

GD

STEEL EXPANSION SLEEVE

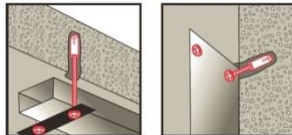


PRODUCT DESCRIPTION

Expansion sleeves made of carbon steel with cone shank, electro-plated min 5 μm , with an internal metric thread.

APPLICATION

Designed for anchorages of statically loaded structural elements in non-cracked and cracked concrete. First, prepare the preliminary hole in the substrate.



LENGTH OF SLEEVE

Type	Dimensions M x D x L [mm]
GD	M6 x 8 x 25
GD	M8 x 10 x 30
GD	M10 x 12 x 40
GD	M12 x 15 x 50
GD	M16 x 20 x 65
GD	M20 x 25 x 80

NATIONAL TECHNICAL ASSESSMENT ITB-KOT-2018/0748

Parameters of assembly and arrangement of GD sleeves in the concrete base				
PARAMETER	Fastener size			
	M6	M8	M10	M12
Diameter of the drilled hole d_{nom} , mm	8	10	12	15
Minimum hole depth h_0 , mm	27	32	42	52
Effective anchorage depth h_{ef} , mm	25	30	40	50
The minimum thickness of the substrate h_{min} , mm	80			
Minimum spacing of sleeves s , mm	200			
The minimum distance of the sleeves from the edge of the substrate c , mm	150			

Characteristic resistance of GD for pulling out of the concrete substrate (N_{Rk}) and on shear (V_{Rk})			
Fastener size	Depth of drilled hole h_1 , mm	Effective anchorage depth h_{ef} , mm	Characteristic resistance of GD for pulling out of the concrete substrate (N_{Rk}) and on shear (V_{Rk}), kN
			Concrete ¹⁾
M6	25	25	0,40
M8	30	30	1,20
M10	35	40	1,70
M12	40	50	3,50

¹⁾ concrete uncracked C20/25 - C50/60 according to: PN-EN 206+A1:2016

Characteristic resistance of GD sleeves for pull-out from the ground and shear in the event of fire, according to TR020, in concrete C20/25 -C50/60 according PN-EN 206+A1:2016					
Fire resistance class	Characteristic resistance pull-out, kN				
	GD M6	GD M8	GD M10	GD M12	GCA
R30	0,10	0,30	0,43	0,88	0,50
R60	0,10	0,30	0,43	0,88	0,50
R90	0,10	0,30	0,43	0,88	0,50
R120	0,10	0,24	0,34	0,70	0,40

Sleeves spacing $s_{cr,fi} = 4 \times h_{ef}$
Distance of sleeves from edge $c_{cr,fi} = 2 \times h_{ef}$
In the event of fire from more than one side, the distance between the fasteners and the edge should not be less than 300 mm

OTHER FEATURES

BASE MATERIAL:

CONCRETE

HOLE DIAMETER:

8, 10, 12, 15 [mm]

THREAD SIZE:

M6, M8, M10, M12



KDWU



ZKP