

Documentation Pandora ERP system.

1. Stock and inventory control.

Description operation article table.

```
bisystem=# \d artikelen
```

Column	Type	Collation	Nullable	Default
artikelID	integer		not null	
artikelomschrijving	character varying(50)		not null	
artikelprijs	double precision			0.00
art_voorraad	double precision			0.00
art_eenheid	character varying(6)			
art_min_voorraad	double precision			0.00
art_bestelgrootte	double precision			0.00
locatie_magazijn	character varying(8)			
artikelgroep	character varying(40)			''::character varying
barcode	integer			0
thumb_artikel	character varying(70)			../images/thumbs/''::character varying
foto_artikel	character varying(70)			../images/''::character varying
categorie	integer			
reserveringsaldo	double precision			0
afmeting	character varying(30)			''::character varying
bestelstatus	boolean			true
mutatiedatum	character varying(10)			''::character varying
bestelsaldo	double precision			0
jaarverbruik_1	double precision			0
jaarverbruik_2	double precision			0

Indexes:

```
"artikelen_pkey" PRIMARY KEY, btree ("artikelID")
```

Check constraints:

```
"art_voorraad" CHECK (art_voorraad >= 0::double precision)
```

Referenced by:

```
TABLE "webbestellingen" CONSTRAINT "artikelID_fkey" FOREIGN KEY ("artikelID") REFERENCES artikelen("artikelID")
TABLE "artikelmutaties" CONSTRAINT "artikel_artikelID_fkey" FOREIGN KEY ("artikelID") REFERENCES artikelen("artikelID")
TABLE "materiaallijsten" CONSTRAINT "artikelen.artikelID_fkey" FOREIGN KEY ("artikelID") REFERENCES artikelen("artikelID")
TABLE "orders_verkoop_artikelen" CONSTRAINT "artikelen_artikelID_fkey" FOREIGN KEY ("artikelID") REFERENCES artikelen("artikelID")

TABLE "orders_inkoop_artikelen" CONSTRAINT "artikelen_artikelID_fkey" FOREIGN KEY ("artikelID") REFERENCES artikelen("artikelID")
TABLE "cluster_artikelen" CONSTRAINT "artikelen_artikelID_fkey" FOREIGN KEY ("artikelID") REFERENCES artikelen("artikelID")
TABLE "icluster_artikelen" CONSTRAINT "artikelen_artikelID_fkey" FOREIGN KEY ("artikelID") REFERENCES artikelen("artikelID")
TABLE "orders_intern" CONSTRAINT "artikelen_artikelID_fkey" FOREIGN KEY ("artikelID") REFERENCES artikelen("artikelID")
```

Above a screenshot of the table with its connections with other tables.

We won't go deeper in the normal fields, for I assume this is common knowledge.

The fields and its purpose we explain are:

art_min_voorraad

art_bestelgrootte

categorie

reserveringsaldo

bestelsaldo

bestelstatus

mutatiedatum

jaarverbruik_1

jaarverbruik_2

This fields are used for inventory control.

art_min_voorraad:

When this article is driven by minimum stock and not reservation, which is determined by the field categorie, the article must be ordered when stock becomes lower then this value.

The minimum stock is calculated by annual consumption and the category (field categorie), by which the number of delivery times per year is determined.

art_bestelgrootte:

This value is determined by the Camp formula, that recognize the order size based on annual consumption. See the explanation of annual consumption by

jaarverbruik_1 and jaarverbruik_2. Camp formula: $Q = \sqrt{2DF/HP}$

Stands for:

Q = Quantity

- D = Demand / year
- F = Fixed Costs (order costs conversion costs)
- H = Stock costs as a percentage of the price
- P = Price of the product

The orders are made with the program voorraadbeheersing and the table materiaallijsten,

here is the Camp formula used for ordering by reservations.

By starting Pandora.py the first time after Januari 1st, the minimum stock and order size is determined for all articles and stored in the database. Furthermore see other purposes of Pandora.py at reserveringsaldo and bestelsaldo.

reserveringsaldo and bestelsaldo

Products are ordered direct online or through article lists of clustercalculaties or iclustercalculaties.

If an order is ordered online, the products are added in the column reservations, and reduced when the product is picked.

If an clustercalculatie or iclustercalculatie is continued as a werknummer or a werkorder the articles

from the article list are added in the column reservations.

The total sum of the articles is added on werken table field begr_materialen.

OR

The value of the delivered articles is added on table orders_intern field werk_materialen.

Also the products and their values are added in a table materiaallijsten with the amount of reservation, reservation data, bestelstatus and bestelsaldo. With this table the orders are made. When the order is made the bestelsaldo is added and the bestelstatus is blocked until delivery and approval is done.

When the products are delivered and approved the bestelsaldo is reduced and the bestelstatus is unblocked. Also the stock is added.

When the products are provided the column reservations is reduced. The stock (voorraad) is also reduced.

The value of the delivered articles is added on table werken field kosten_materialen

OR

The value of the delivered articles is added on table orders_intern field werk_materialen.

The edited articles with values are added on a table artikelmutaties for accountancy and paying taxes.

All stock values are added or deducted in the column jaarverbruik_1 or jaarverbruik_2

Even years jaarverbruik_2 odd years jaarverbruik_1, so always a year-consumption is available.

After a year has passed fields of a year ago are set to 0, so that the countings start from scratch.

In Pandora.py is this organized. Also in this module the monthly values of the stock are counted,

and is determined (with the mutatedatum – last mutation) or the mutatedatum is longer then a year ago. Then it is called dead stock (incourant in Dutch).

With this items graphs are produced.

The data is stored in the table magazijnvoorraad (warehouse stock).