

CATALOG CODE TI-340-X.XX-XX

TORQUE Nm
2.00
3.00
4.00
5.00

SHAFT-END TYPE
01 - KNURLED SHAFT
02 - KNURLED ADAPTER
03 - ONE WAY FORWARD
04 - ONE WAY REVERSE
05 - DUAL ENDED KNURLED SHAFT

NOTES:

1. USER MUST DETERMINE FITNESS FOR USE IN APPLICATION.
2. ENVIRONMENTAL CONDITIONS: -20°C to 80°C.
3. PRODUCT TORQUE SPECIFICATION:

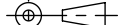
TORQUE INSERT	DYNAMIC TORQUE	
	NOMINAL	TOLERANCE
	Nm	±%
TI-340-2.00-XX	2.00	25
TI-340-3.00-XX	3.00	20
TI-340-4.00-XX	4.00	20
TI-340-5.00-XX	5.00	20
4. LIFE: 25,000 CYCLES.
ONE CYCLE CONSISTS OF 120° CW AND 120° CCW AT 10% DUTY CYCLE FOR SPEEDS LESS THAN 100 RPM.
5. MATERIALS:
PLATED POWDERED METAL HOUSINGS
HARDENED STEEL TORQUE ELEMENT
DIECAST KNURLED ZINC SHAFT END
HARDENED STEEL BEARINGS
STEEL WASHERS
STEEL RETAINING RINGS
MINERAL OIL BASED LUBRICANT
6. FINISH:
NON-COSMETIC.
7. TORQUE INSERT DESIGNED FOR USE IN PLASTIC OR METAL. SEE INDIVIDUAL CONFIGURATION DRAWINGS FOR ADDITIONAL DETAIL.
- [8] HINGE DESIGNED TO SUPPORT A MINIMAL AXIAL FORCE IN DIRECTION SHOWN, NOT DESIGNED TO SUPPORT AXIAL FORCE IN THE OPPOSITE DIRECTION.
9. CUSTOMER IS RESPONSIBLE FOR CHECKING COMPATIBILITY OF REELL LUBRICANTS WITH PLASTICS USED.
10. OVERALL LENGTH MAY CHANGE DURING SHIPPING.
11. NUMBER OF TORQUE ELEMENTS MAY VARY.




FOR PATENTS SEE
Pat.reell.com (PRODUCT CODE: CP10)

SPECIFICATION SUBJECT TO CHANGE

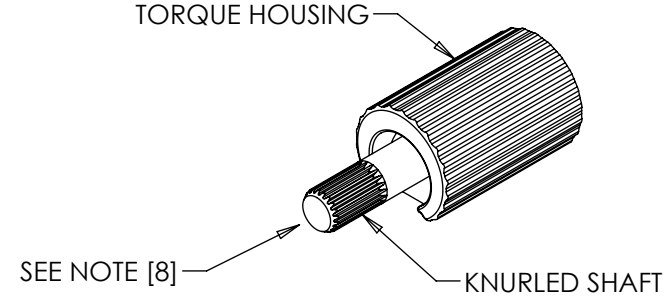
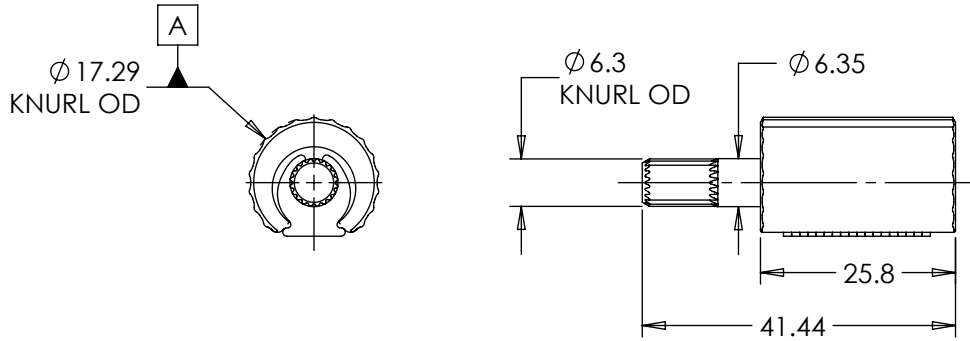
INTERPRET PRINT PER
ASME Y14.5M-1994
THIS PRINT IS THE
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THIRD ANGLE PROJECTION



LEVEL	DESCRIPTION	DRAWN	DATE	APPROVED	
DRAWN:	HMA	DATE:	16APR12	REFERENCE:	
CHECKED:	STK	DATE:	18DEC13	TITLE:	
APPROVED:	STK	DATE:	18DEC13		
REVISED:	18JUN20	DIMS:	mm	SALES DRAWING	
					PART NO:
					TI-340
REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA				K	
SCALE: 1:1		DO NOT SCALE DRAWING		SHEET 1 OF 9	

TI-340-X.XX-01 (KNURLED SHAFT)

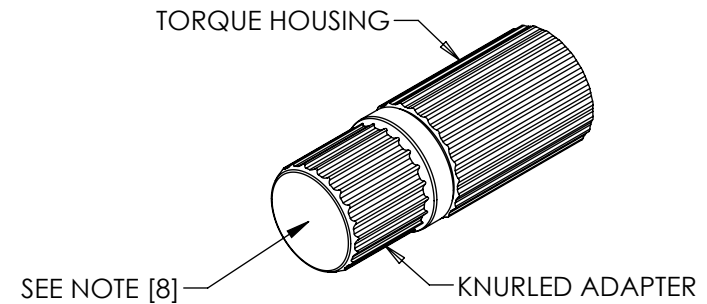
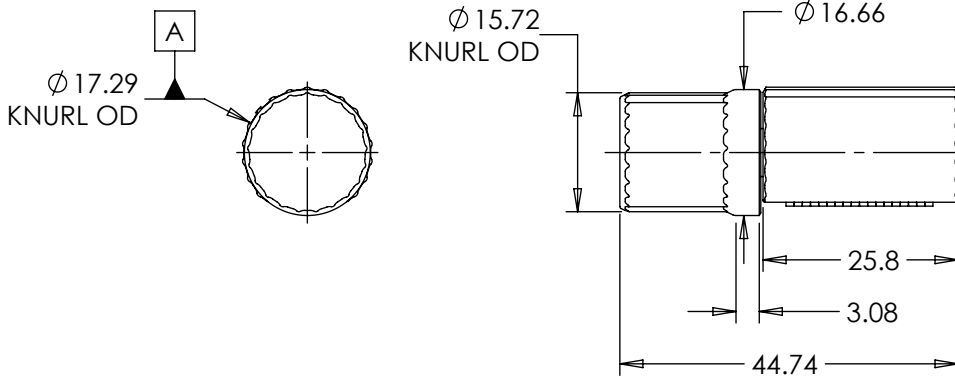
ALL DIMENSIONS REFERENCE
SEE CAD MODEL FOR UNSPECIFIED FEATURES.



- INTENDED FOR PRESS FIT INTO METALS. CONTACT REELL FOR OTHER MOUNTING OPTIONS.
- APPROXIMATE WEIGHT: 38.25 GRAMS

TI-340-X.XX-02 (KNURLED ADAPTER)

ALL DIMENSIONS REFERENCE
SEE CAD MODEL FOR UNSPECIFIED FEATURES.



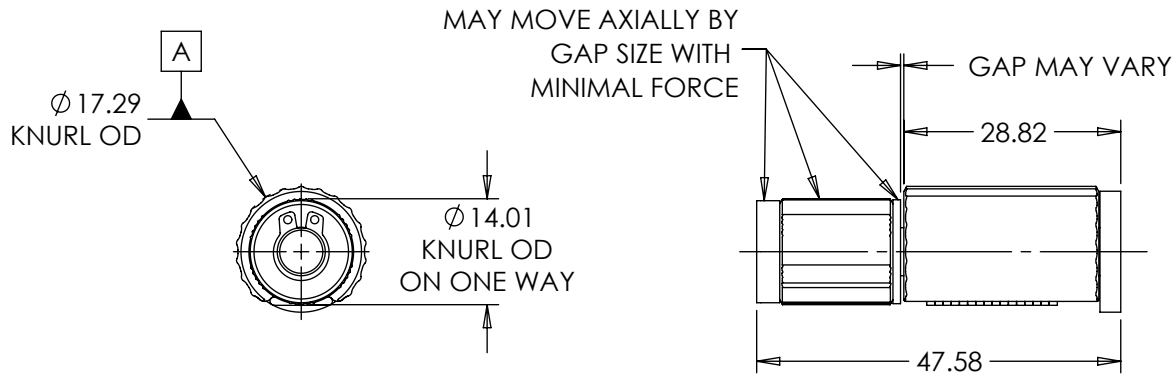
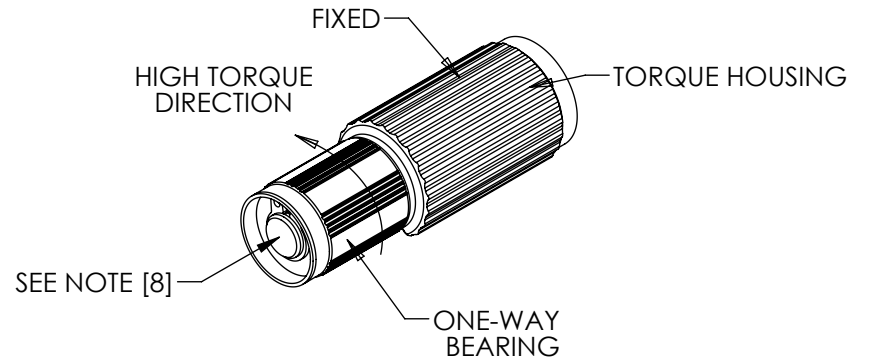
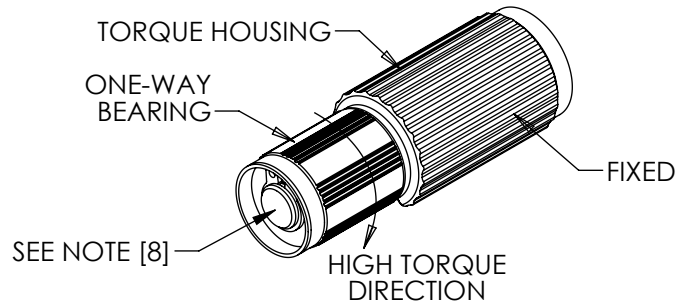
- INTENDED FOR PRESS FIT INTO PLASTICS. CONTACT REELL FOR OTHER MOUNTING OPTIONS.
- APPROXIMATE WEIGHT: 59.28 GRAMS

SPECIFICATION SUBJECT TO CHANGE

LEVEL	DESCRIPTION		DRAWN	DATE	APPROVED
DRAWN:	HMA	DATE: 16APR12	REFERENCE:		
CHECKED:	STK	DATE: 18DEC13	TITLE:		
APPROVED:	STK	DATE: 18DEC13	SALES DRAWING		
REVISED:	18JUN20	DIMS: mm	PART NO: TI-340		
INTERPRET PRINT PER ASME Y14.5M-1994 THIS PRINT IS THE CONFIDENTIAL PROPERTY OF REELL PRECISION MFG. THIRD ANGLE PROJECTION				REV: K	
REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA		SCALE: 1:1	DO NOT SCALE DRAWING	SHEET 2 OF 9	

TI-340-X.XX-03 (ONE WAY FORWARD)

TI-340-X.XX-04 (ONE WAY REVERSE)

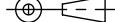


ALL DIMENSIONS REFERENCE
SEE CAD MODEL FOR UNSPECIFIED FEATURES.

- INTENDED FOR PRESS FIT INTO METALS. CONTACT REELL FOR OTHER MOUNTING OPTIONS.
- APPROXIMATE WEIGHT: 54.83 GRAMS

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THIRD ANGLE PROJECTION

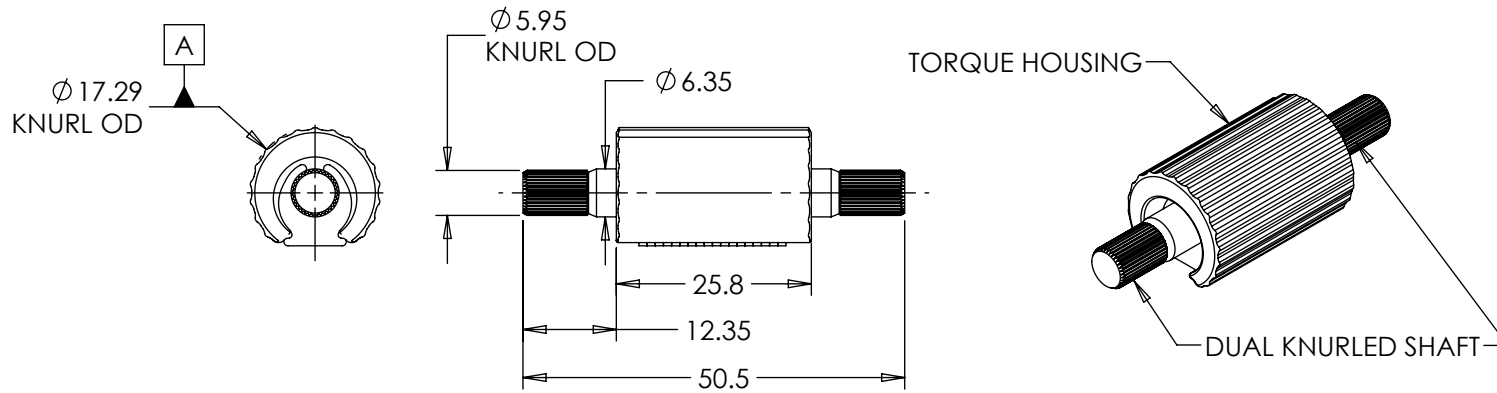


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DRAWN: HMA	DATE: 16APR12	REFERENCE:		
CHECKED: STK	DATE: 18DEC13	TITLE:		
APPROVED: STK	DATE: 18DEC13	SALES DRAWING		
REVISED: 18JUN20	DIMS: mm			
		PART NO: TI-340		REV: K
		SCALE: 1:1		DO NOT SCALE DRAWING

SPECIFICATION SUBJECT TO CHANGE

TI-340-X.XX-05 (DUAL ENDED KNURLED SHAFT)

ALL DIMENSIONS REFERENCE
SEE CAD MODEL FOR UNSPECIFIED FEATURES.



- APPROXIMATE WEIGHT: 39.65 GRAMS
- INTENDED FOR PRESS FIT INTO METALS. CONTACT REELL FOR OTHER MOUNTING OPTIONS.

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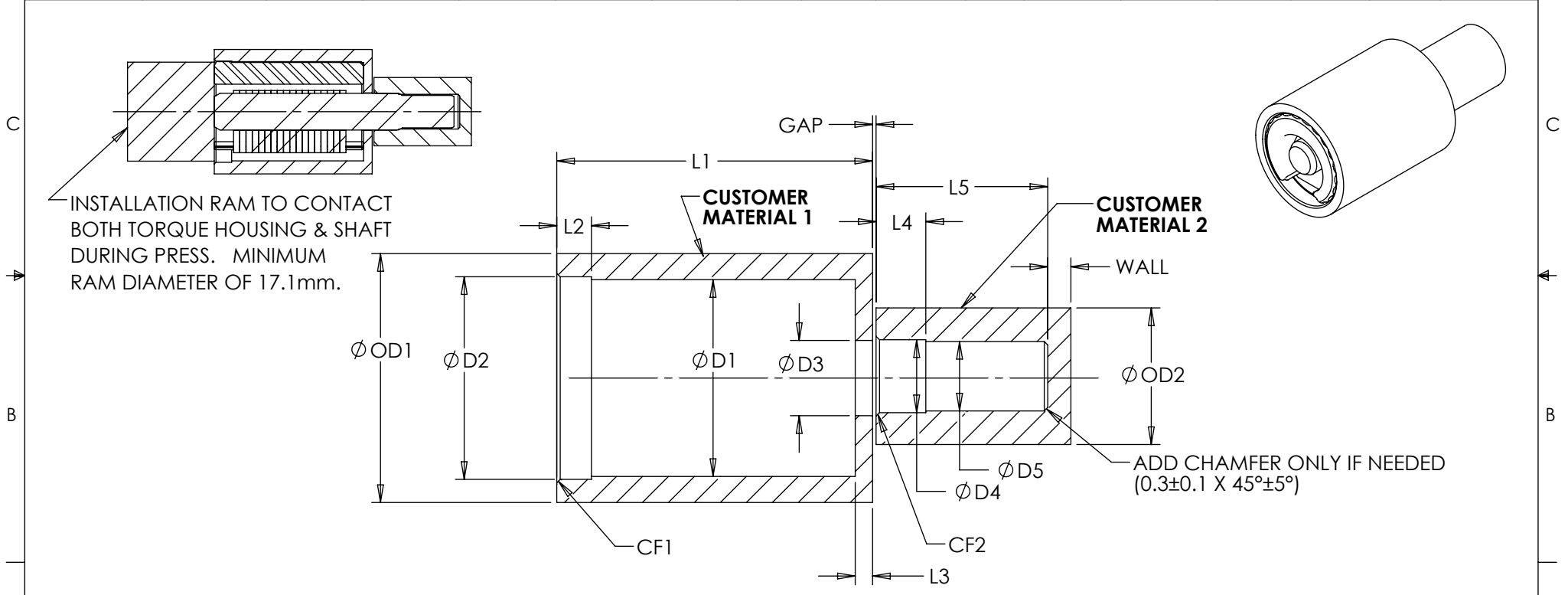
INTERPRET PRINT PER
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 THIRD ANGLE PROJECTION

LEVEL	DESCRIPTION		DRAWN	DATE	APPROVED
DRAWN:	HMA	DATE: 16APR12	REFERENCE:		
CHECKED:	STK	DATE: 18DEC13	TITLE:		
APPROVED:	STK	DATE: 18DEC13	SALES DRAWING		
REVISED:	18JUN20	DIMS: mm			
REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA			PART NO:		REV:
			TI-340		K
SCALE: 1:1		DO NOT SCALE DRAWING		SHEET 4 OF 9	

SPECIFICATION SUBJECT TO CHANGE

TI-340-X.XX-01 CUSTOMER INSTALLATION GEOMETRY

CUSTOMER MATERIAL	D1	D2	D3	D4	D5	L1	L2	L3	L4	L5	CF1	CF2	OD1	OD2	WALL	GAP
DIE CAST ZINC	17.0±0.05	17.5±0.03	6.5±0.03	6.3±0.03	6.15±0.03	27.3 MIN	3±0.1	1.5±0.1	4.3±0.1	13.84 MIN	0.3±0.1 X 45°±5°	0.3±0.1 X 45°±5°	21.5 MIN	11.8 MIN	2 MIN	(0.3)
DIE CAST ALUMINUM																
MILD STEEL	17.15±0.025			6.38±0.03	6.2±0.015											
WROUGHT ALUMINUM																



CUSTOMER MATERIAL 1 AND CUSTOMER MATERIAL 2 ALIGNMENT TO BE WITHIN 0.15mm IN ANY DIRECTION TO ENSURE PRODUCT PERFORMANCE.

SPECIFICATION SUBJECT TO CHANGE

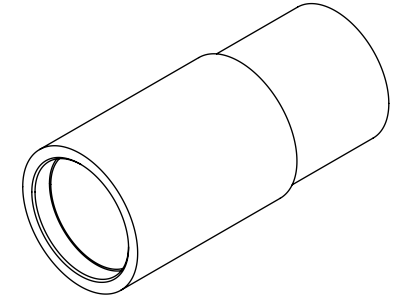
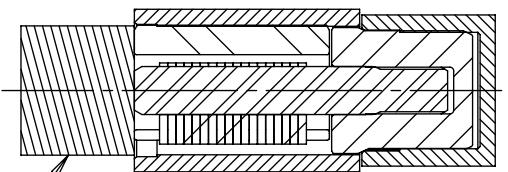
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CHECKED:	STK	DATE: 18DEC13	TITLE:		
APPROVED:	STK	DATE: 18DEC13	<h2>SALES DRAWING</h2>		
REVISED:	18JUN20	DIMS: mm			
			PART NO:		REV:
			TI-340		K
REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA			SCALE: 1:1	DO NOT SCALE DRAWING	SHEET 5 OF 9

INTERPRET PRINT PER ASME Y14.5M-1994
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 THIRD ANGLE PROJECTION

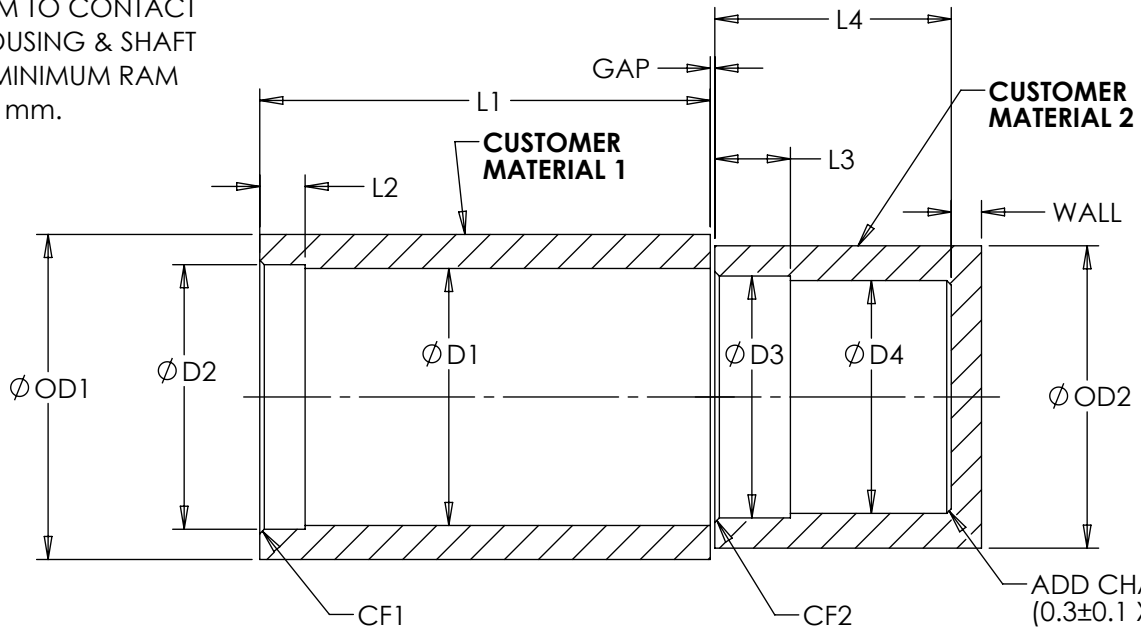
TI-340-X.XX-02 CUSTOMER INSTALLATION GEOMETRY

CUSTOMER MATERIAL	D1	D2	D3	D4	L1	L2	L3	L4	CF1	CF2	OD1	OD2	WALL	GAP
DELRIN	17.0±0.05	17.5±0.05	16±0.03	15.33±0.03	29.8 MIN	3±0.1	5±0.1	15.74 MIN	0.3±0.1 X 45°±5°	0.3±0.1 X 45°±5°	21.5 MIN	20 MIN	2 MIN	(0.3)

DELRIN DIMENSIONS SPECIFIED, OTHER PLASTICS MAY REQUIRE DIFFERENT MOUNTING OPTIONS.



INSTALLATION RAM TO CONTACT BOTH TORQUE HOUSING & SHAFT DURING PRESS. MINIMUM RAM DIAMETER OF 17.1mm.



ADD CHAMFER ONLY IF NEEDED (0.3±0.1 X 45°±5°)

SCALE 2:1

CUSTOMER MATERIAL 1 AND CUSTOMER MATERIAL 2 ALIGNMENT TO BE WITHIN 0.15mm IN ANY DIRECTION TO ENSURE PRODUCT PERFORMANCE.

SPECIFICATION SUBJECT TO CHANGE

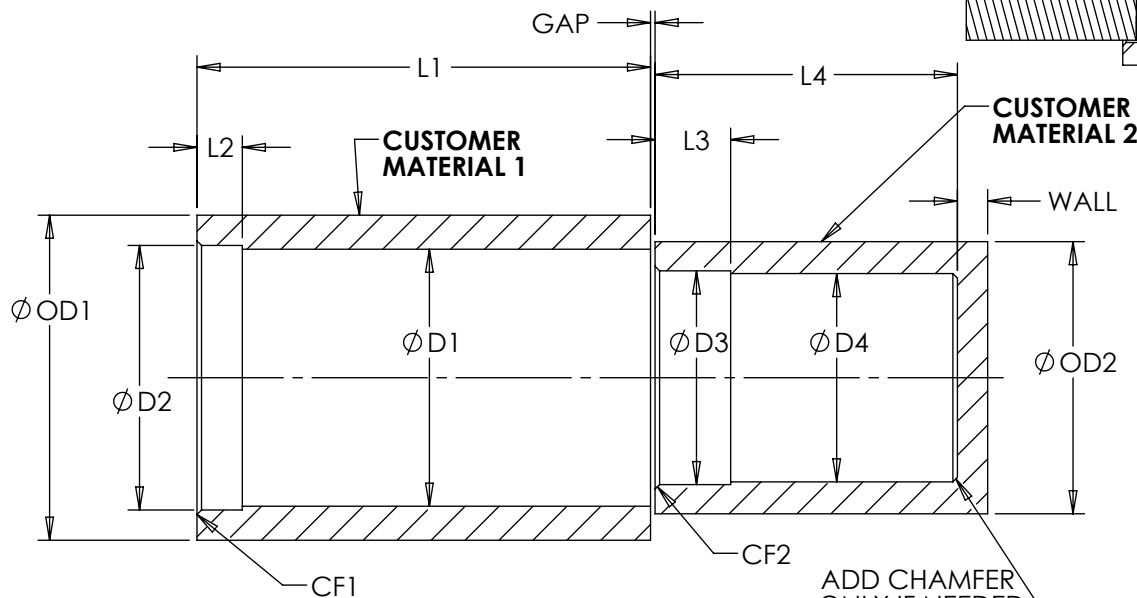
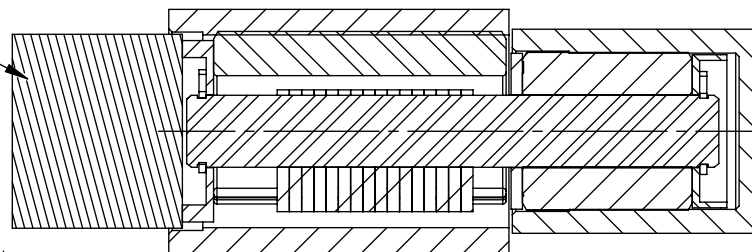
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DRAWN:	HMA	DATE:	16APR12	REFERENCE:
CHECKED:	STK	DATE:	18DEC13	
APPROVED:	STK	DATE:	18DEC13	TITLE:
REVISED:	18JUN20	DIMS:	mm	
				SALES DRAWING
				PART NO: TI-340
REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA		SCALE: 1:1	DO NOT SCALE DRAWING	SHEET 6 OF 9

INTERPRET PRINT PER ASME Y14.5M-1994
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 THIRD ANGLE PROJECTION

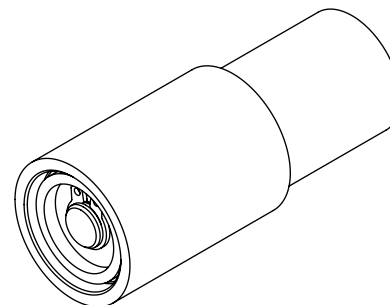
TI-340-X.XX-03 AND TI-340-X.XX-04 CUSTOMER INSTALLATION GEOMETRY

CUSTOMER MATERIAL	D1	D2	D3	D4	L1	L2	L3	L4	CF1	CF2	OD1	OD2	WALL	GAP
DIE CAST ZINC	17±0.05	17.5±0.03	14.14±0.03	13.78±0.03	30 MIN	3±0.1	5.0±0.1	20 MIN	0.3±0.1 X 45°±5°	0.3±0.1 X 45°±5°	21.5 MIN	18 MIN	2 MIN	(0.3)
DIE CAST ALUMINUM														
MILD STEEL	17.15±0.025			13.9±0.015										
WROUGHT ALUMINUM														

INSTALLATION RAM TO CONTACT ONLY
OUTSIDE FACE OF WASHHER DURING PRESS.
MINIMUM RAM DIAMETER OF 17.1mm.



ADD CHAMFER
ONLY IF NEEDED
(0.3±0.1 X 45°±5°)



CUSTOMER MATERIAL 1 AND CUSTOMER MATERIAL 2
ALIGNMENT TO BE WITHIN 0.15mm IN ANY DIRECTION TO
ENSURE PRODUCT PERFORMANCE.

SPECIFICATION SUBJECT TO CHANGE

LEVEL	DESCRIPTION		DRAWN	DATE	APPROVED
DRAWN:	HMA	DATE: 16APR12	REFERENCE:		
CHECKED:	STK	DATE: 18DEC13	TITLE:		
APPROVED:	STK	DATE: 18DEC13	SALES DRAWING		
REVISED:	18JUN20	DIMS: mm	PART NO: TI-340		
INTERPRET PRINT PER ASME Y14.5M-1994 THIS PRINT IS THE CONFIDENTIAL PROPERTY OF REELL PRECISION MFG. THIRD ANGLE PROJECTION				REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA	
			SCALE: 1:1		DO NOT SCALE DRAWING
			SHEET 7 OF 9		

SALES DRAWING

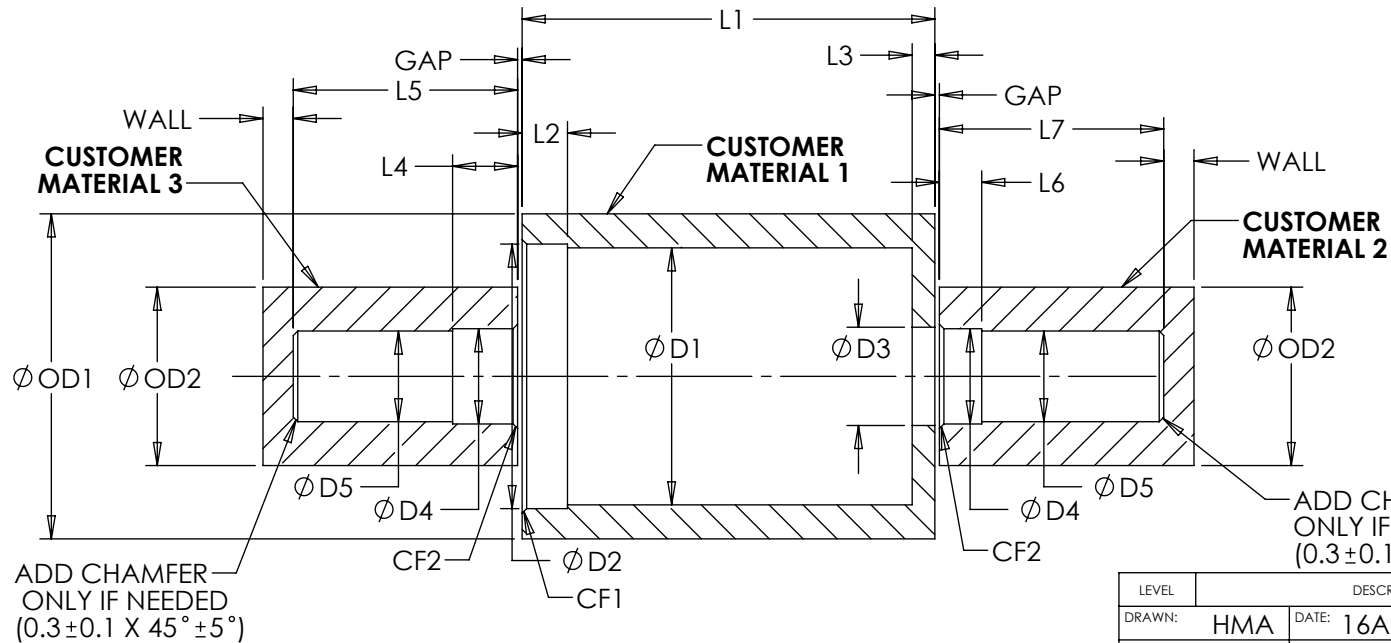
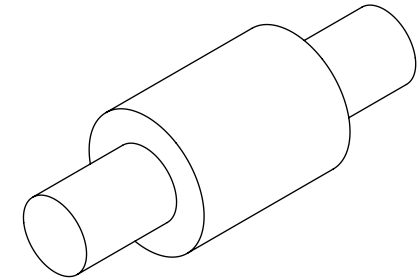
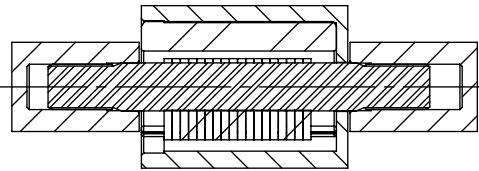
PART NO: TI-340 REV: K

SCALE: 1:1 DO NOT SCALE DRAWING SHEET 7 OF 9

TI-340-X.XX-05 CUSTOMER INSTALLATION GEOMETRY

CUSTOMER MATERIAL	D1	D2	D3	D4	D5	L1	L2	L3	L4	L5	L6	L7	CF1	CF2	OD1	OD2	WALL	GAP
DIE CAST ZINC	17±0.05	17.5±0.03	6.5±0.03	6.3±0.03	5.75±0.03	27.3±0.1	3±0.1	1.5±0.1	4.3±0.1	13.84 MIN	2.8±0.1	10.55±0.1	0.3±0.1 X 45°±5°	0.3±0.1 X 45°±5°	21.5 MIN	11.8 MIN	2 MIN	(0.3)
DIE CAST ALUMINUM																		
MILD STEEL	17.15 ±0.025	17.5±0.03	6.5±0.03	6.48±0.03	5.85 ±0.015	27.3±0.1	3±0.1	1.5±0.1	4.3±0.1	13.84 MIN	2.8±0.1	10.55±0.1	0.3±0.1 X 45°±5°	0.3±0.1 X 45°±5°	21.5 MIN	11.8 MIN	2 MIN	(0.3)
WROUGHT ALUMINUM																		

SEE NEXT PAGE FOR
INSTALLATION SUGGESTIONS



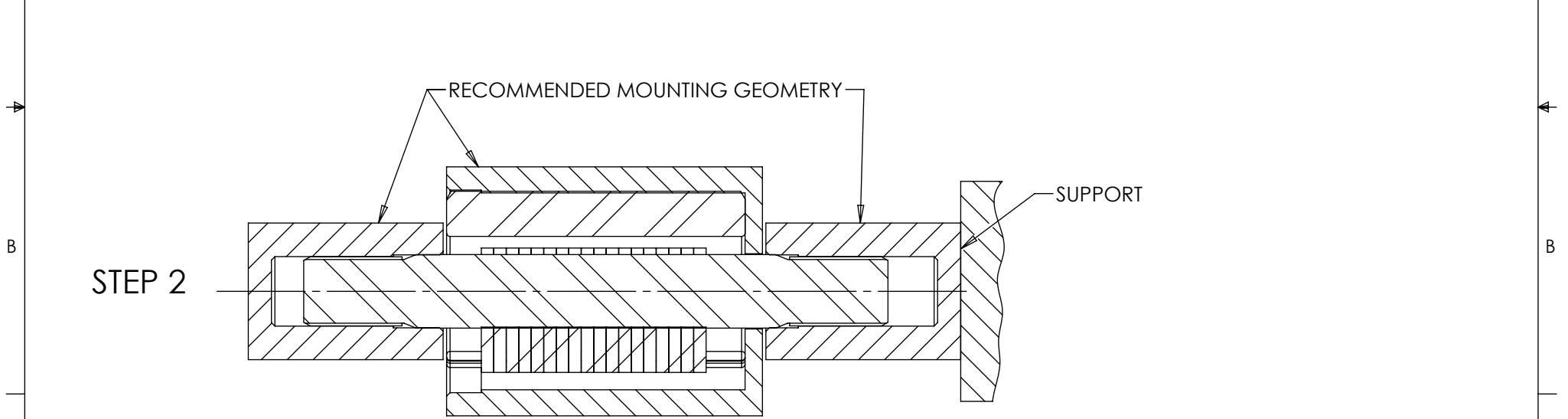
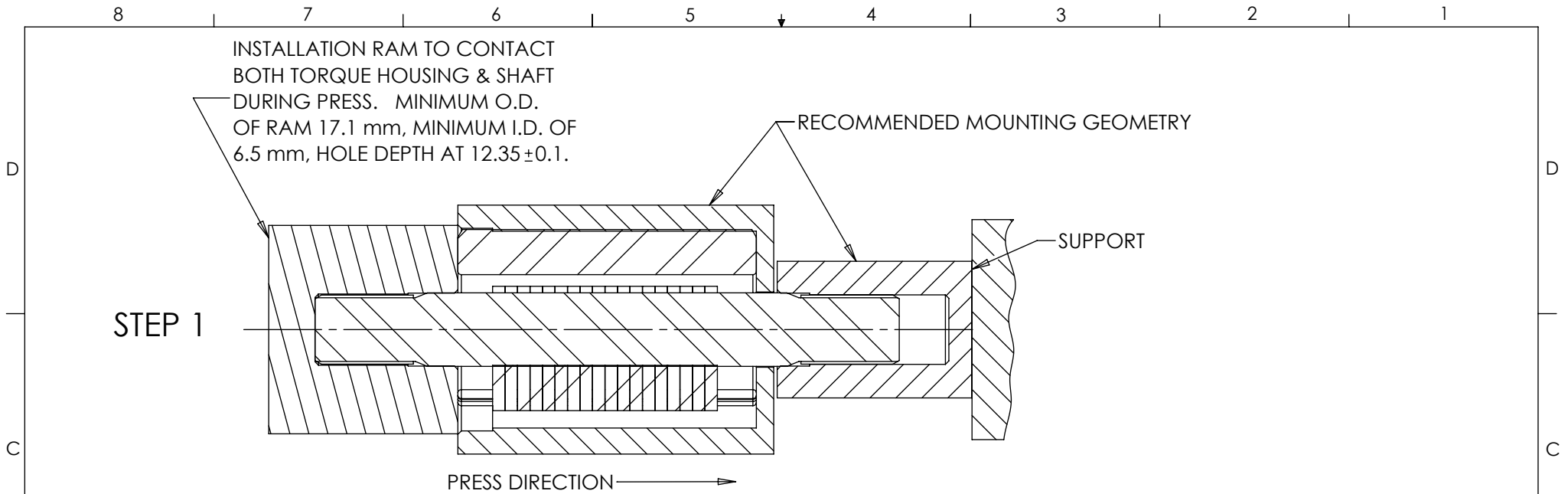
ADD CHAMFER
ONLY IF NEEDED
(0.3±0.1 X 45°±5°)

ADD CHAMFER
ONLY IF NEEDED
(0.3±0.1 X 45°±5°)

CUSTOMER MATERIAL 1, CUSTOMER MATERIAL 2
AND CUSTOMER MATERIAL 3 ALIGNMENT TO
BE WITHIN 0.15mm IN ANY DIRECTION TO
ENSURE PRODUCT PERFORMANCE.

SPECIFICATION SUBJECT TO CHANGE

LEVEL	DESCRIPTION		DRAWN	DATE	APPROVED
DRAWN:	HMA	DATE: 16APR12	REFERENCE:		
CHECKED:	STK	DATE: 18DEC13	TITLE:		
APPROVED:	STK	DATE: 18DEC13	SALES DRAWING		
REVISED:	18JUN20	DIMS: mm	PART NO: TI-340		
<p>INTERPRET PRINT PER ASME Y14.5M-1994 THIS PRINT IS THE CONFIDENTIAL PROPERTY OF REELL PRECISION MFG.</p> <p>THIRD ANGLE PROJECTION</p>				REV: K	
REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA		SCALE: 1:1		DO NOT SCALE DRAWING	
			SHEET 8 OF 9		

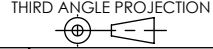


SPECIFICATION SUBJECT TO CHANGE



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DRAWN:	HMA	DATE: 16APR12	REFERENCE:		
CHECKED:	STK	DATE: 18DEC13	TITLE:		
APPROVED:	STK	DATE: 18DEC13	SALES DRAWING		
REVISED:	18JUN20	DIMS: mm	PART NO: TI-340		
REELL		REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA		REV: K	
SCALE: 1:1		DO NOT SCALE DRAWING		SHEET 9 OF 9	