

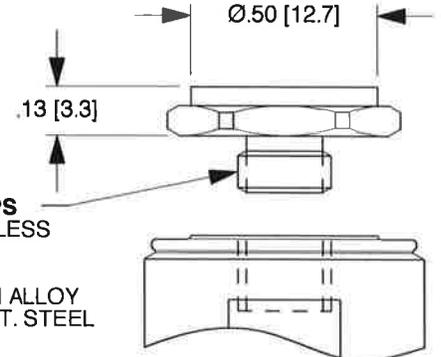
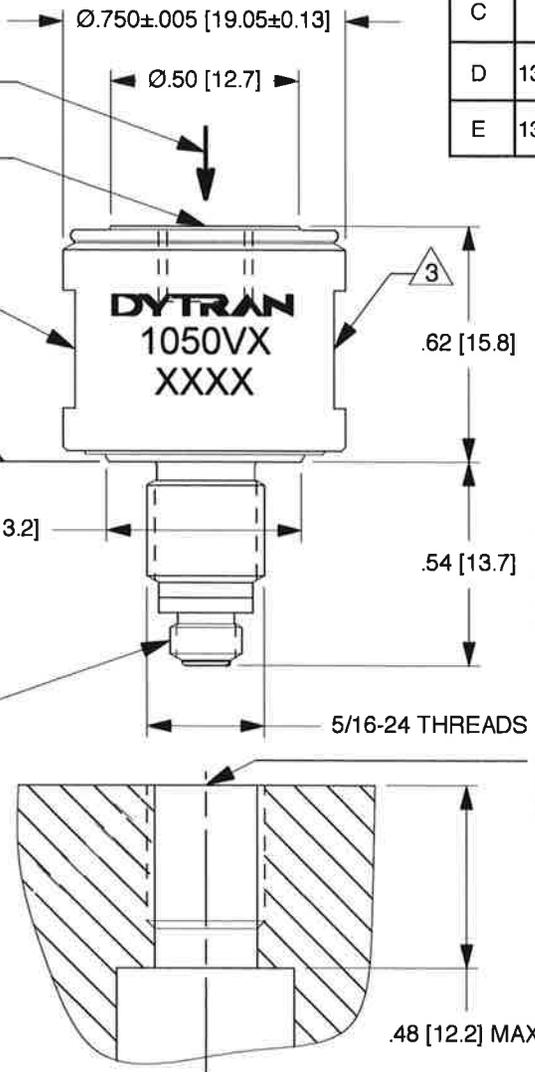
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REV	ECN	DESCRIPTION	BY/DATE	CHK	APPR
C	-	SEE ECN	NC, 11/29/05	NC	NC
D	13356	SEE ECN	RA, 03/20/17	LA	LN
E	13851	Ø.750±.005 [19.05] WAS: Ø.75 [19]	RA, 11/09/17	MH	LN

SENSE & DIRECTION OF
 FORCE FOR POSITIVE GOING
 OUTPUT

1/4-28 UNF-2B X .200
 DEEP, TAPPED HOLE

10-32 COAXIAL
 CONNECTOR.



SERIES 6210 IMPACT CAPS
 MODEL 6210S, 303 STAINLESS
 STEEL (SUPPLIED)
 ALSO AVAILABLE:
 MODEL 6210A, ALUMINUM ALLOY
 MODEL 6210HS, 17-4 PH ST. STEEL

MOUNTING RECOMMENDATIONS
 PORT PREPARATION:
 DRILL "I" (Ø.272) THRU
 TAP 5/16-24 UNF-2B X
 .360 [9] MIN. DEPTH PERF. THREADS

- 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.62 [15.8] MINIMUM AREA BY GRINDING, SPOTFACING, LAPPING ETC. THIS AREA MUST BE FLAT WITH .001 TIR, TYP BOTH MODELS.

USED ON	NEXT ASSY
APPLICATION	
THIRD ANGLE PROJECTION USA	

UNLESS OTHERWISE SPECIFIED:
 INTERPRET DIM & TOL PER ASME
 Y14.5M-1994 REMOVE BURRS
 COUNTERSINKS INTERNAL THDS 90°
 TO MAJOR DIA THD EXT THDS 45°
 TO MAJOR DIA THD LENGTHS AND
 DEPTHS ARE FOR THDS PER MIL-S-
 7742
 DIMENSIONS APPLY AFTER
 FINISHING.

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

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSION IN BRACKETS [] ARE IN MILLIMETERS. TOLERANCES ARE:		
INCHES .XX ± 0.03 .XXX ± 0.10	METRIC .X ± 0.8 .XX ± 0.25	ANGLES ± 1°
MATERIAL		
FINISH		

CONTRACT NO.		
APPROVALS		
ORIG	N.C.	1/30/82
CHK	N.C.	1/30/82
APP	N.C.	11/29/05
APP		

DYTRAN INSTRUMENTS, INC.
 CHATSWORTH, CA.

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TITLE
**OUTLINE/INSTALLATION DRAWING,
 MODEL 1050V FORCE SENSOR**

SIZE A	CAGE CODE 2W033	DWG. NO. 127-1050V	REV E
SCALE: NONE		ASHLAR GRAPHITE	SHEET 1 OF 1

DO NOT SCALE DRAWING

Model Number 1050V4	PERFORMANCE SPECIFICATION	Doc No PS1050V4
	Force Sensors, IEPE	REV B, ECN 13216, 01/17/17



- DYNAMIC FORCE SENSOR
- VOLTAGE MODE
- EXCELLENT LINEARITY

PHYSICAL

Weight, Max.	Type
Connector	Thread
Housing	Material
Sensing Element	Isolation
	Material
	Mode

ENGLISH		SI	
1.12	oz	32	grams
Coaxial		Coaxial	
10-32		10-32	
Stainless steel		Stainless steel	
Case grounded		Case grounded	
Quartz		Quartz	
Compression		Compression	

PERFORMANCE

	ENGLISH	SI
Sensitivity, +/-10%	10 mV/Lb	2.25 mV/N
Compression Range	500 Lbs.Force	2224 N
Maximum Compression, +/-5%	10000 Lbs.Force	44480 N
Tension Range	500 Lbs.Force	2224 N
Maximum Tension [1], +/-5%	1000 Lbs.Force	4448 N
Resolution	.007 Lb. RMS	0.03114 N RMS
Linearity [2]	± 1 % Full Scale	± 1 % Full Scale
Mounted Resonance (Unloaded)	≥ 75 kHz	≥ 75 kHz
Stiffness	11.4 Lb/μin	1.97 kN/μm

ENVIRONMENTAL

	ENGLISH	SI
Coefficient Of Thermal Sensitivity	0.03 %/°F	0.05 %/°C
Operating Temperature	-100 to +250 °F	-73 to +121 °C
Maximum Vibration	5000 g's,Peak	49000 m/s^2 Peak
Maximum Shock	10,000 g's,Peak	98,000 m/s^2 Peak
Environmental Seal	Epoxy	Epoxy

ELECTRICAL

	ENGLISH	SI
Supply Current [3]	2 to 20 mA	2 to 20 mA
Compliance Voltage	18 to 30 VDC	18 to 30 VDC
Discharge Time Constant, Min.	2000 Seconds	2000 Seconds
F.S. Output Voltage	5 Volts	5 Volts
Output Impedance	100 Ω	100 Ω
Bias Voltage	7.5 to 9.5 VDC	7.5 to 9.5 VDC

This family also includes:

Model	Sensitivity (mV/Lb)	Range (LbsF) Compressive, Tensile	Max Force (LbsF) Compressive, Tensile	Discharge Time Constant (Sec)
1050V1	500	10, 10	200, 200	50
1050V2	100	50, 50	1000, 1000	100
1050V3	50	100, 100	2000, 1000	500
1050V5	5	1000, 500	15000, 1000	2000
1050V6	1	5000, 500	15000, 1000	2000

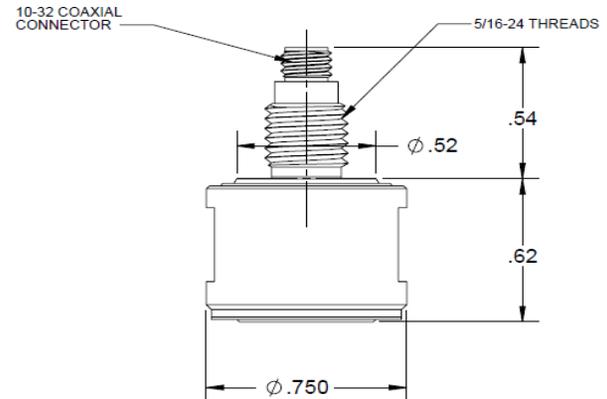
Refer to the performance specifications of the products in this family for detailed description

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 these instruments only with constant current type power units. Do not connect to a source of voltage without current limiting. This will destroy the integral IC amplifier.



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-1050V for more information.



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