



F18 Knauf Integral GIFAfloor Sheet-panelled access floors

- F181 Sheet-panelled access floor single-layer GIFAfloor FHB
- F182 Sheet-panelled access floors double-layer GIFAfloor FHBplus and GIFAfloor DLH



Technical data

GIFAfloor standardized panels



	Technical of	lata					
	Name	Sizes Panel net size	Panel thickness	Weights (Density ≥ Panel	1500 kg/m³)	Material number	Unit
eme without scale	CE-marking	mm	mm	c. kg/pc.	c. kg/m ²	04050	pcs./palett
600	GE-W1DIR1/	1200x600 1200/600/25-C	25 1/NF	27.0	37.5	31256	35 pcs./pal.
	GF-W1DIR1/	600x600 600/600/25-C1	25 I/NF	13.5	37.5	63565	70 pcs./pal.
007	FHB 28 GF-W1DIR1/	1200x600 1200/600/28-0	28 21/NF	30.2	42.0	31545	30 pcs./pal.
	GF-W1DIR1/6	600x600 600/600/28-C	28 I/NF	15.1	42.0	50980	60 pcs./pal.
	FHB 32 GF-W1DIR1/ ²	1200x600 1200/600/32-0	32 21/NF	34.6	48.0	31326	25 pcs./pal.
<u>←</u>	GF-W1DIR1/6	600x600 600/600/32-C	32 I/NF	17.3	48.0	31559	50 pcs./pal.
	FHB 38 GF-W1DIR1/	1200x600 1200/600/38-0	38 C1/NF	41.2	57.0	88635	20 pcs./pal.
600 1	GF-W1DIR1/	600x600 600/600/38-C ²	38 I/NF	20.6	57.0	88636	40 pcs./pal.
	To increase to onto the GIF/ LEP 13 GF-W1DIR1/	the working lo Afloor FHB pa 1200x600 1200/600/13-0	bad and in ca anels 13 C1/SE	se of of dan 14.1	19.5	or coverings 30503	to be put 70 pcs./pal
	LEP 18 GF-W1DIR1/	1200x600 1200/600/18-0	18 1/SF	19.5	27.0	99258	50 pcs./pal.
	DLH panels no	t to be combine	ed with the above	ve mentioned	GIFAfloor pane	Is with densit	y 1500kg/m³
	DLH 25 GF-W1/1200/	1200x600 600/25-C1/NF	25	21.6 (density ≥	30.0 1100kg/m³)	30256	35 pcs./pal.
	DLH 13 GF-W1/1200/	1200x600 600/13-C1/SF	13	11.2 (density ≥	15.6 1100kg/m³)	301138	70 pcs./pal.
600	GIFAfloor acce GIFAfloor FHB Density ≥1500 Knauf Integral a All access pane 34R	ess panel to be plus F182 and kg/m ³ , edges m access opening els are available 600x600	e combined with GIFAfloor FHI nilled angular ar frames and ins singular. 34	th all GIFAfloo Bplus Klima F ad with circumf tallation sectio 16.9	or FHB F181 an 183* systems erental protecti ns made by Kn	nd on stripe. For auf Integral tr 72636	installation for ansition profile 30 pcs./pal.
	GF-W1DIR1/6	00/600/34-C1/	ASK 38	21.9		72638	25 ncs /nal
600	GF-W1DIR1/6	00/600/38-C1/	ASK	21.3	-	70044	20 pcs./pdl.
	40R GF-W1DIR1/6	600x600 00/600/40-C1//	40 ASK	23.0	-	72644	25 pcs./pal.
	42R GF-W1DIR1/6	600x600 00/600/42-C1//	42 ASK	24.2	-	102528	25 pcs./pal.

*= see Knauf Integral Technical information sheet TI Klima

Raw material and production

GIFAtec is produced by natural gypsum and a portion FGD-gypsum by admixturing of cellulose fibres made of sorted recycled paper and cardboard. The natural gypsum is exploited in an area c. 30 km around the factory in open-cast minings. The natural-chemical identical clean FGD gypsum is calcined with the natural gypsum to stucco. The papers are soaked in big tanks. After processing

time they are mixed with processing water and the stucco to a mush. This mush is put on a transport belt, reaching a thickness of c. 2mm by pulling of the surplus water by vacuuming. On the forming cylinder it is wounded up to the needed thickness, roughly cut and after a setting period dryed in a 12-layer dryer. The GIFAtec large-sized panels are been sanded, shaped in a format station to

become GIFAfloor panels. After priming the top and back side of the panels they are packed on pallets. This kind of production of gypsum fibre material ensures the unique homogenious density through the whole thickness of the GIFAfloor panel.

Building biological data / Waste disposal

Since March 2003 Knauf Integral GIFAfloor is recommended by awarding certificate by the institute for building biological testing IBR (Institut für Baubiologie Rosenheim).

The eurofins institute Galten (DK) certificated the suitability for interior installation according German institute for building technology (DIBt) approval criteria by undertaking aptitude tests with Knauf Integral GIFAtec according the new European standards.

For GIFAfloor waste the waste disposal code number is 17 08 02 for building material based on gypsum or no. 17 09 04 for mixed building and demolition waste, not polluted by dangerous materials.

Valuation of the eurofins emission test results

Cancerogene	after 3 and 28 days	not detectable	
TVOC**	after 3 and 28 days	below the limit	
SVOC***	after 28 days	below the limit	
VOC*-value R	after 28 days	below the limit	
VOC*-value without NIK-value	after 28 days	below the limit	
Formaldehyde	after 28 days	below the limit	

* VOC = volatile organic compounds ** TVOC = sum of the volatile organic substances *** SVOC = sum of the less volatile organic substances



🍪 eurofins

Certificate

GIFAfloor **Knauf Integral KG**

ted according to the AgBB-scheme and guide Committee for Health-related Evaluation of Building Products, an institute for Building Technology). Sampling, testing and evaluation de according be N13419-1. EN 13419-3. 150 16000-8. Do 16000-8. USD 16000-11. ISO 16017-1 in the latest versions, see the test record 1.11

aluation of the test result according to AgBB guidelines: Carcinogenic substances were not detectable after 3 and after 28 days.

- The sum of VOC ("TVOC") after 3 days was below the limit of 10.000 µg/m³.
- The sum of VOC ("TVOC") after 28 days was below the limit of 1.000 µg/m³. The sum of SVOC after 28 day was below the limit of 100 µg/m³
- After 28 days the value R was calculated from the detected VOC with single concentrations above 5µg/m². This value R was below the limit of 1.
- The sum of VOC without LCI-value after 28 days was below the limit of 100 $\mu g/m^3$ Formaldehyde after 28 days was below the limit of 120 $\mu g/m^3.$

The tested product is suitable for indoor application, according to the AgBB guide line (version July 2004) of August 2005

Building physical data



Building physical material values

	GIFAfloor FHB / GIFAfloor LEP	GIFAfloor DLH	
Fire protection Building material class according to EN 13501-1 Building material class according to DIN 4102-1	A1 A2	A1 A2	non-combustible non-combustible
$\begin{array}{l} eq:spectral-spec$	0.44	0.38	W/(mK)
	0.30	-	W/(mK)
	30 / 50	17	-
	>1000	>1000	J/(kgK)
	12.9x10 ⁻⁶	12.9x10 ⁻⁶	1/K
	≤0.02	≤0,02	mm/(mK)
	0.6	0.6	mm/m
	+10° to +35°C	+10° to +35°C	c. 45-75% r.h.
	-10° to +35°C	+1° to +35°C	c. 35-75% r.h.
	<300	<300	g/m ²
Strength values Surface hardness acc. to Brinell Pull off bond strength Other Surfaces with transport protecting primer to bond dust and for reduction of water absorption capacity Ability of taking vertical dynamic maximum working load acc. to EN 13964 without additional treatment Value of vapour diffusion resistance μ of the optional factory-made lamination of aluminum foil on the base side	≥ 40	≥ 20	N/mm ²
	≥ 1.0	≥ 0.6	N/mm ²
	yes	yes	-
	≥ 100 000	-	endurance
	9.3x10 ⁶	9.3x10 ⁶	practically vapour-tight

Fire protection

Class	Support height (=clear dimension)	Support thread dimension	Wall thickness sleeve outside \emptyset	Panel thickness
F 30 AB*	≤ 1150 mm ≤ 1000 mm ≤ 600 mm ≤ 218 mm	M 20 M 20 M 20 M 12	3.0 mm 2.5 mm 1.5 mm 17.5 mm	≥ 22 mm
F 60 AB*	≤ 598 mm ≤ 168 mm	M 20 M 16	2.0 mm 2.0 mm	≥ 32 mm
F 90 "from top to side"	Expert's report MPA Dresden "F90 s of the bearing structure.	olely from top side", which mea	ans independent	≥ 50 mm

*= The classification is also valid if drywalls (non-loadbearing internal partitions acc. to DIN 4103) are set on the GIFAfloor FHB.

The Knauf Integral GIFAfloor FHB systems with a thickness \geq 22mm and a clear height \leq 400mm are fulfilling the German building regulations F30 according to DIN 4102.

Sound insulation

	G	IFAfloor F	HB 22	G	IFAfloor F	HB 25	G	FAfloor F	HB 28	GI	GIFAfloor FHB 32				
	without	with finish	without finish	without	with finish	without finish	without	with finish	without finish	without	with finish	without finish			
	finish	(VM=28dB)	with separ. joint with separation	finish	(VM = 28dB)	with separ. joint with separation	finish	(VM=28dB)	with separ. joint with separation	finish	(VM=26dB)	with separ. joint with separation			
Stand. flanking sound val. diff. D _{n,f,w,P} [dB]	42	51	52	~40	~48	~52	39	45	52	46	49	55			
Weighted normal- ized flanking impact sound pressure level L _{n,f,w,P} [dB]	86	50	70	~90	~51	~65	94	52	60	79	49	61			
Reduction in impact sound pressure level $\Delta L_{w,P}$ [dB]	15 (17)*	27 (27)*	-	~13	~26	-	12	25	-	16**	29**	-			
Proved by	Measu Fischer	rement by , (KuF) Pb	Kurz und No. 0247-1	Expect b	ation values y KuF No. 0	calculated 247-5	Meas Fische	urement by r, (KuF) Pb	Kurz und No. 0247-2	Me No	asurement . 0102.01-P	ita, Pb 358/00			

The measurements were taken according to ISO 140. The vertical sound insulation is set by the solid ceiling and is influenced positively by installing a GIFAfloor FHB.



Any building material, each building part and every (building) structures change their dimensions by varying climate conditions. Also deformations of building parts (e.g. allowed deflections) and of (building) structures (e.g. settling of buildings) are generated by the dead load of structure and by additional loads. Therefor joints are necessary and have to be planned. Joints have to be located where cracks are estimated.

There are different kinds of joints in a building:

Separating joints divide the building into several parts. These separating joints have to be transfered to all building parts exactly at the same position. Control joints (Construction joints / expansion joints) divide building parts into sections, which become several units (parts) that are able to take its elongation.

Transition joints have to be placed in a building part when the building material changes. Depending on their position they could be achieved as a hair joint.

Boundary joints have to be planned and achieved at all endings of a building part. They could take the function of expansion joints. They have to be continued e.g in the zone of door openings as a joint with an adequate width. In the case of changes of their direction (e.g. the case of L- or Ushaped areas) a continuation at least in one direction as an expansion joint is necessary.

Acoustically potent separations of building parts (separation cuts / decoupling cuts / separation joints) unhinges subzones (subareas) out of the primarily building part and change its geometry which has to be observed strictly right from the design or planning stage.

Form preferably compact sections. The closer the areas getting to an edge ratio of 1:1 (=square) the bigger the areas could become. For asymmetric areas (e.g. trapezoid shaped areas) the joints have be achieved thoroughly. The long edges in this case are authoritative.

The joint formation (esp. profiles) has to take the bearing capacity of the floor system in each place.

Drawings without scale









Acoustical acting separation joint beneath a planned drywall





Statics basics



Nr.	Utilization	Examples	Design load analogue to DIN 1055-3* kN	Standardized panel thickness* mm
1	Without classification	Miter sills, non-passable	n/a	25
2	Cock lofts	Attics, not for residential usage but passable, clear dimension less than 1.80m	1.0	25
3	Housing and residential rooms	Rooms and corridors in residential buildings, bedrooms in hospitals, hotel rooms including kitchens and bathrooms belonging to them	1.0	25
4	Offices, working areas, corridors	Corridors in office buildings, offices, practices, ward rooms including corridors belonging to them	2.0	25
5	Offices, working areas, corridors	Corridors in hospitals, hotels, old people's homes, boarding schools etc., kitchens and ward rooms including operating theatres without heavy-load equipment	3.0	25
6	Offices, working areas, corridors	See no. 5, but including heavy-load equipment	4.0	28
7	Assembly rooms and areas to convene	Areas with tables, e.g. rooms in schools, cafes, restaurants, dining rooms / halls, reading rooms, receptions	4.0	28
8	Assembly rooms and areas to convene waiting rooms	Floors with fixed chairs. e.g. churches. theatres or cinemas. congress halls. lecture halls. assembly rooms,	4.0	28
9	Assembly rooms and areas to convene	Free passable floors, e.g. in museums, exhibition areas, entry areas of public buildings and hotels	4.0	28
10	Assembly rooms and areas to convene	Dancing halls, gymnastic rooms and stages	7.0	32+18
11	Assembly rooms and areas to convene	Areas for big assemblings e.g. concert halls, terrasses and entry areas, grandstands with fixed chairs	4.0	28
12	Sales rooms	Floors of stores with less than 50m ² selling area inside of residental or office buildings	2.0	25
13	Sales rooms	Floors of retail shops and department stores	4.0	28
14	Sales rooms	See no. 13, but with higher loads because of high shelves	7.0**	32+18
15	Factories, workshops and and warehouses	Floors in factories and workshops with low load activities	4.0	28
16	Factories, workshops and and warehouses	Floors of warehouses and libraries	7.0**	32+18
lf h so dim	igher loads for the project are p those have to be observed for t rensioning of the GIFAfloor syst	lanned, * Proof acc. to EN 13213 he statical iem strictly.	** Example for the grid tion of 600mm, withou edge supports with a g	l of the bearing construc- t transverse joints, with µrid ≤300mm

Load classes of hollow floors acc. to EN 13213

Load class	1	2	3	4	5	6
Breaking load	≥4	≥6	≥8	≥9	≥10	≥12
Safety factor	2	2	2	2	2	2

The EN 13213 hollow floors defines the test procedures and classifications of hollow floor systems. Area loads should not be taken as criterion, only the point load is the determining factor.

Test by an intendor 25x25mm (simulation of a point load) until fail of the panel at specimens weakest position.

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F18	GIFAfloor
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Characteristic static values

	FHB 38 475×475	4507450	7.0	9		0.2	0.6	0.8	1.1	1.2	1.4	1.7 2.0	DLH	25+13 425x425		9.0 9		0.5	0.9	1.4												floor finishings	
	FHB 38		6.0 ⁵⁾	(c 9		0.4	0.8	1.1	1.5	1.6	1.8	2.35)	a DLH	25+13 600x600	Ċ	3.0		0.7	1.2	1.4	1.8											und coatings and side are required	
	32		0			~	(0)	0	0	<i>с</i>	4	0	FHBultra	38+38 425x425	ç	07		Be floo	cau or fii	se o nish	of th ning	e p the	artic defl	ular ecti	rection i	quir is n	eme ot s	ents pec	s to cifie	the d		astic compou from bottom	
	FHB 300v	Y D D D D	9.0	9		0	0.0	0.0	4	<u> </u>	1.	1.0	-HBplus	38+18 500x600		12.5 6		0.3	0.5	0.7	0.9	1.0	1.0	. .	1.2	1.4	1.5	1.6	1.8	1.9	2.0	ng full area m specific loads. ire protection request.	
	FHB 32 475v475	1407440	6.0	9		0.4	0.9	1.2	1.5	1.6	1.8	2.0	FHBplus F	32+18 425x425 (10.0 6		0.2	0.3	0.5	0.6	0.7	0.8	1.0	1.2	1.4	1.6	1.9				ngs / self levelli signed for the of supports for f / load floors on	
	FHB 32 600×600		5.0	S		0.6 ⁶⁾	1.0 6)	1.4	1.7	1.8	2.0		FHBplus	32+18 600x600		9.0 6		0.3	0.5	0.7	0.9	1.0	1.1	<u>1</u> .3	1.5	1.7	1.9					Supports, fillir have to be de Special kind c Further heavy	
	FHB 28		4.5	4	-layer F181	0.4	0.7	1.1	1.4	1.6			3) FHBplus	32+13 425x425	C T	0.7	-layer F182	0.3	0.8	1.1	1.4	1.5	1.7	1.9	2.0							apacity of the estimated.	equest
EN 13213)	B 28 F	V_14.0 0	o; o	m	ors single	.5	o	دن ا	œ.				5. EN 13213 FHBplus	32+13 600x600	((0.0 6	ors double	0.5	0.9	1.3	1.6	1.7	1.9	2.0								e load bearing c solely has to be	available on re
¹⁾ (acc. to	6 FH	n 440	7		access flo			-	-				2 ^{t)} (acc. to FHBplus	28+18 425x425	(6.U	access flo	0.4 6)	0.8 6)	1.16)	1.4 6)	1.6 ⁶⁾	1.8 ⁶⁾	2.0%								is equal to the lel thickness. ow the milling	ial thickness
-layer F181	FHB 28 600×60		4.0	ო	t-panelled	0.7 6)	1.2	1.5	1.8				e-layer F18 FHBplus	28+18 600x600	0	0.0 6	t-panelled	0.5 6)	1.0 6)	1.3 ⁶⁾	1.6 6)	1.76)	1.9 ⁶⁾	2.0 6)								the lower panel h adequate par e thickness bel	00mm ²⁾ Spec d
oors single	FHB 25 300v300		4.5	4	im for shee	0.4	0.8	1.2	1.5	1.8			oors double FHBplus	28+13 425x425	(6.U 6	m for sheet	0.4%	0.9%	1.2%	1.5 ⁶⁾	1.76)	1.96)	2.06)								ing capacity of t system F181 wit anel is milled th	ced grid 600x60 Les interpolate
d access flo	FHB 25	074407	4.0	ო	mp 25x25m	0.6	1.1	1.5	2.0				d access fl FHBplus	28+13 600x600	C	5.U	np 25x25m	0.6 6)	1.1 6)	1.4 ⁶⁾	1.76)	1.8 ⁶⁾	2.0 6)									the load bear single-layer s If the lower p	f the standardiz criterion [©] valı
eet-panelle	IB 25		3.0	2	g with a sta	0.8	1.3	1.8					eet-panelle FHBplus	25+18 425x425	C	5.U	with a star	0.4 6)	0.9 ⁶⁾	1.2 6)	1.5 ⁶⁾	1.76)	1.9 ⁶⁾									ected by the panel redu- ness of the ting pipes),	n the middle of breaking load o
ds) for sh	EP EP	0			l initiating								ds) for sh FHBplus	25+18 600x600	L	6.4 5	initiating	0.6 6)	1.1 6)	1.4 6)	1.7 6)	1.8 ⁶⁾										s is mainly aff s of the lower the total thick (e.g. for hea	supports put i ly according
orking loa	FHB 22		2.0	~	while load	n/a	n/a						orking loa HBplus	25+13 425x425	Ċ	5.U	while load	0.5	1.0	1.3	1.6	1.8	1.9									-layer system g the thicknes: system, even ened by milling	yy additional s V 13213 ⁵⁾ on
pacities (we	FHB 19 ²⁾		1.0	none	Deflection	n/a							pacities (w	25+13 600x600 ⁴	L	0.4 0.4	Deflection	0.7	1.2	1.5	1.8	1.9										he tested double panel. Reducin of the complete anels are weak	n is generated I nr 2) ⁴⁾ acc. EN
Allowable bearing cal	Floor Grid evetem [mm]		Working load [kN] ³⁾	Load class ⁴⁾	Load [kN]		2	ę	4	4.5	5	6	Allowable bearing ca Floor	Grid system [mm]		Working load [kN] ³⁾ Load class ⁴⁾	Load [kN]	-	2	ო	4	4.5	5	9	7	ω	თ	10	1	12	12.5	The load bearing capacity of t thickness of the lower bearing ces the load bearing capacity system is equal. If the upper p) The grid system 425x425mn ⁽¹⁾ (= ultimate load / safety facto 2



Application and processing









Application and processing





Joints to be located on center of the supports. Put glue onto the tongue, onto the front and into the groove (see right).



2

3

4

Installation sequence: put the tongue into the prepared groove immediately after glue application.



Leaking of the glue from the joints shows sufficient glue application.



Scrape off the set glue with e.g. a sharp spatula.

Glueing of the panels



Priming of the laid floor



Realizing of coating with Knauf Nivellierspachtel 415



Consumption: c. 1.6 kg/m²/mm coating thickness. Afterwards to be primed.

Application and processing of the second layer







Laying of the second layer (drawings without scale)





Put the LEP panel into the glue immediately after glue application



dral and onto the rabbet. Load it after positioning and nail it with a nailer.

Application and processing of the second layer



Processing of the second layer

<text><text><text>





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The LEP panels respectively DLH panels for the second layer to be fixed immediately after beeing positioned in the applicated glue. For this stand on the panel to be fixed while nailing with compressed air nailer or impulse nailer.



Section of the notched blade TKB B3 (scale 1:1)



Fixing with compressed air / impulse nailer while standing on the panel



Glue for the next panel, continue as prescribed.

Vertical sections single-layer system (scale 1:5)





Vertical sections single-layer system (scale 1:5)





Vertical sections double-layer system (scale 1:5)











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Vertical sections double-layer system (scale 1:5)







Construction



Transition profiles and access opening frames for GIFAfloor FHB systems

All transition profiles universal uno and universal duo and access opening frames GIFAframe universal uno and

GIFAframe universal duo inclusive height adjustable, demontable aluminum profile for floor finishings (BTL)

Matno.	77807	77808	77809	139307	139310	139518		142265		Matno.	77810		77811		139307		139518			o on request
Accessories	Joining plate	Joining plate 90°	Sealing foam tape 5x2mm	Distance kit uno 32/40 and 28/38	tor one 3m profile End kit uno	Distance kit duo for 38R / DB38 40R / DB40	ang 42K / UB42 for one 3m profile	End kit duo 300x600x300mm		Accessories	Sealing foam tape 5x2mm	600x600mm access opening frame	Sealing foam tape 5x2mm	1200x600mm access opening frame	Distance kit uno 32/40 and28/38	for one access opening frame	Distance kit duo	101 30K / UB30; 40R / DB40;	and 42R / DB42 for one access opening frame	Holiovo ITU notori ***
Suitable** revision panel / access floor panel	34R / DB 34	34R / DB 34		for 28mm: 38R / DB38 for 32mm: 40R / DB40	for 38mm: 42R / DB42	for 28mm: 38R / DB38 for 32mm: 40R / DB40 for 38mm: 42R / DB42				Suitable** revision panel / access floor panel	34R / DB 34	34R / DB 34	34R / DB 34	34R / DB 34	for 28mm: 38R / DB38 for 32mm: 40R / DB40	for 38mm: 42R / DB42	for 28mm: 38R / DB38	for 38mm: 42R / DB42		
Matno.	74345	74348		139308		142264				Matno.	30080 flovible	77801	77798 flavibla	77802	139306 146151		139517	210801		
BTL adjustability	0-8 mm*** flexible	0-8 mm*** flexible		0-15mm in steps of 1mm		0-15mm in steps of 1mm				BTL adjustability	0-8 mm***	0-8 mm*** flexible	0-8 mm***	0-8 mm*** flexible	0-15mm in steps of 1mm		0-15mm in	steps of Imm		
Length of profile [mm]	3000	3000		3000		3000				Inside dimension of frame [mm]	600x600	600x600	1200x600	1200x600	600x600 1200x600		600x600	12002000		
Type of profile	Transition profile 25/34 with aluminum BTL	Transition profile 25/34 with stainless steel BTL		Transition profile universal uno 38/42	(incl. distance kit for 32/40 and 28/38)	Transition profile universal duo 51/42 (incl. distance kit	105 38R/4UR/42R)			Type of transition profile	Transition profile FHB25	Transition profile FHB25 with stainless steel BTL	Transition profile FHB25	Transition profile FHB25 with stainless steel BTL	GIFAframe universal uno 38/42	(incl. distance kit for 32/40 and 28/38)	GIFAframe	universal auo 51/42 (incl. distance kit	for 38R/40R/42R)	** ^#!
FHB system	F181 FHB25	F181 FHB25		F181 FHB28 to FHB38	F182 FHBplus 25+13	F182 and F183 all systems from FHBplus 25+18 and	Fribpius Nima 20+ 10		frames	FHB system	F181 FHB25	F181 FHB25	F181 FHB25	F181 FHB25	F181 FHB28 to FHB38	F182 FHBplus 25+13	F182 and F183	all systems from FHBplus 25+18 and	FHBplus Klima 25+18	
Floor thick- ness [mm]*	25	25		28/32/38		43-56			Access opening	Floor thick- ness [mm]*	25	25	25	25	28/32/38		43-60			Cull and models

* Full area mastic compound is not considered ** Attention! For heav load floors: the bearing capacity of the access opening panels is less!

Construction transition profiles and access opening frames





Construction steel supports



Threaded head support



Pipe-head support



Pipe-head supports M16 ST* for GIFAfloor FHB and GIFAfloor FHBplus

Support height in mm											
Medium height	min.	max.	MatNo.								
202,5	175	230	74391								
252,5	225	280	74396								
302,5	275	330	74401								
352,5	325	380	74405								
402,5	375	430	74411								
452,5	425	480	102663								
502,5	475	530	102664								
552,5	525	580	102665								
*Other support heights on request											

Igh Jbb

Pipe-head supports M20 ST* for GIFAfloor FHB and **GIFAfloor FHBplus**

Support height in mm										
Medium height	min.	max.	Matno.							
212,5	185	240	74412							
262,6	235	290	74413							
312,5	285	340	74414							
362,5	335	390	74415							
412,5	385	440	74416							
462,5	435	490	74417							
512,5	485	540	74418							
562,5	535	590	74419							
612,5	585	640	74420							
662,5	635	690	74421							
712,5	685	740	74422							
762,5	735	790	74423							
812,5	785	840	74424							
862,5	835	890	74425							
912,5	885	940	74426							
962,5	935	990	74427							
1062,5	1035	1090	74428							
1162,5	1135	1190	74429							

Other support heights on request.

The installation of stringers is only possible with support types M16 S, M16 ST, M20 ST up to load class 5.

Supports with bigger wall thickness e.g. for FHBultra or for fire protection reasons on request.

Threaded-head supports M12 S for GIFAfloor FHB

Supp					
Medium height	min.	max.	MatNo.		
28	23	33	102661		
35	30	40	74351		
50	40	60	74352		
56,5	43	70	74353		
71,5	53	90	74355		
80	60	100	74356		
95	70	120	74358		
120	90	150	74360		
145	110	180	74364		
170	120	220	74366		

Threaded-head supports M16 S for GIFAfloor FHB

Support height in mm					
Medium height	min.	max.	Matno.		
32,25	26,5	38	41191		
37,5	30	45	74368		
45	35	55	102662		
52,5	40	65	74369		
60	45	75	74370		
67,5	50	85	74371		
77,5	60	95	74372		
82,5	60	105	74389		
92,5	70	115	74373		
97,5	70	125	74374		
107,5	80	135	74375		
112,5	80	145	74376		
132,5	100	165	74377		
157,5	120	195	74380		
182,5	150	215	74382		
202,5	170	235	74381		
232,5	200	265	74383		
262,5	230	295	41192		
287,5	250	325	99197		
312,5	280	345	99198		
322,5	290	355	99199		
357,5	320	395	99200		

Requirement of material



Material	Matno.		Unit	Required quantity*	
Knauf Knauf floor screed primer F 431	5355		10 kg pail	c.200g / m ²	
Knauf Integral steel support glue (PU)	48422		600 g tubular bag (film tube)	c.15g / support	
Knauf Integral application gun for film tubes	4657		pc.	as required	
Steel supports	see table p.6		pc.	c. 3.9 pcs. / m²	
Thread sealer	78362		1000 ml spray bottle	c. 1 Fl. / 500 supports	
Support sheets 90 without naps	30056		100 pc. / bag	c. 3.9 pcs./m ²	
Support sheets 100 without naps	30056		100 pc. / bag	c. 3.9 pcs./m ²	
Insulation sheets round, self-adhesive, 2mm	44135		pc.	additional c. 3.9 pcs. / m²	
Insulation sheets cornered, self-adhesive, 2mm	44134		pc.	alternative c. 3.9 pcs. / m²	
Knauf Integral stringers light	74336		pc.	if required c. 5.8 pcs. / m ²	
Knauf Integral stringers heavy	74337		pc.	if required c. 5.8 pcs. / m ²	
Knauf Integral ZD-diagonal rod	74338		pc.	as required	
Knauf Integral edge insulation stripes for GIFAfloor systems	109147		c.13x100x1200mm 50 pcs. / carton	as required	
Knauf Integral foam insulation stripe self-adhesive sk	74339		5x10m roll / bag 20 bags / carton	as required	
GIFAfloor FHB panels	see table p.2		palette	c. 1.39 pcs. / m²	
GIFAfloor LEP panels	see table p.2		palette	if required c. 1.39 pcs./m ²	
GIFAfloor DLH panels	see table p.2		palette	as required	
Knauf Integral Nut- / Feder- Klebstoff (glue for tongue and groove)	141974		20 pcs. tubular bags à 600ml (~900g) / carton	F181 c. 82m ² / carton F182 c. 54m ² / carton + glue for 2nd layer	
Knauf Integral application gun for film tubes	4657		pc.	as required	
Knauf Integral Flächenklebstoff (glue f. 2nd layer)	141975		15 kg pail	c. 600g/m²	
Coloquick spreader	4696		pc.	as required	
Notched blades TKB B3 double sided 28cm for Coloquick spreader	4697		12 pcs. / pack	as required	
GIFAfloor access panel	see table p. 2		pc.	as required	
Knauf Integral access opening frame 25/34 600x600mm 1200x600mm	BTL aluminum BTL stainl. steel 30080 77801 77798 77802		рс.	as required	
Sealing foam tape for 25/34 600x600mm 1200x600mm	77810		pc.	as required	
Knauf Integral transition profile 25/34	BTL aluminum	BTL stainl. steel			
.	74345	74348	pc.	as required	
Joining plate for transition profile 25/34	77807	I	рс.	as required	
Joining plate 90° for transition profile 25/34	77808		pc.	as required	
Sealing foam tape for transition profile 25/34	77809		10m roll (5x2mm)	as required	
Access opening frame GIFAframe universal uno	139306		pc.	as required	
Distance kit uno	139307		pc.	as required	
Access opening frame GIFAframe universal duo	139517		pc.	as required	
Distance kit duo	139518		pc.	as required	
Transition profile universal uno	139308		pc.	as required	
End kit uno	139310		pc.	as required	
Distance kit uno	139307		pc.	as required	
Transition profile universal duo	142264		pc.	as required	
End kit duo	142265		pc.	as required	
Distance kit duo	139518		pc.	as required	

* Specification refers to a room dimension of 10x10m. Different room dimensions may cause different quantities.

Specifications



Pos.	Description	Quanti	ity	Unit price	Total price	
	Sheet-panelled access floor single-layer, type Knauf Integral GIFAfloor FHB F181 or equivalent, made of adjustable, zinc-coated steel supports fixed to the primed raw floor by steel support glue, support sheets / insulation sheets* to put the GIFAfloor FHB panels as a floating layer on them. All corners of the GIFAfloor FHB panels are positioned on center of the supports. Panels laid in staggered position, connected by glued tongue and groove system to get big plates, ready for floor covering. Technical demands:					
	Producer: Type: Size of the panels: Thickness / density: Class / breaking load: Safety factor: Building material class: Fire protection class: Structural module of the supports: Structure height: Type of floor covering: Furnish and install	Knauf Integral GIFAfloor FHB F181 25/28/32/38* 1200x600mm t&g / 600x600mm t&g mm / 1500 kg/m ³ / ≥N 2 A1 acc. EN 13501-1 F 30 AB / F 60 AB* 600x600mm; 425x425mm; 300x300mm* edge regions 300mm or stringers heavy mm	m²	€	€	
	 Sheet panelled access floor double-layer type Knauf Integral GIFAfloor DLH F182 or equivalent, made of adjustable, zinc-coated steel supports fixed to the primed raw floor by steel support glue, support sheets / insulation sheets* to put the GIFAfloor DLH25 panels as a floating layer on them. All corners of the GIFAfloor DLH25 panels are positioned on center of the supports. Panels laid in staggered position, connected by glued tongue and groove system to get big plates. The GIFAfloor DLH13 panels of the second layer are laid turned 90°, with staggered joints and are glued holohedral to the first layer and together on the rebate. After positioning they are immediately fixed by compression air / impulse nailing, ready for floor covering. 					
	Producer: Type: Panel thickness 1st layer / density: Size of the panels: Panel thickness 2nd layer / density: Size of the panels: Class / breaking load: Safety factor: Building material class: Fire protection class: Structural module of the supports: Structure height: Type of floor covering: Furnish and install	Knauf Integral GIFAfloor DLH F182 25+13 25 mm / 1100 kg/m ³ 1200x600mm t&g 13 mm / 1100 kg/m ³ 1200x600mm re / \geq N 2 A1 acc. EN 13501-1 F 30 AB / F 60 AB* 600x600mm; 425x425mm* edge regions 300mm or stringers heavy mm 	m²	€	€	

Specifications



Pos.	Description		Quantity	Unit price	Total price		
	 Sheet panelled access floor double-layer type Knauf Integral GIFAfloor FHBplus F182 or equivalent, made of adjustable, zinc-coated steel supports fixed to the primed raw floor by steel support glue, support sheets / insulation sheets* to put the GIFAfloor FHB panels as a floating layer on them. All corners of the GIFAfloor FHB panels are positioned on center of the supports. Panels laid in staggered position, connected by glued tongue and groove system to get big plates. The GIFAfloor LEP panels of the second layer are laid turned 90°, with staggered joints and are glued holohedral to the first layer and together on the rebate joint. After positioning they are immediately fixed by compression air / impulse nailing, ready for floor covering. Technical demands: 						
	Producer: Type: Panel thickness 1st layer / density: Size of the panels: Panel thickness 2nd layer / density Size of the panels: Class / breaking load: Safety factor: Building material class: Fire protection class: Structural module of the supports: Structure height: Type of floor covering: Furnish and install:	Knauf Integral GIFAfloor FHBplus F182 25+13; 25+18; 28+13; 28+18; 3 mm / 1500 kg/m ³ 1200x600mm t&g / 600x600mm : mm / 1500 kg/m ³ 1200x600mm re / \geq N 2 A1 acc. EN 13501-1 F 30 AB / F 60 AB* 600x600mm; 425x425mm; 300x edge regions 300mm or stringer mm	2+13; 32+18; n t&g x300mm* rs heavy m²	38+18*	€		
	Priming the vacuum-cleaned raw floor to bind r Knauf Floor screed primer F431 or equivalen Furnish and install	remained dust with it.	m²	€	€		
	Extra charge. Installation of Knauf Integral ed Knauf Integral foam insulation stripes self-a sheet-panelled access floor GIFAfloor from sur Furnish and install	ge insulation stripes / adhesive sk* to separate the rounding building parts.	m	€	€		
	Extra charge. Installation of separation / extensi including the delivery and installation of the req (grid 300mm o.c.) / stringers heavy* Furnish and install	sion / movement* joints juired additional supports	m	€	€		

Specifications



Pos.	Description	Quantity U	Unit price	Total price
	Extra charge. Installation of Knauf Integral transition profiles with floor covering separation profile aluminum / stainless steel*, flush with the surface to the sheet-panelled access floor GIFAfloor FHB F181 / GIFAfloor FHBplus F18 for connection with Knauf Integral GIFAfloor DB / GIFAfloor access panels . Furnish and install	82 pc.	€	€
	Extra charge. Installation of Knauf Integral access opening frame with / without floor covering separation profile aluminum / stainless steel*, flush with the surface to the sheet-panelled access floor GIFAfloor FHB F181 / GIFAfloor FHBplus F18 for installation of GIFAfloor access panels . Furnish and install	* 82 pc.	€	€
	Extra charge. Installation of Knauf Integral access panel GIFAfloor 34R; 38R; 40R; 42R* into the Knauf Integral access opening frame in the sheet-panelled access floor GIFAfloor FHB F181 / GIFAfloor FHBplus F182 . Furnish and install	рс.	€	€
	Extra charge. Making round / rectangular* cut-outs of the GIFAfloor with a maximum size 305 diameter / edge length* (only possible in the middle of the grid of the supports) including the delivery and installation of the required additional supports. Furnish and install	рс.	€	€
	Extra charge. Cutting out rectangular connection at the edges of the GIFAfloor sheet-panelled access floor , including required additional supports. Furnish and install	m/pc.'	*€	€
	Extra charge. Cutting out round / curved* connection at the edges of the GIFAfloo sheet-panelled access floor , including required additional supports. Furnish and install	or m/pc.'	*€	€
	Extra charge. Making round / rectangular* cut-outs of the area of the GIFAfloor for e.g. columns, including the delivery and installation of the required additional supports. Furnish and install	m/pc.'	*€	€
	Extra charge. Installation of steps to prepare the GIFAfloor sheet-panelled access floor for different thickness of floor finishings including required separation joints with additional supports (grid 300mm o.c.) / stringers heavy*. Furnish and install	m	€	€
	Extra charge for different lengths of the supports caused by different heights of the level of the raw floor. Furnish and install	m²	€	€
	Extra charge. Installation of protective covering consists of cardboard / plastic film non-woven material / derived timber panels* protected against shifting. Furnish and install	, / m²	€	€

Construction and installation



Construction

Knauf Integral GIFAfloor FHB panels are made of Knauf Integral GIFAtec gypsum fibre material in standardized thicknesses of 25, 28, 32 or 38mm. The size of the GIFAfloor FHB panels is 1200x600mm with tongue and groove edges to be stuck with Knauf Integral Nut-/ Feder- Klebstoff (glue for tongue and groove). The GIFAfloor panels are laid floating on the height adjustable and levelled steel supports. The steel supports have been fixed to the load bearing raw ceiling.

The system is suitable for floor heating and cooling systems.

In the cavity all mechanical services could be installed and drywalls could be mounted at any place on the GIFAfloor FHB systems while observing the load limits.

Joints have to be planned according their width, positioning and construction.

Grounding

The ground has to take at least the ultimate loads of the floor system supported by the steel supports. The ground must be dry and solid and free of seperating agents like e.g. bitumen, oil or colours. Insulation materials and bituminous sheetings usually are only with a sufficient load-distributing base able to support hollow floor systems.

The raw floor has to be swept and vacuum cleaned thoroughly and to be primed with e.g. z.B. Knauf Estrichgrund F 431.

Control joints of the structure of the building have to be placed at the same position of the GIFAfloor FHB.

Installation

Put edge insulation stripes or foam insulation stripes self-adhesive at the connecting building parts.

Mark the positions of the first row of steel supports. Stick the bases of the steel supports with approx. 15g Knauf Integral Stützenkleber (steel support glue PU) to the ground, then adjust them with a laser or with a spirit level with high accuracy measurement precision.

For all edge areas of the GIFAfloor FHB F181: steel support center distance \leq 70mm.

Put support sheets or insulation sheets self-adhesive on the steel supports, secure thread against loosen using thread sealer.

All edge areas of the GIFAfloor half steel support distance (grid 300mm o.c.) or stringers heavy! Second row of steel supports for the first panel to be installed like described before. Cut at least both tongues of the first panel, put it onto the prepared steel supports and press against the edge insulation stripes. Cutting of the GIFAfloor panels with e.g. circular saw with a diamond- tipped saw blade and dust exhaustion system or with e.g. a pendulum jigsaw / assembly band saw with a HM-tipped saw blade. Cut the tongue of the second and the following panels of the first row.

Put Nut- / Feder- Klebstoff (glue for tongue and groove) into the groove of the located panel and onto the tongue of the panel to be laid (see page 9). Put the panels together butt jointed immediately in true alignment.

Second and the following rows of panels to be installed in a staggered position (half of the panel's length). Glue coming out of the butt joint shows that the quantity of the glue is sufficient and could be scraped off e.g. by using a sharp-edged spatula next day.

The edge insulation stripes for the gap behind the last row of GIFAfloor panels have to be insert into the gap at last.

Don't walk on the installed GIFAfloor for c.12 hours.

The floor system is receptive to the full working load after c. 24 hours (standard time of the glue is fully set).

For support heights higher than c. 500mm stringers are recommended, for heights higher than c. 800mm or expected lateral forces (e.g. corridors in front of of elevators in hospitals) Knauf Integral ZD diagonal rods are adviced.

Treatment of the surface and floor finishing

Control joints, expansion joints, transition joints and connection joints of the GIFAfloor must be adopted to the floor finishing.

GIFAfloor resists the castors of chairs without supplementary treatment.

Prime with Knauf Estrichgrund F431 or with the primer prescribed of the used adhesive system.

Fitted carpet without putty, or if necessary jointing with Knauf Uniflott. Thin elastic floor coverings (e.g. PVC, linoleum) only with full area mastic compound (self levelling) Knauf Nivellierspachtel 415, minimum thickness 2mm, after beeing dry to be primed. Ceramic tiles and natural stone to be fixed with flexible tile adhesives preferably on double-layer systems F182. The prescribed installation guides of the manufacturer of the glue system especially the minimum thickness of the glue for the choosen tile size must be observed. Porcelain stoneware to be fixed by buttering and floating method, herefor put the tiles into the glue sideways while pressing it down.

Fleece or woven prescribed by the manufacturer of the glueing system has to be installed according the installation instructions.

If the allowed deflections of GIFAfloor by expected loads are bigger than the possible deflection of the floor covering, additional steps to reduce those deflections have to be planned. For further limitation of these deflections use thicker panels and/or additional supports and/or a second layer of panels. Protect the GIFAfloor against water e.g. in bathrooms by using a liquid sealant system (e.g. Knauf Flächendicht / Flächendichtband).

Lay parquet flooring as a floating system or thickness of the parquet limited to $\leq 2/3$ of the thickness of the GIFAfloor panels. The installation guides of the manufacturer of the parquet and of the glueing system for the choosen type of parquet flooring have to be considered.

Fluid floor coverings like e.g. epoxy resin floors have to be elastified and, depending on the manufacturer, water vapour permeable.

Test the bond strength of the floor finish / glueing system (if necessary by usage of a specimen).

Construction and installation



Construction

Knauf Integral GIFAfloor FHB panels are made of Knauf Integral GIFAtec gypsum fibre material in standardized thicknesses of 25, 28, 32 or 38mm. The size of the panels is 1200x600mm with tongue and groove edges to be stuck with Knauf Integral Nut- / Feder-Klebstoff (glue for tongue and groove).

The second layer of the F182 system consists of LEP panels in 13 or 18mm thickness with rebate joints is lain to reduce deflection, as an installation area for e.g. heating pipes or to rise the load bearing capacity or for fire protection reasons.

The second layer is glued holohedral to the first layer and is nailed immediately after been positioned.

The GIFAfloor FHB panels of the first layer are laid floating on the height adjustable and levelled steel supports. The steel supports have been fixed to the load bearing raw ceiling.

The system is suitable for floor heating and cooling systems.

In the cavity all mechanical services could be installed and drywalls could be mounted at any place on the GIFAfloor FHBplus systems while observing the load limits.

Joints have to be planned according their width, positioning and construction.

Grounding

The ground has to take at least the ultimate loads of the floor system supported by the steel supports. The ground must be dry and solid and free of seperating agents like e.g. bitumen, oil or colours. Insulation materials and bituminous sheetings usually are only with a sufficient load-distributing base able to support hollow floor systems. The raw floor has to be swept and vacuum cleaned

The raw floor has to be swept and vacuum cleaned thoroughly and to be primed with e.g. z.B. Knauf Estrichgrund F 431.

Control joints of the structure of the building have to be placed at the same position of the GIFAfloor FHBplus.

Installation

Put edge insulation stripes or foam insulation stripes self-adhesive at the connecting building parts. Mark the positions of the first row of steel supports. Stick the bases of the steel supports with approx. 15g Knauf Integral Stützenkleber (steel support glue PU) to the ground, then adjust them with a laser or with a spirit level with high accuracy measurement precision.

For all edge areas of the GIFAfloor FHBplus: steel support center distance ≤70mm.

Put support sheets or insulation sheets self-adhesive on the steel supports, secure thread against loosen using thread sealer.

All edge areas of the GIFAfloor half steel support distance (grid 300mm o.c.) or stringers heavy! Second row of steel supports for the first panel to be installed like described before. Cut at least both tongues of the first panel, put it onto the prepared steel supports and press against the edge insulation stripes. Cutting of the GIFAfloor panels with e.g. circular saw with a diamond- tipped saw blade and dust exhaustion system or with e.g. a pendulum jigsaw / assembly band saw with a HM-tipped saw blade. Cut the tongue of the second and the following panels of the first row.

Put Nut- / Feder- Klebstoff (glue for tongue and groove) into the groove of the located panel and onto the tongue of the panel to be laid (see page 9). Put the panels together butt jointed immediately in true alignment.

Second and the following rows of panels to be installed in a staggered position (half of the panel's length).

The second layer consists of GIFAfloor LEP panels is installed 90° turned with staggered joints and is glued holohedral to the first layer with Knauf Integral Flächenklebstoff (glue for the 2nd layer) and nailed immediately after been positioned. Glue coming out of the butt joint shows that the quantity of the glue is sufficient and could be scraped off e.g. by using a sharp-edged spatula next day.

The edge insulation stripes for the gap behind the last row of GIFAfloor panels have to be insert into the gap at last.

Don't walk on the installed GIFAfloor for c.12 hours.

The floor system is receptive to the full working load after c. 24 hours (standard time of the glue is fully set).

For support heights higher than c. 500mm stringers are recommended, for heights higher than c. 800mm or expected lateral forces (e.g. corridors in front of of elevators in hospitals) Knauf Integral ZD diagonal rods are adviced.

Treatment of the surface and floor finishing

Control joints, expansion joints, transition joints and connection joints of the GIFAfloor must be adopted to the floor finishing.

GIFAfloor resists the castors of chairs without supplementary treatment.

For floor heating and cooling systems please note Knauf Integral technical information sheet TI Klima. Prime with Knauf Estrichgrund F431 or with the primer prescribed of the used adhesive system. Fitted carpet without putty, or if necessary jointing with Knauf Uniflott. Thin elastic floor coverings (e.g. PVC, linoleum) only with full area mastic compound (self levelling) Knauf Nivellierspachtel 415, minimum thickness 2mm, after beeing dry to be primed. Ceramic tiles and natural stone to be fixed with flexible tile adhesives. The prescribed installation guides of the manufacturer of the glue system especially the minimum thickness of the glue for the choosen tile size must be observed. Porcelain stoneware to be fixed by buttering and floating method, herefor put the tiles into the glue sideways while pressing it down.

Fleece or woven prescribed by the manufacturer of the glueing system has to be installed according the installation instructions.

If the allowed deflections of GIFAfloor by expected loads are bigger than the possible deflection of the floor covering, additional steps to reduce those deflections have to be planned. For further limitation of these deflections use thicker panels and/or additional supports and/or a second layer of panels. Protect the GIFAfloor against water e.g. in bathrooms by using a liquid sealant system (e.g. Knauf Flächendicht / Flächendichtband).

Lay parquet flooring as a floating system or thickness of the parquet limited to $\leq 2/3$ of the thickness of the GIFAfloor panels. The installation guides of the manufacturer of the parquet and of the glueing system for the choosen type of parquet flooring have to be considered.

Fluid floor coverings like e.g. epoxy resin floors have to be elastified and, depending on the manufacturer, water vapour permeable.

Test the bond strength of the floor finish / glueing system (if necessary by usage of a specimen).

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ensured with the exclusive use of Knauf Integral system components, or other products expressly recommended by Knauf Integral.

The structural, statical properties and characteristic building physics of Knauf Integral systems can solely be

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