



**PACE**line

## CHW

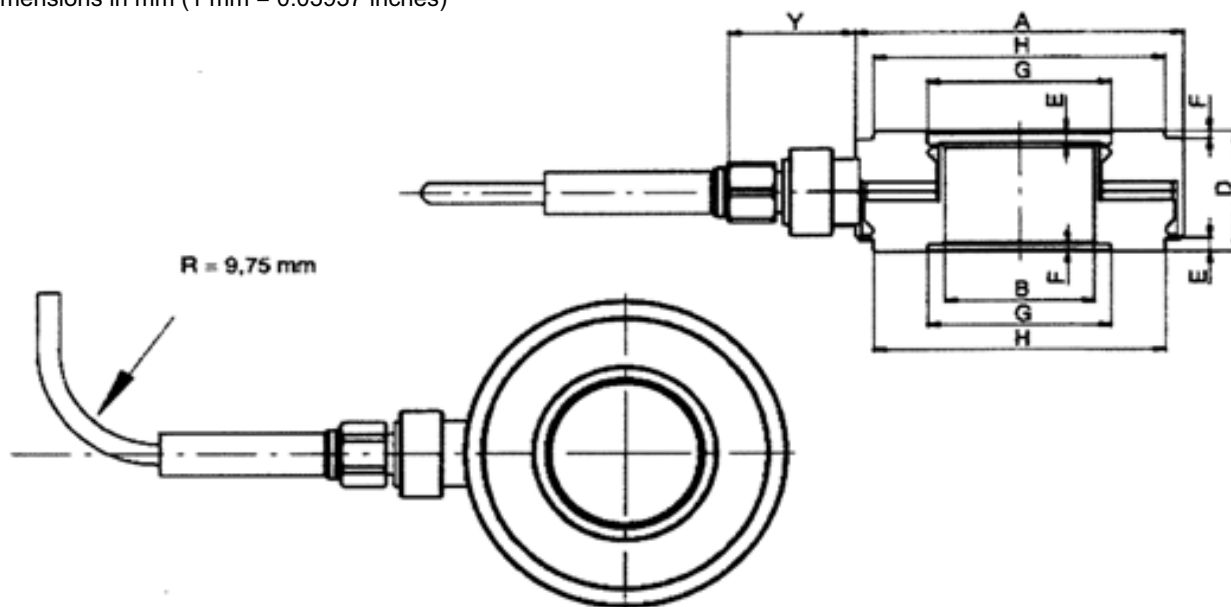
Piezoelectric force washers  
for a wide range of  
temperatures

### Special features

- High nominal (rated) temperature of 300 °C (CHW-3), or 200 °C (CHW-2)
- Welded cable, hermetically welded sensor
- Rustless materials
- Compact design

Data sheet

Dimensions in mm (1 mm = 0.03937 inches)



Type	A	B	D	E	F	G	H	Y
CHW-2/60KN	28.5 <sup>+0.05</sup>	13H7	11-0.05	1.23	0.68	16	25.5	~10.9
CHW-3/60KN								

## Specifications (data per VDI standards/VDE2638)

Type			CHW-2/60KN	CHW-3/60KN
Nominal (rated) force	$F_{nom}$	kN	60	
<b>Accuracy</b>				
Relative reversibility error	$v$	%	1	
Relative linearity error	$d_{lin}$	%	1	
Crosstalk from $F_x/Y$ to $F_z$ <sup>2)</sup>		N/N	0.04	
Crosstalk from $M_{x,y}$ to $F_z$ <sup>2)</sup>		N/Nm	0.002	
<b>Characteristic electrical values</b>				
Sensitivity (typical) <sup>1)</sup>	$S$	pC/N	-4	-8
Insulation resistance at room temperature	$R_{is}$	$\Omega$	$10^{12}$	
<b>Temperature</b>				
Nominal (rated) temperature range	$B_{T,nom}$	°C	-55...+200	-55...+300
Operating temperature range	$B_{T,G}$		-55...+200	-55...+300
Storage temperature range	$B_{T,S}$		-55...+200	-55...+300
Maximum temperature difference between pre-stress and operation		K	180	220
<b>Characteristic mechanical values</b>				
Maximum operating force	$F_G$	% of $F_{nom}$	110	
Force limit	$F_L$		135	
Breaking force	$F_B$		135	
Permissible lateral force <sup>3)</sup>			10	
Nominal (rated) displacement	$S_{nom}$	$\mu m$	2	3.5
Resonance frequency	$f_G$	kHz	130	
Maximum bending moment <sup>1)</sup> when $F_z = 0\%$ of $F_{nom}$ $F_z = 50\%$ of $F_{nom}$ $F_z = 100\%$ of $F_{nom}$	$M_{b, perm}$	Nm	0	220
			0	
Relative permissible oscillatory stress	$F_{rb}$	% of $F_{nom}$	100%	
<b>General information</b>				
Degree of protection per EN 60529			IP65	
Sensor material			Stainless steel, quartz	Stainless steel, gallium phosphate
Connection			Tightly welded cable	
Cable sheath material			Fluororubber	Polyimide
Cable length	$L$	m	4	
Plug			10-32 UNF	
Mass	$m$	g	36	

<sup>1)</sup> Must be calibrated under mounting conditions for quantitative results

<sup>2)</sup>  $F_z$  is the force in the measurement direction

<sup>3)</sup> Under at least 10% pre-stress

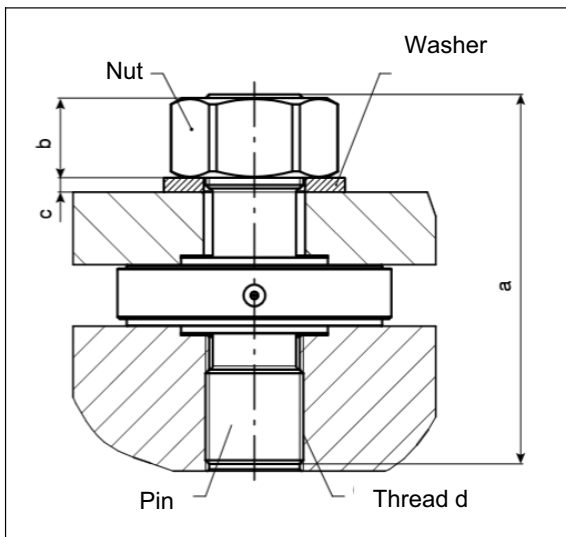
## Scope of supply

1-CHW-2/60KN	Piezoelectric force washer CHW-2/60kN with test certificate and centering aid
1-CHW-3/60KN	Piezoelectric force washer CHW-3/60kN with test certificate and centering aid

## Accessories

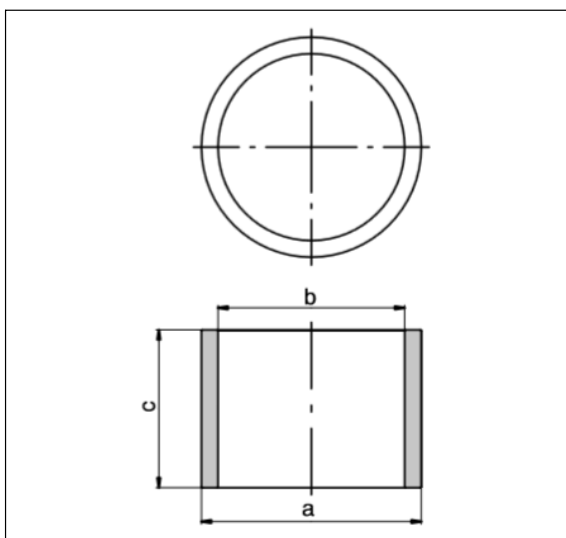
1-CCO	Coupling for piezoelectric cable, for 10-32 UNF plug at both ends
1-CSB4/1	Summing box for parallel connection of piezoelectric sensors
1-KAB143	Transducer connection cable, 10-32 UNF plug at both ends. Available in different lengths
1-KAB176	Transducer connection cable, 10-32 UNF plug at one end, charge amplifier connector: BNC. Available in different lengths.
1-CPS/100KN	Pre-stressing set, comprising pin, nut and washer for CHW-2/60KN and CHW-3/60KN

## Dimensions of pre-stressing set



Type	a	b	c	d
CPS/100KN	46	10	1.6	M10x1

## Dimensions of centering aid



Force washer	a	b	c
CHW-2/60KN and CHW-3/60KN	13 <sup>G7</sup>	11	15

Subject to modifications.  
All product descriptions are for general information only. They are not to be understood as a guarantee of quality or durability.

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