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quickly as a [furnace](#) but cannot smelt anything else. It also serves as an [armorer's job site block](#).



View all renders

Renewable	Yes
Stackable	Yes (64)
Tool	
Blast resis- tance	3.5
Hardness	3.5
Luminous	Yes (13) (when active)
Transparent	Partial (when active)
Flammable	No
Catches fire from lava	No

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## Obtaining

### Breaking

A blast furnace can be picked up using any [pickaxe](#). If mined without a pickaxe, it does not drop.

Blast furnaces drop their contents when broken.

Block	Blast Furnace
Hardness	3.5
Tool	
Breaking time <sup>[A]</sup>	
Default	17.5
Wooden	2.65
Stone	1.35
Iron	0.9
Diamond	0.7
Netherite	0.6
Golden	0.45

1. Times are for unenchanted tools as wielded by players with no status effects, measured in seconds. For more information, see [Breaking § Speed](#).

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## Usage

Blast furnaces can be pushed by [pistons](#).<sup>[*Bedrock Edition only*]</sup>

## Smelting

*Main article: [Smelting](#)*

Blast furnaces are similar to furnaces, but can [smelt](#) only raw [ore](#), [ore](#) blocks and [tools/armor](#) made of [iron](#), [gold](#) or [chainmail](#). Blast furnaces serve as the counterpart to [smokers](#), which are used mainly to cook food faster. Smelting equipment yields one iron or gold nugget from their respective materials.

The GUI for the blast furnace, same as the ordinary furnace's.

Once an [item](#) and a [fuel](#) are placed into the blast furnace, the block state changes to `lit` and the item is smelted twice as fast as a regular furnace. Fuel is also used at double the rate of regular furnaces, so the number of items smelted per fuel stays the same. The product can then be collected by using the output. Like normal [furnaces](#), a [hopper](#) can be used to feed items into a blast furnace and can also pick up items from it.

## Changing profession

If a village has a blast furnace that has not been claimed by a villager, any nearby villager who has not chosen a [job site](#) block has a chance to change their profession to armorer.

## Light source

Blast furnaces emit a [light](#) level of 13 when active, similar to normal [furnaces](#).

## Custom name

By default, the interface of a blast furnace is labeled "Blast Furnace", but this name can be customized by naming it in an [anvil](#) before placing it, or by changing the `CustomName` tag using the `/data` command.<sup>[*Java Edition only*]</sup>

## Lock





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drum" sounds.

## Sounds

### Generic

*Java Edition:*

Sound	Subtitles	Source	Description	Resource location	Translation key	Volume	Pitch	<div><div>[Collapse]</div>Attenuation distance</div>
	Block broken	Blocks	Once the block has broken	<div><div>block</div><div>.stone</div><div>.break</div></div>	<div><div>subtitles</div><div>.block</div><div>.generic</div><div>.break</div></div>	1.0	0.8	16
	Block placed	Blocks	When the block is placed	<div><div>block</div><div>.stone</div><div>.place</div></div>	<div><div>subtitles</div><div>.block</div><div>.generic</div><div>.place</div></div>	1.0	0.8	16
	Block breaking	Blocks	While the block is in the process of being broken	<div><div>block</div><div>.stone</div><div>.hit</div></div>	<div><div>subtitles</div><div>.block</div><div>.generic</div><div>.hit</div></div>	0.25	0.5	16
	<i>None</i> <sup><span>[sound 1]</span></sup>	<i>Entity-Dependent</i>	Falling on the block with fall damage	<div><div>block</div><div>.stone</div><div>.fall</div></div>	<i>None</i> <sup><span>[sound 1]</span></sup>	0.5	0.75	16
	Footsteps	<i>Entity-Dependent</i>	Walking on the block	<div><div>block</div><div>.stone</div><div>.step</div></div>	<div><div>subtitles</div><div>.block</div><div>.generic</div><div>.footsteps</div></div>	0.15	1.0	16

1. MC-177082

*Bedrock Edition:*

Sound	Source	Description	Resource location	Volume	<div><div>[Collapse]</div>Pitch</div>
	Blocks	Once the block has broken	<div><div>dig</div><div>.stone</div></div>	1.0	0.8-1.0
	Blocks	When the block is placed	<div><div>dig</div><div>.stone</div></div>	1.0	0.8-1.0
	Blocks	While the block is in the process of being broken	<div><div>hit</div><div>.stone</div></div>	0.37	0.5

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## Unique

*Java Edition:*

Sound	Subtitles	Source	Description	Resource location	Translation key	Volume	Pitch	<b>[Collapse]</b> Attenuation distance
	Blast furnace crackles	Blocks	Randomly while lit	<div>block</div> <div>.blastfurnace</div> <div>.fire_crackle <sup>[sound 1]</sup></div>	<div>subtitles.block</div> <div>.blastfurnace</div> <div>.fire_crackle <sup>[sound 1]</sup></div>	1.0	1.0	16
	Armorer works	Friendly Creatures	Randomly while an armorer is working	<div>entity.villager</div> <div>.work_armorer</div>	<div>subtitles.entity</div> <div>.villager</div> <div>.work_armorer</div>	1.0	0.8-1.2	16
	Chest locked <sup>[sound 2]</sup>	Blocks	When a player attempts to open a blast furnace locked using the <b>Lock</b> tag	<div>block.chest</div> <div>.locked <sup>[sound 2]</sup></div>	<div>subtitles.block</div> <div>.chest</div> <div>.locked <sup>[sound 2]</sup></div>	1.0	1.0	16

- MC-179832
- MC-98316 – Wrong subtitles caused by missing distinction

*Bedrock Edition:*

Sound	Source	Description	Resource location	Volume	<b>[Collapse]</b> Pitch
	Blocks	Randomly while lit	<div>block</div> <div>.blastfurnace</div> <div>.fire_crackle</div>	3.0	0.6
	Blocks	Randomly while an armorer is working	<div>block</div> <div>.blastfurnace</div> <div>.fire_crackle</div>	3.0	0.6

## Data values

### ID

*Java Edition:*

Name	Identifier	Form	Translation key
Blast Furnace	<div>blast_furnace</div>	Block & Item	<div>block.minecraft.blast_furnace</div>



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DIOCK			Item <sup>[i 4]</sup>		
-------	--	--	-----------------------	--	--

- 1. ID of block's direct item form, which is used in savegame files and addons.
- 2. Available with `/give` command.
- 3. The block's direct item form has the same id as the block.
- 4. Unavailable with `/give` command

Name	Savegame ID
Block entity	BlastFurnace

Block states

See also: [Block states](#)

*Java Edition:*

Name	Default value	Allowed values	Description
facing	north	east north south west	The direction the blast furnace's opening faces. The opposite from the direction the player faces while placing the blast furnace.
lit	false	false true	If the blast furnace is lit.

*Bedrock Edition:*

Name	Metadata Bits	Default value	Allowed values	Values for Metadata Bits	Description
facing_direction (Deprecated)	0x1 0x2 0x4	3	2 3 4 5	2 3 4 5	The direction the blast furnace's opening faces. <ul style="list-style-type: none"><li>2: facing north</li><li>3: facing south</li><li>4: facing west</li><li>5: facing east</li></ul>



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					direction the player faces while placing the blast furnace.
--	--	--	--	--	--

### Block data

A blast furnace has a block entity associated with it that holds additional data about the block.

*Java Edition:*

See also: [Block entity format](#)

Block entity data

Tags common to all block entities
<b>BurnTime</b> : Number of ticks left before the current fuel runs out.
<b>CookTime</b> : Number of ticks the item has been smelting for. The item finishes smelting when this value reaches 200 (10 seconds). Is reset to 0 if BurnTime reaches 0.
<b>CookTimeTotal</b> : Number of ticks It takes for the item to be smelted.
<b>CustomName</b> : Optional. The name of this container in JSON text component, which appears in its GUI where the default name ordinarily appears.
<b>Items</b> : List of items in this container. <ul style="list-style-type: none"><li>: An item in the blast furnace, including the slot tag:<ul style="list-style-type: none"><li>Slot 0: The item(s) being smelted.</li><li>Slot 1: The item(s) to use as the next fuel source.</li><li>Slot 2: The item(s) in the result slot.</li></ul></li></ul>
Tags common to all items
<b>Lock</b> : Optional. When not blank, prevents the container from being opened unless the opener is holding an item whose name matches this string.
<b>RecipesUsed</b> : Recipes that have been used since the last time a recipe result item was manually removed from the GUI. Used to calculate experience given to the player when taking out the resulting item. <ul style="list-style-type: none"><li><b>recipe ID</b>: How many times this specific recipe has been used. The <i>recipe ID</i> is the identifier of the smelting <a href="#">recipe</a>, as a <a href="#">resource location</a>, as used in the <code>/recipe</code> command.</li></ul>

*Bedrock Edition:*

See [Bedrock Edition level format/Block entity format](#).

### History



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	<b>18w50a</b>	<a href="#">desert</a> and <a href="#">taiga</a> villages. Blast furnaces are now functional and <a href="#">craftable</a> .
	<b>19w03a</b>	<a href="#">Sounds</a> have been added for blast furnaces.
	<b>19w11a</b>	Blast furnaces now serve as armorer <a href="#">villagers</a> ' job site block.
<b>1.16</b>	<b>20w06a</b>	Added <a href="#">ancient debris</a> , which can be <a href="#">smelted</a> in blast furnaces.
<b>1.17</b>	<b>21w14a</b>	Added <a href="#">raw metals</a> , which can be smelted in blast furnaces.
<b>1.20</b>	<b>23w12a</b>	Blast furnaces now generate in <a href="#">trail ruins</a> .
<b>Bedrock Edition</b>		
<b>1.9.0</b>	<b>beta 1.9.0.2</b>	Added blast furnaces.
<b>1.10.0</b>	<b>beta 1.10.0.3</b>	A <a href="#">crafting</a> recipe has been added for the blast furnace. Blast furnaces now generate in the new <a href="#">village</a> armorer houses.
	<b>1.11.0 1.11.0.1</b>	Blast furnaces are now functional.
<b>1.20.30</b>	<b>beta 1.20.30.20</b>	Blast furnaces now use the <code>minecraft:cardinal_direction</code> <a href="#">block state</a> instead of <code>facing_direction</code> .
<b>Legacy Console Edition</b>		
	<b>1.91</b>	Added blast furnaces.

Lit blast furnace "item"

The following content is transcluded from [Technical blocks/Lit Blast Furnace](#).

<b>Bedrock Edition</b>	
<b>?</b>	Lit blast furnaces exist as an item.

Appearances

<b>Bedrock Edition</b>	
<b>?</b>	Lit blast furnaces use this model.

Names

**Bedrock Edition**

- ? - ?: `tile.lit_blast_furnace.name`





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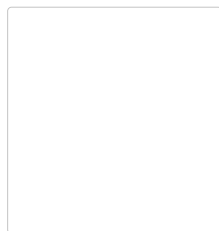
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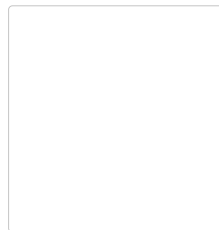
Facing south



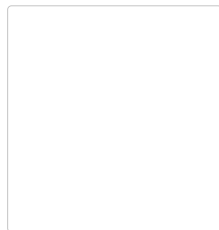
Facing south, lit



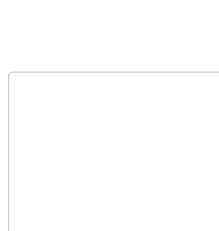
Facing west



Facing north



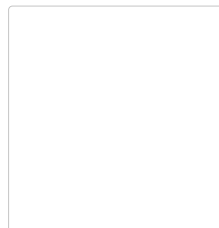
Facing east



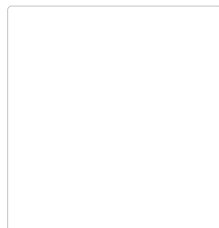
Facing east, lit



#### Bedrock Edition



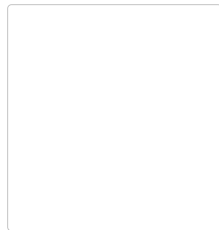
Facing south



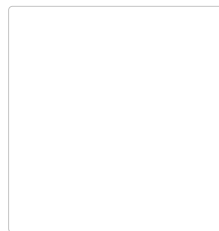
Facing south, lit



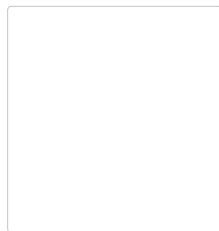
Facing west



Facing north

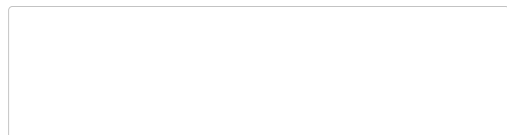


Facing east



Facing east, lit

#### Screenshots





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empty%20or%20resolution%20in%20%281%2C%202%2C%206%29%29%20and%20%28summary%20~%20%22Blast%20Furnace%22%29%20order%20by%20resolution%20desc).

## See also

- Furnace
- Smoker

## References

## External Links

- Block of the Week: Blast Furnace (<https://www.minecraft.net/en-us/article/block-week--blast-furnace>) – Minecraft.net on September 10, 2020

	<b>Blocks</b>	<b>[Collapse]</b>
	<b>Natural</b>	<b>[Expand]</b>
	<b>Biota</b>	<b>[Expand]</b>
	<b>Building</b>	<b>[Expand]</b>
	<b>Utility</b>	<b>[Collapse]</b>
	Anvil ( Chipped Damaged)	
	Barrel Beacon	
	Brewing Stand	
	Cartography Table Chest	
	( Ender) Chiseled Bookshelf	
<b>Interactable</b>	Crafting Table Enchanting Table	
	Fletching Table Furnace	
	( <b>Blast</b> Smoker) Grindstone	
	Lectern Loom Shulker Box	
	Sign ( Hanging) Smithing Table	
	Stonecutter	
	Banners Beehive Beds	
	Bell Cake ( with Candle)	
	Campfire ( Soul) Cauldron	
	( Lava Powder Snow Water)	
	Composter Conduit	
	End Gateway End Portal	
<b>Utilizable</b>	End Portal Frame Farmland	
	Flower Pot Frosted Ice	
	Heads Item Frame ( Glow)	
	Jukebox Ladder Lodestone	
	Monster Spawner Nether Portal	



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		Lamp	Torch)	Slime Block
		Target	Trapped Chest	
		Tripwire Hook (	Tripwire)	
<b>Education Edition only</b>		Border	Chalkboard	
		Allow	Compound Creator	
		Colored Torches	Deny	
<b>BE &amp; edu only</b>		Element Constructor	Heat Block	
		Lab Table	Material Reducer	
		Underwater TNT		
		Underwater Torch		
		<b>Creative only</b>		<b>[Expand]</b>
		<b>Commands only</b>		<b>[Expand]</b>
		<b>Unimplemented</b>		<b>[Expand]</b>
		<b>Unused</b>		<b>[Expand]</b>
		<b>Joke features</b>		<b>[Expand]</b>
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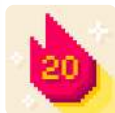
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