



Hydraulic Hose

High quality spiral and wire braid hose for industrial applications

A WORLD LEADER IN THE RUBBER INDUSTRY

Bridgestone was founded in 1931 and has grown to become the world's largest tire and rubber products company, with 179 production facilities in 25 countries and sales networks in over 150 countries.

The company is renowned for its R&D and design capability, exemplified by the success of Bridgestone's racing tires. This expertise extends to a wide range of products including automotive parts and industrial rubber products such as Hydraulic Hoses.

"Bridgestone... Serving Society with Superior Quality"



Construction **Civil Engineering** **Agriculture** **Transportation**

Hydraulic hoses are used in a wide range of applications and industries. Bridgestone has continued to innovate and improve the quality of its hose to meet ever growing market demands, requiring better performance and a wider range of specifications.

Bridgestone Hydraulic Hose History

- 1938** : Started hose production at Yokohama factory Japan
- 1965** : Established joint venture with Imperial Eastman for couplings
- 1971** : Transferred production facility to Kumamoto Japan
- 1980** : Joint venture became 100% subsidiary of Bridgestone Corporation
- 1990** : Began additional hose production at Seki factory
- 1998** : Built hose assembly factory in China (CBF: China Bridgestone Flowtech)
- 2003** : Built hose assembly factory in USA (ABF: America Bridgestone Flowtech)
- 2004** : Built hose production factory in Thailand

Advantages of using Bridgestone Hose

Tested and Proven Reliability

Bridgestone has a long and successful history supplying high quality hose and assemblies to a global client base including Japanese construction machinery manufacturers.

Bridgestone Quality

- Crimping Technology
- Heat Aging Test
- Wire Alignment
- Total Product Control

Superior Performance

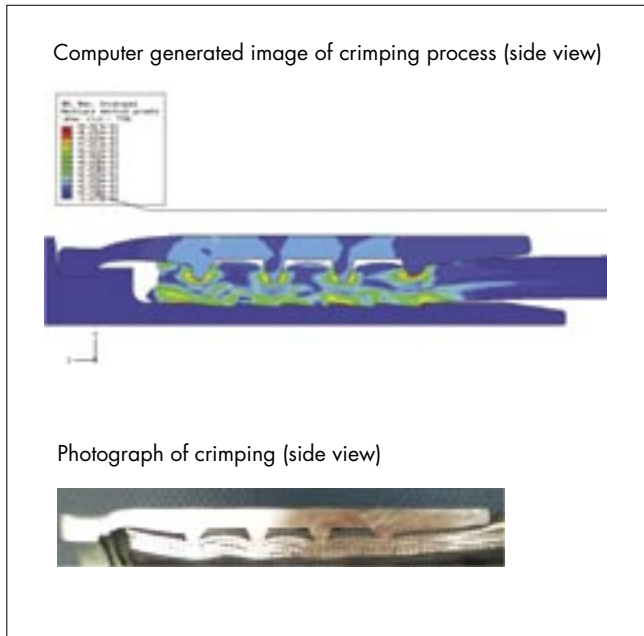
- Longer Life
- Easy Installation



Bridgestone Quality

Crimping Technology

95% of all leaks occur between the crimped portion of the coupling and the hose. Bridgestone overcomes this common problem by using advanced development methods such as computer analysis.



Heat Aging Test

In addition to standard impulse testing, Bridgestone also evaluates hose performance by carrying out its own specialized heat aging tests. These tests allow Bridgestone engineers to optimize hose performance and hose stability.



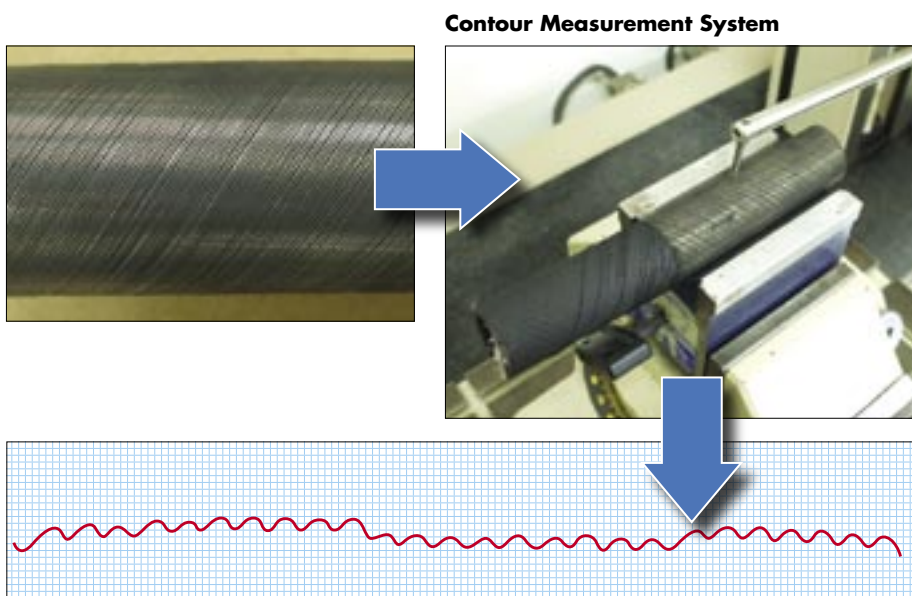
Results show no leakage after the following test:

Test Method:

1. Heat to 100°C for 16 hours
2. Remove hose from oven and cool to room temperature.
3. Pressure Test at maximum working pressure for 3 minutes and check leakage
4. Impulse cycle test for in excess of 1 million cycles.

Wire Alignment

The superior wire alignment found in Bridgestone hoses provides excellent structural uniformity along the whole length of hose. This assures a high level of flexibility and durability. Alignment is controlled using a Contour Measuring System.

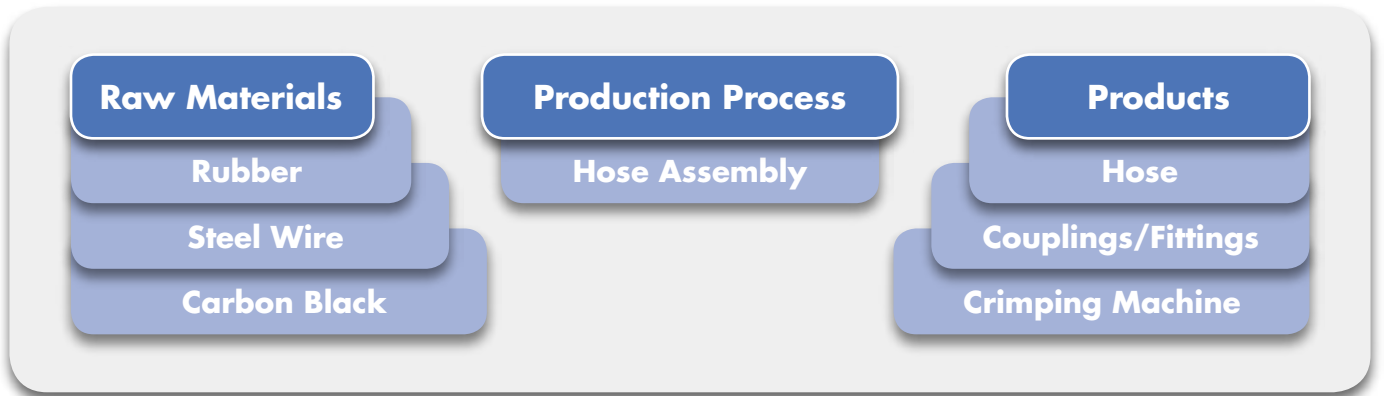


Very low contour deformation results show excellent uniformity



Total Product Control

Bridgestone maintains total control over every step of the manufacturing process because all activities are carried out in-house by Bridgestone's own staff. This core strength means Bridgestone can always ensure that its hoses meet the highest quality standards.



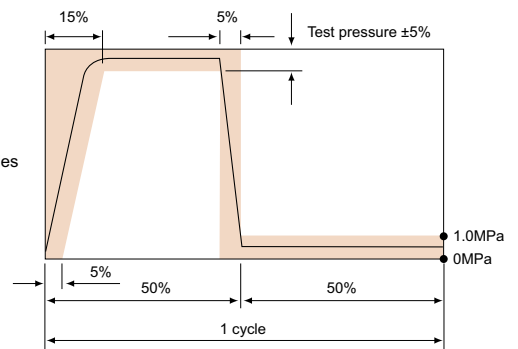
Superior Performance

Bridgestone offers superior performance hoses which exceed SAE/DIN test requirements. Examples of EPOQU series hoses are shown below.

Longer Life

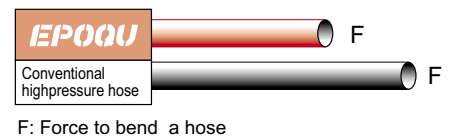
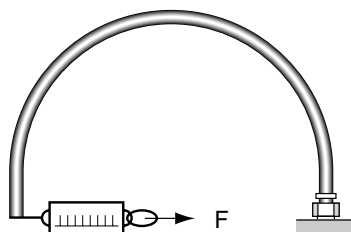
EPOQU hose successfully passes 1,000,000 impulse cycles at 120°C (250°F).

EPOQU		1,000,000 cycles
SAE 100R15		500,000 cycles
JIS K 6349-3		400,000 cycles
SAE 100R2		200,000 cycles



Easy Installation

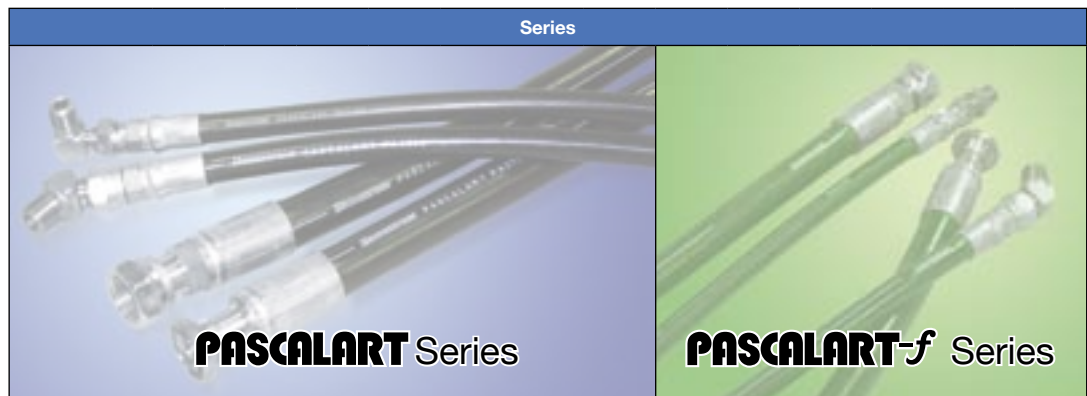
EPOQU is highly flexible. EPOQU requires just two thirds of the force necessary to bend other conventional rubber hoses to the same bending radius. Thus, EPOQU allows easy and speedy installation.



Bridgestone hydraulic hose uses steel wire technologies developed by Bridgestone's tire division.



Hose summary and warranty period



Hose I.D.		PA01	PA03	PA07	PA10	PA14	PA17	PA21	PA28	PA35	PF07	PF14	PF17	PF21	PFW	PFH	
Upper: Reinforcement	inch							1W 20.5 (3000)	2W 27.5 (4000)	2W 34.5 (5000)	1W 7.0 (1000)	1W 14.0 (2000)	1W 17.0 (2500)	1W 20.5 (3000)	2W 24.5 (3500)	2W 27.5 (4000)	
	mm																
	1/4	6.3	4C 1.5 (220)	4C 3.5 (500)			1W 14.0 (2000)	1W 17.0 (2500)									
	3/8	9.5															
	1/2	12.7			1W 7.0 (1000)	1W 10.5 (1500)											
	5/8	15.9		2C 3.5 (500)				2W 20.5 (3000)									
	3/4	19.0		4C 3.5 (500)			2W 14.0 (2000)	2W17.0 (2500)		4S 27.5 (4000)	4S 34.5 (5000)				2W 20.5 (3000)		
	1	25.7															
	1+1/4	31.8		1W 3.5 (500)		2W 10.5 (1500)											
Lower: Max. Working Pressure MPa (psi)	1+1/2	38.1		2W 7.0 (1000)		4S 14.0 (2000)		4S 20.5 (3000)		6S 27.5 (4000)							
	2	50.8			4S 10.5 (1500)												
Warranty period	Required Cycles	400,000 cycles										400,000 cycles					
	Period	1 year															
Peak Pressure		133% of the working pressure															
Burst Pressure		4 times of the working pressure															
Temperature Range		-40°C to +100°C (-40°F to +212°F)										-40°C to +100°C (-40°F to +212°F)					

Warranty Period for Special Purpose Hose

	Series						
	OKE	JW, JWK	VW, NW	WB, WH	SA	Jambo	ACT/PJ
Required Cycles	200,000 cycles	25,000 cycles	200,000 cycles	100,000 cycles	N/A	200,000 cycles	100,000 cycles
Period	1 year for oil 1 year for water	1 year	1 year	6 months	3 months	1 year	1 year for oil 1 year for water



Hose I.D.		Series											
		EQ17	EQ21	EQ25	EQ28	EQ31	R1T	R2T	R12A	R13A	R15A	4SP	4SH
Upper: Reinforcement	inch	mm											
	3/16	4.8											
	1/4	6.3					1W 19.0 (2750)	2W 34.5 (5000)					
	3/8	9.5					1W 15.5 (2250)	2W 27.6 (4000)			4S 41.4 (6000)	4S 44.5 (6000)	
	1/2	12.7					1W 13.8 (2000)	2W 24.1 (3500)				4S 41.5 (6000)	
	5/8	15.9	2W 17.5 (2500)	2W 20.5 (3000)		4S 27.5 (3500)	4S 31.0 (4500)		4S 27.6 (4000)			4S 35.0 (5100)	
	3/4	19.0		4S 24.5 (3500)			1W 8.6 (1250)	2W 15.5 (2250)		4S 34.5 (5000)	4S 41.4 (6000)	4S 28.0 (4100)	4S 42.0 (6100)
	1	25.4		4S 20.5 (3000)			1W 6.9 (1000)	2W 13.8 (2000)				4S 28.0 (4100)	4S 38.0 (5500)
	1+1/4	31.8	4S 17.5 (2500)			6S 27.5 (3500)			4S 20.7 (3000)		6S 41.4 (6000)	4S 21.0 (3000)	4S 32.5 (4700)
	1+1/2	38.1		6S 24.5 (3500)			6S 31.0 (4500)		4S 17.2 (2500)	6S 34.5 (5000)		4S 18.5 (2700)	4S 29.5 (4300)
2	50.8		6S 20.5 (3000)									4S 25.0 (3600)	
Warranty period	Required Cycles	1,000,000 cycles					150,000 cycles	200,000 cycles	500,000 cycles			200,000 cycles	
	Period	1 year											
Peak Pressure		133% of the working pressure					125% of W.P.	133% of W.P.	120% of W.P.			133% of W.P.	
Burst Pressure		5 times of the working pressure					4 times of the working pressure						
Temperature Range		-40°C to +120°C (-40°F to +250°F)					-40°C to +100°C (-40°F to +212°F)			-40°C to +120°C (-40°F to +250°F)		-40°C to +100°C (-40°F to +212°F)	

Warranty Period for Plastic Hose

	Series					
	KF	KG	SPL, KA, KB	JC70, PS, PC	SF	JAT/JAM/JAL/JKY/JAK Only Hose Assembly Available
Required Cycles	150,000 cycles	200,000 cycles	200,000 cycles	25,000 cycles	100,000 cycles	5,000/10,000/15,000/100,000/200,000 cycles
Period	1 year	1 year	1 year	1 year	1 year	1 year



The information contained in this publication is for guidance purposes only. While every effort has been made in its production, no responsibility can be accepted for any loss or damage arising from any undetected error. Any data supplied is subject to possible revision following the date of publication. Produced April 2009.

Bridgestone hose products are manufactured at facilities recognized for their quality of management by the highest international certification standards:



CM012



005

Bridgestone Quality Management Systems
ISO 9001/2000 Approved



CM009



091-C

Bridgestone Environmental Management Systems
ISO 14001 Approved

Sales Companies:

Bridgestone Industrial Ltd.
CP House, 97-107 Uxbridge Road
Ealing, London W5 5TL, UK
Tel: +44 20 8567 8080
Fax: +44 20 8567 2066

Bridgestone Industrial Products America Inc.
402 Bna Drive, Suite 212
Nashville, TN 37217, USA
Tel: +1 615 365 0600
Fax: +1 615 365 9946

Bridgestone Engineered Products of Asia Sdn. Bhd. (364273M)
L1-E-3B, Enterprise 4, Technology Park Malaysia
Lebuhraya Puchong-Sg Besi, Bukit Jalil,
57000 Kuala Lumpur, Malaysia
Tel: +60 3 89962670
Fax: +60 3 89962690

Published by:

Bridgestone Corporation
Yaesu Centre Building, 10F, 1-6-6, Yaesu
Chuo-ku, Tokyo 103-0028 Japan
Tel: +81 3 5202 6883
Fax: +81 3 5202 6885

