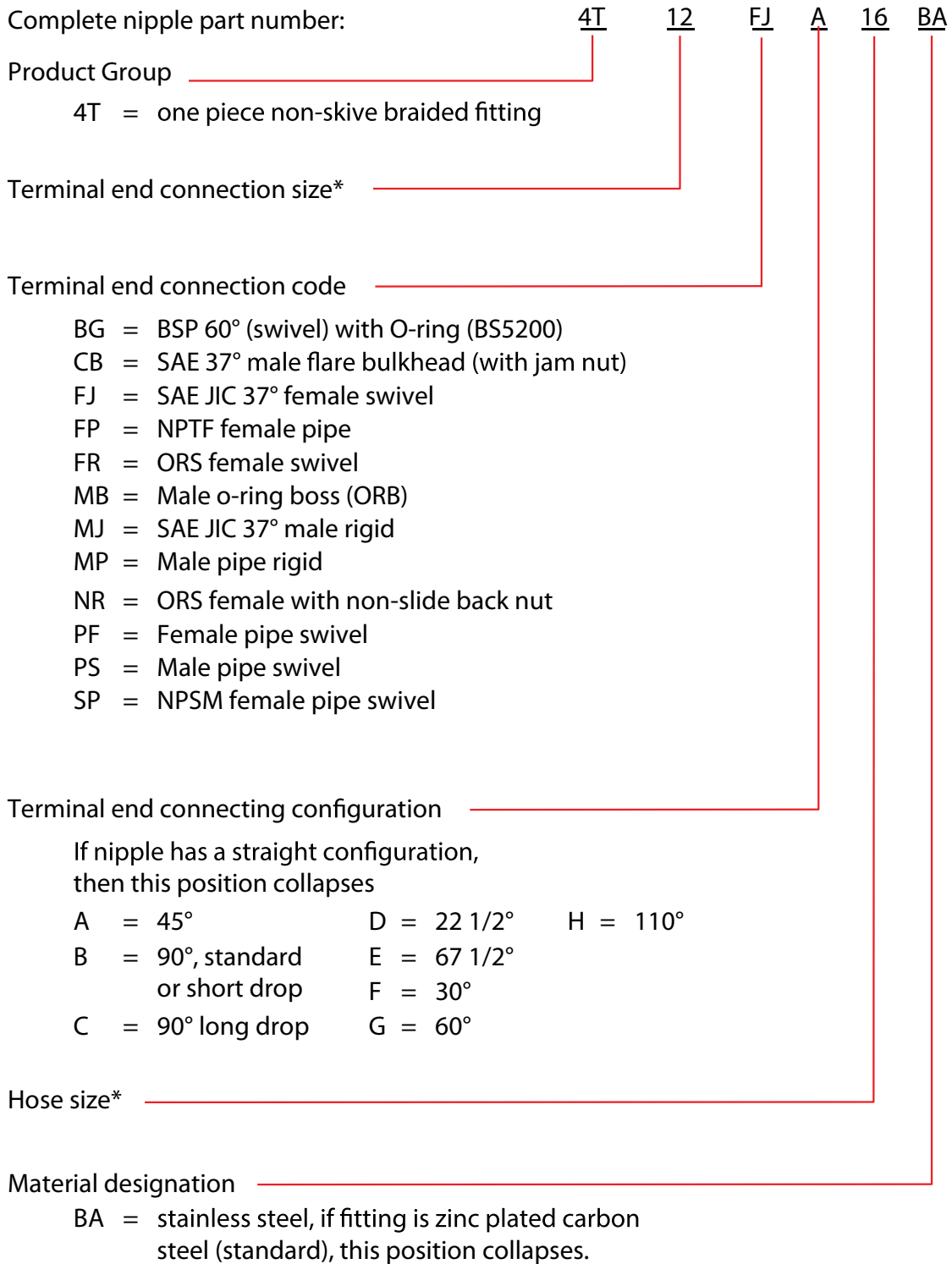
Dura-Kote™ plating comes standard in our Synflex Optimum fittings. Dura-Kote plating delivers up to 3x the corrosion protection on carbon steel fittings as compared to competitive hose fittings and provides up to 1,000 hours of corrosion resistance. This is a huge step forward in metal fitting corrosion protection.



Corrosion comparison after 650 hours of exposure to salt spray testing



# 4T fittings numbering system



\* When ordering sizes 3, 4, 5, 6 and 8 the part number requires only single digits

# 4T core fittings

## BF

BSP female swivel



#	HOSE SIZE INFO	
	Thread	Hose size
4T4BF4	G 1/4	-04
4T6BF4	G 3/8	-04
4T6BF5	G 3/8	-05
4T6BF6	G 3/8	-06
4T8BF6	G 1/2	-06
4T8BF8	G 1/2	-08
4T10BF8	G 5/8	-08
4T12BF8	G 3/4	-08
4T10BF10	G 5/8	-10
4T12BF10	G 3/4	-10
4T12BF12	G 3/4	-12
4T16BF16	G 1	-16

## BFA

BSP female swivel, 45° elbow



#	HOSE SIZE INFO	
	Thread	Hose size
4T4BFA4	G 1/4	-04
4T6BFA4	G 3/8	-04
4T6BFA5	G 3/8	-05
4T6BFA6	G 3/8	-06
4T8BFA6	G 1/2	-06
4T8BFA8	G 1/2	-08
4T10BFA8	G 5/8	-08
4T12BFA8	G 3/4	-08
4T10BFA10	G 5/8	-10
4T12BFA10	G 3/4	-10
4T12BFA12	G 3/4	-12
4T16FJB16	G 1	-16

## BFB

BSP female, swivel 90° elbow



#	HOSE SIZE INFO	
	Thread	Hose size
4T4BFB4	G 1/4	-04
4T6BFB4	G 3/8	-04
4T6BFB5	G 3/8	-05
4T6BFB6	G 3/8	-06
4T8BFB6	G 1/2	-06
4T8BFB8	G 1/2	-08
4T10BFB8	G 5/8	-08
4T12BFB8	G 3/4	-08
4T10BFB10	G 5/8	-10
4T12BFB10	G 3/4	-10
4T12BFB12	G 3/4	-12
4T16BFB16	G 1	-16

## BJ

Banjo, DIN 7642



#	HOSE SIZE INFO	
	Thread	Hose size
4T6BJ4	-	-04
4T8BJ5	-	-05
4T8BJ6	-	-06
4T10BJ6	-	-06
4T12BJ6	-	-06
4T12BJ8	-	-08
4T16BJ10	-	-10
4T20BJ12	-	-12
4T25BJ16	-	-16

## BP

BSP male parallel



#	HOSE SIZE INFO	
	Thread	Hose size
4T4BP4	G 1/4	-04
4T4BP5	G 1/4	-05
4T6BP6	G 3/8	-06
4T8BP6	G 1/2	-06
4T8BP8	G 1/2	-08
4T10BP10	G 5/8	-10
4T12BP12	G 3/4	-12

## DK

24° male, light duty



#	HOSE SIZE INFO	
	Thread	Hose size
4T5DK3	M12X1.5	-03
4T6DK4	M14X1.5	-04
4T8DK5	M16X1.5	-05
4T10DK5	M18X1.5	-05
4T8DK6	M16X1.5	-06
4T10DK6	M18X1.5	-06
4T12DK6	M22X1.5	-06
4T10DK8	M18X1.5	-08
4T12DK8	M22X1.5	-08
4T16DK10	M26X1.5	-10
4T20DK12	M30X2	-12
4T25DK16	M36X2	-16

## DL

DKO female swivel, light duty



#	HOSE SIZE INFO	
	Thread	Hose size
4T5DL3	M12X1.5	-03
4T5DL4	M12X1.5	-04
4T6DL4	M14X1.5	-04
4T8DL4	M16X1.5	-04
4T8DL5	M16X1.5	-05
4T10DL5	M18X1.5	-05
4T8DL6	M16X1.5	-06
4T10DL6	M18X1.5	-06
4T12DL6	M22X1.5	-06
4T10DL8	M18X1.5	-08
4T12DL8	M22X1.5	-08
4T16DL8	M26X1.5	-08
4T12DL10	M22X1.5	-10
4T16DL10	M26X1.5	-10
4T20DL12	M30X2	-12
4T25DL16	M30X2	-12

## DLA

DKO female swivel, light duty, 45° elbow



#	HOSE SIZE INFO	
	Thread	Hose size
4T5DLA3	M12X1.5	-03
4T5DLA4	M12X1.5	-04
4T6DLA4	M14X1.5	-04
4T8DLA5	M16X1.5	-05
4T8DLA6	M16X1.5	-06
4T10DLA6	M18X1.5	-06
4T12DLA8	M22X1.5	-08
4T16DLA10	M26X1.5	-10
4T16DLA12	M26X1.5	-12
4T25DLA16	M36X2	-16

## DLB

DKO female swivel, light duty, 90° elbow



#	HOSE SIZE INFO	
	Thread	Hose size
4T5DLB3	M12X1.5	-03
4T5DLB4	M12X1.5	-04
4T6DLB4	M14X1.5	-04
4T8DLB5	M16X1.5	-05
4T8DLB6	M16X1.5	-06
4T10DLB6	M18X1.5	-06
4T12DLB8	M22X1.5	-08
4T16DLB10	M26X1.5	-10
4T16DLB12	M26X1.5	-12
4T25DLB16	M36X2	-16

# 4T core fittings

## DS

DKO female swivel, heavy duty



PART		HOSE SIZE INFO	
#	Thread	Hose size	
4T5DS3	M16X1.5	-03	
4T5DS4	M16X1.5	-04	
4T6DS4	M18X1.5	-04	
4T6DS5	M18X1.5	-05	
4T8DS5	M20X1.5	-05	
4T8DS6	M20X1.5	-06	
4T10DS6	M22X1.5	-06	
4T10DS8	M22X1.5	-08	
4T12DS8	M24X1.5	-08	
4T16DS10	M30X2	-10	
4T20DS12	M36X2	-12	
4T25DS16	M42X2	-16	

## DSA

DKO female swivel, heavy duty, 45° elbow



PART		HOSE SIZE INFO	
#	Thread	Hose size	
4T5DSA3	M16X1.5	-03	
4T5DSA4	M16X1.5	-04	
4T6DSA4	M18X1.5	-04	
4T6DSA5	M18X1.5	-05	
4T8DSA5	M20X1.5	-05	
4T8DSA6	M20X1.5	-06	
4T10DSA6	M22X1.5	-06	
4T12DSA8	M24X1.5	-08	
4T16DSA10	M30X2	-10	
4T20DSA12	M36X2	-12	
4T25DSA16	M42X2	-16	

## DSB

DKO female swivel, heavy duty, 90° elbow



PART		HOSE SIZE INFO	
#	Thread	Hose size	
4T5DSB3	M16X1.5	-03	
4T5DSB4	M16X1.5	-04	
4T6DSB4	M18X1.5	-04	
4T6DSB5	M18X1.5	-05	
4T8DSB5	M20X1.5	-05	
4T8DSB6	M20X1.5	-06	
4T10DSB6	M22X1.5	-06	
4T12DSB8	M24X1.5	-08	
4T16DSB10	M30X1.5	-10	
4T20DSB12	M36X1.5	-12	
4T25DSB16	M42X1.5	-16	

## EK

24° male, heavy duty



PART		HOSE SIZE INFO	
#	Thread	Hose size	
4T6EK4	M18X1.5	-04	
4T6EK5	M18X1.5	-05	
4T8EK5	M20X1.5	-05	
4T8EK6	M20X1.5	-06	
4T10EK6	M22X1.5	-06	
4T12EK8	M24X1.5	-08	
4T16EK10	M30X2	-10	
4T20EK12	M36X2	-12	
4T25EK16	M42X2	-16	

## FJ

JIC/37° female swivel



PART		HOSE SIZE INFO	
#	Thread	Hose size	
4T3FJ4	3/8-24	-04	
4T5FJ4	1/2-20	-04	
4T6FJ4	9/16-18	-04	
4T4FJ6	7/16-20	-06	
4T5FJ6	1/2-20	-06	
4T6FJ6	9/16-18	-06	
4T6FJ8	9/16-18	-08	
4T10FJ6	7/8-14	-06	
4T10FJ8	7/8-14	-08	
4T16FJ8	1 5/16-12	-08	
4T8FJ10	3/4-16	-10	
4T10FJ10	7/8-14	-10	
4T12FJ10	1 1/16-12	-10	
4T10FJ12	3/4-16	-12	
4T12FJ12	7/8-14	-12	
4T14FJ12	1 1/16-12	-12	
4T16FJ12	7/8-14	-12	
4T12FJ16	1 1/16-12	-16	
4T14FJ16	1 3/16-12	-16	
4T16FJ16	1 5/16-12	-16	
4T20FJ16	1 5/8-12	-16	
4T16FJ20	1 5/16-12	-20	
4T20FJ20	1 5/8-12	-20	
4T24FJ24	1 7/8-12	-24	
4T32FJ32	2 1/2-12	-32	

## FJA

JIC/37° female swivel, 45° tube elbow



PART		HOSE SIZE INFO	
#	Thread	Hose size	
4T4FJA4*	7/16-20	-04	
4T5FJA4*	1/2-20	-04	
4T6FJA4	9/16-18	-04	
4T4FJA6	7/16-20	-06	
4T6FJA6	9/16-18	-06	
4T8FJA6*	3/4-16	-06	
4T8FJA8	3/4-16	-08	
4T10FJA8*	7/8-14	-08	
4T10FJA10*	7/8-14	-10	
4T12FJA10	1 1/16-12	-10	
4T12FJA12	1 1/16-12	-12	
4T16FJA12	1 5/16-12	-12	
4T16FJA16	1 5/16-12	-16	
4T20FJA120	1 5/8-12	-20	

\* Swivel nuts are universal, both 37 and 45 connections

## FJB

JIC/37° female swivel, 90° elbow



PART		HOSE SIZE INFO	
#	Thread	Hose size	
4T4FJB4	7/16-20	-04	
4T5FJB4*	1/2-20	-04	
4T6FJB4	9/16-18	-04	
4T4FJB6	7/16-20	-06	
4T6FJB6	9/16-18	-06	
4T8FJB6*	3/4-16	-06	
4T6FJB8	9/16-18	-08	
4T8FJB8	3/4-16	-08	
4T10FJB8*	7/8-14	-08	
4T10FJB10*	7/8-14	-10	
4T12FJB10*	1 1/16-12	-10	
4T10FJB12	7/8-14	-12	
4T12FJB12	1 1/16-12	-12	
4T16FJB12	1 5/16-12	-12	
4T16FJB16	1 5/16-12	-16	
4T20FJB20	1 5/8-12	-20	
4T24FJB24	1 7/8-12	-24	

\* Swivel nuts are universal, both 37 and 45 connections

# 4T core fittings

## FR

Female ORS swivel



#	HOSE SIZE INFO	
	Thread	Hose size
4T4FR4	9/16-18	-04
4T6FR4	11/16-16	-04
4T8FR4	13/16-16	-04
4T4FR6	9/16-18	-06
4T6FR6	11/16-18	-06
4T8FR6	13/16-16	-06
4T6FR8	11/16-16	-08
4T8FR8	13/16-16	-08
4T10FR8	1-14	-08
4T12FR8	13/16-12	-08
4T8FR10	13/16-16	-10
4T10FR10	1-14	-10
4T12FR10	13/16-12	-10
4T10FR12	1-14	-12
4T12FR12	13/16-12	-12
4T16FR12	1 7/16-12	-12
4T12FR16	1 3/16-12	-16
4T16FR16	1 7/16-12	-16
4T20FR16	1 11/16-12	-16
4T20FR20	1 11/16-12	-20
4T24FR20	2-12	-20

## FRA

Female ORS swivel, 45° tube elbow



#	HOSE SIZE INFO	
	Thread	Hose size
4T4FRA4	9/16-18	-04
4T6FRA4	11/16-16	-04
4T4FRA6	9/16-18	-06
4T6FRA6	11/16-16	-06
4T8FRA6	13/16-16	-06
4T8FRA8	13/16-16	-08
4T10FRA8	1-14	-08
4T12FRA8	13/16-12	-08
4T10FRA10	1-14	-10
4T12FRA10	13/16-12	-10
4T12FRA12	13/16-12	-12
4T16FRA12	1 7/16-12	-12
4T12FRA16	1 3/16-12	-16
4T16FRA16	1 7/16-12	-16
4T20FRA16	1 11/16-12	-16
4T20FRA20	1 11/16-12	-20
4T24FRA20	2-12	-20
4T24FRA24	2-12	-24

## FRB

Female ORS swivel, 90° tube elbow short drop



#	HOSE SIZE INFO	
	Thread	Hose size
4T4FRB4	9/16-18	-04
4T6FRB4	11/16-16	-04
4T4FRB6	9/16-18	-06
4T6FRB6	11/16-16	-06
4T8FRB6	13/16-16	-06
4T6FRB8	11/16-16	-08
4T8FRB8	13/16-16	-08
4T10FRB8	1-14	-08
4T12FRB8	1 3/16-12	-08
4T10FRB10	1-14	-10
4T12FRB10	1 3/16-12	-10
4T10FRB12	1-14	-12
4T12FRB12	1 3/16-12	-12
4T16FRB12	1 7/16-12	-12
4T16FRB16	1 7/16-12	-16
4T20FRB16	1 11/16-12	-16
4T20FRB20	1 11/16-12	-20
4T24FRB20	2-12	-20
4T24FRB24	2-12	-24

## LM

Metric standpipe, straight



#	HOSE SIZE INFO	
	Thread	Hose size
4T6LM4	6	-04
4T8LM4	8	-04
4T10LM4	10	-04
4T10LM5	10	-05
4T12LM5	12	-05
4T10LM6	10	-06
4T12LM6	12	-06
4T14LM6	14	-06
4T15LM8	15	-08
4T18LM10	18	-10
4T20LM12	20	-12
4T25LM16	25	-16

## LMB

Metric standpipe 90° elbow



#	HOSE SIZE INFO	
	Thread	Hose size
4T6LMB4	6	-04
4T8LMB4	8	-04
4T10LMB4	10	-04
4T10LMB5	10	-05
4T12LMB5	12	-05
4T10LMB6	10	-06
4T12LMB6	12	-06
4T14LMB6	14	-06
4T15LMB8	15	-08
4T18LMB10	18	-10
4T20LMB12	20	-12
4T25LMB16	25	-16

## MJ

JIC/37° male rigid



#	HOSE SIZE INFO	
	Thread	Hose size
4T4MJ4	7/16-20	-04
4T5MJ4	1/2-20	-04
4T6MJ4	9/16-18	-04
4T6MJ6	9/16-18	-04
4T8MJ6	3/4-16	-06
4T10MJ6	7/8-14	-06
4T8MJ8	3/4-16	-08
4T10MJ8	7/8-14	-08
4T12MJ8	1 1/16-12	-08
4T8MJ10	3/4-16	-10
4T10MJ10	7/8-14	-10
4T12MJ10	1 1/16-12	-10
4T10MJ12	7/8-14	-12
4T12MJ12	1 1/16-12	-12
4T14MJ12	1 3/16-12	-12
4T16MJ12	1 5/16-12	-12
4T16MJ16	1 5/16-12	-16
4T20MJ16	1 5/8-12	-16
4T20MJ20	1 5/8-12	-20
4T24MJ24	1 7/8-12	-24

## MP

N.P.T.F. male pipe rigid



#	HOSE SIZE INFO	
	Thread	Hose size
4T2MP4	1/8-27	-04
4T4MP4	1/4-18	-04
4T6MP4	3/8-18	-04
4T8MP4	1/2-14	-04
4T4MP6	1/4-18	-06
4T6MP6	3/8-18	-06
4T8MP6	1/2-14	-06
4T4MP8	1/4-18	-08
4T6MP8	3/8-18	-08
4T8MP8	1/2-14	-08
4T12MP8	3/4-14	-08
4T6MP10	3/8-18	-10
4T8MP10	1/2-14	-10
4T12MP10	3/4-14	-10
4T8MP12	1/2-14	-12
4T12MP12C	3/4-14	-12
4T12MP12	3/4-14	-12
4T16MP12	1 1/16-12	-12
4T12MP16	3/4-14	-16
4T16MP16	1 1/16-12	-16
4T20MP16	1 1/4-1 1/16-12	-16
4T20MP20	1 1/4-1 1/16-12	-20
4T24MP24	1 1/2-1 1/16-12	-24
4T32MP32	2-1 1/16-12	-32



# Chemical resistance data

This chart is intended to serve as a guide and does not guarantee suitability of hose material with the chemicals listed. Final selection of materials is dependent on many factors including variations in temperature, pressure, and duration of exposure.

## Hose Material Key

N = Nylon

H = Polyester

## Resistance Rating Key

G = Good

P = Poor

L = Limited

NT = Not Tested

	N	H		N	H		N	H
Acetaldehyde	G	G	Carbon Disulfide	G	L	Fatty Acid	G	G
Acetic Acid	L	L	Carbon Monoxide	G	G	Ferric Chloride	L	NT
Acetic Anhydride	L	L	Carbon Tetrachloride	G	P	Ferric Sulphate	G	G
Acetone	G	L	Carbonic Acid	G	L	Fluoboric Acid	NT	P
Acetyl Bromide	P	P	Castor Oil	G	L	Fluorine	P	P
Acetyl Chloride	P	P	Caustic Potash (>20%)	L	L	Fluorosilicic	NT	NT
Acetylene	G	G	Caustic Potash (<20%)	G	L	Formaldehyde	G	L
Air	G	G	Caustic Soda (>20%)	L	L	Formic Acid	P	P
*Alcohols	G	L	Caustic Soda (<20%)	G	L	Freon	G	L
Aluminum Chloride	P	NT	Cellusolves Union Carbide	G	P	*Fruit Juice	G	G
Aluminum Sulphate	G	NT	Cellulubes Celanese (Hydraulic Fluid, Phosphate Ester Base)	G	P	Fuel Oil (Aromatic Gas) 100 Octane	G	G
Alums	P	NT	Chloracetic Acid	P	P	Fuel Oil	G	G
Ammonia Gas	P	P	Chloroform	G	P	Furfuryl Alcohol	G	G
Ammonium Chloride	G	G	Chlordane	G	G	Galic Acid (<20%)	G	L
Ammonium Hydroxide	P	P	Chlorinated Solvents	G	P	** Gas (Natural)	G	G
Ammonium Nitrate	G	L	Chlorine (Dry)	P	P	Gas Oil	G	GL
Ammonium Phosphate	G	L	Chlorine (Water) (<20%)	L	P	Gasoline	G	G
Ammonium Sulphate	G	L	Chromic Acid	P	P	Gasoline (Aromatic)	G	G
Amyl Acetate	G	L	Chromium Salts	G	G	Gasoline (Non-Aromatic)	G	G
Amyl Alcohol	G	G	*Cider	G	G	Gelatin	G	G
Anethole	G	NT	Citric Acid	G	L	Glucose	G	G
Aniline	L	P	Coal Gas	G	G	Glue (Depends on type)	G	G
Animal Oils	G	G	Copper Chloride	L	G	†Glycerine	G	G
Antimony Salts	G	G	Copper Sulphate	G	G	†Glycol	G	G
Apoclor Monsanto (Chlorinated Hydrocarbon Hydraulic Fluid)	G	L	*Corn Oil	G	G	Greases	G	G
Aromatic Hydrocarbons	G	L	Cottonseed Oil	G	G	Heavy Water (D2O)	G	G
Arsenic Salts	G	G	Creosote	P	P	Heptane	G	G
Asphalt	G	G	Cresols	P	P	Hexane	G	G
Auto Transmission Fluid	G	G	Cresylic Acid	P	P	†Houghton Safe Houghton 600 Series (Hyd. Fluid Water Glycol Base)	G	L
Barium Chloride	G	G	Crude Petroleum Oil	G	L	†Houghton Safe Houghton 1000 Series (Phosphate Ester Base)	G	L
Barium Salts	G	G	Cupric Sulphate	L	L	Hydraulic Fluid Petroleum Base	G	G
Basic Copper Arsenate	G	G	Cyclohexane	G	G	†Hydraulic Fluid Water Glycol Base	G	G
Benzaldehyde	G	G	Cyclohexanone	G	G	†Hydraulic Fluid		
Benzene	G	L	Decalin	G	NT	Phosphate Ester	G	L
Benzoic Acid	G	P	Diacetone Alcohol	G	L	Hydraulic Oil	G	G
Benzol (Benzene)	G	L	Diammonium Phosphate	G	L	Hydrochloric Acid (10%)	G	P
Benzyl Alcohol	L	L	Dibutyl Phthalate	G	L	Hydrocyanic Acid	P	NT
Borax	G	G	Diesel Fuel	G	G	Hydrofluoric Acid	P	P
Bordeaux Mixture	G	G	Diethanolamine (20% conc.)	G	L	Hydrogen Gas	G	G
Boric Acids	G	G	Diethyl Ether	G	L	Hydrogen Peroxide (dil.)	G	G
Boric Copper Sulphate	G	G	Diocetyl Phosphate	G	L	Hydrogen Peroxide (conc.)	P	P
Bromine	P	P	Dioctylphthalate	G	L	Hydrogen Sulphide	L	L
Butanol	G	G	Enamels	G	G	†Hydrolube Union Carbide— (Hydraulic Fluid Water Glycol Base)	G	L
* Butter	G	G	Essential Oils	G	G	†Irus Shell 902 Hydraulic Fluid (Water-Oil Emulsion) Sulphide	G	G
Butyl Acetate	G	L	* Ethanol	G	L	Isocyanates	G	G
Calcium Arsenate	G	G	Ether	G	L	Isopropyl Acetate	G	L
Calcium Bisulphide	G	G	Ethyl Acetate	G	L	Kerosene	G	G
Calcium Chloride	G	G	* Ethyl Alcohol	G	L	Ketones	G	L
Calcium Hydroxide (<20%)	G	L	Ethyl Chloride	G	P	Lacquer Solvents	G	L
Calcium Hypochlorite	G	L	Ethylene Chlorhydrin	P	P	Lactic Acid	G	NT
Calcium Salts	G	G	Ethylene Dichloride	G	P	Lard	G	G
Carbolic Acid	P	P	†Ethylene Glycol	G	G			
Carbon Bisulfide	G	L	Ethylene Oxide	G	L			

# Chemical resistance data (continued)

	N	H		N	H		N	H
Lead Arsenate	G	G	Petroleum Oils (Sour)	G	L	Tar Oil	G	G
Lead Sulphate	G	G	Petroleum Oils (Refined)	G	G	Tartaric Acid	G	G
Lead Tetramethyl	G	G	Phenolates	L	L	Toluene	G	L
Lime	G	G	Phenols	P	P	Toluol	G	L
Linseed Cake	G	G	Phosphoric Acid	G	P	Tributyl Phosphate	G	L
Linseed Oil	G	G	Picric Acid	L	P	Tricesylphosphate	G	L
Lubricating Oils, Petroleum Base	G	G	Potash (Potassium Hydroxide)	L	P	Trichloroacetic Acid	P	P
†Lubricating Oils, Diester Base	G	L	Potassium Chloride	G	G	Trichloroethylene	G	P
Magnesium Chloride	G	G	Potassium Hydroxide (50% conc.)	L	P	†Trisodium Phosphate Solution	G	L
Magnesium Hydroxide (<20%)	G	L	Potassium Nitrate	G	G	Turpentine	G	G
Magnesium Sulphate	G	G	Potassium Permanganate (5% conc.)	P	P	†Ucon Union Carbide (Hydraulic Fluid Water Glycol Base)	G	L
Maleic Acid	G	L	Potassium Sulphate	G	G	Urea	G	L
Mercuric Chloride	G	G	Propane	G	G	Uric Acid	G	P
Mercury	G	G	†Pydraul (Stauffer) F-9, 150, 600, 625	G	L	Varnish	G	G
**Methane	G	G	Pyrethrum	G	G	Vinegar	G	L
Methanol	G	L	Pyridine	L	L	† Water (150°F)	G	G
Methyl Acetate	G	L	†Sea Water	G	G	White and Bagley No. 2190 Cutting Oil	G	NT
Methyl Bromide	L	P	†Skydrol Monsanto 500, 7000	G	P	*Wine	G	G
Methyl Chloride	G	P	†Soap Solution (conc.)	G	G	Wool Oil	G	G
Methyl Sulphate	G	G	* † Soda Water	G	G	Xylol	G	L
Methylethylketone (MEK)	G	L	Sodium Bicarbonate	G	G	Xylene	G	L
Methylisobutylketone (MIBK)	G	L	Sodium Bisulfite	G	G	Zinc Chloride	G	G
*Milk	G	G	Sodium Borate	G	G	Zinc Hydrate	P	L
Mineral Oil	G	G	Sodium Carbonate	G	G	Zinc Sulphate	P	L
Molasses	G	G	Sodium Chloride	G	G			
Mustard	G	G	Sodium Chloride	G	G			
Naphtha	G	L	Sodium Cyanide	G	G			
Naphthalene	G	L	Sodium Hydroxide (<20%)	G	L			
Nickel Chloride	P	P	Sodium Hypochlorite	L	L			
Nicotine	G	G	Sodium Nitrate	G	G			
Nitric Acid (<20%)	L	L	†Sodium Phosphate Solution	G	G			
Nitric Acid (>20%)	L	P	Sodium Silicate	G	G			
Nitrobenzene	G	P	Sodium Sulphate	G	G			
* Nitrous Oxide	G	G	Sodium Thiosulphate	G	G			
Oil	G	G	Solutions/Emulsions 2-4D DDT Preparation Hydroxy Quinoline	G	NT			
* Oil of Turpentine	G	G	Stannous Chloride	L	G			
Oleic Acid	G	G	Steam	P	P			
OS 45 Monsanto Hydraulic Fluid (Silicate Ester Base)	G	L	Stearic Acid	G	G			
Oxalic Acid (-30%)	G	L	Stearin	G	G			
Oxygen	Refer to Factory		Stoddard Solvent	G	P			
Ozone	G	G	Styrene	G	L			
Paint (Oil Base)	G	G	Sulphur	G	G			
Paint Solvents (Oil Base)	G	L	Sulphur Dioxide	P	P			
Palmitic Acid	G	G	Sulphur Trioxide	L	P			
Pentane	G	G	Sulphur Acid (dil.)	L	LP			
Perchloric Acid	P	P	Sulphur Acid (conc.)	P	P			
Perchloroethylene	G	P	Sulphurous Acid	P	LP			
			Tannic Acid	G	L			

\* Does not imply NSF or FDA compliance

† Recommended operating temperature not to exceed +150°F (+66°C)

\*\* Does not imply AGA or UL compliance

90o Recommended operating temperature not to exceed +100°F

## Hose Material Reference Chart

Series	Core	Series	Core
3TR7	Nylon	3CH0	Nylon
3TR7N	Nylon	31CT	Polyester
3TR8	Nylon	3TB0	Polyester
3TR8N	Nylon	37B0	Polyurethane
3TR18CT	Polyester	3R80	Nylon

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