

ThorburnFlex



CUSTOM BUILT RUBBER FLEXPipe
Engineered Solutions For Pipe Motion



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60TMH Wire Reinforced / 61TMH Non-Wire Reinforced Flexpipe



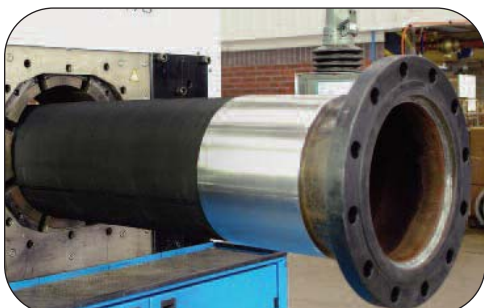
Sizes Available ID 12mm to 1200mm - Pressures Full Vacuum up to 70 bar



Available with smooth tube & cover to provide smooth flow with bend radius of 4X ID



Available with corrugated tube & cover with integral annular rings to increase flexibility to 2X ID



Available with factory assembled permanently attached crimped ends

Thorburn's 60TMH/61TMH Flexpipe is custom designed for use in piping systems that require isolation and absorption of severe noise, vibration, misalignment, lateral deflection and movements caused by mechanical or temperature changes. The 60TMH/61TMH Flexpipe system replaces metal piping and is optimal for pipelines requiring resistance to electrolysis, corrosion, abrasion and water hammering.

Construction

TUBE: Available with various tube compounds wall thickness with smooth or corrugated construction as determined by the application and the media. *Please call Thorburn for details.*

REINFORCEMENT: Multiple layers of precisely angled cross woven calendared fabric. The 60TMH has integrally built in evenly spaced heavy duty helix spring wire or annular rings that withstand the rated working pressures from full vacuum to 1000 psi (70 bar). Can be designed to support a minimum bend radius from two times the diameter or maintain unsupported rigidity over long lengths. The 61TMH can be rolled up for easy handling and storage. *Please call Thorburn for details.*

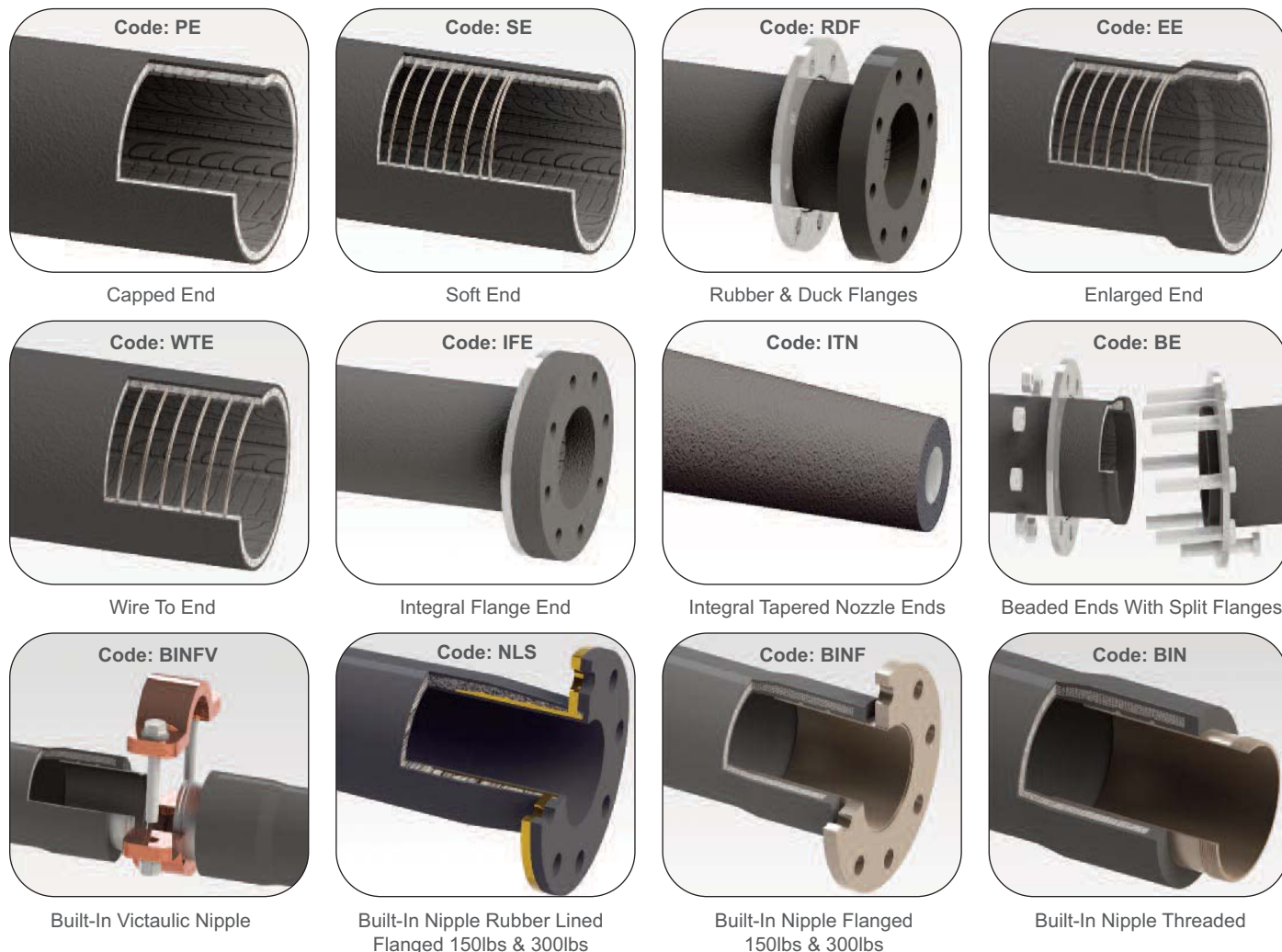
COVER: Available with various cover compounds and wall thicknesses with smooth or corrugated construction as determined by the application and the media. *Please call Thorburn for details.*

SIZES: 1/2" (12mm) to 48" (1200mm) I.D. up to 100ft (30m) long. *Longer lengths available on special order only.*

SPECIAL NOTES:

1. Thorburn's 60TMH assemblies are custom designed for specific applications, therefore the construction may vary depending on pressure, bend radius requirements & media.
2. The standard bend radius is typically 6X ID.
3. Corrugating the cover and tube will improve the bend radius at lower pressures.
4. Incorporating annular rings with a smooth tube and cover will improve the bend radius at high pressures.
5. The forces required to make a bend have a direct relation to the pressure.
6. Arches can be added to provide axial movement.
7. Special end configuration (other than shown) are available upon request.

TYPICAL 60TMH/61TMH ENDS



How to Order 60TMH/61TMH Hose Assemblies

Part Number Example & Description (See Ordering Codes - Page 7)
 (Part number must follow the order listed below. Suffix "X" to specify special construction options)

60TMH-96-I-H-04-02-150-RDF-BE-120

(Part number in imperial units. ID is always in 1/16 " example: 64=4", 48=3", 128=8")

60TMH	Flexpipe Model 60TMH Wire Reinforced
96	Inside Diameter (Inches)
I	(Code I) Compound Tube Material - Viton
H	(Code H) Compound Cover Material - EPDM
04	(Code 04) Tube Thickness - 1/4 Inches
02	(Code 02) Cover Thickness - 1/8 Inches
150	(Code 150) Working Pressure - 150 psi
RDF	(Code RDF) Rubber Duck Flange End
BE	(Code BE) Beaded End - Split Flange End
120	Overall Length - 120 Inches (specify mm for metric length)



Field Attachable Fitting-to-End Joints for 60TMH Rubber Hoses

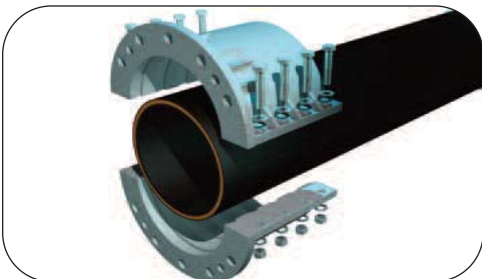


60TMH Split Cast Coupling Hose Assembly

Thorburn’s field attachable fitting to end joints are a ready made hose assembly solution designed to accommodate urgent site custom length hose assembly requirements. The hose lengths are designed to be cut to length on-site and fitted with Thorburn’s aluminum split cast coupling to provide a readymade site assembled flanged hose.

Thorburn’s field attachable split cast couplings are not in contact with the process flow. The hose length can be cut to suit the intended duty, ready for installation. In addition, it allows the re-use of the split cast couplings as the fittings are not in contact with the process flow.

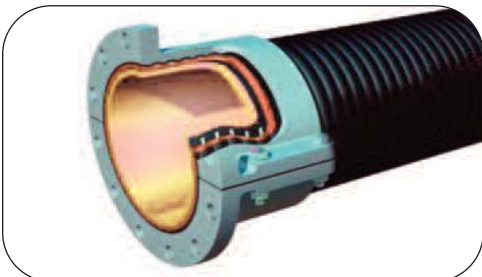
Thorburn’s field attachable fitting-to-end joints are an economical solution for quick emergency change out. Thorburn’s reusable multi-drill pattern coupling system enables operators to minimize inventory costs by stocking bulk hose with separate Thorburn clamped ends instead of factory fabricated hose assemblies.



Thorburn FAS150 Smooth Cover Coupling

Advantages

- High tensile reinforcement cord with a steel wire helix
- An abrasion and UV resistant smooth or corrugated elastomeric compound outer cover
- Suitable working temperature between -40°C and 82°C
- Minimum bend radius of 6 X ID.
- Safety factor is four times the working pressure



Thorburn FAS150 Corrugated Cover Coupling

- Mineral processing plants
- Sand and gravel industries
- Cement and coal industries
- Pump Stations

How to Order 60TMH Assembly With Field Attachable Fitting-to-End Joint

Part Number Example & Description (See Ordering Codes - Page 7)

(Part number must follow the order listed below. Suffix "X" to specify special construction options)

60TMH-96-B-C-04-02-150-RDF-YY-120

(Part number in imperial units. ID is always in 1/16 " example: 64=4", 48=3", 128=8")

60TMH	Flexpipe Model 60TMH
96	Inside Diameter (6 Inches)
B	(Code B) Pure Gum
C	(Code C) Neoprene
04	(Code 04) Tube Thickness - 1/4 Inches
02	(Code 02) Cover Thickness - 1/8 Inches
150	(Code 150) Working Pressure - 150 psi
FAS150	(Code FAS150) Smooth Cover 150lbs split Cast Coupling End
FAS150	(Code FAS150) Smooth Cover 150lbs split Cast Coupling End
120	Overall Length - 120 Inches (specify mm for metric length)



60TMH Rubber Pipe Fittings



60TMH-E90 Rubber 90° Elbow Fitting



60TMH-T Tee Rubber Fitting

Thorburn's 60TMH rubber pipe fittings are designed to replace metal pipe fittings reducing stress and strain on equipment and piping systems. Thorburn's 60TMH rubber pipe fittings will reduce the effects of seismic & ground settling movements, noise vibration from pumps, compressors, and other equipment. Thorburn's 60TMH rubber pipe fittings are custom designed and manufactured from various rubber compounds and reinforced to withstand full vacuum and pressures up to 300psi. Typical end configurations are integral flat face rubber flanges drilled to ANSI class 150 & 300 (other standard flange drillings are available)

Advantages

- Reduces noise and vibration
- Protects pump casing
- Relieves pipe stress and strain
- Excellent for seismic & ground settling movements

Construction

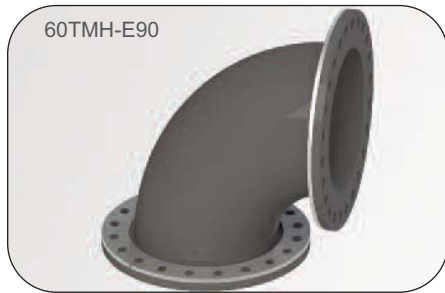
TUBE: Available with various tube compounds wall thicknesses to maximize service life and is determined by the application and the media.

REINFORCEMENT: Multiple layers of precisely angled cross woven fabric with calendared polyester or fiberglass fabric. Integrally built with an evenly spaced heavy duty helix spring wire that withstands full rated working pressures from full vacuum to 300 psi. *Please call Thorburn for details.*

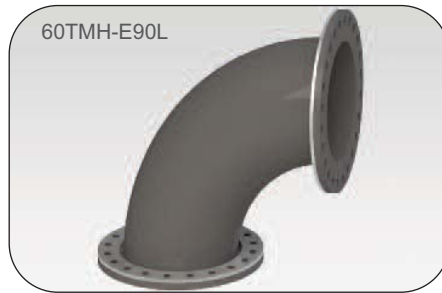
COVER: Available with various cover compounds and wall thicknesses to maximize service life and is determined by the application.

SIZES: 1/2" to 24" I.D. Larger sizes available on special order only.

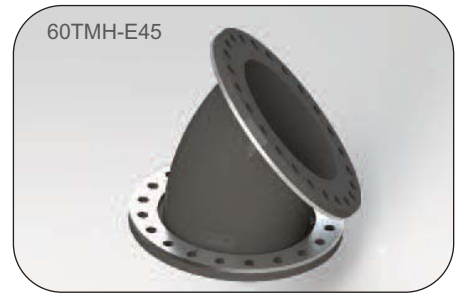
60TMH Pipe Fitting Styles (Built-in offsets available)



90° Elbow (Standard)



90° Elbow Long Radius



45° Elbow



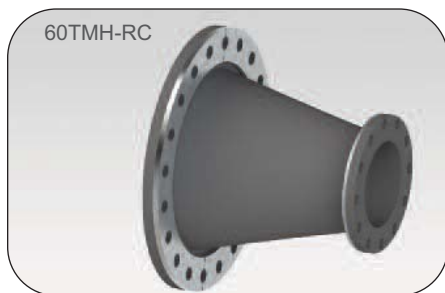
Y Connector



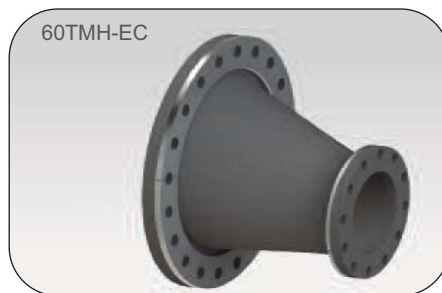
Tee Connector



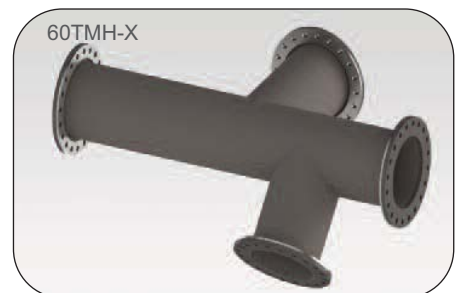
Cross Connector



Concentric Reducer



Eccentric Reducer



Custom Connector with Tangent

How to Order 60TMH Pipe Fittings

Part Number Example & Description (See Ordering Codes - Page 7)

60TMH-RC-10-D-C-04-02-150-RDF-RDF

(Part number in imperial units)

60TMH-RC	Flexpipe Model 60TMH Concentric Reducer
10	Inside Diameter (Inches)
D	Compound Tube Material - Nitrile
C	Compound Cover Material - Neoprene
04	Tube Thickness (Inches)
02	Cover Thickness (Inches)
150	Code 150 (Working Pressure)
RDF	Rubber Duck Flange End
RDF	Rubber Duck Flange End (List additional ends for Tee, Cross & Lateral fittings)



Ordering Codes

Insert Suffix "X" at the end of the part number to specify special construction options such as corrugated tube, corrugated cover & annular rings to meet specific design requirements

Tube & Cover Compounds

Our Flexpipe hoses are manufactured to the latest RMA standards.

Code A	Black natural rubber up to 180°F (82°C).
Code B	Pure gum up to 180°F (82°C).
Code C	Neoprene up to 212°F (100°C).
Code D	Nitrile up to 225°F (107°C).
Code E	H ₃ (Butyl) up to 300°F (148°C).
Code F	Hypalon up to 250°F (121°C).
Code G	Cross linked polyethylene up to 150°F (65°C).
Code H	EPDM up to 300°F (148°C).
Code I	Viton up to 350°F (176°C).
Code J	PTFE Lined up to 400°F (204°C).
Code K	PFA Lined up to 400°F (204°C).
Code L	Silicone up to 500°F (260°C).
Code M	HNBR up to 300°F (148°C).
Code N	Nitrile NSF-61 Certified tube (Only for potable water service).
Code O	Ceramic Lined up to 400°F (204°C).
Code X	Specify.

Tube & Cover Thickness

Code 01	1/16" (1.5mm)
Code 02	1/8" (3mm)
Code 04	1/4" (6mm)
Code 06	3/8" (10mm)
Code 08	1/2" (13mm)

Note: PTFE lining is typically less than 1/8" (3mm)

Working Pressure Codes

Code 25	25 psi (2 bar)
Code 75	75 psi (5 bar)
Code 100	100 psi (7 bar)
Code 150	150 psi (10 bar)
Code 250	250 psi (17 bar)
Code 500	500 psi (34 bar)
Code 1000	1000 psi (69 bar)

Note: Minimum burst pressure is 4X working pressure

Materials

Code CS	Carbon steel
Code S4	304 Stainless steel
Code S6	316 Stainless steel
Code X	Specify

Pipe Fittings

Code E90	90° Elbow (Standard)
Code E90L	90° Elbow (Long)
Code E45	45° Elbow
Code Y	"Y" Connector
Code T	Tee Connector
Code C	Cross Connector
Code L	Lateral Connector
Code RC	Concentric Reducer
Code EC	Eccentric Reducer
Code X	Custom Connector (Specify)

Pipe Fitting Ends

Code RDF	Rubber Duck Flange with Split Rings
Code IFE	Integral Flange End

Field Attachable Fitting-to-End Joints

Code FAS150	Smooth Cover Split Cast Coupling 150lbs
Code FAS300	Smooth Cover Split Cast Coupling 300lbs
Code FAC150	Corrugated Cover Split Cast Coupling 150lbs
Code FAC300	Corrugated Cover Split Cast Coupling 300lbs

Flexpipe Hose Ends

Code PE	Plain End
Code CE	Crimped End
Code SE	Soft End
Code ITN	Integral Rubber Tapered Nozzle End
Code EE	Enlarged End
Code WTE	Wire To End
Code BE	Beaded Ends with Split Flange
Code SWF150	Swivel Flange 150lbs
Code SWF300	Swivel Flange 300lbs
Code RDF	Rubber Duck Flange with Split Rings
Code IFE	Integral Flange End
Code BIN*	Built In Nipple Threaded
Code BINF150*	Built In Nipple with Flange 150lbs drill size
Code BINF300*	Built In Nipple with Flange 300lbs drill size
Code BINFV*	Built In Victaulic Nipple
Code NLS150	Built In Nipple Rubber Lined Flange 150lb
Code NLS300	Built In Nipple Rubber Lined Flange 300lb
Code XX	Specify Special Type First End
Code YY	Specify Special Type Second End

Flexpipe Crimped Ends

Code 140	Beveled 37°
Code 141	Male NPT
Code 142	Victaulic Grooved
Code 143	150 Lb. RF
Code 144	300 LB. RF
Code 192	Female Cam Coupler
Code 196	Male Cam Adapter

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60TMH Hose Applications

Pumping Stations



- Suction and discharge applications
- Mobile barge loading/unloading

Slurry Pumps



- Suction and discharge applications
- Abrasive resistant mill slurry lines

Unloading Terminals



- General refinery applications
- Ship-to-shore loading/unloading
- Storage tank ground settling

Sand & Gravel Dredging



- Barge applications
- Pipe connecting sleeves
- Pipeline thermal & mechanical movement

60TMH Ceramic Lined Rubber Hose



Thorburn's 60TMH Ceramic lined hose assemblies are custom built in a wide range of sizes and up to a maximum of 15m continuous length.

Features

- Designed for applications that require extreme abrasion resistance.
- The 60TMH high abrasion resistant rubber compound is lined with ceramic balls that are vulcanized into the rubber compound. This feature magnifies the abrasive resistance reducing the frequency of hose replacement
- Thorburn's 60TMH unique ceramic ball design insures flexibility while maintaining impact & wear resistance
- Thorburn's 60TMH hose cover can be corrugated to fit standard aluminum field attachable split flanges.
- In all cases, whether the 60TMH hose assembly, regardless of the end fitting, all wetted parts are ceramic lined.
- For ordering information, See Page 7



Thorburn 60TMH rubber hose lined with ceramic balls composed of a minimum of 96% silica for extreme abrasion and temperature resistance



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