Schroeder-Neuenrade

Metallwarenfabrik - Verankerungen in Beton

factory production control (fpc)
documentation of product development

client/customer

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product

RS HA A4 M22HD/d=20 mm

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Schroeder-Neuenrade

Metallwarenfabrik - Verankerungen in Beton

Declaration of Perfomance/ EU Conformity for Factory Production Control (Construction Product)

CE

The manufacturer	**declares that the following product of steel construction**
Friedrich Schroeder GmbH & Co KG Hönnestraße 24 - 58809 Neuenrade www.schroeder-neuenrade.de	**RS HA A4 M22Hd/d=20**

is in conformity with the requirements of the Construction Products Regulation 305/2011/EC

Discription of the product and intended use

- The heavy-duty anchor is made up of a concrete reinforcement B500B d=20 mm and a friction welded stainless steel socket M22/D=36 mm (1.4401, 1.4404, 1.4571 - property class S275)
- The anchors can assemble to cages, single delivery is available
- For casting in during concreting – immediate bond with concrete
- The anchors are used for attaching other part - e.g. steel columns. They can take statical tensile loads. Shear loads are taken by friction or other measure, for rebar connections only axial loads are allowed

Standards used in the design and production

- DIN EN 1990	EC 0: Basis
- DIN EN 1991	EC 1: Actions
- DIN EN 1992	EC 2: Concrete
- DIN EN 1993	EC 3: Steel
- DIN EN 1090-1:2012-02 + NA	Execution of steel structures and aluminium structures Part 1: Conformity proof procedure for structural components
- DIN EN 1090-2:2018-09 + NA	Execution of steel structures and aluminium structures Part 2: Technical requirements for the execution of steel structures
- DIN EN ISO 15620: 2019-09	Friction welding of metallic material
- DIN EN 17660: 2006-12	Weld - Weld of concrete reinforcement
- DIN EN 10088-3:2014-12, -5: 2009-07	Technical delivery - for bars, rods, wire and sections
- DIN EN ISO 3506-1:2010-04	Mechanical properties of corrosion-restistant stainless steel fasteners - Part 1: Bolts, Screws and Studs
- DIN EN ISO 3506-2:2010-04	-Part 2: Screw nuts

other relevant technical specifications and calculations

1.) General approval document Z-30.6-70 of the DIBt, 30.07.2019 - Schroeder RS Schwerlastanker

2.) General approval document Z-30.3-6 of the DIBt, 05.03.2018 - Products, connectors and structural components from stainless steel

3.) DIN 488-1:2009-8: Concrete reinforcement, characteristics, marking und part 2:2009-8: reinforcing bars

4.) Gutachterliche Stellungnahme zur Tragfähigkeit der RS Schwerlastanker der Fa. Friedrich Schroeder GmbH & Co KG, Nr. 39/20/05, Prof. Bucak, 19.10.2020

5.) workshop drawing RS HA A4 M22HD/d=20 mm - 07.12.2020

6.) static calculation axial load capacity RS HA A4 M22HD/d=20 07.12.2012

Declaration of Perfomance/ EU Conformity for Factory Production Control (Construction Product)

Certificate according to DIN/EN 1090 about conformity of the factory production control

Name, adress and number of the notified body	**Certificate**
DVS Zert GmbH Halle Köthener Straße 33 a 06118 Halle (an der Saale) Code 2451	2451-CPR-EN1090-2014.2181.004 Start of validity is 09.03.2012. The certificate is valid as long as the requirements of technical specification, the requirements of the production or the factory production control have not changed. System of assessment and verification of constancy of the performance : 2+

Performance	Declared performance	Technical specification
Basic geometric tolerances	EN 1090-2, Anhang D.1	DIN EN 1090-1: 2012-02
Weldability	in according to welding produce test and DIN 4099-1(→ DIN EN 17660-1:2006)	
Notched bar impact work	NPD	
Fire behaviour	NPD	
Release of cadmium	NPD	
Release of radioactive radiation	NPD	
Durability	Stainless steel CRC III acc. to EN 1993-1-4	
Fire resistance	NPD	
Load capacity	steel failure: fixing screw A4-70: $N_{Rk,S}$ = 172,7 kN, γ = 1,4, $N_{Rd,S}$ = 123,4 kN min. torque moment = 100 Nm; max preload 70% of tensile strength - with fixing srew A4-70 = 95 kN anchorage in the concrete a) according to DIN EN 1992-1-1:2010-12, chapter 8.4 b) according to Z-30.6-70,chapter 3.2	EC2, EC 3
Deformations at the serviceability limit state	NPD	
Fatigue strength	NPD	
Production	in according to the workshop drawing	EN 1090-2:2018-09
Executionclass	EXC 3	
Other		
Marking	Schroeder Logo, dimension, A4, code for production	

Responsible and authorised person for maintaining and establishing the technical documentation

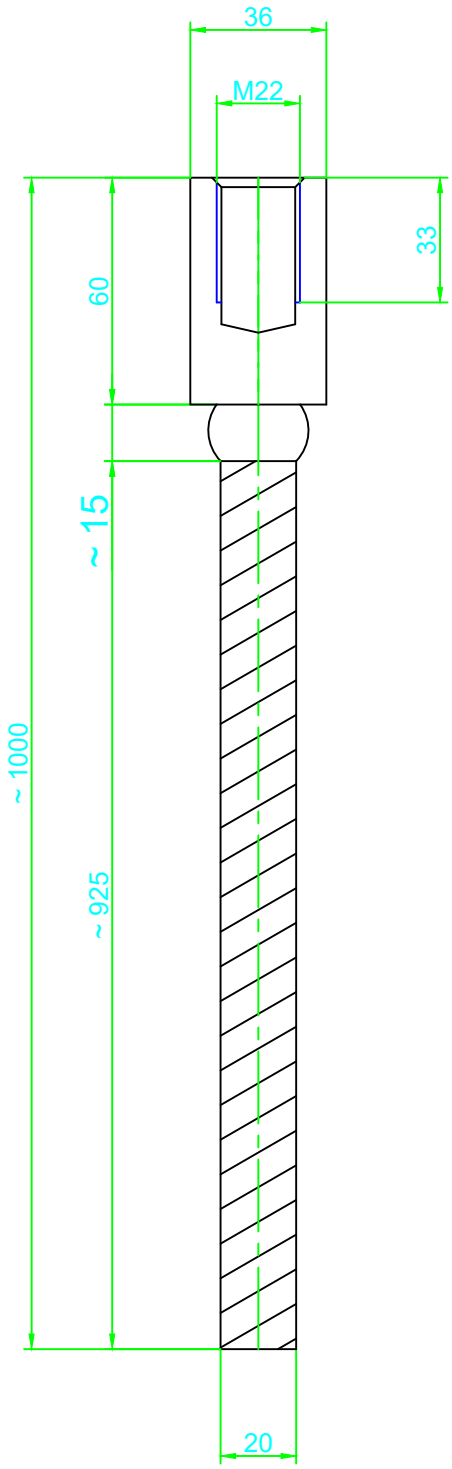
Bernd Bültemeier

Neuenrade, 07.12.2020

Dipl. Betriebswirt MBA Sonja Rager

Dipl.- Ing. Bernd Bültemeier

RS HA A4 M22HD/d=20-1000- G



Threaded socket
- stainless steel: 1.4401, 1.4404, 1.4571
- >= S275
- M22, D=36 mm
- screw-in length >=33 mm

- rebar stick B500B, d=20 mm

SCH	Verwendungszweck BST				Werkstoff: sleeve: stainless steel DIN EN 10088, A4 1.4401, 1.4404 or 1.4571, S275 rebar B500B	Oberfläche
				Datum / Name		
				Gez.: 07.12.2020 Bültemeier	Titel: RS Heavy duty anchor RS HA A4 M22HD/d=20	Maßstab: 1:2
				Gepr.:		
				Norm:	Zeichnungs. Nr.:	Artikel: S64012200HVA
Zust.	Änd.	Datum	Name	Friedrich Schroeder GmbH & Co. KG 58809 Neuenrade, Germany - Hönnestr. 24 Tel. +49 (0) 23 94 / 91 80- 0 - Fax. +49 (0) 23 94 / 91 80- 88 info@schroeder-neuenrade.de - www.schroeder-neuenrade.de		

Axial load capacity and preload

Querschnittswerte, mechanische Kennwerte und Widerstände nach Festigkeitsklasse										
	A s	Klasse	normative Festigkeit		Festigkeitsklasse $N_{Rk,P} = A_s \times f_{y,k}$			Bruch Festigkeitsklasse $N_{Rk,Br} = A_s \times f_{u,k}$		
			$f_{y,k}$	$f_{u,k}$	$N_{Rk,P}$	γ	$N_{Rd,P}$	$N_{Rk,Br}$	γ	$N_{Rd,Br}$
	[mm2]		[N/mm²]		[kN]		[kN]	[kN]		[kN]
Spalte	1	2	3	4	5	7	8	9	10	11
1. RS HA A4 M 22 (DH=36 mm)/d=20 mm - mit Befestigungsschraube oder Gewindestange A4-70										
GeWiBo	303	A4-70	450	700	136,4	1,10	124,0	212,1	1,4	151,5
GeWiHü	637	S275	275	550	175,2	1,10	159,3	350,4	1,4	250,3
B500B	314	B500B	500	550	157,0	1,15	136,5	172,7	1,4	**123,4**
2. RS HA A4 M 22 (DH=36 mm)/d=20 mm - mit Befestigungsschraube oder Gewindestange A4-50										
GeWiBo	303	A4-50	210	500	63,6	1,10	**57,8**	151,5	1,4	108,2
GeWiHü	637	S275	275	550	175,2	1,10	159,3	350,4	1,4	250,3
B500B	314	B500B	500	550	157,0	1,15	136,5	172,7	1,4	123,4

Prelaod with maximum 70% of tensile strength:

with fixing screw A4-70:	95	kN
with fixing screw A4-50:	45	kN

Neuenrade, 07.12.2020

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