

ENGINEERING
TOMORROW

Danfoss

Synflex Optimum by Danfoss

Design **reimagined**

Thermoplastic hydraulic hoses and fittings



Synflex Optimum by Danfoss 3TR18CT

Synflex by Danfoss 3TMH

Synflex Optimum by Danfoss 3TR7

Synflex Optimum by Danfoss 3TR8N

Synflex Optimum by Danfoss 3TR8



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



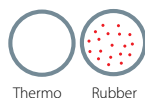
Bonding capabilities

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



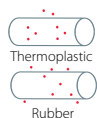
Longer Lasting

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 901/902 series



Features:

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

100R7

Standard 1A / Z series



Features:

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

100R7 100R8







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

Synflex Optimum by Danfoss **3TR7**

3TR7N Non-conductive

Synflex Optimum by Danfoss **3TR7N**

92.2 ANSI (-4 thru -10)

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

3TR7 supersedes

3130, 3160, 3DH0, 3CH0

3TR7N supersedes

3740, 37AL

Approved fittings



4TA series



1A/Z series
with sleeve
(FF91064)



901/902 series

Inner tube

Nylon

Reinforcement

1 textile braid

Cover

Nonstick polyurethane

3TR7 perforated

3TR7N non-perforated

Typical platforms

- Material handling
- Agriculture
- Horticulture
- Chemical transfer
- Foam system
- Food processing
- Forestry delimber
- 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

3TR7-08-250BX

Base series _____

Size _____

Hose Length _____

Packaging _____

BC: continuous length in box (76 m | 249.34 ft)

BX: minimum 6.5 m (21.33 ft) lengths, with up to 3 random lengths, cover 76 m (249.34 ft)

Options on demand

RL: random length reel

R: continuous length on reel

3TR8

Synflex Optimum by Danfoss **3TR8**

3TR8N Non-conductive

Synflex Optimum by Danfoss **3TR8N**

#	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
3TR8-04-250BX 3TR8N-04-250BX	6.4	0.25	15.0	0.59	350	5,100	1,400	20,400	38.1	1.50	0.16	0.11
3TR8-06-250BX 3TR8N-06-250BX	9.5	0.38	19.0	0.75	280	4,500	1,120	16,200	57.2	2.25	0.23	0.15
3TR8-08-250BX 3TR8N-08-250BX	12.7	0.50	22.8	0.90	245	3,550	980	14,200	76.2	3.00	0.29	0.20
3TR8-12-250BX 3TR8N-12-250BX	19.0	0.75	28.8	1.13	157	2,300	628	9,200	114.3	4.50	0.38	0.25
3TR8-16-250BX 3TR8N-16-250BX	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



4TA series



1A/Z series
with sleeve
(FF91064) *



* Sizes -06, -08, -12, -16 only!

Inner tube

Nylon

Reinforcement

2 textile braid

Cover

Nonstick polyurethane

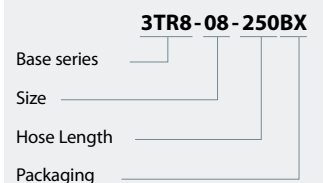
3TR8 perforated

3TR8N non-perforated

Typical platforms

- Material handling
- Air tools
- Cooling/misting/dust suppression
- Forestry delimber
- 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 | 249.34 ft)

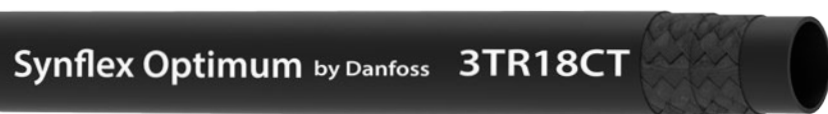
BX: minimum 6.5 m (21.33 ft)
lengths, with up to 3 random
lengths, cover 76 m (249.34 ft)

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
3TR18CT-04-250BX	6.4	0.25	12.2	0.48	210	3,050	840	12,200	31.8	1.25	0.09	0.06
3TR18CT-05-250BX	7.9	0.31	14.8	0.58	210	3,050	840	12,200	38.1	1.50	0.15	0.10
3TR18CT-06-250BX	9.5	0.38	16.8	0.66	210	3,050	840	12,200	50.8	2.00	0.16	0.11
3TR18CT-08-250BX	12.7	0.50	21.6	0.85	210	3,050	840	12,200	69.9	2.75	0.25	0.17
3TR18CT-10-250BX	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

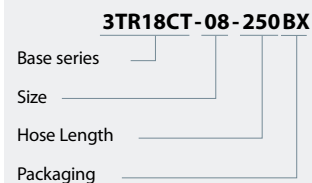
Nonstick polyester

3TR18CT perforated

Typical platforms

- Agriculture
- Horticulture
- Chemical and gas transfer
- Forestry delimber
- 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 | 249.34 ft)

BX: minimum 6.5 m (21.33 ft)
lengths, with up to 3 random
lengths, cover 76 m (249.34 ft)

Options on demand

RL: random length reel

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 hoses
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 hoses
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 hoses
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



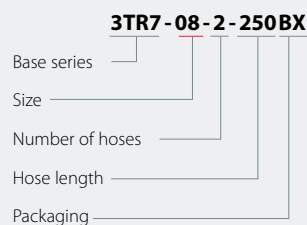
PART	
#	Number of hoses
3TR8N-04-2-250BX	2
3TR8N-06-2-250BX	2
3TR8N-08-2-250BX	2
3TR8N-12-2-250BX	2
3TR8N-16-2-250BX	2

3TR18CT Twin-line



PART	
#	Number of hoses
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 6.10 m (20 ft).
- RL:** random length reel, 2 lengths per reel, no length less than 6.10 m (20 ft).
- 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
3TMH-06	10	9.5	0.37	17.00	0.66	235	3,408	940	13,664	70	2.76	0.380	0.25
3TMH-08	12	12.7	0.50	20.60	0.81	245	3,553	980	14,200	80	3.14	0.495	0.32
3TMH-10	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



Danfoss 1A/Z

Option

Electrical cable
(with min. 3 lines)



Inner tube

Synthetic rubber

Reinforcement

Single or double wire

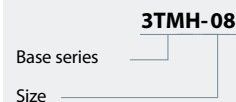
Cover

Polyurethane

Typical platforms

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

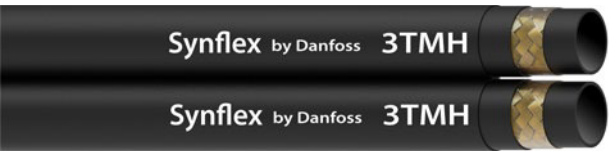
How to order/ part # structure



Packaging:

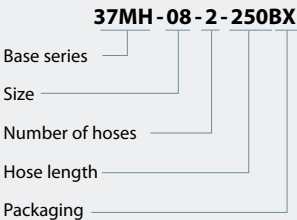
Continues length: single line
76.2 m (250.00 ft), multiline
up to 60 m (196.85 ft)
Random length: 1 or 2 pieces

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 (250.00 ft), multiline
up to 60 m (196.85 ft)
with up to 3 random lengths,
cover 76 m (249.34 ft) or
60 m (196.85 ft)



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

4798FJ8
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

4TA fittings numbering system

Complete nipple part number: **4T A 12 FJ A 16** _____

Product Group _____
4T = one piece non-skive braided fitting

Material stock code _____
A = inch hex stock or metric equivalent

Terminal end connection size* _____

Terminal end connection code _____
BG = BSP 60° (swivel) with O-ring (BS5200)
CB = SAE 37° Male flare bulkhead (with jam nut)
DL = DKO female swivel light duty
FJ = SAE JIC 37° Female swivel
FP = NPTF Female pipe
FR = ORS Female swivel
MB = Male O-ring boss (ORB)
MC = Male STC
MJ = SAE JIC 37° male rigid
MP = Male pipe rigid
MR = ORS male
NR = ORS Female with non-slide back nut
PF = Female pipe swivel
PS = Male pipe swivel
SP = NPSM female pipe swivel
ZB = NPSM Bulkhead with Grease Zerk and Jam Nut
ZP = Zerk male tapered

Terminal end connecting configuration _____
If nipple has a straight configuration,
then this position collapses
A = 45° D = 22 1/2° H = 110°
B = 90°, standard E = 67 1/2°
 or short drop F = 30°
C = 90° long drop G = 60°

Hose size* _____

Material designation _____
C = stainless steel, if fitting is zinc plated carbon
steel (standard), this position collapses.

* 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 SIZE INFO		
#	Hose	Thread
4TA6CB6	6	9/16-18

DL

DKO female swivel
(light duty)



HOSE SIZE INFO		
#	Hose	Thread
4T5DL4	4	12 mm
4T8DL6	6	16 mm

FJ

JIC/37° female swivel



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

FR

Female ORS swivel



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

FRB

Female ORS swivel, 90°
tube elbow short drop



HOSE SIZE INFO		
#	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 SIZE INFO		
#	Hose	Thread
4TA6GB6	-06	3/8-19

MB

Male straight thread
o-ring rigid



HOSE SIZE INFO		
#	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



PART #	HOSE SIZE INFO	
	Hose	Terminal end
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



PART #	HOSE SIZE INFO	
	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



PART #	HOSE SIZE INFO	
	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
4TA6MP5	-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



PART #	HOSE SIZE INFO	
	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



PART #	HOSE SIZE INFO	
	Hose	Thread
4TA6NR6	-06	1 11/16-16
4TA10NR10	-10	1-14

PF

Female pipe swivel



PART #	HOSE SIZE INFO	
	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



PART #	HOSE SIZE INFO	
	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



PART #	HOSE SIZE INFO	
	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



PART #	HOSE SIZE INFO	
	Hose	Thread
4TA2ZB2	-02	1/8-27
4TA2ZB3	-03	1/8-27

ZP

Zerk Male Tapered



PART #	HOSE SIZE INFO	
	Hose	Thread
4TA2ZP2	-02	1/4-28
4TA2ZP3	-03	1/4-28

Reusable fittings



Male Pipe Swivel



PART #	HOSE SIZE INFO	
	Hose	Thread
90102-021400-0	-02	1/8-27

Male Pipe Rigid



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

Female JIC Swivel



PART #	HOSE SIZE INFO	
	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



			Fitting		4TA					1A/Z w/ sleeve (FF91064)			

100R7 100R8 100R18



T-460



T-462



T-465

			Fitting		4TA					1A/Z w/ sleeve (FF91064)			

100R7 100R8 100R18



T-420

Fitting



4TA

1A/Z w/ sleeve (FF91064)

Hose

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	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
-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					
	Spacer Ring	ET1000SR-M115D						X	X		
-16	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							
	Spacer Ring	ET425SR-240A			X	X					
	Spacer Ring	ET420SR-M215A						X	X	X	X

100R7 100R8 100R18



T-480



		Fitting	4TA					1A/Z w/ sleeve (FF91064)			
		Hose	3TR7	3TR7N	3TR8	3TR8N	3TR18CT	3TR7	3TR7N	3TR8	3TR8N
Dash size	Part type	Part number									
-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			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	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	X			X				
	Spacer Ring	ET313SR-060D			X	X					
	Spacer Ring	T-400-37						X	X		
-08	Spacer Ring	T-400-10								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
	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					
-10	Spacer Ring	T-400-62						X	X		
	Spacer Ring	T-400-10								X	X
	Machine Bowl	T-420-26	X	X			X				
	Collet	ET1000DC-M250S	X	X			X				
	Spacer Ring	T-400-46R	X	X			X				
-12	Spacer Ring	ET420SR-M495A									
	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					
	Spacer Ring	ET1000SR-M115D						X	X		
-16	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							
	Spacer Ring	ET425SR-240A			X	X					
	Spacer Ring	ET420SR-M215A						X	X	X	X

100R7 100R8 100R18



ET4000



ET4001

											
			Fitting					4TA			
								1A/Z w/ sleeve (FF91064)			
			Hose								
Dash size	Part type	Part number	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					X				
	Spacer Ring	ET4000SR-M100A	X	X							
	Spacer Ring	ET4000SR-M190D			X	X					
	Spacer Ring	T-410-78R						X	X		
-05	Machine Bowl	ET4000AR-001	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	ET4000AR-001	X	X	X	X	X	X	X	X	X
	Adapter Bowl	T-410-25	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		
	Spacer Ring	T-400-10								X	X
-08	Machine Bowl	ET4000AR-001	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-400-41C	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	Machine Bowl	ET4000AR-001					X				
	Collet	T-440-85C					X				
	Spacer Ring	ET4000SR-M405A					X				
	Machine Bowl	ET4000AR-001	X	X	X	X		X	X	X	X
-12	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
	Spacer Ring	ET4000SR-M560A						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	Fitting	4TA					1A/Z w/ sleeve (FF91064)			
			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					
	Spacer Ring	T-410-78R						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
	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			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	T-410-26	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-400-41C	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
	Spacer Ring	ET4000SR-M560A						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



			Fitting		4TA					1A/Z w/ sleeve (FF91064)			

100R7 100R8 100R18



FT1380



ET1187



FT1390



Dash size	Machine	Fitting	4TA					1A/Z w/ sleeve (FF91064)			
			Hose								
			3TR7	3TR7N	3TR8	3TR8N	3TR18CT	3TR7	3TR7N	3TR8	3TR8N
		Die cage part number									
-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		
	FT1390	FT1307-200-M150	328	328	271	271	323	246	246		
-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						
		FT1380-275-M200			35	35					
		FT1380-200-M210								35	35
	FT1390	FT1307-200-M180	221	221	279	279	225	271	271		
		FT1307-200-M210								193	193
-08	FT1380 ET1187	FT1380-200-M210	80	80	115	115	90				
		FT1380-275-M210	80	80	115	115	90				
		FT1380-200-M240						50	50	100	100
		FT1380-275-M240						50	50	100	100
	FT1390	FT1307-200-M210	243	243	288	288	260				
		FT1307-200-M240						223	223	237	237
-10	FT1380 ET1187	FT1380-200-M280					15				
		FT1380-275-M280					15				
		FT1381-200-M280					15				
		FT1380-200-M240	94	94							
		FT1380-275-M240	94	94							
	FT1390	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					
		FT1380-200-M320						35	35	50	50
		FT1380-275-M320						35	35	50	50
		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
-16	FT1380 ET1187	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
		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	†Houghto Safe Houghton 600 Series (Hyd. Fluid Water Glycol Base)	G	L
Barium Chloride	G	G	Crude Petroleum Oil	G	L	†Houghto 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		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 Cyanide	G G		
Naphtha	G L	Sodium Hydroxide (<20%)	G L		
Naphthalene	G L	Sodium Hypochlorite	L L		
Nickel Chloride	P P	Sodium Nitrate	G G		
Nicotine	G G	†Sodium Phosphate Solution	G G		
Nitric Acid (<20%)	L L	Sodium Silicate	G G		
Nitric Acid (>20%)	L P	Sodium Sulphate	G G		
Nitrobenzene	G P	Sodium Thiosulphate	G G		
* Nitrous Oxide	G G	Solutions/Emulsions 2-4D DDT Preparation Hydroxy Quinoline	G NT		
Oil	G G	Stannous Chloride	L G		
* Oil of Turpentine	G G	Steam	P P		
Oleic Acid	G G	Stearic Acid	G G		
OS 45 Monsanto Hydraulic Fluid (Silicate Ester Base)	G L	Stearin	G G		
Oxalic Acid (-30%)	G L	Stoddard Solvent	G P		
Oxygen	Refer to Factory	Styrene	G L		
Ozone	G G	Sulphur	G G		
Paint (Oil Base)	G G	Sulphur Dioxide	P P		
Paint Solvents (Oil Base)	G L	Sulphur Trioxide	L P		
Palmitic Acid	G G	Sulphur Acid (dil.)	L LP		
Pentane	G G	Sulphur Acid (conc.)	P P		
Perchloric Acid	P P	Sulphurous Acid	P LP		
Perchlorethylene	G P	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
%o 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

About Danfoss Power Solutions

Danfoss Power Solutions is a global manufacturer and supplier of high-quality hydraulic and electric components. We specialize in providing state-of-the-art technology and solutions that excel in the harsh operating conditions of the mobile off-highway market as well as the marine sector. Building on our extensive applications expertise, we work closely with you to ensure exceptional performance for a broad range of applications. We help you and other customers around the world speed up system development, reduce costs and bring vehicles and vessels to market faster.

We offer you expert worldwide support for ensuring the best possible solutions for outstanding performance. And with an extensive network of Global Service Partners, we also provide you with comprehensive global service for all of our components.

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- Danfoss Waltech
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- Electric motors
- Hydrostatic motors
- Hydrostatic pumps
- Orbital motors
- PLUS+1® controllers
- PLUS+1® displays and sensors
- PLUS+1® joysticks and pedals
- PLUS+1® operator interfaces
- PLUS+1® software services, support and training
- PLUS+1® software
- Position controls and sensors
- PVG proportional valves
- SEL by Danfoss
- Steering components and systems
- Synflex by Danfoss
- Telematics
- Weatherhead by Danfoss
- Winner by Danfoss

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