



EC556 blowout preventer hose system

EATON

Powering Business Worldwide



Eaton is excited to announce an extension to its industrial hose portfolio by introducing the new blowout preventer (BOP) hose.


The Eaton EC556 blowout preventer hose system is a critical part of oil & gas drilling and exploration equipment, where reliability and safety are of utmost importance.

The EC556 combines high-performing spiral-reinforced hose with special flame-resistant rubber and is qualified with our reliable 1W-ISC fittings (carbon steel and stainless steel).

Eaton EC556 is rated for 350 bar (5000 psi) constant working pressure in all sizes ½" through 1 ½", meets or exceeds the requirements of API 16D - minimum of 700°C (1300°F) for 5 minutes - and is certified by Lloyd's Registry.

The specially-designed cover is abrasion-resistant and allows for greater flexibility and is easier to route than steel-armored offerings.

Our hoses are proudly assembled by Eaton-certified partners to meet every unique customer need.

The background of the page is a photograph showing the silhouettes of several oil pumpjacks (jack-o'-lanterns) against a vibrant sunset sky. The sky transitions from a deep blue at the top to a bright orange and yellow near the horizon. The pumpjacks are dark, black shapes, with their long walking beams and counterweights clearly visible. The overall scene is industrial and atmospheric.

Technical highlights

- Available in sizes from -12 to -24
- Rated for 350 bar(5000psi) constant working pressure
- Specially designed fire resistant red color cover
- Stainless steel highly flexible protection sleeve available on request
- Qualified with Eaton IW-ISC fittings(carbon steel and stainless steel)
- Assembled by Eaton certified partners based on your demands
- CERTIFIED in accordance with Lloyd's Register Fire Tests

OD/100/499 Rev. 1 and API 16D Sect. 10.1.2



Part Number	Hose I.D.			Hose O.D.		Max. Operating Pressure		Burst Pressure		Min. Bend Radius		Weight	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	Lb/ft
EC556-12	19	19	0.75	32	1.26	350	5000	1400	20000	280	11	1.58	11.4
EC556-16	25	25.4	1	38.3	1.5	350	5000	1400	20000	340	13.4	2	14.6
EC556-20	32	31.7	1.25	45.1	1.77	350	5000	1400	20000	460	18.1	2.47	17.8
EC556-24	38	38	1.5	56.4	2.12	350	5000	1400	20000	500	19.6	4.64	33.5

Fittings

- Internal Skive Crimp (ISC) 1W series fitting for all sizes -12,-16, -20,-24

Operating Temperature

-40°C to +100°C
(-40°F to +212°F)

Agency Listings

Lloyd's certified
API 16D flame resistant

Construction

- Black, oil resistant synthetic rubber tube
- Multiple high tensile wire spiral reinforcement layers
- Red, specially compounded, flame resistant cover

Application

- For prevention of pressure escape at the wellhead during drilling-completion operations
- Critical component of blowout preventer system
- On-shore oil and gas exploration



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER	Eaton Germany GmbH Dr.-Reckeweg-Str. 1 76532 Baden-Baden Germany
DESCRIPTION	High pressure flexible hose assembly consisting of synthetic rubber tube, 4- or 6 wire spiral reinforcement, synthetic rubber cover with permanent crimped 1W fittings
TYPE	EC556
APPLICATION	For hydraulic systems of Blowout Preventer control lines on drilling rigs.
STANDARD	API 16D 2nd Ed.: Specification for Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment.
RATINGS	Sizes: EC556-12, EC556-16, EC556-20, EC556-24 Design pressure: 350 bar, [5100psi] Temperature range: -40 to +100°C, [-40 to +212°F] Fire tested (five minutes at 700°C /1300°F) in acc. with API 16D 10.1.2

Certificate No.	19/20011
Issue Date	08 February 2019
Expiry Date	07 February 2024
Sheet	1 of 2

Lloyd's Register EMEA
71 Fenchurch Street, London EC3M 4BS

Torsten Schröder
Hamburg Technical Support Office
Lloyd's Register EMEA

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EC556 BOP fittings and stainless steel protective sleeve



N.P.T.F Male pipe stainless steel fittings

Part number	Hose size		Terminal end dash size	Thread	A		D cut off factor		E		Hex 1
	Dash	DN			mm	in	mm	in	mm	in	
1W12MP12BA	-12	19	-12	3/4-12	92.1	3.6	40.1	1.6	15.1	0.6	30
1W16MP16BA	-16	25	-16	1-11 1/2	114.5	4.5	47.8	1.9	19.6	0.8	36
1W20MP20BA	-20	32	-20	1 1/4-11 1/2	127.2	5.0	52.3	2.1	25.5	1.0	46
1W24MP24BA	-24	38	-24	1 1/2-11 1/2	150.5	5.9	55.5	2.2	30.1	1.2	50



1WA Stainless steel crimp socket

Part number	Hose size		E	D
	Dash	DN		
1WA12BA	-12	19	52.1	43.1
1WA16BA	-16	25	66.5	48.8
1WA20BA	-20	32	77.7	57.2
1WB24BA	-24	38	96.6	70.6



Stainless steel protective sleeve

Part number	Internal diameter		Outside diameter		hose size	Bend radius		Approx. weight	
	in	mm	in	mm		in	mm	lb/ft	kg/m
GA70000687-038	1.5	38.1	1.7	42.2	19	7.5	190	0.63	0.93
GA70000687-044	1.8	44.5	1.9	48.5	25	11.0	280	0.70	1.04
GA70000687-050	2.0	50.8	2.17	55.1	32	11.8	300	0.87	1.30
GA70000687-063	2.5	63.5	2.66	67.4	38	13.0	330	55.50	2.18

Note: Over ferrule crimp sleeve also available

Quick connect couplings for BOP application

FD85 Series Thread to Connect

The Eaton FD85 Series is a thread to connect coupling most commonly used in Oil and Gas applications, but can also be found on demanding applications on both mobile and stationary equipment where operating pressures of 5,000 psi are present.

Product Features

- Thread to connect feature allows for use in high vibration and impulse applications
- Standard body material: Zinc trivalent plated carbon steel. Stainless steel construction available upon request
- Connect under pressure capability up to 5,000 psi (345 bar)
- Standard seal material: Buna-N. FKM seals are available upon request
- Wing nut and hex flat design allows for easy connection and disconnection
- 3/4" design is offered in a hex nut design
- Female NPTF and BSPP ends available



Physical characteristics

Body size (in)	Maximum operating pressure						Minimum burst pressure						Fluid loss ml-cc.	Air inclusion ml-cc.		
	Connected		Plug/ male half		Socket/ female half		Connected		Plug/ male half		Socket/ female half				Rated flow	
	bar	(psi)	bar	(psi)	bar	(psi)	bar	(psi)	bar	(psi)	bar	(psi)			bar	(gpm)
3/4"	345	5,000	345	5,000	345	5,000	1,380	20,000	1,380	20,000	1,380	20,000	100	26.4	10	10
1"	345	5,000	345	5,000	345	5,000	1,380	20,000	1,380	20,000	1,380	20,000	189	50	20	26
1 1/4"	345	5,000	345	5,000	345	5,000	1,035	15,000	1,035	15,000	1,035	15,000	288	76	20	40
1 1/2"	345	5,000	345	5,000	345	5,000	1,035	15,000	1,035	15,000	1,035	15,000	379	100	83	85
2"	345	5,000	345	5,000	345	5,000	1,035	15,000	1,035	15,000	1,035	15,000	757	200	181	240

Lloyd's Register Certification

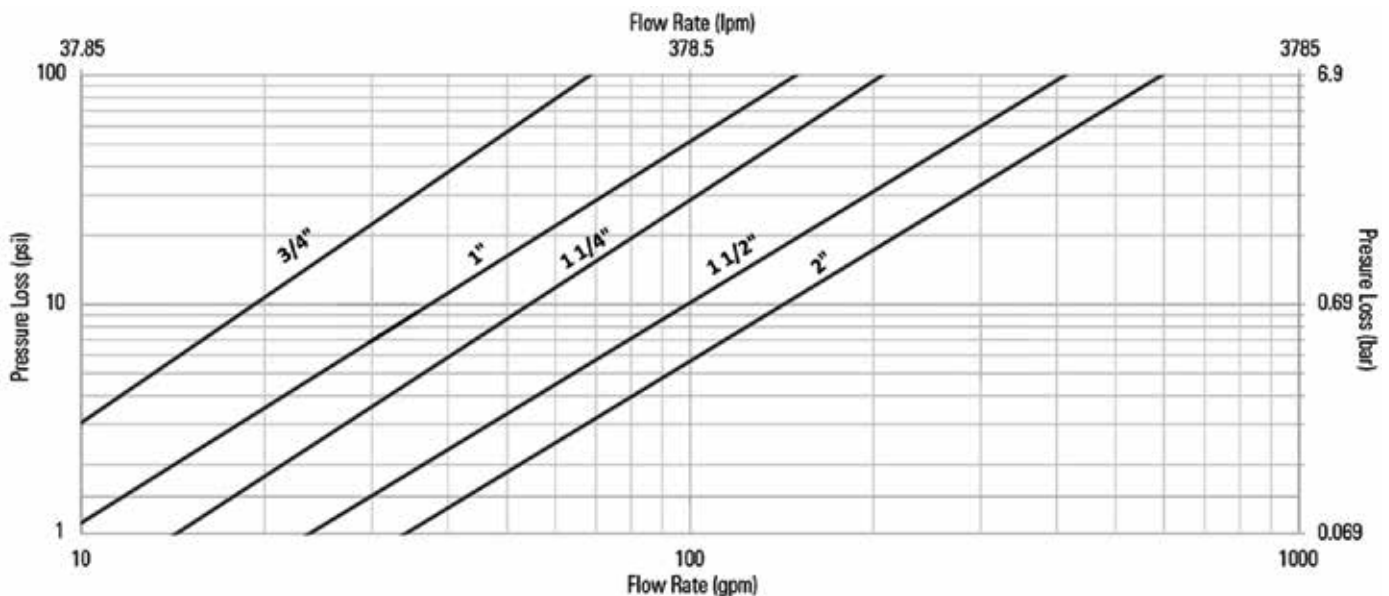
The FD85 Series carries a Lloyd's Registry Certificate for fire conditions outlined in API 16D and EUB Directive 36. These parts meet the requirements that couplings shall be capable of maintaining pressure when exposed to a 700°C (1,300°F) temperature for a five-minute period in connected state.

Certification only applies to those assemblies where both mating parts socket/female and plug/male are Eaton FD85 Series thread to connect couplings.

Applications & Markets

- Oil Fields
- Offshore Drilling
- Construction
- Oil and Gas

Flow Data



HKFR Series ISO 7241-1 BOP

Eaton's HKFR Series is a quick disconnect hydraulic coupling for hazardous Blow Out Preventer (BOP) service in the Oil and Gas Industry. The HKFR Series meets or exceeds the ISO 7241-1 B standard.

Product features

- BOP designation and red color is marked on the socket/female and plug/male halves
- Sleeve lock is standard
- Lloyd's register certification
- Meets or exceeds ISO 7241-1 Series B standard
- Utilizes HK Series dust caps and dust plugs
- Standard body material: 316 stainless steel, zinc trivalent plated steel
- Standard seal material: Buna-N



Physical Characteristics

Series (in)	Body Size bar	Connected		Maximum Operating Pressure Min. Burst Pressure		Rated Flow		Fluid Loss	
		(psi)	bar	(psi)	bar	(psi)	bar	(psi)	bar
3/4"	345	5,000	345	5,000	345	5,000	1,380	20,000	1,380
1"	345	5,000	345	5,000	345	5,000	1,380	20,000	1,380
1 1/4"	345	5,000	345	5,000	345	5,000	1,035	15,000	1,035
1 1/2"	345	5,000	345	5,000	345	5,000	1,035	15,000	1,035
2"	345	5,000	345	5,000	345	5,000	1,035	15,000	1,035

Applications & Markets

- Oil and gas

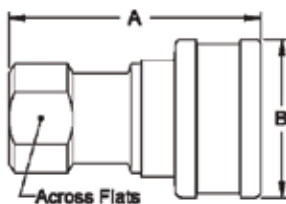


Figure 1

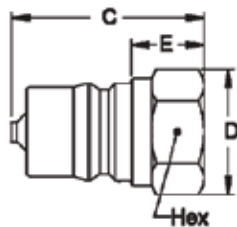


Figure 2

Lloyd's Register Certification

All of the above items carry a Lloyd's Registry Certificate for fire conditions stated in API 16D and EUB Directive 36. These parts meet the requirements that state couplings shall be capable of maintaining pressure when exposed to a 700°C (1,300°F) temperature for a five-minute period. Testing for this certification was conducted at the following pressures in the connected condition:

4HFR26/4KFR26:	3,000 PSI/206 BAR
6HFR31/6KFR31:	3,000 PSI/206 BAR
8HFR36/8KFR36:	4,000 PSI/275 BAR
ML8HFR36/ML8KFR36:	4,000 PSI/275 BAR

Female End Connections

Part number	Coupling type	Body size	Thread	Fig.	Dimensions					
					A (in)	B (in)	Across flats (in)	A (mm)	B (mm)	Across flats (mm)
4HFR26	Socket/Female	1/2	1/2-14 NPTF	1	2.96	1.86	1.13	75.2	47.2	28.7
6HFR31	Socket/Female	3/4	3/4-14 NPTF	1	3.48	2.22	1.31	88.4	56.4	33.3
8HFR36	Socket/Female	1	1-1 1/2 NPTF	1	4.13	2.61	1.75	104.9	66.3	44.5
ML8HFR36*	Socket/Female	1	1-1 1/2 NPTF	1	4.13	2.61	1.75	104.9	66.3	44.5

*Stainless Steel

Plugs/Males

Part Number	Coupling Type	Body Size	Thread	Fig.	Dimensions							
					C	D	E	Hex	C	D	E	Hex
					(in)	(in)	(in)	(in)	(mm)	(mm)	(mm)	(mm)
4KFR26	Plug/Male	1/2	1/2-14 NPTF	2	2.03	1.3	0.76	1.13	51.6	33.0	19.3	28.7
6KFR31	Plug/Male	3/4	3/4-14 NPTF	2	2.36	1.52	0.71	1.31	59.9	38.6	18.0	33.3
8KFR36	Plug/Male	1	1-11 1/2 NPTF	2	2.85	1.88	0.97	1.63	72.4	47.8	24.6	41.4
ML8KFR36*	Plug/Male	1	1-11 1/2 NPTF	2	2.85	1.88	0.97	1.63	72.4	47.8	24.6	41.4

*Stainless Steel

Eaton
Hydraulics Group Europe
Route de la Longeraie 7
1110 Morges, Switzerland
Tel: +49 7221 682 456
Eaton.com/xstorage

Eaton
Hydraulics Group Asia Pacific
Eaton Building
No.7 Lane 280 Linhong Road
Changning District,
Shanghai 200335
China
Tel: (+86 21) 5200 0099
Fax: (+86 21) 2230 72401

Eaton
Hydraulics Group USA
14615 Lone Oak Road
Eden Prairie, MN 55344
USA
Tel: 952-937-9800
Fax: 952-294-7722



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