Barton
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Fact Sheet

BULKHEAD PIPE GLANDS

VAPOUR & WATERPROOF INTEGRITY

Bulkhead vapour and watertight integrity is essential in modern boat building and a compliance requirement of maritime regulations MCA Code 3, MGN and IMO standards. Pipes, tubes and cables moving through the vessel and bulkheads always present a challenge. These Bulkhead Pipe Glands allow pipes and conduits to be sealed to the bulkhead but are fully serviceable and adjustable. The bolted and clamp fittings can be removed quickly and easily with basic tools.

Made from 316 Stainless Steel and Nitrile Rubber (BS2751), means they are durable in the harshest environments, regardless of oils, chemicals or environmental conditions. The design allows for pipe flexibility and can adapt to various bulkhead shapes and angles.
A wide range of inserts and donuts are available to adapt to multiple pipe and cable sizes. Bespoke sizes available by special order.

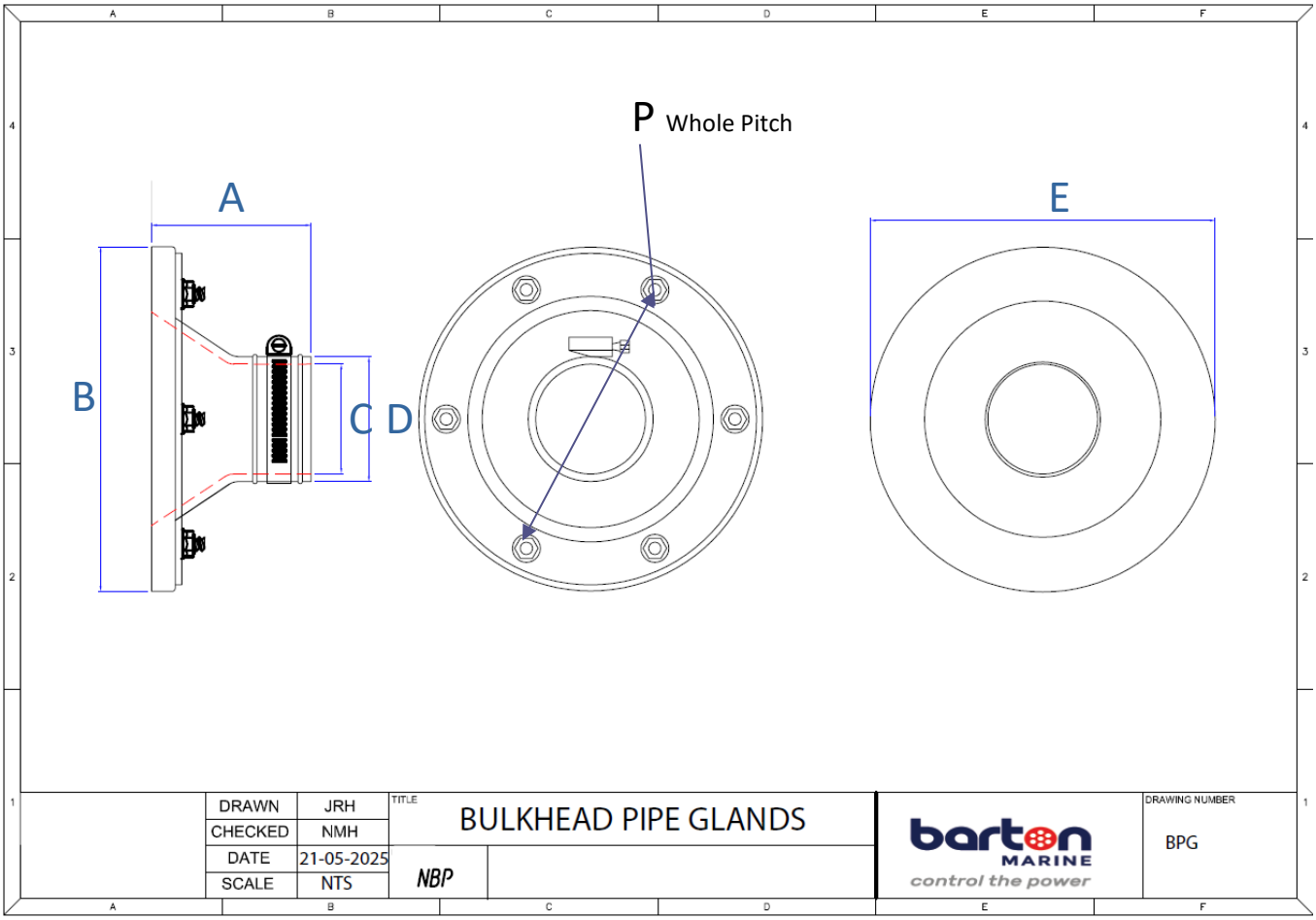
Design Concept

Barton Bulkhead Pipe Glands and inserts are available in a range of sizes to provide maximum flexibility for different pipework and cable systems commonly used. Pipe alignment in both horizontal and vertical planes is facilitated. Gland flexibility reduces stress transfer to the bulkhead and walls of the pipe.

Applications & Uses:

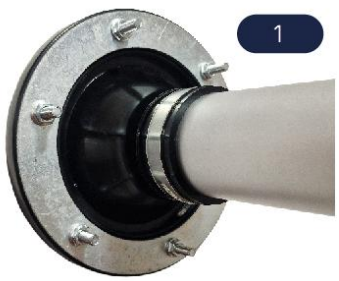
- Tanks & Sumps
- Remote Filling Chambers and Reservoirs
- Bulkhead and Compartmental sealing of pipes, tubes and cables
- Compatible with a range of Substates including; Fibreglass, Steel, Polyethylene & Polypropylene

Rigorous material testing on all Barton products is paramount to ensure the quality of finished items. Material specification and test reports available on request. sales@bartonmarine.com



DRAWN	JRH	TITLE	BULKHEAD PIPE GLANDS	barton MARINE control the power	DRAWING NUMBER
CHECKED	NMH				BPG
DATE	21-05-2025	NBP			
SCALE	NTS				

ITEM No	PART No	DESCRIPTION	DESIGNED FOR PIPE OD		HOLE CUTTER DIAMETER		FASTENERS		DIMENSIONS (mm)
			mm	INCH	mm	INCH	No	Size	
1	BPG-50	Bulkhead Pipe Gland 50mm OD	45-50	1 3/4-2	60	2 3/8	4	M6	A- 74 B&E ø 85 D- 58 P- 83
1	BPG-63	Bulkhead Pipe Gland 63mm OD	58-63	2 5/16-2 1/2	108	4 1/4	6	M6	
1	BPG-110	Bulkhead Pipe Gland 110mm OD	98-110	3 7/8-4 5/16	140	5 1/2	10	M6	A- 57 B&E ø 200 D- 126 P- 172.5
1	BPG-180	Bulkhead Pipe Gland 180mm OD	160-180	6 5/16-7 1/16	200	7 7/8	12	M6	A- 67.5 B&E ø 252 D- 195 P- 227
2	BPI-25	Bulkhead Reducing Insert 25mm OD for BPG-50	22.5-25	7/8-1	–	–	–	–	
2	BPI-32	Bulkhead Reducing Insert 32mm OD for BPG-50	28 -32	1 1/8-1 1/4	–	–	–	–	
2	BPI-50	Bulkhead Reducing Insert 50mm OD for BPG-63	45-50	1 3/4-2	–	–	–	–	
2	BPI-75	Bulkhead Reducing Insert 75mm OD for BPG-110	68-75	2 11/16-3	–	–	–	–	
2	BPI-90	Bulkhead Reducing Insert 88mm OD for BPG-110	82-90	3 1/4-3 7/16	–	–	–	–	
2	BPI-125	Bulkhead Reducing Insert 125mm OD for BPG-180	105-125	4 1/8-5	–	–	–	–	
2	BPI-140	Bulkhead Reducing Insert 140mm OD for BPG-180	117-140	4 5/8-5 1/2	–	–	–	–	
2	BPI-160	Bulkhead Reducing Insert 160mm OD for BPG-180	122-160	4 13/16-6 5/16	–	–	–	–	
3	BPB-50	Blanking Plug Insert for BPG-50	–	–	–	–	–	–	
3	BPB-63	Blanking Plug Insert for BPG-63	–	–	–	–	–	–	
3	BPB-110	Blanking Plug Insert for BPG-110	–	–	–	–	–	–	
3	BPB-180	Blanking Plug Insert for BPG-180	–	–	–	–	–	–	



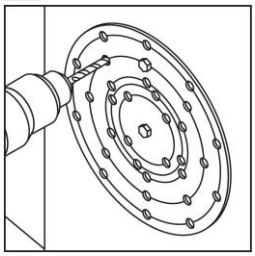
Installation Guide

Barton Bulkhead Pipe Glands have been designed to provide a watertight seal for pipe, duct and cable conduit entries passing through bulkheads.

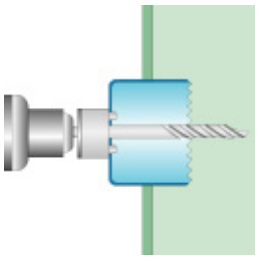
Important:
* Read the installation Instructions first!
* Use the correct hole saw.
* The clamp ring must be secured and all securing nuts installed and tightened in order to prevent water ingress.
* Angled pipe entries must not exceed 15° off centre. Pipe entries in excess of 15° could cause the boot to tear due to prolonged stress and can prevent the formation of a watertight seal.
* Keep all solvents away from the entry boots.
* Incorrect installation will void product warranty!
* For further technical assistance please contact Barton Marine

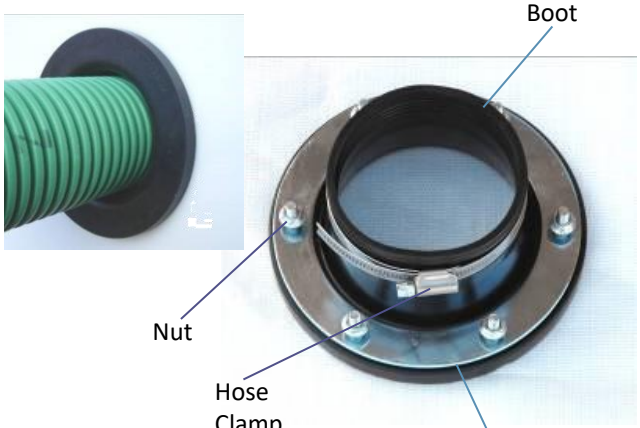
Preparation

Drill a 6.5 to 7 mm hole in the wall of the containment sump or bulkhead at the centre point of the desired pipe entry. Use the clamp ring or template to mark the position of the holes for securing the entry boot. Drill the stud holes (6.5mm).



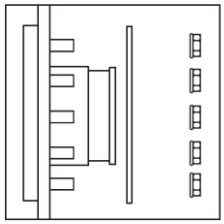
Using the correct hole saw as outlined in the table below, drill out the entry boot opening using the centre hole as a guide. De-burr the hole using sandpaper or de-burring tool to ensure there are no sharp edges to damage the boot.



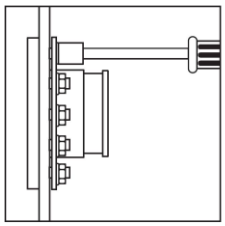


Bolting Up

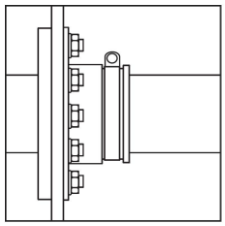
1. Install the Entry Boot from the external side of the bulkhead by pushing the compression ring studs into the stud holes. From the inside, install the clamp ring over the studs and hand tighten the securing nuts.
2. Use a suitably sized ratchet or spanner (10mm) to tighten all the nuts evenly and firmly. Do not over tighten as this may cause deformation of the boot. If a torque wrench is used, the setting should be 6.7 Nm.



3. Insert the appropriate sized pipe or conduit into the Boot. Water containing a little liquid soap can be used as a lubricant if required.

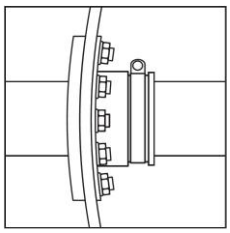


4. Install the hose clamp around the boot and tighten to 3.4 Nm.



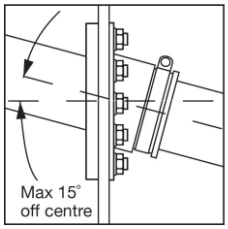
Installation on Curved Surfaces

Bulkhead Pipe Glands maybe installed on curved surfaces which have a diameter greater than 0.8m. The installation procedure is the same as described above, except that the 6.5mm bolt holes should be enlarged to 7.5mm. This is to allow the entry boot studs to move slightly inwards when tightening the nuts. Tighten each nut in stages so that the boot flange and clamp ring can evenly form to the curved surface.



Installation of Angled Pipes

Bulkhead Pipe Glands can accommodate angled entries up to 15° off the centre line.
Note: Exceeding 15° could cause the rubber of the entry boot to tear due to prolonged stress.



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Mixed Compound & Physical Compatibility Test Report

		Room Temp 24 °C	Humidity 45 RH	Compound Date	080520
Compound	NPC805	Vulcanizing condition	160 °C 10 Min	Prototype Date	
Batch	080520	GT-W2000 °C		Test Date	080520

Physical Property Items		Standard	Request	Results
Shore Hardness A		ASTM D2240	80 ±5	80
Tensile Strength		ASTM D412	≥ 12.5	14.26
Elongation at Break %		ASTM D412	≥ 150	213
Permanent Set %		ASTM D412		
Tear Strength KN/m		ASTM D624		34.36
M100 Mpa		ASTM D412		5.7
Density g/cc		ASTM D3165		1.301
Compression Set %		ASTM D395	≤ 20	12.44
				1.76
Heat Resistance Coefficient		ASTM D573		
Heat Ageing 70°C 168 h	Change in Hardness %	ASTM D573	≤ +10	+2.5
	Change in Tensile Strength %	ASTM D573	≤ -10	+6.45
	Change in Elongation %	ASTM D573	≤ -15	-1.4
Liquid Test 40°C 24 h	Change in Hardness %	ASTM D471		
	Change in Tensile Strength %	ASTM D471		
	Change in Elongation %	ASTM D471		
	Change in Volume after oil immersion %	ASTM D471	+25	+11
	Change in weight after water immersion	ASTM D471		
	Change in volume after water immersion	ASTM D471		

Material compatibility testing of rubber used in the production of Barton Bulkhead Pipe Glands.