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Latin capitals

Quantity		SI unit
Symbol	Name	Symbol ¹
A	Work	Nm (J)
A	Area	m ²
A_h	Horizontal component of the support reaction at A ²	N
A_m	Fixed-end moment at A ²	Nm
A_v	Vertical component of the support reaction at A ²	N
$C_1; C_2$	Integration constants	–
E_v	Strain energy	Nm (J)
F	Concentrated force, point load	N
\vec{F}	Force vector	N
F_a	Force along line of action a ³	N
F_h	Horizontal component of the force F	N
F_v	Vertical component of the force F	N
$F_x; F_y; F_z$	Components of the force F	N
F_p	Prestressing force	N
G	Gravitational load	N
H	Horizontal component of the cable force	N

Quantity		SI unit
Symbol	Name	Symbol ¹
M	Bending moment	Nm
M_t	Torsional moment	Nm
M_y	Bending moment in the xy plane	Nm
M_z	Bending moment in the xz plane	Nm
N	Normal force	N
R	Resulting force, resultant	N
T	Concentrated couple (external moment)	Nm
\vec{T}	Moment vector of a couple	Nm
T_x	Moment about the x axis	Nm
T_y	Moment about the y axis	Nm
T_z	Moment about the z axis	Nm
V	Shear force	N
V	Vertical component of the cable force	N
V_y	Shear force in the xy plane	N
V_z	Shear force in the xz plane	N

¹Expressed in the basic units.

²The kernel A refers to the location and could therefore also be B, C, etc.

³The index a refers to the line of action and could therefore also be b, c, etc.

Latin lower case letters

Quantity		SI unit
Symbol	Name	Symbol ¹
a	Distance, length	m
a	Acceleration	m/s ²
b	Distance, width	m
d	Diameter	m
d	Depth	m
\vec{d}	(non-standardised) direction vector	–
$d_x; d_y; d_z$	Components of the direction vector	–
e	Eccentricity	m
e_p	Eccentricity of the prestressing force	m
\vec{e}	Unit vector	–
$e_x; e_y; e_z$	Components of the unit vector	–
e_z	z coordinate of the centre of force in the cross-section	m
g	Distributed permanent load	N/m
g	Gravitational acceleration	m/s ²
g	Gravitational field strength	N/kg
h	Height	m
ℓ	Span, length	m
m	Mass	kg
\vec{n}	Unit normal vector	–

A Number of Notations

Quantity		SI unit
Symbol	Name	Symbol ¹
$n_x; n_y; n_z$	Components of the unit normal vector	–
p	Surface load (pressure, stress)	N/m ² (Pa)
p	Rise or sag of the parabola at midspan	m
p_k	Distance between parabola and chord at midspan	m
\vec{p}	Stress vector	N/m ² (Pa)
$p_x; p_y; p_z$	Components of the stress vector	N/m ² (Pa)
q	Line load	N/m
q	Distributed variable load	N/m
\hat{q}	Top value of the line load	N/m
q_x	Distributed load in the x direction (the direction of the member axis)	N/m
q_z	Distributed load in the z direction (a direction normal to the member axis)	N/m
r	Radius	m
\vec{r}	Location vector	m
$r_x; r_y; r_z$	Components of the location vector	m
s	Path length	m

Quantity		SI unit
Symbol	Name	Symbol ¹
t	Time	s
u	Displacement in the x direction	m
\vec{u}	Displacement vector	m
$u_x; u_y; u_z$	Components of the displacement vector	m
v	Velocity	m/s
v	Displacement in the y direction	m
w	Displacement in the z direction	m
x	Rectangular coordinate	m
y	Rectangular coordinate	m
z	Rectangular coordinate	m

¹Expressed in the basic units.

Greek letters

Quantity		SI unit
Symbol	Name	Symbol ¹
α	Angle	rad
β	Angle	rad
γ	Angle	rad
γ	Specific weight	N/m ³
ϑ	Angle, change in angle due to rotation	rad
ρ	(mass) density, specific mass	kg/m ³

Quantity		SI unit
Symbol	Name	Symbol ¹
σ	Stress, normal stress	N/m ² (Pa)
σ_{ij}	Stress on a plane with the normal in the i direction ($i = x, y, z$), and acting in the j direction ($j = x, y, z$); normal stress when $i = j$ and shear stress when $i \neq j$	N/m ² (Pa)
τ	Shear stress	N/m ² (Pa)
φ	Angle, change in angle due to rotation	rad
φ_x	Rotation about the x axis	rad
φ_y	Rotation about the y axis	rad
φ_z	Rotation about the z axis	rad

¹Expressed in basic units.

A number of other signs and sign combinations

Δ	Change, increase
ΔM	Increase in M
\sum	Summation symbol
$\sum T B$	Moment sum with respect to point B
δ	Variation symbol
δA	Virtual work
δu	Virtual displacement
$\delta \varphi$	Virtual rotation
F_A^{BC}	Force F at A (sub-index) on body BC (upper index)