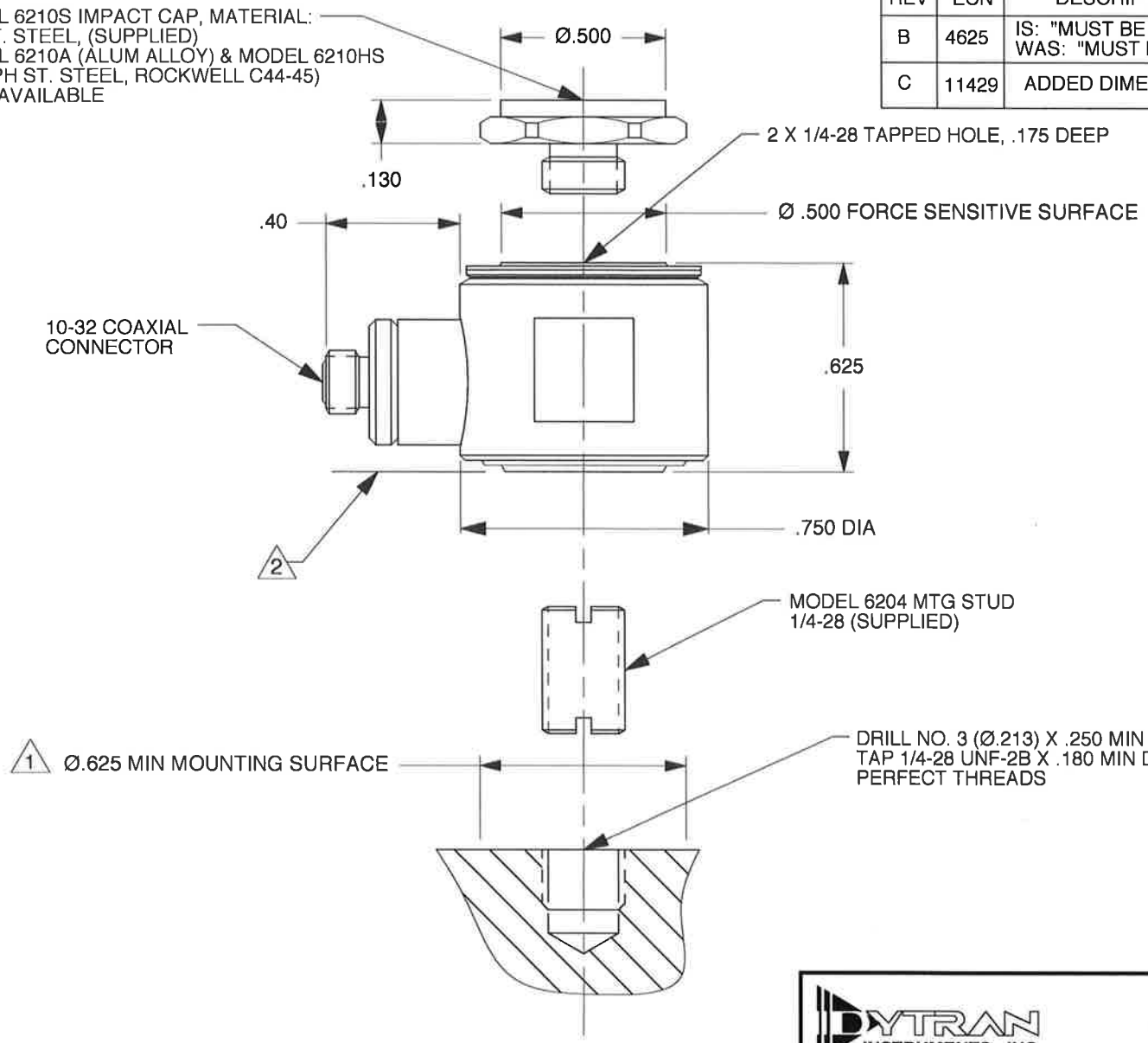
REV	ECN	DESCRIPTION	BY/DATE	CHK	APPR
B	4625	IS: "MUST BE FLAT WITHIN" WAS: "MUST BE FLAT WITHIS"	R.L.A. 5/3/07	CES	CES
C	11429	ADDED DIMENSION DIA .750	LA 11/05/14	[illegible]	LN



3 WRENCH FLATS: 11/16 (.687) ACROSS FLATS X .31 HIGH.

2 IT IS IMPORTANT THAT BOTTOM SURFACE OF SENSOR BE IN INTIMATE CONTACT. INSPECT FOR BURRS, ETC.

1 PREPARE FLAT SURFACE OVER Ø.625 MINIMUM AREA BY GRINDING, SPOTFACING, LAPPING ETC. THIS AREA MUST BE FLAT WITHIN .001 TIR, TYP BOTH MODELS.

EXCEPT AS OTHERWISE NOTED

ALL DIMENSIONS IN INCHES
TOLERANCE: .XXX = ± .XX= ±

SURFACE FINISH EXCEPT AS NOTED √

BREAK EDGES TO DEBURR RADIUS OR CHAMFER

- THESE DIAS ⊙ TO T.I.R.

FILLETS - MAX RAD.

DYTRAN INSTRUMENTS, INC. CHATSWORTH, CA.

MASTER
ONLY IF IN RED

SCALE 2X	REV -	DATE -	ECN SEE REV BLK		
DATE 1/30/82	PART NO. -				
DRAWN N.C.	CHECKED	MAT'L -			
APPROVED LN 11/19/14	NEXT ASSEMBLY	USED ON SERIES 1051V			

TITLE
OUTLINE/INSTALLATION DRAWING, MODEL 1051V

DWG NO. **127-1051V**

SHEET 1 OF 1

Model Number 1051V6	PERFORMANCE SPECIFICATION	DOC NO PS1051V6
	DYNAMIC FORCE SENSOR, IEPE	REV A, ECN 12897, 08/18/16

- **COMPRESSIVE & TENSILE LOADINGS**
- **EXCELLENT LINEARITY**
- **IEPE, VOLTAGE MODE**

		ENGLISH		SI	
PHYSICAL					
Weight, Max.		1.0	oz	28	grams
Connector		10-32		10-32	
Material		Stainless Steel		Stainless Steel	
Sensing Element	Material	Quartz		Quartz	
	Mode	Compression		Compression	
PERFORMANCE					
Sensitivity, ± 5 %		1	mV/lbf	0.2	mV/N
Compression Range		5,000	lbf	22241.1	N
Maximum Compression		15,000	lbf	66723	N
Tension Range		500	lbf	2224.1	N
Maximum Tension [1]		500	lbf	2224	N
Resolution		0.07	lbf, rms	0.31138	N
Linearity [2]		±1	% Full Scale	±1	% Full Scale
Resonant Frequency, Unloaded		75	kHz	75	kHz
Stiffness, Force Sensor		11.4	lbf/µin	2.0	kN/µm
ENVIROMENTAL					
Maximum Shock, Unloaded		10,000	g pk	98100	m/s^2
Maximum Vibration, Unloaded		5,000	g pk	49050	m/s^2
Temperature Range		-100 to +250	°F	-73 to +121	°C
Thermal Coefficient		0.03	%/°F	0.05	%/°C
Seal		Epoxy		Epoxy	
ELECTRICAL					
Output Voltage F.S		±5	V	±5	V
Output Impedance		<100	Ω	<100	Ω
Bias Voltage		7.5 to 11.5	VDC	7.5 to 11.5	VDC
Compliance Voltage Range		18 to 30	VDC	18 to 30	VDC
Supply Current Range [3]		2 to 20	mA	2 to 20	mA
Discharge Time Constant, Nom		2000	Sec	2000	Sec

This family also includes:

Model	Sens. (mV/lbf)	Compression Range (lbf)	Max. Compression (lbf)	Tension Range (lbf)	Max. Tension (lbf)	T.C. (sec)	Resolution (lbf, RMS)
1051V1	500	10	200	10	200	50	0.00014
1051V2	100	50	1000	50	500	100	0.0007
1051V3	50	100	2000	100	500	2000	0.0014
1051V4	10	500	10000	500	500	2000	0.007
1051V5	5	1,000	15000	500	500	2000	0.014

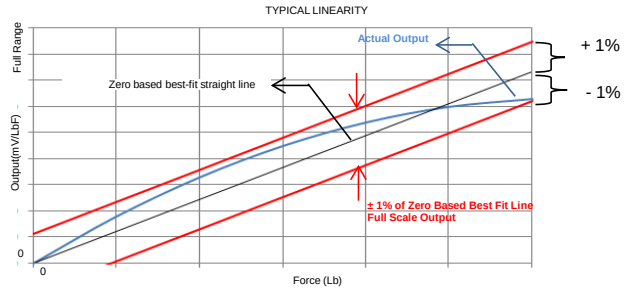
Refer to the performance specifications of the products in this family for detailed description.

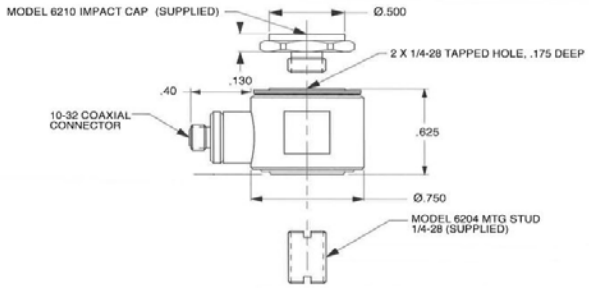
Supplied Accessories:

1) Accredited calibration certificate (ISO 17025)
2) MOD 6210 STEEL IMPACT CAP
3) MOD 6204 1/4-28 MOUNTING STUD

Notes:

[1] Absolute maximum tension. Do not exceed in any case!
[2] Percent of full scale or any lesser range, zero based best-fit straight line method.
[3] Power the device only with constant current type power units. Do not apply power to this system without current limting. This will destroy the integral IC amplifier.





Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-1051V for more information.

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