

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



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



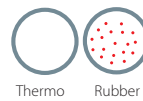
Bonding capabilities

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)

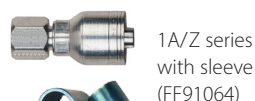
3TR7 supersedes

3130, 3160

3TR7N supersedes

3740, 37AL

Approved fittings



Inner tube

Nylon

Reinforcement:

1 textile braid

Cover

Nonstick polyurethane

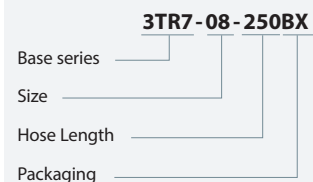
3TR7 perforated

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

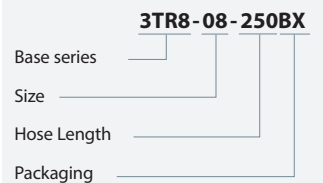
3TR8 perforated

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



4TA series

3TR18CT supersedes

30CT

Inner tube

Polyester

Reinforcement

2 textile braid

Cover

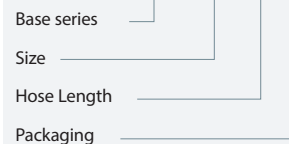
Nonstick polyester
3TR18CT perforated

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

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



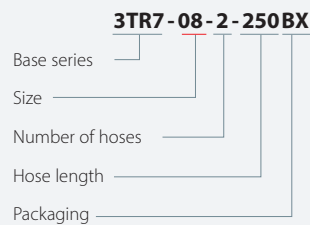
Part #	Number of hose
3TR8N-04-2-250BX	2
3TR8N-06-2-250BX	2
3TR8N-08-2-250BX	2
3TR8N-12-2-250BX	2
3TR8N-16-2-250BX	2

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

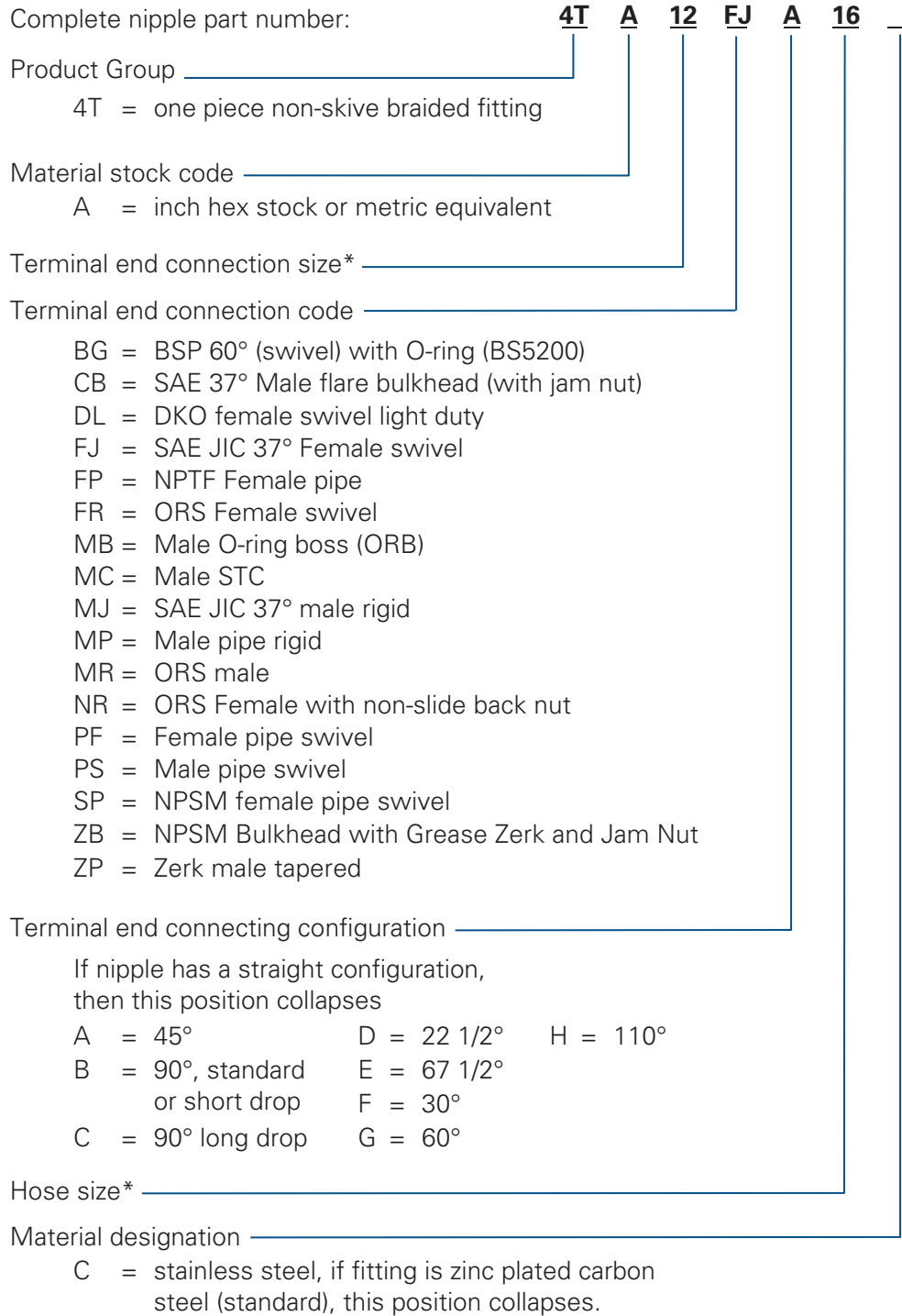
Corrosion resistance

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



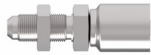
* When ordering sizes 3, 4, 5, 6 and 8 the part number requires only single digits

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

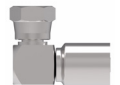
Female ORS swivel,
90° tube elbow
short drop



#	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

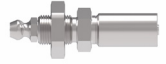
NPSM female pipe swivel



#	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	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							
-05	Machine Bowl	T-400-8									
	Collet	T-400-121C	X	X							
	Spacer Ring	ET1000SR-M190D					X				
	Spacer Ring	T-400-47R	X	X							
	Machine Bowl	T-400-8	X	X	X	X	X	X	X	X	
-06	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		
-08	Machine Bowl	T-400-8	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-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	4TA					1A/Z w/ sleeve (FF91064)			
			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	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				
	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	X
	Adapter Bowl	T-420-25	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	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
	Spacer Ring	T-400-10								X	X
-08	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
	Collet	T-400-41C	X	X	X	X	X				
	Collet	ET401DC-M230S						X	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	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	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	Spacer Ring	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	ET420SR-M660A	X	X							
-16	Spacer Ring	ET425SR-240A			X	X					
	Spacer Ring	ET420SR-M215A						X	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	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	ET420SR-M660A	X	X							
	Spacer Ring	ET425SR-240A			X	X					
	Spacer Ring	ET420SR-M215A						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	
Hose												
-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									X	
	Spacer Ring	ET4000SR-M100A	X	X								
-05	Spacer Ring	ET4000SR-M190D			X	X						
	Spacer Ring	T-410-78R							X	X		
	Machine Bowl	ET4000AR-001	X	X							X	
	Adapter Bowl	T-410-25	X	X							X	
	Collet	T-400-121C	X	X							X	
-06	Spacer Ring	ET4000SR-M190D									X	
	Spacer Ring	T-440-79R	X	X								
	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				X	X
	Collet	ET401DC-M195S								X	X	X
	Spacer Ring	ET4000SR-M100A	X	X					X			
	Spacer Ring	T-440-79R			X	X						
-08	Spacer Ring	T-410-39							X	X		
	Spacer Ring	T-400-10									X	X
	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									X	
	Spacer Ring	ET4000SR-M190D	X	X								
	Spacer Ring	T-410-11			X	X						
	Spacer Ring	T-410-41							X	X		
-10	Spacer Ring	T-400-10									X	X
	Machine Bowl	ET4000AR-001									X	
	Collet	T-440-85C									X	
-12	Spacer Ring	ET4000SR-M405A									X	
	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								
-16	Spacer Ring	ET4000SR-M180A			X	X					X	X
	Spacer Ring	ET4000SR-M560A							X	X		
	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								
-16	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	4TA					1A/Z w/ sleeve (FF91064)				
			Fitting					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	



Fitting

4TA

1A/Z w/ sleeve (FF91064)

Hose

3TR7

3TR7N

3TR8

3TR8N

3TR18CT

3TR7

3TR7N

3TR8

3TR8N

100R7 100R8 100R18



ET1000

Dash size	Part type	Part number	4TA					1A/Z w/ sleeve (FF91064)			
			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			X				
	Collet	T-400-121C	X	X			X				
	Spacer Ring	ET1000SR-M190D	X	X			X				
-06	Adapter Bowl	ET1000AR-001	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			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
	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	Spacer Ring	T-400-10							X	X	
	Collet	ET1000DC-M250S	X	X			X				
	Spacer Ring	T-400-46R	X	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	Fitting					Hose				
			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 ET1187	FT1380-200-M180	55	55	35	35	60	105	105			
		FT1380-275-M180	55	55	35	35	60	105	105			
		FT1380-200-M200			35							
	FT1390	FT1380-275-M200			35	35					35	35
		FT1380-200-M210									35	35
		FT1307-200-M180	221	221	279	279	225	271	271			
-08	FT1380 ET1187	FT1307-200-M210								193	193	
		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	
		FT1307-200-M210	243	243	288	288	260	223	223	237	237	
-10	FT1380 ET1187	FT1380-200-M280					15					
		FT1380-275-M280					15					
		FT1381-200-M280					15					
	FT1390	FT1380-200-M240	94	94								
		FT1380-275-M240	94	94								
		FT1307-200-M240	263	263								
-12	FT1380 ET1187	FT1380-200-M280	15	15	50	50						
		FT1380-275-M280	15	15	50	50						
		FT1381-200-M280	15	15	50	50						
	FT1390	FT1380-200-M320						35	35	50	50	
		FT1380-275-M320						35	35	50	50	
		FT1381-200-M320						35	35	50	50	
-16	FT1380 ET1187	FT1381-275-M320								50	50	
		FT1307-200-M280	160	160	224	224		363	363			
		FT1307-200-M320						205	205	241	241	
	FT1390	FT1380-200-M370	30	30	45	45		155	155	45	45	
		FT1380-275-M370	30	30	45	45		155	155	45	45	
		FT1381-200-M370	30	30	45	45		155	155	45	45	
FT1390	FT1381-275-M370	30	30	45	45		155	155	45	45		
	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

Any information, including, but not limited to information on selection of product, its application or use, product design, weight, dimensions, capacity or any other technical data in product manuals, catalogues, descriptions, advertisements, etc. and whether made available in writing, orally, electronically, online or via download, shall be considered informative, and is only binding if and to the extent, explicit reference is made in a quotation or order confirmation. Danfoss cannot accept any responsibility for possible errors in catalogues, brochures, videos and other material. Danfoss reserves the right to alter its products without notice. This also applies to products ordered but not delivered provided that such alterations can be made without changes to form, fit or function of the product. All trademarks in this material are property of Danfoss A/S or Danfoss group companies. Danfoss and the Danfoss logo are trademarks of Danfoss A/S. All rights reserved.