## Martin’s HW have been sent in 24/3/2017

# E99 Product Type

Subclass of:     E55 Type

Superclass of:

Scope note:    This class comprises types that characterize instances of E22 Man-Made Object that are the result of production activities that

* use the same plans and
* are intended to result in one or more series of functionally and aesthetically identical and interchangeable items.

A notable case is component parts which are typically replaceable pieces of a larger assembly. Instances of this class would, for example, capture the characteristic type of the series of objects that share a manufacturer’s model number.

Frequently this uniform production is achieved by creating individual tools, such as moulds or printing plates, that are themselves carriers of the design of the product type. Modern tools may use the flexibility of electronically controlled devices to achieve such functionally and aesthetically identical products without themselves being specific to the created product. The product type itself, i.e., the potentially unlimited series of aesthetically equivalent items, may be the result of an artistic design process, in contrast to the design of an individual object.

In extreme cases, only one instance of a product type may have been produced, such as in a "print on demand" process. However, this case should not be confused with industrial prototypes, such as car prototypes, which are produced prior to the production line being set up, or to test the production line itself.

 Examples: Volkswagen Type 11 (Beetle)

Dragendorff 54 samian vessel

1937 Edward VIII brass threepenny bit

Qin Crossbow trigger un-notched Part B (Bg2u)

Nokia Cityman 1320 (The first Nokia mobile phone)

Properties:

P187 has production plan (is production plan for)::E29 Design or Procedure

P188 requires production tool (is production tool for): E19 Physical Object

### P187 has production plan (is production plan for)

Domain: E99 Product Type

Range: E29 Design or Procedure

Quantification: one to many (1,n:1,1)

Scope note: This property associates an instance of E99 Product Type with the instance of E29 Design or Procedure that determines completely the production of an instance of E18 Physical Thing so that it becomes an instance of the associated instance of E99 Product Type when orderly carried out. Note that the respective instance of E29 Design or Procedure may not be fixed in a written form, and may require the use of tools or models unique to the product type. The same Product Type may be associated with several variant plans.

Examples:

* the production plans (E29) for Volkswagen Type 11 (Beetle) (E99)

### P188 requires production tool (is production tool for)

Domain: E99 Product Type

Range: E19 Physical Object

Quantification: one to many (1,n:1,1)

Scope note: This property associates an instance of E99 Product Type with the instance of E19 Physical Object that is needed for the production of an instance of E18 Physical Thing so that it becomes an instance of the associated instance of E99 Product Type when orderly carried out, and has distinct features enabling the creation of characteristic features of this product, such as models or moulds.

Examples:

* the luggage compartment lid mould (E19) for the Volkswagen Type 11 (Beetle) (E99)

(https://upload.wikimedia.org/wikipedia/commons/thumb/b/b5/Volkswagen\_Type\_1\_(Auto\_classique\_St.\_Lazare\_%2710).jpg/220px-Volkswagen\_Type\_1\_(Auto\_classique\_St.\_Lazare\_%2710).jpg)