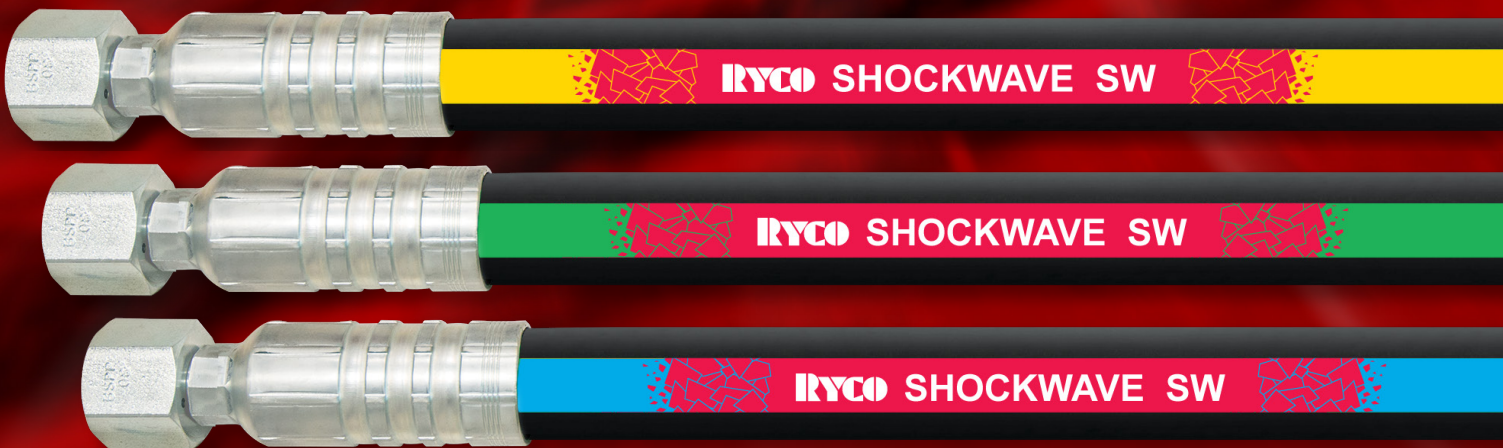




# SHOCKWAVE

Heavy Industry Waterblast



CONNECTING PARTNERSHIPS

[www.RYCO.com.au](http://www.RYCO.com.au)

# SHOCKWAVE VERY HIGH PRESSURE WATERBLAST

## SHOCKWAVE VERY HIGH PRESSURE WATERBLAST

# SW

SHOCKWAVE  
EN 1829-2, AS/NZS 4233.2  
VERY HIGH PRESSURE WATERBLAST



### RECOMMENDED FOR:

Very High Pressure waterblast hose for the cleaning and preparation of marine surfaces, runway and swimming pool cleaning, and paint removal.

**Not recommended for Steam.**

### TUBE:

Oil and water resistant synthetic rubber.

### REINFORCEMENT:

Four alternating layers of spiralled high tensile steel wire.

### COVER:

Oil, water and ozone resistant synthetic rubber. The cover is formulated to resist marking. Internal and External skiving required with TW4000 Series BITELOK Interlok Crimp Couplings.

### FEATURES:

Exceeds ISO 7751 performance requirements.  
Meets specifications EN 1829-2 (impulse) and AS/NZS 4233.2.  
Highly abrasion resistant cover.

### TEMPERATURE RANGE:

Continuous service from -20°C to +80°C (-4°F to +176°F).  
Intermittent service to +100°C (+212°F).

### WORKING PRESSURE:

Maximum working pressures are based on 2.5:1 safety factor (maximum working pressure to minimum burst pressure).



INTERLOK  
ONE-PIECE  
CRIMP TW4000

### COUPLINGS:

**BITELOK INTERLOK SKIVE ONE-PIECE CRIMP TW4000 series** (sizes -06 to -16).

For additional assembly considerations, recommendations and related information see the latest RYCO Product Technical Manual - Hydraulics and the latest Crimp Chart on our website, [www.RYCO.com.au](http://www.RYCO.com.au). Contact RYCO for assembly procedure.

### A MEMBER OF

THE WATERJET TECHNOLOGY ASSOCIATION (WJTA) AND  
INDUSTRIAL & MUNICIPAL CLEANING ASSOCIATION (IMCA)

THE AUSTRALASIAN HIGH PRESSURE WATER JETTING  
ASSOCIATION

SW SHOCKWAVE - VERY HIGH PRESSURE HOSE																
COLOUR CODE	PART NO	HOSE SIZE	NOMINAL HOSE ID	NOMINAL HOSE OD	MAXIMUM WORKING PRESSURE	MINIMUM BURST PRESSURE	MINIMUM BEND RADIUS	AVERAGE WEIGHT	COUPLING SERIES		INTERLOK ONE-PIECE					
	Hose	DN	Dash	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	kg/m	lb/ft	INT/EXT SKIVE
	SW18006	10	-06	9,5	3/8	21,5	0.85	1250	18125	3125	45315	150	5.9	0,56	0.37	TW4000
	SW16008	12	-08	12,7	1/2	24,6	0.97	1100	16000	2750	40000	180	7.1	0,83	0.56	TW4000
	SW14512	19	-12	19,0	3/4	31,9	1.26	1000	14500	2500	36250	220	8.7	0,92	0.62	TW4000
	SW10012	19	-12	19,0	3/4	30,6	1.21	700	10000	1750	25000	220	8.7	1,34	0.90	TW4000
	SW10016	25	-16	25,4	1	37,6	1.48	700	10000	1750	25000	250	9.8	1,39	0.93	TW4000

Cutting and Assembly Charges apply to all RYCO hoses, and vary by hose types and sizes. Contact RYCO for additional information or visit [www.RYCO.com.au](http://www.RYCO.com.au)

### WJTA-IMCA colour code recommendations:

	20K Pressure Range
	15K Pressure Range
	10K Pressure Range

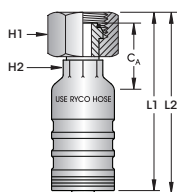
RYCO QUALITY

# TW4000 SERIES BITELOK INTERLOK ONE-PIECE CRIMP COUPLINGS

## BSPP

## TW4027

BSPP FEMALE  
O RING  
60° SEAT

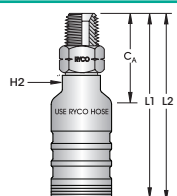


HOSE SIZE		THREAD SIZE	DASH SIZE	BSPP FEMALE O RING					
DN	inch	inch		PART NO	C <sub>A</sub>	L1	L2	H1	H2
10	3/8	3/8	-0606	<b>TW4027-0606</b>	28	78	80	22	14
12	1/2	1/2	-0808	<b>TW4027-0808</b>	28	85	86	27	17
19	3/4	3/4	-1212	<b>TW4027-1212</b>	32	91	96	32	27
25	1	1	-1616	<b>TW4027-1616</b>	37	95	101	38	32

## NPT

## TW4090

NPT MALE  
60° SEAT

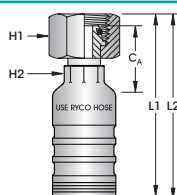


HOSE SIZE		THREAD SIZE	DASH SIZE	NPT MALE					
DN	inch	inch		PART NO	C <sub>A</sub>	L1	L2	H2	
10	3/8	3/8	-0606	<b>TW4090-0606</b>	41	92	93	17	
12	1/2	1/2	-0808	<b>TW4090-0808</b>	47	103	104	22	
19	3/4	3/4	-1212	<b>TW4090-1212</b>	51	109	115	27	
25	1	1	-1616	<b>TW4090-1616</b>	59	117	123	35	

## METRIC

## TW4711

DKOS FEMALE  
METRIC O RING (HEAVY)  
24° CONE



HOSE SIZE		THREAD SIZE	TUBE SIZE	DASH SIZE	DKOS FEMALE 24° CONE					
DN	inch	mm	mm		PART NO	C <sub>A</sub>	L1	L2	H1	H2
10	3/8	22x1,5	14	-0622	<b>TW4711-0622</b>	35	85	87	27	14
10	3/8	24x1,5	16	-0624	<b>TW4711-0624</b>	37	87	89	32	14
12	1/2	24x1,5	16	-0824	<b>TW4711-0824</b>	35	92	93	32	17
19	3/4	36x2,0	25	-1236	<b>TW4711-1236</b>	45	104	109	46	27
25	1	42x2,0	30	-1642	<b>TW4711-1642</b>	48	106	112	50	32

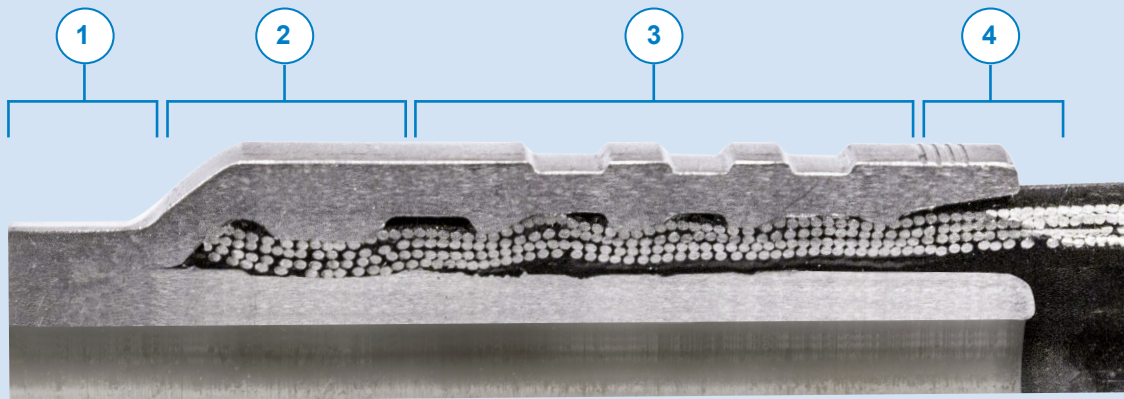
**NOTE:** All dimensions in millimeters unless otherwise stated.



# SHOCKWAVE VERY HIGH PRESSURE WATERBLAST

## FEATURES AND BENEFITS

### TW SERIES



1. Strong heavy-duty connection.
2. Interlok design traps wire for positive retention.
3. Controlled wire grip (waveform) and tubes for sealing.
4. Generous radii protect against flexural damage.

#### SOLID NUT

No more wire-on (pin) nuts means extra strength, reliability and increased safety.

#### ENGINEERING

All couplings have been designed and validated in synergy with SHOCKWAVE hoses to ensure industry standards are exceeded.

#### BRANDING

All components are branded with information for positive identification and traceability.

#### CORROSION PROTECTION

Encased in RYCOTE plating, the couplings will endure harsh environmental conditions and offer excellent protection against corrosion.



#### RELIEF HOLES

All nuts are engineered with 2 axial relief holes that safely seep fluid in the case of a misassembled connection, or in-service loosening of connections.

#### ONE-PIECE DESIGN

A One-Piece design utilising RYCO's cutting-edge Mark 5 technology increases performance and reduces risk of incorrect product selection during assembly fabrication.

#### QUALITY MATERIALS

Only high quality and high grade carbon steels are used during manufacture to ensure consistent, reliable and safe products are delivered to our customers.

RYCO QUALITY

## HOSE ASSEMBLY

RYCO offers a large range of off-the-shelf Very High Pressure waterblast hose assemblies for all popular working pressures, up to 1250 bar/18125 psi.

All hose, couplings and hose assemblies have been designed, validated and fabricated by RYCO to ensure safe, and reliable endurance under even the most harshest of conditions.

All RYCO SHOCKWAVE waterblast hose assemblies are made using matched RYCO hose and RYCO fittings to deliver maximum performance, enduring reliability, and safety.

Production of RYCO SHOCKWAVE hose assemblies is carried out by trained staff in our accredited assembly facilities under strict RYCO process and quality control. Each component used to create hose assemblies is checked for quality prior to fabricating the final assembly.

Each hose assembly is allocated a unique serial number during production. This unique number is later referenced on the test certificate issued with each individual assembly, ensuring complete traceability to the production and test history of each hose assembly.

Once hose assemblies have passed the required testing, they are cleaned and then despatched with the related test certificate attached to provide traceability and security for our SHOCKWAVE customers.

Most hose assemblies are stocked in either one or more of the following lengths, but custom assemblies are also available:

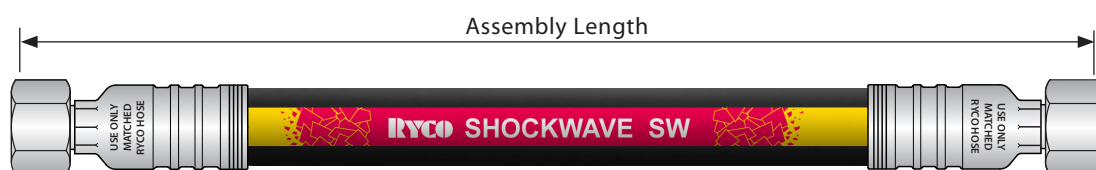
### ASSEMBLY LENGTHS:

15,2m / 20m / 30,4m / 40m

(50ft / 65ft / 100ft / 130 ft)

Maximum length of 60m (200 ft) available on request.

The RYCO coupling range comes in a wide variety of connection types, including popular NPT Male, BSPP Female (O-Ring Seal) and Metric DKOS (Heavy) Female.



### INDIVIDUALLY TESTED

Each fully certified RYCO SHOCKWAVE hose assembly supplied by RYCO is individually tested, quality checked and labelled.

Each assembly is labelled with the following information:

- Manufacture Date (MD)
- Working Pressure (WP)
- Location of Manufacture (LO)
- Part Number (PN)
- Customer Number (CN)
- Re-Test Date (RTD)
- Serial Number (SN)
- Test Certificate Number (TCN)

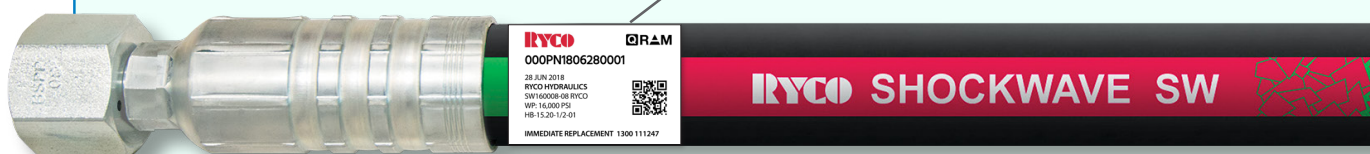


**000PN1806280001**

28 JUN 2018  
RYCO HYDRAULICS  
SW160008-08 RYCO  
WP: 16,000 PSI  
HB-15.20-1/2-01



**IMMEDIATE REPLACEMENT 1300 111247**



# SHOCKWAVE VERY HIGH PRESSURE WATERBLAST

## SHOCKWAVE PROOF TEST CERTIFICATES

Each fully certified RYCO SHOCKWAVE hose assembly is supplied with a corresponding test certificate. The SHOCKWAVE Proof Test Certificate records all vital information applicable to the manufacture of the assembly.

The certificate records contain important information on the unique test certificate number, certificate issue date, applicable test specification, RYCO test procedures, assembly centre location, crimp diameter, nominal hose inner diameter, hose batch code, hose assembly manufacture date, recommended next inspection date and test operator name.



- ✓ ISO 9001: Quality
- ✓ ISO 14001: Environment
- ✓ OHSAS 18001: Safety

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### SHOCKWAVE PROOF TEST CERTIFICATE

TEST CERTIFICATE No. 5021-031

ISSUE DATE 29/11/2017

CUSTOMER NAME	Waterblast Corporation		
CUSTOMER CONTRACT / ORDER No.	WC201609-023	RYCO CO No.	0019013456
TEST SPECIFICATION	EN 1829-2 in accordance with EN ISO 1402		
RYCO HYDRAULICS PROCEDURE No.	RH-WI-196		
TESTED AT RYCO ASSEMBLY CENTRE	MEL-AUS (Melbourne, VIC, Australia)		

PRODUCT	QTY.	MAXIMUM WORKING PRESSURE	PROOF TEST PRESSURE	LEAK / DEFECTIVE	PASS / FAIL
		psi			
HASW160080123	5	16,000	24,000	No	Pass

SERIAL NUMBER	1609180012, 1609180014, 1609180015, 1609180016
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#### TEST PARAMETERS

TEST DURATION:	5 Minutes
AMBIENT TEMPERATURE:	27 °C
TEST RIG ID #:	BE4000E

#### PRODUCT DETAILS

CRIMP DIAMETER:	28.8mm	HOSE ASSEMBLY MANUFACTURED DATE:	29/11/2017
HOSE INNER DIAMETER:	1/2"	NEXT INSPECTION DATE (6 MONTHLY):	29/05/2017
HOSE BATCH CODE:	0575/1605 24 G 1450875/01/01		

#### COMMENTS

No visible leaks or defects were detected throughout test duration.

ASSEMBLER/TEST OPERATOR	DATE	INSPECTED BY	DATE
J. Citizen	29/11/2017	B. Resident	29/11/2017

RHAU Shockwave Proof Test Certificate 2016-11-03 v1-7

RYCO QUALITY



## SAFETY GUIDE

FOR THE SELECTION AND USE OF HOSE, FITTINGS AND RELATED ACCESSORIES

Failure or improper selection or improper use of hose, fittings, or related accessories can cause death, personal injury and property damage. Possible consequences of failure or improper selection or improper use of hose, fittings, or related accessories include, but are not limited to:

- Fittings blown off at high speed.
- High velocity medium discharge.
- Explosion, or burning, of the conveyed medium.
- Electrocutation from high voltage electric power lines or other sources of electricity.
- Contact with suddenly moving, or falling, objects that are held in position, or moved, by conveyed medium.
- Injections by high-pressure fluid or air discharge.
- Dangerously whipping hose.
- Contact with conveyed fluids that may be hot, cold, toxic or otherwise injurious.
- Sparking or explosion caused by static electricity build-up.
- Sparking, or explosion, while spraying paint or other flammable liquid.

- **DO NOT MIX AND MATCH PRODUCT.** Use only matched RYCO products to fabricate waterblast hose assemblies.
- In order to achieve optimum performance, the assembly of RYCO SHOCKWAVE hose and matched TW4000 BITELOK Interlok fittings must be performed using RYCO approved assembly procedures and equipment. RYCO production testing procedures should be used to ensure that the hose assembly produced is fit for purpose.
- For guaranteed performance of assemblies, use only RYCO-approved assembly facilities or distribution partners. Contact RYCO for your nearest approved assembler.
- Waterblast hose assemblies must not exceed the rated maximum working pressure. It is highly recommended that waterblast hose assemblies should not be used in pressure impulse applications.
- Waterblast hose assemblies must not operate outside of the operating temperature range specified for RYCO SHOCKWAVE hoses.
- Do not exert any external forces on the hose assembly, such as axial tension, twisting, kinking or crushing, which may reduce the integrity of the hose assembly. Waterblast hose assemblies should be inspected for signs of deterioration on a regular basis and shall be replaced if damaged or worn. Damage includes but is not limited to twisting, kinking, crushing, hose cover cuts or excessive wear, chemical degradation and corrosion.
- When whipchecks or other safety devices are installed to protect against injury or damage as a result of hose and fitting separation, the change in length of hose under pressure should be considered.
- Waterblast hose assemblies should be adequately supported to prevent excessive tensile (or other) stresses at any point along the hose assembly.
- High pressure water is extremely dangerous. Operators should wear appropriate personal protective equipment at all times, and should observe all related operational and safe working requirements when operating high pressure waterblast equipment.



## RYCO QUALITY

RYCO Hydraulics is certified to the current version of ISO 9001:2008 by the British Standards Institute - Quality Management System.

Company Policy is to supply products and services that meet or exceed our industry standards.

These standards include SAE, EN (DIN), AS, ISO, JIS, BS and BCS.

The bottom line in Quality Control (QC) and Quality Assurance (QA) is Customer Confidence and Customer Satisfaction.

## RYCO LOCATIONS

## RYCO 24•7 SERVICE CENTRES

### AUSTRALIA

+61 1300 111 247  
Sales@RYCO.com.au

#### GLOBAL HEAD OFFICE MELBOURNE

19 Whitehall Street  
Footscray, VIC 3011

#### REGIONAL LOCATIONS

##### ADELAIDE

BL Shipway & Co  
217 Richmond Road  
Richmond, SA 5033

##### BLACKWATER

6 Jarrah Street  
Blackwater, QLD 4717

##### PERTH

47 Tacoma Circuit  
Canning Vale, WA 6155

##### BRISBANE

97 Northlink Place  
Northgate, QLD 4013

##### NEWCASTLE

14 Ironbark Close  
Warabrook, NSW 2304

#### RYCO 24•7

#### 133•24•7

#### Sales@RYCO247.com

##### NSW

Bellingen  
Boggabri  
Ingleburn  
Mascot  
Newcastle  
Penrith  
Smeaton  
Grange  
Wallerawang  
Wetherill Park  
Woodburn

##### QLD

Archerfield  
Banana  
Blackwater  
Clermont  
Dysart  
Eagle Farm  
Emerald  
Ipswich  
Moranbah  
Narangba  
Rocklea  
Rolleston

##### SA & NT

Cowell  
Darwin  
Kadina  
Kapunda  
Loxton  
Port Pirie  
Richmond  
Riverland  
Roxby Downs  
Whyalla

##### VIC & TAS

Bendigo  
Mildura  
Shepperton  
Warrnambool  
Devonport

##### WA

Kalgoorlie  
Mandurah  
Newman  
Port Hedland  
Wangara

### NEW ZEALAND

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#### NEW ZEALAND HEAD OFFICE AUCKLAND

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##### NORTH ISLAND

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Kaikohe  
Manawatu  
Masterton  
Matamata  
Morrinsville  
New Plymouth  
Opoutama  
Otorohanga  
Palmerston North  
Pukekohe  
Putaruru  
Taupo  
Tauranga

##### SOUTH ISLAND

Christchurch  
Blenheim  
Bluff  
Dovedale  
Dunedin  
Golden Bay  
Gore  
Invercargill  
Nelson  
Thornbury  
Timaru  
Westport  
Winton

### USA & CANADA

+1 866 821 7926  
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#### HEAD OFFICE USA & CANADA TEXAS

1616 Greens Road  
Houston, Texas 77032

#### REGIONAL LOCATIONS

##### CALIFORNIA

1150 Valencia Avenue  
Tustin, California 92780

##### IOWA

1007 West 10th Street  
Pella, Iowa 50219

##### ONTARIO

32 Airpark Place  
Guelph, ONT  
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#### RYCO 24•7

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##### BOSSIER CITY

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#### DALIAN

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Gan Jing Zi District  
Dalian 116036

#### SHANGHAI

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Taicang Economy Developing Area  
Taicang, Jiangsu Province 215400

#### MALAYSIA

##### PENANG

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#### SOUTH AFRICA

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