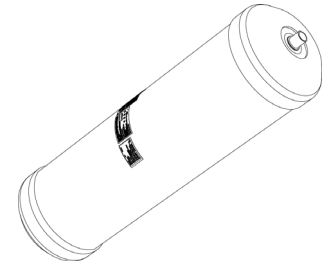


**Part Number:** 117408

**Part Description:** Compressed Natural Gas (CNG)  
Fuel Storage Cylinder



**This cylinder is currently only approved for use in Australia**

## Product Technical Specifications

### General Specifications

Internal Volume .....	117.0 ±2.1 Gallons (443 ±8L)
Overall Length @ 290 psi .....	74.3" ±0.3 (1886 ±7mm)
Overall Length @ 5076 psi .....	74.5" ±0.3 (1892 ±7mm)
Cylinder Length .....	69.1" ±0.3 (1755 ±7mm)
Cylinder Centerline to Sidewall Depth .....	13.0" ±0.2 (331 ±5mm)
Overall Diameter @ 290 psi .....	25.8" ±0.3 (655 ±7mm)
Cylinder Mass .....	291.0 ±15.4 lb (132 ±7kg)
Approved Mount Style (Vertical) .....	Collar Mount Only
Approved Mount Style (Horizontal) .....	Bracket Mount or Collar Mount
Approved Service Gas .....	Compressed Natural Gas (CNG)
Service Life .....	20 Years
Cylinder Construction .....	Type IV
Cylinder Certifications .....	NGV2-2007
Service Pressure .....	5,076 psi (35 MPa) @ 70°F (21°C)
Minimum Working Pressure .....	290 psi (2 MPa)
Cylinder Temperature Range .....	-40°F (-40°C) to 185°F (85°C)
Color .....	Black with White Overwrap

For Gasoline Gallon Equivalent (GGE), Diesel Gallon Equivalent (DGE), and Standard Cubic Feet (SCF) information for this cylinder refer to the *Quantum CNG Cylinder General Specifications* document.

Refer to Page 4 for cylinder mounting specifications.

## Approved Valves and Pressure Relief Devices (PRD)

 **DANGER**

*Only approved valves and PRD's are to be installed in your Quantum cylinder. Installation of a valve, PRD or combination of the two components not approved for your cylinder will result in death or serious injury.*

### Manual Valves:

1. Currently no valve is approved for use in this cylinder. Any valve installed in this cylinder MUST be approved by the cylinder manufacturer before use.

### Automatic Valves:

1. Currently no valve is approved for use in this cylinder. Any valve installed in this cylinder MUST be approved by the cylinder manufacturer before use.

### PRD's:

1. Quantum PN 117397 Manifold Assembly

 **DANGER**

*The PRD manifold assemblies indicated above MUST be built and installed using the specifications and criteria defined on the PRD manifold assembly data sheet for the cylinder and valve combination being used. The PRD manifold assembly MUST be properly secured, if the PRD manifold is not secured the PRD manifold assembly may not operate as intended during a PRD event. Failure of the PRD manifold to operate as intended will result in death or serious injury.*

**Mechanical Interface**

Valve / Fixed Collar Interface .....	1 5/8" -12 UNF-2B
Valve / Fixed Collar Material .....	Stainless Steel
Fixed Side Thread Cut .....	3"-12 UN-2A
Secondary Valve / Slip Collar Interface (if applicable) .....	1 5/8" -12 UNF-2B
Secondary Valve / Slip Collar Material .....	Stainless Steel

**Torque Specifications**

Valve / Fixed Collar Interface (Recommended) .....	100 Ft.lb. (135 N.m)
Secondary Valve / Slip Collar Interface (if applicable) .....	100 Ft.lb. (135 N.m)

**Maintenance Parts**

Valve Interface O-Ring .....	Quantum PN 111409-920
PRD (117397 PRD Manifold) .....	Quantum PN 116712-060
Replacement Certification Label - Dynamic .....	Contact Quantum Technologies
Replacement Certification Label - Static .....	Quantum PN 113446
Replacement Warning Label .....	Quantum PN 113224

**Cylinder Brackets**

Some jurisdictions require that cylinder manufacturer approved cylinder brackets be used for installation of cylinders. Use only cylinder brackets produced or approved by Quantum Technologies for mounting your CNG.

*Collar Mounting* - Quantum does not manufacture and has not approved any mounting brackets for collar mounted cylinders. The mounting specifications defined in this document are predicated on the use of the mounting bracket adaptor built to meet the specifications in the drawings provided in [Appendix A – Drawings](#). Quantum is not liable for mounting bracket adaptors that are not compliant to the drawings.

*Bracket Mounting* – Use only cylinder brackets produced or approved by Quantum Technologies for mounting your CNG cylinder.

Selection and use of cylinder brackets is the sole responsibility of the installer to ensure the bracket selected will comply with all regulations applicable in the jurisdiction where the vehicle will be operated.

**Maintenance Considerations**

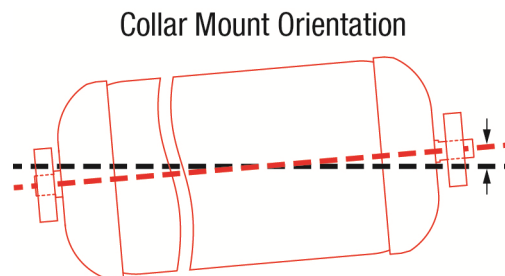
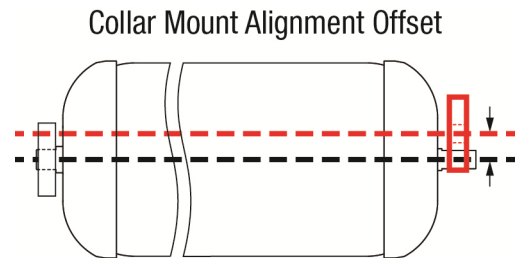
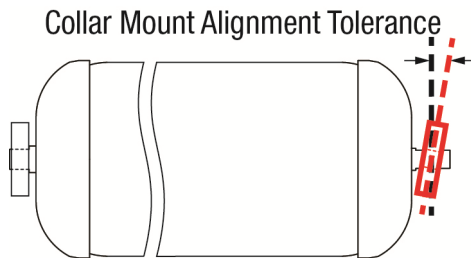
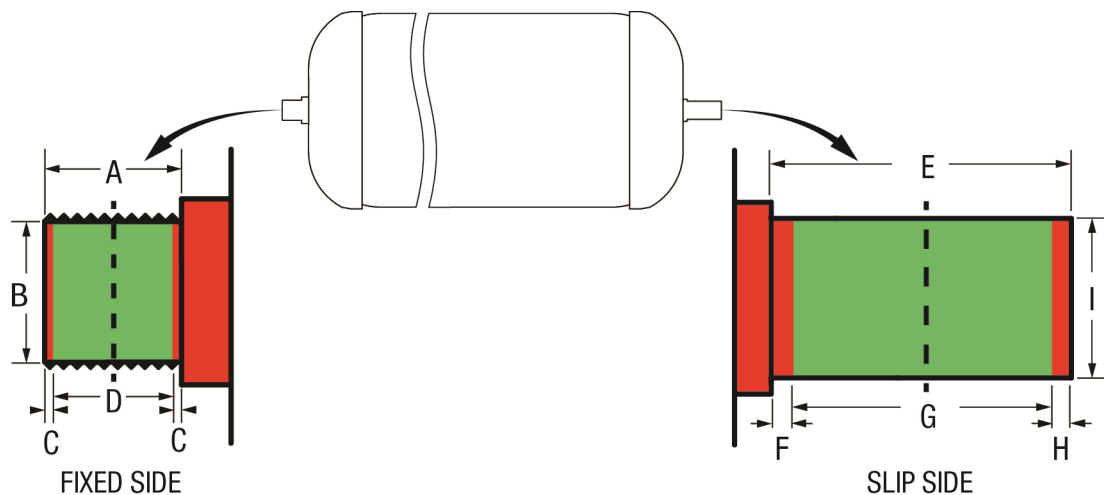
Inspect the CNG cylinder and brackets every 3 years or 36,000 miles (60,000 km), whichever comes first. The frequency and level of inspection may vary based on state and local requirements.

For additional information, refer to the *Type IV Compressed Natural Gas (CNG) Cylinder Installation and Maintenance Guide* available at [www.qtw.com](http://www.qtw.com).

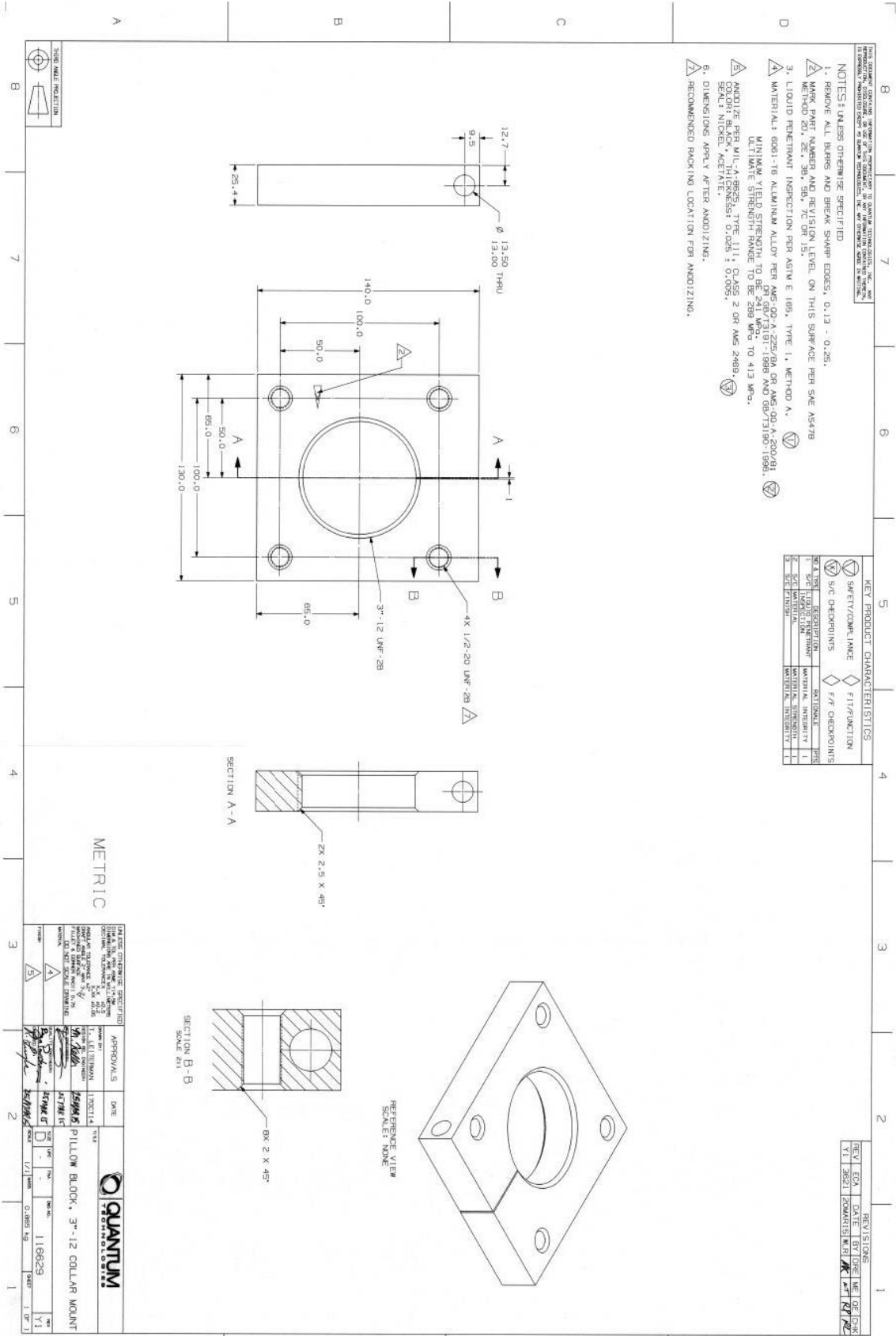
## Mounting Specifications

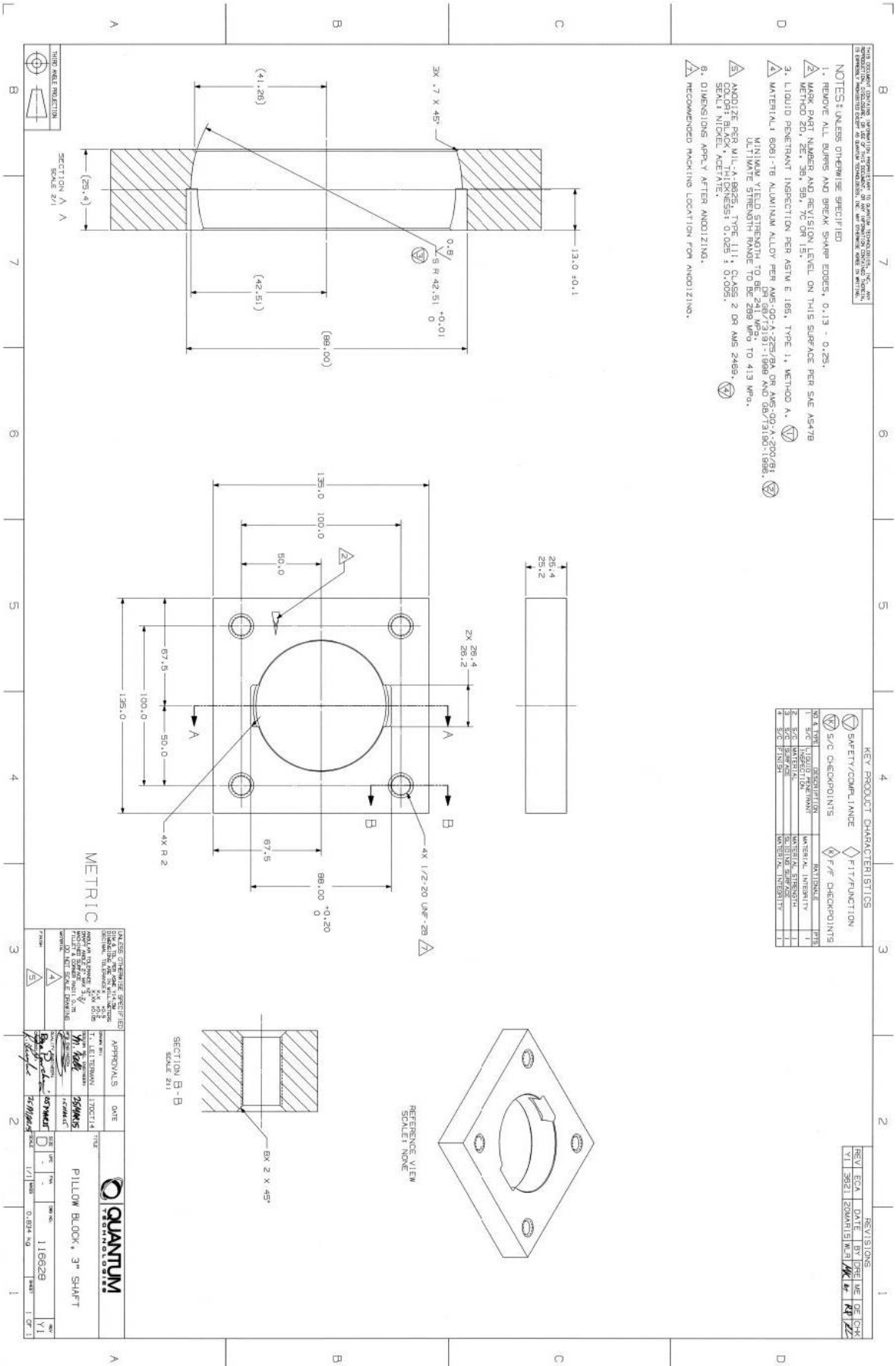
Valve Collar Length (A) .....	1.5" ±0.03 (38.1 ±0.76mm)
Valve Collar Diameter (B) .....	3.0" ±0.03 (76.2 ±0.3mm)
Valve Collar Mounting Bracket Clearance (C) .....	0.25" ±0.1 (6 ±2mm)
Recommended Mounting Area for the Valve Collar Mount (D) .....	1.0" ±0.1 (25 ±3mm)
Rear Collar Length (E) .....	3.0" ±0.03 (76.2 ±0.76mm)
Distance between Rear Collar Shoulder and Mount (F) .....	1.0" ±0.1 (25 ±3mm)
Recommended Mounting Area for the Rear Collar Mount (G) .....	1.0" ±0.1 (25 ±3mm)
Rear Collar Mounting Bracket Clearance (H) .....	1.0" ±0.1 (25 ±3mm)
Rear Collar Diameter (I) .....	3.0" ±0.03 (76.2 ±0.03mm)
Minimum Contact Bracket Width .....	1.0" (25mm)
Minimum Thread Engagement .....	1.0" (25mm)
Collar Mount Alignment Tolerance .....	±2°
Collar Mount Alignment Offset .....	0.5" (13mm)
Cylinder Mount Orientation .....	Horizontal ±2° / Vertical ±2°
Slip Collar Bearing (Recommended) .....	Delrin*

\* The Delrin bearing must have enough clearance to slide freely over the slip collar.



Appendix A – Drawings



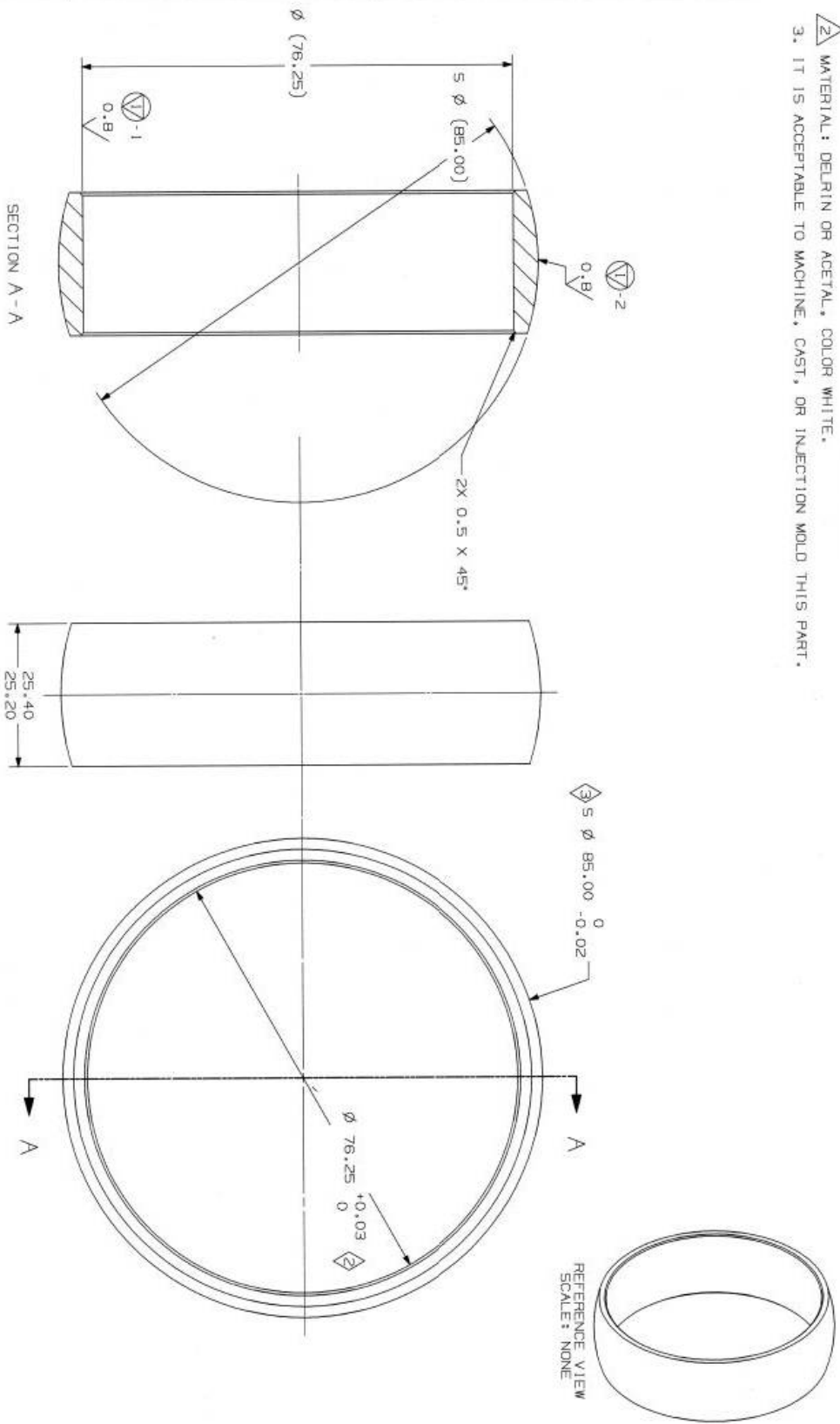




THIS DOCUMENT CONTAINS INFORMATION PROPRIETARY TO QUANTUM TECHNOLOGIES, INC. ANY REPRODUCTION, DISSEMINATION, OR USE OF THIS DOCUMENT OR ANY INFORMATION CONTAINED HEREIN IS EXPRESSLY PROHIBITED EXCEPT AS OTHERWISE SPECIFIED BY QUANTUM TECHNOLOGIES, INC. AND OTHERWISE COVERED BY APPLICABLE LAWS.

**NOTES: UNLESS OTHERWISE SPECIFIED**

1. REMOVE ALL BURRS AND BREAK SHARP EDGES, 0.13 - 0.25.
2. MATERIAL: DELRIN OR ACETAL, COLOR WHITE.
3. IT IS ACCEPTABLE TO MACHINE, CAST, OR INJECTION MOLD THIS PART.



KEY PRODUCT CHARACTERISTICS			
	SAFETY/COMPLIANCE		FIT/FUNCTION
	S/C CHECKPOINTS		F/F CHECKPOINTS
NO. & TYPE		RATIONALE	
1	S/C SURFACE FINISH	1	SLIDING SURFACE CLEARANCE
2	F/F ID	2	PT5
3	F/F OD	1	CLEARANCE

METRIC

DATE CHANGED		APPROVALS		DATE	
1	15/06/15	T. LETTICHMAN	17/02/14		
2	25/06/15				
3	25/06/15				

TITLE		QUANTUM TECHNOLOGIES	
BEARING, SPHERICAL, 3" SHAFT			
SIZE	116625	REV NO.	Y1
DATE	2/11	ISSUE	0.028 KQ
SHEET	1	OF	1

REVISIONS							
REV	ECA	DATE	BY	DR	ME	OE	CHK
Y1	3621	20MAR15	WLR	AK	JK	RP	RL