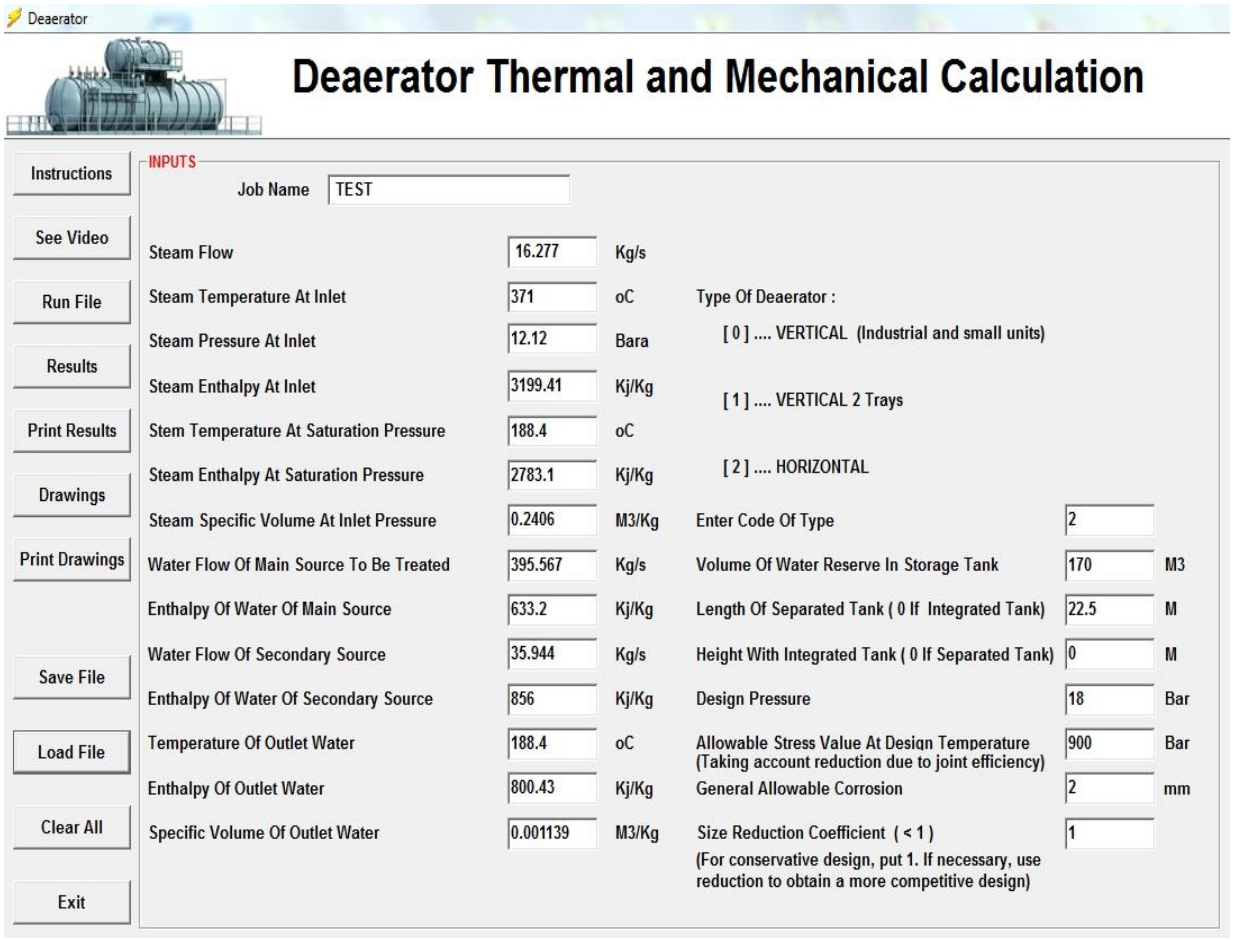
Deaerator

For thermal and mechanical design and sizing of deaerators. This program is valid for small industrial units, medium vertical units or larger horizontal used in industries and thermal or nuclear power plants.

PROGRAM WINDOWS



DATA ENTRY WINDOW

HORIZONTAL DEAERATOR - Data

Job Name : **TEST**

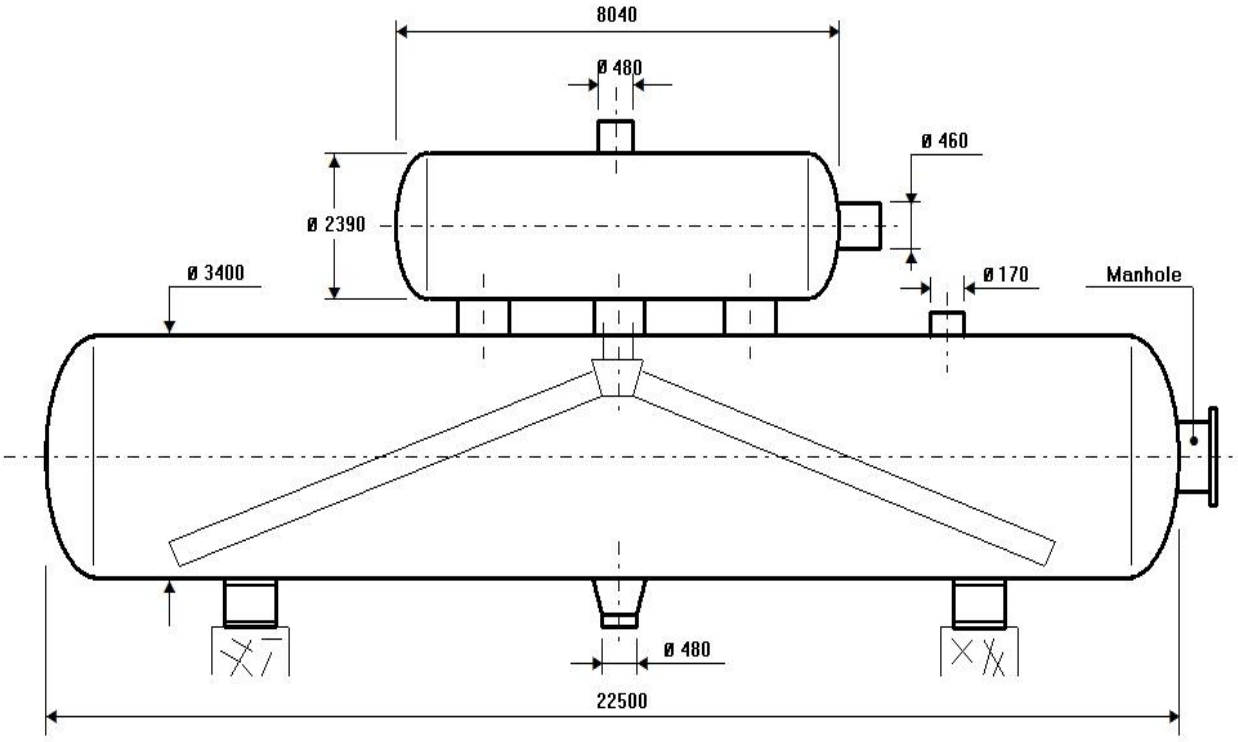
■ Data Input

Steam Flow	26,741	Kg/s
Steam Temperature At Inlet	371	oC
Steam Enthalpy At Inlet	3199,41	kj/kg
Steam Pressure At Inlet	12,12	bara
Specific Volume Of Steam Inlet	0,2406	m3/Kg
Steam Enthalpy At Conden. Pressure	2783,1	Kj/Kg
Steam Temp. At Condensation Pressure	188,4	oC
Flow From LPs Heaters To Treat	395,567	Kg/s
Enthalpy From LPs Heaters	633,2	kj/kg
Flow From HPs Heaters	35,944	Kg/s
Enthalpy From HPs Heaters	856	kj/kg
Drain Outlet Temperature	188,4	oC
Drain Outlet Enthalpy	800,43	kj/kg
Specific Volume Of Drain Outlet	0,001139	m3/Kg
Type Of Deaerator	HORIZONTAL	
Design Pressure	18	bar
Allowable Stress Value At Design Temp.	900	bar
General Allowable Corrosion	2	mm

■ Results

Diameter Of Deaerator	2390	mm
Thickness Of Deaerator	27	mm
Length Of Deaerator	8040	mm
Diameter Of Storage Tank	3400	mm
Thickness Of Storage Tank	37	mm
Length Of Storage Tank	22500	mm
Reserve Volume Of Storage Tank	170	m3
Total Volume Of Storage Tank	191,1	m3
Steam Inlet Diameter	460	mm
Water Flow Inlet Diameter From LPs	480	mm
Water Flow Inlet Diameter From HPs	170	mm
Water Flow Outlet Diameter	480	mm
Steam Deaeration Units Number	6	
Weight Of Deaerator	17,92	Tn
Weight Of Internal S.S. At Deaerator	400	Kg
Weight Of Storage Tank	76	Tn
Empty Total Weight	93,92	Tn
Weight In Operation	268	Tn
Full Of Water Weight	337	Tn
Number Of Spray Water Of 4 in. Diameter	16	
Number And Diameter Of Air Venting	16 x4	mm

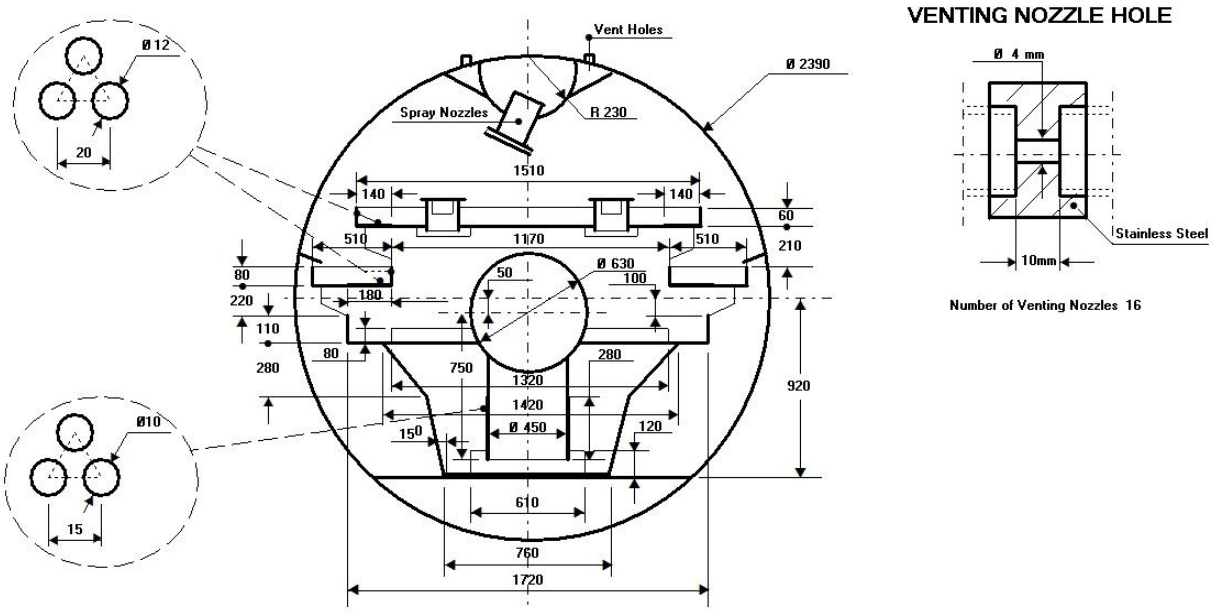
RESULTS SHEET



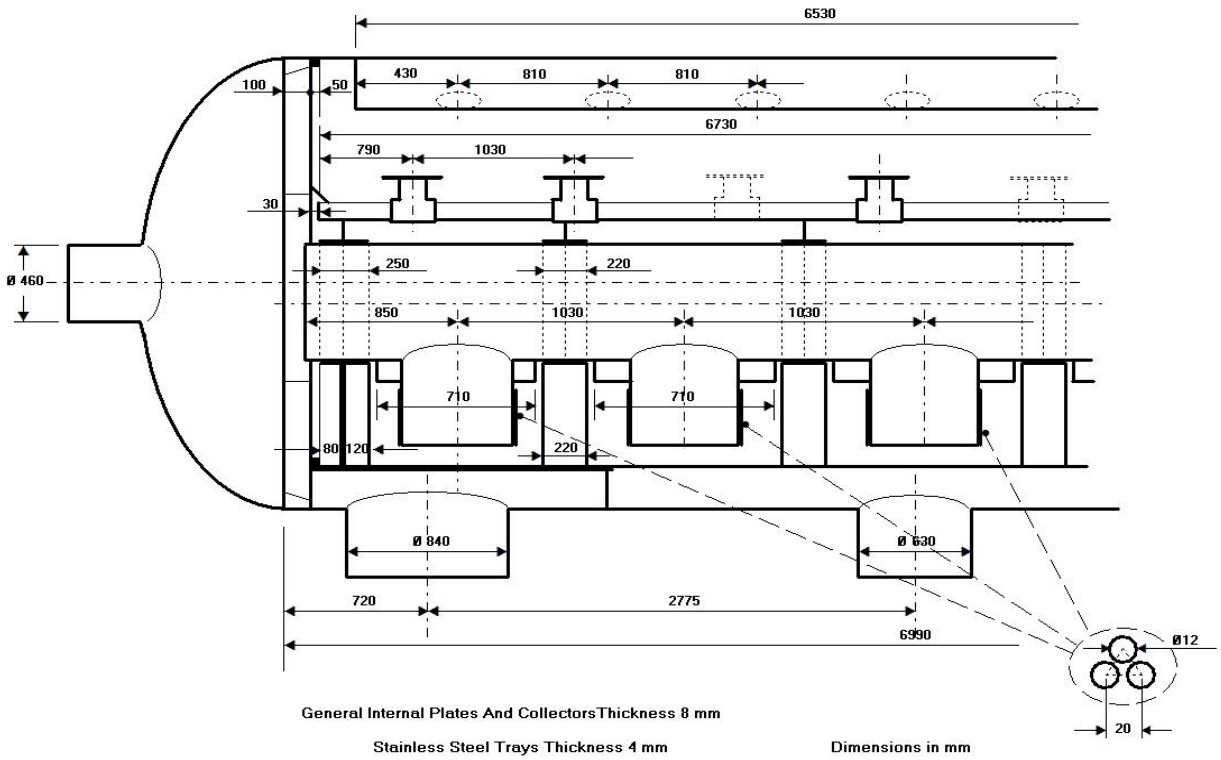
HORIZONTAL TYPE DEAERATOR

Dimensions in mm

DIMENSIONAL DRAWING

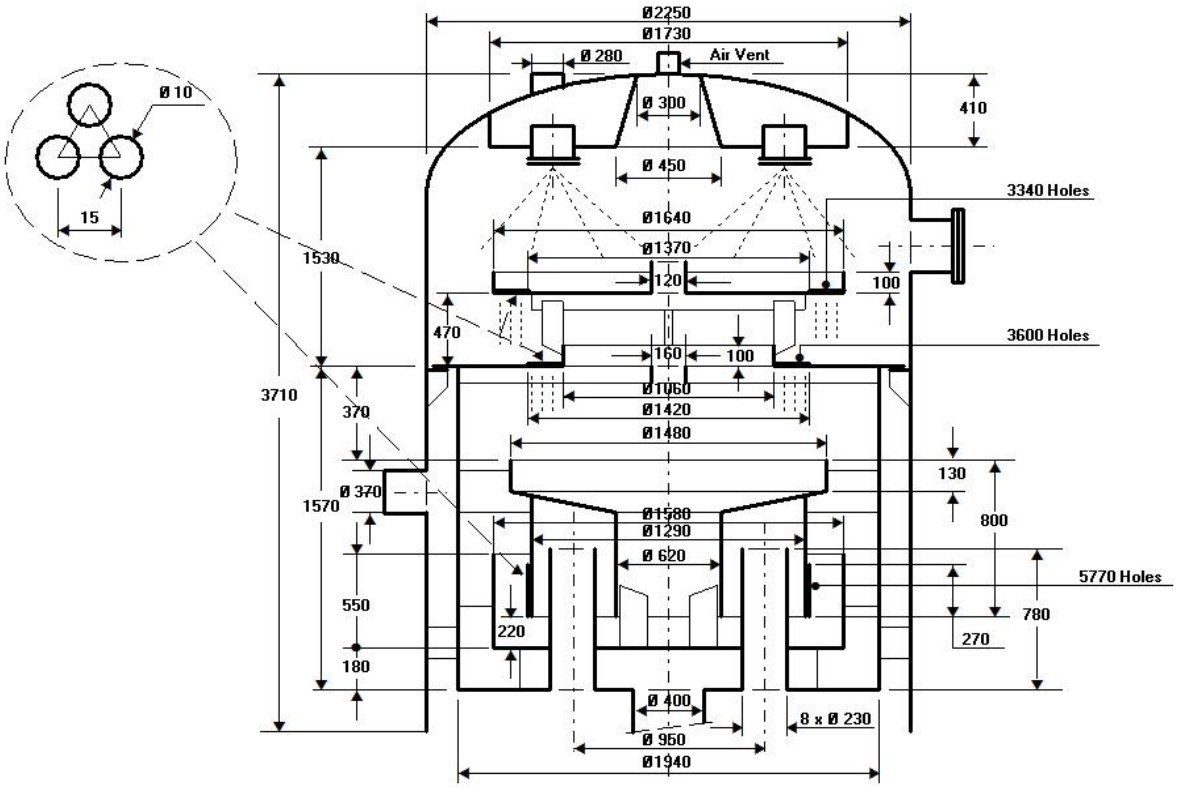


SECTIONAL DRAWING



SECTIONAL DRAWING

VERTICAL TWO TRAYS TYPE

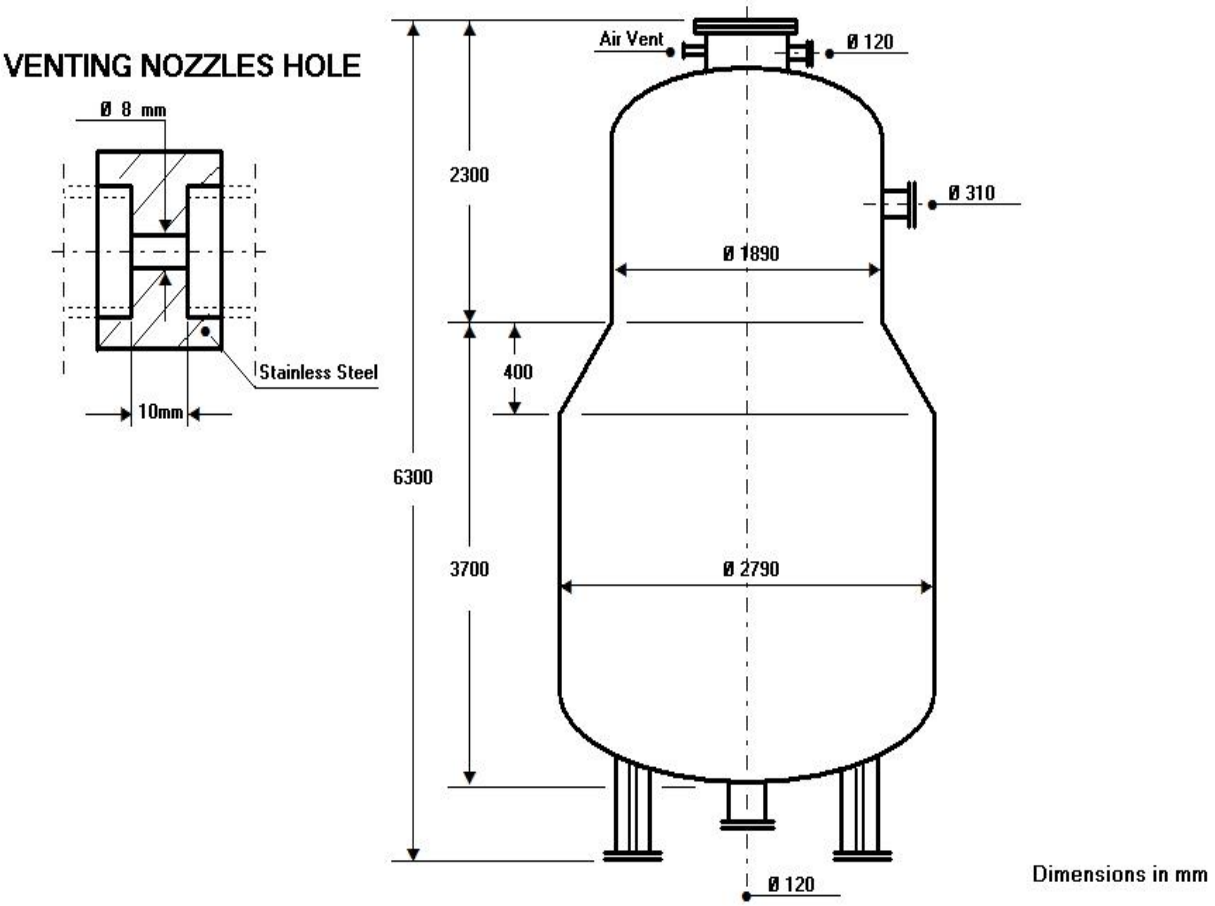


General Internal Plates Thickness 8

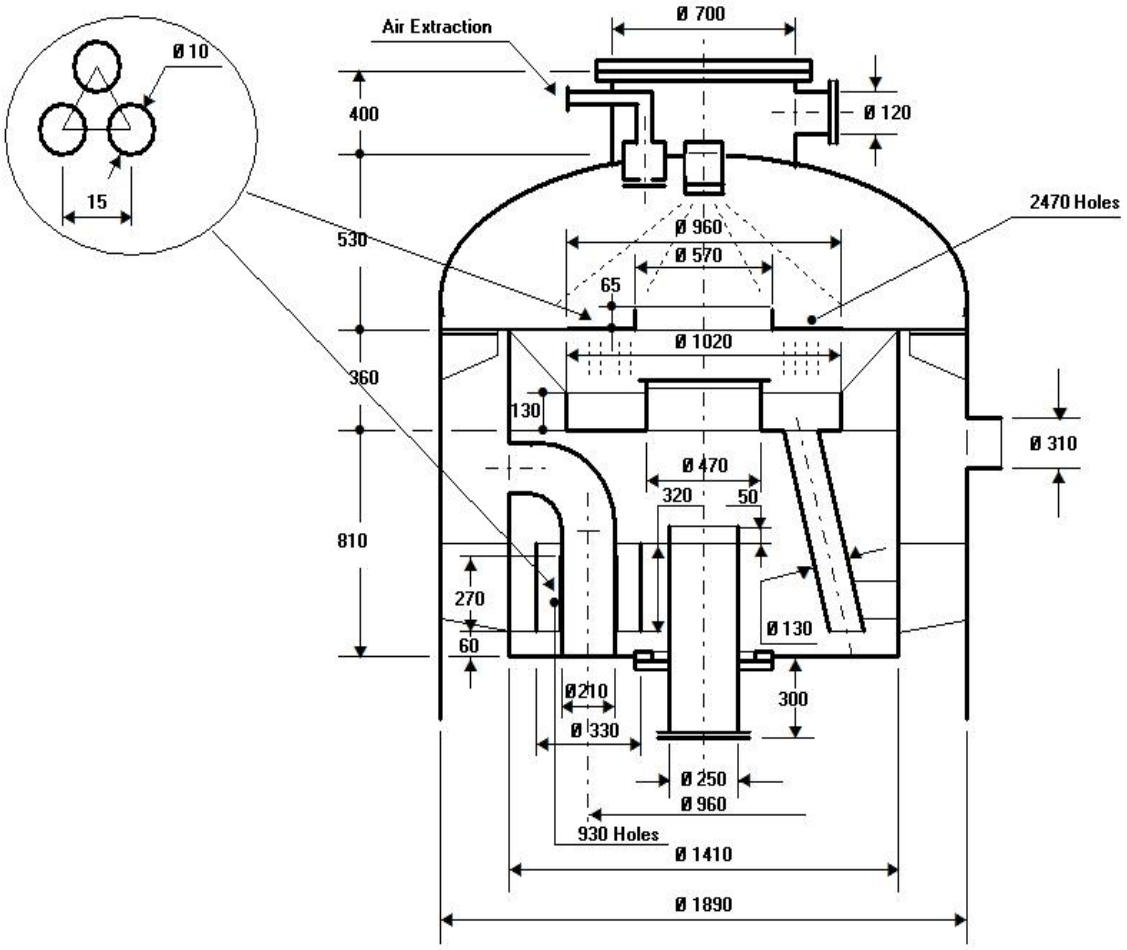
Stainless Steel Trays Thickness 4 mm

Dimensions in mm

SECTIONAL DRAWING



VERTICAL INDUSTRIAL TYPE DEAERATOR WITH INTEGRATED TANK



General Internal Plates Thickness 6

Dimensions in mm

Stainless Steel Trays Thickness 4 mm

SECTIONAL DRAWING