

# Dogelog Player Installation

Version 1.2.0, March 16, 2024



XLOG Technologies AG

# Dogelog Prolog

## Dogelog Player 1.2.0 Installation Guide

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... Defined predicates with arity>0, both static and dynamic, are indexed on the functor of their first argument [1, p.17] ...

[1] Language Reference, Jekejeke Prolog 0.8.1, XLOG Technologies AG,  
Switzerland, February 22<sup>nd</sup>, 2010

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## Change history

Jan Burse, December 14, 2021, 0.1:

- Forked from language reference.

Jan Burse, January 27, 2024, 0.2:

- Release notes 0.9.x removed, release notes 1.0.x removed, section canned removed.

Jan Burse, January 27, 2024, 0.3:

- Section quick start introduced, section known issues introduced.

## 1 Introduction

- **Quick Start:** We give an overview of the available GIT repositories and the typical command lines in our distributions.
- **Release 1.1:** This section lists the changes concerning the Dogelog player executable, documentation and samples for releases 1.1.x
- **Known Issues:** In the following we list some known issues that might take some time until they get resolved.

## 2 Quick Start

We give an overview of the available GIT repositories and the typical command lines. Depending on needs Dogelog Player can be found in the following distributions:

- **Dogelog Distribution:** This distribution contains the transpiler, the core and the liblets. It has the JavaScript, Python and Java targets in its original form.
- **Novacore Distribution:** This distribution contains the novacore testcases. It has the canned JavaScript, Python and Java targets bundled.
- **Tutorial Distribution:** This distribution contains the tutorial examples. It has the canned JavaScript, Python and Java targets bundled.

### 2.1 Dogelog Distribution

This distribution contains the transpiler, the core and the liblets. It has the JavaScript, Python and Java targets in its original form.

#### GIT Access

For binary files and source code initially:

```
git clone https://www.dogelog.ch/dogelog/.git
```

For updates as desired:

```
cd dogelog  
git pull
```

#### JavaScript Command Line

To run Dogelog Player for JavaScript top-level as follows:

```
cd dogelog  
node player/canned/dogelog.mjs
```

#### Python Command Line

To run Dogelog Player for Python top-level:

```
cd dogelog  
pypy3 playerpy/canned/dogelog.py
```

## Java Command Line

To run the Dogelog Player for Java top-level:

```
cd dogelog
java -cp playerj/canned/dogelog.zip:playerj/canned Index
```

## Additional Links

- User Manuals of the Dogelog Spieler.
- Source code and Archives of the Dogelog Player.

## 2.2 Novacore Distribution

This distribution contains the novacore testcases. It has the canned JavaScript, Python and Java targets bundled.

### GIT Access

For binary files and sourc code initially:

```
git clone https://www.dogelog.ch/dogelog/.git
```

For updates as desired:

```
cd dogelog  
git pull
```

### Ant Command Line

To execute the Novacore test cases:

```
cd novacore  
ant -f 07_envir/run.xml
```

### Additional Links

- Results of the Novacore Testcases.
- Source code and Archives of the Novacore Testcases.

## 2.3 Tutorial Distribution

This distribution contains the tutorial examples. It has the canned JavaScript, Python and Java targets bundled.

### GIT Access

For binary files and source code initially:

```
git clone https://www.xlog.ch/tutor/.git
```

For updates as desired:

```
cd tutor  
git pull
```

### Web Filesystem Command Line

To view tutorial at <http://localhost:8000/>:

```
cd tutor  
webfsd
```

### Additional Links

- View Tutorial at our web site.
- Source code and Archives of the Tutorial.

## 3 Release 1.2

This section lists the changes concerning the Dogelog player executable, documentation and samples:

- [Release 1.2.0](#)

### 3.1 Release 1.2.0

The following features and bug fixes were provided for the Dogelog player of version 1.2.0:

#### Language Reference

- Text loader now consults dynamic predicates without static optimizations.
- .

#### Frequent Reference

- The predicate copy\_time/2 now has a ternary version with copy time options.
- The bind/4 predicate with a true option is now the predicate bind\_capture/3.
- The bind/4 and bind\_capture/3 predicates new versions with an element.
- The listing/[0,1] predicates now show multifile declaration of a predicate.
- The listing/[0,1] predicates now show dynamic declaration of a predicate.
- New predicates svg\_image/[5,6] in library(misc/vector) introduced.
- New type/1 and body/2 open option in open/4 in library(util/spin).
- New predicate http\_input\_new/3 in library(util/spin).
- New predicate http\_output\_new/3 in library(util/spin).
- .

#### Host Interface

- Dogelog Player core move into subfolder nova for all targets.
- Cross compiler now compiles dynamic predicates without static optimizations.
- .

## 4 Release 1.1

This section lists the changes concerning the Dogelog player executable, documentation and samples:

- [Release 1.1.6](#)
- [Release 1.1.5](#)
- [Release 1.1.4](#)
- [Release 1.1.3](#)
- [Release 1.1.2](#)
- [Release 1.1.1](#)
- [Release 1.1.0](#)

### 4.1 Release 1.1.6

The following features and bug fixes were provided for the Dogelog player of version 1.1.6:

#### Language Reference

- The predicates get\_code/2 and peek\_code/2 are now realized via promise.
- Streams do not anymore compress CR, LF and CRLF into a single LF.
- The Prolog tokenizer now supports CR in its input stream.
- The various colorizers now support CR in their input stream.
- New predicate get\_compress/2 that does single LF compression.
- The predicate get\_atom/3 is now bootstrapped from get\_compress/2.
- The top-level session console input is now realized via promise.
- The predicate open/3 in read mode is now realized via promise.
- The predicate file\_property/2 is now realized via promise.
- The predicate close/1 for an input stream is now realized via promise.

#### Frequent Reference

- New library(spin) with HTTP client and HTTP server introduced.
- Predicate open/4 moved to new library(spin).
- The predicate open/4 in read mode is now realized via promise.
- The predicate http\_input\_new/2 is now realized via promise.

#### Host Interface

- The instruction '\$YIELD'/1 now takes a promise.
- New register\_signal() can be used by promises to indicate errors.
- Java target now supports promises via bouncer semaphore.
- Python target now supports promises via asyncio.to\_thread.

## 4.2 Release 1.1.5

The following features and bug fixes were provided for the Dogelog player of version 1.1.5:

### Language Reference

- New predicates `absolute_file_name/2` und `is_absolute_file_name/1` exposed.
- New predicates `file_directory_name/2` und `file_base_name/1` exposed.
- The file specifiers `library/1` and `foreign/1` now supports `(/)/2` segmented paths.
- The predicate `sys_time_atom/3` now supports mode `(+, -, +)`.
- New Prolog flag `host_info` for host language version introduced.
- The predicate `retractall/1` has now a more linear than quadratic behaviour.

### Frequent Reference

- Predicate `tag/2` from `library(markup)` renamed to `tag_format/2`.
- New predicate `dom_writer_new/2` introduced.
- New predicate `tag/2` and `tag_format/3` introduced.
- New folders `library(util)`, `library(tester)` and `library(misc)` now used.
- New Prolog text library(`misc/vector`) now used for SVG predicates.
- New predicates `svg_rect/5` and `svg_path/2` introduced.
- New predicate `fancy_file/3` in `library(beautify)` introduced.
- File predicates moved from `library(random)` to new library(`files`).
- New predicates `delete_file/2` and `copy_binary/2` in `library(files)`.
- New predicates `copy_text/2` and `copy_time/2` in `library(files)`.

### Host Interface

- The class `Reader` has been renamed to `Source`.
- The class `Writer` has been renamed to `Sink`.
- The class `Writer` now supports a `notify()` callback for flushing.
- The class `Writer` now supports an `offset` field for indentation.

### Transpiler Tooling

- New folder `grind` with collector and colorizer for JavaScript.
- New folder `grind` with collector and colorizer for Python.
- New folder `grind` with collector and colorizer for Java.
- New folder `grind` with walker, colorizers and presenters.

## 4.3 Release 1.1.4

The following features and bug fixes were provided for the Dogelog player of version 1.1.4:

### Language Reference

- New type/1 property introduced in file\_property/2 predicate.
- New generational garbage collection introduced.
- Full GC now called when areas reach GC\_MAX\_TRAIL.
- Generational GC now called when each area reaches 1/3 GC\_MAX\_TRAIL.

### Frequent Reference

- The ir\_object\_float\_XXX built-ins have been removed from Python.
- The ir\_object\_XXX built-ins have been removed from Python.
- The ir\_object\_float\_XXX built-ins have been removed from Java.
- The ir\_object\_XXX built-ins have been removed from Java.
- The ir\_object\_float\_XXX built-ins moved to library(react) of JavaScript.
- The ir\_object\_float built-ins moved to library(markup) of JavaScript.
- The predicate measure\_time/2 is now multi-file in library(runner).
- New predicate directory\_member/2 in library(random).

## 4.4 Release 1.1.3

The following features and bug fixes were provided for the Dogelog player of version 1.1.3:

### Language Reference

- The built-in symbol/1 has been removed.
- The built-ins ir\_array\_new/2 and ir\_array\_push/2 have been removed.
- The built-in ir\_array\_list/2 has been removed.
- New built-ins ir\_place\_new/2 and ir\_skeleton\_new/3 introduced.
- New built-ins ir\_is\_site/1 and ir\_pred\_site/2 introduced.
- New built-in ir\_site\_name/2 introduced.
- The untrans phase was moved from albufeira.p to dynamic.p.
- New encode phase introduced in dynamic.p.

### Programming Interface

- Flags MASK\_MACH\_FUNC removed.
- New neck API make\_check() introduced.
- New neck APIS exec\_deref() and exec\_unify() introduced.
- Flags MASK\_MACH\_ARIT and MASK\_MACH\_EVAL removed.
- New neck API make\_arithmetic() introduced.
- New neck API exec\_eval() introduced.

## 4.5 Release 1.1.2

The following features and bug fixes were provided for the Dogelog player of version 1.1.2:

### Language Reference

- Evaluable function now throw exception when used as predicate.
- Predicates now throw exception when used as evaluable function.

### Programming Interface

- New flag MASK\_MACH\_ARIT introduced in make\_dispatch().
- The call make\_special() now takes a flags parameter.
- New flag MASK\_MACH\_EVAL introduced in make\_special().
- The call eval\_term() now exposed in dogelog.mjs.
- Java version of Dogelog Player released.

## 4.6 Release 1.1.1

The following features and bug fixes were provided for the Dogelog player of version 1.1.1:

### Language Reference

- The predicate time/1 has been internationalized.
- The predicate statistics/0 has been internationalized.
- The Prolog flag version\_data now returns date/1 extension.
- The welcome banner has been internationalized.
- The predicate prolog/0 has been removed.
- New predicate file\_property/2 introduced.
- New predicate set\_file\_property/2 introduced.
- The predicate absolute\_file\_name/2 has been removed.
- New predicate source\_property/1 introduced.
- New predicate make/0 introduced.

### Programming Interface

- The call set\_stage() has been moved from index.mjs to dogelog.mjs.
- The call set\_stage() has been moved from index.py to dogelog.py.
- The call clear() has been moved from index.mjs to dogelog.mjs.
- The call clear() has been moved from index.py to dogelog.py.
- New call get\_stage() introduced in dogelog.mjs.
- New call get\_stage() introduced in dogelog.py.

## 4.7 Release 1.1.0

The following features and bug fixes were provided for the Dogelog player of version 1.1.0:

### Language Reference

- The strip\_async/1 option has been removed from bundle\_add/[2,3].
- The bundle\_clear/1 command has been removed.
- The bundlepy\_clear/1 command has been removed.
- New copy\_file/[2,3] commands have been introduced.
- New canonical\_add/2 command has been introduced.
- Canned Prolog text of libraries is now canonified.
- New Prolog flag sys\_locale introduced, for the current locale.
- New predicate strings/2 introduced, current locale convenience.
- New predicate strings/3 introduced, extensible multifile database.

## 5 Known Issues

In the following we list some known issues that might take some time until they get resolved:

- **Dogelog Issues:** The issues that pertain to the transpiler, the core and the liblets.
- **Novacore Issues:** The issues that pertain to the novacore testcases.
- **Tutorial Distribution:** The issues that pertain to the tutorial examples.

### 5.1 Dogelog Issues

The issues that pertain to the transpiler, the core and the liblets:

- ensure\_loaded/1 cannot be run from within a task.
- Event loop for the Java target not yet available.
- Parallel task execution constructs not yet provided.
- .

### 5.2 Novacore Issues

The issues that pertain to the novacore testcases:

- .

### 5.3 Tutorial Issues

The issues that pertain to the tutorial examples:

- webify/1 is not yet available from canned targets.
- .

## 6 Indexes

The Dogelog player module files define predicates. The following indexes are provided:

- **Predicates:** This is an alphabetical index of the predicates.

### 6.1 Predicates

This is an alphabetical index of the predicates from the reference manual documentation and the frequent predicate documentation of the Dogelog player.

Indicator	Location
!/0	core.p
\$ALT/1	Special.java, special.mjs, special.py
\$COMPARE/3	Eval.java, eval.mjs, eval.py
\$CUT/1	Special.java, special.mjs, special.py
\$EVAL/2	Eval.java, eval.mjs, eval.py
\$MARK/1	Special.java, special.mjs, special.py
\$SEQ/2	Special.java, special.mjs, special.py
\$YIELD/1	Special.java, special.mjs, special.py
* /3	Eval.java, eval.mjs, eval.py
** /3	Eval.java, eval.mjs, eval.py
+ /3	Eval.java, eval.mjs, eval.py
,/2	core.p
(-/2	Eval.java, eval.mjs, eval.py
(-/3	Eval.java, eval.mjs, eval.py
-> /2	core.p
. /2	loader.p
/ /3	Eval.java, eval.mjs, eval.py
// /3	Eval.java, eval.mjs, eval.py
\ \ /3	Eval.java, eval.mjs, eval.py
;/2	core.p
< /2	Eval.java, eval.mjs, eval.py
<< /3	Eval.java, eval.mjs, eval.py
= /2	Special.java, special.mjs, special.py
=.. /2	Special.java, special.mjs, special.py
=:= /2	Eval.java, eval.mjs, eval.py
=< /2	Eval.java, eval.mjs, eval.py
== /2	Eval.java, eval.mjs, eval.py
=\= /2	Eval.java, eval.mjs, eval.py
> /2	Eval.java, eval.mjs, eval.py
>= /2	Eval.java, eval.mjs, eval.py
>> /3	Eval.java, eval.mjs, eval.py
@< /2	Eval.java, eval.mjs, eval.py
@=< /2	Eval.java, eval.mjs, eval.py
@> /2	Eval.java, eval.mjs, eval.py
@>= /2	Eval.java, eval.mjs, eval.py
(\+)/1	core.p
\= /2	core.p
\ \ /2	Eval.java, eval.mjs, eval.py
\ \ /3	Eval.java, eval.mjs, eval.py
\ \= /2	Eval.java, eval.mjs, eval.py
^ /3	Eval.java, eval.mjs, eval.py
abolish/1	dynamic.p
abort/0	core.p

abs/2	Eval.java, eval.mjs, eval.py
absolute_file_name/2	engine.p
acos/2	Eval.java, eval.mjs, eval.py
acyclic_term/1	Special.java, special.mjs, special.py
aggregate/3	liblet/aggregate.p
aggregate_all/3	liblet/aggregate.p
append/3	core.p
arg/3	Special.java, special.mjs, special.py
asin/2	Eval.java, eval.mjs, eval.py
asserta/1	dynamic.p
assertz/1	dynamic.p
atan/2	Eval.java, eval.mjs, eval.py
atan2/3	Eval.java, eval.mjs, eval.py
atom/1	Special.java, special.mjs, special.py
atom_arg/3	Eval.java, eval.mjs, eval.py
atom_codes/2	Eval.java, eval.mjs, eval.py
atom_concat/3	Eval.java, eval.mjs, eval.py
atom_integer/3	Special.java, special.mjs, special.py
atom_length/2	Eval.java, eval.mjs, eval.py
atom_number/2	Special.java, special.mjs, special.py
atom_reference/2	Special.java, special.mjs, special.py
atom_split/3	Eval.java, eval.mjs, eval.py
atomic/1	Special.java, special.mjs, special.py
bagof/3	liblet/aggregate.p
beautify_file/2	liblet/tester/beautify.p
beautify_file/3	liblet/tester/beautify.p
between/3	core.p
bind/3	liblet/misc/react.p
bind/4	liblet/misc/react.p
build_file/2	liblet/tester/indexer.p
call/1	core.p
call_later/2	core.p
call_nth/2	liblet/sequence.p
callable/1	Special.java, special.mjs, special.py
catch/3	core.p
ceiling/2	Eval.java, eval.mjs, eval.py
chain/2	core.p
change_arg/3	Special.java, special.mjs, special.py
char_code/2	Eval.java, eval.mjs, eval.py
clause/2	dynamic.p
clear/0	liblet/misc/react.p
close/1	Runtime.java, runtime.mjs, runtime.py
close_output_atom_stream/2	liblet/util/auxlib.java, liblet/util/auxlib.mjs, liblet/util/auxlib.py
code_numeric/2	Special.java, special.mjs, special.py
code_type/2	Special.java, special.mjs, special.py
collect_file/3	liblet/tester/indexer.p
compare/3	core.p
compound/1	Special.java, special.mjs, special.py
copy_term/2	Special.java, special.mjs, special.py
cos/2	Eval.java, eval.mjs, eval.py
count_batch/1	liblet/tester/runner.p
create_task/1	core.p
current_error/1	Runtime.java, runtime.mjs, runtime.py
current_input/1	Runtime.java, runtime.mjs, runtime.py
current_lastcode/2	Runtime.java, runtime.mjs, runtime.py

current_op/3	engine.p
current_output/1	Runtime.java, runtime.mjs, runtime.py
current_predicate/1	dynamic.p
current_prolog_flag/2	engine.p
current_source/1	engine.p
decode_report_opt/3	liblet/tester/report.p
decode_report_opts/3	liblet/tester/report.p
delete_file/1	liblet/util/oslib.java, liblet/util/oslib.mjs, liblet/util/oslib.py
diagnose_online/1	liblet/tester/diagnose.p
directory_files/2	liblet/util/oslib.java, liblet/util/oslib.mjs, liblet/util/oslib.py
directory_member/2	liblet/util/files.p
(discontiguous)/1	core.p
disjoint/2	liblet/sets.p
distinct/1	liblet/sequence.p
div/3	Eval.java, eval.mjs, eval.py
divmod/4	liblet/util/bitlib.java, liblet/util/bitlib.mjs, liblet/util/bitlib.py
dom_cell_add/2	liblet/misc/domlib.mjs
dom_cell_clear/1	liblet/misc/emitlib.mjs
dom_cell_current/1	liblet/misc/markup.p
dom_cell_goto/2	liblet/misc/emitlib.mjs
dom_cell_listen/4	liblet/misc/emitlib.mjs
dom_cell_set/1	liblet/misc/markup.p
dom_prevent_default/1	liblet/misc/emitlib.mjs
dom_stop_propagation/1	liblet/misc/emitlib.mjs
dom_writer_new/1	liblet/misc/markup.p
dom_writer_new/2	liblet/misc/domlib.java, liblet/misc/domlib.mjs, liblet/misc/domlib.py
dump_batch/2	liblet/tester/runner.p
dump_index/1	liblet/tester/indexer.p
(dynamic)/1	dynamic.p
e/1	Eval.java, eval.mjs, eval.py
ensure_directory/1	liblet/util/files.p
ensure_loaded/1	loader.p
epsilon/1	Eval.java, eval.mjs, eval.py
equal/2	liblet/sets.p
exp/2	Eval.java, eval.mjs, eval.py
expand_term/2	loader.p
fail/0	Special.java, special.mjs, special.py
file_base_name/2	engine.p
file_directory_name/2	engine.p
file_exists/1	liblet/util/oslib.java, liblet/util/oslib.mjs, liblet/util/oslib.py
file_property/2	code.p
findall/3	core.p
float/1	Special.java, special.mjs, special.py
float/2	Eval.java, eval.mjs, eval.py
floor/2	Eval.java, eval.mjs, eval.py
flush_output/0	code.p
flush_output/1	Runtime.java, runtime.mjs, runtime.py
forall/2	liblet/compat.p
format/2	liblet/util/format.p
format/3	liblet/util/format.p
format_atom/3	liblet/util/format.p
functor/3	Special.java, special.mjs, special.py
get_atom/2	code.p
get_atom/3	Runtime.java, runtime.mjs, runtime.py
get_code/1	code.p

get_code/2	Runtime.java, runtime.mjs, runtime.py
get_string/2	core.p
get_string/3	core.p
goto/1	liblet/misc/react.p
ground/1	Special.java, special.mjs, special.py
ignore/1	core.p
include/1	loader.p
index_pred/3	liblet/tester/indexer.p
(initialization)/1	session.p
integer/1	Special.java, special.mjs, special.py
intersection/3	liblet/sets.p
is/2	core.p
is_absolute_file_name/1	engine.p
json_atom/2	liblet/misc/json.p
json_object_current/3	liblet/misc/json.p
json_object_remove/3	liblet/misc/json.p
json_object_set/4	liblet/misc/json.p
keysort/2	liblet/compat.p
last/2	liblet/lists.p
last/3	liblet/lists.p
last_sub_atom/5	engine.p
legend_batch/1	liblet/tester/runner.p
legend_column/2	liblet/tester/report.p, liblet/tester/runner.p
legend_compute/2	liblet/tester/runner.p
legend_table/1	liblet/tester/report.p, liblet/tester/runner.p
length/2	core.p
limit/2	liblet/sequence.p
list_to_set/2	core.p
listing/0	session.p
listing/1	session.p
log/2	Eval.java, eval.mjs, eval.py
lsb/2	liblet/util/bitlib.java, liblet/util/bitlib.mjs, liblet/util/bitlib.py
make/0	loader.p
make_directory/1	liblet/util/oslib.java, liblet/util/oslib.mjs, liblet/util/oslib.py
markup_display/2	liblet/misc/markup.p
max/3	Eval.java, eval.mjs, eval.py
measure_batch/1	liblet/tester/runner.p
measure_time/2	liblet/tester/runner.p
member/2	core.p
memberchk/2	liblet/lists.p
min/3	Eval.java, eval.mjs, eval.py
mod/3	Eval.java, eval.mjs, eval.py
msb/2	liblet/util/bitlib.java, liblet/util/bitlib.mjs, liblet/util/bitlib.py
(multifile)/1	core.p
nl/0	code.p
nl/1	code.p
nonground/2	Special.java, special.mjs, special.py
nonvar/1	Special.java, special.mjs, special.py
nth0/3	liblet/lists.p
nth0/4	liblet/lists.p
nth1/3	liblet/lists.p
nth1/4	liblet/lists.p
number/1	Special.java, special.mjs, special.py
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once_cleanup/2	core.p
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open/4	core.p
open_input_atom_stream/2	liblet/util/auxlib.java, liblet/util/auxlib.mjs, liblet/util/auxlib.py
open_output_atom_stream/1	liblet/util/auxlib.java, liblet/util/auxlib.mjs, liblet/util/auxlib.py
peek_code/1	code.p
peek_code/2	Runtime.java, runtime.mjs, runtime.py
percent_encode/2	liblet/util/auxlib.java, liblet/util/auxlib.mjs, liblet/util/auxlib.py
pi/1	Eval.java, eval.mjs, eval.py
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put_atom/2	Runtime.java, runtime.mjs, runtime.py
put_code/1	code.p
put_code/2	Runtime.java, runtime.mjs, runtime.py
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read/2	code.p
read_json/1	liblet/misc/json.p
read_json/2	liblet/misc/json.p
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rem/3	Eval.java, eval.mjs, eval.py
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result_summary/2	liblet/tester/diagnose.p, liblet/tester/report.p, liblet/tester/runner.p
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svg_begin/1	liblet/misc/vector.p
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## Pictures

**Es konnten keine Einträge für ein Abbildungsverzeichnis gefunden werden.**

## Tables

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