



TRANSDUCTORES DE FUERZA PB2/ 1kN...600 kN (tracc./compr.)
FORCE TRANSDUCERS PB2/1kN...600kN (tension/compression)

Low profile fatigue rated load cell type with high immunity against transverse forces and high stiffness.

ESPECIFICACIONES GENERALES General Specifications				
CAPACIDADES NOMINALES /Fnom) (*) Load Capacities (Fnom)	1-5 kN	10- 20- 50 kN	100-200kN	250-500-600kN
SALIDA A CARGA NOMINAL (Cnom) Output Sensitivity (Cnom)	2 mV/V (± 0.5%)	2 mV/V (± 0.5%)	2 mV/V (± 0.5%)	2 mV/V (± 0.5%)
EXCITACIÓN ELÉCTRICA Recomendada Recommended Excitation Voltage	10 Vrms	10 Vrms	10 Vrms	10 Vrms
RESISTENCIA TERMINAL ENTRADA Input Resistance	≤ 700 Ω	≤ 700 Ω	≤ 700 Ω	≤700 Ω
RESISTENCIA TERMINAL SALIDA Output Resistance	≤ 700 Ω	≤700 Ω	≤ 700 Ω	≤700 Ω
AJUSTE DE CERO Zero Adjustment	≤ 1% Cnom	≤1% Cnom	≤1% Cnom	≤ 1% Cnom
NO LINEALIDAD TERMINAL (MÁX.) Linearity deviation max.	≤ 0.1% Fnom	≤ 0.05% Fnom	≤ 0.05% Fnom	≤ 0.1% Fnom
NO REPETIBILIDAD (MÁX) Repeatability deviation max.	≤ 0.1% Fnom	≤ 0.05% Fnom	≤ 0.05% Fnom	≤ 0.1% Fnom
RANGO DE TENSIÓN DE EXCITACIÓN	0.5 ... 15 Vrms	0.5 ... 15 Vrms	0.5 ... 15 Vrms	0.5 ... 15 Vrms
RANGO NOMINAL DE TEMPERATURA Nominal Temperature range	10 °C ...+45 °C	10 °C ...+45 °C	10 °C ...+45 °C	10 °C ...+45 °C
RANGO DE TEMPERATURA DE TRABAJO Operating Temperature range	-10 °C ...+80 °C	-10 °C ...+80 °C	-10 °C ...+80 °C	-10 °C ...+80 °C
CARGA LIMITE /%Fnom) LIMIT FORCE (% Fnom)	150% static rated force // 300% fatigue rated force When used in dynamic/fatigue testing system, PB2 load cells are specified for twice the static force and limit force is then 200-300% of the static force.			

(*) Posibilidad de otros valores bajo demanda // *Other values are also possible under request.*

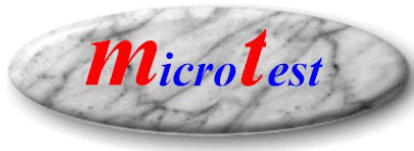
Disponen de sistema de reconocimiento y configuración cuando se emplea con software SCM3000 MICROTEST

Autorecognition: self identifiable and auto-configuration when used with MICROTEST SCM3000 software

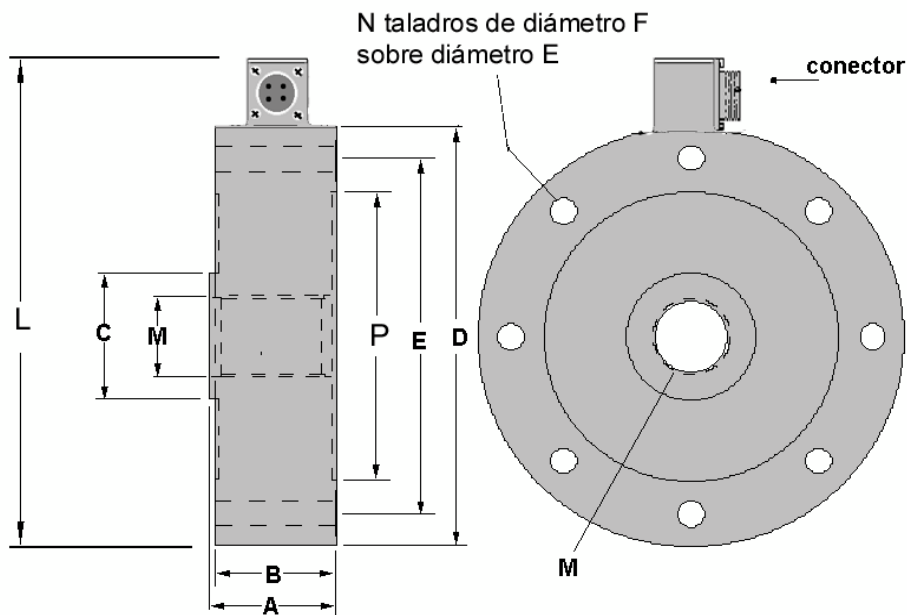
The fatigue life at the capacity of the cell is at least 10⁹ full stress reversed cycles.

Side load resistance is at least 40% of the capacity of the cell





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PB2 MODEL

Load Capacities: 1kN, ..., 600 kN (T/C)

Dimensions (mm):

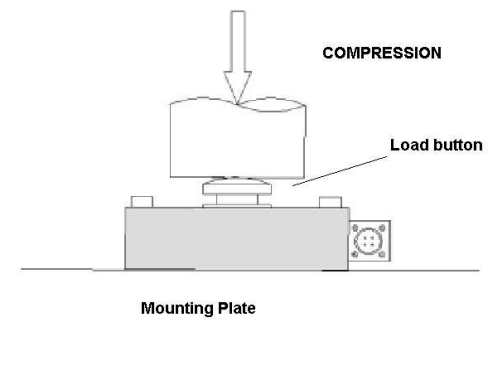
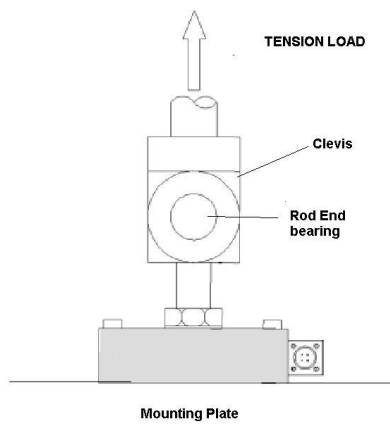
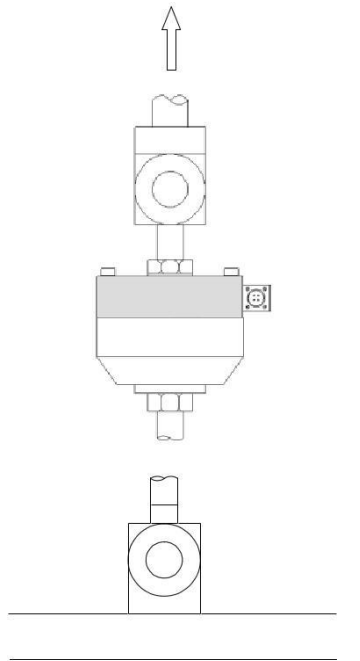
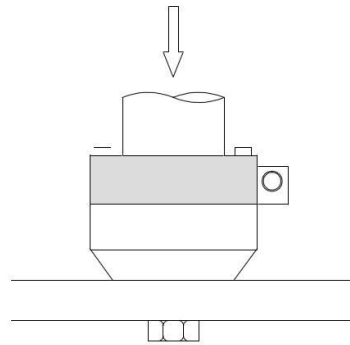
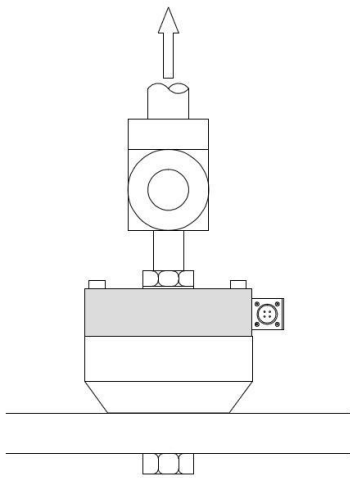
	1-5 kN	10-20-50kN	100-200kN	250-400kN	500-600kN
A	25	32	45	50	58
B	23	30	43	48	54
C	26	32	50	64	76
D	88	101	150	177	190
E	77	85	125	152	159
F	6,5	8,5	11	15	15
L	109	124	173,5	201	220
N	6 tal	8 tal	12 tal	8 tal	8 tal
M	M16	M20x1,5	M30x2	M42x3	M52x3

CONNECTOR: LIDER SERIES 92 BM-14V



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EJEMPLOS DE MONTAJE DE CELULAS PB2
PB2 MOUNTING EXAMPLES





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OPCIONES /Options:

Ref. **PB2**: Ni plated treatment option

Ref. **PB2-I**: Stainless Steel option

Ref. **PB2/YYY-2B**: double bridge, two outputs.

Ref. PB2/XXX-YYY : XXX: static rated force; YYY: fatigue rated force (in kN)

PB2 load cells for dynamic applications can include a miniature **accelerometer** installed in the centre of the load cell system, in the load axis, to compensate the error due to inertia forces caused by the attached mass. The range of compensation is from 0 to 200Hz, covering the majority of cases in servo-hydraulic testing systems. Amplitude and phase inertial errors can be compensated. A procedure for compensation configuration is included in software SCM4000 when used with MICROTEST DMC 4000 or MOOG PTC Systems.

Automatic **transducer recognition** with MICROTEST control system and **SCM3000** or **SCM4000** softwares.

Instalación Mecánica y Eléctrica / Electrical and Mechanical Installation

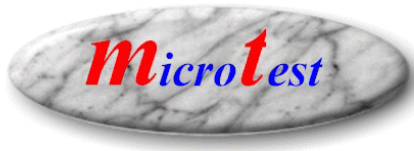
Pin assignement

If the transducer is connected according to the following connection diagram then when the transducer has compressive loading the output voltage at the measuring amplifier is positive.

PIN on male connector		FUNCTION
A	1	Measurement signal (+)
C	3	Measurement signal (-)
B/E	2/5	Excitation voltage (-) / Voltage Sensing (-)
D/F	4/6	Excitation voltage (+) / Voltage Sensing (+)

Recommended mounting torque for assembling screws to base plate			Thread Adapter Torque
MODEL	Screw Size	Torque (N.m)	
PB2/1-5kN	M6	8	60Nm
PB2/20 kN PB2/50 kN	M8	25	120Nm
PB2/100-200kN	M10	75	Pull thread adapter to 110-120% of capacity and tighten jam nut.
PB2/250-600kN	M14	125	

- Mounting screws should be Grade 8.8 or better. Recommended Grade 10.9
 MICROTEST



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MOUNTING INFORMATION PB2 TRANSDUCERS

1

Los transductores de fuerza MICROTEST modelo PB2 deben ser montados sobre una superficie plana (0.01 mm o mejor) y suficientemente rígida de forma que no se deforme apreciablemente bajo carga. Una forma sencilla de obtener una superficie rígida es emplear una placa base de montaje que puede ser servida por MICROTEST. En cualquier caso basta con una superficie rígida equivalente. Los transductores de fuerza PB2 están diseñadas para medir sólo la fuerza paralela a su eje sensible y perpendicular a su superficie de montaje. La aplicación de fuerza con componente transversal dará como resultado una medida del coseno de la fuerza aplicada.

MICROTEST PB2 Series Load Cells must be mounted on a surface that is flat and rigid enough so as not to deform appreciably under load. An easy way to obtain the flat rigid surface is by using an Interface supplied base or mounting plate. Where this is not practical, a rigid surface equivalent to the appropriate MICROTEST base or mounting plate will suffice.

PB2 load cells respond to forces in the axis perpendicular to the mounting surface. Load cell response to a non-axial force is proportional to that force times the cosine of the angle it makes with the loading axis.

2

Cuando se instalan estos transductores de fuerza en otras superficies distintas a la placa base de montaje MICROTEST, los tornillos de sujeción (cal. 8.8 o superior) deben ser apretados de acuerdo con el par mostrado en la tabla.

When installing these load cells without factory-installed Interface base or bottom plate, the Grade 8 cap screws holding the cell to the mounting plate must be tightened to the value shown in Table

3

Las contratueras de fijación de rótulas y accesorios de montaje deben roscarse al valor mostrado en la tabla para evitar daño en la rosca.

Series Load Cells must have jam nuts tightened to the value shown in Table 3 on Page 2, to avoid thread damage.

4

Para un mejor comportamiento de los transductores PB2 se recomienda emplear contratueras, que han de instalarse de acuerdo a lo indicado en la tabla.

For the best performance of PB2 Series Load Cells, the use of jam nuts is recommended. The jam nuts should be installed and torqued as indicated in Table.

5

Los adaptadores roscados y rótulas han de tener su rosca en buenas condiciones. En el montaje se recomienda roscar estos elementos a mano y desenroscar una vuelta antes de apretar la contratuerca.

Rod end bearings, or threaded adapters, should have smooth threads. They should be installed hand tight and backed off 1 turn prior to tightening jam nut as indicated in Table.

6

Las placas para compresión deben tener dureza alta (Rc 45 o mayor) cuando son empleadas con un botón de carga o directamente sobre el transductor.

Bearing Plates should be hardened steel (Rc 45 or higher) when mating with a load button or steel load cells. For aluminum compression-only load cells, a mild steel bearing plate may be used.

7

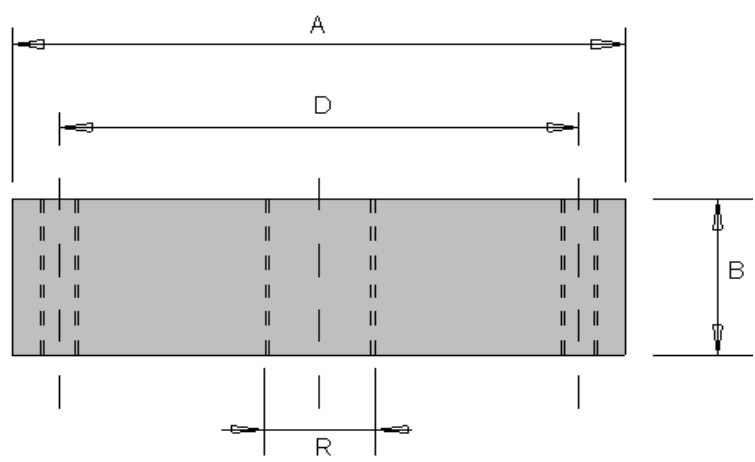
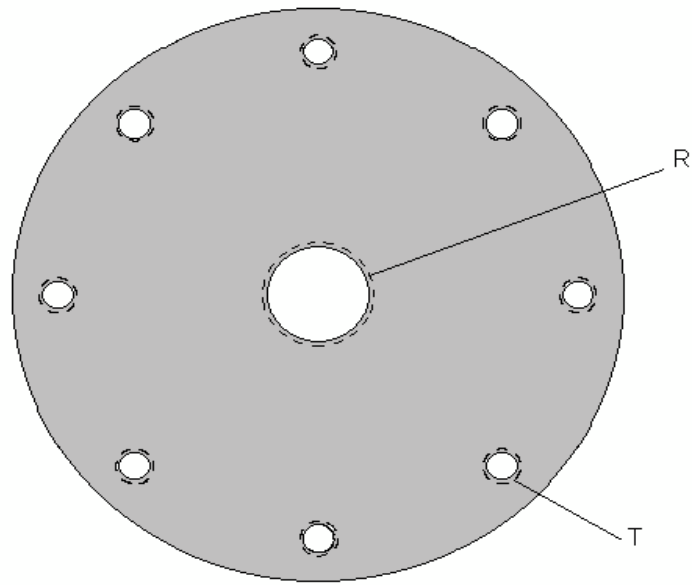
Para eliminar potenciales errores de medida la base del transductor, así como sus cables de conexión eléctrica deben montarse en una estructura fija o no móvil.

To eliminate potential reading errors, the outer rim or base of the load cell and its connecting electrical cable should be mounted on the fixed or non-moving structure.



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MOUNTING ACCESSORIES FOR PB2 TRANSDUCERS

MOUNTING BASE PLATE PB/PB2



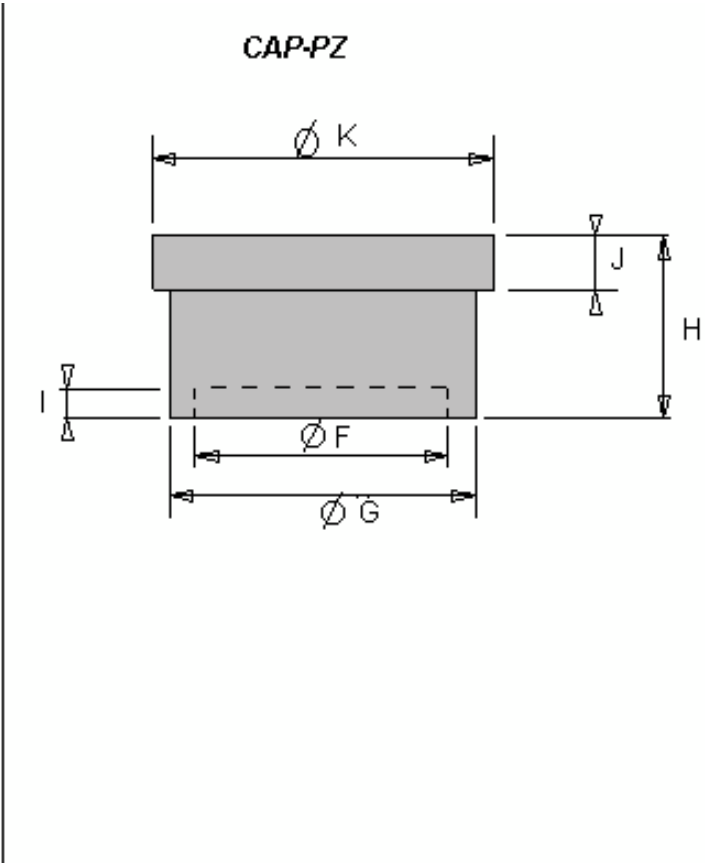
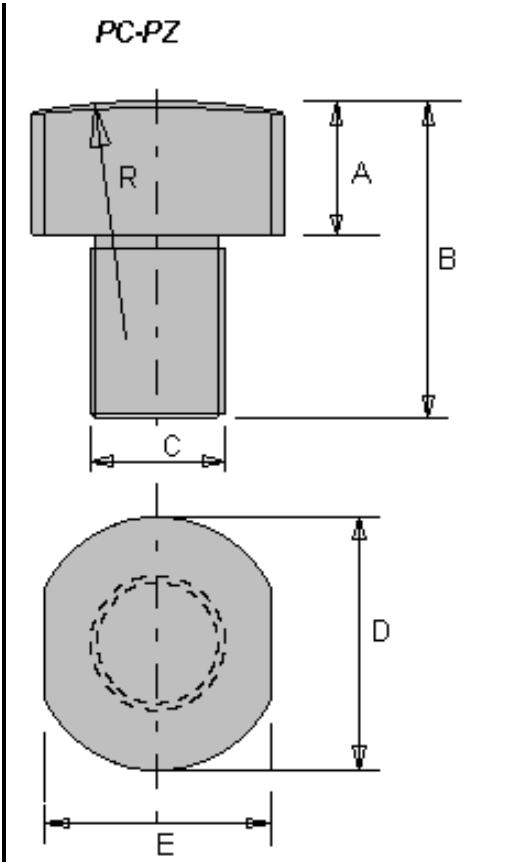
	A	B	D	R	T
PB/PB2/1...5kN	88	25	77	M16	6 TAL M6 sobre diámetro de 77
PB/PB2/10...50kN	101	30	85	M20x1,5	8 TAL M8 sobre diámetro de 85
PB/PB2/100..200 kN	150	50	125	M30x2	12 TAL M10 sobre diámetro de 125



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MOUNTING ACCESSORIES FOR PB2 TRANSDUCERS

PISTÓN DE CARGA (PC/PB2) Y CAP DE CARGA (CAP/PB2) PARA COMPRESIÓN



PC/PB2

CAP/PB2

CAP/PB2	A	B	C	D	E	R	F	G	H	I	J	K
1...5kN	15	30	M16	28	20	50	28	40	25	5	6	45
10...50 kN	16	36	M20x1,5	32	26	60	32	48	27	5	8	58
100..200 kN	35	75	M30x2	56	50	160	56	68	40	7	12	76

(Dimensions are in mm)