

# Package ‘INEbaseR’

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**Type** Package

**Title** R package for obtaining and analyzing open data from INE  
(Instituto Nacional de Estadística) API

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**Description**

R package for obtaining and analyzing open data from INE (Instituto Nacional de Estadística) API

**License** GPL-3

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**BuildResaveData** false

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get_data_metadataoperation
<i>Get data metadata-operation</i>

---

**Description**

This function returns a data frame with latest n series data by crossing metadata from an id or code

**Usage**

```
get_data_metadataoperation(code, query = NULL, p = 1, nult = 1, det = 0,
  tip = NA, ioe = FALSE, lang = "ES")
```

**Arguments**

code	table identification
query	string separated by AND with syntax variable = value using natural language
p	periodicity
nult	last n values
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
tip	tip = AM to obtain the metadata (crossing variables-values) of the series and a friendly output.
ioe	TRUE if code is in format IO30138, and FALSE by default
lang	language used to obtain information

**Examples**

```
get_data_metadataoperation("IPC", query = "Provincias = Madrid AND Tipo de dato = Variación mensual AND Grupos EC
```

---

get_data_serie	<i>Get data serie</i>
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---

### Description

This function returns a data frame with data of a serie from an id or/and from a date or date range

### Usage

```
get_data_serie(code, date_start = NA, date_end = NA, nult = 0, det = 0,  
  lang = "ES")
```

### Arguments

code	operation identification
date_start	start date in format (string) YYYY-MM-DD
date_end	end date in format (string) YYYY-MM-DD
nult	last n values
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
lang	language used to obtain information

### Examples

```
get_data_serie("IPC206449", nult = 1) # Get the latest data of a series  
get_data_serie("IPC206449", nult = 5) # Get the \code{n} last data of a series  
get_data_serie("IPC206449", "2013-01-01", "2016-01-01") # Get data of a series between two dates  
get_data_serie("IPC206449", "2010-01-01") # Get data from a series from a date
```

---

get_data_table	<i>Get data table</i>
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---

### Description

This function returns a data frame with latest n data of a table from an id or code

### Usage

```
get_data_table(id, nult = 0, det = 0, tip = NA, lang = "ES")
```

**Arguments**

id	table identification
nult	last n values
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
tip	tip = AM to obtain the metadata (crossing variables-values) of the series and a friendly output.
lang	language used to obtain information

**Examples**

```
get_data_table(22350, 4)
```

---

get_frequency	<i>Get frequency</i>
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---

**Description**

This function return the periodicity (number) of a time serie

**Usage**

```
get_frequency(periodicity, data = NULL)
```

**Arguments**

periodicity	string with a periodicity
data	result of get_data_serie()\$Data call

**Examples**

```
get_frequency("Mensual")
get_frequency("Trimestral")
get_frequency("Anual")
```

---

get_operation	<i>Get operation</i>
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---

**Description**

This function returns a data frame with all available statistical operations from an id or code

**Usage**

```
get_operation(code, ioe = FALSE, lang = "ES")
```

**Arguments**

code	operation identification
ioe	TRUE if code is in format IO30138, and FALSE by default
lang	language used to obtain information

**Details**

Numeric code id Alphabetic code IPC IOE code (Inventario de Operaciones Estadísticas)

**Examples**

```
get_operation(25)
get_operation("IPC")
get_operation(30138, ioe = TRUE)
```

---

get_operations_all	<i>Get operations (all)</i>
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**Description**

This function returns a data frame with all available statistical operations

**Usage**

```
get_operations_all(lang = "ES")
```

**Arguments**

lang	language used to obtain information
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**Examples**

```
get_operations_all()
```

---

get_publications	<i>Get publications</i>
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---

**Description**

This function returns a data frame with all available publications from an id or code

**Usage**

```
get_publications(det = 0, lang = "ES")
```

**Arguments**

det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
lang	language used to obtain information

**Examples**

```
get_publications()
```

---

get_publications_date	<i>Get publications date</i>
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---

**Description**

This function returns a data frame with all publication date of a publication from an id or code

**Usage**

```
get_publications_date(code, det = 0, lang = "ES")
```

**Arguments**

code	publication identification
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
lang	language used to obtain information

**Examples**

```
get_publications_date(8)
```

---

get_publications_operation	
	<i>Get publications operation</i>

---

**Description**

This function returns a data frame with publications of an operation from an id or code

**Usage**

```
get_publications_operation(code, ioe = FALSE, det = 0, lang = "ES")
```

**Arguments**

code	operation identification
ioe	TRUE if code is in format IO30138, and FALSE by default
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
lang	language used to obtain information

**Details**

Numeric code id Alphabetic code IPC IOE code (Inventario de Operaciones Estadísticas)

**Examples**

```
get_publications_operation(25)
get_publications_operation(30138, ioe = TRUE)
```

---

get_serie	<i>Get serie</i>
-----------	------------------

---

**Description**

This function returns a data frame with a serie from an id or code

**Usage**

```
get_serie(code, det = 0, tip = NA, lang = "ES")
```

**Arguments**

code	serie identification
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
tip	tip = M to obtain the metadata (crossing variables-values) of the series.
lang	language used to obtain information

Examples

```
get_series("IPC206449")
get_series("IPC206449", det = 2, tip = "M")
```

---

get_series_metadataoperation
<i>Get series metadata operation</i>

---

Description

This function returns a data frame with all series by metadata crossing from an id or code

Usage

```
get_series_metadataoperation(code, query = NULL, p = NULL, det = 0,
  tip = NA, ioe = FALSE, lang = "ES")
```

Arguments

code	operation identification
query	string separated by AND with syntax variable = value using natural language
p	periodicity, p = 1 by default
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
tip	tip = M to obtain the metadata (crossing variables-values) of the series.
ioe	TRUE if code is in format IO30138, and FALSE by default
lang	language used to obtain information

Details

Numeric code id Alphabetic code IPC IOE code (Inventario de Operaciones Estadísticas) Código identificativo de la operación (IOE30138 /IPC/ 25) y códigos identificativos de las variables y valores: Provincias (FK\_VARIABLE=115) = "Madrid" (FK\_VALOR=29) > g1=115:29 Tipo de dato (FK\_VARIABLE=3) = "Variación mensual" (FK\_VALOR=84) > g2=3:84 Grupos ECOICOP (FK\_VARIABLE=762) = "Todos los grupos ECOICOP" (FK\_VALOR=null) > g3=762: Serie mensual (FK\_PERIODICIDAD=1) > p=1 (Ver PUBLICACIONES\_OPERACION)

Examples

```
get_series_metadataoperation("IPC", query = "Provincias = Madrid AND Tipo de dato = Variación mensual AND Grupos
```



---

get\_series\_operation    *Get series operation*

---

## Description

This function returns a data frame with all series of an operation from an id or code

## Usage

```
get_series_operation(code, det = 0, tip = NA, pagination = FALSE,  
  page = NA, page_start = NA, page_end = NA, ioe = FALSE, lang = "ES",  
  cache = TRUE, benchmark = FALSE)
```

## Arguments

code	operation identification
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
tip	tip = M to obtain the metadata (crossing variables-values) of the series.
pagination	TRUE to obtain data page by page and FALSE by default.
page	page = 1 to obtain data of an specific page (to use this, pagination = FALSE).
page_start	page_start = 1 start page range to obtain data (to use this, pagination = TRUE).
page_end	page_end = 2 end page range to obtain data (to use this, pagination = TRUE).
ioe	TRUE if code is in format IO30138, and FALSE by default
lang	language used to obtain information
cache	used to load data from local cache instead API, cache = FALSE by default.
benchmark	used to measure the performance of the system, benchmark = FALSE by default.

## Details

Numeric code id Alphabetic code IPC IOE code (Inventario de Operaciones Estadísticas)

## Examples

```
get_series_operation(25)  
get_series_operation(25, 2, "M")  
get_series_operation(30138, ioe = TRUE)  
get_series_operation(30138, 2, "M", ioe = TRUE)  
get_series_operation("IPC", det = 2, tip = "M")  
get_series_operation(25, pagination = FALSE, page = 1, cache = FALSE)  
get_series_operation(25, pagination = TRUE, page_start = 1, page_end = 2, cache = FALSE)
```

---

get_series_table	<i>Get series table</i>
------------------	-------------------------

---

**Description**

This function returns a data frame with all series of a table from an id or code

**Usage**

```
get_series_table(code, det = 0, tip = NA, lang = "ES")
```

**Arguments**

code	table identification
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
tip	tip = M to obtain the metadata (crossing variables-values) of the series.
lang	language used to obtain information

**Examples**

```
get_series_table(22350)  
get_series_table(22350, 2, "M")
```

---

get_series_values	<i>Get series values</i>
-------------------	--------------------------

---

**Description**

This function returns a data frame with the metadata that defines a series from an id or code

**Usage**

```
get_series_values(code, det = 0, lang = "ES")
```

**Arguments**

code	serie identification
det	det = 1 to see the detail of the variable to which it belongs, det = 0 by default
lang	language used to obtain information

**Examples**

```
get_series_values("IPC206449")  
get_series_values("IPC206449", 1)
```

---

get_tables_group	<i>Get tables group</i>
------------------	-------------------------

---

**Description**

This function returns a data frame with a combination of variables and values that define a table from an id or code

**Usage**

```
get_tables_group(id, lang = "ES")
```

**Arguments**

id	table identification
lang	language used to obtain information

**Examples**

```
get_tables_group(22350)
```

---

get_tables_group_values	<i>Get tables group values</i>
-------------------------	--------------------------------

---

**Description**

This function returns a data frame with a combination of variables and values that define a table from an id or code

**Usage**

```
get_tables_group_values(id, grp, det = 0, lang = "ES")
```

**Arguments**

id	table identification
grp	group identification
det	det = 1 to see the detail of the variable to which it belongs, det = 0 by default
lang	language used to obtain information

**Examples**

```
get_tables_group_values(22350, 81497)  
get_tables_group_values(22350, 81497, 1)
```

---

get_tables_operation	<i>Get tables operation</i>
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---

**Description**

This function returns a data frame with all tables of an operation with geographic information from an id or code

**Usage**

```
get_tables_operation(code, det = 0, geo = 0, tip = NA, ioe = FALSE,
  lang = "ES")
```

**Arguments**

code	operation identification
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
geo	geo = 1 to access only tables with geographic content, geo = 0 by default
tip	tip = A to view as friendly, specifically the view the field ultima_modificacion
ioe	TRUE if code is in format IO30138, and FALSE by default
lang	language used to obtain information

**Details**

Numeric code id Alphabetic code IPC IOE code (Inventario de Operaciones Estadísticas)

**Examples**

```
get_tables_operation(25)
get_tables_operation(25, 2, 1, tip = "A")
get_tables_operation(30138, ioe = TRUE, 2, 1, tip = "A")
```

---

get_values_all	<i>Get values (all)</i>
----------------	-------------------------

---

**Description**

This function returns a data frame with all values from a variable

**Usage**

```
get_values_all(id, det = 0, lang = "ES")
```

**Arguments**

id	operation identification
det	det = 1 to see the detail of the variable to which it belongs, det = 0 by default
lang	language used to obtain information

**Examples**

```
get_values_all(115)
get_values_all(115, 1)
```

---

```
get_values_variableoperation
```

*Get values from variable operation*

---

**Description**

This function returns a data frame with all values from a variable to an operation

**Usage**

```
get_values_variableoperation(id, op, det = 0, ioe = FALSE, lang = "ES")
```

**Arguments**

id	variable identification
op	operation identification
det	det = 1 to see the detail of the variable to which it belongs, det = 0 by default
ioe	TRUE if code is in format IO30138, and FALSE by default
lang	language used to obtain information

**Details**

Numeric code id Alphabetic code IPC IOE code (Inventario de Operaciones Estadísticas)

**Examples**

```
get_values_variableoperation(762, 25)
get_values_variableoperation(762, 25, 1)
get_values_variableoperation(762, 30138, ioe = TRUE)
get_values_variableoperation(762, 30138, ioe = TRUE, 1)
```

---

get_variables_all	<i>Get variables (all)</i>
-------------------	----------------------------

---

**Description**

This function returns a data frame with all system variables

**Usage**

```
get_variables_all(lang = "ES")
```

**Arguments**

lang                    language used to obtain information

**Examples**

```
get_variables_all()
```

---

get_variables_operation	<i>Get variable operation</i>
-------------------------	-------------------------------

---

**Description**

This function returns a data frame with system variables of an operation from an id or code

**Usage**

```
get_variables_operation(code, ioe = FALSE, lang = "ES")
```

**Arguments**

code                    operation identification  
ioe                    TRUE if code is in format IO30138, and FALSE by default  
lang                    language used to obtain information

**Details**

Numeric code id Alphabetic code IPC IOE code (Inventario de Operaciones Estadísticas)

**Examples**

```
get_variables_operation(25)  
get_variables_operation("IPC")  
get_variables_operation(30138, ioe = TRUE)
```

---

get_var_values_operation	
	<i>Get variable values operation</i>

---

**Description**

This function returns a data frame with all values and variables of an operation from an id or code

**Usage**

```
get_var_values_operation(op, ioe = FALSE, lang = "ES")
```

**Arguments**

op	operation identification
ioe	TRUE if code is in format IO30138, and FALSE by default
lang	language used to obtain information

**Details**

Numeric code id Alphabetic code IPC IOE code (Inventario de Operaciones Estadísticas)

**Examples**

```
get_var_values_operation(25)
get_var_values_operation("IPC")
get_var_values_operation(30138, ioe = TRUE)
```

---

highcharts_series	<i>Highcharts series</i>
-------------------	--------------------------

---

**Description**

This function draws a highchart with data of a series from an id and/or from a date or date range

**Usage**

```
highcharts_series(code, date_start = NA, date_end = NA, nult = 0,
  det = 0, lang = "ES")
```

**Arguments**

code	identification code of a serie (e.g. "IPC206449")
date_start	start date in format (string) YYYY-MM-DD
date_end	end date in format (string) YYYY-MM-DD
nult	last n values
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
lang	language used to obtain information

**Examples**

```
highcharts_series("IPC206449", nult = 1) # Get the latest data of a series
highcharts_series("IPC206449", nult = 5) # Get the \code{n} last data of a series
highcharts_series("IPC206449", "2013-01-01", "2016-01-01") # Get data of a series between two dates
highcharts_series("IPC206449", "2010-01-01") # Get data from a series from a date
```

---

plot_series	<i>Plot series</i>
-------------	--------------------

---

**Description**

This function draws a plot with data of a series from an id and/or from a date or date range

**Usage**

```
plot_series(code, date_start = NA, date_end = NA, nult = 0, det = 0,
            type = NA, lang = "ES")
```

**Arguments**

code	identification code of a serie (e.g. "IPC206449")
date_start	start date in format (string) YYYY-MM-DD
date_end	end date in format (string) YYYY-MM-DD
nult	last n values
det	det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default
type	what type of plot should be drawn, type = "p" (for points) by default. See type in <a href="#">plot</a>
lang	language used to obtain information

**Examples**

```
plot_series("IPC206449", nult = 1) # Get the latest data of a series
plot_series("IPC206449", nult = 5, type = "l") # Get the \code{n} last data of a series
plot_series("IPC206449", "2013-01-01", "2016-01-01") # Get data of a series between two dates
plot_series("IPC206449", "2010-01-01") # Get data from a series from a date
```



---

update_cache	<i>Update cache</i>
--------------	---------------------

---

**Description**

This function allow update specific or all cache data

**Usage**

```
update_cache(code = 0, n = 0, page = NA, pagination = TRUE,  
             page_start = NA, page_end = NA, benchmark = TRUE, force = FALSE)
```

**Arguments**

code	operation identifier
n	number of operation to update starting from first operation getted from get_operations_all() function.
page	page = 1 to obtain data of an specific page (to use this, pagination = FALSE).
pagination	TRUE to obtain data page by page and FALSE by default.
page_start	page_start = 1 start page range to obtain data (to use this, pagination = TRUE).
page_end	page_end = 2 end page range to obtain data (to use this, pagination = TRUE).
benchmark	used to measure the performance of the system, benchmark = FALSE by default.
force	(boolean) to force to update all cache data, force = FALSE by default.

**Examples**

```
update_cache(code = 249)  
update_cache(code = 249, page = 1)  
update_cache(n = 3)
```

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