

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings**with type designation(s)
EC600

Issued to

**Eaton Corporation
Van Wert, OH, USA**

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems**DNV GL class programme DNVGL-CP-0183 – Type approval – Flexible hoses****Application :****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.****Temperature range:** -40°C up to +121°C /
-40°F up to +250°F**Max. working press.:** 420 bar / 6100 psi**Sizes:** 3/4" up to 1 1/4"Issued at **Hamburg** on **2019-07-31**This Certificate is valid until **2024-07-30**.for **DNV GL**DNV GL local station: **Certification & Inspection
Services**Approval Engineer: **Christian Kaemmer**

**Olaf Drews
Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

EC600-Series:

Synthetic rubber inner tube of NBR reinforced by 4 or 6 layers of heavy spiral wire reinforcement.
Outer cover of synthetic rubber NBR/PVC.
Design according to SAE100R15.

Fittings: Permanently fitted Eaton Global 4S/6S and 1W-series fittings. Carbon and stainless steel.

Size and pressure range:

Part number	Hose ID		Maximum working pressure	
	inches	mm	psi	bar
EC600-12	0.75	19.0	6100	420
EC600-16	1.00	25.4	6100	420
EC600-20	1.25	31.8	6100	420

Production places

- Eaton Corporation, 1225 W. Main Street, Van Wert, Ohio, USA.
- Eaton Corporation, 860 Blankenship Rd. Newbern, TN 38059, USA.
- Eaton Germany GmbH, Dr. Reckwegstr. 1, 76532 Baden Baden, Germany
- Eaton Hydraulics (Luzhou) Co Ltd. Economy & Technology Development Zone, Wang Jiang Road, Luzhou, Sichuan, China
- Eaton Hydraulics (Ningbo) Co Ltd No.1965 JiangNan Road, Hi-Tech Industrial Development Zone, Ningbo, ZheJiang, China
- Eaton Industries Pte Ltd, 45 Tuas View Circuit, Singapore 637660
- Polimer Kauçuk Sanayi ve Pazarlama A.Ş. Çerkezköy Organize Sanayi Bölgesi, POB 18 59500 Karaağaç Mah. 6.Sokak No:3 - Kapaklı - Tekirdağ – Türkiye
- Eaton Germany GmbH, Auefeld 1, 34346 Hannoversch Münden, Germany
- Eaton Industries Pty. Ltd. Australia
 - 105 Henderson Road, Rowville, VIC, 3178, Australia
 - Unit 2, 54 Kewdale Road, Welshpool, WA, 6106, Australia
 - 75 Fulcrum St, Richlands, QLD, 4077, Australia
 - 47 Holbeche Road, ARNDELL PARK, NSW, 2148, Australia
 - 17 Waterloo Avenue, THORNTON, NSW, 2322, Australia
- Eaton Hydraulics Group New Zealand, 77-79 Ben Lomond Crescent, PAKURANGA, AUCKLAND, 2010, New Zealand

Responsibility

Eaton Corporation Van Wert, OH, USA, takes the responsibility that the design and production of the hoses, hose end fittings and manufacturing of hose assemblies are in compliance with Rules, Standards and/or Regulations listed on page 1 of this certificate.

Application/Limitation

Hose assemblies covered by this type approval certificate are approved for hydraulic systems with petroleum and water-glycol base fluids, lubricating oils and water.

Flexible hoses are only to be used in short lengths up to 2 m where it is necessary due to vibrations or flexible mounting of the machinery. The hoses shall not replace/be used where permanent piping is possible/required.

Job Id: **262.1-031730-1**
Certificate No: **TAP00001V3**

Installation

The hose assemblies must only be fitted in places where they are always accessible.

Flexible hoses of these types are not to be used on boiler fronts.

The hoses are to be mounted in accordance with the manufacturer's instructions.

It must be possible to shut off from the system all flexible hoses used in systems for fresh water cooling applications, lube oil, fuel oil and petroleum base hydraulic oil.

Hose assemblies with couplings made of carbon steel are not to be used at temperatures below -10°C unless the material is normalized.

Type Approval documentation

Tests carried out

Production testing

All hose assemblies shall be subject to a pressure test at 1.5 times the maximum working pressure and shall be delivered with the pressure test report with reference to the type approval certificate.

Marking of product

For traceability to this type approval, each hose assembly is to be marked with:

Manufacturer's name
Type, Nominal Diameter
Maximum working pressure M.A.W.P.
Date Code
Temperature Rating

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the Type Approval are complied with. Refer to DNVGL-CP-0338, Sec.4.