

NAME: TI - 320 - X.XX - XX

TORQUE Nm
- 0.50
- 0.75
- 1.00
- 1.25
- 1.50

SHAFT-END TYPE
-01 - KNURLED SHAFT
-02 - KNURLED ADAPTER

NOTES:

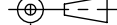
- APPLICATION CONDITIONS REFERENCE (USER MUST DETERMINE FITNESS FOR USE IN APPLICATION).
- PRODUCT TORQUE SPECIFICATION:
±20% DYNAMIC
- LIFE: 50,000 CYCLES.
ONE CYCLE CONSISTS OF 120° CW AND 120° CCW AT 10% DUTY CYCLE FOR SPEEDS LESS THAN 100 RPM.
- MATERIALS:
PLATED POWDERED METAL HOUSINGS
HARDENED STEEL TORQUE ELEMENT
DIECAST KNURLED ZINC SHAFT END
MINERAL OIL BASED LUBRICANT
- FINISH:
NON-COSMETIC PLAIN.
- TORQUE INSERT DESIGNED FOR USE IN PLASTIC OR METAL. SEE INDIVIDUAL CONFIGURATION DRAWINGS FOR ADDITIONAL DETAIL.
- [7] HINGE DESIGNED TO SUPPORT A MINIMAL AXIAL FORCE IN DIRECTION SHOWN, NOT DESIGNED TO SUPPORT AXIAL FORCE IN THE OPPOSITE DIRECTION.
- CUSTOMER IS RESPONSIBLE FOR CHECKING COMPATIBILITY OF REELL LUBRICANTS WITH PLASTICS USED.
- ENVIRONMENTAL CONDITIONS:
-20°C TO +80°C UP TO 10% OF LIFE CYCLES AT HOT AND COLD CONDITIONS.

US PATENT NUMBER 8,875,348

SPECIFICATION SUBJECT TO CHANGE

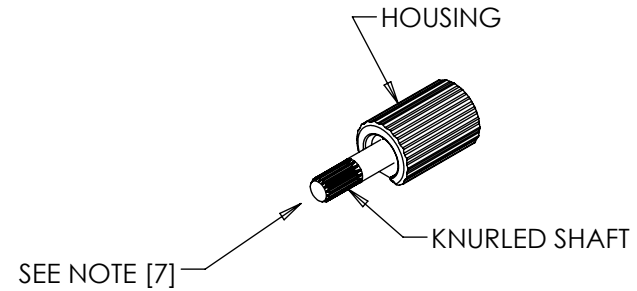
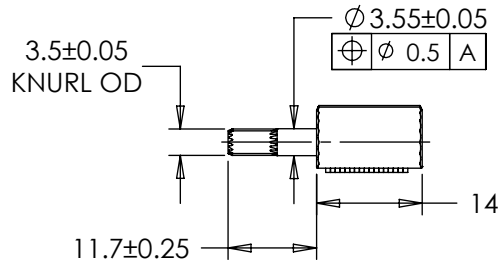
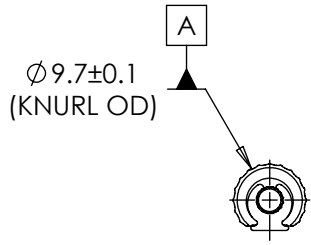
UNLESS SPECIFIED TOLERANCE ±0.15
INTERPRET PRINT PER ASME Y14.5M-1994
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THIRD ANGLE PROJECTION



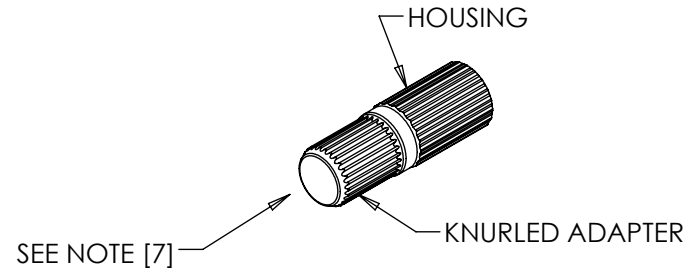
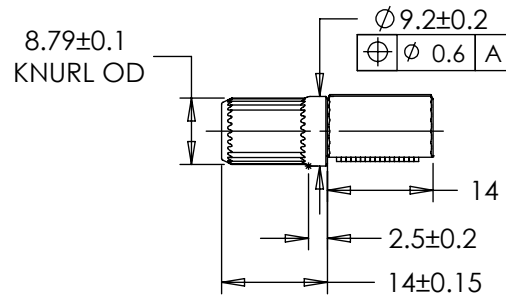
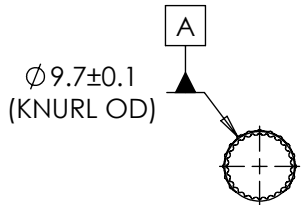
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DRAWN:	HMA	DATE:	16APR12	REFERENCE:
CHECKED:	WJW	DATE:	23AUG13	83560-XXX
APPROVED:	WJW	DATE:	23AUG13	TITLE:
REVISED:	26MAY16	DIMS:	mm	TORQUE INSERT SALES DRAWING
				PART NO:
REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA				REV:
SCALE: 1:1 DO NOT SCALE DRAWING				E
SHEET 1 OF 4				

TI-320-X.XX-01 (KNURLED SHAFT)



- INTENDED FOR PRESS FIT INTO METALS. CONTACT REELL FOR OTHER MOUNTING OPTIONS.
- APPROXIMATE WEIGHT: 6.5 GRAMS

TI-320-X.XX-02 (KNURLED ADAPTER)



- INTENDED FOR PRESS FIT INTO PLASTICS. CONTACT REELL FOR OTHER MOUNTING OPTIONS.
- APPROXIMATE WEIGHT: 11.85 GRAMS

SPECIFICATION SUBJECT TO CHANGE

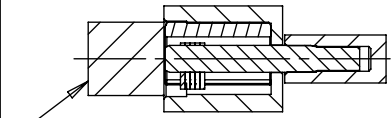
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CHECKED: WJW	DATE: 23AUG13	TITLE: TORQUE INSERT SALES DRAWING		
APPROVED: WJW	DATE: 23AUG13	PART NO: TI-320		
REVISED: 26MAY16	DIMS: mm	REV: E		
REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA		SCALE: 1:1	DO NOT SCALE DRAWING	SHEET 2 OF 4

UNLESS SPECIFIED TOLERANCE ±0.15
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 THIRD ANGLE PROJECTION

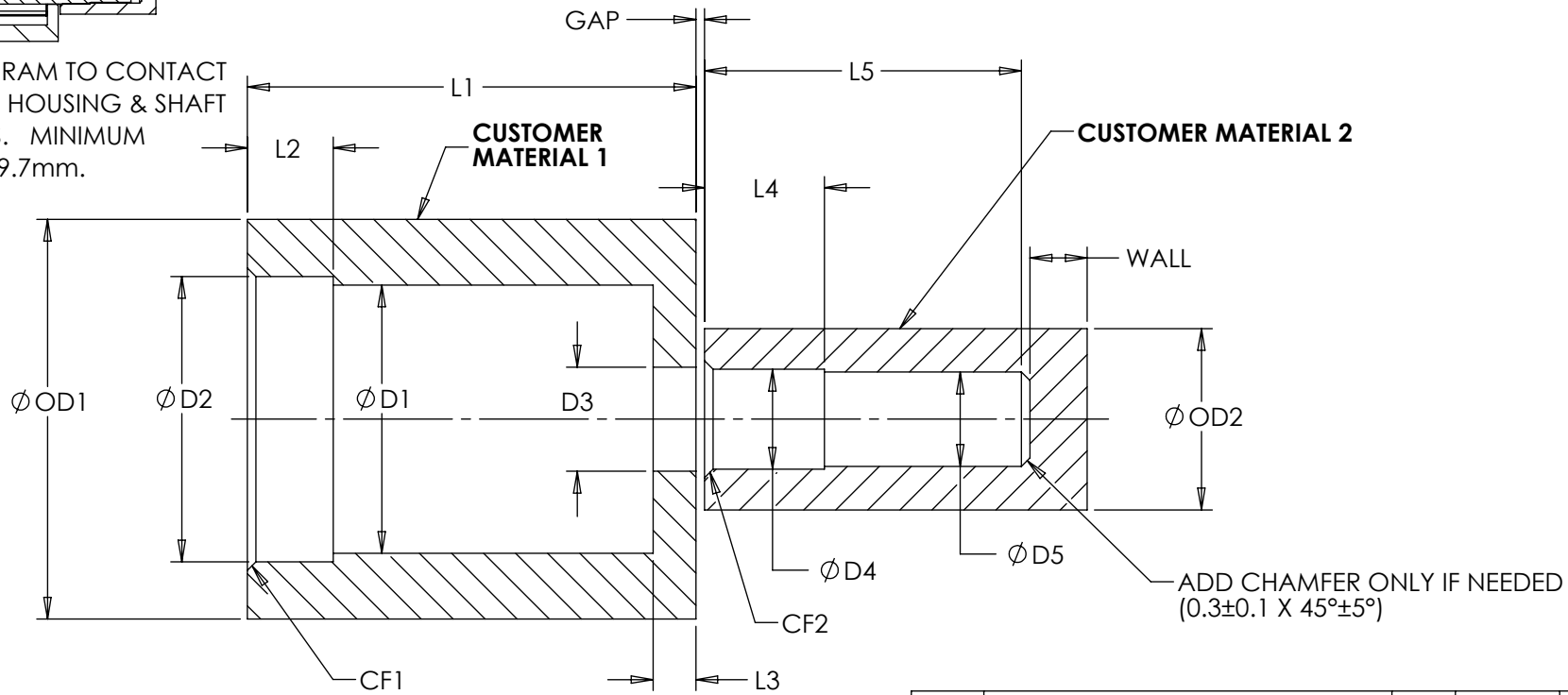


TI-320-X.XX-01 CUSTOMER INSTALLATION GEOMETRY

CUSTOMER MATERIAL	D1	D2	D3	D4	D5	L1	L2	L3	L4	L5	CF1	CF2	OD1	OD2	WALL	GAP
DIE CAST ZINC	9.55±0.05	10±0.03	3.65±0.03	3.5±0.03	3.3±0.03	15.7±0.1	3±0.1	1.5±0.1	4.2±0.1	12.5 MIN	0.3±0.1 X 45°±5°	0.3±0.1 X 45°±5°	12 MIN	6 MIN	2 MIN	(0.3)
DIE CAST ALUMINUM	9.55±0.05	10±0.03	3.65±0.03	3.5±0.03	3.3±0.03	15.7±0.1	3±0.1	1.5±0.1	4.2±0.1	12.5 MIN	0.3±0.1 X 45°±5°	0.3±0.1 X 45°±5°	12 MIN	6 MIN	2 MIN	(0.3)
MILD STEEL	9.6 +/- 0.025	10±0.03	3.65±0.03	3.63±0.03	3.38+/- 0.015	15.7±0.1	3±0.1	1.5±0.1	4.2±0.1	12.5 MIN	0.3±0.1 X 45°±5°	0.3±0.1 X 45°±5°	12 MIN	6 MIN	2 MIN	(0.3)
WROUGHT ALUMINUM	9.6 +/- 0.025	10±0.03	3.65±0.03	3.63±0.03	3.38+/- 0.015	15.7±0.1	3±0.1	1.5±0.1	4.2±0.1	12.5 MIN	0.3±0.1 X 45°±5°	0.3±0.1 X 45°±5°	12 MIN	6 MIN	2 MIN	(0.3)



INSTALLATION RAM TO CONTACT BOTH TORQUE HOUSING & SHAFT DURING PRESS. MINIMUM DIAMETER OF 9.7mm.



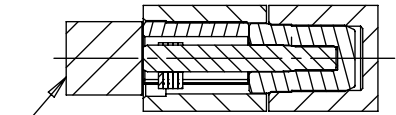
SCALE 4:1

SPECIFICATION SUBJECT TO CHANGE

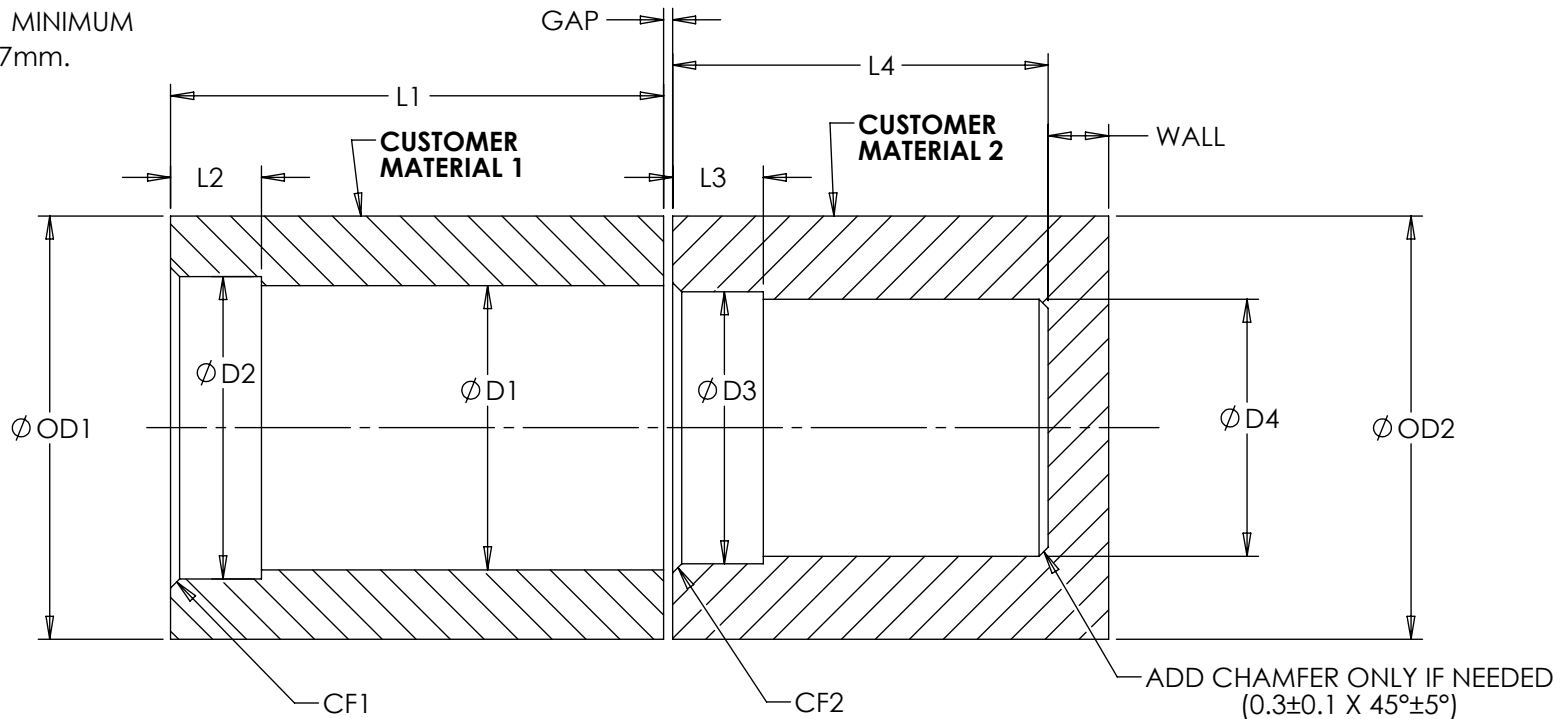
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DRAWN:	HMA	DATE: 16APR12	REFERENCE: 83560-XXX		
CHECKED:	WJW	DATE: 23AUG13	TITLE: TORQUE INSERT SALES DRAWING		
APPROVED:	WJW	DATE: 23AUG13			
REVISED:	26MAY16	DIMS: mm	PART NO: TI-320		
INTERPRET PRINT PER ASME Y14.5M-1994 THIS PRINT IS THE CONFIDENTIAL PROPERTY OF REELL PRECISION MFG. THIRD ANGLE PROJECTION				REV: E	
				REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA	
SCALE: 1:1		DO NOT SCALE DRAWING		SHEET 3 OF 4	

T1-320-X.XX-02 CUSTOMER INSTALLATION GEOMETRY

CUSTOMER MATERIAL	D1	D2	D3	D4	L1	L2	L3	L4	CF1	CF2	OD1	OD2	WALL	GAP
PLASTIC	9.3±0.03	10±0.03	9.1±0.03	8.3±0.03	16.3±0.1	3.0±0.1	3.0±0.1	12.5 MIN	0.3±0.1 X 45°±5°	0.3±0.1 X 45°±5°	13.5 MIN	13.5 MIN	2 MIN	(0.3)



INSTALLATION RAM TO CONTACT BOTH TORQUE HOUSING & SHAFT DURING PRESS. MINIMUM DIAMETER OF 9.7mm.

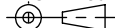


SCALE 4:1

SPECIFICATION SUBJECT TO CHANGE

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THIRD ANGLE PROJECTION



LEVEL	DESCRIPTION	DRAWN	DATE	APPROVED
DRAWN: HMA	DATE: 16APR12	REFERENCE: 83560-XXX		
CHECKED: WJW	DATE: 23AUG13	TITLE: TORQUE INSERT SALES DRAWING		
APPROVED: WJW	DATE: 23AUG13	PART NO: TI-320		
REVISED: 26MAY16	DIMS: mm	SCALE: 1:1		REV: E
REELL PRECISION MANUFACTURING 1259 WILLOW LAKE BOULEVARD SAINT PAUL, MINNESOTA 55110-5103, USA		DO NOT SCALE DRAWING		SHEET 4 OF 4

