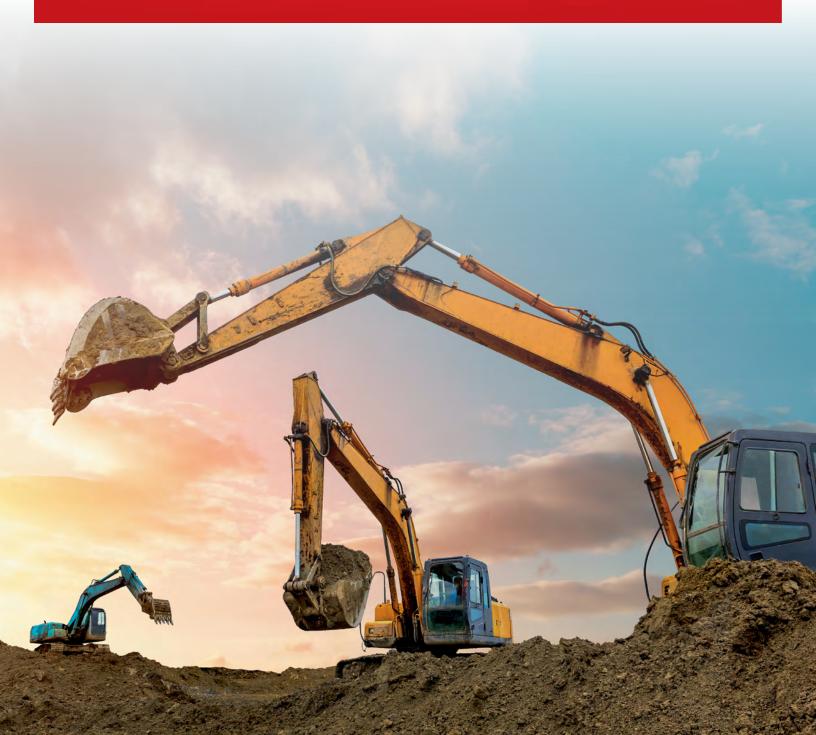
ENGINEERING TOMORROW



**APAC** 

# **Aeroquip® and Winner™ by Danfoss** Core Hydraulic hose products catalog



# Sometimes less is **more.**

Fewer products, smarter choices.

Finding the right product for your application can be complicated. At Danfoss we strive to make this process easier, by reducing the complexity of our hydraulic hose and fitting product offering, and developing intuitive ways to help you find the correct product fast. We know that your workforce demographics, regulatory environment and global economics require a new approach, and we're proactively leading the charge with a smaller— but smarter—hydraulics offering to help you spend less time combing through product options and more time competing in expanded markets, improving responsiveness, and closing new business.





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Standard



# Premium and standard hydraulic hose **options**

**Premium:** Aeroquip by Danfoss **Standard:** Winner by Danfoss

For the ultimate in performance and safety fluid conveyance products need to be designed with specific applications in mind. At Danfoss, understand. Because fluid conveyance platforms run the extreme, from low-pressure to high, moderate impulse to intense, from stable familiar environments to unforgiving conditions Danfoss Rubber Hydraulic Hose & Fittings provides options. The option to choose between standard-performance value based hose for less extreme environments and premium hose deveoped for specific applications that push to the edge.

We do that for our customers, our partners. For those that put their trust in us. We don't compromise our standards and neither should you. When it comes to safety, technology and performance, we pledge our best, everyday.

\*All <u>core</u> premium and standard hoses in the catalog are designated with an icon highlighting premium, premium specialty or standard. See chart on following page for more information.

EC881-6

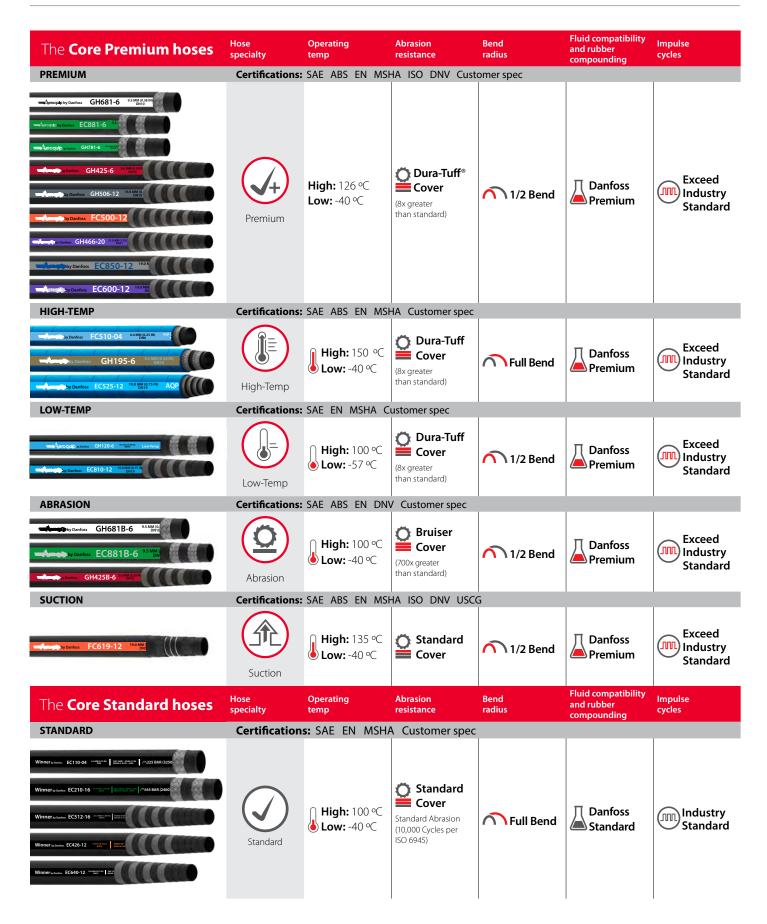
Winner by Danfoss EC215-06

Aeroquip by Danfoss

9.5 MM (0.38 I

Dura-Tuff Dynamax







# Premium & standard hydraulic hose. Know the difference.

# Core hoses

Danfoss core hydraulic hoses – a portfolio of premium and standard performance, these braided and spiral hoses stand unrivaled as the industry's most sought-after hydraulic solutions. The core hoses are the choice that engineers trust for seamless operation in most applications.













Premium

High-Temp

Low-Temp

Abrasion

Suction

Standard

# Premium

Our core premium hoses for OEM or aftermarket use exceed industry standards for pressure, temperature and abrasion resistance, with options adapted to handle your toughest jobs.

# Standard

Winner by Danfoss hoses meet all industry standards for pressure, temperature and abrasion resistance, offering the right product at a competitive price point for OEM markets.







# GH681 Premium one wire braided hose

**Exceeds:** SAE 100R17 | EN 857 Type 1SC | ISO 1436 1SN | ISO 18752

9.5 MM (0.38 IN) DN10 1-46°C to +126°C -50°F to +260°F GH681-6 Aeroquip by Danfoss

# **Typical** application:

Petroleum and fire-resistant hydraulic fluids, fuel and lubricating oils, gasoline, water and other industrial fluids.

Agency MSHA | ABS | DNV | USCG specifications:

**Reinforcement:** Cover: Inner tube: Hose Dura-Tuff premium construction: Synthetic rubber One wire braid abrasion

Operating -46°C to +126°C (-50°F to +260°F) temperature:

Qualified fittings:

1A (-4 to -32) | 1R (-4 -6 -8 -12 -16)

PART	SIZE DIME	NSIONS			PRESSURE				BEND		WEIGHT	
#	Hose I.D.		Hose O.D. (nominal)		Working Pressure		Min. Burs Pressure	t	Min. Bend Radius		Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH681-3	4.8	0.19	10.9	0.42	250	3,625	1,000,	14,500	45	1.77	0.19	0.13
GH681-4	6.4	0.25	12.9	0.51	255	3,700	1,020	14,800	50	1.97	0.21	0.14
GH681-5	7.9	0.31	14.0	0.55	225	3,250	900	13,000	55	2.17	0.22	0.15
GH681-6	9.5	0.38	16.3	0.64	235	3,400	940	13,600	63	2.48	0.31	0.21
GH681-8	2.7	0.50	19.9	0.78	221	3,200	883	12,800	90	3.54	0.43	0.29
GH681-10	15.9	0.63	22.3	0.88	140	2,025	559	8,100	100	3.94	0.42	0.28
GH681-12	19.0	0.75	26.0	1.02	138	2,000	552	8,000	120	4.72	0.56	0.37
GH681-16	25.4	1.00	34.0	1.34	103	1,500	414	6,000	150	5.91	0.80	0.54
GH681-20	31.8	1.25	41.5	1.63	69	1,000	276	4,000	210	8.27	1.01	0.68
GH681-24	38.1	1.50	47.9	1.89	52	750	207	3,000	250	9.84	1.19	0.80
GH681-32	50.8	2.00	64.0	2.52	41	600	166	2,400	315	12.4	1.92	1.29

Also available with Bruiser® ultra-abrasion resistant cover for the highest abrasion protection

<b>Accord to</b> by Danfo	ss GH681B	-6 9.5 MM (0.38 IN) DN10	Bruiser	Exceeds EN 857 1SC Perfor ISO 1436 1SN • ISO 18752 •		<b>?</b> 235 BAR (3	400 PSI) 1-40°	CC to +126°C PF to +260°F 1A
Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction







Standard one wire braid hose

Meets or exceeds: SAE 100R1 | EN 853 1SN

Winner by Danfoss EC110-04

6.4 MM (0.25 IN) DN6

# Typical application:

Hydraulic system service with petroleum and water based fluids, for general industrial service.

Agency MSHA | DNV specifications:

Reinforcement:` Cover: Inner Tube: Hose construction: Synthetic rubber Synthetic rubber One wire braid

Operating  $-40^{\circ}$ C to  $+100^{\circ}$ C ( $-40^{\circ}$ F to  $+212^{\circ}$ F)` temperature:

Qualified fittings:

1A (-4 to 32) | Winner 2pc (-4 to -32) | 1R (-4 -6 -8 -12 -16)

PART	SIZE DIME	Ensions			PRESSUR	E			BEND		WEIGHT	
#	Hose I.D.		Hose O.D (nominal		Working Pressure		Min. Bur Pressure		Min. Ben Radius	d	Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC110-04L	6.4	0.25	14.1	0.56	225	3,250	900	13,000	100	3.94	0.22	0.15
EC110-05L	7.9	0.31	15.7	0.62	215	3,125	860	12,500	115	4.53	0.26	0.17
EC110-06L	9.5	0.38	18.1	0.71	180	2,600	720	10,400	130	5.12	0.33	0.22
EC110-08L	12.7	0.50	21.4	0.84	160	2,300	640	9,200	180	7.09	0.41	0.28
EC110-10L	15.9	0.62	24.5	0.96	130	1,900	520	7,600	200	7.87	0.47	0.32
EC110-12L	19.0	0.75	28.5	1.12	105	1,525	420	6,100	240	9.45	0.59	0.40
EC110-16L	25.4	1.00	36.6	1.44	88	1,275	352	5,100	300	11.81	0.87	0.58
EC110-20L	31.8	1.25	44.8	1.76	63	925	252	3,700	420	16.54	1.20	0.81
EC110-24L	38.1	1.50	52.1	2.05	50	725	200	2,900	500	19.69	1.40	0.94
EC110-32L	50.8	2.00	65.5	2.58	40	580	160	2,320	630	24.80	1.91	1.28
EC110-40L*	63.5	2.50	78.0	3.07	40	580	200	2,900	762	30.00	2.52	1.69
EC110-48L*	76.2	3.00	90.5	3.56	35	508	160	2,320	900	35.43	2.70	1.81

<sup>\*</sup>Only bulk hose

Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction
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Standard one wire braid hose

Meets or exceeds: EN 857 Type 1SC | SAE 100R1

**Typical** application:

Hydraulic system service with petroleum and water based fluids, for general industrial service.

Agency MSHA | DNV | USCG specifications:

Reinforcement:` Inner tube: Cover: Hose construction: Synthetic rubber Synthetic rubber One wire braid

Operating  $-40^{\circ}$ C to  $+100^{\circ}$ C ( $-40^{\circ}$ F to  $+212^{\circ}$ F) temperature:

Qualified fittings:

1A (-4 to 32) | Winner 2pc (-4 to -32) | 1R (-4 -6 -8 -12 -16)

PART	SIZE,DIMEN	NSIONS			PRESSURE				BEND		WEIGHT	
#	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
EC115-04	6.4	0.25	12.6	0.50	225	3,250	900	13,000	50	1.97	0.18	0.12
EC115-05	7.9	0.31	14.5	0.57	215	3,125	860	12,500	55	2.17	0.20	0.13
EC115-06	9.5	0.38	16.0	0.63	180	2,600	720	10,400	63	2.48	0.26	0.17
EC115-08	12.7	0.50	19.4	0.77	160	2,300	640	9,200	90	3.54	0.34	0.23
EC115-10	15.9	0.62	22.4	0.88	130	1,900	520	7,600	100	3.94	0.42	0.28
EC115-12	19.0	0.75	26.0	1.02	105	1,525	420	6,100	120	4.72	0.50	0.34
EC115-16	25.4	1.00	33.8	1.33	88	1,275	352	5,100	160	6.30	0.74	0.50
EC115-20	31.8	1.25	41.2	1.62	63	925	252	3,700	210	8.27	0.99	0.67
EC115-24	38.1	1.50	48.0	1.89	50	725	200	2,900	300	11.81	1.20	0.81
EC115-32	50.8	2.00	61.0	2.41	40	580	160	2,320	400	15.75	1.50	1.01

Core Premium Standard Braided Spiral High-Temp Low-Temp Abrasion







Standard two wire braid hose

Meets or exceeds: ESAE 100R2 | EN 853 2SN

Winner by Danfoss EC210-16

25.4 MM (1.00 IN) DN25

(~)165 BAR (2400 PSI) ↓ -40°C to +100°C 2pc ☐

Typical
application:

Hydraulic system service with petroleum and water based fluids, for general industrial service.

Agency MSHA | DNV specifications:

Reinforcement:` Cover: Inner Tube: Hose construction: Synthetic rubber Synthetic rubber Two wire braid

Operating  $-40^{\circ}$ C to  $+100^{\circ}$ C ( $-40^{\circ}$ F to  $+212^{\circ}$ F)` temperature:

Qualified fittings:

1A (-4 to 32) | Winner 2pc (-4 to -32) | 2R (-4 -6 -8 -12 -16)

PART	SIZE DIME	Ensions			PRESSUR	E			BEND		WEIGHT	
#	Hose I.D.		Hose O.D (nominal)		Working Pressure		Min. Burs Pressure	st	Min. Ben Radius	d	Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC210-04L	6.4	0.25	15.7	0.62	400	5,800	1,600	23,200	100	3.94	0.38	0.26
EC210-05L	7.9	0.31	17.3	0.68	350	5,100	1,400	20,400	115	4.53	0.43	0.29
EC210-06L	9.5	0.38	19.7	0.78	330	4,800	1,320	19,200	130	5.12	0.54	0.36
EC210-08L	12.7	0.50	23.0	0.91	275	4,000	1,100	16,000	180	7.09	0.64	0.43
EC210-10L	15.9	0.62	26.2	1.03	250	3,650	1,000	14,600	200	7.87	0.75	0.50
EC210-12L	19.0	0.75	30.1	1.19	215	3,125	860	12,500	240	9.45	0.93	0.62
EC210-16L	25.4	1.00	38.9	1.53	165	2,400	660	9,600	300	11.81	1.29	0.87
EC210-20L	31.8	1.25	49.5	1.95	125	1,800	500	7,200	420	16.54	1.89	1.27
EC210-24L	38.1	1.50	55.9	2.20	90	1,300	360	5,200	500	19.69	2.10	1.41
EC210-32L	50.8	2.00	68.6	2.70	80	1,150	320	4,600	630	24.80	2.76	1.85
EC210-40L*	63.5	2.50	81.0	3.19	69	1,000	300	4,350	760	29.92	3.80	2.55
EC210-48L*	76.2	3.00	93.0	3.66	50	725	240	3,500	900	35.43	4.03	2.71

<sup>\*</sup>Only bulk hose

Core   Premium   Standard   Braided   Spiral   High-Temp   Low-Temp   Abrasion   Suc
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Standard two wire braid hose

**Meets:** EN 857 Type 2SC | ISO 18752

Winner by Danfoss EC215-06



### Typical application:

Hydraulic system service with petroleum and water based fluids, for general industrial service.

Agency MSHA | DNV | USCG specifications:

Inner tube: Reinforcement: Cover: Hose construction: Synthetic rubber Two wire braid Synthetic rubber

Operating  $-40^{\circ}$ C to  $+100^{\circ}$ C ( $-40^{\circ}$ F to  $+212^{\circ}$ F) temperature:

Qualified fittings:

1A (-4 to 32) | Winner 2pc (-4 to -32) | 2R (-4 -6 -8 -12 -16)

PART	SIZE DIME	NSIONS			PRESSURE				BEND		WEIGHT	
#	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
EC215-04	6.4	0.25	13.5	0.53	400	5,800	1,600	23,200	50	1.97	0.28	0.19
EC215-05	7.9	0.31	16.0	0.63	350	5,100	1,400	20,400	55	2.17	0.33	0.22
EC215-06	9.5	0.38	17.5	0.69	345	5,000	1,380	20,000	65	2.56	0.41	0.28
EC215-08	12.7	0.50	20.8	0.82	275	4,000	1,100	16,000	90	3.54	0.57	0.38
EC215-10	15.9	0.62	24.0	0.94	250	3,650	1,000	14,600	100	3.94	0.68	0.46
EC215-12	19.0	0.75	27.9	1.10	215	3,125	860	12,500	120	4.72	0.81	0.54
EC215-16	25.4	1.00	35.7	1.40	165	2,400	660	9,600	160	6.30	1.17	0.79
EC215-20	31.8	1.25	43.9	1.73	125	1,800	500	7,200	250	9.84	1.56	1.05
EC215-24	38.1	1.50	51.0	2.01	100	1,450	400	5,800	300	11.81	1.81	1.22
EC215-32	50.8	2.00	63.4	2.50	90	1,300	360	5,200	400	15.75	2.36	1.59

High-Temp | Low-Temp Core Premium Standard Braided Spiral Abrasion







Premium Dynamax® ultra-performance two wire braided hose

**Exceeds:** SAE 100R16 Type S | EN 857 2SC | ISO 11237-1 Type 2SC

eroquip by Danfoss	EC881-6	9.5 MM (0.38 IN) DN10	Dura-Tuff Dynamax	Exceeds SAE 100R16 / 100R19 / EN857 2SC ISO 18752 • ABS • DNV • MSHA IC-84/56	₱400 BAR (5800 PSI)	-46°C to +126°C -50°F to +260°F	1/3 Bend	1A 🖁 🔾 🔾

### Typical application:

Low & medium pressure hydraulic systems, petroleum & water-based fluids, construction equipment, agriculture equipment. This Dynamax ultra-performance hose with the Danfoss Dura-Pulse inner tube combines the lightweight flexibility of a two-wire braided hose with the pressure and performance of spiral 100R12 hoses (-16 and smaller). For high abrasion applications select Bruiser cover. Extra demanding applications requiring high performance- EC881 offers one million impulse cycle performance and 1/3 SAE bend radius.

Agency specifications:	MSHA   ABS   DNV								
Hara	Inner tube:	Reinforcement:	Cover:						
Hose construction:	Dura-Pulse™ patented tube	Two wire braid	Dura-Tuff premium abrasion						
Operating temperature:	-46°C to +126°C (-50°F to -46° C to +70° C (-50 to + 0° C to +70° C (+32°F to	-158° F) for water based h	yd. fluids						
Qualified fittings:	1A (-4 to -32)								

PART	SIZE DIM	IENSIONS		PRESSURE					BEND			WEIGHT	
#	Hos			Hose O.E (nomina		Working Pressure		Min. Bur pressure		Min. Ben Radius	d	Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC881-4	6	6.4	0.25	14.2	0.56	450	6,525	1,800	26,100	33	1.30	0.32	0.22
EC881-5	8	7.9	0.31	16	0.63	400	5,800	1,600	23,200	38	1.50	0.38	0.26
EC881-6	10	9.5	0.38	18.3	0.72	400	5,800	1,600	23,200	42	1.65	0.42	0.28
EC881-8	12	12.7	0.50	21.5	0.85	360	5,220	1,440	20,880	60	2.36	0.58	0.39
EC881-10	16	15.9	0.63	24.7	0.97	350	5,075	1,400	20,300	68	2.68	0.75	0.50
EC881-12	19	19	0.75	28.6	1.13	330	4,785	1,320	19,140	80	3.15	1.03	0.69
EC881-16	25	25.4	1.00	36.6	1.44	280	4,060	1,120	16,240	150	5.91	0.47	0.99
EC881-20	31	31.8	1.25	44.3	1.74	172	2,500	688	9,980	210	8.27	1.75	1.18
EC881-24	38	38.1	1.50	52.8	2.08	138	2,000	552	8,000	250	9.84	1.91	1.28
EC881-32	51	50.8	2.00	65.5	2.58	110	1,600	440	6,400	315	12.40	2.62	1.76

Also available with Bruiser ultra-abrasion resistant cover for the highest abrasion protection

According by Danfos	EC881B-6	9.5 MM (0.38 IN) DN10	Bruiser Dynamax	Exceeds SAE ISO 18752 • E	: 100R16 / 100R19 / EN857 2 DNV • MSHA IC-84/54	2SC	<b>№</b> 400 BA	AR (5800 PSI)	1-40°C to +126°C -40°F to +260°F	1/3 Bend	1A 🖁 🔾 🔾
Core	Premium	Standard	Br	raided	Spiral	Н	igh-Temp	Low-Temp	Abrasion	Suc	ition







Premium four wire spiral hose

Exceeds: EN856 4SP

€490 BAR (7100 PSI) GH425-6 **Dura-Tuff** 

# Typical application:

High pressure hydraulic system service with petroleum and water-base fluids for low temperature applications.

Agency specifications:	MSHA   DNV   ABS		
Uses	Inner tube:	Reinforcement:	Cover:
Hose construction:	Synthetic rubber	Four wire spiral	Dura-Tuff premium abrasion
Operating temperature:	-40°C to +100°C (-40°F to	o +212°F)	
Qualified fittings:	1T (-6 to -10)   4S (-12 to	o -16)	

PART	SIZE DIM	IENSIONS				PRESSURE				BEND		WEIGHT		
#	Hose I.D.	Hose I.D.			Hose O.D. (nominal)		Working Pressure		Min. Burst pressure		Min. Bend Radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft	
GH425-6	10	9.5	0.38	20.9	0.82	490	7,100	1,960	28,400	180	7.09	0.70	0.47	
GH425-8	12	12.7	0.50	24.4	0.96	420	6,100	1,680	24,400	230	9.06	0.92	0.62	
GH425-10	16	15.9	0.62	28.1	1.11	420	6,100	1,680	24,400	250	9.84	1.13	0.76	
GH425-12	19	19.1	0.75	32.9	1.30	380	5,500	1,520	22,000	300	11.81	1.50	1.01	
GH425-16	25	25.4	1.00	39.8	1.57	320	4,650	1,280	18,600	340	13.39	2.15	1.44	

Also available with Bruiser ultra-abrasion resistant cover for the highest abrasion protection

Acroque by Danfoss	GH425B-6 9.5 MM (0.38 IN) DN10	Bruiser	Exceeds EN 856 4SP MSHA IC-84/56 • ABS • DNV	<b>○</b> 490 BAR (7100 PSI)	-40°C to +100°C -40°F to +212°F	1Т 🖁

Standard Braided Spiral High-Temp Low-Temp Core Premium Abrasion







Standard four wire spiral hose

Meets: EN856 4SP

EN 856 4SP MSHA IC-84/41 | 350 BAR (5100 PSI) \$\mathbb{L}^{-40\cent{o}}C \text{ to } +100\cent{o}C \text{ to } +212\cent{o}F \text{ to } +212\cent{o}F Winner by Danfoss EC426-12

**Typical** application:

Hydraulic systems service with petroleum and water based fluids, for general use.

Agency MSHA specifications: Reinforcement: Inner tube: Cover: Hose construction: Synthetic rubber Synthetic rubber Four wire spiral

Operating  $-40^{\circ}$ C to  $+100^{\circ}$ C ( $-40^{\circ}$ F to  $+212^{\circ}$ F) temperature:

Qualified fittings:

1T (-6 to -10) | 4S (-12 to -20)

PART	SIZE DIM	IENSIONS				PRESSURE				BEND		WEIGHT	
#	Hose I.D	Hose I.D.		Hose O.E (nomina	•		Working Pressure		Min. Burst pressure		nd	Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC426-6	10	9.5	0.37	20.9	0.82	445	6,450	1,780	25,800	180	7.09	0.74	0.50
EC426-8	12	12.7	0.50	25.4	1.00	415	6,000	1,660	24,000	230	9.06	0.88	0.59
EC426-10	16	15.9	0.62	29.0	1.14	350	5,100	1,400	20,400	250	9.84	1.04	0.70
EC426-12	19	19.0	0.75	33.0	1.30	350	5,100	1,400	20,400	300	11.81	1.47	0.99
EC426-16	25	25.4	1.00	40.9	1.61	280	4,050	1,120	16,200	340	13.39	1.90	1.28
EC426-20	31	31.8	1.25	48.6	1.91	210	3,050	840	12,200	460	18.11	2.46	1.65

	Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction
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GH506

Premium four wire spiral hose

Meets or exceeds: EN 856 Type 4SH | ISO 18752 | ISO 3862 Type 4SH

Acroquio by Danfoss	GH506-12	19.0 MM (0.75 IN) DN19	Dura-Tuff	EN 856 4SH • ISO 3862 4SH • ISO 18752 MSHA IC-84/56 • ABS • DNV	₱420 BAR (6100 PSI)	-40°C to +100°C -40°F to +212°F	1W 🖁

# **Typical** application:

High pressure hydraulic systems with petroleum based fluids. Challenging applications like construction equipment, agriculture machines, stationary applications. 2 Million flex impulse cycle performance according ISO6802 for size 12' and 16'.

Agency specifications:	MSHA   DNV   ABS		
lla-s-	Inner tube:	Reinforcement:	Cover:
Hose construction:	Synthetic rubber	Four wire spiral	Dura-Tuff premium abrasion
Operating temperature:	-40°C to +100°C (-40°F to	o +212°F), Short term to -	+120°C (+248°F)
Qualified fittings:	1W (-12 to -32)		

PART	SIZE DIM	ENSIONS				PRESSUR	ιE			BEND		WEIGHT	
#	Hose I.D.				Hose O.D. (nominal)		Working Pressure		Min. Burst Pressure		Min. Bend Radius		
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH506-12*	19	19	0.75	33	1.30	420	6,100	1,680	24,400	280	11.02	1.49	1.00
GH506-16*	25	25.4	1	39.9	1.57	420	6,100	1,680	24,400	340	13.39	2.05	1.38
GH506-20	31	31.8	1.25	47.1	1.85	350	5,100	1,400	20,300	460	18.11	2.54	1.71
GH506-24	38	38.1	1.5	55.1	2.17	300	4,350	1,200	17,400	560	22.05	3.27	2.20
GH506-32	51	50.8	2	69.7	2.74	250	3,650	1,000	14,500	700	27.56	4.58	3.08

<sup>\* 2</sup> million flex impulse cycle performance according ISO6802

Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction







Standard four wire spiral hose

Meets: EN 856 Type 4SH

Winner by Danfoss EC512-12

420 BAR (6100 PSI) \$\int\_{-40^\circ}^{\circ} \text{to} +100^\circ\$

**Typical** application:

Hydraulic systems service with petroleum and water based fluids, for general use.

Agency MSHA | DNV specifications:

Reinforcement: Inner tube: Cover: Hose construction: Four wire spiral Synthetic rubber Synthetic rubber

Operating temperature:  $40^{\circ}\text{C to} + 100^{\circ}\text{C} (-40^{\circ}\text{F to} + 212^{\circ}\text{F})$ 

Qualified 4S (-12 to -32) fittings:

PART	SIZE DIM	SIZE DIMENSIONS					ΙE			BEND		WEIGHT	
#	Hose I.D.			Hose O.E (nominal	•		Working Pressure		Min. Burst Pressure		Min. Bend Radius		
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC512-12	19	19	0.75	33.0	1.30	420	6,100	1,680	24,400	280	11.02	1.47	0.99
EC512-16	25	25.4	1.00	39.9	1.57	380	5,500	1,520	22,000	340	13.39	2.04	1.37
EC512-20	31	31.8	1.25	47.1	1.85	350	5,100	1,400	20,400	460	18.11	2.39	1.61
EC512-24	38	38.1	1.05	55.1	2.17	290	4,200	1,160	16,800	560	22.05	3.19	2.14
EC512-32	51	50.8	2.00	69.7	2.74	250	3,650	1,000	14,600	700	27.56	4.37	2.94

Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction







Premium X-Flex four and six wire spiral hose

**Meets or exceeds:** SAE 100R13 | EN 856 R13 | ISO 3862 R13

According by Danfoss	FC500-12	19.0 MM (0.75 IN) DN19	Dura-Tuff X-Flex	Exceeds SAE 100R13 / EN 856 R13 / ISO 3862 R13 MSHA IC-84/19 • USCG *	350 BAR (5100 PSI)	-40°C to +127°C -40°F to +260°F	Half Bend	<b>₽4S</b>

# Typical application:

High pressure hydraulic system service with petroleum and water-base fluids for applications where extra flexibility needed.

Agency specifications:	MSHA   USCG		
Hose	Inner tube:	Reinforcement:	Cover:
construction:	Synthetic rubber	Four wire spiral (-12 to -24) Six wire spiral (-32)	Dura-Tuff premium abrasion
Operating temperature:	-40°C to +127°C (-40	0°F to +260°F)	

Qualified 4S (-12 to -24) | 6S (-32) fittings:

PART	SIZE DIMEI	SIZE DIMENSIONS				PRESSURE				BEND		
#	Hose I.D.	Hose I.D.		Hose O.D. (nominal)		Working Pressure		Min. Burst Pressure		Min. Bend Radius		
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC500-12	19.0	0.75	31.0	1.22	350	5,100	1,400	20,400	121	4.75	1.28	0.86
FC500-16	25.4	1.00	38.4	1.51	350	5,100	1,400	20,400	152	6.00	1.85	1.24
FC500-20	31.8	1.25	45.5	1.79	350	5,100	1,400	20,400	210	8.25	2.50	1.68
FC500-24	38.1	1.50	53.5	2.11	350	5,100	1,400	20,400	254	10.00	3.38	2.27
FC500-32	50.8	2.00	71.8	2.83	350	5,100	1,400	20,400	476	18.75	6.07	4.08

Core   Premium   Standard   Braided   Spiral   High-Temp   Low-Temp   Abrasion
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Standard four and six wire spiral hose

Meets or exceeds: SAE 100R13 | EN 856 R13 | ISO 18752

Winner by Danfoss EC420-12 19.0 MM (0.75 IN) SEE 100R13 • EN 856 R13 • ISO 18752 SEE 100R13 • ISO 18752 SEE



Typical
application:

Suitable for use in hydraulic systems with high peak pressures and arduous operating conditions.

Agency MSHA | USCG | DNV specifications:

Reinforcement: Inner tube: Cover: Hose Four wire spiral (-12, -16) construction: Synthetic rubber Synthetic rubber Six wire spiral (-20 to -32)

Operating  $-40^{\circ}$ C to  $+121^{\circ}$ C ( $-40^{\circ}$ F to  $+250^{\circ}$ F) temperature:

Qualified 4S (-12 to -16) | 6S (-20 to -32) fittings:

PART	SIZE DIMEI	SIZE DIMENSIONS				PRESSURE				BEND		WEIGHT	
#	Hose I.D.		Hose O.D. (nominal)		Working Pressure	9		Min. Burst Pressure		Min. Bend Radius			
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft	
EC420-12	19.0	0.75	32.1	1.27	350	5,100	1,400	20,400	120	4.72	1.54	1.03	
EC420-16	25.4	1.00	38.7	1.53	350	5,100	1,400	20,400	150	5.91	2.01	1.35	
EC420-20	31.8	1.25	49.8	1.96	350	5,100	1,400	20,400	210	8.27	3.78	2.54	
EC420-24	38.1	1.50	57.3	2.26	350	5,100	1,400	20,400	250	9.84	4.73	3.18	
EC420-32	50.8	2.00	71.6	2.82	350	5,100	1,400	20,400	320	12.60	6.26	4.21	

Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction
				•	,	'		1







Premium six wire spiral hose

**Exceeds:** SAE 100R15 | EN 856 R13

Accordo by Danfoss	GH466-20	31.8 MM (1.25 IN) DN31	Dura-Tuff 2M Cycles	Exceeds SAE 100R15 / EN 856 R13 MSHA IC-84/19 • ABS • DNV	<b>△</b> 420 BAR (6100 PSI)	9 -40°C to +121°C -40°F to +250°F	¹w <b>ਊ6</b> \$

# Typical application:

High pressure hydraulic systems with constant high working pressure for use with petroleum based fluids. 2 Million flex impulse cycle performance according ISO6802.

Agency specifications:	MSHA   DNV   ABS	MSHA   DNV   ABS								
	Inner tube:	Reinforcement:	Cover:							
Hose construction:	Synthetic rubber	Six wire spiral	Dura-Tuff premium abrasion							
Operating temperature:	-40°C to +121°C (-40°F t	-40°C to +121°C (-40°F to +250°F)								
Qualified fittings:	6S (-20 to -24)   1W (-20 to -32)									

PART	SIZE DIM	ENSIONS				PRESSURE				BEND		WEIGHT	
#	Hose I.D.	Hose I.D.			Hose O.D. (nominal)		Working Pressure		Min. Burst Pressure		Min. Bend Radius		
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
GH466-20	31	31.8	1.25	51.3	2.02	420	6,100	1,680	24,400	420	16.54	3.48	2.34
GH466-24	38	38.1	1.50	58.8	2.31	420	6,100	1,680	24,400	500	19.69	4.63	3.11
GH466-32	51	50.8	2.00	72.7	2.86	420	6,100	1,680	24,400	630	24.80	6.70	4.50

Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction
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Standard four and six wire spiral hose

Meets or exceeds: ISO 18752-CC | SAE100 R15

Winner by Danfoss EC640-12

19.0 MM (0.75 IN) | SAE 100R15 · ISO 18752 | (~40°C to +120°C MSHA IC-84/43" | (~40°E to +248°F MSHA IC-84/43")



### Typical application:

For hydraulic systems with high peak pressure and arduous operating conditions such as high pressure hydraulic circuits (for example on booms) on mobile construction equipment, mining equipment, and agricultural machines.

Agency **MSHA** specifications:

Inner Tube: Reinforcement: Cover: Hose Four wire & construction: Synthetic rubber Synthetic rubber Six wire spiral

Operating  $-40^{\circ}$ C to  $+120^{\circ}$ C ( $-40^{\circ}$ F to  $+248^{\circ}$ F) temperature:

Qualified fittings:

4S (-6 to 16) | 1W (-16) | Winner 2pc (-20,-24)

PART	SIZE DIMENSIONS				PRESSUR	Ē			BEND		WEIGHT	WEIGHT	
#	Hose I.D.		Hose O.D. (nominal)		9	Working Pressure		Min. Burst Pressure		Min. Bend Radius			
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft	
EC640-06	9.5	0.37	20.9	0.82	420	6100	1680	24360	65	2.56	0.70	0.47	
EC640-08	12.7	0.50	24.0	0.94	420	6100	1680	24360	90	3.54	0.92	0.62	
EC640-10	15.9	0.63	27.7	1.09	420	6100	1680	24360	100	3.94	1.13	0.76	
EC640-12	19.0	0.75	30.7	1.21	420	6100	1680	24360	150	5.91	1.25	0.84	
EC640-16	25.4	1.00	37.9	1.49	420	6100	1680	24360	210	8.27	1.83	1.23	
EC640-20	31.8	1.25	49.6	1.95	420	6100	1680	24360	260	10.24	3.17	2.13	
EC640-24	38.1	1.50	56.9	2.24	420	6100	1680	24360	310	12.20	4.40	2.95	
EC640-32	50.8	2.00	71.4	2.81	420	6100	1680	24360	350	13.78	6.28	4.22	

	Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction
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Dynamax® ultra-performance four and six wire spiral hose

**Meets or exceeds:** SAE 100R15 | ISO 18752 | EN 856 R13

Acroquip by Danfoss	EC850-12	19.0 MM (0.75 IN) DN19	Dura-Tuff Dynamax	Exceeds SAE 100R15 / EN856 R13 ISO 18752 • MSHA IC-84/56	€ 500 BAR (7250 PSI)	-40°C to +100°C -40°F to +212°F	1W 🖁

# Typical application:

Demanding high pressure applications requiring SAE J517 100R15 compliant solutions at pressures up to 500 bar-including hydrostatic drives, direct drive steering systems and critical subsystems in off-highway equipment.

Agency specifications:	MSHA							
Hara	Inner tube: Reinforcement:		Cover:					
Hose construction:	Synthetic rubber	Four wire spiral (-10, -12, -16) Six wire spiral (-20)	Dura-Tuff premium abrasion					
Operating temperature:	-40°C to +100°C (-40°F to +212°F)							
Qualified fittings:	1W (-10 to -20)							

PART	SIZE DIM	IZE DIMENSIONS					RE			BEND		WEIGHT	
#	Hose I.D.	Hose I.D.					Working Pressure		Min. Burst Pressure		Min. Bend Radius		
		mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC850-10	16	15.9	0.63	29.0	1.14	500	7,250	2,000	29,000	200	7.87	1.23	0.83
EC850-12	19	19.0	0.75	33.3	1.31	500	7,250	2,000	29,000	215	8.46	1.52	1.02
EC850-16	25	25.4	1.00	40.4	1.59	500	7,250	2,000	29,000	270	10.63	2.31	1.55
EC850-20	31	31.8	1.25	50.9	2.00	500	7,250	2,000	29,000	380	14.96	4.01	2.69

Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction
-0		Starraara	Dialaca	Jpa.	11191111011110	LOW ICITIP	7101031011	Jaction







**EC600** 

Premium X-Flex® four and six wire spiral hose

Meets or exceeds: SAE 100R15 | ISO 18752-DC

A CLOQUE by Danfoss	EC600-12	19.0 MM (0.75 IN) DN19	Dura-Tuff X-Flex	Exceeds SAE 100R15 • ISO 18752 MSHA IC-84/19 • ABS • DNV • USCG#	(A) 420 BAR (6100 PSI)	1-40°C to +127°C -40°F to +260°F	Half Bend	¹₩ <b>ਊ4</b> \$

# Typical application:

High-pressure hydraulics, hydrostatic transmissions. Hydraulic system with petroleum and water-glycol base fluids, for lubricants oils and water.

Agency specifications:	MSHA   ABS   USCG   DNV							
	Inner tube:	Reinforcement: Cover:						
Hose construction:	Dura-Pulse patented tube	Four wire spiral (-12 to -16) Six wire spiral (-20 to -32)	Dura-Tuff premium abrasion					
Operating temperature:	-40°C to +127°C (-40°F to +260°F)							
Qualified fittings:	4S (-12 to -16)   6S (-20 to 32)   1W (-12 to -32)							

PART	SIZE DIM	Ensions				PRESSURI	E			BEND		WEIGHT	
#	Hose I.D.			Hose O.D. (nominal)		Working Pressure			Min. Burst Pressure		Min. Bend Radius		
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
EC600-12	19	19.0	0.75	33.3	1.31	420	6,100	1,680	24,400	135	5.31	1.52	1.01
EC600-16	25	25.4	1.00	39.4	1.55	420	6,100	1,680	24,400	165	6.50	2.04	1.36
EC600-20	31	31.8	1.25	50.5	1.99	420	6,100	1,680	24,400	225	8.86	3.89	2.61
EC600-24	38	38.1	1.50	57.7	2.27	420	6,100	1,680	24,400	265	10.43	4.78	3.21
EC600-32*	51	50.8	2.00	71.8	2.83	420	6,100	1,680	24,400	375	14.76	7.05	4.74

<sup>\*-32</sup> size is qualified for 500.000 cycles (ISO 18752-CC)

Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction







Premium AQP™ high-temp HI-PAC one wire braided hose

Exceeds: EN 857 1SC

Across by Danfoss	FC510-04	6.4 MM (0.25 IN) DN6	AQP High-Temp Hi-Pac	Exceeds EN 857 1SC MSHA IC-84/18 • DNV • USCG	₱345 BAR (5000 PSI)	40°C to +149°C -40°F to +300°F	

# Typical application:

For applications operating in high temperature conditions, or applications with higher than average hydraulic fuid temperatures such as: mini excavators, skid steer loaders, mini hydraulic breakers, industrial high pressure compact power packs.

Agency specifications:	MSHA   DNV   USCG								
Hose	Inner tube:	Reinforcement:	Cover:						
construction:	AQP® Elastomer Hi-Pac® one wire braid Blue AQP Elastom								
Operating temperature:	-40°C to +149°C (-40°F to +300°F)								
Qualified fittings:	1A (-4 to -20)								

PART	SIZE DIME	SIZE DIMENSIONS								BEND		WEIGHT	
#	Hose I.D.			Hose O.D (nominal		Working Pressure		Min. Burs Pressure		Min. Bend Radius	d	Weight	
		mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
FC510-04	6	6.4	0.25	14.9	0.59	345	5,000	1,380	20,000	76	3.00	0.34	0.23
FC510-06	10	9.5	0.37	18.2	0.72	275	4,000	1,100	16,000	89	3.50	0.43	0.29
FC510-08	12	12.7	0.50	20.7	0.81	240	3,500	960	14,000	127	5.00	0.50	0.34
FC510-10	16	15.9	0.63	24.4	0.96	190	2,750	760	11,000	152	6.00	0.66	0.44
FC510-12	19	19.0	0.75	28.2	1.11	155	2,250	620	9,000	178	7.00	0.77	0.52
FC510-16	25	25.4	1.00	35.2	1.39	138	2,000	552	8,000	229	9.00	1.05	0.71
FC510-20	31	31.8	1.25	43.7	1.72	112	1,625	448	6,500	279	11.00	1.61	1.08

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Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction







Premium AQP high-temp two wire braided hose

Meets or exceeds: SAE 100R | EN 853 2SN | ISO 1436-1 2SN

Accorded by Danfoss	GH195-6	9.5 MM (0.38 IN) DN10	AQP High-Temp	Exceeds SAE 100R2 / EN853 2SN • ISO 1436-1 2SN MSHA IC-84/18 • ABS • DNV • USCG 🏶	€345 BAR (5000 PSI)	-40°C to +150°C -40°F to +302°F	1A 🖁 🔾 🔾

# Typical application:

For applications operating in high temperature conditions, or applications with higher than average hydraulic fuid temperatures such as: mini excavators, skid steer loaders, mini hydraulic breakers, industrial high pressure compact power packs.

Agency specifications:	MSHA   ABS   DNV   U	SCG	
Hose	Inner tube:	Reinforcement:	Cover:
construction:	AQP elastomer	Two wire braid	Blue AQP elastomer

Operating  $-40^{\circ}$ C to  $+150^{\circ}$ C ( $-40^{\circ}$ F to  $+302^{\circ}$ F) temperature:

Qualified 1A (-4 to -32) fittings:

PART	SIZE DIMENSIONS				PRESSURE				BEND		WEIGHT	
#	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
GH195-4	6.4	0.25	15.1	0.60	400.0	5,800	1,600	23,200	102	4.02	0.40	0.27
GH195-6	9.5	0.38	19.2	0.75	345.0	5,000	1,380	20,000	127	5.00	0.58	0.39
GH195-8	12.7	0.50	22.1	0.87	293.0	4,250	1,172	17,000	178	7.01	0.68	0.46
GH195-10	15.9	0.62	25.5	1.00	250.0	3,650	1,000	14,600	203	7.99	0.80	0.54
GH195-12	19.0	0.75	29.5	1.16	215.0	3,125	860	12,500	241	9.49	1.00	0.67
GH195-16	25.4	1.00	37.8	1.49	175.0	2,550	700	10,200	305	12.01	1.44	0.97
GH195-20	31.8	1.25	48.5	1.91	155.0	2,250	620	9,000	419	16.50	2.38	1.60
GH195-24	38.1	1.50	55.1	2.17	125.0	1,800	500	7,250	508	20.00	2.59	1.74
GH195-32	50.8	2.00	67.8	2.67	105.0	1,525	420	6,100	635	25.00	3.38	2.27

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Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction







Premium AQP high-temp four wire spiral hose

**Exceeds:** SAE 100R12 | EN 856 R12

Across by Danfoss	EC525-12	19.0 MM (0.75 IN) DN19	AQP High-Temp	MSHA IC-84/18	345 BAR (5000 PSI)	4-40°C to +149°C -40°F to +300°F	<b>84S</b>

# Typical application:

For applications operating in high temperature conditions, or applications with higher than average hydraulic fuid temperatures such as: mini excavators, skid steer loaders, mini hydraulic breakers, industrial high pressure compact power packs.

Agency specifications:	MSHA		
Hose	Inner tube:	Reinforcement:	Cover:
construction:	AQP Elastomer	Four wire spiral	Blue AQP elastomer
Operating temperature:	<i>7</i> 1	To +150°C (-40°F To +302°F) se fluids: -40°C To +82°C (-40	°F To +180°F)
Qualified fittings:	4S (-12 to -32)		

PART	SIZE DIMEN	SIZE DIMENSIONS				PRESSURE				WEIGHT		
#	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
EC525-12	19.0	0.75	30.7	1.21	345.0	5,000	1380.0	20,000	241.3	9.50	1.28	0.86
EC525-16	25.4	1.00	37.9	1.49	345.0	5,000	1380.0	20,000	304.8	12.00	1.73	1.16
EC525-20	31.8	1.25	46.6	1.84	240.0	3,500	960.0	14,000	419.1	16.50	2.31	1.55
EC525-24	38.1	1.50	53.9	2.12	240.0	3,500	960.0	14,000	508.0	20.00	2.96	1.99
EC525-32	50.8	2.00	67.3	2.65	225.0	3,250	900.0	13,000	635.0	25.00	4.42	2.97

Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction
COIC	i i Ciiii aiii	Junuara	Didiaca	Jpnu	ingn icinp	LOW ICITIP	/ \DIU31011	Juctic







Premium low-temp two wire braided hose

**Exceeds:** SAE 100R16 | EN 857 2SC | ISO 11237-1 2SC

eroquip by Danfoss	GH120-6	9.5 mm (0.38 in) DN10	Low-Temp	Exceeds SAE 100R16 / EN857 2SC ISO 11237-1	(~) 345 BAR (5000 PSI)	-57°C to +100°C -70°F to +212°F	1A @OO

### Typical application:

For applications operating in low temperature conditions, cold climate, extreme outdoor conditions such as snow snowploughs or material handling in freezer stores.

Agency specifications:

MSHA

Inner tube: Hose

Reinforcement:

Cover:

Special low temperature construction: synthetic rubber

Two wire braid

Dura-Tuff premium abrasion

Operating temperature:

 $-57^{\circ}$ C to  $+100^{\circ}$ C ( $-70^{\circ}$ F to  $+212^{\circ}$ F)

Qualified fittings:

1A (-4 to -32)

PART	SIZE DIMEN	NSIONS			PRESSURE		PRESSURE				WEIGHT	
#	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
GH120-4	6.4	0.25	13.8	0.54	414.0	6,000	1656.0	24,025	51.0	2.00	0.30	0.20
GH120-6	9.5	0.38	17.4	0.68	345.0	5,000	1380.0	20,025	64.0	2.50	0.40	0.27
GH120-8	12.7	0.50	20.8	0.82	310.0	4,500	1240.0	18,000	89.0	3.50	0.58	0.39
GH120-10	15.9	0.62	24.9	0.98	276.0	4,000	1104.0	16,000	102.0	4.00	0.74	0.50
GH120-12	19.0	0.75	28.4	1.12	241.0	3,500	964.0	14,000	121.0	4.75	0.92	0.62
GH120-16	25.4	1.00	35.7	1.41	193.0	2,800	772.0	11,200	152.0	6.00	1.22	0.82
GH120-20	31.8	1.25	43.3	1.71	159.0	2,300	636.0	9,225	210.0	8.25	1.59	1.07
GH120-24	38.1	1.50	51.5	2.03	138.0	2,000	552.0	8,000	254.0	10.00	2.11	1.42
GH120-32	50.8	2.00	63.9	2.51	103.0	1,500	412.0	6,000	318.0	12.50	2.80	1.88

Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suction







# EC810 Premium low-temp four and six wire spiral hose

Acroquip by Danfoss	EC810-12	19.0 MM (0.75 IN) DN19	Low-Temp	MSHA IC-84/68	(~)420 BAR (6100 PSI)	-57°C to +100°C -70°F to +212°F	<b>ਊ4S</b>

### Typical application:

For applications operating in low temperature conditions, cold climate, extreme outdoor conditions such as snow snowploughs or material handling in freezer stores.

Agency MSHA specifications:

Reinforcement: Cover: Inner tube: Hose Special low temperature Four wire spiral (-12 to -16) construction: Synthetic rubber synthetic rubber Six wire spiral (-20 to -32)

Operating  $-57^{\circ}$ C to  $+100^{\circ}$ C ( $-70^{\circ}$ F to  $+212^{\circ}$ F) temperature:

Qualified fittings:

4S (-12 to -16) | 6S (-20 to -32) | 1W (-12 to -32)

PART	SIZE DIMEN	ze dimensions			PRESSURE				BEND		WEIGHT	
#	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
EC810-12	19.0	0.75	32.2	1.27	420	6,100	1,680	24,360	280	11.02	1.61	1.08
EC810-16	25.4	1.00	39.0	1.54	420	6,100	1,680	24,360	340	13.39	2.02	1.36
EC810-20	31.8	1.25	49.4	1.95	420	6,100	1,680	24,360	420	16.54	3.55	2.39
EC810-24	38.1	1.50	57.3	2.26	420	6,100	1,680	24,360	510	20.08	4.74	3.19
EC810-32*	50.8	2.00	71.1	2.80	420	6,100	1490	21,610	630	24.80	6.70	4.50

<sup>\*</sup>With the 6S fitting the -32 size working pressure is 350 bar (5100 psi) with a 4:1 safety factor.

Core   Premium   Standard   Braided   Spiral   High-Temp   Low-Temp   Abrasion   Suc	Core	Premium	Standard	Braided	Spiral	High-Temp	Low-Temp	Abrasion	Suctio
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FC619

Premium suction one wire braided hose

**Exceeds:** SAE 100R4 | EN 45545

Associate by Danfoss	FC619-12	19.0 MM (0.75 IN) DN19	Dura-Tuff	Exceeds SAE 100R4 • ABS MSHA IC-84/19 • EN45545	♠ 21 BAR (305 PSI)	-40°C to +135°C -40°F to +275°F	1/3 Bend	45 • 1A 🖁

### Typical application:

Suction and transfer applications for petroleum hydraulic fluids, fuel, lubricating oils, gasoline, water and many other industrial fluids.

Agency MSHA | EN45545 specifications:

Inner tube: Reinforcement: Cover: Hose Helical wire between two textile construction: Synthetic rubber

AQP elastomer reinforcement layers

Operating -40°C to +135°C (-40°F to +275°F) temperature:

Qualified fittings:

1A (-12 to -32) | 1G (-12 to -32)

PART	SIZE DIM	Ensions			PRESSU	RE			BEND		VACUUN	И	WEIGHT	
#	Hose I.D.		Hose O.I	-1.	Working Pressure	2	Min. Bu Pressure		Min. Ber Radius	nd	Vacuum Service		Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft	kg/m	lbs/ft
FC619-12	19.1	0.75	30.7	1.21	21.0	300,†	84	1,200	63.5	2.50	94.8	28	0.68	0.46
FC619-16	25.4	1.00	37.6	1.48	17.0	250†	70	1,000	76.2	3.00	94.8	28	0.83	0.56
FC619-20	31.8	1.25	44.5	1.75	14.0	200,†	56	800	102.0	4.00	94.8	28	1.16	0.78
FC619-24	38.1	1.50	51.8	2.04	10.5	150,†	42	600	127.0	5.00	94.8	28	1.49	1.00
FC619-32	50.8	2.00	64.8	2.55	7.0	100,†	28	400	152.4	6.00	94.8	28	1.83	1.23
FC619-40*	63.5	2.50	79.2	3.12	4.0	62	17	250	355.6	14.00	94.8	28	2.35	1.58
FC619-48*	76.2	3.00	95.3	3.75	4.0	62	16	225	457.2	18.00	94.8	28	3.36	2.26

<sup>\*</sup>Only bulk hose

<sup>†</sup> Maximum working pressure for band clamp type fittings is 3,4 bar [50 psi].







# Standard suction and return hose

Meets or exceeds: SAE 100R4

Winner by Danfoss WH004-12

SAE 100R4 MSHA IC-261/5 21 BAR (305 PSI) \$-40°C to +100°C -40°F to +212°F

### Typical application:

Suitable for use in suction applications for hydraulics, crude fuel, lubricating oils, gasoline, air, water and chemical transfer. Agency MSHA specifications:

Hose construction:

Oil-resistant NBR

Inner tube:

Reinforcement: Textile with helical & anti-static wire

Synthetic rubber

Cover:

Operating temperature:

 $-40^{\circ}$ C to  $+100^{\circ}$ C ( $-40^{\circ}$ F to  $+212^{\circ}$ F)

Qualified fittings:

1A (-12 to -32) | 1G (-12 to -32) | Winner 2pc (-12 to -32)

PART	SIZE DIM	MENSIONS	5		PRESSUF	E			BEND		VACUUN	M	WEIGHT	
#	Hose I.D	).	Hose O.		Working Pressure		Min. Bu Pressure		Min. Bei Radius	nd	Vacuum	٦	Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kPa	in/Hg	kg/m	lbs/ft
WH004-12	19.0	0.75	30.0	1.18	21	305	84	1,220	40	1.57	94.8	28	0.54	0.36
WH004-16	25.4	1.00	36.2	1.43	17	245	68	980	45	1.77	94.8	28	0.68	0.46
WH004-20	31.8	1.25	43.0	1.69	14	205	56	820	60	2.36	94.8	28	0.85	0.57
WH004-24	38.1	1.50	50.2	1.98	10.5	150	42	600	65	2.56	94.8	28	1.20	0.81
WH004-32	50.8	2.00	63.2	2.49	7	100	28	400	100	3.94	94.8	28	1.53	1.03
WH004-40*	53.5	2.50	76.7	3.02	4	60	16	240	140	5.51	94.8	28	2.05	1.38
WH004-48*	76.2	3.00	89.4	3.52	4	60	16	240	180	7.09	94.8	28	2.62	1.76

<sup>\*</sup>Only bulk hose

Standard High-Temp Low-Temp Core Premium Braided Spiral Abrasion

# We're changing the crimping game.

# **Mobile crimp tool**

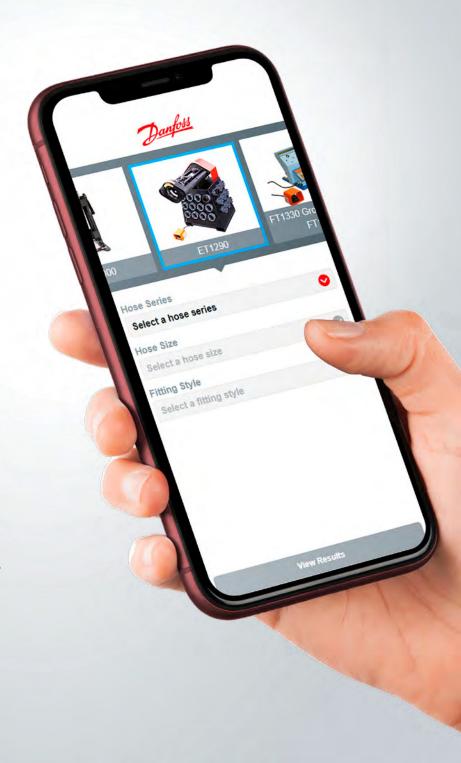
We've made it easier to help your customers find the proper crimp spec anytime, anywhere with the new mobile crimp spec tool on PowerSource.

Visit **www.Danfoss.com/crimp** on your mobile device and follow these steps:

- 1. Find your machine
- 2. Select your hose series
- 3. Select your hose size
- 4. Find your fitting style

Then view your results.

Add the tool to your home screen for even quicker access.





# New laylines



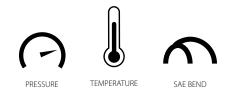
# Agency specifications

Hose agency specifications are clearly defined on each hose. SAE, ISO, MSHA, DNV, USCG designation are displayed clearly on each hose, taking the guess work out of hose qualifications.

In addition, many of Danfoss' premium hydraulic hoses exceed SAE and EN specifications to offer superior performance. We will now consistently note this and other specification-related terms on the layline.

# Global comprehension

The new layline design also introduces easyto-identify icons and pictograms, which allow more users around the world to intuitively identify performance characteristics associated with each of Danfoss' rubber hydraulic hoses. Icons include temperature, bend radius, pressure, correct fitting type and more.



Braided

# EN standards

Each hose standard specifies the minimum bend radius of a hose. This is defined as the smallest diameter the hose can be bent without kinking. However, Danfoss recognizes that merely meeting a standard is often not good enough for the tight routing needs of your applications. Many of our core hoses have long been engineered to perform at half or even one-third of the bend radius required by different standards.

For the first time, our laylines will now indicate when a hose exceeds the standard bend radius requirement. This improvement in bend means easier routing, better performance and reduced hose length requirements.

Spiral

# Fitting info

As part of this layline refresh, all of Danfoss' rubber hydraulic hoses will now utilize the simple, intuitive MatchMate® hose & fitting system.





# Fittings

# Dura-Kote and Dura-Seal technology extends the life of your hose assembly









## Dura-Kote™ plating technology

Hose fittings that offer 3x the corrosion protection on carbon steel fittings as compared to competitive hose fittings. Danfoss' Dura-Kote™ fittings provide up to 1000 hours of corrosion protection. This is a huge step forward in metal fitting corrosion protection.



Class 0 Cool-down leakage protection

# Dura-Seal™ technology

This patent-pending innovation from Danfoss eliminates hose assembly cool-down leakage, while extending hose assembly life, reducing equipment down-time.

Braided hose fittings	Features
Premium	· New <b>Dura-Kote™</b> plating technology for up to 1,000 hours of corrosion resistance
1A (TTC series)	· Bite the wire technology for best in class connection and sealing
	· Class zero leakage SAE J1176 on approved hose styles
	· Over 550 TTC Series part numbers available
	Danfoss' MatchMate® program provides identification markings on the hose, hose fittings, and crimp dies for quick and easy assembly
Standard	· Non-skive, two-piece crimp fitting
Two-piece Winner	· One nipple part number for EC115, EC215 and EC118 standard hoses
	Meets industry specifications when used with the EC115, EC215 and EC118 standard hoses
	· Clear silver hexavalent chromium-free plating
	· Carbon steel material
Spiral hose fittings	Features
Premium 4S/6S spiral series	<ul> <li>New Dura-Kote plating technology for up to 1,000 hours of corrosion resistance</li> <li>New patent pending Dura-Seal™ technology to eliminate hose assembly cool-down leakage</li> </ul>
	· Class zero leakage SAE J1176 on approved hose styles
	Danfoss' MatchMate spiral-hose/fitting identification system program provides identification markings on the hose, hose fittings, and crimp dies for quick and easy assembly
Premium	· Internal Skive Hi-Performance Spiral Fitting with design related sockets
1W internal skive series	· Blow off prevention for critical applications
	· Designed to withstand high-pressure environments, with a capacity of up to working 500 bar (7250 psi).
	· Tested to two million flex impulse cycles, proving their durability and reliability over the long-term.
	· Class 0 Cool Down Leakage per SAE J1176
	Double O-Ring <b>Dura-Seal</b> for sizes -20 to -32 providing extra protection and durability for large size hoses
Reusable hose fittings	Features
Premium	· New <b>Dura-Kote</b> plating technology for up to 1,000 hours of corrosion resistance
Reusable	· Engineered to provide peak performance with Danfoss' core braided hose products
	· Can be assembled in the field without special tooling
0 3	· Reduced downtime

· Quick repair



# Ordering & hose numbering system

# How to order

Accurate processing and prompt delivery of your order depends on easy identification of your requirements. Please order Aeroquip and Winner brand parts using correct part numbers as described in this quide. Inquiries and orders should be directed to your distributor or:

#### **Danfoss regional sales** teams at:

FC-AP-SDM@danfoss.com

#### Part numbers and dash sizes

Dash size designates the nominal size in 16th of an inch. This number immediately follows the part number and is separated from it with a dash.

#### **Dimensions**

Dimensions given in this guide for Aeroquip and Winner products are approximate and should be used for reference only. Exact dimensional information for a given product is subject to change and varying tolerances; contact

Danfoss directly for full current information.

# **WARNING** Hose assemblies

Danfoss manufactures the terminal ends of our hose fittings to the appropriate requirements established by the SAE or DIN. Therefore, the performance ratings of these hose fittings meet the SAE or DIN requirements. It is possible to order a hose assembly with a fitting terminal end that has a performance

rating lower than the hose rating. When ordering hose assemblies, please keep the connecting end performance rating in mind since this may affect overall hose assembly performance. Hose assembly components (hose and fittings) are easily assembled in the field. However, factory assembled reusable and crimped hose assemblies are available. For complete information, contact Danfoss.

# Numbering system - hydraulic hose

Depending on the production type, hoses will be bundled in pre-defined hose lengths:



Danfoss is committed to providing pre-defined hose lengths with as few cuts as possible. Nevertheless, please note that following specifications will be valid for the bundled part numbers:

	< MT61	> MT61
Max number of pieces in one bundled coil	Max. 3 pieces	Max. 5 pieces
Shortest length	5 meter	5 meter
Overall length tolerance	+/- 1%	+/- 1%

# Bulk hose

Bulk hose should be ordered by specifying length in feet as shown below.



**NOTE:** Length tolerance for hose, assemblies and sleeves is:

Up to and including 12 inches:  $\pm 1/8"$ 

Above 12 inches to and including 18 inches: ±3/16"

Above 18 inches to and including 36 inches:  $\pm 1/4$ "

Above 36 inches: ±1% of length

**NOTE:** For bulk hose prices please contact your sales representative.



# Hose fitting numbering system

# Numbering system - hose fittings

#### Part numbering system

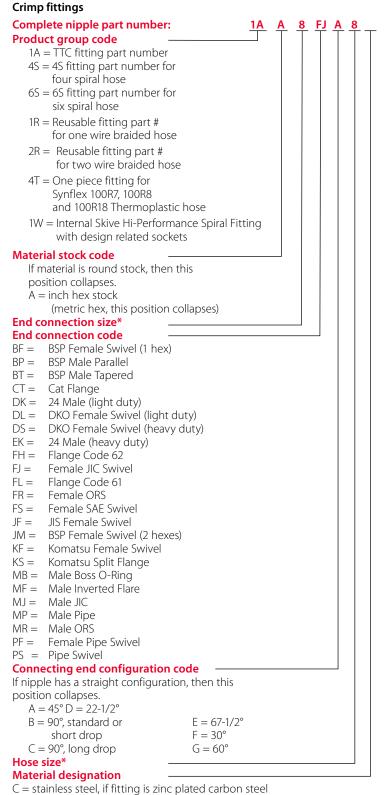
Part numbers collapse to the shortest possible number

It is assumed that a fitting has a straight configuration unless a code is added to designate otherwise.

> 1AA8FJ8 has a straight configuration 1AA8FJA8 has a 45° elbow configuration

Dashes and unnecessary zeros are not used.

1/4" is designated by "4" not "-4" or "04" 5/8" is designated by "10" not "-10"



<sup>(</sup>standard), this position collapses.



# Crimp machine comparison chart













	ET4100	ET4200	ET4250	ET4300	ET4350	ET4400
Description	Manual crimper	Electric crimper 1 phase or 3 phase	Mobile electric crimper with 12V	Electric crimper 1 phase or 3 phase	Mobile electric crimper with 12V	Electric crimper 1 phase or 3 phase
Production volume	Low	medium	medium	medium	medium	medium
Pump option**	manual	230V / 380 V	DC 12V - Mobile	230V / 380 V	DC 12V - Mobile	230V / 380 V
Application	Portable crimper	Workshop crimper	Portable crimper	Workshop crimper	Portable crimper	Workshop crimper
Capability braided	1 1/4"	1 1/2"	1 1/2"	2"	2"	2"
(up to)*	(Size -20)	(Size –24)	(Size –24)	(Size –32)	(Size -32	(Size – 32)
Capability 4 spiral	3/4"	1"	1"	1 1/4"	1 1/4"	2"
(up to)*	(Size -12)	(Size -16)	(Size -16)	(Size - 20)	(Size -20)	(Size -32)
Capability 6 spiral	-	-	-	1 1/4"	1 1/4"	1 1/2"
(up to)*				(Size -20)	(Size -20)	(Size -24)

<sup>\*</sup>Capabilities based on Danfoss core hose and fitting products

<sup>\*</sup>See pump ordering options for each machine for specific kit numbers



# Crimp machine comparison chart











ET4500

ET4500-002

ET5020

ET5025

ET5070

Description	Electric crimper 1 phase or 3 phase	Electric crimper 3 phase with controller	Electric crimper 3 phase with controller	Electric crimper 3 phase with controller	Electric crimper 3 phase with controller
Production volume	medium	medium	high	high	high
Pump option**	230V / 380 V	380 V	380 V	380 V	380 V
Application	Workshop crimper	Workshop crimper	Production crimper	Production crimper	Production crimper
Capability braided	3"	3"	1 1/2"	2"	3"
(up to)*	(Size –48)	(Size –48)	(Size -24)	(Size -32)	(Size -48)
Capability 4 spiral	2"	2"	1"	1 1/4"	3"
(up to)*	   (Size -32)	(Size -32)	   (Size -16)	   (Size -20)	(Size -48)
Capability 6 spiral	1 1/2"	1 1/2"	-	-	2 1/2"
(up to)*	   (Size -24) 	(Size -24)			(Size -40)

<sup>\*</sup>Capabilities based on Danfoss core hose and fitting products

<sup>\*</sup>See pump ordering options for each machine for specific kit numbers

# A broad portfolio of leading technology expertly matched to your needs...



Tooling is a costly investment that you must get right. Whether your challenge is a mobile workshop, a full hose assembly manufacturing branch, or anything in between, our high-quality tooling can meet your needs and ensure a strong return-on-investment.

We offer an extensive portfolio of portable, workshop, and production line crimping machines that can suit any environment, as well as versatile cutting, skiving, nipple insertion, and marking machines. There's no need to waste time and money researching appropriate solutions—our experts have pre-selected market-leading tooling that's the best technical match for Danfoss hoses and fittings.

We also offer expert technical guidance and recommendations that consider your unique needs to ensure 'right-sized' solutions that can support you over the long term. We'll advise you on the most appropriate tooling and methods to use when assembling individual hoses and fittings, so you can accelerate production speeds, ensure optimal assembly performance, and minimize the risk of errors that can cause leaks and safety issues.



# 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.

Danfoss Power Solutions – your strongest partner in mobile hydraulics and mobile electrification.

#### **Products we offer:**

- Aeroquip by Danfoss
- · Boston by Danfoss
- DCV directional control valves
- **Electric converters**
- Electric machines
- · Electric motors
- Hydrostatic motors
- Hydrostatic pumps
- · Orbital motors

- PLUS+1® controllers
- PLUS+1® displays
- PLUS+1® joysticks and pedals
- PLUS+1® operator interfaces
- PLUS+1® sensors
- 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 Optimum by Danfoss
- **Telematics**
- Weatherhead by Danfoss
- Winner by Danfoss

Go to www.danfoss.com for further product information.

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