Modul:Convert/extra/Doku

Ausgabe: 27.06.2026
Letzte Änderung: 23.02.2022

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Modul:Convert/extra/Doku

Dies ist die Dokumentationsseite für Modul:Convert/extra

This module can be used to quickly add a new unit for use with Vorlage:Tl. When satisfied that a unit is working correctly, ask at Module talk:Convert for the unit to be moved to the permanent list of units.

See Template:Convert/unit sandbox for a good way to prepare unit definitions that can be copied into this page.

The following extracts from Module:Convert/data show examples that could be used to define a new unit. Any number of spaces can be used where blanks are shown in the following.

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```
-- These are EXAMPLES on the documentation page. Scroll down to see the module content.
local extra_units = {
    -- Similar to a redirect: "sqm" is an alias for "m2".
    -- {{convert|1.5|m2|sp=us}}   1.5 square meters (16 sq ft)
    -- {{convert|1.5|sqm|sp=us}}  1.5 square meters (16 sq ft)
    ["sqm"] = {
        target   = "m2",
    },
    -- A simple unit, showing the minimum that is required.
    -- The "ha" is the unit code used to identify the unit:
    -- {{convert|1.5|ha}}  1.5 hectares (3.7 acres)
    ["ha"] = {
        name1    = "hectare",
        symbol   = "ha",
        utype    = "area",
        scale    = 10000,
        default  = "acre",
    },
    -- A unit which accepts an SI prefix. There is no "name1" field because it
    -- has to be constructed (mJ gives "millijoule"; MJ gives "megajoule").
    -- {{convert|125|kJ}}  125 kilojoules (30,000 cal)
    ["J"] = {
        _name1   = "joule",
        _symbol  = "J",
```

```
        utype    = "energy",
        scale    = 1,
        prefixes = 1,
        default  = "cal",
        link     = "Joule",
    },
    -- A unit where US and plural names are required.
    -- {{convert|125|cm/s2}}  125 centimetres per second squared (4.1 ft/s²)
    ["cm/s2"] = {
        name1    = "centimetre per second squared",
        name1_us = "centimeter per second squared",
        name2    = "centimetres per second squared",
        name2_us = "centimeters per second squared",
        symbol   = "cm/s<sup>2</sup>",
        utype    = "acceleration",
        scale    = 0.01,
        default  = "ft/s2",
        link     = "Gal (unit)",
    },
    -- A "per" unit is defined as the ratio of two other units.
    -- {{convert|125|g/cm3}}  125 grams per cubic centimetre (4.5 lb/cu in)
    ["g/cm3"] = {
        per      = { "g", "cm3" },
        utype    = "density",
        default  = "lb/cuin",
    },
    -- If the automatic "per" link is not wanted, a link can be specified.
    -- {{convert|125|g/cm3|lk=on|disp=unit}}  [[gram]]s per [[cubic centimetre]]
    -- {{convert|125|g/m3|lk=on|disp=unit}}  [[density|grams per cubic metre]]
    ["g/m3"] = {
 per  = { "g", "m3" },
 utype  = "density",
 default  = "lb/cuyd",
 link  = "density",
    },
    -- Characters "$" and "£" are recognized as currency symbols.
    -- {{convert|125|$/acre}}  $125 per acre ($310/ha)
    ["$/acre"] = {
        per      = { "$", "acre" },
        utype    = "cost $ per unit area",
        default  = "$/ha",
    },
    -- An output unit can be defined as a combination of existing units.
    -- {{convert|2|ha|ft2 m2}}  2 hectares (220,000 sq ft; 20,000 m²)
    -- Any number of output units can be specified.
    -- NOTE: There may be no need to define a combination because a convert
    --       can specify the output by joining unit codes with "+":
    -- {{convert|1.2|acre|ft2+yd2+m2}}  1.2 acres (52,800 sq ft; 5,800 sq yd; 4,900 m²)
    ["ft2 m2"] = {
        combination = { "ft2", "m2" },
        utype    = "area",
    },
    -- An output unit can be defined using subunits (from least to most significant).
    -- {{convert|90|in|ydftin}}  90 inches (2 yd 1 ft 6 in)
    ["ydftin"] = {
        combination = { "in", "ft", "yd" },
        multiple = { 12, 3 },
        utype    = "length",
    },
}
```

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Field	Description
`symbol`	Unit identifier used when `abbr=on` is in effect.

`name1`	Singular name of the unit used when `abbr=off` is in effect.
`name2`	Plural name of the unit; not required if it is the same as `name1` plus "s".
`name1_us`	Singular name when `sp=us` is in effect; not required if the same as `name1`.
`name2_us`	Plural name when `sp=us` is in effect; not required if the same as `name1_us` plus "s".
`utype`	Unit type; must be exactly the same as the `utype` of any other unit used in a conversion.
`scale`	Number of base units in the unit being defined.
`default`	Unit code of the default output used when no output unit is specified in a conversion.
`target`	Unit code of an existing unit (the unit being defined "redirects" to the existing unit).
`prefixes`	Use 1 if an SI prefix is accepted; 2 is used for `m`^{2}, and 3 is used for `m`^{3}.
`link`	Article title used when `lk=on` is in effect; not required if it is the same as `name1`.

Vorlage:Anchor

Modul:Convert/data

This page defines the conversion data used by Module:Convert. All documentation (from Module:Convert /doc) is at that page.

Do not manually add units to this page. First add the unit definitions in Module:Convert/documentation /conversion data. And then update this page by copying the results from Module:Convert/makeunits (those results appear at Module talk:Convert/makeunits).

Any changes should first be tested at Module:Convert/data/sandbox—see Module:Convert/sandbox /testcases.

New units can be manually added at Module:Convert/extra as a temporary measure before being incorporated into this main table.

```
-- Conversion data used by [[Module:Convert]] which uses mw.loadData() for
-- read-only access to this module so that it is loaded only once per page.
-- See [[:en:Template:Convert/Transwiki guide]] if copying to another wiki.
--
-- These data tables follow:
--   all_units           all properties for a unit, including default output
--   default_exceptions  exceptions for default output ('kg' and 'g' have different defaul
--   link_exceptions     exceptions for links ('kg' and 'g' have different links)
--
-- These tables are generated by a script which reads the wikitext of a page that
-- documents the required properties of each unit; see [[:en:Module:Convert/doc]].

------------------------------------------------------------------------------
-- Do not change the data in this table because it is created by running --
-- a script that reads the wikitext from a wiki page (see note above).   --
------------------------------------------------------------------------------
local all_units = {
    ["Gy"] = {
        _name1   = "gray",
        _symbol  = "Gy",
        utype    = "absorbed radiation dose",
        scale    = 1,
```

```
    prefixes = 1,
    default  = "rad",
    link     = "Gray (unit)",
},
["rad"] = {
    _name1   = "rad",
    _symbol  = "rad",
    utype    = "absorbed radiation dose",
    scale    = 0.01,
    prefixes = 1,
    default  = "Gy",
    link     = "Rad (unit)",
},
["cm/s2"] = {
    name1    = "centimetre per second squared",
    name1_us = "centimeter per second squared",
    name2    = "centimetres per second squared",
    name2_us = "centimeters per second squared",
    symbol   = "cm/s<sup>2</sup>",
    utype    = "acceleration",
    scale    = 0.01,
    default  = "ft/s2",
    link     = "Gal (unit)",
},
["ft/s2"] = {
    name1    = "foot per second squared",
    name2    = "feet per second squared",
    symbol   = "ft/s<sup>2</sup>",
    utype    = "acceleration",
    scale    = 0.3048,
    default  = "m/s2",
},
["g0"] = {
    name1    = "standard gravity",
    name2    = "standard gravities",
    symbol   = "''g''<sub>0</sub>",
    utype    = "acceleration",
    scale    = 9.80665,
    default  = "m/s2",
},
["g-force"] = {
    name2    = "''g''",
    symbol   = "''g''",
    utype    = "acceleration",
    scale    = 9.80665,
    default  = "m/s2",
    link     = "g-force",
},
["km/hs"] = {
    name1    = "kilometre per hour per second",
    name1_us = "kilometer per hour per second",
    name2    = "kilometres per hour per second",
    name2_us = "kilometers per hour per second",
    symbol   = "km/(hs)",
    utype    = "acceleration",
    scale    = 0.2777777777777779,
    default  = "mph/s",
    link     = "Acceleration",
},
["km/s2"] = {
    name1    = "kilometre per second squared",
    name1_us = "kilometer per second squared",
    name2    = "kilometres per second squared",
    name2_us = "kilometers per second squared",
    symbol   = "km/s<sup>2</sup>",
    utype    = "acceleration",
    scale    = 1000,
```

```
    default  = "mph/s",
    link     = "Acceleration",
},
["m/s2"] = {
    name1    = "metre per second squared",
    name1_us = "meter per second squared",
    name2    = "metres per second squared",
    name2_us = "meters per second squared",
    symbol   = "m/s<sup>2</sup>",
    utype    = "acceleration",
    scale    = 1,
    default  = "ft/s2",
},
["mph/s"] = {
    name1    = "mile per hour per second",
    name2    = "miles per hour per second",
    symbol   = "mph/s",
    utype    = "acceleration",
    scale    = 0.44704,
    default  = "km/hs",
    link     = "Acceleration",
},
["km/h/s"] = {
    target   = "km/hs",
},
["standard gravity"] = {
    target   = "g0",
},
["1000sqft"] = {
    name1    = "thousand square feet",
    name2    = "thousand square feet",
    symbol   = "1000 sq ft",
    utype    = "area",
    scale    = 92.90304,
    default  = "m2",
    link     = "Square foot",
},
["a"] = {
    _name1   = "are",
    _symbol  = "a",
    utype    = "area",
    scale    = 100,
    prefixes = 1,
    default  = "sqft",
    link     = "Hectare#Are",
},
["acre"] = {
    symbol   = "acre",
    usename  = 1,
    utype    = "area",
    scale    = 4046.8564224,
    default  = "ha",
    subdivs  = { ["rood"] = { 4, default = "ha" }, ["sqperch"] = { 160, default = "ha"
},
["acre-sing"] = {
    target   = "acre",
},
["arpent"] = {
    symbol   = "arpent",
    usename  = 1,
    utype    = "area",
    scale    = 3418.89,
    default  = "ha",
},
["cda"] = {
    name1    = "cuerda",
    symbol   = "cda",
```

```
    utype    = "area",
    scale    = 3930.395625,
    default  = "ha acre",
},
["daa"] = {
    name1    = "decare",
    symbol   = "daa",
    utype    = "area",
    scale    = 1000,
    default  = "km2 sqmi",
},
["dunam"] = {
    symbol   = "dunam",
    usename  = 1,
    utype    = "area",
    scale    = 1000,
    default  = "km2 sqmi",
},
["dunum"] = {
    symbol   = "dunum",
    usename  = 1,
    utype    = "area",
    scale    = 1000,
    default  = "km2 sqmi",
    link     = "Dunam",
},
["ha"] = {
    name1    = "hectare",
    symbol   = "ha",
    utype    = "area",
    scale    = 10000,
    default  = "acre",
},
["hectare"] = {
    name1    = "hectare",
    symbol   = "ha",
    usename  = 1,
    utype    = "area",
    scale    = 10000,
    default  = "acre",
},
["Irish acre"] = {
    name1    = "Irish acre",
    symbol   = "Irish acres",
    utype    = "area",
    scale    = 6555.2385024,
    default  = "ha",
    link     = "Acre (Irish)",
},
["m2"] = {
    _name1   = "square metre",
    _name1_us= "square meter",
    _symbol  = "m<sup>2</sup>",
    prefix_position= 8,
    utype    = "area",
    scale    = 1,
    prefixes = 2,
    default  = "sqft",
    link     = "Square metre",
},
["pondemaat"] = {
    name1    = "pondemaat",
    name2    = "pondemaat",
    symbol   = "pond",
    utype    = "area",
    scale    = 3674.363358816,
    default  = "m2",
```

```
    link     = ":nl:pondemaat",
},
["pyeong"] = {
    name2    = "pyeong",
    symbol   = "pyeong",
    usename  = 1,
    utype    = "area",
    scale    = 3.3057851239669422,
    default  = "m2",
},
["rai"] = {
    name2    = "rai",
    symbol   = "rai",
    utype    = "area",
    scale    = 1600,
    default  = "m2",
    link     = "Rai (unit)",
},
["rood"] = {
    symbol   = "rood",
    usename  = 1,
    utype    = "area",
    scale    = 1011.7141056,
    default  = "sqft m2",
    subdivs  = { ["sqperch"] = { 40, default = "m2" } },
    link     = "Rood (unit)",
},
["sqfoot"] = {
    name1    = "square foot",
    name2    = "square foot",
    symbol   = "sq ft",
    utype    = "area",
    scale    = 0.09290304,
    default  = "m2",
},
["sqft"] = {
    name1    = "square foot",
    name2    = "square feet",
    symbol   = "sq ft",
    utype    = "area",
    scale    = 0.09290304,
    default  = "m2",
},
["sqin"] = {
    name1    = "square inch",
    name2    = "square inches",
    symbol   = "sq in",
    utype    = "area",
    scale    = 0.00064516,
    default  = "cm2",
},
["sqmi"] = {
    name1    = "square mile",
    symbol   = "sq mi",
    utype    = "area",
    scale    = 2589988.110336,
    default  = "km2",
},
["sqnmi"] = {
    name1    = "square nautical mile",
    symbol   = "sq nmi",
    utype    = "area",
    scale    = 3429904,
    default  = "km2 sqmi",
    link     = "Nautical mile",
},
["sqperch"] = {
```

```
    name2    = "perches",
    symbol   = "perch",
    usename  = 1,
    utype    = "area",
    scale    = 25.29285264,
    default  = "m2",
    link     = "Rod (unit)#Area and volume",
},
["sqverst"] = {
    symbol   = "square verst",
    usename  = 1,
    utype    = "area",
    scale    = 1138062.24,
    default  = "km2 sqmi",
    link     = "Verst",
},
["sqyd"] = {
    name1    = "square yard",
    symbol   = "sq yd",
    utype    = "area",
    scale    = 0.83612736,
    default  = "m2",
},
["tsubo"] = {
    name2    = "tsubo",
    symbol   = "tsubo",
    usename  = 1,
    utype    = "area",
    scale    = 3.3057851239669422,
    default  = "m2",
    link     = "Japanese units of measurement#Area",
},
["acres"] = {
    target   = "acre",
},
["are"] = {
    target   = "a",
},
["decare"] = {
    target   = "daa",
},
["foot2"] = {
    target   = "sqfoot",
},
["ft2"] = {
    target   = "sqft",
},
["in2"] = {
    target   = "sqin",
    symbol   = "in<sup>2</sup>",
},
["km²"] = {
    target   = "km2",
},
["mi2"] = {
    target   = "sqmi",
},
["million acre"] = {
    target   = "e6acre",
},
["million acres"] = {
    target   = "e6acre",
},
["million hectares"] = {
    target   = "e6ha",
},
["m²"] = {
```

```
    target   = "m2",
},
["nmi2"] = {
    target   = "sqnmi",
},
["pond"] = {
    target   = "pondemaat",
},
["sq arp"] = {
    target   = "arpent",
},
["sqkm"] = {
    target   = "km2",
},
["sqm"] = {
    target   = "m2",
},
["square verst"] = {
    target   = "sqverst",
},
["verst2"] = {
    target   = "sqverst",
},
["yd2"] = {
    target   = "sqyd",
},
["m2/ha"] = {
    name1    = "square metre per hectare",
    name1_us = "square meter per hectare",
    name2    = "square metres per hectare",
    name2_us = "square meters per hectare",
    symbol   = "m<sup>2</sup>/ha",
    utype    = "area per unit area",
    scale    = 0.0001,
    default  = "sqft/acre",
    link     = "Basal area",
},
["sqft/acre"] = {
    name1    = "square foot per acre",
    name2    = "square feet per acre",
    symbol   = "sq ft/acre",
    utype    = "area per unit area",
    scale    = 2.295684113865932e-5,
    default  = "m2/ha",
    link     = "Basal area",
},
["cent"] = {
    name1    = "cent",
    symbol   = "¢",
    utype    = "cent",
    scale    = 1,
    default  = "cent",
    link     = "Cent (currency)",
},
["¢"] = {
    target   = "cent",
},
["A.h"] = {
    name1    = "ampere hour",
    symbol   = "Ah",
    utype    = "charge",
    scale    = 3600,
    default  = "coulomb",
},
["coulomb"] = {
    _name1   = "coulomb",
    _symbol  = "C",
```

```
    utype    = "charge",
    scale    = 1,
    prefixes = 1,
    default  = "e",
    link     = "Coulomb",
},
["e"] = {
    name1    = "elementary charge",
    symbol   = "''e''",
    utype    = "charge",
    scale    = 1.602176487e-19,
    default  = "coulomb",
},
["g-mol"] = {
    name1    = "gram-mole",
    symbol   = "g&amp;#8209;mol",
    utype    = "chemical amount",
    scale    = 1,
    default  = "lbmol",
    link     = "Mole (unit)",
},
["gmol"] = {
    name1    = "gram-mole",
    symbol   = "gmol",
    utype    = "chemical amount",
    scale    = 1,
    default  = "lbmol",
    link     = "Mole (unit)",
},
["kmol"] = {
    name1    = "kilomole",
    symbol   = "kmol",
    utype    = "chemical amount",
    scale    = 1000,
    default  = "lbmol",
    link     = "Mole (unit)",
},
["lb-mol"] = {
    name1    = "pound-mole",
    symbol   = "lb&amp;#8209;mol",
    utype    = "chemical amount",
    scale    = 453.59237,
    default  = "mol",
},
["lbmol"] = {
    name1    = "pound-mole",
    symbol   = "lbmol",
    utype    = "chemical amount",
    scale    = 453.59237,
    default  = "mol",
},
["mol"] = {
    name1    = "mole",
    symbol   = "mol",
    utype    = "chemical amount",
    scale    = 1,
    default  = "lbmol",
    link     = "Mole (unit)",
},
["kgCO2/L"] = {
    name1    = "kilogram per litre",
    name1_us = "kilogram per liter",
    name2    = "kilograms per litre",
    name2_us = "kilograms per liter",
    symbol   = "kg(CO<sub>2</sub>)/L",
    utype    = "co2 per unit volume",
    scale    = 1000,
```

```
    default  = "lbCO2/USgal",
    link     = "Exhaust gas",
},
["lbCO2/USgal"] = {
    name1    = "pound per US gallon",
    name2    = "pounds per US gallon",
    symbol   = "lbCO2/US gal",
    utype    = "co2 per unit volume",
    scale    = 119.82642731689663,
    default  = "kgCO2/L",
    link     = "Exhaust gas",
},
["oz/lb"] = {
    per      = { "oz", "lb" },
    utype    = "concentration",
    default  = "mg/kg",
},
["mg/kg"] = {
    per      = { "mg", "kg" },
    utype    = "concentration",
    default  = "oz/lb",
},
["g/dm3"] = {
    name1    = "gram per cubic decimetre",
    name1_us = "gram per cubic decimeter",
    name2    = "grams per cubic decimetre",
    name2_us = "grams per cubic decimeter",
    symbol   = "g/dm<sup>3</sup>",
    utype    = "density",
    scale    = 1,
    default  = "kg/m3",
    link     = "Density",
},
["g/L"] = {
    name1    = "gram per litre",
    name1_us = "gram per liter",
    name2    = "grams per litre",
    name2_us = "grams per liter",
    symbol   = "g/L",
    utype    = "density",
    scale    = 1,
    default  = "lb/cuin",
    link     = "Density",
},
["g/mL"] = {
    name1    = "gram per millilitre",
    name1_us = "gram per milliliter",
    name2    = "grams per millilitre",
    name2_us = "grams per milliliter",
    symbol   = "g/mL",
    utype    = "density",
    scale    = 1000,
    default  = "lb/cuin",
    link     = "Density",
},
["g/ml"] = {
    name1    = "gram per millilitre",
    name1_us = "gram per milliliter",
    name2    = "grams per millilitre",
    name2_us = "grams per milliliter",
    symbol   = "g/ml",
    utype    = "density",
    scale    = 1000,
    default  = "lb/cuin",
    link     = "Density",
},
["kg/dm3"] = {
```

```
    name1    = "kilogram per cubic decimetre",
    name1_us = "kilogram per cubic decimeter",
    name2    = "kilograms per cubic decimetre",
    name2_us = "kilograms per cubic decimeter",
    symbol   = "kg/dm<sup>3</sup>",
    utype    = "density",
    scale    = 1000,
    default  = "lb/cuft",
    link     = "Density",
},
["kg/L"] = {
    name1    = "kilogram per litre",
    name1_us = "kilogram per liter",
    name2    = "kilograms per litre",
    name2_us = "kilograms per liter",
    symbol   = "kg/L",
    utype    = "density",
    scale    = 1000,
    default  = "lb/USgal",
    link     = "Density",
},
["kg/l"] = {
    name1    = "kilogram per litre",
    name1_us = "kilogram per liter",
    name2    = "kilograms per litre",
    name2_us = "kilograms per liter",
    symbol   = "kg/l",
    utype    = "density",
    scale    = 1000,
    default  = "lb/USgal",
    link     = "Density",
},
["kg/m3"] = {
    name1    = "kilogram per cubic metre",
    name1_us = "kilogram per cubic meter",
    name2    = "kilograms per cubic metre",
    name2_us = "kilograms per cubic meter",
    symbol   = "kg/m<sup>3</sup>",
    utype    = "density",
    scale    = 1,
    default  = "lb/cuyd",
    link     = "Density",
},
["lb/cuft"] = {
    name1    = "pound per cubic foot",
    name2    = "pounds per cubic foot",
    symbol   = "lb/cu ft",
    utype    = "density",
    scale    = 16.018463373960142,
    default  = "g/cm3",
    link     = "Density",
},
["lb/cuin"] = {
    name1    = "pound per cubic inch",
    name2    = "pounds per cubic inch",
    symbol   = "lb/cu in",
    utype    = "density",
    scale    = 27679.904710203122,
    default  = "g/cm3",
    link     = "Density",
},
["lb/cuyd"] = {
    name1    = "pound per cubic yard",
    name2    = "pounds per cubic yard",
    symbol   = "lb/cu yd",
    utype    = "density",
    scale    = 0.5932764212577829,
```

```
    default  = "kg/m3",
    link     = "Density",
},
["lb/impgal"] = {
    name1    = "pound per imperial gallon",
    name2    = "pounds per imperial gallon",
    symbol   = "lb/imp gal",
    utype    = "density",
    scale    = 99.776372663101697,
    default  = "kg/L",
    link     = "Density",
},
["lb/in3"] = {
    name1    = "pound per cubic inch",
    name2    = "pounds per cubic inch",
    symbol   = "lb/cu in",
    utype    = "density",
    scale    = 27679.904710203122,
    default  = "g/cm3",
    link     = "Density",
},
["lb/U.S.gal"] = {
    name1    = "pound per U.S. gallon",
    name2    = "pounds per U.S. gallon",
    symbol   = "lb/U.S. gal",
    utype    = "density",
    scale    = 119.82642731689663,
    default  = "kg/L",
    link     = "Density",
},
["lb/USbu"] = {
    name1    = "pound per US bushel",
    name2    = "pounds per US bushel",
    symbol   = "lb/US bu",
    utype    = "density",
    scale    = 12.871859780974471,
    default  = "kg/m3",
    link     = "Bushel",
},
["lb/USgal"] = {
    name1    = "pound per US gallon",
    name2    = "pounds per US gallon",
    symbol   = "lb/US gal",
    utype    = "density",
    scale    = 119.82642731689663,
    default  = "kg/L",
    link     = "Density",
},
["lbm/cuin"] = {
    name1    = "pound mass per cubic inch",
    name2    = "pounds mass per cubic inch",
    symbol   = "lbm/cu in",
    utype    = "density",
    scale    = 27679.904710203122,
    default  = "g/cm3",
    link     = "Density",
},
["mg/L"] = {
    name1    = "milligram per litre",
    name1_us = "milligram per liter",
    name2    = "milligrams per litre",
    name2_us = "milligrams per liter",
    symbol   = "mg/L",
    utype    = "density",
    scale    = 0.001,
    default  = "lb/cuin",
    link     = "Density",
```

```
},
["oz/cuin"] = {
    name1    = "ounce per cubic inch",
    name2    = "ounces per cubic inch",
    symbol   = "oz/cu&amp;nbsp;in",
    utype    = "density",
    scale    = 1729.9940443876951,
    default  = "g/cm3",
    link     = "Density",
},
["g/cm3"] = {
    per      = { "g", "cm3" },
    utype    = "density",
    default  = "lb/cuin",
},
["g/m3"] = {
    per      = { "g", "m3" },
    utype    = "density",
    default  = "lb/cuyd",
    link     = "Density",
},
["Mg/m3"] = {
    per      = { "Mg", "m3" },
    utype    = "density",
    default  = "lb/cuft",
},
["mg/l"] = {
    per      = { "mg", "l" },
    utype    = "density",
    default  = "oz/cuin",
},
["g/dL"] = {
    per      = { "g", "dL" },
    utype    = "density",
    default  = "lb/cuin",
},
["g/l"] = {
    per      = { "g", "l" },
    utype    = "density",
    default  = "oz/cuin",
},
["lb/ft3"] = {
    target   = "lb/cuft",
},
["lb/yd3"] = {
    target   = "lb/cuyd",
},
["lbm/in3"] = {
    target   = "lbm/cuin",
},
["mcg/dL"] = {
    target   = "g/dL",
},
["oz/in3"] = {
    target   = "oz/cuin",
},
["ug/dL"] = {
    target   = "g/dL",
},
["ug/l"] = {
    target   = "g/l",
},
["B.O.T.U."] = {
    name1    = "Board of Trade Unit",
    symbol   = "B.O.T.U.",
    utype    = "energy",
    scale    = 3600000,
```

```
    default  = "MJ",
    link     = "Kilowatt-hour",
},
["bboe"] = {
    name1    = "barrel of oil equivalent",
    name2    = "barrels of oil equivalent",
    symbol   = "bboe",
    utype    = "energy",
    scale    = 6117863200,
    default  = "GJ",
},
["BOE"] = {
    name1    = "barrel of oil equivalent",
    name2    = "barrels of oil equivalent",
    symbol   = "BOE",
    utype    = "energy",
    scale    = 6117863200,
    default  = "GJ",
},
["BTU"] = {
    name1    = "British thermal unit",
    symbol   = "BTU",
    utype    = "energy",
    scale    = 1055.05585262,
    default  = "kJ",
},
["Btu"] = {
    name1    = "British thermal unit",
    symbol   = "Btu",
    utype    = "energy",
    scale    = 1055.05585262,
    default  = "kJ",
},
["BTU-39F"] = {
    name1    = "British thermal unit (39°F)",
    name2    = "British thermal units (39°F)",
    symbol   = "BTU<sub>39°F</sub>",
    utype    = "energy",
    scale    = 1059.67,
    default  = "kJ",
    link     = "British thermal unit",
},
["Btu-39F"] = {
    name1    = "British thermal unit (39°F)",
    name2    = "British thermal units (39°F)",
    symbol   = "Btu<sub>39°F</sub>",
    utype    = "energy",
    scale    = 1059.67,
    default  = "kJ",
    link     = "British thermal unit",
},
["BTU-59F"] = {
    name1    = "British thermal unit (59°F)",
    name2    = "British thermal units (59°F)",
    symbol   = "BTU<sub>59°F</sub>",
    utype    = "energy",
    scale    = 1054.804,
    default  = "kJ",
    link     = "British thermal unit",
},
["Btu-59F"] = {
    name1    = "British thermal unit (59°F)",
    name2    = "British thermal units (59°F)",
    symbol   = "Btu<sub>59°F</sub>",
    utype    = "energy",
    scale    = 1054.804,
    default  = "kJ",
```

```
    link     = "British thermal unit",
},
["BTU-60F"] = {
    name1    = "British thermal unit (60°F)",
    name2    = "British thermal units (60°F)",
    symbol   = "BTU<sub>60°F</sub>",
    utype    = "energy",
    scale    = 1054.68,
    default  = "kJ",
    link     = "British thermal unit",
},
["Btu-60F"] = {
    name1    = "British thermal unit (60°F)",
    name2    = "British thermal units (60°F)",
    symbol   = "Btu<sub>60°F</sub>",
    utype    = "energy",
    scale    = 1054.68,
    default  = "kJ",
    link     = "British thermal unit",
},
["BTU-63F"] = {
    name1    = "British thermal unit (63°F)",
    name2    = "British thermal units (63°F)",
    symbol   = "BTU<sub>63°F</sub>",
    utype    = "energy",
    scale    = 1054.6,
    default  = "kJ",
    link     = "British thermal unit",
},
["Btu-63F"] = {
    name1    = "British thermal unit (63°F)",
    name2    = "British thermal units (63°F)",
    symbol   = "Btu<sub>63°F</sub>",
    utype    = "energy",
    scale    = 1054.6,
    default  = "kJ",
    link     = "British thermal unit",
},
["BTU-ISO"] = {
    name1    = "British thermal unit (ISO)",
    name2    = "British thermal units (ISO)",
    symbol   = "BTU<sub>ISO</sub>",
    utype    = "energy",
    scale    = 1055.056,
    default  = "kJ",
    link     = "British thermal unit",
},
["Btu-ISO"] = {
    target   = "BTU-ISO",
},
["BTU-IT"] = {
    name1    = "British thermal unit (IT)",
    name2    = "British thermal units (IT)",
    symbol   = "BTU<sub>IT</sub>",
    utype    = "energy",
    scale    = 1055.05585262,
    default  = "kJ",
    link     = "British thermal unit",
},
["Btu-IT"] = {
    name1    = "British thermal unit (IT)",
    name2    = "British thermal units (IT)",
    symbol   = "Btu<sub>IT</sub>",
    utype    = "energy",
    scale    = 1055.05585262,
    default  = "kJ",
    link     = "British thermal unit",
```

```
},
["BTU-mean"] = {
    name1    = "British thermal unit (mean)",
    name2    = "British thermal units (mean)",
    symbol   = "BTU<sub>mean</sub>",
    utype    = "energy",
    scale    = 1055.87,
    default  = "kJ",
    link     = "British thermal unit",
},
["Btu-mean"] = {
    name1    = "British thermal unit (mean)",
    name2    = "British thermal units (mean)",
    symbol   = "Btu<sub>mean</sub>",
    utype    = "energy",
    scale    = 1055.87,
    default  = "kJ",
    link     = "British thermal unit",
},
["BTU-th"] = {
    name1    = "British thermal unit (thermochemical)",
    name2    = "British thermal units (thermochemical)",
    symbol   = "BTU<sub>th</sub>",
    utype    = "energy",
    scale    = 1054.35026444,
    default  = "kJ",
    link     = "British thermal unit",
},
["Btu-th"] = {
    name1    = "British thermal unit (thermochemical)",
    name2    = "British thermal units (thermochemical)",
    symbol   = "Btu<sub>th</sub>",
    utype    = "energy",
    scale    = 1054.35026444,
    default  = "kJ",
    link     = "British thermal unit",
},
["Cal"] = {
    name1    = "calorie",
    symbol   = "Cal",
    utype    = "energy",
    scale    = 4184,
    default  = "kJ",
},
["cal"] = {
    name1    = "calorie",
    symbol   = "cal",
    utype    = "energy",
    scale    = 4.184,
    default  = "J",
},
["Cal-15"] = {
    name1    = "Calorie (15°C)",
    name2    = "Calories (15°C)",
    symbol   = "Cal<sub>15</sub>",
    utype    = "energy",
    scale    = 4185.8,
    default  = "kJ",
    link     = "Calorie",
},
["cal-15"] = {
    name1    = "calorie (15°C)",
    name2    = "calories (15°C)",
    symbol   = "cal<sub>15</sub>",
    utype    = "energy",
    scale    = 4.1858,
    default  = "J",
```

```
    link     = "Calorie",
},
["Cal-IT"] = {
    name1    = "Calorie (International Steam Table)",
    name2    = "Calories (International Steam Table)",
    symbol   = "Cal<sub>IT</sub>",
    utype    = "energy",
    scale    = 4186.8,
    default  = "kJ",
    link     = "Calorie",
},
["cal-IT"] = {
    name1    = "calorie (International Steam Table)",
    name2    = "calories (International Steam Table)",
    symbol   = "cal<sub>IT</sub>",
    utype    = "energy",
    scale    = 4.1868,
    default  = "J",
    link     = "Calorie",
},
["Cal-th"] = {
    name1    = "Calorie (thermochemical)",
    name2    = "Calories (thermochemical)",
    symbol   = "Cal<sub>th</sub>",
    utype    = "energy",
    scale    = 4184,
    default  = "kJ",
    link     = "Calorie",
},
["cal-th"] = {
    name1    = "calorie (thermochemical)",
    name2    = "calories (thermochemical)",
    symbol   = "cal<sub>th</sub>",
    utype    = "energy",
    scale    = 4.184,
    default  = "J",
    link     = "Calorie",
},
["CHU-IT"] = {
    name1    = "Celsius heat unit (International Table)",
    name2    = "Celsius heat units (International Table)",
    symbol   = "CHU<sub>IT</sub>",
    utype    = "energy",
    scale    = 1899.100534716,
    default  = "kJ",
    link     = "Conversion of units#Energy",
},
["cufootnaturalgas"] = {
    name1    = "cubic foot of natural gas",
    name2    = "cubic foot of natural gas",
    symbol   = "cuftnaturalgas",
    usename  = 1,
    utype    = "energy",
    scale    = 1055055.85262,
    default  = "MJ",
    link     = "Conversion of units#Energy",
},
["cuftnaturalgas"] = {
    name1    = "cubic foot of natural gas",
    name2    = "cubic feet of natural gas",
    symbol   = "cuftnaturalgas",
    usename  = 1,
    utype    = "energy",
    scale    = 1055055.85262,
    default  = "MJ",
    link     = "Conversion of units#Energy",
},
```

```
["Eh"] = {
    name1    = "Hartree",
    symbol   = "''E''<sub>h</sub>",
    utype    = "energy",
    scale    = 4.35974417e-18,
    default  = "eV",
},
["erg"] = {
    symbol   = "erg",
    utype    = "energy",
    scale    = 0.0000001,
    default  = "J",
},
["eV"] = {
    name1    = "electronvolt",
    symbol   = "eV",
    utype    = "energy",
    scale    = 1.602176487e-19,
    default  = "aJ",
},
["feV"] = {
    name1    = "femtoelectronvolt",
    symbol   = "feV",
    utype    = "energy",
    scale    = 1.602176487e-34,
    default  = "yJ",
    link     = "Electronvolt",
},
["foe"] = {
    symbol   = "foe",
    utype    = "energy",
    scale    = 1e44,
    default  = "YJ",
    link     = "Foe (unit)",
},
["ftlb"] = {
    name1    = "foot-pound",
    symbol   = "ftlb",
    utype    = "energy",
    alttype  = "torque",
    scale    = 1.3558179483314004,
    default  = "J",
    link     = "Foot-pound (energy)",
},
["ftlb-f"] = {
    name1    = "foot-pound force",
    name2    = "foot-pounds force",
    symbol   = "ftlb<sub>f</sub>",
    utype    = "energy",
    alttype  = "torque",
    scale    = 1.3558179483314004,
    default  = "J",
    link     = "Foot-pound (energy)",
},
["ftlbf"] = {
    name1    = "foot-pound force",
    name2    = "foot-pounds force",
    symbol   = "ftlbf",
    utype    = "energy",
    alttype  = "torque",
    scale    = 1.3558179483314004,
    default  = "J",
    link     = "Foot-pound (energy)",
},
["ftpdl"] = {
    name1    = "foot-poundal",
    symbol   = "ftpdl",
```

```
    utype    = "energy",
    scale    = 0.0421401100938048,
    default  = "J",
},
["GeV"] = {
    name1    = "gigaelectronvolt",
    symbol   = "GeV",
    utype    = "energy",
    scale    = 1.602176487e-10,
    default  = "nJ",
    link     = "Electronvolt",
},
["gTNT"] = {
    name2    = "grams of TNT",
    symbol   = "gram of TNT",
    usename  = 1,
    utype    = "energy",
    scale    = 4184,
    default  = "kJ",
    link     = "TNT equivalent",
},
["Gtoe"] = {
    name1    = "gigatonne of oil equivalent",
    name2    = "gigatonnes of oil equivalent",
    symbol   = "Gtoe",
    utype    = "energy",
    scale    = 4.1868e19,
    default  = "EJ",
    link     = "Tonne of oil equivalent",
},
["GtonTNT"] = {
    name2    = "gigatons of TNT",
    symbol   = "gigaton of TNT",
    usename  = 1,
    utype    = "energy",
    scale    = 4.184e18,
    default  = "EJ",
    link     = "TNT equivalent",
},
["GtTNT"] = {
    name2    = "gigatonnes of TNT",
    symbol   = "gigatonne of TNT",
    usename  = 1,
    utype    = "energy",
    scale    = 4.184e18,
    default  = "EJ",
    link     = "TNT equivalent",
},
["GW.h"] = {
    name1    = "gigawatt-hour",
    symbol   = "GWh",
    utype    = "energy",
    scale    = 3.6e12,
    default  = "TJ",
    link     = "Kilowatt-hour",
},
["GWh"] = {
    name1    = "gigawatt-hour",
    symbol   = "GWh",
    utype    = "energy",
    scale    = 3.6e12,
    default  = "TJ",
    link     = "Kilowatt-hour",
},
["hph"] = {
    name1    = "horsepower-hour",
    symbol   = "hph",
```

```
    utype    = "energy",
    scale    = 2684519.537696172792,
    default  = "kWh",
    link     = "Horsepower",
},
["inlb"] = {
    name1    = "inch-pound",
    symbol   = "inlb",
    utype    = "energy",
    alttype  = "torque",
    scale    = 0.1129848290276167,
    default  = "mJ",
    link     = "Foot-pound (energy)",
},
["inlb-f"] = {
    name1    = "inch-pound force",
    name2    = "inch-pounds force",
    symbol   = "inlb<sub>f</sub>",
    utype    = "energy",
    alttype  = "torque",
    scale    = 0.1129848290276167,
    default  = "mJ",
    link     = "Foot-pound (energy)",
},
["inlbf"] = {
    name1    = "inch-pound force",
    name2    = "inch-pounds force",
    symbol   = "inlbf",
    utype    = "energy",
    alttype  = "torque",
    scale    = 0.1129848290276167,
    default  = "mJ",
    link     = "Foot-pound (energy)",
},
["inoz-f"] = {
    name1    = "inch-ounce force",
    name2    = "inch-ounces force",
    symbol   = "inoz<sub>f</sub>",
    utype    = "energy",
    alttype  = "torque",
    scale    = 0.00706155181422604375,
    default  = "mJ",
    link     = "Foot-pound (energy)",
},
["inozf"] = {
    name1    = "inch-ounce force",
    name2    = "inch-ounces force",
    symbol   = "inozf",
    utype    = "energy",
    alttype  = "torque",
    scale    = 0.00706155181422604375,
    default  = "mJ",
    link     = "Foot-pound (energy)",
},
["J"] = {
    _name1   = "joule",
    _symbol  = "J",
    utype    = "energy",
    scale    = 1,
    prefixes = 1,
    default  = "cal",
    link     = "Joule",
},
["kBOE"] = {
    name1    = "kilo barrel of oil equivalent",
    name2    = "kilo barrels of oil equivalent",
    symbol   = "kBOE",
```

```
    utype    = "energy",
    scale    = 6.1178632e12,
    default  = "TJ",
    link     = "Barrel of oil equivalent",
},
["kcal"] = {
    name1    = "kilocalorie",
    symbol   = "kcal",
    utype    = "energy",
    scale    = 4184,
    default  = "kJ",
    link     = "Calorie",
},
["kcal-15"] = {
    name1    = "kilocalorie (15°C)",
    name2    = "kilocalories (15°C)",
    symbol   = "kcal<sub>15</sub>",
    utype    = "energy",
    scale    = 4185.8,
    default  = "kJ",
    link     = "Calorie",
},
["kcal-IT"] = {
    name1    = "kilocalorie (International Steam Table)",
    name2    = "kilocalories (International Steam Table)",
    symbol   = "kcal<sub>IT</sub>",
    utype    = "energy",
    scale    = 4186.8,
    default  = "kJ",
    link     = "Calorie",
},
["kcal-th"] = {
    name1    = "kilocalorie (thermochemical)",
    name2    = "kilocalories (thermochemical)",
    symbol   = "kcal<sub>th</sub>",
    utype    = "energy",
    scale    = 4184,
    default  = "kJ",
    link     = "Calorie",
},
["kerg"] = {
    name1    = "kiloerg",
    symbol   = "kerg",
    utype    = "energy",
    scale    = 0.0001,
    default  = "mJ",
    link     = "Erg",
},
["keV"] = {
    name1    = "kiloelectronvolt",
    symbol   = "keV",
    utype    = "energy",
    scale    = 1.602176487e-16,
    default  = "fJ",
    link     = "Electronvolt",
},
["kgTNT"] = {
    name2    = "kilograms of TNT",
    symbol   = "kilogram of TNT",
    usename  = 1,
    utype    = "energy",
    scale    = 4184000,
    default  = "MJ",
    link     = "TNT equivalent",
},
["kt(TNT)"] = {
    name1    = "kilotonne",
```

```
    name1_us = "kiloton",
    symbol   = "kt",
    utype    = "energy",
    scale    = 4.184e12,
    default  = "TJ",
    link     = "TNT equivalent",
},
["ktoe"] = {
    name1    = "kilotonne of oil equivalent",
    name2    = "kilotonnes of oil equivalent",
    symbol   = "ktoe",
    utype    = "energy",
    scale    = 4.1868e13,
    default  = "TJ",
    link     = "Tonne of oil equivalent",
},
["ktonTNT"] = {
    name1    = "kiloton of TNT",
    name2    = "kilotons of TNT",
    symbol   = "kt",
    utype    = "energy",
    scale    = 4.184e12,
    default  = "TJ",
    link     = "TNT equivalent",
},
["ktTNT"] = {
    name2    = "kilotonnes of TNT",
    symbol   = "kilotonne of TNT",
    usename  = 1,
    utype    = "energy",
    scale    = 4.184e12,
    default  = "TJ",
    link     = "TNT equivalent",
},
["kW.h"] = {
    name1    = "kilowatt-hour",
    symbol   = "kWh",
    utype    = "energy",
    scale    = 3600000,
    default  = "MJ",
},
["kWh"] = {
    name1    = "kilowatt-hour",
    symbol   = "kWh",
    utype    = "energy",
    scale    = 3600000,
    default  = "MJ",
},
["Mcal"] = {
    name1    = "megacalorie",
    symbol   = "Mcal",
    utype    = "energy",
    scale    = 4184000,
    default  = "MJ",
    link     = "Calorie",
},
["mcal"] = {
    name1    = "millicalorie",
    symbol   = "mcal",
    utype    = "energy",
    scale    = 0.004184,
    default  = "mJ",
    link     = "Calorie",
},
["Mcal-15"] = {
    name1    = "megacalorie (15°C)",
    name2    = "megacalories (15°C)",
```

```
    symbol   = "Mcal<sub>15</sub>",
    utype    = "energy",
    scale    = 4185800,
    default  = "MJ",
    link     = "Calorie",
},
["mcal-15"] = {
    name1    = "millicalorie (15°C)",
    name2    = "millicalories (15°C)",
    symbol   = "mcal<sub>15</sub>",
    utype    = "energy",
    scale    = 0.0041858,
    default  = "mJ",
    link     = "Calorie",
},
["Mcal-IT"] = {
    name1    = "megacalorie (International Steam Table)",
    name2    = "megacalories (International Steam Table)",
    symbol   = "Mcal<sub>IT</sub>",
    utype    = "energy",
    scale    = 4186800,
    default  = "MJ",
    link     = "Calorie",
},
["mcal-IT"] = {
    name1    = "millicalorie (International Steam Table)",
    name2    = "millicalories (International Steam Table)",
    symbol   = "mcal<sub>IT</sub>",
    utype    = "energy",
    scale    = 0.0041868,
    default  = "mJ",
    link     = "Calorie",
},
["Mcal-th"] = {
    name1    = "megacalorie (thermochemical)",
    name2    = "megacalories (thermochemical)",
    symbol   = "Mcal<sub>th</sub>",
    utype    = "energy",
    scale    = 4184000,
    default  = "MJ",
    link     = "Calorie",
},
["mcal-th"] = {
    name1    = "millicalorie (thermochemical)",
    name2    = "millicalories (thermochemical)",
    symbol   = "mcal<sub>th</sub>",
    utype    = "energy",
    scale    = 0.004184,
    default  = "mJ",
    link     = "Calorie",
},
["Merg"] = {
    name1    = "megaerg",
    symbol   = "Merg",
    utype    = "energy",
    scale    = 0.1,
    default  = "J",
    link     = "Erg",
},
["merg"] = {
    name1    = "millierg",
    symbol   = "merg",
    utype    = "energy",
    scale    = 0.0000000001,
    default  = "J",
    link     = "Erg",
},
```

```
["MeV"] = {
    name1    = "megaelectronvolt",
    symbol   = "MeV",
    utype    = "energy",
    scale    = 1.602176487e-13,
    default  = "pJ",
    link     = "Electronvolt",
},
["meV"] = {
    name1    = "millielectronvolt",
    symbol   = "meV",
    utype    = "energy",
    scale    = 1.602176487e-22,
    default  = "zJ",
    link     = "Electronvolt",
},
["MMBtu"] = {
    name1    = "million British thermal units",
    name2    = "million British thermal units",
    symbol   = "MMBtu",
    utype    = "energy",
    scale    = 1055055852.62,
    default  = "GJ",
    link     = "British thermal unit",
},
["Mt(TNT)"] = {
    name1    = "megatonne",
    name1_us = "megaton",
    symbol   = "Mt",
    utype    = "energy",
    scale    = 4.184e15,
    default  = "PJ",
    link     = "TNT equivalent",
},
["Mtoe"] = {
    name1    = "megatonne of oil equivalent",
    name2    = "megatonnes of oil equivalent",
    symbol   = "Mtoe",
    utype    = "energy",
    scale    = 4.1868e16,
    default  = "PJ",
    link     = "Tonne of oil equivalent",
},
["MtonTNT"] = {
    name1    = "megaton of TNT",
    name2    = "megatons of TNT",
    symbol   = "Mt",
    utype    = "energy",
    scale    = 4.184e15,
    default  = "PJ",
    link     = "TNT equivalent",
},
["mtonTNT"] = {
    name2    = "millitons of TNT",
    symbol   = "milliton of TNT",
    usename  = 1,
    utype    = "energy",
    scale    = 4184000,
    default  = "MJ",
    link     = "TNT equivalent",
},
["MtTNT"] = {
    name2    = "megatonnes of TNT",
    symbol   = "megatonne of TNT",
    usename  = 1,
    utype    = "energy",
    scale    = 4.184e15,
```

```
    default  = "PJ",
    link     = "TNT equivalent",
},
["mtTNT"] = {
    name2    = "millitonnes of TNT",
    symbol   = "millitonne of TNT",
    usename  = 1,
    utype    = "energy",
    scale    = 4184000,
    default  = "MJ",
    link     = "TNT equivalent",
},
["MW.h"] = {
    name1    = "megawatt-hour",
    symbol   = "MWh",
    utype    = "energy",
    scale    = 3600000000,
    default  = "GJ",
    link     = "Kilowatt-hour",
},
["mW.h"] = {
    name1    = "milliwatt-hour",
    symbol   = "mWh",
    utype    = "energy",
    scale    = 3.6,
    default  = "J",
    link     = "Kilowatt-hour",
},
["MWh"] = {
    name1    = "megawatt-hour",
    symbol   = "MWh",
    utype    = "energy",
    scale    = 3600000000,
    default  = "GJ",
    link     = "Kilowatt-hour",
},
["mWh"] = {
    name1    = "milliwatt-hour",
    symbol   = "mWh",
    utype    = "energy",
    scale    = 3.6,
    default  = "J",
    link     = "Kilowatt-hour",
},
["neV"] = {
    name1    = "nanoelectronvolt",
    symbol   = "neV",
    utype    = "energy",
    scale    = 1.602176487e-28,
    default  = "yJ",
    link     = "Electronvolt",
},
["PeV"] = {
    name1    = "petaelectronvolt",
    symbol   = "PeV",
    utype    = "energy",
    scale    = 0.0001602176487,
    default  = "mJ",
    link     = "Electronvolt",
},
["peV"] = {
    name1    = "picoelectronvolt",
    symbol   = "peV",
    utype    = "energy",
    scale    = 1.602176487e-31,
    default  = "yJ",
    link     = "Electronvolt",
```

```
},
["PSh"] = {
    name1    = "Pferdestärkenstunde",
    symbol   = "PSh",
    utype    = "energy",
    scale    = 2647795.5,
    default  = "kWh",
},
["quad"] = {
    name1    = "quadrillion British thermal units",
    name2    = "quadrillion British thermal units",
    symbol   = "quad",
    utype    = "energy",
    scale    = 1.054804e18,
    default  = "EJ",
    link     = "Quad (unit)",
},
["Ry"] = {
    name1    = "rydberg",
    symbol   = "Ry",
    utype    = "energy",
    scale    = 2.1798741e-18,
    default  = "eV",
    link     = "Rydberg constant",
},
["scf"] = {
    name1    = "standard cubic foot",
    name2    = "standard cubic feet",
    symbol   = "scf",
    utype    = "energy",
    scale    = 2869.2044809344,
    default  = "kJ",
},
["scfoot"] = {
    name1    = "standard cubic foot",
    name2    = "standard cubic foot",
    symbol   = "scf",
    utype    = "energy",
    scale    = 2869.2044809344,
    default  = "kJ",
},
["t(TNT)"] = {
    name1    = "tonne",
    name1_us = "ton",
    symbol   = "t",
    utype    = "energy",
    scale    = 4184000000,
    default  = "GJ",
    link     = "TNT equivalent",
},
["TeV"] = {
    name1    = "teraelectronvolt",
    symbol   = "TeV",
    utype    = "energy",
    scale    = 1.602176487e-7,
    default  = "J",
    link     = "Electronvolt",
},
["th"] = {
    name1    = "thermie",
    symbol   = "th",
    utype    = "energy",
    scale    = 4186800,
    default  = "MJ",
    link     = "Conversion of units#Energy",
},
["thm-EC"] = {
```

```
    name1    = "therm (EC)",
    name2    = "therms (EC)",
    symbol   = "thm (EC)",
    utype    = "energy",
    scale    = 105506000,
    default  = "MJ",
    link     = "Therm",
},
["thm-UK"] = {
    name1    = "therm (UK)",
    name2    = "therms (UK)",
    symbol   = "thm (UK)",
    utype    = "energy",
    scale    = 105505585.257348,
    default  = "MJ",
    link     = "Therm",
},
["thm-US"] = {
    name1    = "therm (US)",
    name1_us = "therm (U.S.)",
    name2    = "therms (US)",
    name2_us = "therms (U.S.)",
    symbol   = "thm (US)",
    sym_us   = "thm (U.S.)",
    utype    = "energy",
    scale    = 105480400,
    default  = "MJ",
    link     = "Therm",
},
["toe"] = {
    name1    = "tonne of oil equivalent",
    name2    = "tonnes of oil equivalent",
    symbol   = "toe",
    utype    = "energy",
    scale    = 41868000000,
    default  = "GJ",
},
["tonTNT"] = {
    name2    = "tons of TNT",
    symbol   = "ton of TNT",
    usename  = 1,
    utype    = "energy",
    scale    = 4184000000,
    default  = "GJ",
    link     = "TNT equivalent",
},
["tTNT"] = {
    name2    = "tonnes of TNT",
    symbol   = "tonne of TNT",
    usename  = 1,
    utype    = "energy",
    scale    = 4184000000,
    default  = "GJ",
    link     = "TNT equivalent",
},
["TtonTNT"] = {
    name2    = "teratons of TNT",
    symbol   = "teraton of TNT",
    usename  = 1,
    utype    = "energy",
    scale    = 4.184e21,
    default  = "ZJ",
    link     = "TNT equivalent",
},
["TtTNT"] = {
    name2    = "teratonnes of TNT",
    symbol   = "teratonne of TNT",
```

```
    usename  = 1,
    utype    = "energy",
    scale    = 4.184e21,
    default  = "ZJ",
    link     = "TNT equivalent",
},
["TW.h"] = {
    name1    = "terawatt-hour",
    symbol   = "TWh",
    utype    = "energy",
    scale    = 3.6e15,
    default  = "PJ",
    link     = "Kilowatt-hour",
},
["TWh"] = {
    name1    = "terawatt-hour",
    symbol   = "TWh",
    utype    = "energy",
    scale    = 3.6e15,
    default  = "PJ",
    link     = "Kilowatt-hour",
},
["W.h"] = {
    name1    = "watt-hour",
    symbol   = "Wh",
    utype    = "energy",
    scale    = 3600,
    default  = "kJ",
    link     = "Kilowatt-hour",
},
["Wh"] = {
    name1    = "watt-hour",
    symbol   = "Wh",
    utype    = "energy",
    scale    = 3600,
    default  = "kJ",
    link     = "Kilowatt-hour",
},
["erg"] = {
    name1    = "microerg",
    symbol   = "erg",
    utype    = "energy",
    scale    = 1e-13,
    default  = "nJ",
    link     = "Erg",
},
["eV"] = {
    name1    = "microelectronvolt",
    symbol   = "eV",
    utype    = "energy",
    scale    = 1.602176487e-25,
    default  = "yJ",
    link     = "Electronvolt",
},
["W.h"] = {
    name1    = "microwatt-hour",
    symbol   = "Wh",
    utype    = "energy",
    scale    = 0.0036,
    default  = "mJ",
    link     = "Kilowatt-hour",
},
["Wh"] = {
    name1    = "microwatt-hour",
    symbol   = "Wh",
    utype    = "energy",
    scale    = 0.0036,
```

```
    default  = "mJ",
    link     = "Kilowatt-hour",
},
["-kW.h"] = {
    target   = "kW.h",
    link     = "Kilowatt hour",
},
["btu"] = {
    target   = "BTU",
},
["Calorie"] = {
    target   = "Cal",
},
["ft.lbf"] = {
    target   = "ftlbf",
},
["ft·lbf"] = {
    target   = "ftlbf",
},
["g-cal-15"] = {
    target   = "cal-15",
},
["g-cal-IT"] = {
    target   = "cal-IT",
},
["g-cal-th"] = {
    target   = "cal-th",
},
["g-kcal-15"] = {
    target   = "kcal-15",
},
["g-kcal-IT"] = {
    target   = "kcal-IT",
},
["g-kcal-th"] = {
    target   = "kcal-th",
},
["g-Mcal-15"] = {
    target   = "Mcal-15",
},
["g-mcal-15"] = {
    target   = "mcal-15",
},
["g-Mcal-IT"] = {
    target   = "Mcal-IT",
},
["g-mcal-IT"] = {
    target   = "mcal-IT",
},
["g-Mcal-th"] = {
    target   = "Mcal-th",
},
["g-mcal-th"] = {
    target   = "mcal-th",
},
["GW-h"] = {
    target   = "GW.h",
},
["GW·h"] = {
    target   = "GW.h",
},
["Hartree"] = {
    target   = "Eh",
},
["hp.h"] = {
    target   = "hph",
},
```

```
["in.lb-f"] = {
    target   = "inlb-f",
},
["in.lbf"] = {
    target   = "inlbf",
},
["in.oz-f"] = {
    target   = "inoz-f",
},
["in.ozf"] = {
    target   = "inozf",
},
["kbboe"] = {
    target   = "kBOE",
    symbol   = "kbboe",
},
["kg-cal-15"] = {
    target   = "Cal-15",
},
["kg-cal-IT"] = {
    target   = "Cal-IT",
},
["kg-cal-th"] = {
    target   = "Cal-th",
},
["kW-h"] = {
    target   = "kW.h",
},
["kW·h"] = {
    target   = "kW.h",
},
["MW-h"] = {
    target   = "MW.h",
},
["mW-h"] = {
    target   = "mW.h",
},
["MW·h"] = {
    target   = "MW.h",
},
["TW-h"] = {
    target   = "TW.h",
},
["uerg"] = {
    target   = "erg",
},
["ueV"] = {
    target   = "eV",
},
["uW-h"] = {
    target   = "W.h",
},
["uW.h"] = {
    target   = "W.h",
},
["uWh"] = {
    target   = "Wh",
},
["W-h"] = {
    target   = "W.h",
},
["eVpar"] = {
    _name1   = "electronvolt",
    _symbol  = "eV",
    utype    = "energy per chemical amount",
    scale    = 96485.329522144166,
    prefixes = 1,
```

```
    default  = "kcal/mol",
    link     = "Electronvolt",
},
["kcal/mol"] = {
    per      = { "kcal", "mol" },
    utype    = "energy per chemical amount",
    default  = "kJ/mol",
    link     = "Kilocalorie per mole",
},
["kJ/mol"] = {
    per      = { "kJ", "mol" },
    utype    = "energy per chemical amount",
    default  = "kcal/mol",
    link     = "Joule per mole",
},
["kWh/100 km"] = {
    name1    = "kilowatt-hour per 100 kilometres",
    name1_us = "kilowatt-hour per 100 kilometers",
    name2    = "kilowatt-hours per 100 kilometres",
    name2_us = "kilowatt-hours per 100 kilometers",
    symbol   = "kWh/100 km",
    utype    = "energy per unit length",
    scale    = 36,
    default  = "MJ/km kWh/mi",
    link     = "Kilowatt-hour",
},
["kWh/100 mi"] = {
    name1    = "kilowatt-hour per 100 miles",
    name2    = "kilowatt-hours per 100 miles",
    symbol   = "kWh/100 mi",
    utype    = "energy per unit length",
    scale    = 22.3694,
    default  = "mpge",
    link     = "Miles per gallon gasoline equivalent",
},
["MJ/100 km"] = {
    name1    = "megajoule per 100 kilometres",
    name1_us = "megajoule per 100 kilometers",
    name2    = "megajoules per 100 kilometres",
    name2_us = "megajoules per 100 kilometers",
    symbol   = "MJ/100 km",
    utype    = "energy per unit length",
    scale    = 10,
    default  = "BTU/mi",
    link     = "British thermal unit",
},
["mpge"] = {
    name1    = "mile per gallon gasoline equivalent",
    name2    = "miles per gallon gasoline equivalent",
    symbol   = "mpg&#8209;e",
    utype    = "energy per unit length",
    scale    = 13e-6,
    invert   = -1,
    iscomplex= true,
    default  = "kWh/100 mi",
    link     = "Miles per gallon gasoline equivalent",
},
["BTU/mi"] = {
    per      = { "BTU", "mi" },
    utype    = "energy per unit length",
    default  = "v > 1525 ! M ! k ! J/km",
},
["kJ/km"] = {
    per      = { "kJ", "km" },
    utype    = "energy per unit length",
    default  = "BTU/mi",
},
```

```
["kWh/km"] = {
    per      = { "-kW.h", "km" },
    utype    = "energy per unit length",
    default  = "MJ/km kWh/mi",
},
["kWh/mi"] = {
    per      = { "-kW.h", "mi" },
    utype    = "energy per unit length",
    default  = "kWh/km MJ/km",
},
["MJ/km"] = {
    per      = { "MJ", "km" },
    utype    = "energy per unit length",
    default  = "BTU/mi",
},
["mpg-e"] = {
    target   = "mpge",
},
["BTU/lb"] = {
    name1    = "British thermal unit per pound",
    name2    = "British thermal units per pound",
    symbol   = "BTU/lb",
    utype    = "energy per unit mass",
    scale    = 429.92261414790346,
    default  = "kJ/kg",
    link     = "British thermal unit",
},
["cal/g"] = {
    name1    = "calorie per gram",
    name2    = "calories per gram",
    symbol   = "cal/g",
    utype    = "energy per unit mass",
    scale    = 4184,
    default  = "J/g",
},
["GJ/kg"] = {
    name1    = "gigajoule per kilogram",
    name2    = "gigajoules per kilogram",
    symbol   = "GJ/kg",
    utype    = "energy per unit mass",
    scale    = 1e9,
    default  = "ktTNT/t",
    link     = "Specific energy",
},
["J/g"] = {
    name1    = "joule per gram",
    name2    = "joules per gram",
    symbol   = "J/g",
    utype    = "energy per unit mass",
    scale    = 1000,
    default  = "kcal/g",
    link     = "Specific energy",
},
["kcal/g"] = {
    name1    = "kilocalorie per gram",
    name2    = "kilocalories per gram",
    symbol   = "kcal/g",
    utype    = "energy per unit mass",
    scale    = 4184000,
    default  = "kJ/g",
},
["kJ/g"] = {
    name1    = "kilojoule per gram",
    name2    = "kilojoules per gram",
    symbol   = "kJ/g",
    utype    = "energy per unit mass",
    scale    = 1000000,
```

```
    default  = "kcal/g",
    link     = "Specific energy",
},
["kJ/kg"] = {
    name1    = "kilojoule per kilogram",
    name2    = "kilojoules per kilogram",
    symbol   = "kJ/kg",
    utype    = "energy per unit mass",
    scale    = 1000,
    default  = "BTU/lb",
    link     = "Specific energy",
},
["ktonTNT/MT"] = {
    name2    = "kilotons of TNT per metric ton",
    symbol   = "kiloton of TNT per metric ton",
    usename  = 1,
    utype    = "energy per unit mass",
    scale    = 4184000000,
    default  = "GJ/kg",
    link     = "TNT equivalent",
},
["ktTNT/t"] = {
    name2    = "kilotonnes of TNT per tonne",
    symbol   = "kilotonne of TNT per tonne",
    usename  = 1,
    utype    = "energy per unit mass",
    scale    = 4184000000,
    default  = "GJ/kg",
    link     = "TNT equivalent",
},
["MtonTNT/MT"] = {
    name2    = "megatons of TNT per metric ton",
    symbol   = "megaton of TNT per metric ton",
    usename  = 1,
    utype    = "energy per unit mass",
    scale    = 4.184e12,
    default  = "TJ/kg",
    link     = "TNT equivalent",
},
["MtTNT/MT"] = {
    name2    = "megatonnes of TNT per tonne",
    symbol   = "megatonne of TNT per tonne",
    usename  = 1,
    utype    = "energy per unit mass",
    scale    = 4.184e12,
    default  = "TJ/kg",
    link     = "TNT equivalent",
},
["TJ/kg"] = {
    name1    = "terajoule per kilogram",
    name2    = "terajoules per kilogram",
    symbol   = "TJ/kg",
    utype    = "energy per unit mass",
    scale    = 1e12,
    default  = "MtTNT/MT",
    link     = "Specific energy",
},
["Cal/g"] = {
    per      = { "Cal", "g" },
    utype    = "energy per unit mass",
    default  = "kJ/g",
},
["BTU/cuft"] = {
    per      = { "BTU", "cuft" },
    utype    = "energy per unit volume",
    default  = "kJ/L",
},
```

```
["Cal/12USoz(mL)serve"] = {
    per      = { "Cal", "-12USoz(mL)serve" },
    utype    = "energy per unit volume",
    default  = "kJ/L",
},
["Cal/12USoz(ml)serve"] = {
    per      = { "Cal", "-12USoz(ml)serve" },
    utype    = "energy per unit volume",
    default  = "kJ/l",
},
["Cal/12USozserve"] = {
    per      = { "Cal", "-12USozserve" },
    utype    = "energy per unit volume",
    default  = "kJ/L",
},
["Cal/USoz"] = {
    per      = { "Cal", "USoz" },
    utype    = "energy per unit volume",
    default  = "kJ/ml",
},
["kJ/L"] = {
    per      = { "kJ", "L" },
    utype    = "energy per unit volume",
    default  = "BTU/cuft",
},
["kJ/l"] = {
    per      = { "kJ", "l" },
    utype    = "energy per unit volume",
    default  = "BTU/cuft",
},
["kJ/ml"] = {
    per      = { "kJ", "ml" },
    utype    = "energy per unit volume",
    default  = "Cal/USoz",
},
["MJ/m3"] = {
    per      = { "MJ", "m3" },
    utype    = "energy per unit volume",
    default  = "BTU/cuft",
},
["Sv"] = {
    _name1   = "sievert",
    _symbol  = "Sv",
    utype    = "equivalent radiation dose",
    scale    = 1,
    prefixes = 1,
    default  = "rem",
    link     = "Sievert",
},
["rem"] = {
    _name1   = "rem",
    _symbol  = "rem",
    utype    = "equivalent radiation dose",
    scale    = 0.01,
    prefixes = 1,
    default  = "Sv",
    link     = "Roentgen equivalent man",
},
["g/km"] = {
    name1    = "gram per kilometre",
    name1_us = "gram per kilometer",
    name2    = "grams per kilometre",
    name2_us = "grams per kilometer",
    symbol   = "g/km",
    utype    = "exhaust emission",
    scale    = 1e-6,
    default  = "oz/mi",
```

```
    link     = "Exhaust gas",
},
["g/mi"] = {
    name1    = "gram per mile",
    name2    = "grams per mile",
    symbol   = "g/mi",
    utype    = "exhaust emission",
    scale    = 6.2137119223733397e-7,
    default  = "g/km",
    link     = "Exhaust gas",
},
["gCO2/km"] = {
    name1    = "gram of CO<sub>2</sub> per kilometre",
    name1_us = "gram of CO<sub>2</sub> per kilometer",
    name2    = "grams of CO<sub>2</sub> per kilometre",
    name2_us = "grams of CO<sub>2</sub> per kilometer",
    symbol   = "g(CO<sub>2</sub>)/km",
    utype    = "exhaust emission",
    scale    = 1e-6,
    default  = "ozCO2/mi",
    link     = "Exhaust gas",
},
["gCO2/mi"] = {
    name1    = "gram of CO<sub>2</sub> per mile",
    name2    = "grams of CO<sub>2</sub> per mile",
    symbol   = "g(CO<sub>2</sub>)/mi",
    utype    = "exhaust emission",
    scale    = 6.2137119223733397e-7,
    default  = "gCO2/km",
    link     = "Exhaust gas",
},
["kg/km"] = {
    name1    = "kilogram per kilometre",
    name1_us = "kilogram per kilometer",
    name2    = "kilograms per kilometre",
    name2_us = "kilograms per kilometer",
    symbol   = "kg/km",
    utype    = "exhaust emission",
    scale    = 0.001,
    default  = "lb/mi",
    link     = "Exhaust gas",
},
["kgCO2/km"] = {
    name1    = "kilogram of CO<sub>2</sub> per kilometre",
    name1_us = "kilogram of CO<sub>2</sub> per kilometer",
    name2    = "kilograms of CO<sub>2</sub> per kilometre",
    name2_us = "kilograms of CO<sub>2</sub> per kilometer",
    symbol   = "kg(CO<sub>2</sub>)/km",
    utype    = "exhaust emission",
    scale    = 0.001,
    default  = "lbCO2/mi",
    link     = "Exhaust gas",
},
["lb/mi"] = {
    name1    = "pound per mile",
    name2    = "pounds per mile",
    symbol   = "lb/mi",
    utype    = "exhaust emission",
    scale    = 0.00028184923173665794,
    default  = "kg/km",
    link     = "Exhaust gas",
},
["lbCO2/mi"] = {
    name1    = "pound of CO<sub>2</sub> per mile",
    name2    = "pounds of CO<sub>2</sub> per mile",
    symbol   = "lb(CO<sub>2</sub>)/mi",
    utype    = "exhaust emission",
```

```
    scale    = 0.00028184923173665794,
    default  = "kgCO2/km",
    link     = "Exhaust gas",
},
["oz/mi"] = {
    name1    = "ounce per mile",
    name2    = "ounces per mile",
    symbol   = "oz/mi",
    utype    = "exhaust emission",
    scale    = 1.7615576983541121e-5,
    default  = "g/km",
    link     = "Exhaust gas",
},
["ozCO2/mi"] = {
    name1    = "ounce of CO<sub>2</sub> per mile",
    name2    = "ounces of CO<sub>2</sub> per mile",
    symbol   = "oz(CO<sub>2</sub>)/mi",
    utype    = "exhaust emission",
    scale    = 1.7615576983541121e-5,
    default  = "gCO2/km",
    link     = "Exhaust gas",
},
["cuft/a"] = {
    name1    = "cubic foot per annum",
    name2    = "cubic feet per annum",
    symbol   = "cu ft/a",
    utype    = "flow",
    scale    = 8.9730672142368242e-10,
    default  = "m3/a",
    link     = "Cubic foot per second",
},
["cuft/d"] = {
    name1    = "cubic foot per day",
    name2    = "cubic feet per day",
    symbol   = "cu ft/d",
    utype    = "flow",
    scale    = 3.2774128000000003e-7,
    default  = "m3/d",
    link     = "Cubic foot per second",
},
["cuft/h"] = {
    name1    = "cubic foot per hour",
    name2    = "cubic feet per hour",
    symbol   = "cu ft/h",
    utype    = "flow",
    scale    = 7.8657907200000004e-6,
    default  = "m3/h",
    link     = "Cubic foot per second",
},
["cuft/min"] = {
    name1    = "cubic foot per minute",
    name2    = "cubic feet per minute",
    symbol   = "cu ft/min",
    utype    = "flow",
    scale    = 0.00047194744319999999,
    default  = "m3/min",
},
["cuft/s"] = {
    name1    = "cubic foot per second",
    name2    = "cubic feet per second",
    symbol   = "cu ft/s",
    utype    = "flow",
    scale    = 28316846592e-12,
    default  = "m3/s",
},
["cumi/a"] = {
    name1    = "cubic mile per annum",
```

```
    name2    = "cubic miles per annum",
    symbol   = "cu&amp;nbsp;mi/a",
    utype    = "flow",
    scale    = 132.08171170940057,
    default  = "km3/a",
    link     = "Cubic foot per second",
},
["cuyd/h"] = {
    name1    = "cubic yard per hour",
    name2    = "cubic yards per hour",
    symbol   = "cuyd/h",
    utype    = "flow",
    scale    = 0.00021237634944000001,
    default  = "m3/h",
    link     = "Cubic foot per second",
},
["cuyd/s"] = {
    name1    = "cubic yard per second",
    name2    = "cubic yards per second",
    symbol   = "cu&amp;nbsp;yd/s",
    utype    = "flow",
    scale    = 0.76455485798400002,
    default  = "m3/s",
},
["Goilbbl/a"] = {
    name1    = "billion barrels per year",
    name2    = "billion barrels per year",
    symbol   = "Gbbl/a",
    utype    = "flow",
    scale    = 5.0380033629933836,
    default  = "v * 1.58987294928 < 10 ! e6 ! e9 ! m3/a",
    link     = "Barrel per day",
},
["impgal/h"] = {
    name1    = "imperial gallon per hour",
    name2    = "imperial gallons per hour",
    symbol   = "imp&amp;nbsp;gal/h",
    utype    = "flow",
    scale    = 1.2628027777777779e-6,
    default  = "m3/h",
    link     = "Gallon",
},
["impgal/min"] = {
    name1    = "imperial gallon per minute",
    name2    = "imperial gallons per minute",
    symbol   = "imp gal/min",
    utype    = "flow",
    scale    = 7.5768166666666671e-5,
    default  = "m3/s",
    link     = "Gallon",
},
["impgal/s"] = {
    name1    = "imperial gallon per second",
    name2    = "imperial gallons per second",
    symbol   = "impgal/s",
    utype    = "flow",
    scale    = 0.00454609,
    default  = "m3/s",
    link     = "Imperial gallons per second",
},
["km3/a"] = {
    name1    = "cubic kilometre per annum",
    name1_us = "cubic kilometer per annum",
    name2    = "cubic kilometres per annum",
    name2_us = "cubic kilometers per annum",
    symbol   = "km<sup>3</sup>/a",
    utype    = "flow",
```

```
    scale    = 31.68808781402895,
    default  = "cumi/a",
    link     = "Cubic metre per second",
},
["km3/d"] = {
    name1    = "cubic kilometre per day",
    name1_us = "cubic kilometer per day",
    name2    = "cubic kilometres per day",
    name2_us = "cubic kilometers per day",
    symbol   = "km<sup>3</sup>/d",
    utype    = "flow",
    scale    = 11574.074074074075,
    default  = "cuft/d",
    link     = "Cubic metre per second",
},
["koilbbl/a"] = {
    name1    = "thousand barrels per year",
    name2    = "thousand barrels per year",
    symbol   = "kbbl/a",
    utype    = "flow",
    scale    = 5.0380033629933841e-6,
    default  = "v * 1.58987294928 < 10 ! ! e3 ! m3/a",
    link     = "Barrel per day",
},
["koilbbl/d"] = {
    name1    = "thousand barrels per day",
    name2    = "thousand barrels per day",
    symbol   = "kbbl/d",
    utype    = "flow",
    scale    = 0.0018401307283333335,
    default  = "v * 1.58987294928 < 10 ! ! e3 ! m3/d",
    link     = "Barrel per day",
},
["L/h"] = {
    name1    = "litre per hour",
    name1_us = "liter per hour",
    name2    = "litres per hour",
    name2_us = "liters per hour",
    symbol   = "L/h",
    utype    = "flow",
    scale    = 2.7777777777777776e-7,
    default  = "impgal/h USgal/h",
    link     = "Cubic metre per second",
},
["L/min"] = {
    name1    = "litre per minute",
    name1_us = "liter per minute",
    name2    = "litres per minute",
    name2_us = "liters per minute",
    symbol   = "L/min",
    utype    = "flow",
    scale    = 1.6666666666666667e-5,
    default  = "impgal/min USgal/min",
    link     = "Cubic metre per second",
},
["L/s"] = {
    name1    = "litre per second",
    name1_us = "liter per second",
    name2    = "litres per second",
    name2_us = "liters per second",
    symbol   = "L/s",
    utype    = "flow",
    scale    = 0.001,
    default  = "cuft/s",
    link     = "Cubic metre per second",
},
["m3/a"] = {
```

```
    name1    = "cubic metre per annum",
    name1_us = "cubic meter per annum",
    name2    = "cubic metres per annum",
    name2_us = "cubic meters per annum",
    symbol   = "m<sup>3</sup>/a",
    utype    = "flow",
    scale    = 3.1688087814028947e-8,
    default  = "cuft/a",
    link     = "Cubic metre per second",
},
["m3/d"] = {
    name1    = "cubic metre per day",
    name1_us = "cubic meter per day",
    name2    = "cubic metres per day",
    name2_us = "cubic meters per day",
    symbol   = "m<sup>3</sup>/d",
    utype    = "flow",
    scale    = 1.1574074074074073e-5,
    default  = "cuft/d",
    link     = "Cubic metre per second",
},
["m3/h"] = {
    name1    = "cubic metre per hour",
    name1_us = "cubic meter per hour",
    name2    = "cubic metres per hour",
    name2_us = "cubic meters per hour",
    symbol   = "m<sup>3</sup>/h",
    utype    = "flow",
    scale    = 0.00027777777777777778,
    default  = "cuft/h",
    link     = "Cubic metre per second",
},
["m3/min"] = {
    name1    = "cubic metre per minute",
    name1_us = "cubic meter per minute",
    name2    = "cubic metres per minute",
    name2_us = "cubic meters per minute",
    symbol   = "m<sup>3</sup>/min",
    utype    = "flow",
    scale    = 0.016666666666666666,
    default  = "cuft/min",
    link     = "Cubic metre per second",
},
["m3/s"] = {
    name1    = "cubic metre per second",
    name1_us = "cubic meter per second",
    name2    = "cubic metres per second",
    name2_us = "cubic meters per second",
    symbol   = "m<sup>3</sup>/s",
    utype    = "flow",
    scale    = 1,
    default  = "cuft/s",
},
["Moilbbl/a"] = {
    name1    = "million barrels per year",
    name2    = "million barrels per year",
    symbol   = "Mbbl/a",
    utype    = "flow",
    scale    = 0.0050380033629933837,
    default  = "v * 1.58987294928 < 10 ! e3 ! e6 ! m3/a",
    link     = "Barrel per day",
},
["Moilbbl/d"] = {
    name1    = "million barrels per day",
    name2    = "million barrels per day",
    symbol   = "Mbbl/d",
    utype    = "flow",
```

```
    scale    = 1.8401307283333335,
    default  = "v * 1.58987294928 < 10 ! e3 ! e6 ! m3/d",
    link     = "Barrel per day",
},
["oilbbl/a"] = {
    name1    = "barrel per year",
    name2    = "barrels per year",
    symbol   = "bbl/a",
    utype    = "flow",
    scale    = 5.0380033629933841e-9,
    default  = "m3/a",
    link     = "Barrel per day",
},
["oilbbl/d"] = {
    name1    = "barrel per day",
    name2    = "barrels per day",
    symbol   = "bbl/d",
    utype    = "flow",
    scale    = 1.8401307283333336e-6,
    default  = "m3/d",
},
["Toilbbl/a"] = {
    name1    = "trillion barrels per year",
    name2    = "trillion barrels per year",
    symbol   = "Tbbl/a",
    utype    = "flow",
    scale    = 5038.0033629933832,
    default  = "v * 1.58987294928 < 10 ! e9 ! e12 ! m3/a",
    link     = "Barrel per day",
},
["U.S.gal/d"] = {
    name1    = "U.S. gallon per day",
    name2    = "U.S. gallons per day",
    symbol   = "U.S.&amp;nbsp;gal/d",
    utype    = "flow",
    scale    = 4.3812636388888893e-8,
    default  = "m3/s",
    customary= 1,
},
["U.S.gal/h"] = {
    name1    = "gallon per hour",
    name2    = "gallons per hour",
    symbol   = "gal/h",
    utype    = "flow",
    scale    = 1.0515032733333334e-6,
    default  = "m3/h",
    link     = "Gallon",
    customary= 2,
},
["U.S.gal/min"] = {
    name1    = "U.S. gallon per minute",
    name2    = "U.S. gallons per minute",
    symbol   = "U.S.&amp;nbsp;gal/min",
    utype    = "flow",
    scale    = 6.3090196400000003e-5,
    default  = "m3/s",
    link     = "Gallon",
},
["USgal/a"] = {
    name1    = "US gallon per year",
    name2    = "US gallons per year",
    symbol   = "US&amp;nbsp;gal/a",
    utype    = "flow",
    scale    = 1.1995246102365199e-10,
    default  = "m3/s",
},
["USgal/d"] = {
```

```
    name1    = "US gallon per day",
    name2    = "US gallons per day",
    symbol   = "US&amp;nbsp;gal/d",
    utype    = "flow",
    scale    = 4.3812636388888893e-8,
    default  = "m3/s",
},
["USgal/h"] = {
    name1    = "gallon per hour",
    name2    = "gallons per hour",
    symbol   = "gal/h",
    utype    = "flow",
    scale    = 1.0515032733333334e-6,
    default  = "m3/h",
    link     = "Gallon",
    customary= 1,
},
["USgal/min"] = {
    name1    = "US gallon per minute",
    name2    = "US gallons per minute",
    symbol   = "US&amp;nbsp;gal/min",
    utype    = "flow",
    scale    = 6.3090196400000003e-5,
    default  = "m3/s",
    link     = "Gallon",
},
["USgal/s"] = {
    name1    = "US gallon per second",
    name1_us = "U.S. gallon per second",
    name2    = "US gallons per second",
    name2_us = "U.S. gallons per second",
    symbol   = "USgal/s",
    utype    = "flow",
    scale    = 0.003785411784,
    default  = "m3/s",
    link     = "US gallons per second",
},
["ft3/a"] = {
    target   = "cuft/a",
},
["ft3/d"] = {
    target   = "cuft/d",
},
["ft3/h"] = {
    target   = "cuft/h",
},
["ft3/s"] = {
    target   = "cuft/s",
},
["Gcuft/a"] = {
    target   = "e9cuft/a",
},
["Gcuft/d"] = {
    target   = "e9cuft/d",
},
["kcuft/a"] = {
    target   = "e3cuft/a",
},
["kcuft/d"] = {
    target   = "e3cuft/d",
},
["kcuft/s"] = {
    target   = "e3cuft/s",
},
["Mcuft/a"] = {
    target   = "e6cuft/a",
},
```

```
["Mcuft/d"] = {
    target   = "e6cuft/d",
},
["Mcuft/s"] = {
    target   = "e6cuft/s",
},
["m³/s"] = {
    target   = "m3/s",
},
["Tcuft/a"] = {
    target   = "e12cuft/a",
},
["Tcuft/d"] = {
    target   = "e12cuft/d",
},
["u.s.gal/min"] = {
    target   = "U.S.gal/min",
},
["usgal/min"] = {
    target   = "USgal/min",
},
["-LTf"] = {
    name1    = "long ton-force",
    name2    = "long tons-force",
    symbol   = "LTf",
    utype    = "force",
    scale    = 9964.01641818352,
    default  = "kN",
},
["-STf"] = {
    name1    = "short ton-force",
    name2    = "short tons-force",
    symbol   = "STf",
    utype    = "force",
    scale    = 8896.443230521,
    default  = "kN",
},
["dyn"] = {
    name1    = "dyne",
    symbol   = "dyn",
    utype    = "force",
    scale    = 0.00001,
    default  = "gr-f",
},
["g-f"] = {
    name1    = "gram-force",
    name2    = "grams-force",
    symbol   = "g<sub>f</sub>",
    utype    = "force",
    scale    = 0.00980665,
    default  = "mN oz-f",
    link     = "Kilogram-force",
},
["gf"] = {
    name1    = "gram-force",
    name2    = "grams-force",
    symbol   = "gf",
    utype    = "force",
    scale    = 0.00980665,
    default  = "mN ozf",
    link     = "Kilogram-force",
},
["gr-f"] = {
    name1    = "grain-force",
    name2    = "grains-force",
    symbol   = "gr<sub>f</sub>",
    utype    = "force",
```

```
    scale    = 0.0006354602307515,
    default  = "N",
    link     = "Pound (force)",
},
["grf"] = {
    name1    = "grain-force",
    name2    = "grains-force",
    symbol   = "grf",
    utype    = "force",
    scale    = 0.0006354602307515,
    default  = "N",
    link     = "Pound (force)",
},
["kdyn"] = {
    name1    = "kilodyne",
    symbol   = "kdyn",
    utype    = "force",
    scale    = 0.01,
    default  = "oz-f",
    link     = "Dyne",
},
["kg-f"] = {
    name1    = "kilogram-force",
    name2    = "kilograms-force",
    symbol   = "kg<sub>f</sub>",
    utype    = "force",
    scale    = 9.80665,
    default  = "N lb-f",
},
["kgf"] = {
    name1    = "kilogram-force",
    name2    = "kilograms-force",
    symbol   = "kgf",
    utype    = "force",
    scale    = 9.80665,
    default  = "N lbf",
},
["kp"] = {
    name1    = "kilopond",
    symbol   = "kp",
    utype    = "force",
    scale    = 9.80665,
    default  = "N lb-f",
    link     = "Kilogram-force",
},
["L/T-f"] = {
    name1    = "long ton-force",
    name2    = "long tons-force",
    symbol   = "L/T<sub>f</sub>",
    utype    = "force",
    scale    = 9964.01641818352,
    default  = "kN",
},
["L/Tf"] = {
    name1    = "long ton-force",
    name2    = "long tons-force",
    symbol   = "L/Tf",
    utype    = "force",
    scale    = 9964.01641818352,
    default  = "kN",
},
["lb-f"] = {
    name1    = "pound-force",
    name2    = "pounds-force",
    symbol   = "lb<sub>f</sub>",
    utype    = "force",
    scale    = 4.4482216152605,
```

```
    default  = "N",
    link     = "Pound (force)",
},
["lbf"] = {
    name1    = "pound-force",
    name2    = "pounds-force",
    symbol   = "lbf",
    utype    = "force",
    scale    = 4.4482216152605,
    default  = "N",
    link     = "Pound (force)",
},
["lb(f)"] = {
    name1    = "pound",
    symbol   = "lb",
    utype    = "force",
    scale    = 4.4482216152605,
    default  = "N",
    link     = "Pound (force)",
},
["LT-f"] = {
    name1    = "long ton-force",
    name2    = "long tons-force",
    symbol   = "LT<sub>f</sub>",
    utype    = "force",
    scale    = 9964.01641818352,
    default  = "kN",
},
["LTf"] = {
    name1    = "long ton-force",
    name2    = "long tons-force",
    symbol   = "LTf",
    usename  = 1,
    utype    = "force",
    scale    = 9964.01641818352,
    default  = "kN",
},
["Mdyn"] = {
    name1    = "megadyne",
    symbol   = "Mdyn",
    utype    = "force",
    scale    = 10,
    default  = "lb-f",
    link     = "Dyne",
},
["mdyn"] = {
    name1    = "millidyne",
    symbol   = "mdyn",
    utype    = "force",
    scale    = 0.00000001,
    default  = "gr-f",
    link     = "Dyne",
},
["mg-f"] = {
    name1    = "milligram-force",
    name2    = "milligrams-force",
    symbol   = "mg<sub>f</sub>",
    utype    = "force",
    scale    = 0.00000980665,
    default  = "N gr-f",
    link     = "Kilogram-force",
},
["mgf"] = {
    name1    = "milligram-force",
    name2    = "milligrams-force",
    symbol   = "mgf",
    utype    = "force",
```

```
    scale    = 0.00000980665,
    default  = "N grf",
    link     = "Kilogram-force",
},
["Mp"] = {
    name1    = "megapond",
    symbol   = "Mp",
    utype    = "force",
    scale    = 9806.65,
    default  = "kN LT-f ST-f",
    link     = "Kilogram-force",
},
["mp"] = {
    name1    = "millipond",
    symbol   = "mp",
    utype    = "force",
    scale    = 0.00000980665,
    default  = "N gr-f",
    link     = "Kilogram-force",
},
["N"] = {
    _name1   = "newton",
    _symbol  = "N",
    utype    = "force",
    scale    = 1,
    prefixes = 1,
    default  = "lb-f",
    link     = "Newton (unit)",
},
["oz-f"] = {
    name1    = "ounce-force",
    name2    = "ounces-force",
    symbol   = "oz<sub>f</sub>",
    utype    = "force",
    scale    = 0.2780138203095378125,
    default  = "mN",
    link     = "Pound (force)",
},
["ozf"] = {
    name1    = "ounce-force",
    name2    = "ounces-force",
    symbol   = "ozf",
    utype    = "force",
    scale    = 0.2780138203095378125,
    default  = "mN",
    link     = "Pound (force)",
},
["p"] = {
    name1    = "pond",
    symbol   = "p",
    utype    = "force",
    scale    = 0.00980665,
    default  = "mN oz-f",
    link     = "Kilogram-force",
},
["pdl"] = {
    name1    = "poundal",
    symbol   = "pdl",
    utype    = "force",
    scale    = 0.138254954376,
    default  = "N",
},
["S/T-f"] = {
    name1    = "short ton-force",
    name2    = "short tons-force",
    symbol   = "S/T<sub>f</sub>",
    utype    = "force",
```

```
    scale    = 8896.443230521,
    default  = "kN",
},
["S/Tf"] = {
    name1    = "short ton-force",
    name2    = "short tons-force",
    symbol   = "S/Tf",
    utype    = "force",
    scale    = 8896.443230521,
    default  = "kN",
},
["ST-f"] = {
    name1    = "short ton-force",
    name2    = "short tons-force",
    symbol   = "ST<sub>f</sub>",
    utype    = "force",
    scale    = 8896.443230521,
    default  = "kN",
},
["STf"] = {
    name1    = "short ton-force",
    name2    = "short tons-force",
    symbol   = "STf",
    usename  = 1,
    utype    = "force",
    scale    = 8896.443230521,
    default  = "kN",
},
["t-f"] = {
    name1    = "tonne-force",
    name2    = "tonnes-force",
    symbol   = "t<sub>f</sub>",
    utype    = "force",
    scale    = 9806.65,
    default  = "kN LT-f ST-f",
    link     = "Ton-force#Tonne-force",
},
["tf"] = {
    name1    = "tonne-force",
    name2    = "tonnes-force",
    symbol   = "tf",
    utype    = "force",
    scale    = 9806.65,
    default  = "kN LTf STf",
    link     = "Ton-force#Tonne-force",
},
["dyne"] = {
    target   = "dyn",
},
["newtons"] = {
    target   = "N",
},
["poundal"] = {
    target   = "pdl",
},
["tonne-force"] = {
    target   = "tf",
},
["impgal/mi"] = {
    per      = { "@impgal", "mi" },
    utype    = "fuel efficiency",
    invert   = 1,
    iscomplex= true,
    default  = "l/km USgal/mi",
},
["km/L"] = {
    per      = { "km", "L" },
```

```
    utype    = "fuel efficiency",
    invert   = -1,
    iscomplex= true,
    default  = "mpgimp mpgus",
},
["km/l"] = {
    per      = { "km", "l" },
    utype    = "fuel efficiency",
    invert   = -1,
    iscomplex= true,
    default  = "mpgimp mpgus",
},
["L/100 km"] = {
    per      = { "L", "100km" },
    utype    = "fuel efficiency",
    invert   = 1,
    iscomplex= true,
    default  = "mpgimp mpgus",
    symlink  = "[[Fuel economy in automobiles#Units of measure|L/100 km]]",
},
["l/100 km"] = {
    per      = { "l", "100km" },
    utype    = "fuel efficiency",
    invert   = 1,
    iscomplex= true,
    default  = "mpgimp mpgus",
    symlink  = "[[Fuel economy in automobiles#Units of measure|l/100 km]]",
},
["L/km"] = {
    per      = { "L", "km" },
    utype    = "fuel efficiency",
    invert   = 1,
    iscomplex= true,
    default  = "mpgimp mpgus",
},
["l/km"] = {
    per      = { "l", "km" },
    utype    = "fuel efficiency",
    invert   = 1,
    iscomplex= true,
    default  = "mpgimp mpgus",
},
["mi/impqt"] = {
    per      = { "mi", "impqt" },
    utype    = "fuel efficiency",
    invert   = -1,
    iscomplex= true,
    default  = "km/L",
},
["mi/U.S.qt"] = {
    per      = { "mi", "U.S.qt" },
    utype    = "fuel efficiency",
    invert   = -1,
    iscomplex= true,
    default  = "km/L",
},
["mi/USqt"] = {
    per      = { "mi", "USqt" },
    utype    = "fuel efficiency",
    invert   = -1,
    iscomplex= true,
    default  = "km/L",
},
["mi/usqt"] = {
    per      = { "mi", "usqt" },
    utype    = "fuel efficiency",
    invert   = -1,
```

```
    iscomplex= true,
    default  = "km/L",
},
["mpgimp"] = {
    per      = { "mi", "@impgal" },
    symbol   = "mpg<sub>&#8209;imp</sub>",
    utype    = "fuel efficiency",
    invert   = -1,
    iscomplex= true,
    default  = "L/100 km+mpgus",
    symlink  = "[[Fuel economy in automobiles#Units of measure|mpg]]<sub>&#8209;[[Impe
},
["mpgus"] = {
    per      = { "mi", "+USgal" },
    symbol   = "mpg<sub>&#8209;US</sub>",
    utype    = "fuel efficiency",
    invert   = -1,
    iscomplex= true,
    default  = "L/100 km+mpgimp",
    symlink  = "[[Fuel economy in automobiles#Units of measure|mpg]]<sub>&#8209;[[Unit
},
["U.S.gal/mi"] = {
    per      = { "*U.S.gal", "mi" },
    sp_us    = true,
    utype    = "fuel efficiency",
    invert   = 1,
    iscomplex= true,
    default  = "l/km impgal/mi",
},
["usgal/mi"] = {
    per      = { "+USgal", "mi" },
    utype    = "fuel efficiency",
    invert   = 1,
    iscomplex= true,
    default  = "l/km impgal/mi",
},
["L/100km"] = {
    target   = "L/100 km",
},
["l/100km"] = {
    target   = "l/100 km",
},
["mpg"] = {
    shouldbe = "Use %{mpgus%} for miles per US gallon or %{mpgimp%} for miles per impe
},
["mpgU.S."] = {
    target   = "mpgus",
    symbol   = "mpg<sub>&#8209;U.S.</sub>",
    sp_us    = true,
    symlink  = "[[Fuel economy in automobiles#Units of measure|mpg]]<sub>&#8209;[[Unit
},
["mpgu.s."] = {
    target   = "mpgus",
    symbol   = "mpg<sub>&#8209;U.S.</sub>",
    sp_us    = true,
    symlink  = "[[Fuel economy in automobiles#Units of measure|mpg]]<sub>&#8209;[[Unit
},
["mpgUS"] = {
    target   = "mpgus",
},
["USgal/mi"] = {
    target   = "usgal/mi",
},
["kPa/m"] = {
    per      = { "kPa", "-m-frac" },
    utype    = "fracture gradient",
    default  = "psi/ft",
```

```
},
["psi/ft"] = {
    per      = { "psi", "-ft-frac" },
    utype    = "fracture gradient",
    default  = "kPa/m",
},
["cm/km"] = {
    name1    = "centimetre per kilometre",
    name1_us = "centimeter per kilometer",
    name2    = "centimetres per kilometre",
    name2_us = "centimeters per kilometer",
    symbol   = "cm/km",
    utype    = "gradient",
    scale    = 0.00001,
    default  = "ft/mi",
    link     = "Grade (slope)",
},
["ft/mi"] = {
    name1    = "foot per mile",
    name2    = "feet per mile",
    symbol   = "ft/mi",
    utype    = "gradient",
    scale    = 0.00018939393939393939,
    default  = "v < 5.28 ! c ! ! m/km",
    link     = "Grade (slope)",
},
["ft/nmi"] = {
    name1    = "foot per nautical mile",
    name2    = "feet per nautical mile",
    symbol   = "ft/nmi",
    utype    = "gradient",
    scale    = 0.00016457883369330455,
    default  = "v < 6.076 ! c ! ! m/km",
    link     = "Grade (slope)",
},
["in/ft"] = {
    name1    = "inch per foot",
    name2    = "inches per foot",
    symbol   = "in/ft",
    utype    = "gradient",
    scale    = 0.083333333333333329,
    default  = "mm/m",
    link     = "Grade (slope)",
},
["in/mi"] = {
    name1    = "inch per mile",
    name2    = "inches per mile",
    symbol   = "in/mi",
    utype    = "gradient",
    scale    = 1.5782828282828283e-5,
    default  = "v < 0.6336 ! m ! c ! m/km",
    link     = "Grade (slope)",
},
["m/km"] = {
    name1    = "metre per kilometre",
    name1_us = "meter per kilometer",
    name2    = "metres per kilometre",
    name2_us = "meters per kilometer",
    symbol   = "m/km",
    utype    = "gradient",
    scale    = 0.001,
    default  = "ft/mi",
    link     = "Grade (slope)",
},
["mm/km"] = {
    name1    = "millimetre per kilometre",
    name1_us = "millimeter per kilometer",
```

```
    name2    = "millimetres per kilometre",
    name2_us = "millimeters per kilometer",
    symbol   = "mm/km",
    utype    = "gradient",
    scale    = 0.000001,
    default  = "in/mi",
    link     = "Grade (slope)",
},
["mm/m"] = {
    name1    = "millimetre per metre",
    name1_us = "millimeter per meter",
    name2    = "millimetres per metre",
    name2_us = "millimeters per meter",
    symbol   = "mm/m",
    utype    = "gradient",
    scale    = 0.001,
    default  = "in/ft",
    link     = "Grade (slope)",
},
["admi"] = {
    name1    = "admiralty mile",
    symbol   = "nmi (admiralty)",
    utype    = "length",
    scale    = 1853.184,
    default  = "km mi",
    link     = "Nautical mile",
},
["AU"] = {
    name1    = "astronomical unit",
    symbol   = "AU",
    utype    = "length",
    scale    = 149597870700,
    default  = "km mi",
},
["Brnmi"] = {
    name1    = "British nautical mile",
    symbol   = "(Brit) nmi",
    utype    = "length",
    scale    = 1853.184,
    default  = "km mi",
    link     = "Nautical mile",
},
["bu"] = {
    name2    = "bu",
    symbol   = "bu",
    usename  = 1,
    utype    = "length",
    scale    = 0.0030303030303030303,
    default  = "mm",
    link     = "Japanese units of measurement#Length",
},
["ch"] = {
    name1    = "chain",
    symbol   = "ch",
    utype    = "length",
    scale    = 20.1168,
    default  = "ft m",
    subdivs  = { ["ft"] = { 66, default = "m" }, ["yd"] = { 22, default = "m" } },
    link     = "Chain (unit)",
},
["chlk"] = {
    name1    = "[[Chain (unit)|chain]]",
    symbol   = "[[Chain (unit)|ch]]",
    utype    = "length",
    scale    = 20.1168,
    default  = "ft m",
    link     = "",
```

```
},
["chain"] = {
    symbol   = "chain",
    usename  = 1,
    utype    = "length",
    scale    = 20.1168,
    default  = "ft m",
    subdivs  = { ["ft"] = { 66, default = "m" }, ["yd"] = { 22, default = "m" } },
    link     = "Chain (unit)",
},
["chainlk"] = {
    symbol   = "[[Chain (unit)|chain]]",
    usename  = 1,
    utype    = "length",
    scale    = 20.1168,
    default  = "ft m",
    link     = "",
},
["dpcm"] = {
    name2    = "dot/cm",
    symbol   = "dot/cm",
    utype    = "length",
    scale    = 100,
    invert   = -1,
    iscomplex= true,
    default  = "dpi",
    link     = "Dots per inch",
},
["dpi"] = {
    name2    = "DPI",
    symbol   = "DPI",
    utype    = "length",
    scale    = 39.370078740157481,
    invert   = -1,
    iscomplex= true,
    default  = "pitch",
    link     = "Dots per inch",
},
["fathom"] = {
    symbol   = "fathom",
    usename  = 1,
    utype    = "length",
    scale    = 1.8288,
    default  = "ft m",
},
["foot"] = {
    name1    = "foot",
    name2    = "foot",
    symbol   = "ft",
    utype    = "length",
    scale    = 0.3048,
    default  = "m",
    subdivs  = { ["in"] = { 12, default = "m" } },
    link     = "Foot (unit)",
},
["ft"] = {
    name1    = "foot",
    name2    = "feet",
    symbol   = "ft",
    utype    = "length",
    scale    = 0.3048,
    exception= "integer_more_precision",
    default  = "m",
    subdivs  = { ["in"] = { 12, default = "m" } },
    link     = "Foot (unit)",
},
["furlong"] = {
```

```
    symbol   = "furlong",
    usename  = 1,
    utype    = "length",
    scale    = 201.168,
    default  = "ft m",
},
["Gly"] = {
    name1    = "gigalight-year",
    symbol   = "Gly",
    utype    = "length",
    scale    = 9.4607304725808e24,
    default  = "Mpc",
    link     = "Light-year#Definitions",
},
["Gpc"] = {
    name1    = "gigaparsec",
    symbol   = "Gpc",
    utype    = "length",
    scale    = 3.0856775814671916e25,
    default  = "Gly",
    link     = "Parsec#Megaparsecs and gigaparsecs",
},
["hand"] = {
    name1    = "hand",
    symbol   = "h",
    utype    = "length",
    builtin  = "hand",
    scale    = 0.1016,
    iscomplex= true,
    default  = "in cm",
    link     = "Hand (unit)",
},
["in"] = {
    name1    = "inch",
    name2    = "inches",
    symbol   = "in",
    utype    = "length",
    scale    = 0.0254,
    exception= "subunit_more_precision",
    default  = "mm",
},
["inabbreviated"] = {
    name2    = "in",
    symbol   = "in",
    utype    = "length",
    scale    = 0.0254,
    default  = "mm",
    link     = "Inch",
},
["kly"] = {
    name1    = "kilolight-year",
    symbol   = "kly",
    utype    = "length",
    scale    = 9.4607304725808e18,
    default  = "pc",
    link     = "Light-year#Definitions",
},
["kpc"] = {
    name1    = "kiloparsec",
    symbol   = "kpc",
    utype    = "length",
    scale    = 3.0856775814671916e19,
    default  = "kly",
    link     = "Parsec#Parsecs and kiloparsecs",
},
["LD"] = {
    name1    = "lunar distance",
```

```
    symbol   = "LD",
    utype    = "length",
    scale    = 384403000,
    default  = "km mi",
    link     = "Lunar distance (astronomy)",
},
["league"] = {
    symbol   = "league",
    usename  = 1,
    utype    = "length",
    scale    = 4828.032,
    default  = "km",
    link     = "League (unit)",
},
["ly"] = {
    name1    = "light-year",
    symbol   = "ly",
    utype    = "length",
    scale    = 9.4607304725808e15,
    default  = "AU",
},
["m"] = {
    _name1   = "metre",
    _name1_us= "meter",
    _symbol  = "m",
    utype    = "length",
    scale    = 1,
    prefixes = 1,
    default  = "v > 0 and v < 3 ! ftin ! ft",
    link     = "Metre",
},
["mi"] = {
    name1    = "mile",
    symbol   = "mi",
    utype    = "length",
    scale    = 1609.344,
    default  = "km",
    subdivs  = { ["ch"] = { 80, default = "km" }, ["chlk"] = { 80, default = "km" }, [
},
["mil"] = {
    symbol   = "mil",
    usename  = 1,
    utype    = "length",
    scale    = 0.0000254,
    default  = "mm",
    link     = "Thousandth of an inch",
},
["Mly"] = {
    name1    = "megalight-year",
    symbol   = "Mly",
    utype    = "length",
    scale    = 9.4607304725808e21,
    default  = "kpc",
    link     = "Light-year#Definitions",
},
["Mpc"] = {
    name1    = "megaparsec",
    symbol   = "Mpc",
    utype    = "length",
    scale    = 3.0856775814671916e22,
    default  = "Mly",
    link     = "Parsec#Megaparsecs and gigaparsecs",
},
["NM"] = {
    name1    = "nautical mile",
    symbol   = "NM",
    utype    = "length",
```

```
    scale    = 1852,
    default  = "km mi",
},
["nmi"] = {
    name1    = "nautical mile",
    symbol   = "nmi",
    utype    = "length",
    scale    = 1852,
    default  = "km mi",
},
["oldUKnmi"] = {
    name1    = "nautical mile",
    symbol   = "nmi",
    utype    = "length",
    scale    = 1853.184,
    default  = "km mi",
},
["oldUSnmi"] = {
    name1    = "nautical mile",
    symbol   = "nmi",
    utype    = "length",
    scale    = 1853.24496,
    default  = "km mi",
},
["pc"] = {
    name1    = "parsec",
    symbol   = "pc",
    utype    = "length",
    scale    = 3.0856775814671916e16,
    default  = "ly",
},
["perch"] = {
    name2    = "perches",
    symbol   = "perch",
    usename  = 1,
    utype    = "length",
    scale    = 5.0292,
    default  = "ft m",
    link     = "Rod (unit)",
},
["pitch"] = {
    name2    = "m",
    symbol   = "m",
    utype    = "length",
    scale    = 1e-6,
    default  = "dpi",
    defkey   = "pitch",
    linkey   = "pitch",
    link     = "Dots per inch",
},
["pole"] = {
    symbol   = "pole",
    usename  = 1,
    utype    = "length",
    scale    = 5.0292,
    default  = "ft m",
    link     = "Rod (unit)",
},
["pre1954U.S.nmi"] = {
    name1    = "(pre-1954 U.S.) nautical mile",
    symbol   = "(pre&#8209;1954 U.S.) nmi",
    utype    = "length",
    scale    = 1853.24496,
    default  = "km mi",
    link     = "Nautical mile",
},
["pre1954USnmi"] = {
```

```
    name1    = "(pre-1954&amp;nbsp;US) nautical mile",
    name1_us = "(pre-1954&amp;nbsp;U.S.) nautical mile",
    symbol   = "(pre&amp;#8209;1954&amp;nbsp;US) nmi",
    sym_us   = "(pre&amp;#8209;1954&amp;nbsp;U.S.) nmi",
    utype    = "length",
    scale    = 1853.24496,
    default  = "km mi",
    link     = "Nautical mile",
},
["rd"] = {
    name1    = "rod",
    symbol   = "rd",
    utype    = "length",
    scale    = 5.0292,
    default  = "ft m",
    link     = "Rod (unit)",
},
["royal cubit"] = {
    name1    = "royal cubit",
    symbol   = "cu",
    utype    = "length",
    scale    = 0.524,
    default  = "mm",
},
["rtkm"] = {
    name1    = "route kilometre",
    name1_us = "route kilometer",
    symbol   = "km",
    utype    = "length",
    scale    = 1000,
    default  = "mi",
    link     = "Kilometre",
},
["rtmi"] = {
    name1    = "route mile",
    symbol   = "mi",
    utype    = "length",
    scale    = 1609.344,
    default  = "km",
    link     = "Mile",
},
["shaku"] = {
    name2    = "shaku",
    symbol   = "shaku",
    usename  = 1,
    utype    = "length",
    scale    = 0.30303030303030304,
    default  = "m",
    link     = "Shaku (unit)",
},
["sm"] = {
    name1    = "smoot",
    symbol   = "sm",
    utype    = "length",
    scale    = 1.70180,
    default  = "m",
    link     = "Smoot (unit)",
},
["smi"] = {
    name1    = "statute mile",
    symbol   = "mi",
    utype    = "length",
    scale    = 1609.344,
    default  = "km",
    subdivs  = { ["chain"] = { 80, default = "km" } },
},
["solar radius"] = {
```

```
    name1    = "solar radius",
    name2    = "solar radii",
    symbol   = "'''R''<sub></sub>",
    utype    = "length",
    scale    = 695700e3,
    default  = "km",
},
["sun"] = {
    name2    = "sun",
    symbol   = "sun",
    usename  = 1,
    utype    = "length",
    scale    = 0.030303030303030304,
    default  = "mm",
    link     = "Japanese units of measurement#Length",
},
["thou"] = {
    name2    = "thou",
    symbol   = "thou",
    usename  = 1,
    utype    = "length",
    scale    = 0.0000254,
    default  = "mm",
    link     = "Thousandth of an inch",
},
["verst"] = {
    symbol   = "verst",
    usename  = 1,
    utype    = "length",
    scale    = 1066.8,
    default  = "km mi",
},
["yd"] = {
    name1    = "yard",
    symbol   = "yd",
    utype    = "length",
    scale    = 0.9144,
    default  = "m",
    subdivs  = { ["ft"] = { 3, default = "m" } },
},
["in"] = {
    name1    = "microinch",
    name2    = "microinches",
    symbol   = "in",
    utype    = "length",
    scale    = 0.0000000254,
    default  = "nm",
    link     = "SI prefix#Non-metric units",
},
["Å"] = {
    name1    = "ångström",
    symbol   = "Å",
    utype    = "length",
    scale    = 0.0000000001,
    default  = "in",
},
["Hz"] = {
    _name1   = "hertz",
    _name2   = "hertz",
    _symbol  = "Hz",
    utype    = "length",
    scale    = 3.3356409519815204e-9,
    invert   = -1,
    iscomplex= true,
    prefixes = 1,
    default  = "m",
    link     = "Hertz",
```

```
},
["rpm"] = {
    name1    = "revolution per minute",
    name2    = "revolutions per minute",
    symbol   = "rpm",
    utype    = "length",
    scale    = 5.5594015866358675e-11,
    invert   = -1,
    iscomplex= true,
    default  = "Hz",
    link     = "Revolutions per minute",
},
["-ft-frac"] = {
    target   = "ft",
    link     = "Fracture gradient",
},
["-in-stiff"] = {
    target   = "in",
    link     = "Stiffness",
},
["-m-frac"] = {
    target   = "m",
    link     = "Fracture gradient",
},
["-m-stiff"] = {
    target   = "m",
    link     = "Stiffness",
},
["100km"] = {
    target   = "km",
    multiplier= 100,
},
["100mi"] = {
    target   = "mi",
    multiplier= 100,
},
["100miles"] = {
    target   = "mi",
    symbol   = "miles",
    multiplier= 100,
},
["admiralty nmi"] = {
    target   = "oldUKnmi",
},
["angstrom"] = {
    target   = "Å",
},
["au"] = {
    target   = "AU",
    symbol   = "au",
},
["feet"] = {
    target   = "ft",
},
["hands"] = {
    target   = "hand",
},
["inch"] = {
    target   = "in",
},
["light-year"] = {
    target   = "ly",
},
["meter"] = {
    target   = "m",
    sp_us    = true,
},
```

```
["meters"] = {
    target   = "m",
    sp_us    = true,
},
["metre"] = {
    target   = "m",
},
["metres"] = {
    target   = "m",
},
["micrometre"] = {
    target   = "m",
},
["micron"] = {
    target   = "m",
    default  = "in",
},
["mile"] = {
    target   = "mi",
},
["miles"] = {
    target   = "mi",
},
["parsec"] = {
    target   = "pc",
},
["rod"] = {
    target   = "rd",
},
["smoot"] = {
    target   = "sm",
},
["uin"] = {
    target   = "in",
},
["yard"] = {
    target   = "yd",
},
["yards"] = {
    target   = "yd",
},
["yds"] = {
    target   = "yd",
},
["dtex"] = {
    name1    = "decitex",
    name2    = "decitex",
    symbol   = "dtex",
    utype    = "linear density",
    scale    = 1e-7,
    default  = "lb/yd",
    link     = "Units of textile measurement#Units",
},
["kg/cm"] = {
    name1    = "kilogram per centimetre",
    name1_us = "kilogram per centimeter",
    name2    = "kilograms per centimetre",
    name2_us = "kilograms per centimeter",
    symbol   = "kg/cm",
    utype    = "linear density",
    scale    = 100,
    default  = "lb/yd",
    link     = "Linear density",
},
["kg/m"] = {
    name1    = "kilogram per metre",
    name1_us = "kilogram per meter",
```

```
    name2    = "kilograms per metre",
    name2_us = "kilograms per meter",
    symbol   = "kg/m",
    utype    = "linear density",
    scale    = 1,
    default  = "lb/yd",
    link     = "Linear density",
},
["lb/ft"] = {
    name1    = "pound per foot",
    name2    = "pounds per foot",
    symbol   = "lb/ft",
    utype    = "linear density",
    scale    = 1.4881639435695539,
    default  = "kg/m",
    link     = "Linear density",
},
["lb/yd"] = {
    name1    = "pound per yard",
    name2    = "pounds per yard",
    symbol   = "lb/yd",
    utype    = "linear density",
    scale    = 0.49605464785651798,
    default  = "kg/m",
    link     = "Linear density",
},
["G"] = {
    _name1   = "gauss",
    _name2   = "gauss",
    _symbol  = "G",
    utype    = "magnetic field strength",
    scale    = 0.0001,
    prefixes = 1,
    default  = "T",
    link     = "Gauss (unit)",
},
["T"] = {
    _name1   = "tesla",
    _symbol  = "T",
    utype    = "magnetic field strength",
    scale    = 1,
    prefixes = 1,
    default  = "G",
    link     = "Tesla (unit)",
},
["A/m"] = {
    name1    = "ampere per metre",
    name1_us = "ampere per meter",
    name2    = "amperes per metre",
    name2_us = "amperes per meter",
    symbol   = "A/m",
    utype    = "magnetizing field",
    scale    = 1,
    default  = "Oe",
},
["kA/m"] = {
    name1    = "kiloampere per metre",
    name1_us = "kiloampere per meter",
    name2    = "kiloamperes per metre",
    name2_us = "kiloamperes per meter",
    symbol   = "kA/m",
    utype    = "magnetizing field",
    scale    = 1000,
    default  = "kOe",
    link     = "Ampere per metre",
},
["MA/m"] = {
```

```
    name1    = "megaampere per metre",
    name1_us = "megaampere per meter",
    name2    = "megaamperes per metre",
    name2_us = "megaamperes per meter",
    symbol   = "MA/m",
    utype    = "magnetizing field",
    scale    = 1e6,
    default  = "kOe",
    link     = "Ampere per metre",
},
["Oe"] = {
    _name1   = "oersted",
    _symbol  = "Oe",
    utype    = "magnetizing field",
    scale    = 79.5774715,
    prefixes = 1,
    default  = "kA/m",
    link     = "Oersted",
},
["-Lcwt"] = {
    name1    = "hundredweight",
    name2    = "hundredweight",
    symbol   = "cwt",
    utype    = "mass",
    scale    = 50.80234544,
    default  = "lb",
},
["-Scwt"] = {
    name1    = "hundredweight",
    name2    = "hundredweight",
    symbol   = "cwt",
    utype    = "mass",
    scale    = 45.359237,
    default  = "lb",
},
["-ST"] = {
    name1    = "short ton",
    symbol   = "ST",
    utype    = "mass",
    scale    = 907.18474,
    default  = "t",
},
["carat"] = {
    symbol   = "carat",
    usename  = 1,
    utype    = "mass",
    scale    = 0.0002,
    default  = "g",
    link     = "Carat (mass)",
},
["drachm"] = {
    name1_us = "dram",
    symbol   = "drachm",
    usename  = 1,
    utype    = "mass",
    scale    = 0.001771845195,
    default  = "g",
    link     = "Dram (unit)",
},
["dram"] = {
    target   = "drachm",
},
["dwt"] = {
    name1    = "pennyweight",
    symbol   = "dwt",
    utype    = "mass",
    scale    = 0.00155517384,
```

```
    default  = "oz g",
},
["DWton"] = {
    symbol   = "deadweight ton",
    usename  = 1,
    utype    = "mass",
    scale    = 1016.0469088,
    default  = "DWtonne",
    link     = "Deadweight tonnage",
},
["DWtonne"] = {
    symbol   = "deadweight tonne",
    usename  = 1,
    utype    = "mass",
    scale    = 1000,
    default  = "DWton",
    link     = "Deadweight tonnage",
},
["g"] = {
    _name1   = "gram",
    _symbol  = "g",
    utype    = "mass",
    scale    = 0.001,
    prefixes = 1,
    default  = "oz",
    link     = "Gram",
},
["gr"] = {
    name1    = "grain",
    symbol   = "gr",
    utype    = "mass",
    scale    = 0.00006479891,
    default  = "g",
    link     = "Grain (unit)",
},
["Gt"] = {
    name1    = "gigatonne",
    symbol   = "Gt",
    utype    = "mass",
    scale    = 1000000000000,
    default  = "LT ST",
    link     = "Tonne",
},
["impgalh2o"] = {
    name1    = "imperial gallon of water",
    name2    = "imperial gallons of water",
    symbol   = "imp gal H<sub>2</sub>O",
    utype    = "mass",
    scale    = 4.5359236999999499,
    default  = "lb kg",
    link     = "Imperial gallon",
},
["kt"] = {
    name1    = "kilotonne",
    symbol   = "kt",
    utype    = "mass",
    scale    = 1000000,
    default  = "LT ST",
    link     = "Tonne",
},
["lb"] = {
    name1    = "pound",
    symbol   = "lb",
    utype    = "mass",
    scale    = 0.45359237,
    exception= "integer_more_precision",
    default  = "kg",
```

```
    subdivs  = { ["oz"] = { 16, default = "kg" } },
    link     = "Pound (mass)",
},
["Lcwt"] = {
    name1    = "long hundredweight",
    name2    = "long hundredweight",
    symbol   = "Lcwt",
    usename  = 1,
    utype    = "mass",
    scale    = 50.80234544,
    default  = "lb",
    subdivs  = { ["qtr"] = { 4, default = "kg" }, ["st"] = { 8, default = "kg" } },
    link     = "Hundredweight",
},
["long cwt"] = {
    name1    = "long hundredweight",
    name2    = "long hundredweight",
    symbol   = "long cwt",
    utype    = "mass",
    scale    = 50.80234544,
    default  = "lb kg",
    subdivs  = { ["qtr"] = { 4, default = "kg" } },
    link     = "Hundredweight",
},
["long qtr"] = {
    name1    = "long quarter",
    symbol   = "long qtr",
    utype    = "mass",
    scale    = 12.70058636,
    default  = "lb kg",
},
["LT"] = {
    symbol   = "long ton",
    usename  = 1,
    utype    = "mass",
    scale    = 1016.0469088,
    default  = "t",
    subdivs  = { ["Lcwt"] = { 20, default = "t", unit = "-Lcwt" } },
},
["lt"] = {
    name1    = "long ton",
    symbol   = "LT",
    utype    = "mass",
    scale    = 1016.0469088,
    default  = "t",
    subdivs  = { ["Lcwt"] = { 20, default = "t", unit = "-Lcwt" } },
},
["metric ton"] = {
    symbol   = "metric ton",
    usename  = 1,
    utype    = "mass",
    scale    = 1000,
    default  = "long ton",
    link     = "Tonne",
},
["MT"] = {
    name1    = "metric ton",
    symbol   = "t",
    utype    = "mass",
    scale    = 1000,
    default  = "LT ST",
    link     = "Tonne",
},
["Mt"] = {
    name1    = "megatonne",
    symbol   = "Mt",
    utype    = "mass",
```

```
    scale    = 1000000000,
    default  = "LT ST",
    link     = "Tonne",
},
["oz"] = {
    name1    = "ounce",
    symbol   = "oz",
    utype    = "mass",
    scale    = 0.028349523125,
    default  = "g",
},
["ozt"] = {
    name1    = "troy ounce",
    symbol   = "ozt",
    utype    = "mass",
    scale    = 0.0311034768,
    default  = "oz g",
},
["pdr"] = {
    name1    = "pounder",
    symbol   = "pdr",
    utype    = "mass",
    scale    = 0.45359237,
    default  = "kg",
    link     = "Pound (mass)",
},
["qtr"] = {
    name1    = "quarter",
    symbol   = "qtr",
    utype    = "mass",
    scale    = 12.70058636,
    default  = "lb kg",
    subdivs  = { ["lb"] = { 28, default = "kg" } },
    link     = "Long quarter",
},
["Scwt"] = {
    name1    = "short hundredweight",
    name2    = "short hundredweight",
    symbol   = "Scwt",
    usename  = 1,
    utype    = "mass",
    scale    = 45.359237,
    default  = "lb",
    link     = "Hundredweight",
},
["short cwt"] = {
    name1    = "short hundredweight",
    name2    = "short hundredweight",
    symbol   = "short cwt",
    utype    = "mass",
    scale    = 45.359237,
    default  = "lb kg",
    link     = "Hundredweight",
},
["short qtr"] = {
    name1    = "short quarter",
    symbol   = "short qtr",
    utype    = "mass",
    scale    = 11.33980925,
    default  = "lb kg",
},
["ST"] = {
    symbol   = "short ton",
    usename  = 1,
    utype    = "mass",
    scale    = 907.18474,
    default  = "t",
```

```
    subdivs  = { ["Scwt"] = { 20, default = "t", unit = "-Scwt" } },
},
["shtn"] = {
    name1    = "short ton",
    symbol   = "sh tn",
    utype    = "mass",
    scale    = 907.18474,
    default  = "t",
},
["shton"] = {
    symbol   = "ton",
    usename  = 1,
    utype    = "mass",
    scale    = 907.18474,
    default  = "t",
},
["solar mass"] = {
    name1    = "solar mass",
    name2    = "solar masses",
    symbol   = "''M''<sub></sub>",
    utype    = "mass",
    scale    = 1.98855e30,
    default  = "kg",
},
["st"] = {
    name1    = "stone",
    name2    = "stone",
    symbol   = "st",
    utype    = "mass",
    scale    = 6.35029318,
    default  = "lb kg",
    subdivs  = { ["lb"] = { 14, default = "kg lb" } },
    link     = "Stone (unit)",
},
["t"] = {
    name1    = "tonne",
    name1_us = "metric ton",
    symbol   = "t",
    utype    = "mass",
    scale    = 1000,
    default  = "LT ST",
},
["tonne"] = {
    name1    = "tonne",
    name1_us = "metric ton",
    symbol   = "t",
    utype    = "mass",
    scale    = 1000,
    default  = "shton",
},
["troy pound"] = {
    symbol   = "troy pound",
    usename  = 1,
    utype    = "mass",
    scale    = 0.3732417216,
    default  = "lb kg",
    link     = "Troy weight",
},
["usgalh2o"] = {
    name1    = "US gallon of water",
    name1_us = "U.S. gallon of water",
    name2    = "US gallons of water",
    name2_us = "U.S. gallons of water",
    symbol   = "US gal H<sub>2</sub>O",
    utype    = "mass",
    scale    = 3.7776215836051126,
    default  = "lb kg",
```

```
    link     = "United States customary units#Fluid volume",
},
["viss"] = {
    name2    = "viss",
    symbol   = "viss",
    utype    = "mass",
    scale    = 1.632932532,
    default  = "kg",
    link     = "Myanmar units of measurement#Mass",
},
["billion tonne"] = {
    target   = "e9t",
},
["kilogram"] = {
    target   = "kg",
},
["kilotonne"] = {
    target   = "kt",
},
["lbs"] = {
    target   = "lb",
},
["lbt"] = {
    target   = "troy pound",
},
["lcwt"] = {
    target   = "Lcwt",
},
["long ton"] = {
    target   = "LT",
},
["mcg"] = {
    target   = "g",
},
["million tonne"] = {
    target   = "e6t",
},
["scwt"] = {
    target   = "Scwt",
},
["short ton"] = {
    target   = "ST",
},
["stone"] = {
    target   = "st",
},
["thousand tonne"] = {
    target   = "e3t",
},
["tonnes"] = {
    target   = "t",
},
["kg/kW"] = {
    name1    = "kilogram per kilowatt",
    name2    = "kilograms per kilowatt",
    symbol   = "kg/kW",
    utype    = "mass per unit power",
    scale    = 0.001,
    default  = "lb/hp",
    link     = "Kilowatt",
},
["lb/hp"] = {
    name1    = "pound per horsepower",
    name2    = "pounds per horsepower",
    symbol   = "lb/hp",
    utype    = "mass per unit power",
    scale    = 0.00060827738784176115,
```

```
    default  = "kg/kW",
    link     = "Horsepower",
},
["kg/h"] = {
    per      = { "kg", "h" },
    utype    = "mass per unit time",
    default  = "lb/h",
},
["lb/h"] = {
    per      = { "lb", "h" },
    utype    = "mass per unit time",
    default  = "kg/h",
},
["g-mol/d"] = {
    name1    = "gram-mole per day",
    name2    = "gram-moles per day",
    symbol   = "g&#8209;mol/d",
    utype    = "molar rate",
    scale    = 1.1574074074073e-5,
    default  = "mol/s",
    link     = "Mole (unit)",
},
["g-mol/h"] = {
    name1    = "gram-mole per hour",
    name2    = "gram-moles per hour",
    symbol   = "g&#8209;mol/h",
    utype    = "molar rate",
    scale    = 0.00027777777777777778,
    default  = "mmol/s",
    link     = "Mole (unit)",
},
["g-mol/min"] = {
    name1    = "gram-mole per minute",
    name2    = "gram-moles per minute",
    symbol   = "g&#8209;mol/min",
    utype    = "molar rate",
    scale    = 0.016666666666666666,
    default  = "g-mol/s",
    link     = "Mole (unit)",
},
["g-mol/s"] = {
    name1    = "gram-mole per second",
    name2    = "gram-moles per second",
    symbol   = "g&#8209;mol/s",
    utype    = "molar rate",
    scale    = 1,
    default  = "lb-mol/min",
    link     = "Mole (unit)",
},
["gmol/d"] = {
    name1    = "gram-mole per day",
    name2    = "gram-moles per day",
    symbol   = "gmol/d",
    utype    = "molar rate",
    scale    = 1.1574074074073e-5,
    default  = "mol/s",
    link     = "Mole (unit)",
},
["gmol/h"] = {
    name1    = "gram-mole per hour",
    name2    = "gram-moles per hour",
    symbol   = "gmol/h",
    utype    = "molar rate",
    scale    = 0.00027777777777777778,
    default  = "mmol/s",
    link     = "Mole (unit)",
},
```

```
["gmol/min"] = {
    name1    = "gram-mole per minute",
    name2    = "gram-moles per minute",
    symbol   = "gmol/min",
    utype    = "molar rate",
    scale    = 0.016666666666666666,
    default  = "gmol/s",
    link     = "Mole (unit)",
},
["gmol/s"] = {
    name1    = "gram-mole per second",
    name2    = "gram-moles per second",
    symbol   = "gmol/s",
    utype    = "molar rate",
    scale    = 1,
    default  = "lbmol/min",
    link     = "Mole (unit)",
},
["kmol/d"] = {
    name1    = "kilomole per day",
    name2    = "kilomoles per day",
    symbol   = "kmol/d",
    utype    = "molar rate",
    scale    = 0.011574074074074073,
    default  = "mmol/s",
    link     = "Mole (unit)",
},
["kmol/h"] = {
    name1    = "kilomole per hour",
    name2    = "kilomoles per hour",
    symbol   = "kmol/h",
    utype    = "molar rate",
    scale    = 0.2777777777777779,
    default  = "mol/s",
    link     = "Mole (unit)",
},
["kmol/min"] = {
    name1    = "kilomole per minute",
    name2    = "kilomoles per minute",
    symbol   = "kmol/min",
    utype    = "molar rate",
    scale    = 16.666666666666668,
    default  = "mol/s",
    link     = "Kilomole (unit)",
},
["kmol/s"] = {
    name1    = "kilomole per second",
    name2    = "kilomoles per second",
    symbol   = "kmol/s",
    utype    = "molar rate",
    scale    = 1000,
    default  = "lb-mol/s",
    link     = "Mole (unit)",
},
["lb-mol/d"] = {
    name1    = "pound-mole per day",
    name2    = "pound-moles per day",
    symbol   = "lb&#8209;mol/d",
    utype    = "molar rate",
    scale    = 0.0052499116898148141,
    default  = "mmol/s",
    link     = "Pound-mole",
},
["lb-mol/h"] = {
    name1    = "pound-mole per hour",
    name2    = "pound-moles per hour",
    symbol   = "lb&#8209;mol/h",
```

```
    utype    = "molar rate",
    scale    = 0.12599788055555555,
    default  = "mol/s",
    link     = "Pound-mole",
},
["lb-mol/min"] = {
    name1    = "pound-mole per minute",
    name2    = "pound-moles per minute",
    symbol   = "lb&#8209;mol/min",
    utype    = "molar rate",
    scale    = 7.5598728333333334,
    default  = "mol/s",
    link     = "Pound-mole",
},
["lb-mol/s"] = {
    name1    = "pound-mole per second",
    name2    = "pound-moles per second",
    symbol   = "lb&#8209;mol/s",
    utype    = "molar rate",
    scale    = 453.59237,
    default  = "kmol/s",
    link     = "Pound-mole",
},
["lbmol/d"] = {
    name1    = "pound-mole per day",
    name2    = "pound-moles per day",
    symbol   = "lbmol/d",
    utype    = "molar rate",
    scale    = 0.0052499116898148141,
    default  = "mmol/s",
    link     = "Pound-mole",
},
["lbmol/h"] = {
    name1    = "pound-mole per hour",
    name2    = "pound-moles per hour",
    symbol   = "lbmol/h",
    utype    = "molar rate",
    scale    = 0.12599788055555555,
    default  = "mol/s",
    link     = "Pound-mole",
},
["lbmol/min"] = {
    name1    = "pound-mole per minute",
    name2    = "pound-moles per minute",
    symbol   = "lbmol/min",
    utype    = "molar rate",
    scale    = 7.5598728333333334,
    default  = "mol/s",
    link     = "Pound-mole",
},
["lbmol/s"] = {
    name1    = "pound-mole per second",
    name2    = "pound-moles per second",
    symbol   = "lbmol/s",
    utype    = "molar rate",
    scale    = 453.59237,
    default  = "kmol/s",
    link     = "Pound-mole",
},
["mmol/s"] = {
    name1    = "millimole per second",
    name2    = "millimoles per second",
    symbol   = "mmol/s",
    utype    = "molar rate",
    scale    = 0.001,
    default  = "lb-mol/d",
    link     = "Mole (unit)",
```

```
},
["mol/d"] = {
    name1    = "mole per day",
    name2    = "moles per day",
    symbol   = "mol/d",
    utype    = "molar rate",
    scale    = 1.1574074074074073e-5,
    default  = "mol/s",
    link     = "Mole (unit)",
},
["mol/h"] = {
    name1    = "mole per hour",
    name2    = "moles per hour",
    symbol   = "mol/h",
    utype    = "molar rate",
    scale    = 0.0002777777777777778,
    default  = "mmol/s",
    link     = "Mole (unit)",
},
["mol/min"] = {
    name1    = "mole per minute",
    name2    = "moles per minute",
    symbol   = "mol/min",
    utype    = "molar rate",
    scale    = 0.016666666666666666,
    default  = "mol/s",
    link     = "Mole (unit)",
},
["mol/s"] = {
    name1    = "mole per second",
    name2    = "moles per second",
    symbol   = "mol/s",
    utype    = "molar rate",
    scale    = 1,
    default  = "lb-mol/min",
    link     = "Mole (unit)",
},
["mol/s"] = {
    name1    = "micromole per second",
    name2    = "micromoles per second",
    symbol   = "mol/s",
    utype    = "molar rate",
    scale    = 0.000001,
    default  = "lb-mol/d",
    link     = "Mole (unit)",
},
["umol/s"] = {
    target   = "mol/s",
},
["/acre"] = {
    name1    = "per acre",
    name2    = "per acre",
    symbol   = "/acre",
    utype    = "per unit area",
    scale    = 0.00024710538146716532,
    default  = "/ha",
    link     = "Acre",
},
["/ha"] = {
    name1    = "per hectare",
    name2    = "per hectare",
    symbol   = "/ha",
    utype    = "per unit area",
    scale    = 100e-6,
    default  = "/acre",
    link     = "Hectare",
},
```

```
["/sqcm"] = {
    name1    = "per square centimetre",
    name1_us = "per square centimeter",
    name2    = "per square centimetre",
    name2_us = "per square centimeter",
    symbol   = "/cm<sup>2</sup>",
    utype    = "per unit area",
    scale    = 1e4,
    default  = "/sqin",
    link     = "Square centimetre",
},
["/sqin"] = {
    name1    = "per square inch",
    name2    = "per square inch",
    symbol   = "/in<sup>2</sup>",
    utype    = "per unit area",
    scale    = 1550.0031000062002,
    default  = "/sqcm",
    link     = "Square inch",
},
["/sqkm"] = {
    name1    = "per square kilometre",
    name1_us = "per square kilometer",
    name2    = "per square kilometre",
    name2_us = "per square kilometer",
    symbol   = "/km<sup>2</sup>",
    utype    = "per unit area",
    scale    = 1e-6,
    default  = "/sqmi",
    link     = "Square kilometre",
},
["/sqmi"] = {
    name1    = "per square mile",
    name2    = "per square mile",
    symbol   = "/sq mi",
    utype    = "per unit area",
    scale    = 3.8610215854244582e-7,
    default  = "/sqkm",
    link     = "Square mile",
},
["PD/acre"] = {
    name1    = "inhabitant per acre",
    name2    = "inhabitants per acre",
    symbol   = "/acre",
    utype    = "per unit area",
    scale    = 0.00024710538146716532,
    default  = "PD/ha",
    link     = "Acre",
},
["PD/ha"] = {
    name1    = "inhabitant per hectare",
    name2    = "inhabitants per hectare",
    symbol   = "/ha",
    utype    = "per unit area",
    scale    = 100e-6,
    default  = "PD/acre",
    link     = "Hectare",
},
["PD/sqkm"] = {
    name1    = "inhabitant per square kilometre",
    name1_us = "inhabitant per square kilometer",
    name2    = "inhabitants per square kilometre",
    name2_us = "inhabitants per square kilometer",
    symbol   = "/km<sup>2</sup>",
    utype    = "per unit area",
    scale    = 1e-6,
    default  = "PD/sqmi",
```

```
    link     = "Square kilometre",
},
["PD/sqmi"] = {
    name1    = "inhabitant per square mile",
    name2    = "inhabitants per square mile",
    symbol   = "/sq&amp;nbsp;mi",
    utype    = "per unit area",
    scale    = 3.8610215854244582e-7,
    default  = "PD/sqkm",
    link     = "Square mile",
},
["/cm2"] = {
    target   = "/sqcm",
},
["/in2"] = {
    target   = "/sqin",
},
["/km2"] = {
    target   = "/sqkm",
},
["pd/acre"] = {
    target   = "PD/acre",
},
["pd/ha"] = {
    target   = "PD/ha",
},
["PD/km2"] = {
    target   = "PD/sqkm",
},
["pd/km2"] = {
    target   = "PD/sqkm",
},
["PD/km²"] = {
    target   = "PD/sqkm",
},
["pd/sqkm"] = {
    target   = "PD/sqkm",
},
["pd/sqmi"] = {
    target   = "PD/sqmi",
},
["/l"] = {
    name1    = "per litre",
    name1_us = "per liter",
    name2    = "per litre",
    name2_us = "per liter",
    symbol   = "/l",
    utype    = "per unit volume",
    scale    = 1000,
    default  = "/usgal",
    link     = "Litre",
},
["/USgal"] = {
    name1    = "per gallon",
    name2    = "per gallon",
    symbol   = "/gal",
    utype    = "per unit volume",
    scale    = 264.172052,
    default  = "/l",
    link     = "US gallon",
    customary= 2,
},
["/usgal"] = {
    target   = "/USgal",
},
["bhp"] = {
    name1    = "brake horsepower",
```

```
    name2    = "brake horsepower",
    symbol   = "bhp",
    utype    = "power",
    scale    = 745.69987158227022,
    default  = "kW",
    link     = "Horsepower#Brake horsepower",
},
["Cal/d"] = {
    name1    = "large calorie per day",
    name2    = "large calories per day",
    symbol   = "Cal/d",
    utype    = "power",
    scale    = 0.048425925925925928,
    default  = "kJ/d",
    link     = "Calorie",
},
["Cal/h"] = {
    name1    = "large calorie per hour",
    name2    = "large calories per hour",
    symbol   = "Cal/h",
    utype    = "power",
    scale    = 1.1622222222222223,
    default  = "kJ/h",
    link     = "Calorie",
},
["cal/h"] = {
    name1    = "calorie per hour",
    name2    = "calories per hour",
    symbol   = "cal/h",
    utype    = "power",
    scale    = 0.0011622222222222223,
    default  = "W",
    link     = "Calorie",
},
["CV"] = {
    name1    = "metric horsepower",
    name2    = "metric horsepower",
    symbol   = "CV",
    utype    = "power",
    scale    = 735.49875,
    default  = "kW",
},
["hk"] = {
    name1    = "metric horsepower",
    name2    = "metric horsepower",
    symbol   = "hk",
    utype    = "power",
    scale    = 735.49875,
    default  = "kW",
},
["hp"] = {
    name1    = "horsepower",
    name2    = "horsepower",
    symbol   = "hp",
    utype    = "power",
    scale    = 745.69987158227022,
    default  = "kW",
},
["hp-electric"] = {
    name1    = "electric horsepower",
    name2    = "electric horsepower",
    symbol   = "hp",
    utype    = "power",
    scale    = 746,
    default  = "kW",
    link     = "Horsepower#Electrical horsepower",
},
```

```
["hp-electrical"] = {
    name1    = "electrical horsepower",
    name2    = "electrical horsepower",
    symbol   = "hp",
    utype    = "power",
    scale    = 746,
    default  = "kW",
    link     = "Horsepower#Electrical horsepower",
},
["hp-metric"] = {
    name1    = "metric horsepower",
    name2    = "metric horsepower",
    symbol   = "hp",
    utype    = "power",
    scale    = 735.49875,
    default  = "kW",
},
["ihp"] = {
    name1    = "indicated horsepower",
    name2    = "indicated horsepower",
    symbol   = "ihp",
    utype    = "power",
    scale    = 745.69987158227022,
    default  = "kW",
    link     = "Horsepower#Indicated horsepower",
},
["kcal/h"] = {
    name1    = "kilocalorie per hour",
    name2    = "kilocalories per hour",
    symbol   = "kcal/h",
    utype    = "power",
    scale    = 1.1622222222222223,
    default  = "kW",
    link     = "Calorie",
},
["kJ/d"] = {
    name1    = "kilojoule per day",
    name2    = "kilojoules per day",
    symbol   = "kJ/d",
    utype    = "power",
    scale    = 0.011574074074074073,
    default  = "Cal/d",
    link     = "Kilojoule",
},
["kJ/h"] = {
    name1    = "kilojoule per hour",
    name2    = "kilojoules per hour",
    symbol   = "kJ/h",
    utype    = "power",
    scale    = 0.27777777777777779,
    default  = "W",
    link     = "Kilojoule",
},
["PS"] = {
    name1    = "metric horsepower",
    name2    = "metric horsepower",
    symbol   = "PS",
    utype    = "power",
    scale    = 735.49875,
    default  = "kW",
},
["shp"] = {
    name1    = "shaft horsepower",
    name2    = "shaft horsepower",
    symbol   = "shp",
    utype    = "power",
    scale    = 745.69987158227022,
```

```
    default  = "kW",
    link     = "Horsepower#Shaft horsepower",
},
["W"] = {
    _name1   = "watt",
    _symbol  = "W",
    utype    = "power",
    scale    = 1,
    prefixes = 1,
    default  = "hp",
    link     = "Watt",
},
["BTU/h"] = {
    per      = { "BTU", "h" },
    utype    = "power",
    default  = "W",
},
["Btu/h"] = {
    per      = { "Btu", "h" },
    utype    = "power",
    default  = "W",
},
["BHP"] = {
    target   = "bhp",
},
["btu/h"] = {
    target   = "BTU/h",
},
["HP"] = {
    target   = "hp",
},
["Hp"] = {
    target   = "hp",
},
["hp-mechanical"] = {
    target   = "hp",
},
["IHP"] = {
    target   = "ihp",
},
["SHP"] = {
    target   = "shp",
},
["whp"] = {
    target   = "hp",
},
["hp/lb"] = {
    name1    = "horsepower per pound",
    name2    = "horsepower per pound",
    symbol   = "hp/lb",
    utype    = "power per unit mass",
    scale    = 1643.986806,
    default  = "kW/kg",
    link     = "Power-to-weight ratio",
},
["hp/LT"] = {
    name1    = "horsepower per long ton",
    name2    = "horsepower per long ton",
    symbol   = "hp/LT",
    utype    = "power per unit mass",
    scale    = 0.73392268125000004,
    default  = "kW/t",
    link     = "Power-to-weight ratio",
},
["hp/ST"] = {
    name1    = "horsepower per short ton",
    name2    = "horsepower per short ton",
```

```
    symbol   = "hp/ST",
    utype    = "power per unit mass",
    scale    = 0.821993403,
    default  = "kW/t",
    link     = "Power-to-weight ratio",
},
["hp/t"] = {
    name1    = "horsepower per tonne",
    name2    = "horsepower per tonne",
    symbol   = "hp/t",
    utype    = "power per unit mass",
    scale    = 0.74569987158227022,
    default  = "kW/t",
    link     = "Power-to-weight ratio",
},
["kW/kg"] = {
    name1    = "kilowatt per kilogram",
    name2    = "kilowatts per kilogram",
    symbol   = "kW/kg",
    utype    = "power per unit mass",
    scale    = 1000,
    default  = "hp/lb",
    link     = "Power-to-weight ratio",
},
["kW/t"] = {
    name1    = "kilowatt per tonne",
    name2    = "kilowatts per tonne",
    symbol   = "kW/t",
    utype    = "power per unit mass",
    scale    = 1,
    default  = "PS/t",
    link     = "Power-to-weight ratio",
},
["PS/t"] = {
    name1    = "metric horsepower per tonne",
    name2    = "metric horsepower per tonne",
    symbol   = "PS/t",
    utype    = "power per unit mass",
    scale    = 0.73549875,
    default  = "kW/t",
    link     = "Power-to-weight ratio",
},
["shp/lb"] = {
    name1    = "shaft horsepower per pound",
    name2    = "shaft horsepower per pound",
    symbol   = "shp/lb",
    utype    = "power per unit mass",
    scale    = 1643.986806,
    default  = "kW/kg",
    link     = "Power-to-weight ratio",
},
["hp/tonne"] = {
    target   = "hp/t",
    symbol   = "hp/tonne",
    default  = "kW/tonne",
},
["kW/tonne"] = {
    target   = "kW/t",
    symbol   = "kW/tonne",
},
["-lb/in2"] = {
    name1    = "pound per square inch",
    name2    = "pounds per square inch",
    symbol   = "lb/in<sup>2</sup>",
    utype    = "pressure",
    scale    = 6894.7572931683608,
    default  = "kPa kgf/cm2",
```

```
},
["atm"] = {
    name1    = "standard atmosphere",
    symbol   = "atm",
    utype    = "pressure",
    scale    = 101325,
    default  = "kPa",
    link     = "Atmosphere (unit)",
},
["Ba"] = {
    name1    = "barye",
    symbol   = "Ba",
    utype    = "pressure",
    scale    = 0.1,
    default  = "Pa",
},
["bar"] = {
    symbol   = "bar",
    utype    = "pressure",
    scale    = 100000,
    default  = "kPa",
    link     = "Bar (unit)",
},
["dbar"] = {
    name1    = "decibar",
    symbol   = "dbar",
    utype    = "pressure",
    scale    = 10000,
    default  = "kPa",
    link     = "Bar (unit)",
},
["inHg"] = {
    name1    = "inch of mercury",
    name2    = "inches of mercury",
    symbol   = "inHg",
    utype    = "pressure",
    scale    = 3386.388640341,
    default  = "kPa",
},
["kBa"] = {
    name1    = "kilobarye",
    symbol   = "kBa",
    utype    = "pressure",
    scale    = 100,
    default  = "hPa",
    link     = "Barye",
},
["kg-f/cm2"] = {
    name1    = "kilogram-force per square centimetre",
    name1_us = "kilogram-force per square centimeter",
    name2    = "kilograms-force per square centimetre",
    name2_us = "kilograms-force per square centimeter",
    symbol   = "kg<sub>f</sub>/cm<sup>2</sup>",
    utype    = "pressure",
    scale    = 98066.5,
    default  = "psi",
    link     = "Kilogram-force",
},
["kg/cm2"] = {
    name1    = "kilogram per square centimetre",
    name1_us = "kilogram per square centimeter",
    name2    = "kilograms per square centimetre",
    name2_us = "kilograms per square centimeter",
    symbol   = "kg/cm<sup>2</sup>",
    utype    = "pressure",
    scale    = 98066.5,
    default  = "psi",
```

```
    link     = "Kilogram-force",
},
["kgf/cm2"] = {
    name1    = "kilogram-force per square centimetre",
    name1_us = "kilogram-force per square centimeter",
    name2    = "kilograms-force per square centimetre",
    name2_us = "kilograms-force per square centimeter",
    symbol   = "kgf/cm<sup>2</sup>",
    utype    = "pressure",
    scale    = 98066.5,
    default  = "psi",
    link     = "Kilogram-force",
},
["ksi"] = {
    name1    = "kilopound per square inch",
    name2    = "kilopounds per square inch",
    symbol   = "ksi",
    utype    = "pressure",
    scale    = 6894757.2931683613,
    default  = "MPa",
    link     = "Pound per square inch",
},
["lbf/in2"] = {
    name1    = "pound-force per square inch",
    name2    = "pounds-force per square inch",
    symbol   = "lbf/in<sup>2</sup>",
    utype    = "pressure",
    scale    = 6894.7572931683608,
    default  = "kPa kgf/cm2",
},
["mb"] = {
    name1    = "millibar",
    symbol   = "mb",
    utype    = "pressure",
    scale    = 100,
    default  = "hPa",
    link     = "Bar (unit)",
},
["mbar"] = {
    name1    = "millibar",
    symbol   = "mbar",
    utype    = "pressure",
    scale    = 100,
    default  = "hPa",
    link     = "Bar (unit)",
},
["mmHg"] = {
    name1    = "millimetre of mercury",
    name1_us = "millimeter of mercury",
    name2    = "millimetres of mercury",
    name2_us = "millimeters of mercury",
    symbol   = "mmHg",
    utype    = "pressure",
    scale    = 133.322387415,
    default  = "kPa",
},
["Pa"] = {
    _name1   = "pascal",
    _symbol  = "Pa",
    utype    = "pressure",
    scale    = 1,
    prefixes = 1,
    default  = "psi",
    link     = "Pascal (unit)",
},
["psf"] = {
    name1    = "pound per square foot",
```

```
    name2    = "pounds per square foot",
    symbol   = "psf",
    utype    = "pressure",
    scale    = 47.880258980335839,
    default  = "kPa",
    link     = "Pound per square inch",
},
["psi"] = {
    name1    = "pound per square inch",
    name2    = "pounds per square inch",
    symbol   = "psi",
    utype    = "pressure",
    scale    = 6894.7572931683608,
    default  = "kPa",
},
["Torr"] = {
    name1    = "torr",
    symbol   = "Torr",
    utype    = "pressure",
    scale    = 133.32236842105263,
    default  = "kPa",
},
["N/cm2"] = {
    per      = { "N", "cm2" },
    utype    = "pressure",
    default  = "psi",
},
["N/m2"] = {
    per      = { "N", "m2" },
    utype    = "pressure",
    default  = "psi",
},
["g/cm2"] = {
    per      = { "g", "cm2" },
    utype    = "pressure",
    default  = "lb/sqft",
    multiplier= 9.80665,
},
["g/m2"] = {
    per      = { "g", "m2" },
    utype    = "pressure",
    default  = "lb/sqft",
    multiplier= 9.80665,
},
["kg/ha"] = {
    per      = { "kg", "ha" },
    utype    = "pressure",
    default  = "lb/acre",
    multiplier= 9.80665,
},
["kg/m2"] = {
    per      = { "kg", "m2" },
    utype    = "pressure",
    default  = "lb/sqft",
    multiplier= 9.80665,
},
["lb/1000sqft"] = {
    per      = { "lb", "1000sqft" },
    utype    = "pressure",
    default  = "g/m2",
    multiplier= 9.80665,
},
["lb/acre"] = {
    per      = { "lb", "acre" },
    utype    = "pressure",
    default  = "kg/ha",
    multiplier= 9.80665,
```

```
},
["lb/sqft"] = {
    per      = { "lb", "sqft" },
    utype    = "pressure",
    default  = "kg/m2",
    multiplier= 9.80665,
},
["lb/sqyd"] = {
    per      = { "lb", "sqyd" },
    utype    = "pressure",
    default  = "kg/m2",
    multiplier= 9.80665,
},
["LT/acre"] = {
    per      = { "LT", "acre" },
    utype    = "pressure",
    default  = "t/ha",
    multiplier= 9.80665,
},
["MT/ha"] = {
    per      = { "MT", "ha" },
    utype    = "pressure",
    default  = "LT/acre ST/acre",
    multiplier= 9.80665,
},
["oz/sqft"] = {
    per      = { "oz", "sqft" },
    utype    = "pressure",
    default  = "g/m2",
    multiplier= 9.80665,
},
["oz/sqyd"] = {
    per      = { "oz", "sqyd" },
    utype    = "pressure",
    default  = "g/m2",
    multiplier= 9.80665,
},
["ST/acre"] = {
    per      = { "ST", "acre" },
    utype    = "pressure",
    default  = "t/ha",
    multiplier= 9.80665,
},
["t/ha"] = {
    per      = { "t", "ha" },
    utype    = "pressure",
    default  = "LT/acre ST/acre",
    multiplier= 9.80665,
},
["tonne/acre"] = {
    per      = { "tonne", "acre" },
    utype    = "pressure",
    default  = "tonne/ha",
    multiplier= 9.80665,
},
["tonne/ha"] = {
    per      = { "tonne", "ha" },
    utype    = "pressure",
    default  = "tonne/acre",
    multiplier= 9.80665,
},
["kgfpsqcm"] = {
    target   = "kgf/cm2",
},
["kgpsqcm"] = {
    target   = "kg/cm2",
},
```

```
["kN/m2"] = {
    target   = "kPa",
},
["lb/in2"] = {
    target   = "lbf/in2",
},
["torr"] = {
    target   = "Torr",
},
["Bq"] = {
    _name1   = "becquerel",
    _symbol  = "Bq",
    utype    = "radioactivity",
    scale    = 1,
    prefixes = 1,
    default  = "pCi",
    link     = "Becquerel",
},
["Ci"] = {
    _name1   = "curie",
    _symbol  = "Ci",
    utype    = "radioactivity",
    scale    = 3.7e10,
    prefixes = 1,
    default  = "GBq",
    link     = "Curie (unit)",
},
["Rd"] = {
    _name1   = "rutherford",
    _symbol  = "Rd",
    utype    = "radioactivity",
    scale    = 1e6,
    prefixes = 1,
    default  = "MBq",
    link     = "Rutherford (unit)",
},
["cm/h"] = {
    name1    = "centimetre per hour",
    name1_us = "centimeter per hour",
    name2    = "centimetres per hour",
    name2_us = "centimeters per hour",
    symbol   = "cm/h",
    utype    = "speed",
    scale    = 2.7777777777777775e-6,
    default  = "in/h",
    link     = "Metre per second",
},
["cm/s"] = {
    name1    = "centimetre per second",
    name1_us = "centimeter per second",
    name2    = "centimetres per second",
    name2_us = "centimeters per second",
    symbol   = "cm/s",
    utype    = "speed",
    scale    = 0.01,
    default  = "in/s",
    link     = "Metre per second",
},
["cm/year"] = {
    name1    = "centimetre per year",
    name1_us = "centimeter per year",
    name2    = "centimetres per year",
    name2_us = "centimeters per year",
    symbol   = "cm/year",
    utype    = "speed",
    scale    = 3.168873850681143e-10,
    default  = "in/year",
```

```
    link     = "Orders of magnitude (speed)",
},
["foot/s"] = {
    name1    = "foot per second",
    name2    = "foot per second",
    symbol   = "ft/s",
    utype    = "speed",
    scale    = 0.3048,
    default  = "m/s",
},
["ft/min"] = {
    name1    = "foot per minute",
    name2    = "feet per minute",
    symbol   = "ft/min",
    utype    = "speed",
    scale    = 0.00508,
    default  = "m/min",
    link     = "Feet per second",
},
["ft/s"] = {
    name1    = "foot per second",
    name2    = "feet per second",
    symbol   = "ft/s",
    utype    = "speed",
    scale    = 0.3048,
    default  = "m/s",
    link     = "Feet per second",
},
["furlong per fortnight"] = {
    name2    = "furlongs per fortnight",
    symbol   = "furlong per fortnight",
    usename  = 1,
    utype    = "speed",
    scale    = 0.00016630952380952381,
    default  = "km/h mph",
    link     = "FFF system",
},
["in/h"] = {
    name1    = "inch per hour",
    name2    = "inches per hour",
    symbol   = "in/h",
    utype    = "speed",
    scale    = 7.0555555555555559e-6,
    default  = "cm/h",
    link     = "Inch",
},
["in/s"] = {
    name1    = "inch per second",
    name2    = "inches per second",
    symbol   = "in/s",
    utype    = "speed",
    scale    = 0.0254,
    default  = "cm/s",
    link     = "Inch",
},
["in/year"] = {
    name1    = "inch per year",
    name2    = "inches per year",
    symbol   = "in/year",
    utype    = "speed",
    scale    = 8.0489395807301024e-10,
    default  = "cm/year",
    link     = "Orders of magnitude (speed)",
},
["isp"] = {
    name1    = "second",
    symbol   = "s",
```

```
    utype    = "speed",
    scale    = 9.80665,
    default  = "km/s",
    link     = "Specific impulse",
},
["km/d"] = {
    name1    = "kilometre per day",
    name1_us = "kilometer per day",
    name2    = "kilometres per day",
    name2_us = "kilometers per day",
    symbol   = "km/d",
    utype    = "speed",
    scale    = 1.1574074074074074e-2,
    default  = "mi/d",
    link     = "Orders of magnitude (speed)",
},
["km/h"] = {
    name1    = "kilometre per hour",
    name1_us = "kilometer per hour",
    name2    = "kilometres per hour",
    name2_us = "kilometers per hour",
    symbol   = "km/h",
    utype    = "speed",
    scale    = 0.2777777777777779,
    default  = "mph",
    link     = "Kilometres per hour",
},
["km/s"] = {
    name1    = "kilometre per second",
    name1_us = "kilometer per second",
    name2    = "kilometres per second",
    name2_us = "kilometers per second",
    symbol   = "km/s",
    utype    = "speed",
    scale    = 1000,
    default  = "mi/s",
    link     = "Metre per second",
},
["kn"] = {
    name1    = "knot",
    symbol   = "kn",
    utype    = "speed",
    scale    = 0.5144444444444448,
    default  = "km/h mph",
    link     = "Knot (unit)",
},
["kNs/kg"] = {
    name2    = "kN&#8209;s/kg",
    symbol   = "kN&#8209;s/kg",
    utype    = "speed",
    scale    = 1000,
    default  = "isp",
    link     = "Specific impulse",
},
["m/min"] = {
    name1    = "metre per minute",
    name1_us = "meter per minute",
    name2    = "metres per minute",
    name2_us = "meters per minute",
    symbol   = "m/min",
    utype    = "speed",
    scale    = 0.016666666666666666,
    default  = "ft/min",
    link     = "Metre per second",
},
["m/s"] = {
    name1    = "metre per second",
```

```
    name1_us = "meter per second",
    name2    = "metres per second",
    name2_us = "meters per second",
    symbol   = "m/s",
    utype    = "speed",
    scale    = 1,
    default  = "ft/s",
},
["Mach"] = {
    name2    = "Mach",
    symbol   = "Mach",
    utype    = "speed",
    builtin  = "mach",
    scale    = 0,
    iscomplex= true,
    default  = "km/h mph",
    link     = "Mach number",
},
["mi/d"] = {
    name1    = "mile per day",
    name2    = "miles per day",
    symbol   = "mi/d",
    utype    = "speed",
    scale    = 1.8626666666666667e-2,
    default  = "km/d",
    link     = "Orders of magnitude (speed)",
},
["mi/s"] = {
    name1    = "mile per second",
    name2    = "miles per second",
    symbol   = "mi/s",
    utype    = "speed",
    scale    = 1609.344,
    default  = "km/s",
    link     = "Mile",
},
["mm/h"] = {
    name1    = "millimetre per hour",
    name1_us = "millimeter per hour",
    name2    = "millimetres per hour",
    name2_us = "millimeters per hour",
    symbol   = "mm/h",
    utype    = "speed",
    scale    = 2.7777777777777781e-7,
    default  = "in/h",
    link     = "Metre per second",
},
["mph"] = {
    name1    = "mile per hour",
    name2    = "miles per hour",
    symbol   = "mph",
    utype    = "speed",
    scale    = 0.44704,
    default  = "km/h",
    link     = "Miles per hour",
},
["Ns/kg"] = {
    name2    = "N&#8209;s/kg",
    symbol   = "N&#8209;s/kg",
    utype    = "speed",
    scale    = 1,
    default  = "isp",
    link     = "Specific impulse",
},
["si tsfc"] = {
    name2    = "g/(kNs)",
    symbol   = "g/(kNs)",
```

```
    utype    = "speed",
    scale    = 9.9999628621379242e-7,
    invert   = -1,
    iscomplex= true,
    default  = "tsfc",
    link     = "Thrust specific fuel consumption",
},
["tsfc"] = {
    name2    = "lb/(lbfh)",
    symbol   = "lb/(lbfh)",
    utype    = "speed",
    scale    = 2.832545036049801e-5,
    invert   = -1,
    iscomplex= true,
    default  = "si tsfc",
    link     = "Thrust specific fuel consumption",
},
["cm/y"] = {
    target   = "cm/year",
},
["cm/yr"] = {
    target   = "cm/year",
},
["in/y"] = {
    target   = "in/year",
},
["in/yr"] = {
    target   = "in/year",
},
["knot"] = {
    target   = "kn",
},
["knots"] = {
    target   = "kn",
},
["kph"] = {
    target   = "km/h",
},
["mi/h"] = {
    target   = "mph",
},
["mm/s"] = {
    per      = { "mm", "s" },
    utype    = "speed",
    default  = "in/s",
    link     = "Metre per second",
},
["C"] = {
    name1    = "degree Celsius",
    name2    = "degrees Celsius",
    symbol   = "°C",
    usesymbol= 1,
    utype    = "temperature",
    scale    = 1,
    offset   = -273.15,
    iscomplex= true,
    istemperature= true,
    default  = "F",
    link     = "Celsius",
},
["F"] = {
    name1    = "degree Fahrenheit",
    name2    = "degrees Fahrenheit",
    symbol   = "°F",
    usesymbol= 1,
    utype    = "temperature",
    scale    = 0.55555555555555558,
```

```
    offset   = 32-273.15*(9/5),
    iscomplex= true,
    istemperature= true,
    default  = "C",
    link     = "Fahrenheit",
},
["K"] = {
    _name1   = "kelvin",
    _symbol  = "K",
    usesymbol= 1,
    utype    = "temperature",
    scale    = 1,
    offset   = 0,
    iscomplex= true,
    istemperature= true,
    prefixes = 1,
    default  = "C F",
    link     = "Kelvin",
},
["keVT"] = {
    name1    = "kiloelectronvolt",
    symbol   = "keV",
    utype    = "temperature",
    scale    = 11.604505e6,
    offset   = 0,
    iscomplex= true,
    default  = "MK",
    link     = "Electronvolt",
},
["R"] = {
    name1    = "degree Rankine",
    name2    = "degrees Rankine",
    symbol   = "°R",
    usesymbol= 1,
    utype    = "temperature",
    scale    = 0.55555555555555558,
    offset   = 0,
    iscomplex= true,
    istemperature= true,
    default  = "K F C",
    link     = "Rankine scale",
},
["Celsius"] = {
    target   = "C",
},
["°C"] = {
    target   = "C",
},
["°F"] = {
    target   = "F",
},
["°R"] = {
    target   = "R",
},
["C-change"] = {
    name1    = "degree Celsius change",
    name2    = "degrees Celsius change",
    symbol   = "°C",
    usesymbol= 1,
    utype    = "temperature change",
    scale    = 1,
    default  = "F-change",
    link     = "Celsius",
},
["F-change"] = {
    name1    = "degree Fahrenheit change",
    name2    = "degrees Fahrenheit change",
```

```
    symbol   = "°F",
    usesymbol= 1,
    utype    = "temperature change",
    scale    = 0.55555555555555558,
    default  = "C-change",
    link     = "Fahrenheit",
},
["K-change"] = {
    name1    = "kelvin change",
    name2    = "kelvins change",
    symbol   = "K",
    usesymbol= 1,
    utype    = "temperature change",
    scale    = 1,
    default  = "F-change",
    link     = "Kelvin",
},
["°C-change"] = {
    target   = "C-change",
},
["°F-change"] = {
    target   = "F-change",
},
["century"] = {
    name1    = "century",
    name2    = "centuries",
    symbol   = "ha",
    utype    = "time",
    scale    = 3155760000,
    default  = "Gs",
},
["d"] = {
    name1    = "day",
    symbol   = "d",
    utype    = "time",
    scale    = 86400,
    default  = "ks",
},
["decade"] = {
    name1    = "decade",
    symbol   = "daa",
    utype    = "time",
    scale    = 315576000,
    default  = "Ms",
},
["dog year"] = {
    name1    = "dog year",
    symbol   = "dog yr",
    utype    = "time",
    scale    = 220903200,
    default  = "years",
    link     = "List of unusual units of measurement#Dog year",
},
["fortnight"] = {
    symbol   = "fortnight",
    usename  = 1,
    utype    = "time",
    scale    = 1209600,
    default  = "week",
},
["h"] = {
    name1    = "hour",
    symbol   = "h",
    utype    = "time",
    scale    = 3600,
    default  = "ks",
},
```

```
["long billion year"] = {
    name1    = "billion years",
    name2    = "billion years",
    symbol   = "Ta",
    utype    = "time",
    scale    = 31557600000000000000,
    default  = "Es",
    link     = "Annum",
},
["millennium"] = {
    name1    = "millennium",
    name2    = "millennia",
    symbol   = "ka",
    utype    = "time",
    scale    = 31557600000,
    default  = "Gs",
},
["milliard year"] = {
    name1    = "milliard years",
    name2    = "milliard years",
    symbol   = "Ga",
    utype    = "time",
    scale    = 31557600000000000,
    default  = "Ps",
    link     = "Annum",
},
["million year"] = {
    name1    = "million years",
    name2    = "million years",
    symbol   = "Ma",
    utype    = "time",
    scale    = 31557600000000,
    default  = "Ts",
    link     = "Annum",
},
["min"] = {
    name1    = "minute",
    symbol   = "min",
    utype    = "time",
    scale    = 60,
    default  = "s",
},
["month"] = {
    symbol   = "month",
    usename  = 1,
    utype    = "time",
    scale    = 2629800,
    default  = "Ms",
},
["months"] = {
    name1    = "month",
    symbol   = "mo",
    utype    = "time",
    scale    = 2629800,
    default  = "year",
},
["s"] = {
    _name1   = "second",
    _symbol  = "s",
    utype    = "time",
    scale    = 1,
    prefixes = 1,
    default  = "min",
    link     = "Second",
},
["short billion year"] = {
    name1    = "billion years",
```

```
    name2    = "billion years",
    symbol   = "Ga",
    utype    = "time",
    scale    = 31557600000000000,
    default  = "Ps",
    link     = "Annum",
},
["short trillion year"] = {
    name1    = "trillion years",
    name2    = "trillion years",
    symbol   = "Ta",
    utype    = "time",
    scale    = 3155760000000000000,
    default  = "Es",
    link     = "Annum",
},
["thousand million year"] = {
    name1    = "thousand million years",
    name2    = "thousand million years",
    symbol   = "Ga",
    utype    = "time",
    scale    = 31557600000000000,
    default  = "Ps",
    link     = "Annum",
},
["wk"] = {
    symbol   = "week",
    usename  = 1,
    utype    = "time",
    scale    = 604800,
    default  = "Ms",
},
["year"] = {
    name1    = "year",
    symbol   = "a",
    utype    = "time",
    scale    = 31557600,
    default  = "Ms",
    link     = "Annum",
},
["years"] = {
    name1    = "year",
    symbol   = "yr",
    utype    = "time",
    scale    = 31557600,
    default  = "Ms",
    link     = "Annum",
},
["byr"] = {
    target   = "short billion year",
},
["day"] = {
    target   = "d",
},
["days"] = {
    target   = "d",
},
["dog yr"] = {
    target   = "dog year",
},
["Gyr"] = {
    target   = "thousand million year",
},
["hour"] = {
    target   = "h",
},
["hours"] = {
```

```
    target   = "h",
},
["kMyr"] = {
    target   = "thousand million year",
},
["kmyr"] = {
    target   = "thousand million year",
},
["kyr"] = {
    target   = "millennium",
},
["long byr"] = {
    target   = "long billion year",
},
["minute"] = {
    target   = "min",
},
["minutes"] = {
    target   = "min",
},
["mth"] = {
    target   = "month",
},
["Myr"] = {
    target   = "million year",
},
["myr"] = {
    target   = "million year",
},
["second"] = {
    target   = "s",
},
["seconds"] = {
    target   = "s",
},
["tmyr"] = {
    target   = "thousand million year",
},
["tryr"] = {
    target   = "short trillion year",
},
["tyr"] = {
    target   = "millennium",
},
["week"] = {
    target   = "wk",
},
["weeks"] = {
    target   = "wk",
},
["yr"] = {
    target   = "year",
},
["kg.m"] = {
    name1    = "kilogram metre",
    name1_us = "kilogram meter",
    symbol   = "kgm",
    utype    = "torque",
    scale    = 9.80665,
    default  = "Nm lbft",
    link     = "Kilogram metre (torque)",
},
["kgf.m"] = {
    name1    = "kilogram force-metre",
    name1_us = "kilogram force-meter",
    symbol   = "kgfm",
    utype    = "torque",
```

```
    scale    = 9.80665,
    default  = "Nm lbfft",
    link     = "Kilogram metre (torque)",
},
["kgm"] = {
    name1    = "kilogram metre",
    name1_us = "kilogram meter",
    symbol   = "kgm",
    utype    = "torque",
    scale    = 9.80665,
    default  = "Nm lbfft",
    link     = "Kilogram metre (torque)",
},
["kpm"] = {
    name1    = "kilopond metre",
    name1_us = "kilopond meter",
    symbol   = "kpm",
    utype    = "torque",
    scale    = 9.80665,
    default  = "Nm lbft",
    link     = "Kilogram metre (torque)",
},
["lb-fft"] = {
    name1    = "pound force-foot",
    name2    = "pound force-feet",
    symbol   = "ftlb<sub>f</sub>",
    utype    = "torque",
    scale    = 1.3558179483314004,
    default  = "Nm",
    link     = "Pound-foot (torque)",
},
["lb.ft"] = {
    name1    = "pound force-foot",
    name2    = "pound force-feet",
    symbol   = "lbft",
    utype    = "torque",
    scale    = 1.3558179483314004,
    default  = "Nm",
    link     = "Pound-foot (torque)",
},
["lb.in"] = {
    name1    = "pound force-inch",
    symbol   = "lbin",
    utype    = "torque",
    scale    = 0.1129848290276167,
    default  = "mN.m",
    link     = "Pound-foot (torque)",
},
["lbfft"] = {
    name1    = "pound force-foot",
    name2    = "pound force-feet",
    symbol   = "lbfft",
    utype    = "torque",
    scale    = 1.3558179483314004,
    default  = "Nm",
    link     = "Pound-foot (torque)",
},
["lbft"] = {
    name1    = "pound-foot",
    name2    = "pound-feet",
    symbol   = "lbft",
    utype    = "torque",
    scale    = 1.3558179483314004,
    default  = "Nm",
    link     = "Pound-foot (torque)",
},
["m.kg-f"] = {
```

```
    name1    = "metre kilogram-force",
    name1_us = "meter kilogram-force",
    name2    = "metre kilograms-force",
    name2_us = "meter kilograms-force",
    symbol   = "mkg<sub>f</sub>",
    utype    = "torque",
    scale    = 9.80665,
    default  = "Nm lbfft",
    link     = "Kilogram metre (torque)",
},
["m.kgf"] = {
    name1    = "metre kilogram-force",
    name1_us = "meter kilogram-force",
    name2    = "metre kilograms-force",
    name2_us = "meter kilograms-force",
    symbol   = "mkgf",
    utype    = "torque",
    scale    = 9.80665,
    default  = "Nm lbfft",
    link     = "Kilogram metre (torque)",
},
["mN.m"] = {
    name1    = "millinewton-metre",
    name1_us = "millinewton-meter",
    symbol   = "mNm",
    utype    = "torque",
    scale    = 0.001,
    default  = "lb.in",
    link     = "Newton-metre",
},
["Nm"] = {
    _name1   = "newton-metre",
    _name1_us= "newton-meter",
    _symbol  = "Nm",
    utype    = "torque",
    alttype  = "energy",
    scale    = 1,
    prefixes = 1,
    default  = "lbfft",
    link     = "Newton-metre",
},
["kN/m"] = {
    per      = { "kN", "-m-stiff" },
    utype    = "torque",
    default  = "lbf/in",
},
["lbf/in"] = {
    per      = { "lbf", "-in-stiff" },
    utype    = "torque",
    default  = "kN/m",
},
["lb-f.ft"] = {
    target   = "lb-fft",
},
["lbf.ft"] = {
    target   = "lbfft",
},
["lbf·ft"] = {
    target   = "lbfft",
},
["lb·ft"] = {
    target   = "lb.ft",
},
["mkg-f"] = {
    target   = "m.kg-f",
},
["mkgf"] = {
```

```
    target   = "m.kgf",
},
["N.m"] = {
    target   = "Nm",
},
["N·m"] = {
    target   = "Nm",
},
["ton-mile"] = {
    symbol   = "ton-mile",
    usename  = 1,
    utype    = "transportation",
    scale    = 1.4599723182105602,
    default  = "tkm",
},
["tkm"] = {
    name1    = "tonne-kilometre",
    name1_us = "tonne-kilometer",
    symbol   = "tkm",
    utype    = "transportation",
    scale    = 1,
    default  = "ton-mile",
},
["-12USoz(mL)serve"] = {
    name1_us = "12 U.S. fl oz (355 mL) serving",
    symbol   = "12 US fl oz (355 mL) serving",
    sym_us   = "12 U.S. fl oz (355 mL) serving",
    utype    = "volume",
    scale    = 0.00035488235475000004,
    default  = "mL",
    link     = "Beverage can#Standard sizes",
},
["-12USoz(ml)serve"] = {
    name1_us = "12 U.S. fl oz (355 ml) serving",
    symbol   = "12 US fl oz (355 ml) serving",
    sym_us   = "12 U.S. fl oz (355 ml) serving",
    utype    = "volume",
    scale    = 0.00035488235475000004,
    default  = "ml",
    link     = "Beverage can#Standard sizes",
},
["-12USozserve"] = {
    name1_us = "12 U.S. fl oz serving",
    symbol   = "12 US fl oz serving",
    sym_us   = "12 U.S. fl oz serving",
    utype    = "volume",
    scale    = 0.00035488235475000004,
    default  = "mL",
    link     = "Beverage can#Standard sizes",
},
["acre-foot"] = {
    name1    = "acre-foot",
    name2    = "acre-foot",
    symbol   = "acreft",
    utype    = "volume",
    scale    = 1233.48183754752,
    default  = "m3",
},
["acre-ft"] = {
    name1    = "acre-foot",
    name2    = "acre-feet",
    symbol   = "acreft",
    utype    = "volume",
    scale    = 1233.48183754752,
    default  = "m3",
},
["AUtbsp"] = {
```

```
    name1    = "Australian tablespoon",
    symbol   = "AU tbsp",
    utype    = "volume",
    scale    = 0.000020,
    default  = "ml",
},
["Bcuft"] = {
    name1    = "billion cubic foot",
    name2    = "billion cubic feet",
    symbol   = "billion cu ft",
    utype    = "volume",
    scale    = 28316846.592,
    default  = "Gl",
    link     = "Cubic foot",
},
["bdft"] = {
    name1    = "board foot",
    name2    = "board feet",
    symbol   = "bd ft",
    utype    = "volume",
    scale    = 0.0023597372167,
    default  = "m3",
},
["board feet"] = {
    name2    = "board feet",
    symbol   = "board foot",
    usename  = 1,
    utype    = "volume",
    scale    = 0.0023597372167,
    default  = "m3",
},
["board foot"] = {
    name2    = "board foot",
    symbol   = "board foot",
    usename  = 1,
    utype    = "volume",
    scale    = 0.0023597372167,
    default  = "m3",
},
["cc"] = {
    name1    = "cubic centimetre",
    name1_us = "cubic centimeter",
    symbol   = "cc",
    utype    = "volume",
    scale    = 0.000001,
    default  = "cuin",
},
["CID"] = {
    name1    = "cubic inch",
    name2    = "cubic inches",
    symbol   = "cu in",
    utype    = "volume",
    scale    = 0.000016387064,
    default  = "cc",
    link     = "Cubic inch#Engine displacement",
},
["cord"] = {
    symbol   = "cord",
    utype    = "volume",
    scale    = 3.624556363776,
    default  = "m3",
    link     = "Cord (unit)",
},
["cufoot"] = {
    name1    = "cubic foot",
    name2    = "cubic foot",
    symbol   = "cu ft",
```

```
    utype    = "volume",
    scale    = 0.028316846592,
    default  = "m3",
},
["cuft"] = {
    name1    = "cubic foot",
    name2    = "cubic feet",
    symbol   = "cu&amp;nbsp;ft",
    utype    = "volume",
    scale    = 0.028316846592,
    default  = "m3",
},
["cuin"] = {
    name1    = "cubic inch",
    name2    = "cubic inches",
    symbol   = "cu&amp;nbsp;in",
    utype    = "volume",
    scale    = 0.000016387064,
    default  = "cm3",
},
["cumi"] = {
    name1    = "cubic mile",
    symbol   = "cu&amp;nbsp;mi",
    utype    = "volume",
    scale    = 4168181825.440579584,
    default  = "km3",
},
["cuyd"] = {
    name1    = "cubic yard",
    symbol   = "cu&amp;nbsp;yd",
    utype    = "volume",
    scale    = 0.764554857984,
    default  = "m3",
},
["firkin"] = {
    symbol   = "firkin",
    usename  = 1,
    utype    = "volume",
    scale    = 0.04091481,
    default  = "l impgal USgal",
    link     = "Firkin (unit)",
},
["foot3"] = {
    target   = "cufoot",
},
["Goilbbl"] = {
    name1    = "billion barrels",
    name2    = "billion barrels",
    symbol   = "Gbbl",
    utype    = "volume",
    scale    = 158987294.928,
    default  = "v * 1.58987294928 < 10 ! e6 ! e9 ! m3",
    link     = "Barrel (unit)#Oil barrel",
},
["gr water"] = {
    name1    = "grains water",
    name2    = "grains water",
    symbol   = "gr H<sub>2</sub>O",
    utype    = "volume",
    scale    = 0.00000006479891,
    default  = "cm3",
    link     = "Grain (unit)",
},
["grt"] = {
    name1    = "gross register ton",
    symbol   = "grt",
    utype    = "volume",
```

```
    scale    = 2.8316846592,
    default  = "m3",
    link     = "Gross register tonnage",
},
["impbbl"] = {
    name1    = "imperial barrel",
    symbol   = "imp bbl",
    utype    = "volume",
    scale    = 0.16365924,
    default  = "l impgal USgal",
    link     = "Barrel (unit)",
},
["impbsh"] = {
    name1    = "imperial bushel",
    symbol   = "imp bsh",
    utype    = "volume",
    scale    = 0.03636872,
    default  = "l impgal USdrygal",
},
["impbu"] = {
    name1    = "imperial bushel",
    symbol   = "imp bu",
    utype    = "volume",
    scale    = 0.03636872,
    default  = "m3",
},
["impgal"] = {
    name1    = "imperial gallon",
    symbol   = "imp gal",
    utype    = "volume",
    scale    = 0.00454609,
    default  = "l USgal",
},
["impgi"] = {
    name1    = "gill",
    symbol   = "gi",
    utype    = "volume",
    scale    = 0.0001420653125,
    default  = "ml USoz",
    link     = "Gill (unit)",
},
["impkenning"] = {
    name1    = "imperial kenning",
    symbol   = "kenning",
    utype    = "volume",
    scale    = 0.01818436,
    default  = "l USdrygal",
    link     = "Kenning (unit)",
},
["impoz"] = {
    name1    = "imperial fluid ounce",
    symbol   = "imp fl oz",
    utype    = "volume",
    scale    = 0.0000284130625,
    default  = "ml USoz",
},
["imppk"] = {
    name1    = "imperial peck",
    symbol   = "pk",
    utype    = "volume",
    scale    = 0.00909218,
    default  = "l USdrygal",
    link     = "Peck",
},
["imppt"] = {
    name1    = "imperial pint",
    symbol   = "imp pt",
```

```
    utype    = "volume",
    scale    = 0.00056826125,
    default  = "l",
},
["impqt"] = {
    name1    = "imperial quart",
    symbol   = "imp&amp;nbsp;qt",
    utype    = "volume",
    scale    = 0.0011365225,
    default  = "ml USoz",
    customary= 3,
},
["kilderkin"] = {
    symbol   = "kilderkin",
    usename  = 1,
    utype    = "volume",
    scale    = 0.08182962,
    default  = "l impgal USgal",
},
["koilbbl"] = {
    name1    = "thousand barrels",
    name2    = "thousand barrels",
    symbol   = "kbbl",
    utype    = "volume",
    scale    = 158.987294928,
    default  = "v * 1.58987294928 < 10 ! ! e3 ! m3",
    link     = "Barrel (unit)#Oil barrel",
},
["L"] = {
    _name1   = "litre",
    _name1_us= "liter",
    _symbol  = "L",
    utype    = "volume",
    scale    = 0.001,
    prefixes = 1,
    default  = "impgal USgal",
    link     = "Litre",
},
["l"] = {
    _name1   = "litre",
    _name1_us= "liter",
    _symbol  = "l",
    utype    = "volume",
    scale    = 0.001,
    prefixes = 1,
    default  = "impgal USgal",
    link     = "Litre",
},
["m3"] = {
    _name1   = "cubic metre",
    _name1_us= "cubic meter",
    _symbol  = "m<sup>3</sup>",
    prefix_position= 7,
    utype    = "volume",
    scale    = 1,
    prefixes = 3,
    default  = "cuft",
    link     = "Cubic metre",
},
["Mbbl"] = {
    name1    = "thousand barrels",
    name2    = "thousand barrels",
    symbol   = "Mbbl",
    utype    = "volume",
    scale    = 158.987294928,
    default  = "v * 1.58987294928 < 10 ! e3 ! ! m3",
    link     = "Barrel (unit)#Oil barrel",
```

```
},
["MMoilbbl"] = {
    name1    = "million barrels",
    name2    = "million barrels",
    symbol   = "MMbbl",
    utype    = "volume",
    scale    = 158987.294928,
    default  = "v * 1.58987294928 < 10 ! e3 ! e6 ! m3",
    link     = "Barrel (unit)#Oil barrel",
},
["Moilbbl"] = {
    name1    = "million barrels",
    name2    = "million barrels",
    symbol   = "Mbbl",
    utype    = "volume",
    scale    = 158987.294928,
    default  = "v * 1.58987294928 < 10 ! e3 ! e6 ! m3",
    link     = "Barrel (unit)#Oil barrel",
},
["MTON"] = {
    name1    = "measurement ton",
    symbol   = "MTON",
    utype    = "volume",
    scale    = 1.13267386368,
    default  = "m3",
},
["MUSgal"] = {
    name1    = "million US gallons",
    name1_us = "million U.S. gallons",
    name2    = "million US gallons",
    name2_us = "million U.S. gallons",
    symbol   = "million US gal",
    sym_us   = "million U.S. gal",
    utype    = "volume",
    scale    = 3785.411784,
    default  = "Ml",
    link     = "US gallon",
},
["oilbbl"] = {
    name1    = "barrel",
    symbol   = "bbl",
    utype    = "volume",
    scale    = 0.158987294928,
    default  = "m3",
    link     = "Barrel (unit)#Oil barrel",
},
["stere"] = {
    symbol   = "stere",
    usename  = 1,
    utype    = "volume",
    scale    = 1,
    default  = "cuft",
},
["Toilbbl"] = {
    name1    = "trillion barrels",
    name2    = "trillion barrels",
    symbol   = "Tbbl",
    utype    = "volume",
    scale    = 158987294928,
    default  = "v * 1.58987294928 < 10 ! e9 ! e12 ! m3",
    link     = "Barrel (unit)#Oil barrel",
},
["USbbl"] = {
    name1    = "US barrel",
    name1_us = "U.S. barrel",
    symbol   = "US bbl",
    sym_us   = "U.S. bbl",
```

```
    utype    = "volume",
    scale    = 0.119240471196,
    default  = "l USgal impgal",
    link     = "Barrel (unit)",
},
["USbeerbbl"] = {
    name1    = "US beer barrel",
    name1_us = "U.S. beer barrel",
    symbol   = "US bbl",
    sym_us   = "U.S. bbl",
    utype    = "volume",
    scale    = 0.117347765304,
    default  = "l USgal impgal",
    link     = "Barrel (unit)",
},
["USbsh"] = {
    name1    = "US bushel",
    name1_us = "U.S. bushel",
    symbol   = "US bsh",
    sym_us   = "U.S. bsh",
    utype    = "volume",
    scale    = 0.03523907016688,
    default  = "l USdrygal impgal",
    link     = "Bushel",
},
["USbu"] = {
    name1    = "US bushel",
    name1_us = "U.S. bushel",
    symbol   = "US bu",
    sym_us   = "U.S. bu",
    utype    = "volume",
    scale    = 0.03523907016688,
    default  = "l USdrygal impgal",
    link     = "Bushel",
},
["USdrybbl"] = {
    name1    = "US dry barrel",
    name1_us = "U.S. dry barrel",
    symbol   = "US dry bbl",
    sym_us   = "U.S. dry bbl",
    utype    = "volume",
    scale    = 0.11562819898508,
    default  = "m3",
    link     = "Barrel (unit)",
},
["USdrygal"] = {
    name1    = "US dry gallon",
    name1_us = "U.S. dry gallon",
    symbol   = "US dry gal",
    sym_us   = "U.S. dry gal",
    utype    = "volume",
    scale    = 0.00440488377086,
    default  = "l",
    link     = "Gallon",
},
["USdrypt"] = {
    name1    = "US dry pint",
    name1_us = "U.S. dry pint",
    symbol   = "US dry pt",
    sym_us   = "U.S. dry pt",
    utype    = "volume",
    scale    = 0.0005506104713575,
    default  = "ml",
    link     = "Pint",
},
["USdryqt"] = {
    name1    = "US dry quart",
```

```
    name1_us = "U.S. dry quart",
    symbol   = "US&amp;nbsp;dry&amp;nbsp;qt",
    sym_us   = "U.S.&amp;nbsp;dry&amp;nbsp;qt",
    utype    = "volume",
    scale    = 0.001101220942715,
    default  = "ml",
    link     = "Quart",
},
["USflgal"] = {
    name1    = "US gallon",
    name1_us = "U.S. gallon",
    symbol   = "US fl gal",
    sym_us   = "U.S.&amp;nbsp;fl&amp;nbsp;gal",
    utype    = "volume",
    scale    = 0.003785411784,
    default  = "l impgal",
    link     = "Gallon",
},
["USgal"] = {
    name1    = "US gallon",
    name1_us = "U.S. gallon",
    symbol   = "US&amp;nbsp;gal",
    sym_us   = "U.S.&amp;nbsp;gal",
    utype    = "volume",
    scale    = 0.003785411784,
    default  = "l impgal",
},
["USgi"] = {
    name1    = "gill",
    symbol   = "gi",
    utype    = "volume",
    scale    = 0.0001182941183,
    default  = "ml impoz",
    link     = "Gill (unit)",
},
["USkenning"] = {
    name1    = "US kenning",
    name1_us = "U.S. kenning",
    symbol   = "US&amp;nbsp;kenning",
    sym_us   = "U.S.&amp;nbsp;kenning",
    utype    = "volume",
    scale    = 0.01761953508344,
    default  = "l impgal",
    link     = "Kenning (unit)",
},
["USmin"] = {
    name1    = "US minim",
    name1_us = "U.S. minim",
    symbol   = "US&amp;nbsp;min",
    sym_us   = "U.S.&amp;nbsp;min",
    utype    = "volume",
    scale    = 0.000000061611519921875,
    default  = "ml",
    link     = "Minim (unit)",
},
["USoz"] = {
    name1    = "US fluid ounce",
    name1_us = "U.S. fluid ounce",
    symbol   = "US&amp;nbsp;fl&amp;nbsp;oz",
    sym_us   = "U.S.&amp;nbsp;fl&amp;nbsp;oz",
    utype    = "volume",
    scale    = 0.0000295735295625,
    default  = "ml",
},
["USpk"] = {
    name1    = "US peck",
    name1_us = "U.S. peck",
```

```
    symbol   = "US pk",
    sym_us   = "U.S. pk",
    utype    = "volume",
    scale    = 0.00880976754172,
    default  = "l impgal",
    link     = "Peck",
},
["USpt"] = {
    name1    = "US pint",
    name1_us = "U.S. pint",
    symbol   = "US pt",
    sym_us   = "U.S. pt",
    utype    = "volume",
    scale    = 0.000473176473,
    default  = "l imppt",
    link     = "Pint",
},
["USqt"] = {
    name1    = "US quart",
    name1_us = "U.S. quart",
    symbol   = "US qt",
    sym_us   = "U.S. qt",
    utype    = "volume",
    scale    = 0.000946352946,
    default  = "ml",
    link     = "Quart",
    customary= 1,
},
["USquart"] = {
    name1    = "US quart",
    name1_us = "U.S. quart",
    symbol   = "US qt",
    sym_us   = "U.S. qt",
    utype    = "volume",
    scale    = 0.000946352946,
    default  = "ml impoz",
    link     = "Quart",
},
["UStbsp"] = {
    name1    = "US tablespoon",
    name1_us = "U.S. tablespoon",
    symbol   = "US tbsp",
    sym_us   = "U.S. tbsp",
    utype    = "volume",
    scale    = 1.4786764781250001e-5,
    default  = "ml",
},
["winecase"] = {
    symbol   = "case",
    usename  = 1,
    utype    = "volume",
    scale    = 0.009,
    default  = "l",
    link     = "Case (goods)",
},
["*U.S.drygal"] = {
    target   = "USdrygal",
    sp_us    = true,
    customary= 2,
},
["*U.S.gal"] = {
    target   = "USgal",
    sp_us    = true,
    default  = "L impgal",
    customary= 2,
},
["+USdrygal"] = {
```

```
    target   = "USdrygal",
    customary= 1,
},
["+usfloz"] = {
    target   = "USoz",
    link     = "Fluid ounce",
    customary= 1,
},
["+USgal"] = {
    target   = "USgal",
    customary= 1,
},
["+USoz"] = {
    target   = "USoz",
    customary= 1,
},
["@impgal"] = {
    target   = "impgal",
    link     = "Gallon",
    customary= 3,
},
["acre feet"] = {
    target   = "acre-ft",
},
["acre foot"] = {
    target   = "acre-foot",
},
["acre ft"] = {
    target   = "acre-ft",
},
["acre-feet"] = {
    target   = "acre-ft",
},
["acre.foot"] = {
    target   = "acre-foot",
},
["acre.ft"] = {
    target   = "acre-ft",
},
["acre·ft"] = {
    target   = "acre-ft",
},
["bushels"] = {
    target   = "USbsh",
},
["cid"] = {
    target   = "CID",
},
["ft3"] = {
    target   = "cuft",
},
["gal"] = {
    target   = "USgal",
},
["gallon"] = {
    shouldbe = "Use %{USgal%} for US gallons or %{impgal%} for imperial gallons (not %
},
["gallons"] = {
    shouldbe = "Use %{USgal%} for US gallons or %{impgal%} for imperial gallons (not %
},
["Gcuft"] = {
    target   = "e9cuft",
},
["impfloz"] = {
    target   = "impoz",
},
["Impgal"] = {
```

```
    target   = "impgal",
},
["in3"] = {
    target   = "cuin",
    symbol   = "in<sup>3</sup>",
},
["kcuft"] = {
    target   = "e3cuft",
},
["kcum"] = {
    target   = "e3m3",
},
["km³"] = {
    target   = "km3",
},
["liter"] = {
    target   = "L",
    sp_us    = true,
},
["liters"] = {
    target   = "L",
    sp_us    = true,
},
["litre"] = {
    target   = "L",
},
["litres"] = {
    target   = "L",
},
["Mcuft"] = {
    target   = "e6cuft",
},
["Mcum"] = {
    target   = "e6m3",
},
["Mft3"] = {
    target   = "e6cuft",
},
["mi3"] = {
    target   = "cumi",
},
["m³"] = {
    target   = "m3",
},
["Pcuft"] = {
    target   = "e15cuft",
},
["pt"] = {
    shouldbe = "Use %{USpt%} for US pints or %{imppt%} for imperial pints (not %{pt%})
},
["qt"] = {
    shouldbe = "Use %{USqt%} for US quarts or %{impqt%} for imperial quarts (not %{qt%
},
["Tcuft"] = {
    target   = "e12cuft",
},
["Tft3"] = {
    target   = "e12cuft",
},
["U.S.bbl"] = {
    target   = "USbbl",
    sp_us    = true,
    default  = "l U.S.gal impgal",
},
["U.S.beerbbl"] = {
    target   = "USbeerbbl",
    sp_us    = true,
```

```
    default  = "l U.S.gal impgal",
},
["U.S.bsh"] = {
    target   = "USbsh",
    sp_us    = true,
    default  = "l U.S.drygal impgal",
},
["U.S.bu"] = {
    target   = "USbu",
    sp_us    = true,
    default  = "l U.S.drygal impgal",
},
["U.S.drybbl"] = {
    target   = "USdrybbl",
    sp_us    = true,
},
["U.S.drygal"] = {
    target   = "USdrygal",
    sp_us    = true,
},
["U.S.drypt"] = {
    target   = "USdrypt",
    sp_us    = true,
},
["U.S.dryqt"] = {
    target   = "USdryqt",
    sp_us    = true,
},
["U.S.flgal"] = {
    target   = "USflgal",
    sp_us    = true,
},
["U.S.floz"] = {
    target   = "USoz",
    sp_us    = true,
},
["U.S.gal"] = {
    target   = "USgal",
    sp_us    = true,
    default  = "L impgal",
    link     = "U.S. gallon",
},
["u.s.gal"] = {
    target   = "USgal",
    sp_us    = true,
    default  = "L impgal",
    link     = "U.S. gallon",
},
["U.S.gi"] = {
    target   = "USgi",
    sp_us    = true,
},
["U.S.kenning"] = {
    target   = "USkenning",
    sp_us    = true,
},
["U.S.oz"] = {
    target   = "USoz",
    sp_us    = true,
},
["U.S.pk"] = {
    target   = "USpk",
    sp_us    = true,
},
["U.S.pt"] = {
    target   = "USpt",
    sp_us    = true,
```

```
},
["U.S.qt"] = {
    target   = "USqt",
    sp_us    = true,
    default  = "L impqt",
    customary= 2,
},
["usbbl"] = {
    target   = "USbbl",
},
["usbeerbbl"] = {
    target   = "USbeerbbl",
},
["usbsh"] = {
    target   = "USbsh",
},
["usbu"] = {
    target   = "USbu",
},
["usdrybbl"] = {
    target   = "USdrybbl",
},
["usdrygal"] = {
    target   = "USdrygal",
},
["usdrypt"] = {
    target   = "USdrypt",
},
["usdryqt"] = {
    target   = "USdryqt",
},
["USfloz"] = {
    target   = "USoz",
},
["usfloz"] = {
    target   = "USoz",
},
["USGAL"] = {
    target   = "USgal",
},
["usgal"] = {
    target   = "USgal",
},
["usgi"] = {
    target   = "USgi",
},
["uskenning"] = {
    target   = "USkenning",
},
["usoz"] = {
    target   = "USoz",
},
["uspk"] = {
    target   = "USpk",
},
["uspt"] = {
    target   = "USpt",
},
["usqt"] = {
    target   = "USqt",
},
["yd3"] = {
    target   = "cuyd",
},
["cuft/sqmi"] = {
    per      = { "cuft", "sqmi" },
    utype    = "volume per unit area",
```

```
    default  = "m3/km2",
},
["m3/ha"] = {
    name1    = "cubic metre per hectare",
    name1_us = "cubic meter per hectare",
    name2    = "cubic metres per hectare",
    name2_us = "cubic meters per hectare",
    symbol   = "m<sup>3</sup>/ha",
    utype    = "volume per unit area",
    scale    = 0.0001,
    default  = "USbu/acre",
    link     = "Hectare",
},
["m3/km2"] = {
    per      = { "m3", "km2" },
    utype    = "volume per unit area",
    default  = "cuft/sqmi",
},
["U.S.gal/acre"] = {
    per      = { "U.S.gal", "acre" },
    utype    = "volume per unit area",
    default  = "m3/km2",
},
["USbu/acre"] = {
    name2    = "US bushels per acre",
    symbol   = "US bushel per acre",
    usename  = 1,
    utype    = "volume per unit area",
    scale    = 8.7077638761350888e-6,
    default  = "m3/ha",
    link     = "Bushel",
},
["USgal/acre"] = {
    per      = { "USgal", "acre" },
    utype    = "volume per unit area",
    default  = "m3/km2",
},
["cuyd/mi"] = {
    per      = { "cuyd", "mi" },
    utype    = "volume per unit length",
    default  = "m3/km",
},
["m3/km"] = {
    per      = { "m3", "km" },
    utype    = "volume per unit length",
    default  = "cuyd/mi",
},
["mich"] = {
    combination= { "ch", "mi" },
    multiple = { 80 },
    utype    = "length",
},
["michlk"] = {
    combination= { "chlk", "mi" },
    multiple = { 80 },
    utype    = "length",
},
["michainlk"] = {
    combination= { "chainlk", "mi" },
    multiple = { 80 },
    utype    = "length",
},
["miyd"] = {
    combination= { "yd", "mi" },
    multiple = { 1760 },
    utype    = "length",
},
```

```
["miydftin"] = {
    combination= { "in", "ft", "yd", "mi" },
    multiple = { 12, 3, 1760 },
    utype    = "length",
},
["mift"] = {
    combination= { "ft", "mi" },
    multiple = { 5280 },
    utype    = "length",
},
["ydftin"] = {
    combination= { "in", "ft", "yd" },
    multiple = { 12, 3 },
    utype    = "length",
},
["ydft"] = {
    combination= { "ft", "yd" },
    multiple = { 3 },
    utype    = "length",
},
["ftin"] = {
    combination= { "in", "ft" },
    multiple = { 12 },
    utype    = "length",
},
["footin"] = {
    combination= { "in", "foot" },
    multiple = { 12 },
    utype    = "length",
},
["handin"] = {
    combination= { "in", "hand" },
    multiple = { 4 },
    utype    = "length",
},
["lboz"] = {
    combination= { "oz", "lb" },
    multiple = { 16 },
    utype    = "mass",
},
["stlb"] = {
    combination= { "lb", "st" },
    multiple = { 14 },
    utype    = "mass",
},
["stlboz"] = {
    combination= { "oz", "lb", "st" },
    multiple = { 16, 14 },
    utype    = "mass",
},
["st and lb"] = {
    combination= { "lb", "st" },
    multiple = { 14 },
    utype    = "mass",
},
["GN LTf"] = {
    combination= { "GN", "-LTf" },
    utype    = "force",
},
["GN LTf STf"] = {
    combination= { "GN", "-LTf", "-STf" },
    utype    = "force",
},
["GN STf"] = {
    combination= { "GN", "-STf" },
    utype    = "force",
},
```

```
["GN STf LTf"] = {
    combination= { "GN", "-STf", "-LTf" },
    utype    = "force",
},
["kN LTf"] = {
    combination= { "kN", "-LTf" },
    utype    = "force",
},
["kN LTf STf"] = {
    combination= { "kN", "-LTf", "-STf" },
    utype    = "force",
},
["kN STf"] = {
    combination= { "kN", "-STf" },
    utype    = "force",
},
["kN STf LTf"] = {
    combination= { "kN", "-STf", "-LTf" },
    utype    = "force",
},
["LTf STf"] = {
    combination= { "-LTf", "-STf" },
    utype    = "force",
},
["MN LTf"] = {
    combination= { "MN", "-LTf" },
    utype    = "force",
},
["MN LTf STf"] = {
    combination= { "MN", "-LTf", "-STf" },
    utype    = "force",
},
["MN STf"] = {
    combination= { "MN", "-STf" },
    utype    = "force",
},
["MN STf LTf"] = {
    combination= { "MN", "-STf", "-LTf" },
    utype    = "force",
},
["STf LTf"] = {
    combination= { "-STf", "-LTf" },
    utype    = "force",
},
["L/100 km mpgimp"] = {
    combination= { "L/100 km", "mpgimp" },
    utype    = "fuel efficiency",
},
["l/100 km mpgimp"] = {
    combination= { "l/100 km", "mpgimp" },
    utype    = "fuel efficiency",
},
["L/100 km mpgUS"] = {
    combination= { "L/100 km", "mpgus" },
    utype    = "fuel efficiency",
},
["L/100 km mpgus"] = {
    combination= { "L/100 km", "mpgus" },
    utype    = "fuel efficiency",
},
["l/100 km mpgus"] = {
    combination= { "l/100 km", "mpgus" },
    utype    = "fuel efficiency",
},
["mpgimp L/100 km"] = {
    combination= { "mpgimp", "L/100 km" },
    utype    = "fuel efficiency",
```

```
    },
    ["LT ST t"] = {
        combination= { "lt", "-ST", "t" },
        utype    = "mass",
    },
    ["LT t ST"] = {
        combination= { "lt", "t", "-ST" },
        utype    = "mass",
    },
    ["ST LT t"] = {
        combination= { "-ST", "lt", "t" },
        utype    = "mass",
    },
    ["ST t LT"] = {
        combination= { "-ST", "t", "lt" },
        utype    = "mass",
    },
    ["t LT ST"] = {
        combination= { "t", "lt", "-ST" },
        utype    = "mass",
    },
    ["ton"] = {
        combination= { "LT", "ST" },
        utype    = "mass",
    },
    ["kPa kg/cm2"] = {
        combination= { "kPa", "kgf/cm2" },
        utype    = "pressure",
    },
    ["kPa lb/in2"] = {
        combination= { "kPa", "-lb/in2" },
        utype    = "pressure",
    },
    ["floz"] = {
        combination= { "impoz", "USoz" },
        utype    = "volume",
    },
}

--------------------------------------------------------------------------------
-- Do not change the data in this table because it is created by running --
-- a script that reads the wikitext from a wiki page (see note above).   --
--------------------------------------------------------------------------------
local default_exceptions = {
        -- Prefixed units with a default different from that of the base unit.
        -- Each key item is a prefixed symbol (unitcode for engineering notation).
        ["cm<sup>2</sup>"] = "sqin",
        ["dm<sup>2</sup>"] = "sqin",
        ["e3acre"] = "km2",
        ["e3m2"] = "e6sqft",
        ["e6acre"] = "km2",
        ["e6ha"] = "e6acre",
        ["e6km2"] = "e6sqmi",
        ["e6m2"] = "e6sqft",
        ["e6sqft"] = "v * 9.290304 < 100 ! e3 ! e6 ! m2",
        ["e6sqmi"] = "e6km2",
        ["hm<sup>2</sup>"] = "acre",
        ["km<sup>2</sup>"] = "sqmi",
        ["mm<sup>2</sup>"] = "sqin",
        ["aJ"] = "eV",
        ["e3BTU"] = "MJ",
        ["e6BTU"] = "GJ",
        ["EJ"] = "kWh",
        ["fJ"] = "keV",
        ["GJ"] = "kWh",
        ["MJ"] = "kWh",
        ["PJ"] = "kWh",
```

```
["pJ"] = "MeV",
["TJ"] = "kWh",
["YJ"] = "kWh",
["yJ"] = "eV",
["ZJ"] = "kWh",
["zJ"] = "meV",
["e12cuft/a"] = "v * 2.8316846592 < 100 ! e9 ! e12 ! m3/a",
["e12cuft/d"] = "v * 2.8316846592 < 100 ! e9 ! e12 ! m3/d",
["e12m3/a"] = "Tcuft/a",
["e12m3/d"] = "Tcuft/d",
["e3cuft/a"] = "v * 2.8316846592 < 100 ! ! e3 ! m3/a",
["e3cuft/d"] = "v * 2.8316846592 < 100 ! ! e3 ! m3/d",
["e3cuft/s"] = "v * 2.8316846592 < 100 ! ! e3 ! m3/s",
["e3m3/a"] = "v < 28.316846592 ! k ! M ! cuft/a",
["e3m3/d"] = "v < 28.316846592 ! k ! M ! cuft/d",
["e3m3/s"] = "v < 28.316846592 ! k ! M ! cuft/s",
["e3USgal/a"] = "v * 3.785411784 < 1000 ! ! e3 ! m3/a",
["e6cuft/a"] = "v * 2.8316846592 < 100 ! e3 ! e6 ! m3/a",
["e6cuft/d"] = "v * 2.8316846592 < 100 ! e3 ! e6 ! m3/d",
["e6cuft/s"] = "v * 2.8316846592 < 100 ! e3 ! e6 ! m3/s",
["e6m3/a"] = "v < 28.316846592 ! M ! G ! cuft/a",
["e6m3/d"] = "v < 28.316846592 ! M ! G ! cuft/d",
["e6m3/s"] = "v < 28.316846592 ! e6 ! e9 ! cuft/s",
["e6USgal/a"] = "v * 3.785411784 < 1000 ! e3 ! e6 ! m3/a",
["e9cuft/a"] = "m3/a",
["e9cuft/d"] = "v * 2.8316846592 < 100 ! e6 ! e9 ! m3/d",
["e9m3/a"] = "v < 28.316846592 ! G ! T ! cuft/a",
["e9m3/d"] = "v < 28.316846592 ! G ! T ! cuft/d",
["e9m3/s"] = "v < 28.316846592 ! e9 ! e12 ! cuft/s",
["e9USgal/a"] = "v * 3.785411784 < 1000 ! e6 ! e9 ! m3/a",
["e9USgal/s"] = "v * 3.785411784 < 1000 ! e6 ! e9 ! m3/s",
["nN"] = "gr-f",
["N"] = "gr-f",
["mN"] = "oz-f",
["am"] = "in",
["cm"] = "in",
["dam"] = "ft",
["dm"] = "in",
["e12km"] = "e12mi",
["e12mi"] = "e12km",
["e3AU"] = "ly",
["e3km"] = "e3mi",
["e3mi"] = "e3km",
["e6km"] = "e6mi",
["e6mi"] = "e6km",
["e9km"] = "AU",
["e9mi"] = "e9km",
["Em"] = "mi",
["fm"] = "in",
["Gm"] = "mi",
["hm"] = "ft",
["km"] = "mi",
["mm"] = "in",
["Mm"] = "mi",
["nm"] = "in",
["Pm"] = "mi",
["pm"] = "in",
["Tm"] = "mi",
["Ym"] = "mi",
["ym"] = "in",
["Zm"] = "mi",
["zm"] = "in",
["m"] = "in",
["e12lb"] = "v * 4.5359237 < 10 ! Mt ! Gt",
["e3lb"] = "v * 4.5359237 < 10 ! kg ! t",
["e3ozt"] = "v * 0.311034768 < 10 ! kg ! t",
["e3t"] = "LT ST",
```

```
["e6carat"] = "t",
["e6lb"] = "v * 4.5359237 < 10 ! t ! kilotonne",
["e6ozt"] = "lb kg",
["e6ST"] = "Mt",
["e6t"] = "LT ST",
["e9lb"] = "v * 4.5359237 < 10 ! kilotonne ! Mt",
["e9t"] = "LT ST",
["Gg"] = "lb",
["kg"] = "lb",
["mg"] = "gr",
["Mg"] = "LT ST",
["ng"] = "gr",
["g"] = "gr",
["mBq"] = "fCi",
["kBq"] = "nCi",
["MBq"] = "Ci",
["GBq"] = "mCi",
["TBq"] = "Ci",
["PBq"] = "kCi",
["EBq"] = "kCi",
["fCi"] = "mBq",
["pCi"] = "Bq",
["nCi"] = "Bq",
["Ci"] = "kBq",
["mCi"] = "MBq",
["kCi"] = "TBq",
["MCi"] = "PBq",
["ns"] = "s",
["s"] = "ms",
["ms"] = "s",
["ks"] = "h",
["Ms"] = "week",
["Gs"] = "decade",
["Ts"] = "millennium",
["Ps"] = "million year",
["Es"] = "thousand million year",
["MK"] = "keVT",
["cL"] = "impoz usoz",
["cl"] = "impoz usoz",
["cm<sup>3</sup>"] = "cuin",
["dL"] = "impoz usoz",
["dl"] = "impoz usoz",
["mm<sup>3</sup>"] = "cuin",
["dm<sup>3</sup>"] = "cuin",
["e12cuft"] = "v * 2.8316846592 < 100 ! e9 ! e12 ! m3",
["e12impgal"] = "v * 4.54609 < 1000 ! T ! P ! l",
["e12m3"] = "v < 28.316846592 ! T ! P ! cuft",
["e12U.S.gal"] = "v * 3.785411784 < 1000 ! T ! P ! l",
["e12USgal"] = "v * 3.785411784 < 1000 ! T ! P ! l",
["e15cuft"] = "v * 2.8316846592 < 100 ! e12 ! e15 ! m3",
["e15m3"] = "Pcuft",
["e3bdft"] = "v * 0.23597372167 < 100 ! e3 ! e6 ! m3",
["e3cuft"] = "v * 2.8316846592 < 100 ! ! e3 ! m3",
["e3impgal"] = "v * 4.54609 < 1000 ! k ! M ! l",
["e3m3"] = "v < 28.316846592 ! k ! M ! cuft",
["e3U.S.gal"] = "v * 3.785411784 < 1000 ! k ! M ! l",
["e3USgal"] = "v * 3.785411784 < 1000 ! k ! M ! l",
["e6bdft"] = "v * 0.23597372167 < 100 ! e3 ! e6 ! m3",
["e6cuft"] = "v * 2.8316846592 < 100 ! e3 ! e6 ! m3",
["e6cuyd"] = "v * 7.64554857984 < 10 ! e3 ! e6 ! m3",
["e6impgal"] = "v * 4.54609 < 1000 ! M ! G ! l",
["e6L"] = "USgal",
["e6m3"] = "v < 28.316846592 ! M ! G ! cuft",
["e6U.S.gal"] = "v * 3.785411784 < 1000 ! M ! G ! l",
["e6USgal"] = "v * 3.785411784 < 1000 ! M ! G ! l",
["e9bdft"] = "v * 0.23597372167 < 100 ! e6 ! e9 ! m3",
["e9cuft"] = "v * 2.8316846592 < 100 ! e6 ! e9 ! m3",
```

```
        ["e9impgal"] = "v * 4.54609 < 1000 ! G ! T ! l",
        ["e9m3"] = "v < 28.316846592 ! G ! T ! cuft",
        ["e9U.S.gal"] = "v * 3.785411784 < 1000 ! G ! T ! l",
        ["e9USgal"] = "v * 3.785411784 < 1000 ! G ! T ! l",
        ["GL"] = "cuft",
        ["Gl"] = "cuft",
        ["kL"] = "cuft",
        ["kl"] = "cuft",
        ["km<sup>3</sup>"] = "cumi",
        ["mL"] = "impoz usoz",
        ["ml"] = "impoz usoz",
        ["Ml"] = "v < 28.316846592 ! e3 ! e6 ! cuft",
        ["ML"] = "v < 28.316846592 ! e3 ! e6 ! cuft",
        ["TL"] = "cumi",
        ["Tl"] = "cumi",
        ["L"] = "cuin",
        ["l"] = "cuin",
}

--------------------------------------------------------------------------------
-- Do not change the data in this table because it is created by running --
-- a script that reads the wikitext from a wiki page (see note above).   --
--------------------------------------------------------------------------------
local link_exceptions = {
        -- Prefixed units with a linked article different from that of the base unit.
        -- Each key item is a prefixed symbol (not unitcode).
        ["mm<sup>2</sup>"] = "Square millimetre",
        ["cm<sup>2</sup>"] = "Square centimetre",
        ["dm<sup>2</sup>"] = "Square decimetre",
        ["km<sup>2</sup>"] = "Square kilometre",
        ["kJ"] = "Kilojoule",
        ["MJ"] = "Megajoule",
        ["GJ"] = "Gigajoule",
        ["TJ"] = "Terajoule",
        ["fm"] = "Femtometre",
        ["pm"] = "Picometre",
        ["nm"] = "Nanometre",
        ["m"] = "Micrometre",
        ["mm"] = "Millimetre",
        ["cm"] = "Centimetre",
        ["dm"] = "Decimetre",
        ["dam"] = "Decametre",
        ["hm"] = "Hectometre",
        ["km"] = "Kilometre",
        ["Mm"] = "Megametre",
        ["Gm"] = "Gigametre",
        ["Tm"] = "Terametre",
        ["Pm"] = "Petametre",
        ["Em"] = "Exametre",
        ["Zm"] = "Zettametre",
        ["Ym"] = "Yottametre",
        ["g"] = "Microgram",
        ["mg"] = "Milligram",
        ["kg"] = "Kilogram",
        ["Mg"] = "Tonne",
        ["yW"] = "Yoctowatt",
        ["zW"] = "Zeptowatt",
        ["aW"] = "Attowatt",
        ["fW"] = "Femtowatt",
        ["pW"] = "Picowatt",
        ["nW"] = "Nanowatt",
        ["W"] = "Microwatt",
        ["mW"] = "Milliwatt",
        ["kW"] = "Kilowatt",
        ["MW"] = "Megawatt",
        ["GW"] = "Gigawatt",
        ["TW"] = "Terawatt",
```

```
        ["PW"] = "Petawatt",
        ["EW"] = "Exawatt",
        ["ZW"] = "Zettawatt",
        ["YW"] = "Yottawatt",
        ["as"] = "Attosecond",
        ["fs"] = "Femtosecond",
        ["ps"] = "Picosecond",
        ["ns"] = "Nanosecond",
        ["s"] = "Microsecond",
        ["ms"] = "Millisecond",
        ["ks"] = "Kilosecond",
        ["Ms"] = "Megasecond",
        ["Gs"] = "Gigasecond",
        ["Ts"] = "Terasecond",
        ["Ps"] = "Petasecond",
        ["Es"] = "Exasecond",
        ["Zs"] = "Zettasecond",
        ["Ys"] = "Yottasecond",
        ["mm<sup>3</sup>"] = "Cubic millimetre",
        ["cm<sup>3</sup>"] = "Cubic centimetre",
        ["dm<sup>3</sup>"] = "Cubic decimetre",
        ["dam<sup>3</sup>"] = "Cubic decametre",
        ["km<sup>3</sup>"] = "Cubic kilometre",
        ["L"] = "Microlitre",
        ["l"] = "Microlitre",
        ["mL"] = "Millilitre",
        ["ml"] = "Millilitre",
        ["cL"] = "Centilitre",
        ["cl"] = "Centilitre",
        ["dL"] = "Decilitre",
        ["dl"] = "Decilitre",
        ["daL"] = "Decalitre",
        ["dal"] = "Decalitre",
        ["hL"] = "Hectolitre",
        ["hl"] = "Hectolitre",
        ["kL"] = "Kilolitre",
        ["kl"] = "Kilolitre",
        ["ML"] = "Megalitre",
        ["Ml"] = "Megalitre",
        ["GL"] = "Gigalitre",
        ["Gl"] = "Gigalitre",
        ["TL"] = "Teralitre",
        ["Tl"] = "Teralitre",
        ["PL"] = "Petalitre",
        ["Pl"] = "Petalitre",
}

--------------------------------------------------------------------------------
-- Do not change the data in this table because it is created by running --
-- a script that reads the wikitext from a wiki page (see note above).   --
--------------------------------------------------------------------------------
local per_unit_fixups = {
        -- Automatically created per units of form "x/y" may have their unit type
        -- changed, for example, "length/time" is changed to "speed".
        -- Other adjustments can also be specified.
        ["/area"] = "per unit area",
        ["/volume"] = "per unit volume",
        ["area/area"] = "area per unit area",
        ["energy/length"] = "energy per unit length",
        ["energy/mass"] = "energy per unit mass",
        ["energy/time"] = { utype = "power", link = "Power (physics)" },
        ["energy/volume"] = "energy per unit volume",
        ["force/area"] = { utype = "pressure", link = "Pressure" },
        ["length/length"] = { utype = "gradient", link = "Grade (slope)" },
        ["length/time"] = { utype = "speed", link = "Speed" },
        ["length/time/time"] = { utype = "acceleration", link = "Acceleration" },
        ["mass/area"] = { utype = "pressure", multiplier = 9.80665 },
```

```
        ["mass/length"] = "linear density",
        ["mass/mass"] = "concentration",
        ["mass/power"] = "mass per unit power",
        ["mass/time"] = "mass per unit time",
        ["mass/volume"] = { utype = "density", link = "Density" },
        ["power/mass"] = "power per unit mass",
        ["power/volume"] = { link = "Power density" },
        ["pressure/length"] = "fracture gradient",
        ["speed/time"] = { utype = "acceleration", link = "Acceleration" },
        ["volume/area"] = "volume per unit area",
        ["volume/length"] = "volume per unit length",
        ["volume/time"] = "flow",
}

return {
        all_units = all_units,
        default_exceptions = default_exceptions,
        link_exceptions = link_exceptions,
        per_unit_fixups = per_unit_fixups,
}
```

Modul:Convert/extra

This module can be used to quickly add a new unit for use with Vorlage:Tl. When satisfied that a unit is working correctly, ask at Module talk:Convert for the unit to be moved to the permanent list of units.

See Template:Convert/unit sandbox for a good way to prepare unit definitions that can be copied into this page.

The following extracts from Module:Convert/data show examples that could be used to define a new unit. Any number of spaces can be used where blanks are shown in the following.

Vorlage:Collapse top

```
-- These are EXAMPLES on the documentation page. Scroll down to see the module content.
local extra_units = {
    -- Similar to a redirect: "sqm" is an alias for "m2".
    -- {{convert|1.5|m2|sp=us}}   1.5 square meters (16 sq ft)
    -- {{convert|1.5|sqm|sp=us}}  1.5 square meters (16 sq ft)
    ["sqm"] = {
        target   = "m2",
    },
    -- A simple unit, showing the minimum that is required.
    -- The "ha" is the unit code used to identify the unit:
    -- {{convert|1.5|ha}}  1.5 hectares (3.7 acres)
    ["ha"] = {
        name1    = "hectare",
        symbol   = "ha",
        utype    = "area",
        scale    = 10000,
        default  = "acre",
    },
    -- A unit which accepts an SI prefix. There is no "name1" field because it
    -- has to be constructed (mJ gives "millijoule"; MJ gives "megajoule").
    -- {{convert|125|kJ}}  125 kilojoules (30,000 cal)
    ["J"] = {
        _name1   = "joule",
        _symbol  = "J",
        utype    = "energy",
```

```
        scale    = 1,
        prefixes = 1,
        default  = "cal",
        link     = "Joule",
    },
    -- A unit where US and plural names are required.
    -- {{convert|125|cm/s2}}  125 centimetres per second squared (4.1 ft/s²)
    ["cm/s2"] = {
        name1    = "centimetre per second squared",
        name1_us = "centimeter per second squared",
        name2    = "centimetres per second squared",
        name2_us = "centimeters per second squared",
        symbol   = "cm/s<sup>2</sup>",
        utype    = "acceleration",
        scale    = 0.01,
        default  = "ft/s2",
        link     = "Gal (unit)",
    },
    -- A "per" unit is defined as the ratio of two other units.
    -- {{convert|125|g/cm3}}  125 grams per cubic centimetre (4.5 lb/cu in)
    ["g/cm3"] = {
        per      = { "g", "cm3" },
        utype    = "density",
        default  = "lb/cuin",
    },
    -- If the automatic "per" link is not wanted, a link can be specified.
    -- {{convert|125|g/cm3|lk=on|disp=unit}}  [[gram]]s per [[cubic centimetre]]
    -- {{convert|125|g/m3|lk=on|disp=unit}}  [[density|grams per cubic metre]]
    ["g/m3"] = {
 per  = { "g", "m3" },
 utype  = "density",
 default  = "lb/cuyd",
 link  = "density",
    },
    -- Characters "$" and "£" are recognized as currency symbols.
    -- {{convert|125|$/acre}}  $125 per acre ($310/ha)
    ["$/acre"] = {
        per      = { "$", "acre" },
        utype    = "cost $ per unit area",
        default  = "$/ha",
    },
    -- An output unit can be defined as a combination of existing units.
    -- {{convert|2|ha|ft2 m2}}  2 hectares (220,000 sq ft; 20,000 m²)
    -- Any number of output units can be specified.
    -- NOTE: There may be no need to define a combination because a convert
    --       can specify the output by joining unit codes with "+":
    -- {{convert|1.2|acre|ft2+yd2+m2}}  1.2 acres (52,000 sq ft; 5,800 sq yd; 4,900 m²)
    ["ft2 m2"] = {
        combination = { "ft2", "m2" },
        utype    = "area",
    },
    -- An output unit can be defined using subunits (from least to most significant).
    -- {{convert|90|in|ydftin}}  90 inches (2 yd 1 ft 6 in)
    ["ydftin"] = {
        combination = { "in", "ft", "yd" },
        multiple = { 12, 3 },
        utype    = "length",
    },
}
```

Vorlage:Collapse bottom

Field	Description
`symbol`	Unit identifier used when `abbr=on` is in effect.

`name1`	Singular name of the unit used when `abbr=off` is in effect.
`name2`	Plural name of the unit; not required if it is the same as `name1` plus "s".
`name1_us`	Singular name when `sp=us` is in effect; not required if the same as `name1`.
`name2_us`	Plural name when `sp=us` is in effect; not required if the same as `name1_us` plus "s".
`utype`	Unit type; must be exactly the same as the `utype` of any other unit used in a conversion.
`scale`	Number of base units in the unit being defined.
`default`	Unit code of the default output used when no output unit is specified in a conversion.
`target`	Unit code of an existing unit (the unit being defined "redirects" to the existing unit).
`prefixes`	Use 1 if an SI prefix is accepted; 2 is used for `m`^{2}, and 3 is used for `m`^{3}.
`link`	Article title used when `lk=on` is in effect; not required if it is the same as `name1`.

Vorlage:Anchor

```
-- Extra conversion data used by Module:Convert.
--
-- [[Module:Convert/data]] defines all units and is transcluded in all pages
-- where [[Module:Convert]] is used. Testing new units by editing that module
-- would invalidate the cache for all affected pages.
--
-- For quick changes and experiments with new units, this module can be edited.
-- Since this module is transcluded in only a small number of pages, changes
-- should cause little server overhead and should propagate quickly.
--
-- If a unit is defined in the data module, any definition here is ignored,
-- so defining the same unit in both modules is not an error.
-- A unit defined here can refer to units that are also defined here, and
-- can refer to units defined in the data module.
--
-- Periodically, those extra units that are wanted permanently can be removed
-- from here after being added to [[Module:Convert/data]].

local extra_units = {
}

return { extra_units = extra_units }
```