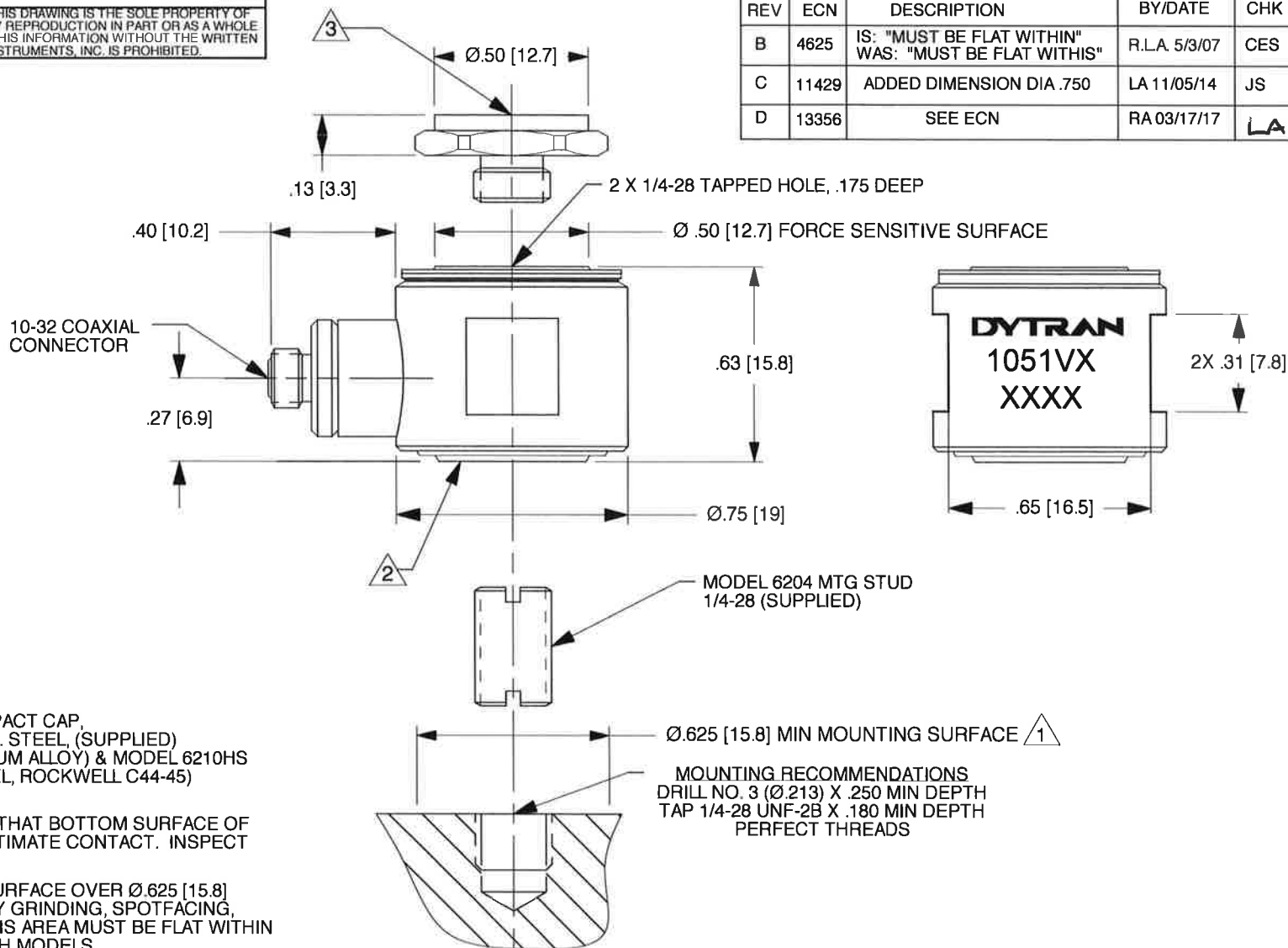


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REV	ECN	DESCRIPTION	BY/DATE	CHK	APPR
B	4625	IS: "MUST BE FLAT WITHIN" WAS: "MUST BE FLAT WITHIS"	R.L.A. 5/3/07	CES	CES
C	11429	ADDED DIMENSION DIA .750	LA 11/05/14	JS	LN
D	13356	SEE ECN	RA 03/17/17	LA	LN



- 3 MODEL 6210S IMPACT CAP,  
MATERIAL: 303 ST. STEEL, (SUPPLIED)  
MODEL 6210A (ALUM ALLOY) & MODEL 6210HS  
(17-4 PH ST. STEEL, ROCKWELL C44-45)  
ALSO AVAILABLE
- 2 IT IS IMPORTANT THAT BOTTOM SURFACE OF  
SENSOR BE IN INTIMATE CONTACT. INSPECT  
FOR BURRS, ETC.
- 1 PREPARE FLAT SURFACE OVER Ø.625 [15.8]  
MINIMUM AREA BY GRINDING, SPOTFACING,  
LAPPING ETC. THIS AREA MUST BE FLAT WITHIN  
.001 TIR, TYP BOTH MODELS.

NOTES: UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED: INTERPRET DIM & TOL PER ASME Y14.5M-1994. REMOVE BURRS COUNTERSINKS INTERNAL THDS 90° TO MAJOR DIA CHAM EXT THDS 45° TO MAJOR DIA THD LENGTHS AND DEPTHS ARE FOR THDS PER MIL-S- 7742. DIMENSIONS APPLY AFTER FINISHING.		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSION IN BRACKETS [ ] ARE IN MILLIMETERS. TOLERANCES ARE: INCHES METRIC ANGLES .XX ±.03 .X ± 0.8 ± 1° .XXX ±.010 .XX ± 0.25		CONTRACT NO.	
USED ON	NEXT ASSY	MATERIAL		APPROVALS	
APPLICATION		FINISH		ORIG	N.C. 1/30/82
THIRD ANGLE PROJECTION USA		DO NOT SCALE DRAWING		CHK	N.C. 1/30/82
ALL MACHINED SURFACES TOTAL RUNOUT WITHIN .005 BREAK SHARP EDGES .005 TO .010 MACHINE FILLET RADI .005 TO .015 WELDING SYMBOLS PER AWS A2.4 ABBREVIATIONS PER MIL-STD-12				APP	LN. 11/19/14
				APP	

TITLE					
OUTLINE/INSTALLATION DRAWING, MODEL 1051V					
SIZE	CAGE CODE	DWG. NO.	REV		
A	2W033	127-1051V	D		
SCALE:	NONE	ASHLAR GRAPHITE	SHEET 1 OF 1		

Model Number 1051V3	PERFORMANCE SPECIFICATION				DOC NO PS1051V3
		DYNAMIC FORCE SENSOR, IEPE			REV D, ECN 16158, 04/19/21



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

#### PHYSICAL

Weight, Max.  
Connector  
Material  
Sensing Element

Material  
Mode

ENGLISH		SI	
1.0	oz	28	grams
10-32		10-32	
Stainless Steel		Stainless Steel	
Quartz		Quartz	
Compression		Compression	

#### PERFORMANCE

Sensitivity,  $\pm 10\%$   
Compression Range  
Maximum Compression  
Tension Range  
Maximum Tension [1]  
Resolution  
Linearity [2]  
Resonant Frequency, Unloaded  
Stiffness, Force Sensor

50	mV/lbf	11.2	mV/N
100	lbf	444.8	N
2,000	lbf	8896	N
100	lbf	444.8	N
500	lbf	2224	N
0.0014	lbf, RMS	0.00623	N
$\pm 1$	% Full Scale	$\pm 1$	% Full Scale
>39	kHz	>39	kHz
11.4	lbf/ $\mu$ in	2.0	kN/ $\mu$ m

#### ENVIRONMENTAL

Maximum Shock, Unloaded  
Temperature Range  
Thermal Coefficient  
Seal

10,000	g pk	98100	m/s <sup>2</sup> pk
-100 to +250	°F	-73 to +121	°C
0.03	%/°F	0.05	%/°C
Epoxy		Epoxy	

#### ELECTRICAL

Output Voltage F.S  
Output Impedance  
Bias Voltage  
Compliance Voltage Range  
Supply Current Range [4]  
Discharge Time Constant, Min

$\pm 5$	V	$\pm 5$	V
<100	$\Omega$	<100	$\Omega$
7.5 to 9.5	VDC	7.5 to 9.5	VDC
18 to 30	VDC	18 to 30	VDC
2 to 20	mA	2 to 20	mA
100	Sec	100	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	>20	0.00014
1051V2	100	50	1000	50	500	>50	0.0007
1051V4	10	500	10000	500	500	>1000	0.007
1051V5	5	1,000	15000	500	500	>1200	0.014
1051V6	1	5,000	15000	500	500	>2000	0.07

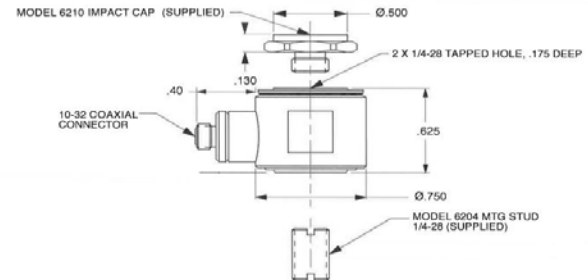
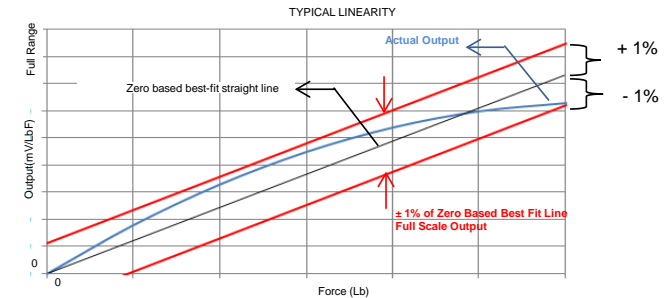
Refer to the performance specifications of the products in this family for detailed description.

#### 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] Measure using zero-based straight line method, % of F.S. or any lesser range.
- [3] All specifications are at room temperature unless otherwise specified.
- [4] Do not apply power to this system without current limiting, 20 mA MAX. To do so will destroy the IC charge amplifier.
- [5] In the interest of constant product improvement, we reserve the right to change specifications without notice. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.



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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