



Pellet & combi-heating systems 8-40 kW

Technology & Planning 2024



KWB Easyfire 1 type EF1

Pellet heating system 10–20 kW

Versions: Manual filling, suction conveyor system

KWB combustion system:

- Underfeed retort system with automatic ignition
- Combustion air fan
- Backfire protector (fire shutter closing automatically)

Suitable for the burning of wood pellets Ø 6 mm (or Ø 8 mm with selected conveyor systems) in accordance with ISO 17225-2 class A1.

KWB heat exchanger:

- Semi-automatic heat exchanger cleaning for KWB Easyfire 1 with storage container or fully automatic heat exchanger cleaning for KWB Easyfire 1 Plus with suction conveyor system
- Induced draught fan
- Ash tray

Storage container: Capacity: 228 litres in KWB Easyfire 1, usable volume for KWB Easyfire 1 Plus: 15 litres; fuel supply only from the left.

KWB Comfort 3 control comprising:

- Control unit incl. buffer storage tank and domestic hot water management, expandable with internal or external heating circuit control

KWB Comfort Online:

Heating systems with Comfort 3 control will additionally need a network card (art. no. 13-2000395).



KWB Easyfire EF1
for manual filling



KWB Combifire type CF2

Combi-heating for log wood and pellet 18–38 kW

Models for pellet use: Manual filling, screw and suction conveyor system

- Modular, 3x divided boiler body, including insulation
- Stable powder-coated system casing incl. insulation for minimal radiation and standby loss
- 185 l fill room – the largest of its class (upon request also available with 150 l fill room)
- Broadband lambda probe for accurate residual oxygen measuring

KWB heat exchanger: upright tubular heat exchanger with fully automatic heat exchanger cleaning, consisting of:

- Screw turbulators
- speed-regulated induced draught fan for modulating power adjustment

Suitable for the burning of log wood with a max. length of 55 cm (L50, D15 according to ISO 17225-5), moisture content of between 15% and 25% (stored in a dry place), filling transversely is possible with 1/3 m wood logs (at 185 l fill room)

Optional: fully automatic ignition (1.000 W)

Optional: quick-charge valve for intelligent buffer charging for a quicker heat provision.

Pellet module for conveyor screw system connection with KWB combustions system:

- Cast underfeed burner with stainless steel burner plate and KWB EasyFlex (automatic burner plate cleaning)
- Fully automatic ignition by means of a ceramic igniter element and thermal element
- Combustion air fan
- Automatic ash removal into an ash container available in a convenient design
- Burnback protector: cellular wheel sluice with seven transport chambers.
- Storage container incl. suction turbine
- The pellet module can only be installed on the left.

Suitable for wood pellets Ø 6 mm (or Ø 8 mm with storage container) in accordance with ISO 17225-2 class A1.

KWB Comfort 4 control comprising:

- Exclusive control unit incl. buffer storage tank and domestic hot water management, expandable with internal or external heating circuit control

IMPORTANT! A sufficiently large buffer storage tank is absolutely required.

Utilisable minimum buffer storage tank volume of 1.800 l; recommended utilisable buffer storage tank volume of 2.500 l.



KWB Combifire CF2
for screw conveyor system



KWB Easyfire type EF2

Pellet heating system 8–38 kW

Versions: Manual filling, screw and suction conveyor system

KWB combustion system:

- Cast underfeed burner with stainless steel burner plate and KWB EasyFlex (automatic burner plate cleaning)
- Fully automatic ignition by means of a ceramic igniter element and thermal element
- Combustion air fan
- Automatic ash removal into an ash container
- Burnback protector: cellular wheel sluice with seven transport chambers.
- Broadband lambda probe for accurate residual oxygen measuring

Suitable for the burning of wood pellets Ø 6 mm (or Ø 8 mm with selected conveyor systems) in accordance with ISO 17225-2 class A1.

KWB heat exchanger:

- Upright tubular heat exchanger with fully automatic heat exchanger cleaning
- Induced draught fan
- Integrated return flow temperature boost with variable volume flow (incl. two-way valve with servomotor). Alternatively, externally with a PWM pump.

Storage container (in suction operation) including suction turbine, fuel supply exclusively from the left.

Optional: ambient air-independent operation possible.

KWB Comfort 4 control comprising:

- Exclusive control unit
- Buffer storage tank and domestic hot water management,
- Expandable with heating circuit control internal or external



KWB Easyfire EF2
for screw conveyor system



CLEAN 2.0
EFFICIENCY

KWB Easyfire type EF2 CC4

Condensing pellet heating system 10–40 kW

Versions: Manual filling, screw and suction conveyor system

Type EF2 CC4 uses the hidden energy from the exhaust air which is emitted unused in traditional chimney solutions. This is made possible by the additional heat exchanger made from high-quality stainless steel at the rear of the heating system.

KWB combustion system:

- Cast underfeed burner with stainless steel burner plate and KWB EasyFlex (automatic burner plate cleaning)
- Fully automatic ignition by means of a ceramic igniter element and thermal element
- Combustion air fan
- Automatic ash removal into an ash container
- Burnback protector: cellular wheel sluice with seven transport chambers.
- Broadband lambda probe for accurate residual oxygen measuring

Suitable for the burning of wood pellets Ø 6 mm (or Ø 8 mm with selected conveyor systems) in accordance with ISO 17225-2 class A1.

KWB heat exchanger:

- Upright tubular heat exchanger with fully automatic heat exchanger cleaning
- Induced draught fan
- Integrated return flow temperature boost with variable volume flow (incl. two-way valve with servomotor). Alternatively, externally with a PWM pump.

Storage container (in suction operation) including suction turbine, fuel supply exclusively from the left.

Optional: ambient air-independent operation possible.

KWB Comfort 4 control comprising:

- Exclusive control unit
- Buffer storage tank and domestic hot water management,
- Expandable with heating circuit control internal or external



KWB Easyfire CC4
for suction conveyor system



CLEAN 2.0
EFFICIENCY

KWB's modular and easily transportable system

All KWB heating systems listed on this double page can be dismantled into several modules, which allows our products to be placed in almost every heating room and easily installed even in tight spaces. The KWB Easyfire types EF2 and EF2 CC4 are delivered in individual modules.



Notes

Pellet & combi
8-40kW



Technology & Planning

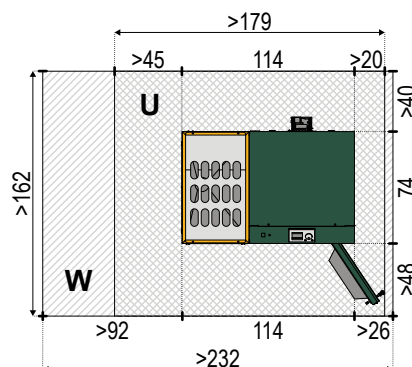
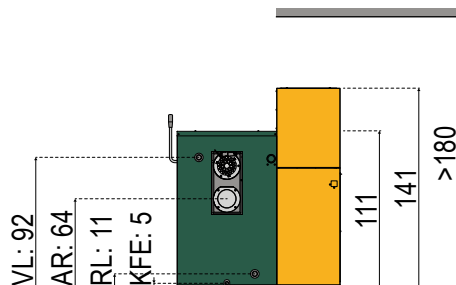
Pellet & combi-heating systems 8–40 kW



KWB Easyfire 1

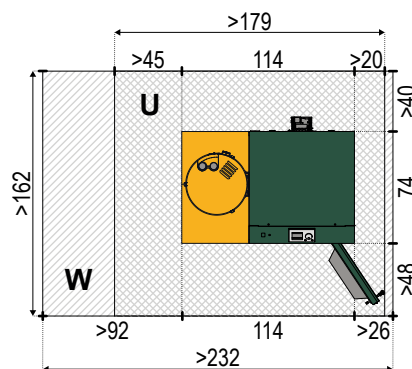
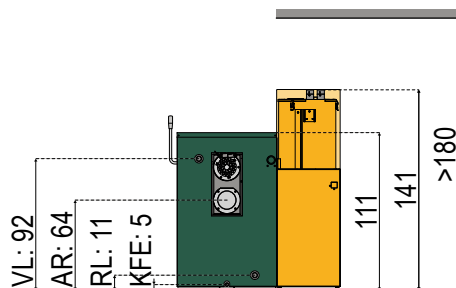
Installation and connecting dimensions

KWB Easyfire 1



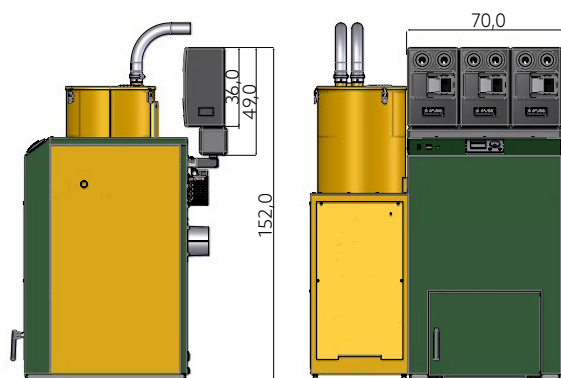
Reference values: Heating room from 2,9 m², storage room 0 m³

KWB Easyfire 1 Plus



Reference values: Heating room size from 2,9 m²

Dimensions for the KWB Easyfire 1 hydraulics package



Legend

- AR Exhaust pipe Ø 130 mm
- KFE Filling and emptying 1/2"
- RL Connection return flow 1"
- U Minimum space requirements
- VL Connection forward flow 1"
- W Recommended space requirements incl. sufficient room to perform maintenance

* Recommended room height: 200 cm. In the event of a room with a low ceiling (1,80 m), we provide 90° bends for the suction connections. The respective specifications must be provided when submitting the order. Scale 1:50 | All dimensions in cm | Width x Height | Distances stated are minimum distances!

Dimensions for boiler transport and placement

KWB Easyfire 1	Delivery condition	Without casing, dismantled
Unobstructed entry opening	80/145	75/75

KWB Easyfire 1

Technical data

USP V/GS	Unit	10	15 ***	20
Rated power	kW	10,4	15,0	20,0
Partial load	kW	3,1	4,5	5,6
Boiler efficiency at rated power	%	91,0	91,7	92,5
Boiler efficiency at partial load	%	90,7	90,4	90,1
Fuel thermal output at rated load	kW	11,4	16,4	21,6
Fuel thermal output at partial load	kW	3,4	5,0	6,2
Boiler class according to EN 303-5:2012	–		5	
EU Energylabel	–		A+	
Water side				
Water content	l		66	
Water connection, forward/return flow (internal thread)	inch		1	
Water connection for filling and/or emptying (internal thread)	inch		1/2	
Water-side resistance at 10 K	mbar	4,2	10	15,8
Water-side resistance at 20 K	mbar	1	2,6	4,2
Boiler-entry temperature (for installation of an external return-flow boost device)	°C		50	
Working temperature/operating temperature	°C		60–80	
Maximum permitted temperature	°C		110	
Maximum operating pressure	bar		3,5	
Exhaust-gas side (for chimney calculation)				
Combustion chamber temperature	°C		900–1100	
Required draft at rated power/partial load	mbar		0,07 0,05	
Suction available	–		✓	
Exhaust-gas temperature at rated power	°C	140	160	160
Exhaust-gas temp. Partial load	°C	90	100	100
Exhaust-gas mass flow at rated power	kg/s	0,006	0,009	0,012
Exhaust-gas mass flow at partial load	kg/s	0,003	0,004	0,004
Exhaust-gas volume at rated power	Nm³/h	17,0	25,5	34,0
Exhaust-gas volume at partial load	Nm³/h	8,7	10,4	12,0
Exhaust-gas connection height boiler side	mm		635	
Exhaust-gas pipe diameter	mm		130	
Incline of the smoke-pipe	°		≥ 3	
Chimney diameter (approx. values)	mm		140	
Chimney design: Moisture-resistant	–		✓	
Electrical system				
Connection	–		230V, 1~ 50Hz, C13 A	
Connected power USP V	W		545	
Connected power USP GS	W		2347	
Ash				
Ash container volume	l		25	
Ash container filled	kg		~ 25	
Weights				
Boiler body	kg		196	
Boiler weight USP V	kg		323	
Boiler weight USP GS	kg		349	
Noise emissions				
Normal operating noise at rated power	dB(A)		< 70	
Storage container type USP V				
Contents storage container for type USP V	l		228	
Suction conveyor type USP GS				
Max. suction length	m		10	
Max. suction length	m		4	
Max. suction head	m		3,5	
Contents storage container for type USP GS	l		15	

*** ... Drawing inspection, values for intermediate sizes interpolated

Conversion: 1 mbar = 100 Pa

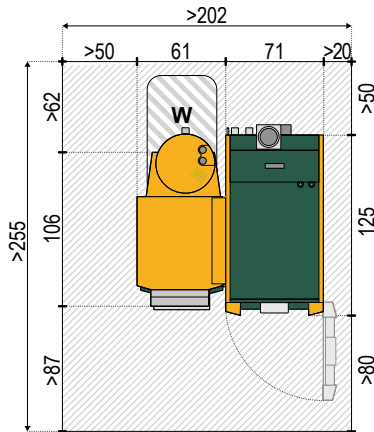
FJ-BLT ... Francisco Josephinum Wieselburg – Biomass Logistic Technology

mg/Nm³ ... Milligram per standard cubic meter (1 Nm³ under 1.013 hectopascal at 0 °C)

KWB Combifire

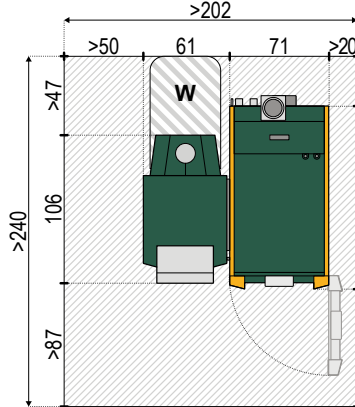
Installation and connecting dimensions

KWB Combifire with suction conveyor



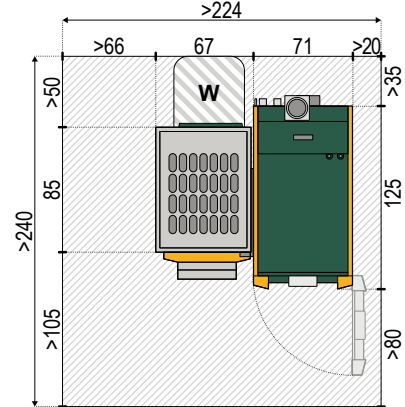
Reference value:
Heating room size approx. 5,2 m²

KWB Combifire with elbow screw

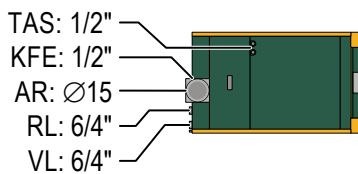
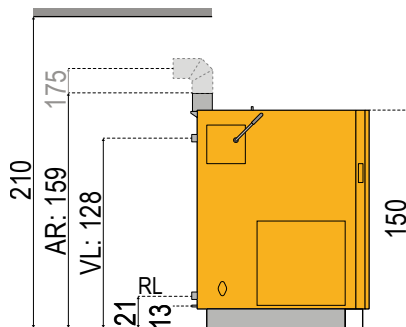


Reference value:
Heating room size approx. 4,8 m²

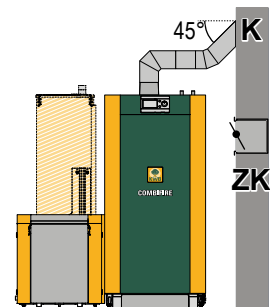
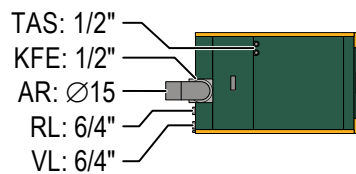
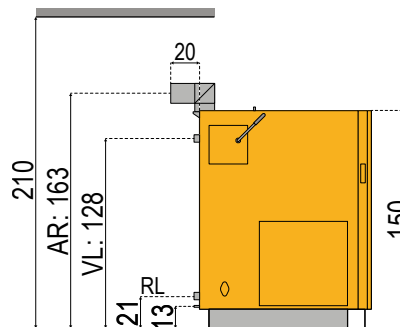
KWB Combifire with storage container



KWB Combifire standard version



KWB Combifire with exhaust pipe connection 90° to the rear



Legend

AR	Exhaust pipe Ø 150 mm (bend 90° optionally available)
KFE	Filling and emptying 1/2"
W	Space requirements for the pellet burner including clearance for maintenance
RL	Connection return flow 6/4"

TAS	Thermal discharge safety valve feed and discharge 1/2"
VL	Connection forward flow 6/4"
K	Chimney
ZK	Energy-saving damper with explosion door

All dimensions in cm | Width x Height | Distances stated are minimum!

Dimensions for boiler transport and placement

KWB Combifire	Delivery condition	Without casing, dismantled	With casing and cleaning lever
Unobstructed entry opening	75/160	75/100	80/160

KWB Combifire

Technical data

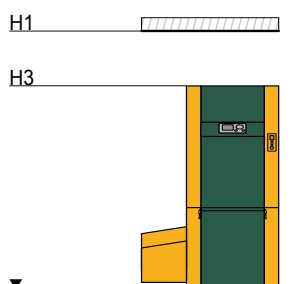
CF1.5 CF2	Unit	CF1.5/CF2 18	CF1.5/CF2 28	CF1.5/CF2 32	CF1.5/CF2 38
		Log wood/Pellet	Log wood/Pellet	Log wood/Pellet	Log wood/Pellet
Rated power	kW	18,0/22,0	28,0/28,0	32,0/32,0	38,0/35,0
Partial load	kW	- /6,6	14,0/8,4	14,0/9,6	14,0/10,5
Boiler efficiency at rated power	%	93,9/93,9	92,5/93,9	91,9/93,9	91,3/93,9
Boiler efficiency at partial load	%	- /93,3	92,0/93,1	92,0/93,0	92,0/92,9
Fuel thermal output at rated power	kW	19,2/23,4	30,3/29,8	34,8/34,1	41,6/37,3
Fuel thermal output at partial load	kW	- /7,1	15,2/9,0	15,2/10,3	15,2/11,3
Full load burn-off period CF1.5	h	10/-	6,2/-	5,9/-	5,8/-
Full load burn-off period CF2	h	12,2/-	7,6/-	7,3/-	6,6/-
Boiler class according to EN 303-5:2012	-			5,0	
EU Energylabel	-			A+	
Water side					
Water content	l		141/168		
Water connection, forward/return flow (internal thread)	inch		6/4		
Water connection for filling and/or emptying (internal thread)	inch		1/2		
Thermal safety valve: pressure	bar		2-4		
Water connection for thermal safety valve (internal thread)	inch		1/2		
Water-side resistance at 20 K	mbar		13,5		
Boiler-entry temperature	°C		55/-		
Working temperature/operating temperature	°C		80		
Maximum permitted temperature	°C		110		
Maximum operating pressure	bar		3,5		
Minimum usable buffer tank volume CF1.5	l		1500		
Minimum usable buffer tank volume CF2	l		1800		
Recommended usable buffer tank volume CF1.5	l		1800		
Recommended usable buffer tank volume CF2	l		2500		
Exhaust-gas side (data for chimney design)					
Combustion chamber temperature	°C		900-1100		
Required draft at rated power/partial load	mbar		0,08 0,05		
Induced draught required	-		✓		
Exhaust-gas temperature at rated power	°C		160/140		
Exhaust-gas temperature at partial load	°C		- /80		
Exhaust-gas mass flow at rated power	kg/s		0,023		
Exhaust-gas mass flow at partial load	kg/s		0,011		
Exhaust-gas volume at rated power	Nm³/h		54		
Exhaust-gas volume at partial load	Nm³/h		27		
Chimney connection height	mm		1590		
Exhaust-gas connection diameter	mm		150		
Incline of the Exhaust-gas pipe	°		≥ 3		
Chimney diameter (minimum)	mm		150		
Chimney design: moisture-resistant	-		✓		
Electrical system					
Connection	-		230V, 1~ 50Hz, C13 A		
Unit switch and main switch: present	-		✓		
Connected power boiler (minimum)	W		151/502		
Connected power boiler (maximum)	W		1288/1639		
Weights					
Heat exchanger	kg		108		
Burning chamber module	kg		273		
Fill chamber module	kg		221		
KWB pellet module	kg		130		
Total weight (without/with pellet module)	kg		719/852		
Noise emissions (EN 15036-1)					
Normal operating noise at rated power	dB(A)		< 70		
Fill chamber					
Fill chamber volume CF1.5	l		160,8		
Fill chamber volume CF2	l		183,8		
Width of fill doors	mm		440		
Height of fill doors	mm		364		

mg/Nm³ ... Milligram per standard cubic meter (1 Nm³ under 1.013 hectopascal at 0 °C) Conversion: 1 mbar ... 100 Pa

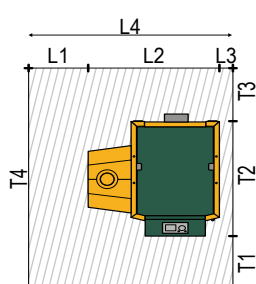
KWB Easyfire 2

Installation and connecting dimensions

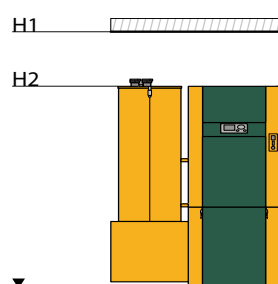
Type EF2 S



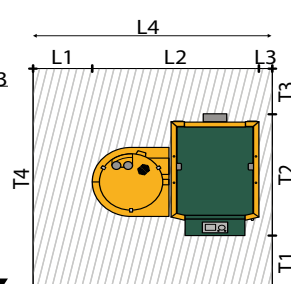
Heating room size from 2,3 m²



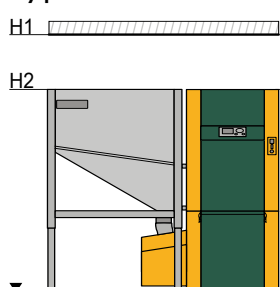
Type EF2 GS



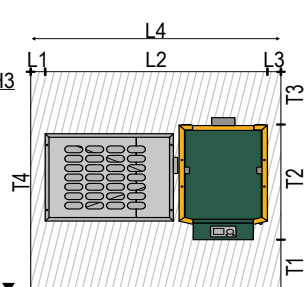
Heating room size from 2,6 m²



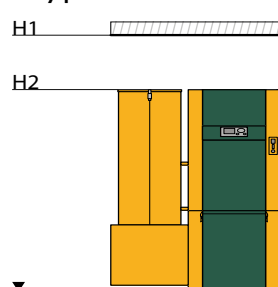
Type EF2 S+300



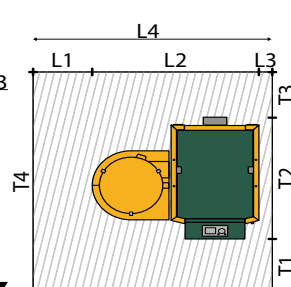
Heating room size from 2,8 m²



Type EF2 V



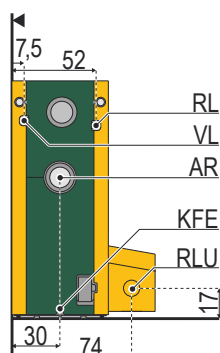
Heating room size from 2,6 m²



Position in drawing	EF2 8 - 12 kW				EF2 15 - 22 kW				EF2 25 - 38 kW			
	S	GS	V	S+300	S	GS	V	S+300	S	GS	V	S+300
H1	165	165	165	165	195	195	195	195	230	230	230	230
H2	-	126	146	146	-	146	146	146	-	164	146	146
H3	126	126	126	126	146	146	146	146	164	164	164	164
L1	40	40	40	10	40	40	40	10	40	40	40	10
L2	88	106	106	148	88	106	106	148	88	106	106	148
L3	10	10	10	10	10	10	10	10	10	10	10	10
L4	> 138	> 156	> 156	> 168	> 138	> 156	> 156	> 168	> 138	> 156	> 156	> 168
T1	40	40	40	40	40	40	40	40	40	40	40	40
T2	93	93	93	93	93	93	93	93	93	93	93	93
T3	40	40	40	40	40	40	40	40	40	40	40	40
T4	> 167	> 167	> 167	> 167	> 167	> 167	> 167	> 167	> 167	> 167	> 167	> 167

S KWB Easyfire type EF2 S: Screw conveyor system
 GS KWB Easyfire type EF2 GS: Suction conveyor system
 V KWB Easyfire type EF2 V: 107-litre storage container

S+300 KWB Easyfire type EF2 S with storage container 300 litres



	EF2 8 - 12 kW	EF2 15 - 22 kW	EF2 25 - 38 kW
VL	Female thread 1", H = 101 cm	Female thread 1", Height = 121 cm	Female thread 5/4", Height = 137 cm
RL	Ø 25, G 1", H = 100 cm	Ø 25, G 1", H = 118 cm	Ø 32, G 5/4", H = 126 cm
AR	Ø 13 cm, H = 75 cm	Ø 13 cm, H = 86 cm	Ø 15 cm, H = 105 cm
KFE	Female thread 1/2", H = 6 cm		
RLU	Connection for ambient air-independent operation (optional)		
	Connector set with distributor, H=boiler height + 14 cm		
	Connector set with heating circuit group, H=boiler height + 41 cm		
	Connector set with buffer charging group, H=boiler height + 51 cm		
	Connector set with distributor and heating circuit group, H=boiler height + 55 cm		

Dimensions for boiler transport and placement

KWB Easyfire EF2	Without casing, dismantled
Unobstructed entry opening	60x80

All dimensions in cm | Length x Width x Height | Distances stated are minimum distances!

KWB Easyfire 2

Technical data

EF2 S / EF2 GS / EF2 V	Unit	8	12	15	22	25	30	35	38
Rated power	kW	8,0	12,0	15,0	22,0	25,0	30,0	34,9	38
Partial load	kW	2,4	3,6	4,5	6,6	7,5	9,0	10,5	11,4
Boiler efficiency at rated power	%	92,4	93,6	93,9	94,6	94,8	95,2	95,6	95,3
Boiler efficiency at partial load	%	91,4	90,7	91,6	93,8	93,9	94,1	94,3	94,9
Fuel thermal output at rated load	kW	8,7	12,8	16,0	23,3	26,4	31,5	36,5	39,9
Fuel thermal output at partial load	kW	2,6	4,0	4,9	7,0	8,0	9,6	11,1	12,0
Boiler class according to EN 303-5:2012	–	5							
EU Energy Label	–	A+							
Water side									
Water content	l	40	40	52	52	78	78	78	78
Water connection, forward/return flow (internal thread)	inch	1	1	1	1	5/4	5/4	5/4	5/4
Water connection for filling and/or emptying(internal thread)	inch	1/2							
Thermal safety valve: no	–	x							
Water-side resistance at 10 K	mbar	5,7	12	34	56	39	52	66	66
Water-side resistance at 20 K	mbar	1,7	3,5	9,5	15,4	10,8	14	18	18
Boiler-entry temperature (for installation of the KWB-supplied two-way valve with servomotor)	°C	10–70							
Boiler-entry temperature (for installation of an external return-flow boost device)	°C	40–70							
Working temperature/operating temperature	°C	80							
Maximum permitted temperature	°C	110							
Maximum operating pressure	bar	3,5							
Minimum usable buffer tank volume	l	500	500	500	800	800	800	1000	1000
Exhaust-gas side (for chimney calculation)									
Combustion chamber temperature	°C	900–1100							
Combustion chamber pressure	mbar	-0,20							
Required draft at rated power/partial load	mbar	0,05							
		0,03							
Suction available	–	✓							
Exhaust-gas temperature at rated power	°C	120,0							
Exhaust-gas temp. Partial load	°C	90,0							
Exhaust-gas mass flow at rated power	kg/s	0,006	0,009	0,011	0,016	0,018	0,022	0,026	0,028
Exhaust-gas mass flow at partial load	kg/s	0,002	0,003	0,004	0,005	0,006	0,007	0,008	0,008
Exhaust-gas volume at rated power	Nm³/h	16,5	24,9	31,1	45,2	51,3	61,4	71,2	77,3
Exhaust-gas volume at partial load	Nm³/h	5,3	7,9	9,8	14,1	15,9	18,7	21,5	23,3
Exhaust-gas connection height boiler side	mm	750	750	860	860	1050	1050	1050	1050
Exhaust-gas pipe diameter	mm	130	130	130	130	150	150	150	150
Incline of the smoke-pipe	°	≥ 3							
Chimney diameter (approx. values)	mm	140	140	140	140	160	160	160	160
Electrical system									
Connection	–	230V, 1~ 50Hz, C13 A							
Connected power EF2 V	W	559	559	559	559	577	577	577	577
Connected power EF2 S	W	609	609	609	609	627	627	627	627
Connected power EF2 GS	W	2189	2189	2189	2189	2207	2207	2207	2207
Connected power EF2 GS with sample probes	W	2444	2444	2444	2444	2462	2462	2462	2462
Ash									
Ash container volume	l	28							
Ash container filled	kg	27							
Ash removal system	–	✓							
Weights									
Boiler weight EF2 V	kg	341	341	370	370	416	416	416	416
Boiler weight EF2 S	kg	326	326	352	352	394	394	394	394
Boiler weight EF2 GS	kg	349	349	378	378	424	424	424	424
Noise emissions									
Normal operating noise at rated power	dB(A)	< 70							
Storage container									
Contents storage container for type EF2 V	l	107							
Contents storage container for type EF2 S + 300	l	300							
Suction conveyor type EF2 GS									
Max. suction length	m	25							
Max. suction head	m	5							
Contents storage container for type EF2 GS	l	42	42	67	67	90	90	90	90

*** ... Drawing inspection, values for intermediate sizes interpolated

Conversion: 1 mbar = 100 Pa

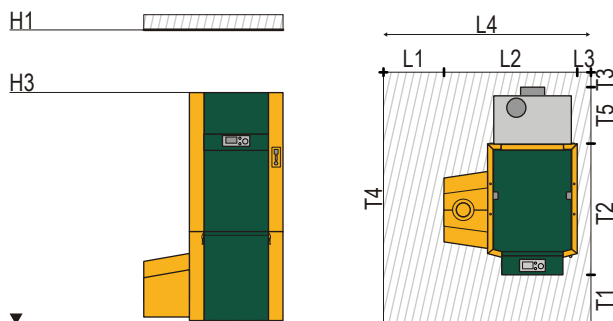
FJ-BLT ... Francisco Josephinum Wieselburg – Biomass Logistic Technology

mg/Nm³ ... Milligram per standard cubic meter (1 Nm³ under 1.013 hectopascal at 0 °C)

KWB Easyfire 2 CC4

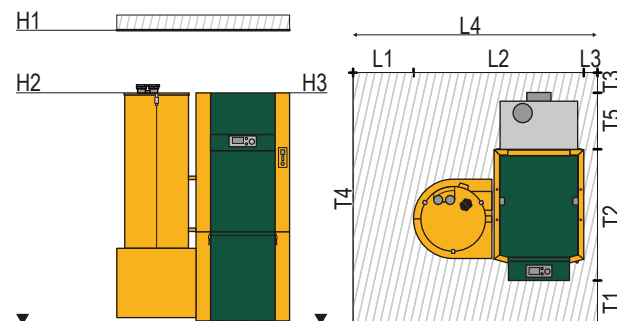
Installation and connecting dimensions

Type EF2 CC4 S



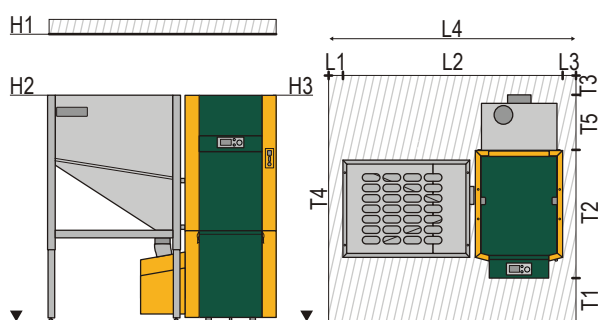
Heating room size from 2,6 m²

Type EF2 CC4 GS



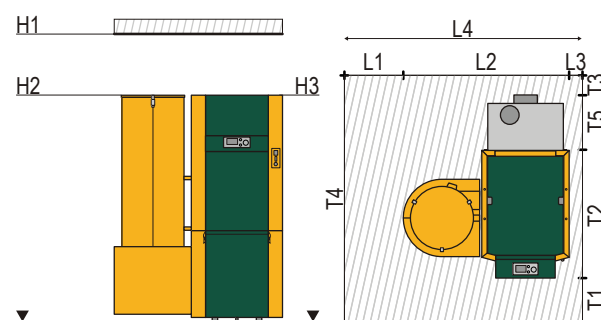
Heating room size from 3,0 m²

Type EF2 CC4 S+300



Heating room from 3,2 m²
No additional storage room required!

Type EF2 CC4 V



Heating room from 3,0 m²
No additional storage room required!

Position in drawing	EF2 CC4 10 - 12 kW				EF2 CC4 15 - 22 kW				EF2 CC4 25 - 35 kW				EF2 CC4 40 kW			
	S	GS	S+300	V	S	GS	S+300	V	S	GS	S+300	V	S	GS	S+300	V
H1	>165	>165	>165	>165	>195	>195	>195	>195	>230	>230	>230	>230	>230	>230	>230	>230
H2	-	126	146	146	-	146	146	146	-	164	146	146	-	164	146	146
H3	126	126	126	126	146	146	146	146	164	164	164	164	164	164	164	164
L1	>40	>40	>10	>40	>40	>40	>10	>40	>40	>40	>10	>40	>40	>40	>40	>40
L2	88	106	148	106	88	106	148	106	88	106	148	106	88	106	148	106
L3	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10
L4	>138	>156	>168	>156	>138	>156	>168	>156	>138	>156	>168	>156	>138	>156	>168	>156
T1	>40	>40	>40	>40	>40	>40	>40	>40	>40	>40	>40	>40	>40	>40	>40	>40
T2	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87
T3	>20	>20	>20	>20	>20	>20	>20	>20	>20	>20	>20	>20	>20	>20	>20	>20
T4	>190	>190	>190	>190	>194	>194	>194	>194	>197	>197	>197	>197	>207	>207	>207	>207
T5	43	43	43	43	47	47	47	47	50	50	50	50	58	58	58	58

S = KWB Easyfire type EF2 CC4 S: Screw conveyor system
GS = KWB Easyfire type EF2 CC4 GS: Suction conveyor system

S+300 = KWB Easyfire type EF2 CC4 S with storage container 300 litres
V = KWB Easyfire type EF2 CC4 V: 107-litre storage container

Dimensions for boiler transport and placement

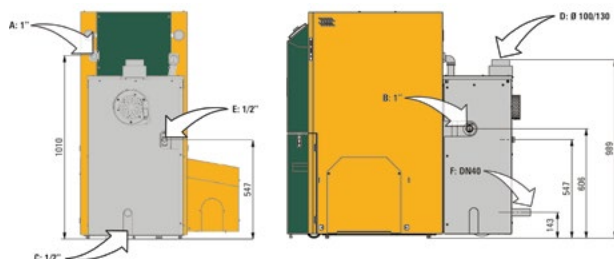
KWB Easyfire EF2 CC4	Without casing, dismantled
Unobstructed entry opening	60x80

An unobstructed door width of 70 x 180 cm is sufficient for all boiler types to be able to transport KWB Easyfire components into the respective room.
All dimensions in cm | Length x Width x Height | Distances stated are minimum distances!

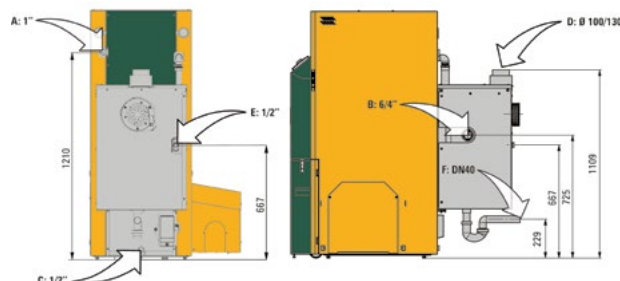
KWB Easyfire 2 CC4

Connecting dimensions

Type EF2 CC4 10-12 kW



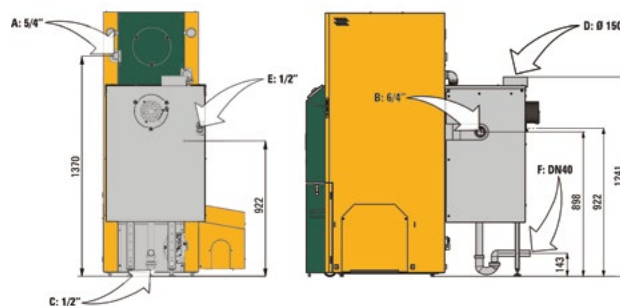
Type EF2 CC4 15-22 kW



Type EF2 CC4 25-35 kW



Type EF2 CC4 40 kW



Legend

- A Forward flow
- B Reversal
- E Washing unit
- C Boiler filling and emptying
- D Exhaust gas pipe
- F Condensate discharge



Information

If a lifting system is required for the condensate, then a wastewater lifting system will need to be installed (recommended: Wilo HiDrainlift 3).

KWB Easyfire 2 CC4

Technical data

EF2 S / EF2 GS / EF2 V	Unit	CC4 10	CC4 12	CC4 15	CC4 22	CC4 25	CC4 30	CC4 35	CC4 40
Rated power	kW	10,0	12,0	15,0	22,0	25,0	30,0	34,9	40
Partial load	kW	3,0	3,6	4,5	6,6	7,5	9,0	10,5	12,0
Boiler efficiency at rated power (based on the net calorific value)	%	101,6	101,8	102,2	102,8	102,7	102,6	102,5	103,1
Boiler efficiency at partial load (based on the net calorific value)	%	96,9	97,2	97,8	98,6	99,2	100,1	101,0	101,8
Boiler efficiency at rated power (based on the gross calorific value)	%	93,4	93,5	93,9	94,5	94,5	94,4	94,6	94,8
Boiler efficiency at partial load (based on the gross calorific value)	%	89,0	89,2	89,8	90,6	91,2	92,1	93,2	93,5
Fuel thermal output at rated load (based on the net calorific value)	kW	9,8	11,8	14,7	21,4	24,3	29,2	34,0	38,8
Fuel thermal output at partial load (based on the net calorific value)	kW	3,1	3,7	4,6	6,7	7,6	9,0	10,4	11,8
Boiler class according to EN 303-5:2012	–	5	5	5	5	5	5	5	5
EU Energy Label	–	A+	A+	A++	A++	A++	A++	A++	A++
Water side									
Water content	l	40	40	52	52	78	78	78	78
Water connection, forward/return flow (internal thread)	inch	1 / 1	1 / 1	1 / 6/4	1 / 6/4	5/4 / 6/4	5/4 / 6/4	5/4 / 6/4	5/4 / 6/4
Water connection for filling and/or emptying (internal thread)	inch					1/2			
Thermal safety valve: no	–					*			
Water-side resistance at 10 K	mbar	17,3	30,5	50,3	96,4	95,9	95,2	94,4	124,7
Water-side resistance at 20 K	mbar	4,89	7,7	12,0	21,9	22,6	23,8	24,95	32,4
Boiler-entry temperature (for installation of the KWB-supplied two-way valve with servomotor)	°C					10-70			
Boiler-entry temperature (for installation of an external return-flow boost device)	°C					40-70			
Working temperature/operating temperature	°C					80			
Maximum permitted temperature	°C					110			
Maximum operating pressure	bar					3,0			
Minimum usable buffer tank volume	l	500	500	500	800	800	800	1000	1000
Exhaust-gas side (for chimney calculation)									
Combustion chamber temperature	°C					900-1100			
Combustion chamber pressure	mbar					-0,20			
Required draft at rated power/partial load	mbar					0,01			
						0,01			
Suction available	–					✓			
Exhaust-gas temperature at rated power	°C					40-70			
Exhaust-gas temp. Partial load	°C					40-70			
Exhaust-gas mass flow at rated power	kg/s	0,007	0,009	0,011	0,016	0,018	0,022	0,026	0,031
Exhaust-gas mass flow at partial load	kg/s	0,002	0,003	0,004	0,005	0,006	0,007	0,008	0,009
Exhaust-gas volume at partial load	Nm³/h	6,6	7,9	9,8	14,1	15,9	18,7	21,5	26,2
Exhaust-gas connection height boiler side	mm	990	990	1110,0	1110,0	1241,0	1241,0	1241	1241
Exhaust-gas pipe diameter	mm	100/130	100/130	100/130	100/130	150,0	150,0	150,0	150,0
Chimney diameter (approx. values)	mm	140,0	140,0	140,0	140,0	160,0	160,0	160,0	160,0
Chimney design: Moisture-resistant	–					✓			
Electrical system									
Connection	–					230V, 1~ 50Hz, C13 A			
Connected power EF2 V	W	559	559	559	559	577	577	577	577
Connected power EF2 S	W	609	609	609	609	627	627	627	627
Connected power EF2 GS	W	2189	2189	2189	2189	2207	2207	2207	2207
Connected power EF2 GS with sample probes	W	2444	2444	2444	2444	2462	2462	2462	2462
Ash									
Ash container volume	l					28			
Ash container filled	kg					27			
Ash removal system	–					✓			
Weights									
Boiler weight EF2 V	kg	341	341	370	370	416	416	416	416
Boiler weight EF2 S	kg	326	326	352	352	394	394	394	394
Boiler weight EF2 GS	kg	349	349	378	378	424	424	424	424
Noise emissions									
Normal operating noise at rated power	dB(A)					< 70			
Storage container									
Contents storage container for type EF2 V	l					107			
Contents storage container for type EF2 S + 300	l					300			
Suction conveyor type EF2 GS									
Max. suction length	m					25			
Max. suction head	m					5			
Contents storage container for type EF2 GS	l	42	42	67	67	90	90	90	90

mg/Nm³ ... Milligram per standard cubic meter (1 Nm³ under 1.013 hectopascal at 0 °C)

Conversion 1 mbar = 100 Pa



Notes

Grid of dots for notes.



KWB conveyor screw with elbow screw

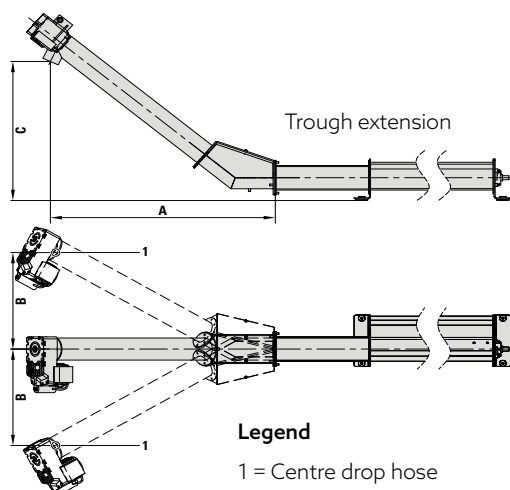
- ✓ Extremely quiet operation
- ✓ Minimal power consumption
- ✓ Maintenance-free
- ✓ Also realizable as case solution.



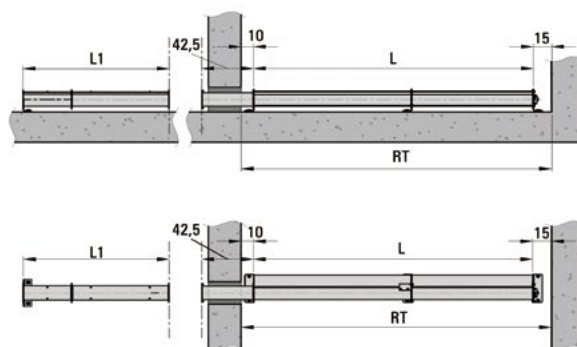
Compatible with

KWB Easyfire type EF2 S 8-38 kW
KWB Easyfire type EF2 CC4 S 10-40 kW
KWB Combifire type CF2 S 18-38 kW
KWB Pelletfire^{Plus} type MF2 45-135 kW

Ascending screw

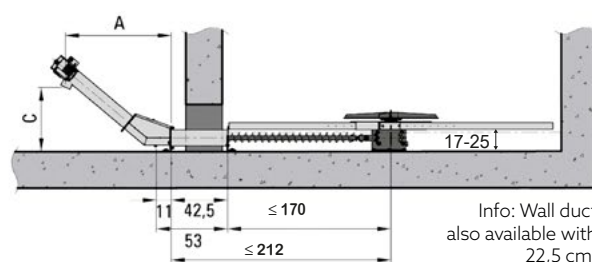
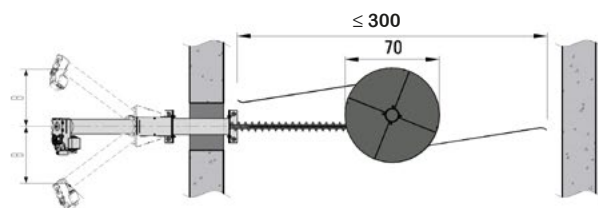


Conveyor screw



KWB Pellet Stirrer Plus and elbow screw

- ✓ Best possible storage room utilisation
- ✓ Extremely quiet operation
- ✓ Sloping floor is not required
- ✓ Also realizable as case solution.



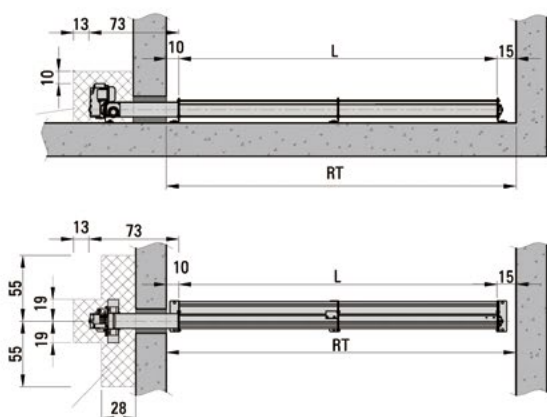
Ascending screw with axis deviation B depending on storage room lowering

Storage room lowering	Ascending screw 1	Ascending screw 2	Ascending screw 3	Ascending screw 4
	A=78,5cm C=48,7cm	A=91,0cm C=59,9cm	A=101,0cm C=67,9cm	A=116,0cm C=80,8cm
0cm	B=0	B=0-35cm	B=0-47cm	B=44-64cm
5cm	-	B=0-27cm	B=0-42cm	B=35-60cm
10cm	-	B=0-12cm	B=0-34cm	B=22-55cm
15cm	-	B=0cm	B=0-24cm	B=0-50cm
20cm	-	-	B=0cm	B=0-43cm
25cm	-	-	B=0cm	B=0-33cm
30cm	-	-	-	B=0-19cm
35cm	-	-	-	B=0cm

Conveyor screw L	Room depth Min. room depth	Channel extension L1
130cm	155cm	40cm
180cm	205cm	80cm
230cm	255cm	120cm
260cm	285cm	160cm
280cm	305cm	200cm
310cm	335cm	240cm
360cm	385cm	
460cm	485cm	
490cm	515cm	
540cm	565cm	

KWB conveyor screw with suction conveyor

- ✓ Pellets up to 8 mm can be used
- ✓ Ideal for storage room systems which are not situated on the same level as the heating room
- ✓ Suction lengths of up to 25 metres possible (10 metres for the KWB Easyfire 1 Plus)



Information

Find information about hose routing in module „I“.

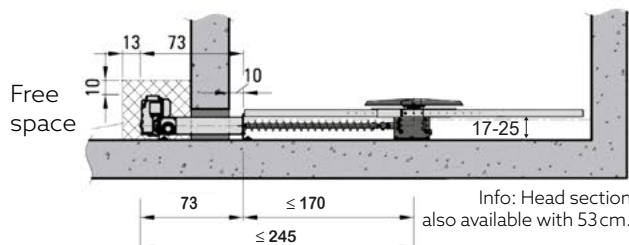
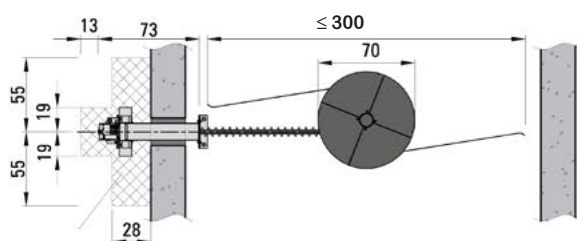


Compatible with

KWB Easyfire type EF2 GS 8-38 kW
KWB Easyfire type EF2 CC4 10-40 kW
KWB Easyfire type EF3 40-60 kW
KWB Combifire type CF2 GS 18-38 kW
KWB Pelletfire^{Plus} type MF2 GS 45-135 kW
KWB Easyfire 1 Plus type EF1 GS 10-20 kW

KWB Pellet Stirrer Plus with suction conveyor

- ✓ Pellets up to 8 mm can be used
- ✓ Best possible storage room utilisation
- ✓ Suction lengths of up to 25 metres possible (10 metres for the KWB Easyfire 1 Plus)
- ✓ Sloping floor is not required



Notes

- Provide ventilation of the heating room sized $5 \text{ cm}^2 / \text{kW}$ or $\geq 400 \text{ cm}^2$.
- Assemble the drives outside of the storage room
- Strictly comply with local fire safety regulations and other regulations!
- Maintain the legally prescribed distances to flammable materials!
- Take the ceiling load / static loads into account!



Fuel pouring heights

A maximum pouring height of 3 m is permitted in pellet operations. Please comply with the EN ISO 20023 standard when designing the pellet storage.

KWB sampling probe(s) with suction conveyor

3-point sampling probe

The one-point sampling probe is offered as an additional suction conveyor system model for the pellet heating systems KWB Easyfire 2 type EF2 GS and KWB Easyfire 1 Plus type EF1 GS. The switchover to pellet removal between the 3 sampling probes takes place automatically.

- ✓ Flexible utilisation and easily installed with very little planning expenditures
- ✓ No moving pellet suction tubes in the heating and storage room – thus low space requirements
- ✓ Reliable pellet extraction based on special probe geometry



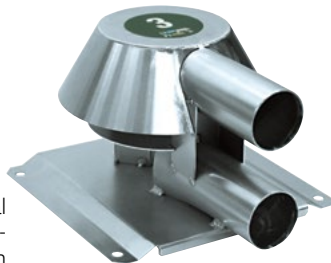
Compatible with

KWB Easyfire type EF2 GS 8-38 kW

KWB Easyfire 1 type EF1 GS 10-20 kW

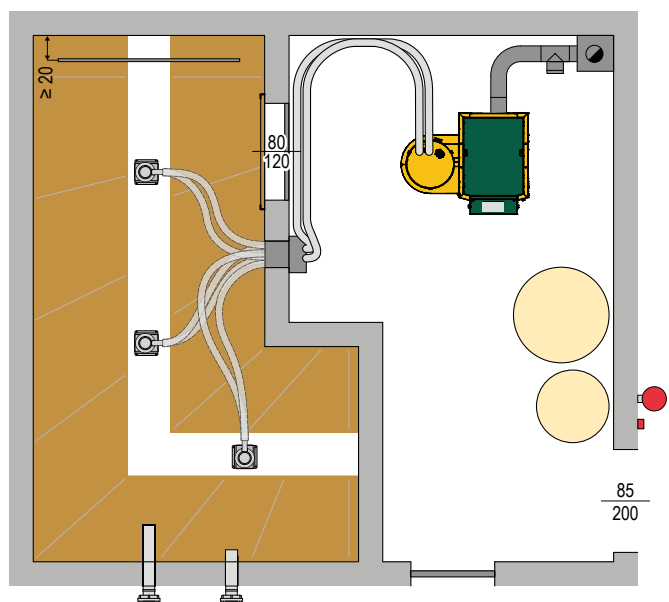
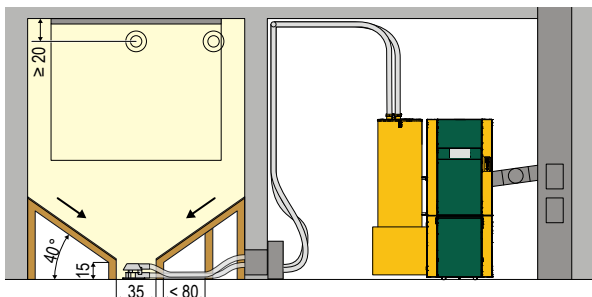
KWB Combifire type CF2 GS 18-38 kW

KWB Pelletfire^{Plus} type MF2 GS 45-65 kW



KWB sampling probes: optimal safety thanks to 1 or 3 separate removal points in the storage room

KWB switchover unit: automatic switchover when using 3 sampling probes



1-Point sampling probe also possible with the KWB weekly storage container or for installation in the storage room.
LxWxH = 100x100x110 cm, room height min. 180 cm



Fuel pouring heights

A maximum pouring height of 3 m is permitted in pellet operations. Please comply with the EN ISO 20023 standard when designing the pellet storage.

KWB sampling probe(s) with suction conveyor

8-point sampling probe

- ✓ Flexible utilisation and easily installed with very little planning expenditures
- ✓ Reliable pellet extraction based on special probe geometry



Compatible with

KWB Easyfire type EF2 GS 8-38 kW

KWB Easyfire type EF2 CC4 10-40 kW

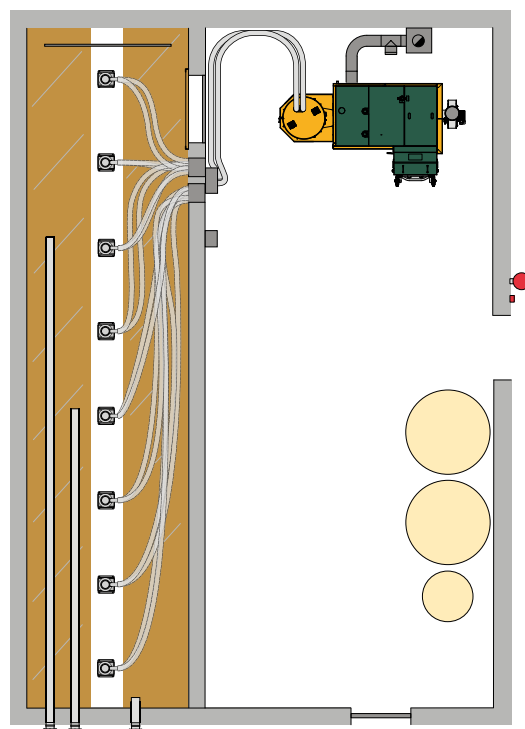
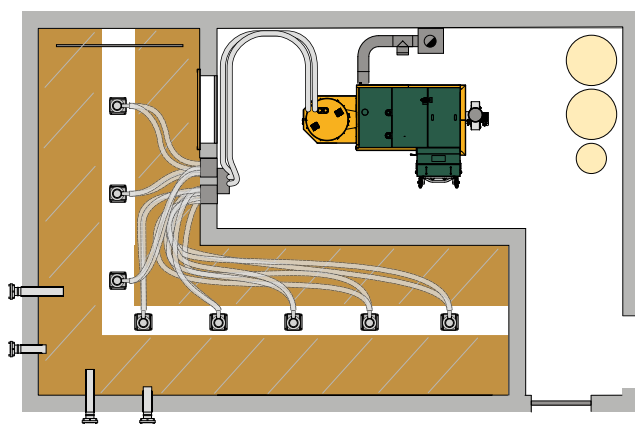
KWB Pelletfire^{Plus} type MF2 GS 45-135 kW

Pellet &
combi
8-40kW

KWB sampling probes: optimal safety thanks to 8 separate removal points in the storage room



KWB switchover unit: automatic switchover with 8 sampling probes



KWB Pellet Big Bag and suction conveyor

- ✓ Pellets up to 8 mm can be used
- ✓ Very high degree of space utilisation
- ✓ Possible to set up outdoors (if protected from the weather)
- ✓ Available in 4 different sizes



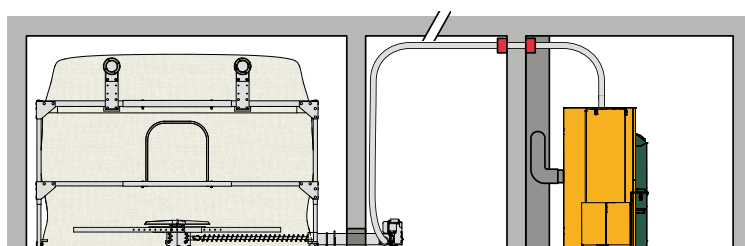
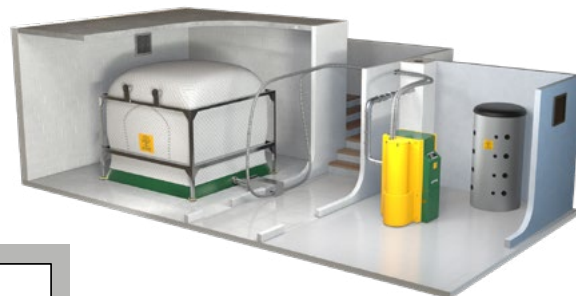
Compatible with

KWB Easyfire type EF2 GS 8-38 kW

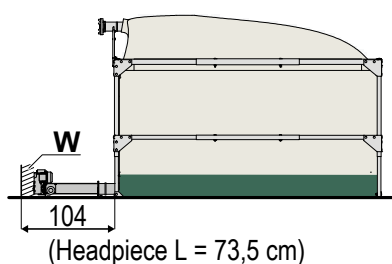
KWB Easyfire 1 type EF1 GS 10-20 kW

KWB Combifire type CF2 GS 18-38 kW

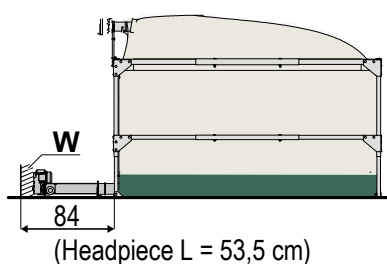
KWB Pelletfire^{Plus} type MF2 GS 45-135 kW



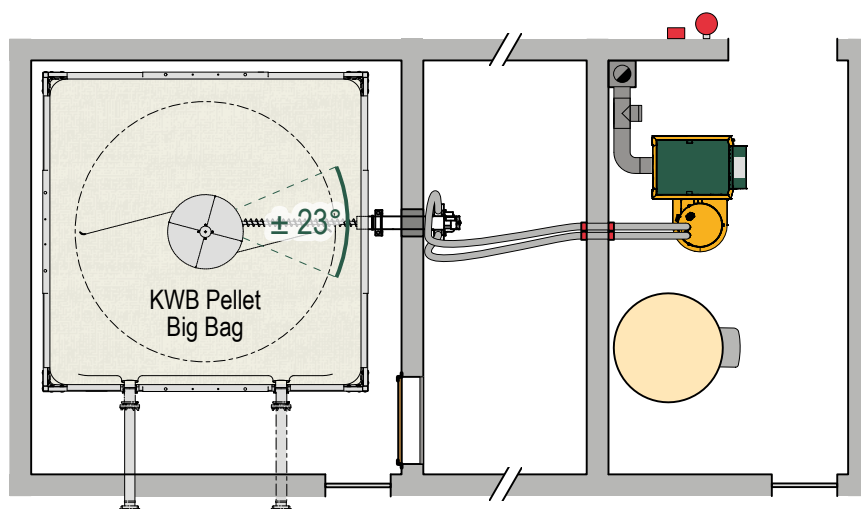
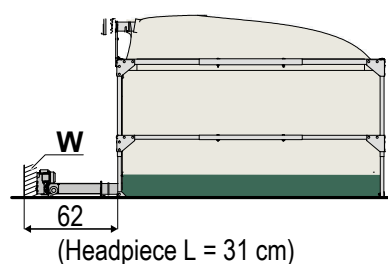
Standard variant



Medium variant



shorter version



Fuel pouring heights

The integrated injection nozzles are height-adjustable, depending on the room height the pouring height and storage volume may vary. Please comply with the EN ISO 20023 standard when designing the pellet storage.

KWB Pellet Big Bag and elbow screw

- ✓ Very high degree of space utilisation
- ✓ No special storage room adaptation required
- ✓ Suitable for low and moist rooms
- ✓ Also realizable as case solution.

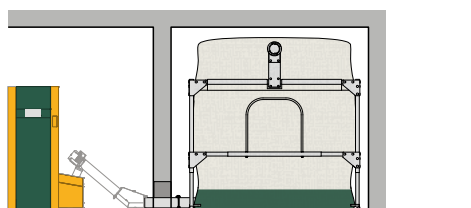
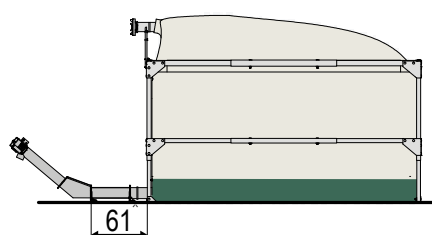
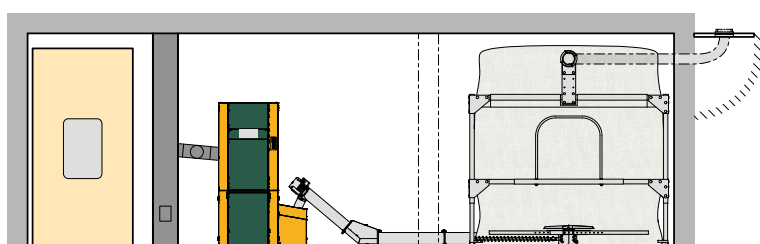


Compatible with

KWB Easyfire type EF2 S 8-38 kW

KWB Combifire type CF2 S 18-38 kW

KWB Pelletfire^{Plus} type MF2 S 45-135 kW



* Can also be realized with 41 cm.

KWB Pellet Big Bag – Technical data

Length & Width	Size:	[m]	EF2/CF2	EF2/CF2		
			1515	2020	2525	3030
			1,5x1,5m	2,0 x 2,0m	2,5 x 2,5m	3,0 x 3,0 m
Fill quantity** (max.):	Injection nozzle bottom	[t]	< 2,2t	< 3,9t	< 6,5t	< 9,3t
Fill quantity** (max.):	Injection nozzle top	[t]	< 2,3t	< 4,1t	< 4,9t	< 10,5t
Fill height ***	FH:	[cm]	162 cm or 177 cm or 192 cm			
Room height (min.)	RH:	[cm]	Fill height + ≥ 20 cm			
Fill openings	Quantity	Pcs.	1 Pc.	1 Pc.	2 Pcs.	2 Pcs.
Fill distance	FD:	[cm]	-	-	100cm	140cm

** The capacity depends on: the filling technique, pellet characteristics, available space, container size and height of the injection nozzles!

*** Fill height is dependent on the position of the injection nozzles. Depending on the locally applicable fire safety regulations, the KWB Pellet Big Bag can be set up directly in the heating room if a specified minimum distance to the heating system is maintained. If appropriately protected against weather influences the Big Bag can be set up outdoors. Local fire safety regulations must be strictly complied with. The Big Bag does not require any air extraction – the air escapes through the fabric and via a window or vent (at least 400 cm²) to the outside. Structural characteristics of the place of installation: dry, horizontal, smooth, clean, able to carry maximum load – at least 1.500 kg/m²

KWB Pellet Box and suction conveyor

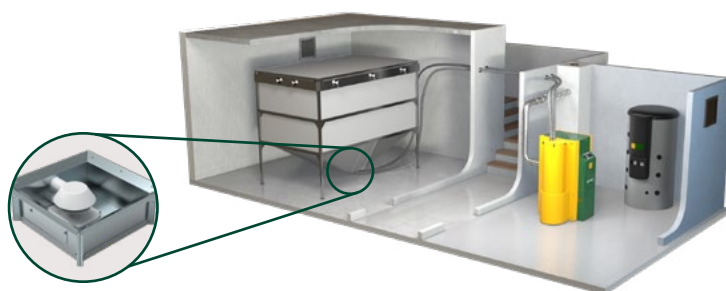
- ✓ Height adjustable 180 / 190 cm – 250 cm
- ✓ Durable steel frame
- ✓ Optimal emptying

Compatible with

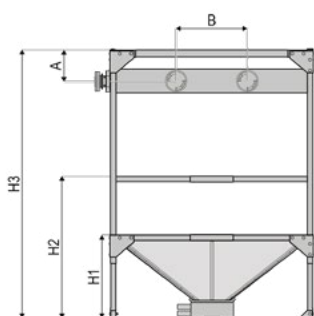
KWB Easyfire 1 type EF1 GS 10-20 kW

KWB Easyfire type EF2 GS 8-38 kW

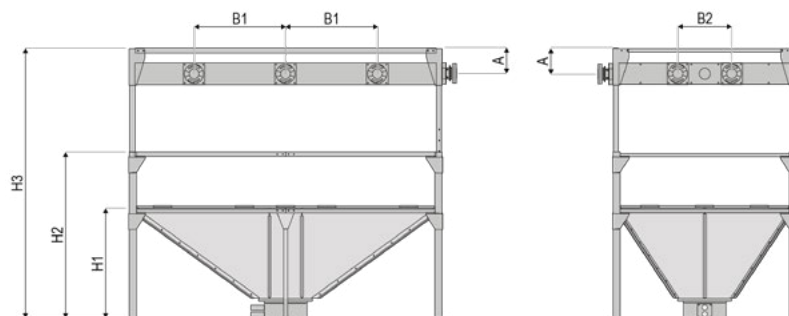
KWB Combifire type CF2 GS 18-38 kW



Drawing for a square option



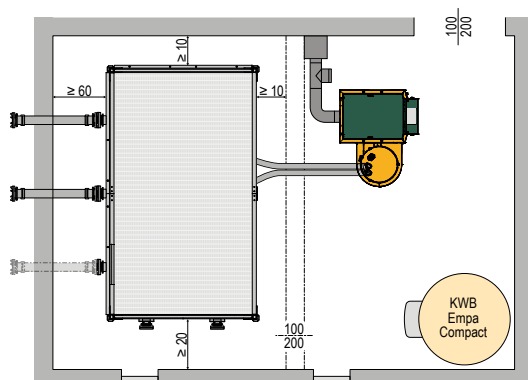
Drawing for a rectangular option



Type designation	Unit	Type 12	Type 17	Type 21	Type 25	Type 17/29	Type 21/29	Type 29
Volume	m ³	1,7–2,6	3,2–5,4	4,4–7,7	6,4–10,9	5,6–8,3	6,6–10,2	9,6–14,1
Fill quantity* (max.):	t	1,1–1,7	2,1–3,5	2,8–5,0	4,2–7,0	3,6–5,4	4,3–6,6	6,1–9,2
Injection connectors	Pcs.	1	1	1	1	1 or 2**	1 or 2**	1 or 2**
Suction nozzle	Pcs.	1	1	1	1	1	1	1
Width	cm	120	170	210	250	170	210	290
Length	cm	120	170	210	250	290	290	290
A	cm	23	23	23	23	23	23	23
B	cm	50	50	50	90	–	–	–
B1	cm	–	–	–	–	85	85	85
B2	cm	–	–	–	–	50	50	50
H1	cm	70	70	86	86	103	103	103
H2	cm	136	136	136	136	155	155	155
H3 – adjustable for height	cm	180–250	180–250	180–250	180–250	190–250	190–250	190–250

* The capacity depends on: the filling technique, pellet characteristics, available space, container size and height of the container!

** When filling on the narrow side, 2 filling nozzles will be required, if filling on the broader side, 3 filling nozzles will be required. The scope of delivery includes 3 nozzles.



Fuel pouring heights

The KWB Pellet Box is height-adjustable and can be individually adjusted to the respective room height. Please comply with the EN ISO 20023 standard when designing the pellet storage.