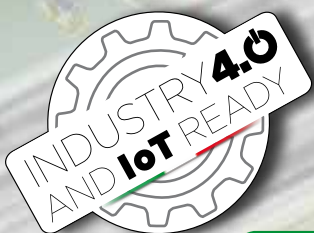


ENGINEERING CEM[®]

Comerio Ercole provides the coordination and the integration of different specific levels of plant engineering (electricity, hydraulic, pneumatic)

**PLANT ENGINEERING
FROM BASIC
TO MASTER PLUS**



COMERIO ERCOLE

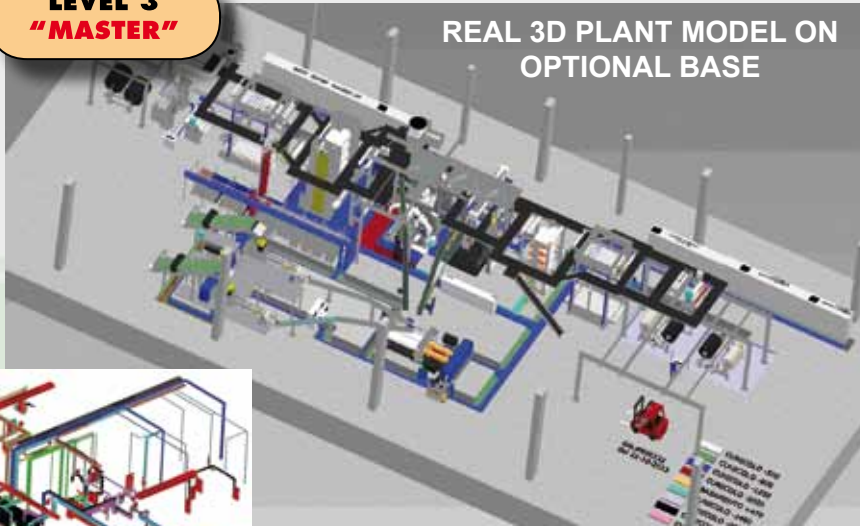
MECHANICAL CONSTRUCTIONS SINCE 1885 - ITALY



PACKAGE:

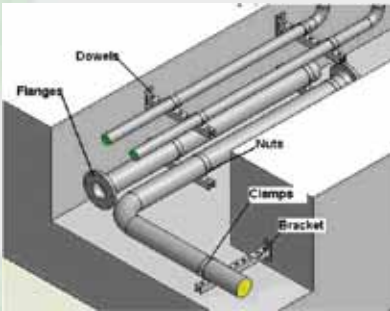
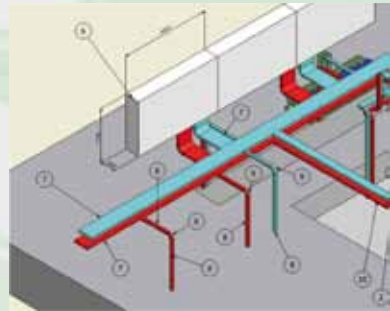
**LEVEL 3
"MASTER"**

**REAL 3D PLANT MODEL ON
OPTIONAL BASE**



Element Description	Reference	Dimension	Remark	Qty
C1 support profile semicircle	A235.5	41x41x2,5mm		20
Screw Rod (padding)	31721.3	M12	90mm total (4m x post)	30
Flat washer	M612		Acotta x barra M12	400
Hex nut	H4612		Acotta x barra M12	400
Start Connector	E412	M12	Acotta x barra M12	30
Plate	PL14		Acotta x barra M12	400
Bracket length 120mm	C11012-3	120x120mm		50
Bracket length 200mm	C11021-3	200x120mm		30
Bracket length 300mm	C11031-3	300x120mm		20
Bracket length 400mm	C11041-3	400x120mm		15
Base plate	Z22.732	100x140mm		40
Beam clamp G	Z11.632			20
Beam clamp G	Z11.607			20
Plate 4 holes	Z11.614			80
Plate bracket 90°	Z24.230			150
Plate bracket 45°	Z24.238			40
Spring 40°	Z26.203			100
Spring Nuts M12	U4612	M12		600
Hex. headed screw				100
Preassembled F Bolt				100
Dowels 10-60	M8			200
Dowels 10-80	M10			100
Dowels 10-90	M12			200

Item	Description	Quantity	Unit	Material	Notes
1
2
3
4
5
6
7
8
9
10



9

Item	Description	Quantity	Unit	Material	Notes
1
2
3
4
5
6
7
8
9
10

8

All what foreseen in Level 2 BASIC +

- 8 **3D PLANT ENGINEERING for Electrics / Fluidics** – study and design of runways: conducts-cables-pipelines (related to components of direct supply) - real 3D model on optional base
- 9 List of line engineering materials (pipes, cables, etc) for procurement
- 10 Optimization of arrival point of utilities (at customer charge)

A specific handbook or self explaining drawings are included in the **MASTER** package, the handbook states the interpretation rules of all drawings, lists, tables and diagrams, referred to the electric plant engineering. The handbook is ordered according to the logic sequence utilized for the engineering activity.

All drawings are carried out with 2D AUTOCAD® and/or 3D INVENTOR®.

Information – drawings and list supplied:

- Interpretation modalities of terminal board diagrams
- Bi-dimensional general assembly of electric components of single machines
- Bi-dimensional general assembly of terminal boards for the whole plant.
- Print form for the different lists
- List of interfaces with cable length calculation
- Cable list for type
- Cable list for each single terminal board on the machine
- Cable list for each single terminal board in equipment
- Dimensioning of cable trays
- Three-dimensional general assembly of cable tray run
- Procedure for the choice of interconnecting cables (international codes)
- List of motors and components and List Cable Trays and accessories

PACKAGE:

**LEVEL 4
"MASTER PLUS"**

All what foreseen in Level 3 MASTER +

- 11. Extension of the **3D LINE ENGINEERING** for machines not of Comerio Ercole direct supply
- 12. **3D FACTORY ENGINEERING** – utilities distribution starting from single points supplied by the customer



COMERC ENGINEERING



