

ENGINEERING  
TOMORROW

*Danfoss*

Synflex Optimum by Danfoss

# Design **reimagined**

Thermoplastic hydraulic hose and fittings



## Optimum

thermoplastic hose  
can be thermoformed  
to work in the  
configuration  
you need



**Synflex Optimum**  
by Danfoss

[www.danfoss.com](http://www.danfoss.com)



# 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.



### 100R7

### 100R8

### 100R18

3TR7 / 3TR7N Non-conductive

3TR8 / 3TR8N Non-conductive

3TR18CT



#### 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



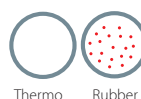
#### Bonding capabilities

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 resistant 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 1,015 psi to 5,000 psi



#### Noise reduction

Special reinforcements on the thermoplastic hoses help reduce machine noise

## Fittings



100R7 100R8 100R18

### 4TA series

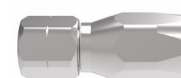
The optimized one-piece fitting crimps directly to Synflex 100R7, 100R8 and 100R18 hoses for the most robust economic connection



100R7 100R8

### 1A / Z series (with sleeve)

Leverage Danfoss' bestselling or existing high volume fitting on 100R7 and 100R8 hoses by adding a sleeve



100R7

### 901/902 series

Field attachable reusable fitting that can be assembled with hand tools made specifically for R7 hose

## 3TR7

Synflex Optimum by Danfoss **3TR7**

## 3TR7N Non-conductive

Synflex Optimum by Danfoss **3TR7N**

92.2 ANSI (-4 thru -10)

Part #	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						
3TR7-02	3,2	0.12	8,5	0.33	210	3050			840	12200	12,7	0.50	0,04	0.03
3TR7-03 3TR7N-03	4,8	0.19	10,8	0.43	210	3050	210	3050	840	12200	19,0	0.75	0,07	0.05
3TR7-04 3TR7N-04	6,4	0.25	12,5	0.49	210	3050	210	3050	759	11000	31,8	1.25	0,09	0.06
3TR7-05 3TR7N-05	7,9	0.31	14,6	0.57	175	2550	207	3000	690	10000	38,1	1.50	0,13	0.08
3TR7-06 3TR7N-06	9,8	0.39	16,5	0.65	157	2300	207	3000	621	9000	50,8	2.00	0,15	0.10
3TR7-08 3TR7N-08	12,7	0.50	20,8	0.82	140	2050	207	3000	621	9000	69,9	2.75	0,21	0.14
3TR7-10 3TR7N-10	16,0	0.63	23,6	0.93	105	1525	140	2050	421	6100	101,6	4.00	0,24	0.16
3TR7-12 3TR7N-12	19,0	0.75	26,4	1.04	86	1250			348	5000	127,0	5.00	0,26	0.17
3TR7-16 3TR7N-16	25,4	1.00	33,7	1.33	69	1000			280	4000	190,5	7.50	0,40	0.27

### 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)

### 3TR7 supersedes

3130, 3160

### 3TR7N supersedes

3740, 37AL

### Approved fittings



### Inner tube

Nylon

### Reinforcement:

1 textile braid

### Cover

Nonstick polyurethane

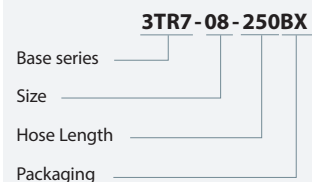
3TR7 perforated

3TR7N non-perforated

### Typical platforms

- Agriculture
- Horticulture
- Chemical transfer
- Foam systems
- 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

**BX:** 2 lengths per box, no length less than 20 ft.

**RL:** random length reel, 2 lengths per reel, no length less than 20 ft.

**R:** continuous length on reel

## 3TR8

Synflex Optimum by Danfoss 3TR8

## 3TR8N Non-conductive

Synflex Optimum by Danfoss 3TR8N

Part #	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
3TR8-04 3TR8N-04	6,4	0.25	15,0	0.59	350	5100	1400	20400	38,1	1.50	0,16	0.11
3TR8-06 3TR8N-06	9,5	0.38	19,0	0.75	280	4050	1120	16200	57,2	2.25	0,23	0.15
3TR8-08 3TR8N-08	12,7	0.50	22,8	0.90	245	3550	980	14200	76,2	3.00	0,29	0.20
3TR8-12 3TR8N-12	19,0	0.75	28,8	1.13	157	2300	628	9200	114,3	4.50	0,38	0.25
3TR8-16 3TR8N-16	25,4	1.00	36,2	1.43	140	2050	560	8200	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)

### Approved fittings



### 3TR8 supersedes

3R80

### 3TR8N supersedes

3E80

### Inner tube

Nylon

### Reinforcement:

2 textile braid

### Cover

Nonstick polyurethane

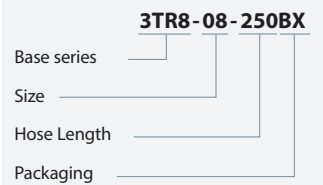
3TR8 perforated

3TR8N non-perforated

### Typical platforms

- 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

**BX:** 2 lengths per box, no length less than 20 ft.

**RL:** random length reel, 2 lengths per reel, no length less than 20 ft.

**R:** continuous length on reel

## 3TR18CT



Part #	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
3TR18CT-04	6,4	0.25	12,2	0.48	210	3050	840	12200	31,8	1.25	0,09	0.06
3TR18CT-05	7,9	0.31	14,8	0.58	210	3050	840	12200	38,1	1.50	0,15	0.10
3TR18CT-06	9,5	0.38	16,8	0.66	210	3050	840	12200	50,8	2.00	0,16	0.11
3TR18CT-08	12,7	0.50	21,6	0.85	210	3050	840	12200	69,9	2.75	0,25	0.17
3TR18CT-10	15,9	0.62	26,8	1.06	210	3050	840	12200	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



### 3TR18CT supersedes

30CT

### Inner tube

Polyester

### Reinforcement

2 textile braid

### Cover

Nonstick polyester

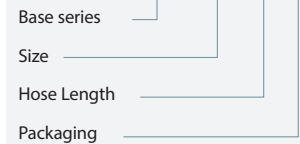
3TR18CT perforated

### 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

#### 3TR18CT-08-250BX



**BC:** continuous length in box

**BX:** 2 lengths per box, no length less than 20 ft.

**RL:** random length reel, 2 lengths per reel, no length less than 20 ft.

**R:** continuous length on reel

# Multi-line capabilities

Available to bond up to 6 lines, see examples below of twin-line for each hose series.

## 3TR7 Twin-line



Part #	Number of hose
3TR7-04-2-250BX	2
3TR7-05-2-250BX	2
3TR7-06-2-250BX	2
3TR7-08-2-250BX	2
3TR7-10-2-250BX	2
3TR7-12-2-250BX	2
3TR7-16-2-250BX	2

## 3TR7N Twin-line Non-conductive



Part #	Number of hose
3TR7N-04-2-250BX	2
3TR7N-05-2-250BX	2
3TR7N-06-2-250BX	2
3TR7N-08-2-250BX	2
3TR7N-10-2-250BX	2
3TR7N-12-2-250BX	2
3TR7N-16-2-250BX	2

## 3TR8 Twin-line



Part #	Number of hose
3TR8-04-2-250BX	2
3TR8-06-2-250BX	2
3TR8-08-2-250BX	2
3TR8-12-2-250BX	2
3TR8-16-2-250BX	2

## 3TR8N Twin-line Non-conductive



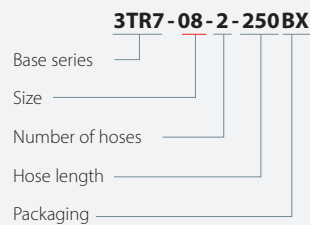
Part #	Number of hose
3TR8N-04-2-250BX	2
3TR8N-06-2-250BX	2
3TR8N-08-2-250BX	2
3TR8N-12-2-250BX	2
3TR8N-16-2-250BX	2

## 3TR18CT Twin-line



Part #	Number of hose
3TR18CT-04-2-250BX	2
3TR18CT-05-2-250BX	2
3TR18CT-06-2-250BX	2
3TR18CT-08-2-250BX	2
3TR18CT-10-2-250BX	2

### How to order/part # structure



- BC:** continuous length in box
- BX:** 2 lengths per box, no length less than 20 ft.
- RL:** random length reel, 2 lengths per reel, no length less than 20 ft.
- R:** continuous length on reel

## 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

## Designed to last

### Corrosion resistance

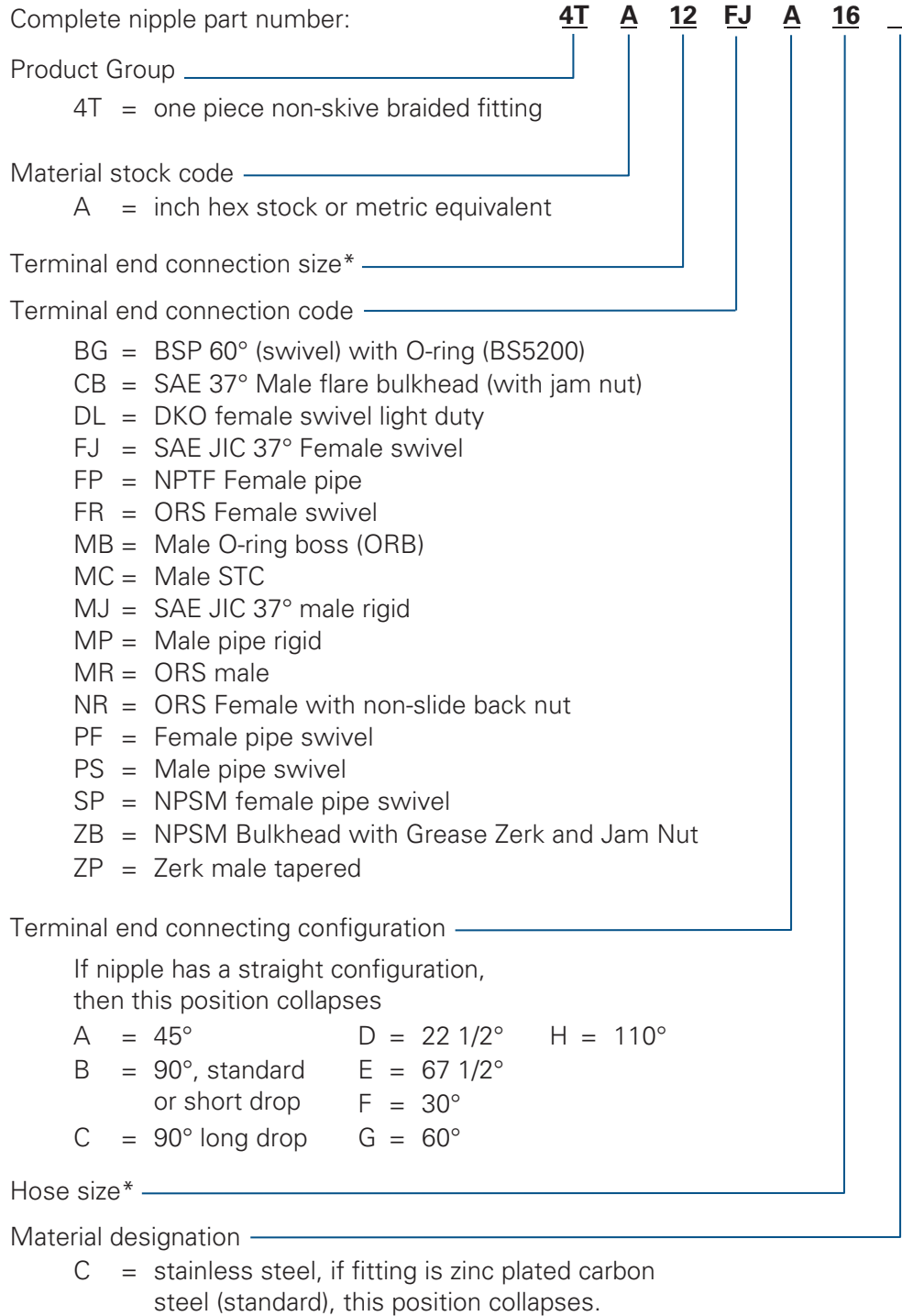
Dura-Kote™ plating comes standard in our Synflex Optimum fittings. Dura-Kote plating delivers up 3x the corrosion protection on carbon steel fittings as compared to competitive hose fittings and provides up to 1,000 hours of corrosion resistance. This is a huge step forward in metal fitting corrosion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



Corrosion comparison after 650 hours of exposure to salt spray testing



# 4TA fittings numbering system



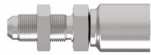
\* When ordering sizes 3, 4, 5, 6 and 8 the part number requires only single digits

# 4TA core and reusable fittings

## 4TA fittings

### CB

JIC 37° male flare  
bulkhead (with jam nut)



#	Hose	Thread
4TA6CB6	6	9/16-18

### DL

DKO female swivel  
(light duty)



#	Hose	Thread
4T5DL4	4	12 mm
4T8DL6	6	16 mm

### FJ

JIC/37° female swivel



#	Hose	Thread
4TA2FJ2	2	5/16-24
4TA3FJ2	2	3/8-24
4TA4FJ2	2	7/16-20
4TA4FJ3	3	7/16-20
4TA5FJ3	3	1/2-20
4TA4FJ4	4	7/16-20
4TA4FJ6	6	7/16-20
4TA5FJ4	4	1/2-20
4TA5FJ5	5	1/2-20
4TA5FJ6	6	1/2-20
4TA6FJ4	4	9/16-18
4TA6FJ5	5	9/16-18
4TA6FJ6	6	9/16-18
4TA8FJ6	6	3/4-16
4TA8FJ8	8	3/4-16
4TA10FJ8	8	7/8-14
4TA12FJ8	8	1 1/16-12
4TA12FJ10	10	1 1/16-12
4TA12FJ12	12	1 1/16-12
4TA16FJ16	16	1 5/16-12

### FJA

JIC/37° female swivel,  
45° tube elbow



#	Hose	Thread
4TA4FJA3	-03	7/16-20
4TA4FJA4	-04	7/16-20
4T6FJA5	-05	9/16-18
4TA6FJA6	-06	9/16-18
4TA8FJA6	-06	7/8-14
4TA8FJA8	-08	3/4-16
4TA10FJA8	-08	7/8-14

### FJB

JIC/37° female  
swivel, 90° elbow



#	Hose	Thread
4TA4FJB2	-02	7/16-20
4TA4FJB3	-03	7/16-20
4TA4FJB4	-04	7/16-20
4TA5FJB4	-04	1/2-20
4TA6FJB4	-04	9/16-18
4T6FJB5	-05	9/16-18
4TA6FJB6	-06	9/16-18
4TA8FJB6	-06	3/4-16
4TA8FJB8	-08	3/4-16
4TA10FJB8	-08	1 7/8-12
4TA12FJB12	-12	1 1/16-12

### FJC

JIC/37° female swivel,  
90° long drop tube  
elbow



#	Hose	Thread
4TA4FJC4	-04	7/8-14
4TA6FJC6	-06	9/16-18
4TA8FJC6	-06	3/4-16
4TA8FJC8	-08	3/4-16
4TA10FJC8	-08	7/8-14

### FP

NPTF female pipe



#	Hose	Thread
4TA4FP4	-04	1/4-18
4TA8FP8	-08	1/2-14

### FR

Female ORS  
swivel



#	Hose	Thread
4TA4FR2	-02	9/16-18
4TA4FR4	-04	9/16-18
4TA6FR4	-04	11/16-16
4TA6FR6	-06	11/16-16
4TA8FR6	-06	13/16-16
4TA8FR8	-08	13/16-16
4TA10FR8	-08	1-14
4TA10FR10	-10	1-14
4TA12FR12	-12	1 3/16-12

### FRA

Female ORS swivel,  
45° tube elbow



#	Hose	Thread
4TA4FRA4	-04	9/16-18
4TA6FRA6	-06	11/16-12

### FRB

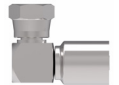
Female ORS swivel,  
90° tube elbow  
short drop



#	Hose	Thread
4TA4FRB2	-02	9/16-18
4TA4FRB4	-04	9/16-18
4TA6FRB4	-04	11/16-16
4TA6FRB6	-06	11/16-16
4TA8FRB8	-08	13/16-12

### GB

Male cone, 60° Block



#	Hose	Thread
4TA6GB6	-06	3/8-19

### MB

Male straight thread  
o-ring rigid



#	Hose	Thread
4TA4MB3	-03	7/16-20
4TA4MB4	-04	7/16-20
4TA5MB4	-04	1/2-20
4TA6MB4	-04	9/16-18
4TA6MB5	-05	1/2-20
4TA6MB6	-06	9/16-18
4TA8MB6	-06	3/4-16

## MC

Male STC



#	Hose	Thread
4TA10MCA8	-08	-10
4TA10MCB8	-08	-10
4TA10MC8	-08	-10
4TA8MCB8	-08	-08
4TA8MC8	-08	-08
4TA6MCA6	-06	-06
4TA6MCB6	-06	-06
4TA6MC6	-06	-06
4TA6MC4	-04	-06
4TA6MCA4	-04	-06
4TA6MCB4	-04	-06
4TA12MCB12	-12	-12
4TA12MC12	-12	-12
4TA10MC10	-10	-10

## MJ

JIC/37° male rigid



#	Hose	Thread
4TA4MJ3	-03	7/16-20
4TA4MJ4	-04	7/16-20
4TA5MJ4	-04	1/2-20
4TA5MJ5	-05	1/2-20
4TA6MJ4	-04	9/16-18
4TA6MJ5	-05	9/16-18
4TA6MJ6	-06	9/16-18
4TA8MJ6	-06	3/4-16
4TA8MJ8	-08	3/4-16
4TA10MJ8	-08	7/8-14

## MP

N.P.T.F. male pipe rigid



#	Hose	Thread
4TA2MP2	-02	1/8-27
4TA4MP2	-02	1/4-18
4TA2MP3	-03	1/8-27
4TA4MP3	-03	1/4-18
4TA2MP4	-04	1/8-27
4TA4MP4	-04	1/4-18
4T4MP5	-05	1/4-18
4TA4MP6	-06	1/4-18
4TA6MP4	-04	3/8-18
4T6MP5	-05	3/8-18
4TA6MP6	-06	3/8-18
4TA6MP8	-08	3/8-18
4TA8MP6	-06	1/2-14
4TA8MP8	-08	1/2-14
4TA12MP12	-12	3/4-14
4TA16MP16	-16	1-11 1/2

## MR

ORS Male



#	Hose	Thread
4TA4MR4	-04	9/16-18
4TA6MR6	-06	11/16-16
4TA8MR6	-06	13/16-16
4TA8MR8	-08	13/16-16

## NR

ORS female with non-slide back nut



#	Hose	Thread
4TA6NR6	-06	1 11/16-16
4TA10NR10	-10	1-14

## PF

Female pipe swivel



#	Hose	Thread
4TA4PF2	-02	1/4-18
4TA2PF3	-03	1/8-27
4TA4PF4	-04	1/4-18
4TA6PF6	-06	3/8-18

## PS

N.P.T.F. male pipe swivel



#	Hose	Thread
4TA2PS2	-02	1/8-27
4TA4PS4	-04	1/4-18
4TA4PS5	-05	1/4-18
4TA6PS6	-06	3/8-18
4TA8PS8	-08	1/2-14
4TA12PS12	-12	3/4-14

## SP

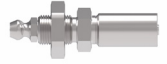
NPSM female pipe swivel



#	Hose	Thread
4TA4SP4	-04	1/4-18
4TA6SP6	-06	3/8-18
4TA8SP8	-08	1/2-14
4TA16SP16	-16	1-11 1/2

## ZB

NPSM Bulkhead with Grease Zerk and Jam Nut



#	Hose	Thread
4TA2ZB2	-02	1/8-27
4TA2ZB3	-03	1/8-27

## ZP

Zerk Male Tapered



#	Hose	Thread
4TA2ZP2	-02	1/4-28
4TA2ZP3	-03	1/4-28

## Reusable fittings



Male Pipe Swivel



#	Hose	Thread
90102-021400-0	-02	1/8-27

Male Pipe Rigid



#	Hose	Thread
90102-021000-0	-02	1/8-27
90203-041000-0	-03	1/4-28

Female JIC Swivel



#	Hose	Thread
90102-035500-0	-02	3/8-24
90102-045400-0	-02	7/16-20
90203-045400-0	-03	7/16-20

100R7 100R8 100R18



T-400



Dash size	Part type	Part number	Fitting					Hose			
			4TA					1A/Z w/ sleeve (FF91064)			
			3TR7	3TR7N	3TR8	3TR8N	3TR18CT	3TR7	3TR7N	3TR8	3TR8N
-02	Machine Bowl	T-400-8	X								
	Collet	ET1000DC-M065S	X								
	Spacer Ring	ET313SR-120D	X								
-03	Machine Bowl	T-400-8	X	X							
	Collet	ET1000DC-M095S	X	X							
	Spacer Ring	T-400-10	X	X							
-04	Machine Bowl	T-400-8	X	X	X	X	X	X	X		
	Collet	T-400-109C	X	X	X	X	X				
	Collet	T-400-121C						X	X		
	Spacer Ring	T-400-37					X				
	Spacer Ring	ET313SR-045A	X	X							
	Spacer Ring	ET1000SR-M190D			X	X					
	Spacer Ring	T-400-46						X	X		
-05	Machine Bowl	T-400-8	X	X			X				
	Collet	T-400-121C	X	X			X				
	Spacer Ring	ET1000SR-M190D					X				
	Spacer Ring	T-400-47R	X	X							
-06	Machine Bowl	T-400-8	X	X	X	X	X	X	X	X	X
	Collet	T-400-110C	X	X	X	X	X				
	Collet	ET401DC-M195S						X	X	X	X
	Spacer Ring	ET1000SR-M100A					X				
	Spacer Ring	ET313SR-045A	X	X							
	Spacer Ring	ET313SR-060D			X	X					
	Spacer Ring	T-400-37						X	X		
	Spacer Ring	T-400-10								X	X
-08	Machine Bowl	T-400-8	X	X	X	X	X	X	X	X	X
	Collet	T-400-41C	X	X	X	X	X				
	Collet	ET401DC-M230S						X	X	X	X
	Spacer Ring	ET1000SR-M265D					X				
	Spacer Ring	ET1000SR-M190D	X	X							
	Spacer Ring	ET1000SR-M395D			X	X					
	Spacer Ring	T-400-62								X	X
	Spacer Ring	T-400-10						X	X		

100R7 100R8 100R18



T-460



T-462



T-465



Dash size	Part type	Part number	Fitting					1A/Z w/ sleeve (FF91064)			
			4TA					1A/Z w/ sleeve (FF91064)			
Hose			3TR7	3TR7N	3TR8	3TR8N	3TR18CT	3TR7	3TR7N	3TR8	3TR8N
-02	Machine Bowl	Integrated	X								
	Collet	ET1000DC-M065S	X								
	Spacer Ring	ET313SR-120D	X								
-03	Machine Bowl	Integrated	X	X							
	Collet	ET1000DC-M095S	X	X							
	Spacer Ring	T-400-10	X	X							
-04	Machine Bowl	Integrated	X	X	X	X	X	X	X		
	Collet	T-400-109C	X	X	X	X	X				
	Collet	T-400-121C						X	X		
	Spacer Ring	T-400-37					X				
	Spacer Ring	ET313SR-045A	X	X							
	Spacer Ring	ET1000SR-M190D			X	X					
	Spacer Ring	T-400-46						X	X		
-05	Machine Bowl	Integrated	X	X			X				
	Collet	T-400-121C	X	X			X				
	Spacer Ring	ET1000SR-M190D					X				
	Spacer Ring	T-400-47R	X	X							
-06	Machine Bowl	Integrated	X	X	X	X	X	X	X	X	X
	Collet	T-400-110C	X	X	X	X	X				
	Collet	ET401DC-M195S						X	X	X	X
	Spacer Ring	ET1000SR-M100A					X				
	Spacer Ring	ET313SR-045A	X	X							
	Spacer Ring	ET313SR-060D			X	X					
	Spacer Ring	T-400-37						X	X		
-08	Machine Bowl	Integrated	X	X	X	X	X	X	X	X	X
	Collet	T-400-41C	X	X	X	X	X				
	Collet	ET401DC-M230S						X	X	X	X
	Spacer Ring	ET1000SR-M265D					X				
	Spacer Ring	ET1000SR-M190D	X	X							
	Spacer Ring	ET1000SR-M395D			X	X					
	Spacer Ring	T-400-62						X	X		
Spacer Ring	T-400-10								X	X	

100R7 100R8 100R18



T-420



Dash size	Part type	Part number	4TA					1A/Z w/ sleeve (FF91064)			
			3TR7	3TR7N	3TR8	3TR8N	3TR18CT	3TR7	3TR7N	3TR8	3TR8N
-02	Machine Bowl	T-420-26	X								
	Adapter Bowl	T-420-25	X								
	Collet	ET1000DC-M065S	X								
	Spacer Ring	ET313SR-120D	X								
-03	Machine Bowl	T-420-26	X	X							
	Adapter Bowl	T-420-25	X	X							
	Collet	ET1000DC-M095S	X	X							
	Spacer Ring	T-400-10	X	X							
-04	Machine Bowl	T-420-26	X	X	X	X	X	X	X		
	Adapter Bowl	T-420-25	X	X	X	X	X	X	X		
	Collet	T-400-109C	X	X	X	X	X				
	Collet	T-400-121C						X	X		
	Spacer Ring	T-400-37								X	
	Spacer Ring	ET313SR-045A	X	X							
	Spacer Ring	ET1000SR-M190D			X	X					
	Spacer Ring	T-400-46						X	X		
-05	Machine Bowl	T-420-26	X	X			X				
	Adapter Bowl	T-420-25	X	X			X				
	Collet	T-400-121C	X	X			X				
	Spacer Ring	ET1000SR-M190D							X		
	Spacer Ring	T-400-47R	X	X							
-06	Machine Bowl	T-420-26	X	X	X	X	X	X	X	X	
	Adapter Bowl	T-420-25	X	X	X	X	X	X	X	X	
	Collet	T-400-110C	X	X	X	X	X				
	Collet	ET401DC-M195S						X	X	X	
	Spacer Ring	ET1000SR-M100A								X	
	Spacer Ring	ET313SR-045A	X	X							
	Spacer Ring	ET313SR-060D			X	X					
	Spacer Ring	T-400-37						X	X		
	Spacer Ring	T-400-10								X	
	Spacer Ring	T-400-10								X	
-08	Machine Bowl	T-420-26	X	X	X	X	X	X	X	X	
	Adapter Bowl	T-420-25	X	X	X	X	X	X	X	X	
	Collet	T-400-41C	X	X	X	X	X				
	Collet	ET401DC-M230S						X	X	X	
	Spacer Ring	ET1000SR-M190D	X	X							
	Spacer Ring	ET1000SR-M395D			X	X					
	Spacer Ring	T-400-62						X	X		
	Spacer Ring	T-400-10								X	
-10	Machine Bowl	T-420-26	X	X			X				
	Collet	ET1000DC-M250S	X	X			X				
	Spacer Ring	T-400-46R								X	
	Spacer Ring	ET420SR-M495A	X	X							
-12	Machine Bowl	T-420-26	X	X	X	X		X	X	X	
	Collet	T-420-30C	X	X	X	X					
	Collet	ET1000DC-M295S						X	X		
	Collet	T-420-86C								X	
	Spacer Ring	T-420-29	X	X							
	Spacer Ring	T-400-10			X	X					
-16	Spacer Ring	ET1000SR-M115D						X	X		
	Spacer Ring	ET420SR-M215A								X	
	Machine Bowl	T-420-26	X	X	X	X		X	X	X	
	Collet	T-421-10C	X	X	X	X					
	Collet	ET1001DC-M390S						X	X	X	
	Spacer Ring	ET420SR-M660A	X	X							
-16	Spacer Ring	ET425SR-240A			X	X					
	Spacer Ring	ET420SR-M215A						X	X	X	

100R7 100R8 100R18



T-480



Dash size	Part type	Part number	Fitting					Hose			
			4TA					1A/Z w/ sleeve (FF91064)			
			3TR7	3TR7N	3TR8	3TR8N	3TR18CT	3TR7	3TR7N	3TR8	3TR8N
-02	Machine Bowl	T-420-26	X								
	Adapter Bowl	T-420-25	X								
	Collet	ET1000DC-M065S	X								
	Spacer Ring	ET313SR-120D	X								
-03	Machine Bowl	T-420-26	X	X							
	Adapter Bowl	T-420-25	X	X							
	Collet	ET1000DC-M095S	X	X							
	Spacer Ring	T-400-10	X	X							
-04	Machine Bowl	T-420-26	X	X	X	X	X	X	X		
	Adapter Bowl	T-420-25	X	X	X	X	X	X	X		
	Collet	T-400-109C	X	X	X	X	X				
	Collet	T-400-121C						X	X		
	Spacer Ring	T-400-37	X	X							
	Spacer Ring	ET1000SR-M190D			X	X					
-05	Machine Bowl	T-420-26	X	X			X				
	Adapter Bowl	T-420-25	X	X			X				
	Collet	T-400-121C	X	X			X				
	Spacer Ring	ET1000SR-M190D	X	X			X				
	Machine Bowl	T-420-26	X	X	X	X	X	X	X	X	X
	Adapter Bowl	T-420-25	X	X	X	X	X	X	X	X	X
-06	Collet	T-400-110C	X	X	X	X	X				
	Collet	ET401DC-M195S						X	X	X	X
	Spacer Ring	ET1000SR-M100A	X	X			X				
	Spacer Ring	ET313SR-060D			X	X					
	Spacer Ring	T-400-37						X	X		
	Spacer Ring	T-400-10								X	X
	Machine Bowl	T-420-26	X	X	X	X	X	X	X	X	X
-08	Adapter Bowl	T-420-25	X	X	X	X	X	X	X	X	X
	Collet	T-400-41C	X	X	X	X	X				
	Collet	ET401DC-M230S						X	X	X	X
	Spacer Ring	ET1000SR-M265D					X				
	Spacer Ring	ET1000SR-M190D	X	X							
	Spacer Ring	ET1000SR-M395D			X	X					
	Spacer Ring	T-400-62						X	X		
-10	Machine Bowl	T-420-26	X	X			X				
	Collet	ET1000DC-M250S	X	X			X				
	Spacer Ring	T-400-46R	X	X			X				
	Spacer Ring	ET420SR-M495A									
-12	Machine Bowl	T-420-26	X	X	X	X		X	X	X	X
	Collet	T-420-30C	X	X	X	X					
	Collet	ET1000DC-M295S						X	X		
	Collet	T-420-86C								X	X
	Spacer Ring	T-420-29	X	X							
	Spacer Ring	T-400-10			X	X					
-16	Machine Bowl	ET1000SR-M115D						X	X		
	Spacer Ring	ET420SR-M215A								X	X
	Machine Bowl	T-420-26	X	X	X	X		X	X	X	X
	Collet	T-421-10C	X	X	X	X					
	Collet	ET1001DC-M390S						X	X	X	X
	Spacer Ring	ET425SR-240A	X	X							
Spacer Ring	ET420SR-M215A			X	X		X	X	X	X	

100R7 100R8 100R18



ET4000



ET4001



Dash size	Part type	Part number	Fitting					1A/Z w/ sleeve (FF91064)				
			4TA									
			3TR7	3TR7N	3TR8	3TR8N	3TR18CT	3TR7	3TR7N	3TR8	3TR8N	
-03	Machine Bowl	ET4000AR-001	X	X								
	Adapter Bowl	T-410-25	X	X								
	Collet	ET1000DC-M095S	X	X								
	Spacer Ring	T-410-10	X	X								
-04	Machine Bowl	ET4000AR-001	X	X	X	X	X	X	X			
	Adapter Bowl	T-410-25	X	X	X	X	X	X	X			
	Collet	T-400-109C	X	X	X	X	X					
	Collet	T-400-121C							X	X		
	Spacer Ring	T-410-39										
	Spacer Ring	ET4000SR-M100A	X	X								
	Spacer Ring	ET4000SR-M190D			X	X						
-05	Machine Bowl	ET4000AR-001	X	X								
	Adapter Bowl	T-410-25	X	X								
	Collet	T-400-121C	X	X								
	Spacer Ring	ET4000SR-M190D										
	Spacer Ring	T-440-79R	X	X					X	X		
-06	Machine Bowl	ET4000AR-001	X	X	X	X	X	X	X	X	X	X
	Adapter Bowl	T-410-25	X	X	X	X	X	X	X	X	X	
	Collet	T-400-110C	X	X	X	X	X					
	Collet	ET401DC-M195S							X	X	X	X
	Spacer Ring	ET4000SR-M100A	X	X								
	Spacer Ring	T-440-79R			X	X						
	Spacer Ring	T-410-39							X	X		
	Spacer Ring	T-400-10									X	X
-08	Machine Bowl	ET4000AR-001	X	X	X	X	X	X	X	X	X	X
	Adapter Bowl	T-410-25	X	X	X	X	X	X	X	X	X	X
	Collet	T-400-41C	X	X	X	X	X					
	Collet	ET401DC-M230S							X	X	X	X
	Spacer Ring	T-410-10										
	Spacer Ring	ET4000SR-M190D	X	X								
	Spacer Ring	T-410-11			X	X						
	Spacer Ring	T-410-41							X	X		
-10	Machine Bowl	ET4000AR-001										
	Collet	T-440-85C										
	Spacer Ring	ET4000SR-M405A										
-12	Machine Bowl	ET4000AR-001	X	X	X	X			X	X	X	X
	Collet	T-440-85C	X	X	X	X						X
	Collet	ET4000DC-M320S							X	X		
	Collet	T-440-86C									X	
	Spacer Ring	ET4000SR-M405A	X	X								
	Spacer Ring	ET4000SR-M180A			X	X					X	X
-16	Machine Bowl	ET4000AR-001	X	X	X	X			X	X	X	X
	Collet	T-470-16C	X	X	X	X						
	Collet	ET4001DC-M380S							X	X	X	X
	Spacer Ring	ET4000SR-M560A	X	X								
	Spacer Ring	ET525SR-195A			X	X						
	Spacer Ring	T-440-82R							X	X	X	X



100R7 100R8 100R18



T410 and T440



Dash size	Part type	Part number	Fitting					1A/Z w/ sleeve (FF91064)				
			4TA									
			Hose	3TR7	3TR7N	3TR8	3TR8N	3TR18CT	3TR7	3TR7N	3TR8	3TR8N
-03	Machine Bowl	T-410-26	X	X								
	Adapter Bowl	T-410-25	X	X								
	Collet	ET1000DC-M095S	X	X								
	Spacer Ring	T-410-10	X	X								
-04	Machine Bowl	T-410-26	X	X	X	X	X	X	X			
	Adapter Bowl	T-410-25	X	X	X	X	X	X	X			
	Collet	T-400-109C	X	X	X	X	X					
	Collet	T-400-121C						X	X			
	Spacer Ring	T-410-39					X					
	Spacer Ring	ET4000SR-M100A	X	X								
	Spacer Ring	ET4000SR-M190D			X	X						
-05	Machine Bowl	T-410-26	X	X			X					
	Adapter Bowl	T-410-25	X	X			X					
	Collet	T-400-121C	X	X			X					
	Spacer Ring	ET4000SR-M190D					X					
	Spacer Ring	T-440-79R	X	X								
-06	Machine Bowl	T-410-26	X	X	X	X	X	X	X	X	X	X
	Adapter Bowl	T-410-25	X	X	X	X	X	X	X	X	X	X
	Collet	T-400-110C	X	X	X	X	X					
	Collet	ET401DC-M195S						X	X	X	X	
	Spacer Ring	ET4000SR-M100A	X	X			X					
	Spacer Ring	T-440-79R			X	X						
	Spacer Ring	T-410-39						X	X			
-08	Machine Bowl	T-410-26	X	X	X	X	X	X	X	X	X	X
	Adapter Bowl	T-410-25	X	X	X	X	X	X	X	X	X	X
	Collet	T-400-41C	X	X	X	X	X					
	Collet	ET401DC-M230S						X	X	X	X	
	Spacer Ring	T-410-10					X			X	X	
	Spacer Ring	ET4000SR-M190D	X	X								
	Spacer Ring	T-410-11			X	X						
	Spacer Ring	T-410-41						X	X			
-10	Machine Bowl	T-410-26					X					
	Collet	T-440-85C					X					
	Spacer Ring	ET4000SR-M405A					X					
-12	Machine Bowl	T-410-26	X	X	X	X		X	X	X	X	
	Collet	T-440-85C	X	X	X	X						
	Collet	ET4000DC-M320S						X	X			
	Collet	T-440-86C								X	X	
	Spacer Ring	ET4000SR-M405A	X	X								
	Spacer Ring	ET4000SR-M180A			X	X				X	X	
-16	Machine Bowl	T-410-26	X	X	X	X		X	X	X	X	
	Collet	T-470-16C	X	X	X	X						
	Collet	ET4001DC-M380S						X	X	X	X	
	Spacer Ring	ET4000SR-M560A	X	X								
	Spacer Ring	ET525SR-195A			X	X						
	Spacer Ring	T-440-82R						X	X	X	X	



100R7 100R8 100R18



ET1000

Dash size	Part type	Part number	Fitting					1A/Z w/ sleeve (FF91064)				
			4TA									
			Hose	3TR7	3TR7N	3TR8	3TR8N	3TR18CT	3TR7	3TR7N	3TR8	3TR8N
-02	Machine Bowl	ET1000AR-001	X									
	Collet	ET1000DC-M065S	X									
	Spacer Ring	ET313SR-120D	X									
-03	Machine Bowl	ET1000AR-001	X	X								
	Collet	ET1000DC-M095S	X	X								
	Spacer Ring	T-400-10	X	X								
-04	Adapter Bowl	ET1000AR-001	X	X	X	X	X	X	X			
	Collet	T-400-109C	X	X	X	X	X					
	Collet	T-400-121C						X	X			
	Collet	ET401DC-M195S										
	Spacer Ring	T-400-37	X	X			X					
	Spacer Ring	ET1000SR-M190D			X	X						
	Spacer Ring	T-400-46						X	X			
-05	Adapter Bowl	ET1000AR-001	X	X								
	Collet	T-400-121C	X	X								
	Spacer Ring	ET1000SR-M190D	X	X								
-06	Adapter Bowl	ET1000AR-001	X	X	X	X	X	X	X	X	X	X
	Collet	T-400-110C	X	X	X	X	X					
	Collet	ET401DC-M195S						X	X	X	X	
	Spacer Ring	ET1000SR-M100A	X	X								
	Spacer Ring	ET313SR-060D			X	X						
	Spacer Ring	T-400-37						X	X			
	Spacer Ring	ET1000C-0012									X	X
-08	Adapter Bowl	ET1000AR-001	X	X	X	X	X	X	X	X	X	X
	Collet	T-400-41C	X	X	X	X	X					
	Collet	ET401DC-M230S						X	X	X	X	
	Spacer Ring	ET1000SR-M265D										
	Spacer Ring	ET1000SR-M190D	X	X								
	Spacer Ring	ET1000SR-M395D			X	X						
	Spacer Ring	T-400-62						X	X			
-10	Spacer Ring	T-400-10								X	X	
	Collet	ET1000DC-M250S	X	X								
	Spacer Ring	T-400-46R	X	X								
-12	Collet	T-420-30C	X	X	X	X						
	Collet	ET1000DC-M295S						X	X			
	Collet	T-420-86C									X	X
	Spacer Ring	T-420-29	X	X								
	Spacer Ring	ET1000C-0012			X	X						
	Spacer Ring	ET1000SR-M115D						X	X			
	Spacer Ring	ET420SR-M215A									X	X
-16	Collet	T-421-10C	X	X	X	X						
	Collet	ET1001DC-M390S						X	X	X	X	
	Spacer Ring	ET420SR-M660A	X	X								
	Spacer Ring	ET425SR-240A			X	X						
	Spacer Ring	ET420SR-M215A						X	X	X	X	

100R7 100R8 100R18



FT1380



ET1187



FT1390



Dash size	Machine	Die cage part number	4TA					1A/Z w/ sleeve (FF91064)					
			3TR7	3TR7N	3TR8	3TR8N	3TR18CT	3TR7	3TR7N	3TR8	3TR8N		
-02	FT1380	FT1380-275-M090	69										
	ET1187	FT1380-275-M090	69										
	FT1390	FT1307-200-M090	223										
-03	FT1380	FT1380-275-M120	49	49									
	ET1187	FT1380-275-M120	49	49									
	FT1390	FT1307-200-M120	205	205									
-04	FT1380	FT1380-200-M150	40	40			40	80	80				
	ET1187	FT1380-200-M165			45	45							
		FT1380-275-M150	40	40			40	80	80				
-05	FT1380	FT1380-200-M150	100	100			108						
	ET1187	FT1380-275-M150	100	100			108						
	FT1390	FT1307-200-M150	262	262			270						
-06	FT1380	FT1380-200-M180	55	55	35	35	60	105	105				
		FT1380-275-M180	55	55	35	35	60	105	105				
	ET1187	FT1380-200-M200			35								
		FT1380-275-M200			35	35							
	FT1390	FT1380-200-M210									35	35	
		FT1380-275-M210									35	35	
-08	FT1380	FT1307-200-M180	221	221	279	279	225	271	271				
		FT1307-200-M210									193	193	
	ET1187	FT1380-200-M210	80	80	115	115	90						
		FT1380-275-M210	80	80	115	115	90						
	FT1390	FT1380-200-M240						50	50	100	100		
		FT1380-275-M240						50	50	100	100		
-10	FT1380	FT1307-200-M210	243	243	288	288	260	223	223	237	237		
		FT1307-200-M240											
	ET1187	FT1380-200-M280					15						
		FT1380-275-M280					15						
	FT1390	FT1381-200-M280					15						
		FT1380-200-M240	94	94									
-12	FT1380	FT1380-200-M240	94	94									
		FT1380-275-M240	94	94									
	ET1187	FT1307-200-M240	263	263									
		FT1380-200-M280	15	15	50	50							
	FT1390	FT1380-275-M280	15	15	50	50							
		FT1381-200-M280	15	15	50	50							
-16	FT1380	FT1380-200-M320						35	35	50	50		
		FT1380-275-M320						35	35	50	50		
	ET1187	FT1381-200-M320						35	35	50	50		
		FT1381-275-M320								50	50		
	FT1390	FT1307-200-M280	160	160	224	224		363	363				
		FT1307-200-M320						205	205	241	241		
-18	FT1380	FT1380-200-M370	30	30	45	45		155	155	45	45		
		FT1380-275-M370	30	30	45	45		155	155	45	45		
	ET1187	FT1381-200-M370	30	30	45	45		155	155	45	45		
		FT1381-275-M370	30	30	45	45		155	155	45	45		
	FT1390	FT1382-200-M370	30	30	45	45		155	155	45	45		
		FT1382-275-M370	30	30	45	45		155	155	45	45		
FT1390	FT1307-200-M370	211	211	223	223		329	329	334	334			

# 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		Resistance Rating Key	
N = Nylon	H = Polyester	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	Diethyl Phosphate	G L	Hydrogen Peroxide (conc.)	P P
Bromine	P P	Diethylphthalate	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		

	N	H
Lead Arsenate	G	G
Lead Sulphate	G	G
Lead Tetramethyl	G	G
Lime	G	G
Linseed Cake	G	G
Linseed Oil	G	G
Lubricating Oils, Petroleum Base	G	G
†Lubricating Oils, Diester Base	G	L
Magnesium Chloride	G	G
Magnesium Hydroxide (<20%)	G	L
Magnesium Sulphate	G	G
Maleic Acid	G	L
Mercuric Chloride	G	G
Mercury	G	G
**Methane	G	G
Methanol	G	L
Methyl Acetate	G	L
Methyl Bromide	L	P
Methyl Chloride	G	P
Methyl Sulphate	G	G
Methylethylketone (MEK)	G	L
Methylisobutylketone (MIBK)	G	L
*Milk	G	G
Mineral Oil	G	G
Molasses	G	G
Mustard	G	G
Naphtha	G	L
Naphthalene	G	L
Nickel Chloride	P	P
Nicotine	G	G
Nitric Acid (<20%)	L	L
Nitric Acid (>20%)	L	P
Nitrobenzene	G	P
* Nitrous Oxide	G	G
Oil	G	G
* Oil of Turpentine	G	G
Oleic Acid	G	G
OS 45 Monsanto Hydraulic Fluid (Silicate Ester Base)	G	L
Oxalic Acid (-30%)	G	L
Oxygen	Refer to Factory	
Ozone	G	G
Paint (Oil Base)	G	G
Paint Solvents (Oil Base)	G	L
Palmitic Acid	G	G
Pentane	G	G
Perchloric Acid	P	P
Perchloroethylene	G	P

	N	H
Petroleum Oils (Sour)	G	L
Petroleum Oils (Refined)	G	G
Phenolates	L	L
Phenols	P	P
Phosphoric Acid	G	P
Picric Acid	L	P
Potash (Potassium Hydroxide)	L	P
Potassium Chloride	G	G
Potassium Hydroxide (50% conc.)	L	P
Potassium Nitrate	G	G
Potassium Permanganate (5% conc.)	P	P
Potassium Sulphate	G	G
Propane	G	G
†Pydraul (Stauffer) F-9, 150, 600, 625	G	L
Pyrethrum	G	G
Pyridine	L	L
†Sea Water	G	G
†Skydrol Monsanto 500, 7000	G	P
†Soap Solution (conc.)	G	G
* † Soda Water	G	G
Sodium Bicarbonate	G	G
Sodium Bisulfite	G	G
Sodium Borate	G	G
Sodium Carbonate	G	G
Sodium Chloride	G	G
Sodium Cyanide	G	G
Sodium Hydroxide (<20%)	G	L
Sodium Hypochlorite	L	L
Sodium Nitrate	G	G
†Sodium Phosphate Solution	G	G
Sodium Silicate	G	G
Sodium Sulphate	G	G
Sodium Thiosulphate	G	G
Solutions/Emulsions 2-4D DDT Preparation Hydroxy Quinoline	G	NT
Stannous Chloride	L	G
Steam	P	P
Stearic Acid	G	G
Stearin	G	G
Stoddard Solvent	G	P
Styrene	G	L
Sulphur	G	G
Sulphur Dioxide	P	P
Sulphur Trioxide	L	P
Sulphur Acid (dil.)	L	LP
Sulphur Acid (conc.)	P	P
Sulphurous Acid	P	LP
Tannic Acid	G	L

	N	H
Tar Oil	G	G
Tartaric Acid	G	G
Toluene	G	L
Toluol	G	L
Tributyl Phosphate	G	L
Tricesylphosphate	G	L
Trichloroacetic Acid	P	P
Trichloroethylene	G	P
†Trisodium Phosphate Solution	G	L
Turpentine	G	G
†Ucon Union Carbide (Hydraulic Fluid Water Glycol Base)	G	L
Urea	G	L
Uric Acid	G	P
Varnish	G	G
Vinegar	G	L
† Water (150°F)	G	G
White and Bagley No. 2190 Cutting Oil	G	NT
*Wine	G	G
Wool Oil	G	G
Xylol	G	L
Xylene	G	L
Zinc Chloride	G	G
Zinc Hydrate	P	L
Zinc Sulphate	P	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
- ‰ Recommended operating temperature not to exceed +100°F (+37.8°C)

### Hose Material Reference Chart

Series	Core
3TR7	Nylon
3TR7N	Nylon
3TR8	Nylon
3TR8N	Nylon
3TR18CT	Polyester

## Synflex Optimum

by Danfoss

Danfoss Power Solutions, Nordborgvej 81, 6430 Nordborg, Denmark, Tel. +45 74 88 22 22, Fax +45 74 65 25 80  
www.danfoss.com, E-mail: info@danfoss.com

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