



DECLARATION OF CONFORMITY AND PRODUCT DESCRIPTION

EN 1856-1

Chimneys – Requirements for metal chimneys. Part 1: System chimney products

Manufacturer: **DINAK**
Camiño do Laranxo, 19. 36216, VIGO (ESPAÑA)

Product commercial name: **FK hp**

Product description: Single wall metal chimney with outer seal

Name and function of the responsible person: Íñigo A. Canoa (General Manager)

Notified Body: **TÜV Industrie Service
GmbH TÜV SÜD Gruppe
0036 CPD 90220 027**

Certificate number:



Designations according to EN 1856-1 standard:

	Metal chimney with outer seal	ND 80-300	EN 1856-1	T200	H1	W	V2-L50040	O(40)	
	0.1	ND 350-400	EN 1856-1	T200	H1	W	V2-L50050	O(60)	
Product description									Compressive strength Up to 53 m. See Annex
Standard number									Flow resistance Inner roughness: 1 mm (according to EN 13384-1 Standard) Flow resistance coefficients ζ according to EN 13384-1 Standard
Temperature level									Thermal resistance 0 m ² K/W at reference temperature
Pressure level									Mechanical resistance and stability Tensile strength: up to 100 m. See Annex Non vertical installation: maximum deflection 90° and maximum length of the slope up to 3 m. Wind load resistance: Maximum length between supports up to 4 m. Maximum length from the last support up to 2.5 m. See Annex
Condensate resistance (W: wet; D: dry)									Wet working conditions: Yes
Corrosion resistance and inner wall material									
Sootfire resistance (G: yes; O: no) and distance to combustible materials (in mm)									



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Designations according to EN 1856-1 standard:

	Metal chimney with outer seal	ND 80-300	EN 1856-1	T200	H1	W	V2-L99040	O(40)	
	0.1	1.4521/444 <td>ND 350-400 <td>EN 1856-1 <td>T200 <td>H1 <td>W <td>V2-L99050 <td>O(60)</td> </td></td></td></td></td></td>	ND 350-400 <td>EN 1856-1 <td>T200 <td>H1 <td>W <td>V2-L99050 <td>O(60)</td> </td></td></td></td></td>	EN 1856-1 <td>T200 <td>H1 <td>W <td>V2-L99050 <td>O(60)</td> </td></td></td></td>	T200 <td>H1 <td>W <td>V2-L99050 <td>O(60)</td> </td></td></td>	H1 <td>W <td>V2-L99050 <td>O(60)</td> </td></td>	W <td>V2-L99050 <td>O(60)</td> </td>	V2-L99050 <td>O(60)</td>	O(60)
Product description									
Standard number									
Temperature level									
Pressure level									
Condensate resistance (W: wet; D: dry)									
Corrosion resistance and inner wall material									
Sootfire resistance (G: yes; O: no) and distance to combustible materials (in mm)									

Compressive strength
Up to 53 m. See Annex

Flow resistance
Inner roughness: 1 mm (according to EN 13384-1 Standard)
Flow resistance coefficients ζ according to EN 13384-1 Standard

Thermal resistance
0 m² K/W at reference temperature

Mechanical resistance and stability
Tensile strength: up to 100 m. See Annex
Non vertical installation: maximum deflection 90° and maximum length of the slope up to 3 m.
Wind load resistance: Maximum length between supports up to 4 m. Maximum length from the last support up to 2.5 m. See Annex

Wet working conditions: Yes



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Designations according to EN 1856-1 standard:

	Metal chimney with outer seal	ND 80-300	EN 1856-1	T200	H1	W	V2-L99050	O(40)	
0.1	1.4162/S32101	ND 350-400	EN 1856-1	T200	H1	W	V2-L99050	O(60)	
Product description	Metal chimney with outer seal								Compressive strength Up to 53 m. See Annex
Standard number	EN 1856-1								Flow resistance Inner roughness: 1 mm (according to EN 13384-1 Standard) Flow resistance coefficients ζ according to EN 13384-1 Standard
Temperature level	T200								Thermal resistance 0 m ² K/W at reference temperature
Pressure level	H1								Mechanical resistance and stability Tensile strength: up to 100 m. See Annex Non vertical installation: maximum deflection 90° and maximum length of the slope up to 3 m. Wind load resistance: Maximum length between supports up to 4 m. Maximum length from the last support up to 2.5 m. See Annex
Condensate resistance (W: wet; D: dry)	W								Wet working conditions: Yes
Corrosion resistance and inner wall material	V2-L99050								
Sootfire resistance (G: yes; O: no) and distance to combustible materials (in mm)	O(40)								



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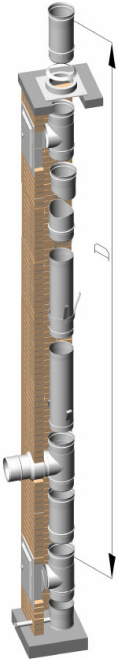
Designations according to EN 1856-1 standard:

Designation	Standard	Temperature level	Pressure level	Condensate resistance (W: wet; D: dry)	Corrosion resistance and inner wall material	Sootfire resistance (G: yes; O: no) and distance to combustible materials (in mm)	Compressive strength
0.1 Metal chimney with outer seal	ND 80-300	T200	H1	W	Vm-L20040	O(40)	Up to 53 m. See Annex
1.4301/304	ND 350-400	T200	H1	W	Vm-L20050	O(60)	Flow resistance Inner roughness: 1 mm (according to EN 13384-1 Standard) Flow resistance coefficients ζ according to EN 13384-1 Standard Thermal resistance 0 m ² K/W at reference temperature Mechanical resistance and stability Tensile strength: up to 100 m. See Annex Non vertical installation: maximum deflection 90° and maximum length of the slope up to 3 m. Wind load resistance: Maximum length between supports up to 4 m. Maximum length from the last support up to 2.5 m. See Annex Wet working conditions: Yes
Product description							
Standard number							
Temperature level							
Pressure level							
Condensate resistance (W: wet; D: dry)							
Corrosion resistance and inner wall material							
Sootfire resistance (G: yes; O: no) and distance to combustible materials (in mm)							



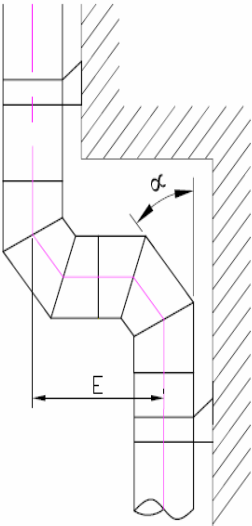
	Characteristics	Units	Ref. EN 1856-1	Values / Levels				Remarks
1.0	Nominal dimensions	mm	4, 5	80, 100, 110, 120, 130, 140, 150, 160, 180, 200, 250, 300, 350, 400				
2.0	Inner diameter (minimum)	mm	4, 5	78,4; 98,4; 108,4; 118,4; 128,4; 138,4; 148,4; 158,4; 178,4; 198,4; 248,4; 298,4; 348,2; 398,2				
3.0	Inner wall material		4, 5, 6.5.2					
	Quality			1.4404 / 316L	1.4521 / 444	1.4162 / S32101	1.4301 / 304	
	Nominal thickness (minimum thickness)	mm		ND 80-300: 0,4 (0,34) ND 350-400: 0,5 (0,44)	ND 80-300: 0,4 (0,34) ND 350-400: 0,5 (0,44)	ND 80-400: 0,5 (0,44)	ND 80-300: 0,4 (0,34) ND 350-400: 0,5 (0,44)	
	Description according to EN 1856-1			ND 80-300: L50040 ND 350-400: L50050	ND 80-300: L99040 ND 350-400: L99050	ND 80-400: L99050	ND 80-300: L20040 ND 350-400: L20050	
4.0	Outer wall material		4, 5, 6.5.2	None				
5.0	Insulation		7.2	None				
6.0	Seals		7.2					
	Density	g/cm ³		1.14 ± 0.02				
	Hardness	ShA		60 ± 5				
	Tensile strength	N/m ²		≥ 8.5				
	Lengthening to breakage	%		≥ 350				
	Nominal dimensions			80, 100, 110, 120, 130, 140, 150, 160, 180, 200, 250, 300, 350, 400				
	Mechanical resistance and stability		6.1					RP: TÜV-A 1445-00/05
7.0	Compressive strength		6.1.1	Up to 53 m.				See Annex
8.0	Tensile strength		6.1.2	Up to 100 m.				See Annex
9.0	Wind load resistance		6.1.3.2	Maximum length from the last support: up to 3 m. Maximum length between supports: up to 4 m.				See Annex
	Non vertical installation		6.1.3.1					RP: TÜV-A 1445-00/05
10.0	Maximum deflection			90° (horizontal installation)				See Annex
11.0	Maximum length of the slope			Up to 3 m.				See Annex
12.0	Gas tightness		6.3	Pressure level: H1				RP: TÜV-A 1815-00/09
13.0	Distance to combustible materials at T200	mm	6.2	ND 80-300: 40 (O40) ND 350-400: 60 (O60)				RP: TÜV-A 1815-00/09
14.0	Accidental human contact		6.4.2	Protection in the traffic area needed				RP: TÜV-A 1815-00/09
15.0	Thermal resistance	m ² K / W	6.4.3	0				RP: TÜV-A 1815-00/09

	Characteristics	Units	Ref. EN 1856-1	Values / Levels				Remarks
16.0	Condensate resistance		6.4.4, 6.4.5	Designation: W (wet)				RP: TÜV-A 1815-00/09
17.0	Resistance against rainwater penetration		6.4.6	Not apply (not insulated)				
	Flow resistance		6.4.7					
18.0	Mean value of roughness	mm	6.4.7.1	1 (according to EN 13384-1 standard)				
19.0	Coefficients of flow resistance for fittings		6.4.7.2	Values according to EN 13384-1 standard				
	Terminal							
20.0	Coefficient of flow resistance		6.4.7.3	Values according to EN 13384-1 standard				
21.0	Protection against rainwater		6.4.8.1	N.P.D.				
22.0	Aerodynamic behavior		6.4.8.2	N.P.D.				
23.0	Corrosion resistance		6.5.1	1.4404 / 316L	1.4521 / 444	1.4162 / S32101	1.4301 / 304	RP: TÜV-A 1439-00/05
				V2	V2	V2	Vm	
24.0	Freeze / thaw resistance		6.5.3	Fulfilled according to EN 1856-1				
25.0	Dangerous substances		7.2	None				
26.0	Typical installation drawing		7.2					See Annex
27.0	Assembly instructions		7.2					See Annex
28.0	Flow direction		7.2	Installation with the Female at the top				
29.0	Storage instructions		7.2	No corrosive atmosphere				
30.0	Method of application of any sealant required		7.2	None				

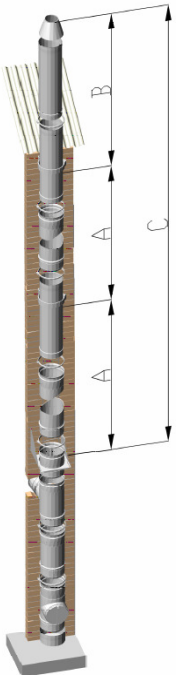


	COMPRESSIVE STRENGTH*		TENSILE STRENGTH	
	Height – Size D (m)		Height (m)	
	Material	1.4301 /304; 1.4404 / 316L 1.4521 / 444; 1.4162 / S32101	1.4301 /304; 1.4404 / 316L 1.4521 / 444; 1.4162 / S32101	1.4301 /304; 1.4404 / 316L 1.4521 / 444; 1.4162 / S32101
ND (mm)	110	53	100	
	120	48	92	
	125	46	88	
	130	45	85	
	140	41	78	
	150	38	73	
	160	36	69	
	180	32	61	
	200	29	55	
	250	23	44	
300	19	36		

* In case a higher resistance is required, check with Dinak the possibility of installing a reinforced Tee

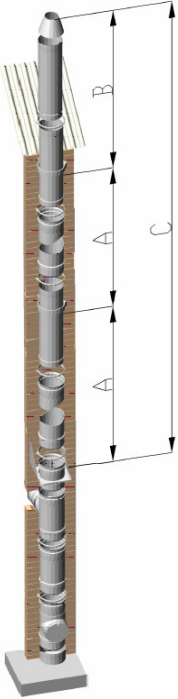


	NON VERTICAL INSTALLATION		
	Maximum deflection α (°)		Maximum length of the slope – Size E (m)
	Material	1.4301 /304; 1.4404 / 316L 1.4521 / 444; 1.4162 / S32101	1.4301 /304; 1.4404 / 316L 1.4521 / 444; 1.4162 / S32101
ND (mm)	110	90	3
	120	90	3
	125	90	3
	130	90	3
	140	90	3
	150	90	3
	160	90	3
	180	90	3
	200	90	3
	250	90	3
300	90	3	

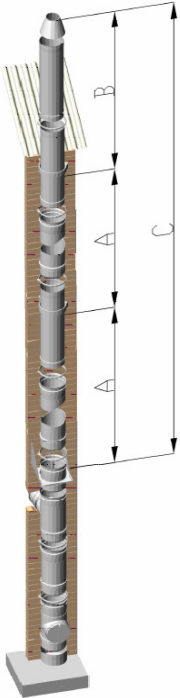


WIND LOAD RESISTANCE			
Configuration 1 (flat wall supports 086 with a self-standing 861 at highest position)			
	Max number of straight elements (020) between supports (Size A)	Max. Length from last support. (m) (Size B)	
Material	1.4301 / 304; 1.4404 / 316L 1.4521 / 444; 1.4162 / S32101	AISI 304 / 1.4401	1.4404 / 316L 1.4521 / 444; 1.4162 / S32101
ND (mm)	110-180	X	X
	200	4	2.5
	250	4	2.5
	300	4	2.5

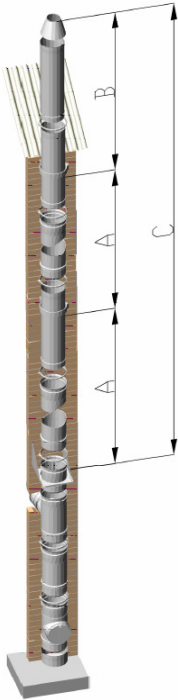
Configuration 2 (wall supports 086)		
	Max number of straight elements (020) between supports (Size A)	Max. Length from last support. (m) (Size B)
Material	1.4301 / 304; 1.4404 / 316L 1.4521 / 444; 1.4162 / S32101	
ND (mm)	110	1.5
	120	1.5
	125	1.5
	130	1.5
	140	1.5
	150	1.5
	160	1.5
	180	1.5
	200	1.5
	250	1.5
	300	1.5



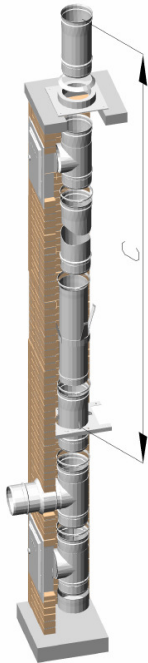
Configuration 3 (flat adjustable supports 831)		
Distance to wall (083/831) : 70-120 mm		
	Max number of straight elements (020) between supports (Size A)	Max. Length from last support. (m) (Size B)
Material	1.4301 / 304; 1.4404 / 316L 1.4521 / 444; 1.4162 / S32101	
ND (mm)	110	3
	120	3
	125	3
	130	3
	140	3
	150	3
	160	3
	180	3
	200	3
	250	3
300	3	



Configuration 4 (flat short cuttable supports 836)		
Distance to wall (836) : 100-250 mm		
	Max number of straight elements (020) between supports (Size A)	Max. Length from last support. (m) (Size B)
Material	1.4301 / 304; 1.4404 / 316L 1.4521 / 444; 1.4162 / S32101	
ND (mm)	110	3
	120	3
	125	3
	130	3
	140	3
	150	3
	160	3
	180	3
	200	3
	250	3
300	3	



Configuration 5 (flat long cuttable supports 846)		
Distance to wall (846) : 250-430 mm		
	Max number of straight elements (020) between supports (Size A)	Max. Length from last support. (m) (Size B)
Material	1.4301 /304; 1.4404 / 316L 1.4521 / 444; 1.4162 / S32101	
ND (mm)	110	2
	120	2
	125	2
	130	2
	140	2
	150	2
	160	2
	180	2
	200	2
	250	2
300	2	



COMPRESSIVE STRENGTH OF THE SUPPORT			
Height (m)			
Model	Adjustable base support closed 853 Size (C)	Adjustable base support extended 853 Size (C)	Adjustable floor support 856*
ND (mm)	110	274	143
	120	251	131
	125	241	126
	130	232	121
	140	215	112
	150	201	105
	160	188	98
	180	167	87
	200	151	78
	250	120	63
300	100	52	

*Please check maximum load in the compressive strength table, in case of installing a Tee section on top of our floor support