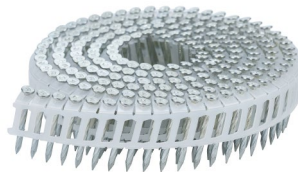
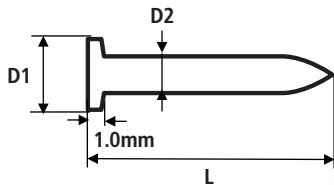


Production data

Dimensions



Helical Thread



Grooved

General Information

Material : Carbon Steel, Stainless steel

Hardness: > HRC55

Zinc coating(Carbon Steel) : > 5µm

Tool

PowerLite

HN65, HN65S, HN75, HN90, HN90F

Coil Nailer

CN565S, CN565S2, CN650M, CN890S

Approvals



EN14592:2008 + A1:2012
DoP No.311002402/1/2016
DiBt Z-14.4.771(Germany)

	L	D1	D2	Shank	Head	Material	Approvals
FAP27V5	27	5.5	2.5	Helical Tread	Flat	Carbon Steel with Zinc	
FAP27V9	27	5.8	2.9	Grooved	Flat	Carbon Steel with Zinc	
FAP32V5	32	5.5	2.5	Helical Tread	Flat	Carbon Steel with Zinc	CE
FAP32V5-S	32	5.5	2.5	Helical Tread	Flat	Stainless Steel	CE
FAP32V9	32	5.8	2.9	Grooved	Flat	Carbon Steel with Zinc	
FAP38V5	38	5.5	2.5	Helical Tread	Flat	Carbon Steel with Zinc	
FAP38V9	38	5.8	2.9	Grooved	Flat	Carbon Steel with Zinc	CE
FAP38V9-HT	38	5.8	2.9	Helical Tread	Flat	Carbon Steel with Zinc	
FAP38V9-HT/65CUP	38	6.5	2.9	Helical Tread	Cup	Carbon Steel with Zinc	CE
FAP45V5	45	5.5	2.5	Helical Tread	Flat	Carbon Steel with Zinc	
FAP45V9	45	5.8	2.9	Grooved	Flat	Carbon Steel with Zinc	
FAP50V9	50	5.8	2.9	Grooved	Flat	Carbon Steel with Zinc	CE
FAP50V9-HT	50	5.8	2.9	Helical Tread	Flat	Carbon Steel with Zinc	
FAP57V9	57	5.8	2.9	Grooved	Flat	Carbon Steel with Zinc	
FAP60V9-HT	60	5.8	2.9	Helical Tread	Flat	Carbon Steel with Zinc	
FAP65V5	65	5.5	2.5	Helical Tread	Flat	Carbon Steel with Zinc	CE
FAP65V9	65	5.8	2.9	Grooved	Flat	Carbon Steel with Zinc	CE
FAP65V9-HT	65	5.8	2.9	Helical Tread	Flat	Carbon Steel with Zinc	
FAP75V9	75	5.8	2.9	Grooved	Flat	Carbon Steel with Zinc	

Applications

Plywood to Thin Steel



Plywood to Metal Stud

Board to Thin Steel



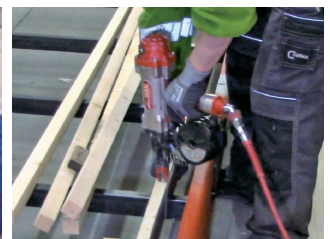
Gypsum board to Metal Stud

Thin Steel to Wood



Light Steel Roof to Structural lumber

Wood to Thin Steel



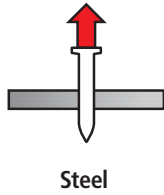
Wood to Metal Stud

Product Characteristics according to EN 14592:2008 +A1:2012

	Symbol	Unit	FAP32V5	FAP32V5-S	FAP38V9	FAP38V9-HT/65-CUP	FAP50V9	FAP65V5	FAP65V9
Yield moment	M_y	Nm	5.13	3.86	7.10	7.16	7.02	4.63	6.81
Withdrawal parameter	f_{ax}	N/mm ²	8.6	3.8	10.1	14.4	9.3	9.6	9.6
Head pull-through parameter	$f_{head,k}$	N/mm ²	32.2	22.3	16.4	26.4	35	44.9	37.7
Tensile Capacity	$f_{tens,k}$	N	9077	6648	11697	4810	11303	8354	10909

Test Data

Pull Out Test

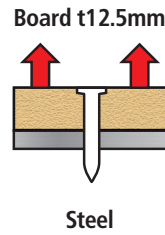


Steel

Maximum Load (kN)

Nails	FAP50V5		Failure mode
	t2.5mm S355J2H	t3.0mm S235	
1	2.49	2.98	Pull out
2	2.49	3.81	
3	2.49	3.54	
4	2.32	3.46	
5	2.32	3.54	
6	2.81	2.86	
7	2.87	2.47	
8	2.25	2.56	
9	2.18	2.58	
10	2.48	2.57	
11	2.67	2.99	
12	2.51	2.98	
13		3.45	
14		2.90	
15		3.14	
16		2.38	
[kN]	2.49	3.01	

Pull Through Test

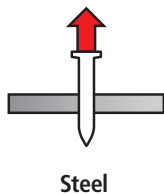


Steel

Maximum Load (kN)

Nails	FAP50V5		Failure mode
	Board	Gypsum Plaster-board Fermacell	
1	0.31	0.90	Head pull through
2	0.29	0.91	
3	0.30	0.91	
4	0.27	0.97	
5	0.28	0.91	
6	0.28	0.93	
7	0.29	1.00	
8	0.26	0.99	
9	0.30	0.92	
10	0.29	0.98	
Ave.	0.29	0.94	

Pull Out Test

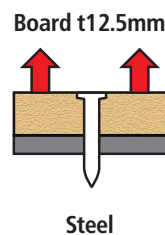


Steel

Maximum Load (kN)

Nails	FAP50V9		Failure mode
	t2.5mm S355J2H	t3.0mm S235	
1	2.97	3.43	Pull out
2	2.83	3.51	
3	2.68	3.04	
4	2.87	3.12	
5	3.01	3.20	
6	2.78	3.20	
7	2.89	3.16	
8	2.88	2.73	
9	2.77	2.84	
10	2.89	3.37	
11	2.74	3.10	
12		3.33	
Ave.	2.85	3.17	

Pull Through Test



Steel

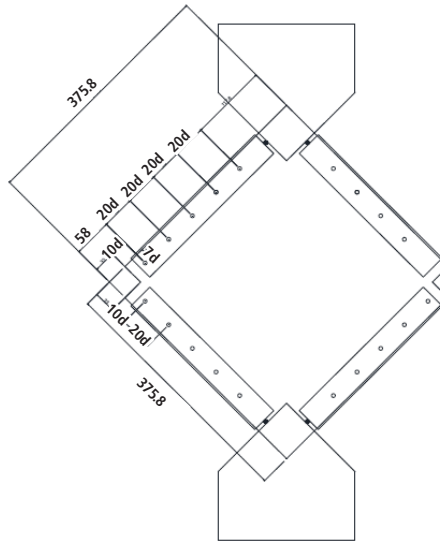
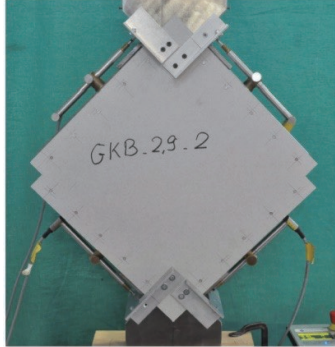
Maximum Load (kN)

Nails	FAP50V9		Failure mode
	Board	Gypsum Plaster-board Fermacell	
1	0.28	0.85	Head pull through
2	0.27	0.93	
3	0.29	0.98	
4	0.29	0.98	
5	0.29	0.96	
6	0.28	0.85	
7	0.29	1.00	
8	0.29	0.76	
9	0.28	0.95	
10	0.27	0.80	
Ave.	0.28	0.91	

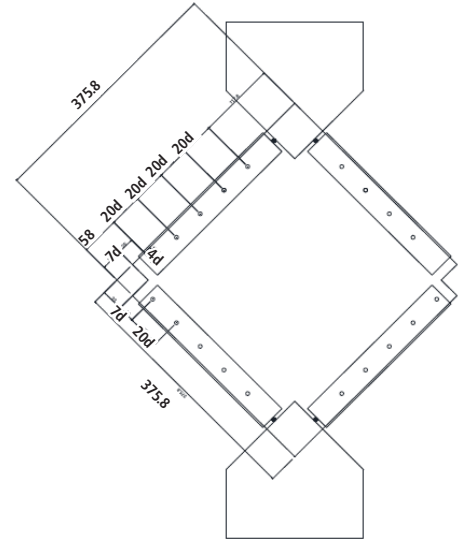
Test Data

Shear Test

Test Setup



Test structure for Gypsum plasterboard



Test structure for Fermacell

Maximum Load (kN)

	FAP32V5	Force per nail	FAP32V5	Force per nail	FAP32V9	Force per nail	FAP32V9	Force per nail
Board	Gypsum plasterboard		Fermacell		Gypsum plasterboard		Fermacell	
Steel	t2.5mm Steel grade: S355J2H							
1	5.56	0.39	14.6	1.03	6.50	0.46	17.1	1.21
2	5.66	0.40	14.2	1.00	6.83	0.48	16.6	1.17
3	5.71	0.40	14.1	1.00	6.63	0.47	17.0	1.20
Ave.	5.64	0.40	14.3	1.01	6.65	0.47	16.9	1.19

Application requirements

Thickness of Steel

FAP V5 Series < 2.3mm

FAP V9 Series < 3.2mm

Nail Selector

Top member	Item name
12mm Plywood	FAP27V5, FAP27V9 FAP32V5, FAP32V5-S, FAP32V9
18-25mm Wood	FAP38V5, FAP38V9, FAP38V9-HT
12-25mm Board	FAP38V9-HT
25mm Wood	FAP45V5, FAP45V9
25-38mm Wood	FAP50V5, FAP50V9, FAP50V9-HT
25-38mm Board	FAP50V9-HT
38-50mm Wood	FAP65V5, FAP65V9, FAP65V9-HT
38-50mm Board	FAP65V9-HT