

## ● Metalastik® type Bearer Springs "Hourglass"



### Application

Metalastik® 'Hourglass' Bearer Springs are in successful operation worldwide in a diversity of service applications including suspensions for LRV, metro, freight wagon and locomotives.

### Features

Designed and developed to provide an idealised interface between rail vehicle bodies and bogies, 'Hourglass' Bearer Springs allow all the relative displacements required by secondary suspensions, but with all the advantages of rubber springing, i.e. simplicity, reduced maintenance costs, improved ride char-

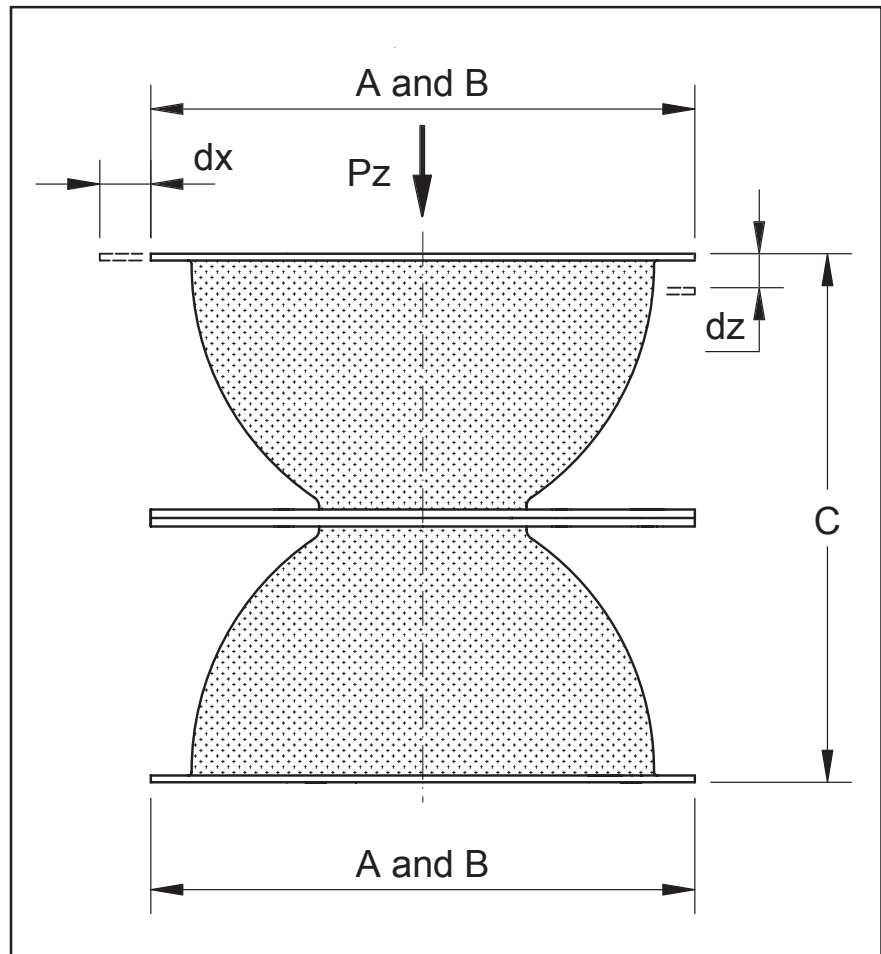
acteristics and long service life.

Metalastik® 'Hourglass' Bearer Springs offer rail vehicle designers the solution of a high load capacity spring which exhibits excellent all round flexibility (vertical frequencies of 1.8 – 2.5 Hz). The spring has a progressive load/displacement characteristic which achieves quasi-constant periodicity and at the same time minimises vehicle body height change, tare to laden. This is coupled with the ability to accommodate large horizontal, torsional and conical displacements.

# Metalastik® type Bearer Springs "Hourglass"

## Bearer Springs (Hourglass)

42 - 100 mm  
Shear Deflection



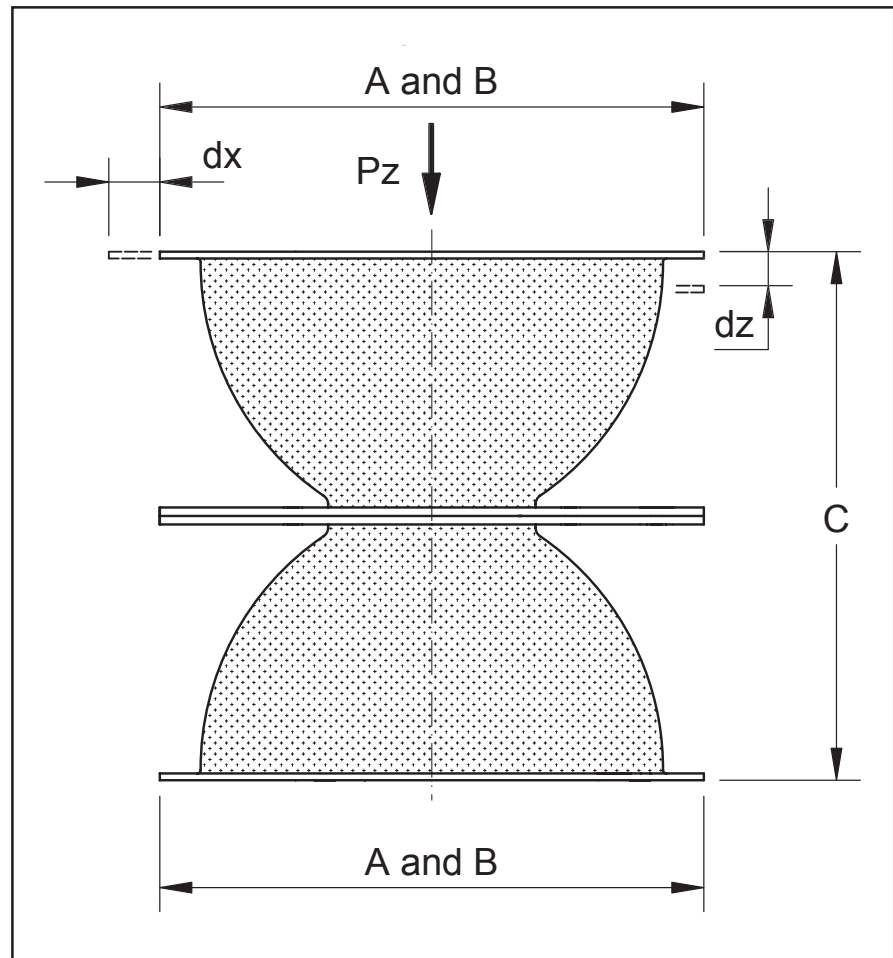
Parts listed are a selection of a wider range, details of which are available on request.

Product No		17-2252	17-1653	17-1980	17-2173	17-1863
Vertical Load Pz	kN	43	63	130	38	56
Vertical Deflection dz	mm	52	105	100	119	119
Horizontal Deflection dx	mm	42	95	95	100	100
Dimension A	mm	240	432	400	320	320
B	mm	240	370	370	320	320
C	mm	154	384	368	312	311
Unit mass	kg	8.6	46	46	19	19

# ● Metalastik® type Bearer Springs "Hourglass"

## Bearer Springs (Hourglass)

100 - 120 mm  
Shear Deflection



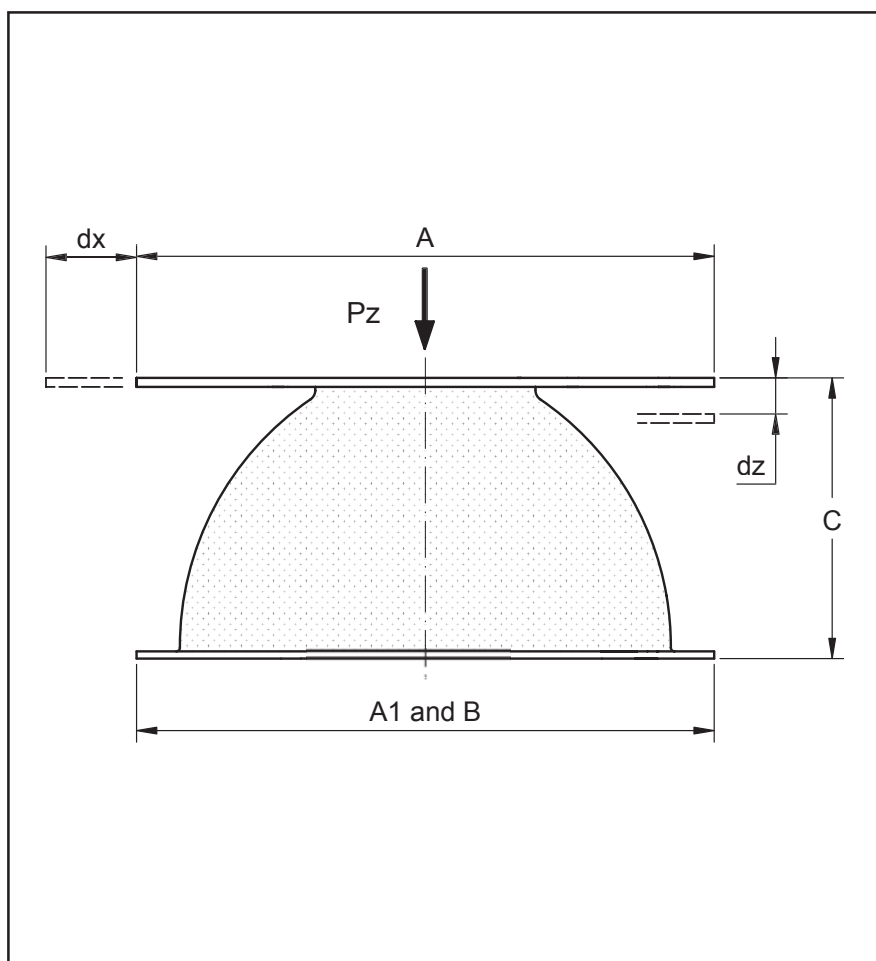
*Parts listed are a selection of a wider range, details of which are available on request.*

Product No		17-1869	17-2171	17-1946	17-1658
Vertical Load $P_z$	kN	90	75	200	250
Vertical Deflection $dz$	mm	118	142	164	128
Horizontal Deflection $dx$	mm	100	120	120	120
Dimension A	mm	362	432	470	570
B	mm	340	384	470	570
C	mm	332	376	460	370
Unit mass	kg	22	42	42,6	92

# Metalastik® type Bearer Springs "Half Hourglass"

## Bearer Springs (Half-Hourglass)

20 - 60 mm  
Shear Deflection



Parts listed are a selection of a wider range, details of which are available on request.

Product No		17-2134	17-1948	12-1822	17-1818	17-1950
Vertical Load $P_z$	kN	43	75	99	100	200
Vertical Deflection $dz$	mm	26	71	50	72	82
Horizontal Deflection $dx$	mm	20	40	40	55	60
Dimension A	mm	240	370	284	370	495
A1	mm	240	432	360	420	470
B	mm	240	384	330	420	470
C	mm	77	188	182	192	230
Unit mass	kg	4.3	19.2	12	20.4	43