



Dottorato di Ricerca in Meccanica Applicata

XX ciclo

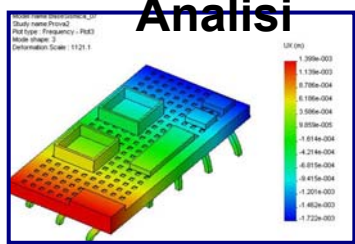
Attività I anno - a.a. 2004/2005

**Daniela Amadori**

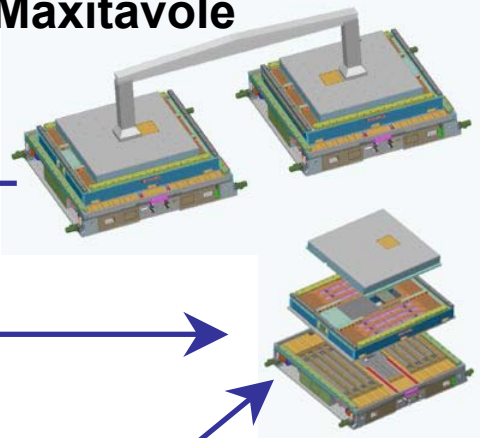
TITOLO:

**Disegno di sistemi a supportazione  
idrostatica ed azionamento oleoidraulico in  
presenza di forti sollecitazioni vibrazionali**

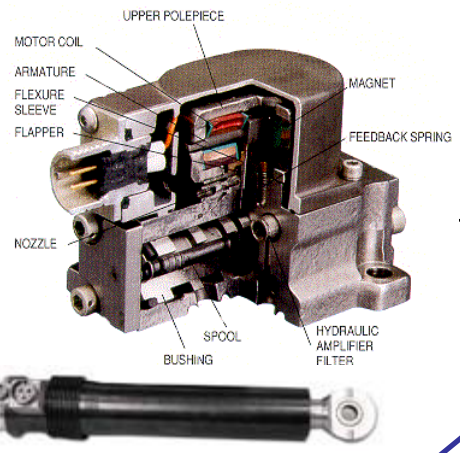
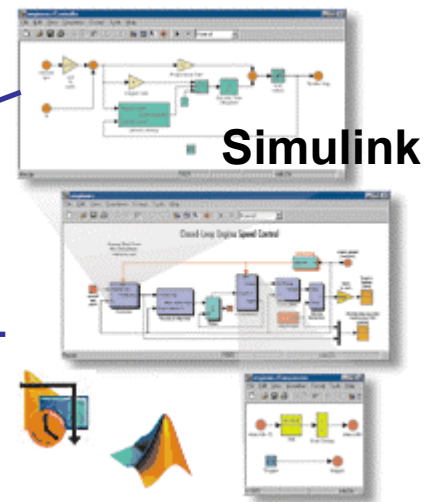
# Analisi



# Maxitavole



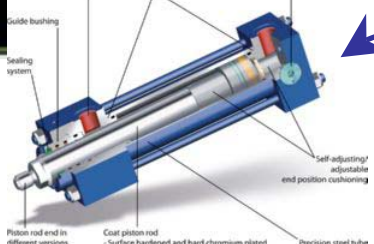
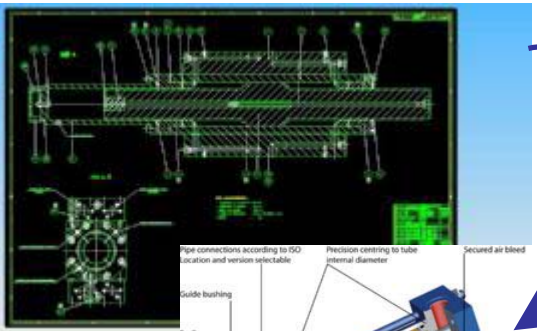
# Formazione



# MOOG



# CAD





# MOOG



Moog Italiana azienda leader nel settore dei servosistemi per l'automazione industriale  
sviluppa - produce – commercializza  
motori e azionamenti

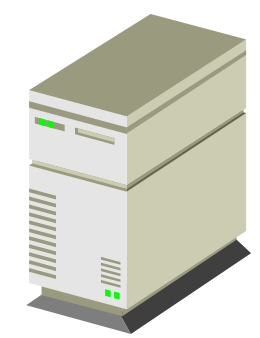
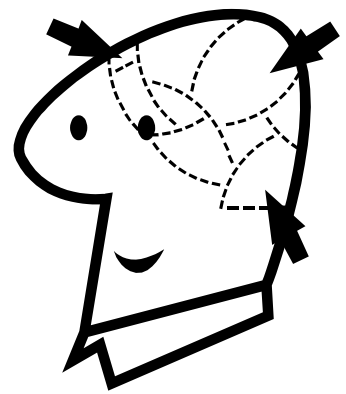
Sviluppo sistemi di controllo  
per l'Automazione Industriale e Applicazioni Speciali

## RUOLO

Meccanica 

Olioidraulica

Controllistica

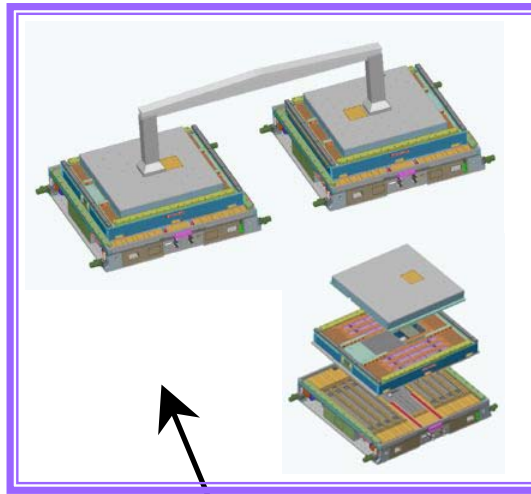


MOOG



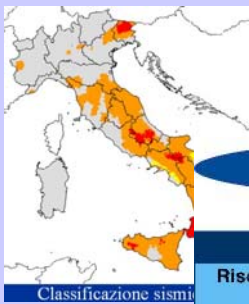
COLGAR

MOOG

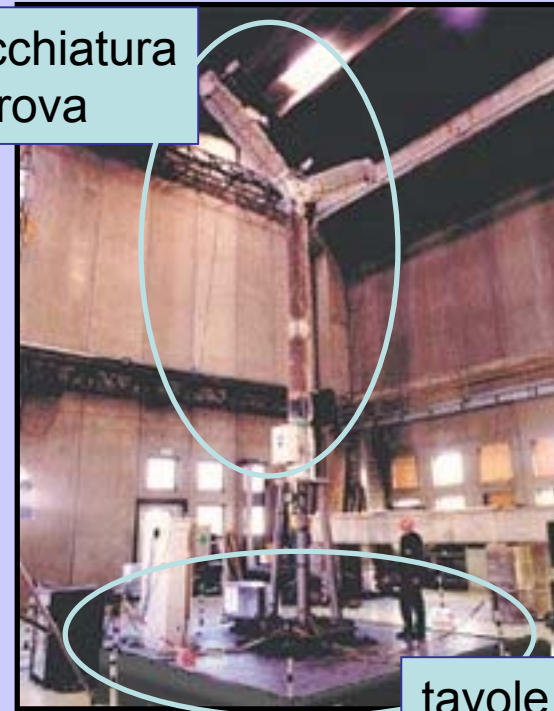


Maxitavole

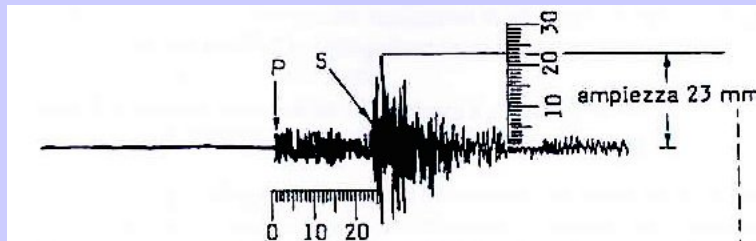




Apparecchiatura  
in prova

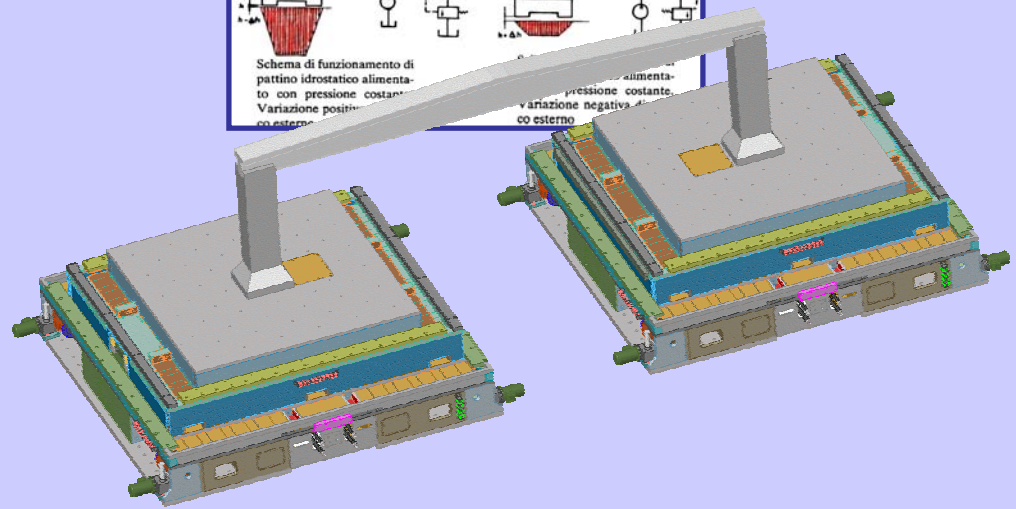
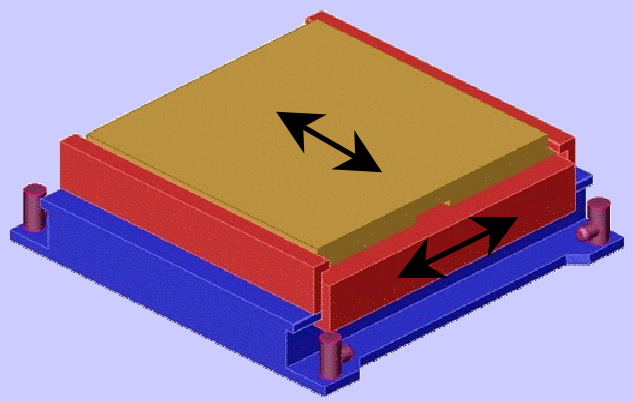
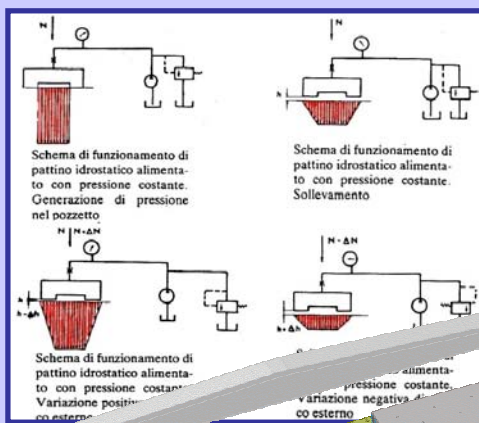
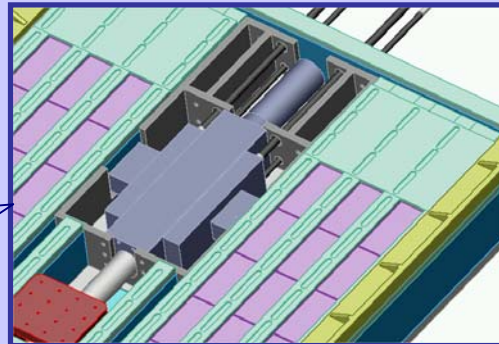
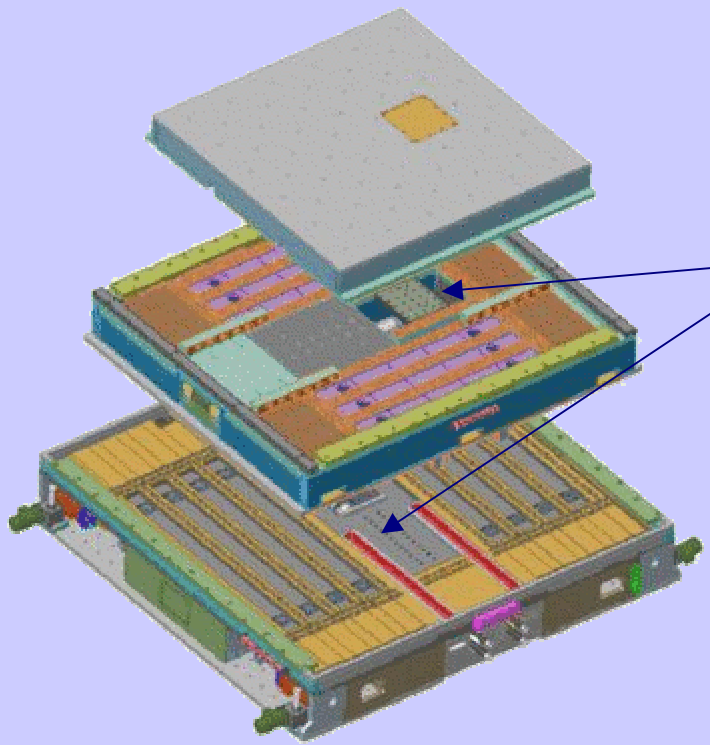


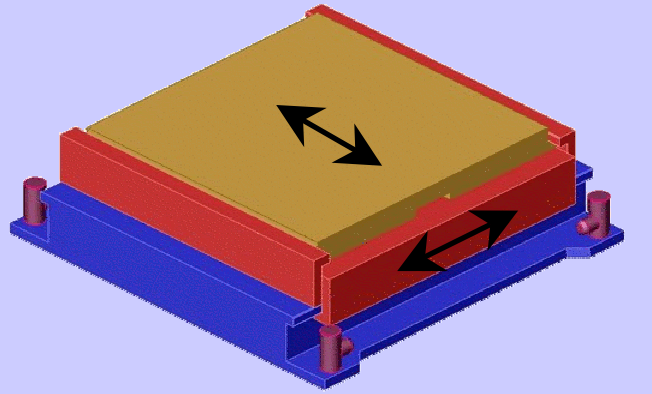
tavole vibranti



## Specifiche

- Superficie utile: 3 x 3 m
- Corsa massima per ciascuna delle due direzioni: +/- 250 mm
- Massimo peso del campione da sottoporre a test: 20 ton
- Velocità massima: 1 m/s
- Sostentamento idrostatico delle tavole
- Accelerazione massima: 1 g
- Massimo momento ribaltante: 125 ton-m
- Massimo momento di imbardata: 50 ton-m

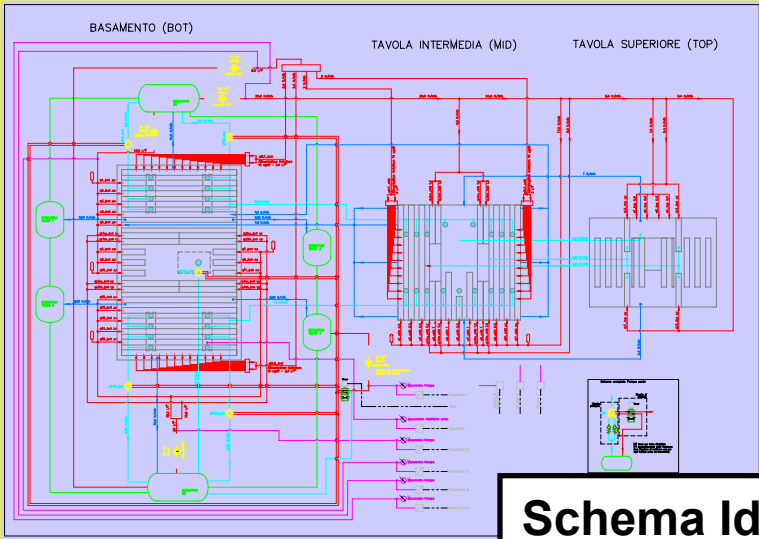
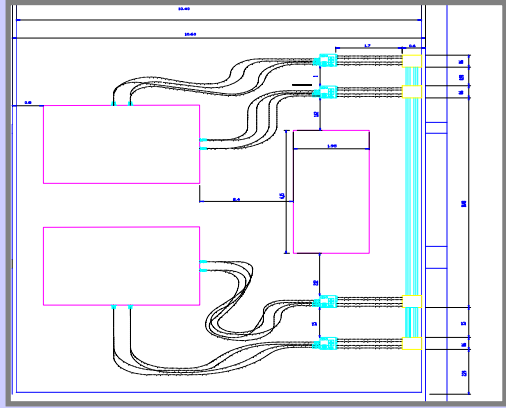




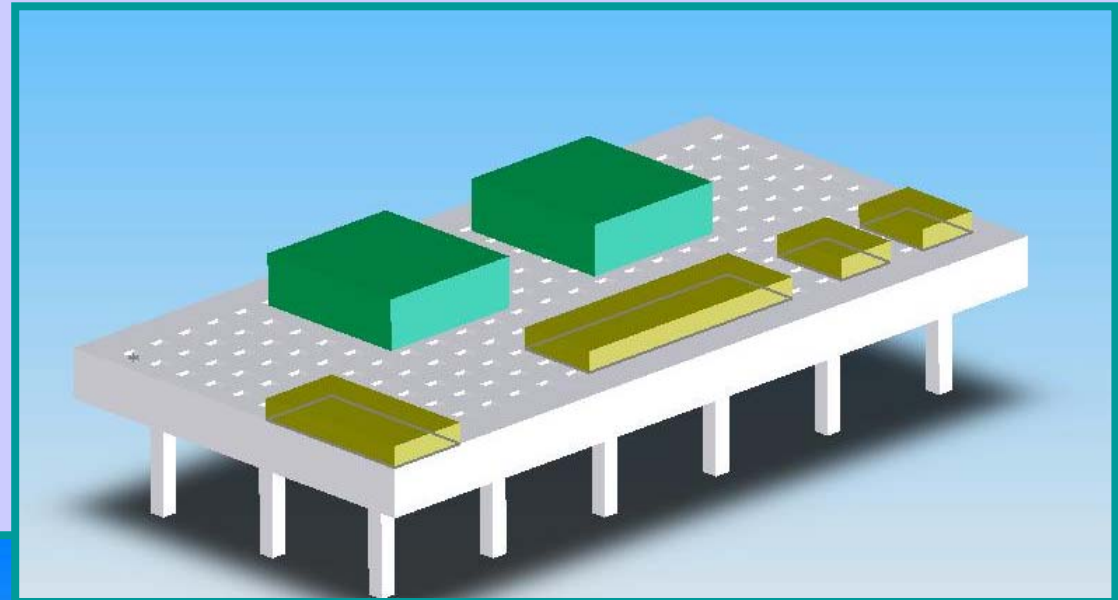
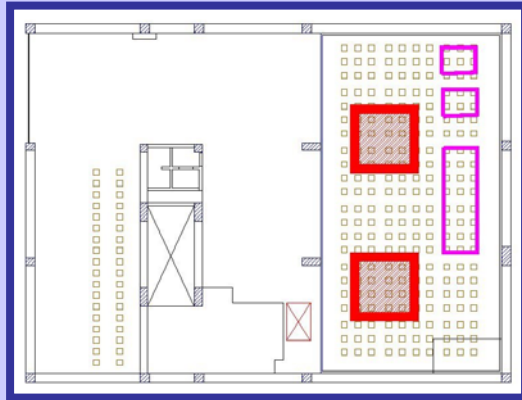
CENTRALINA



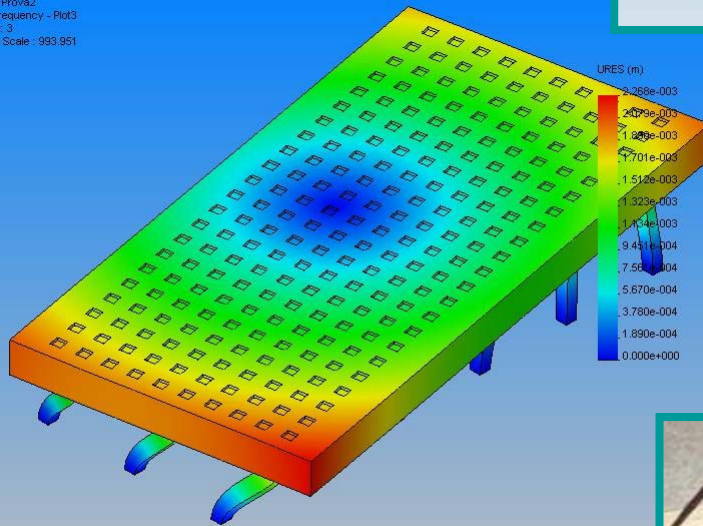
Meccanica  
Idrostatica  
Idraulica  
Controllistica



Schema Idraulico



Model name: BaseSismica\_02  
 Study name: Prova2  
 Plot type: Frequency - Plot3  
 Mode shape: 3  
 Deformation Scale: 933.951



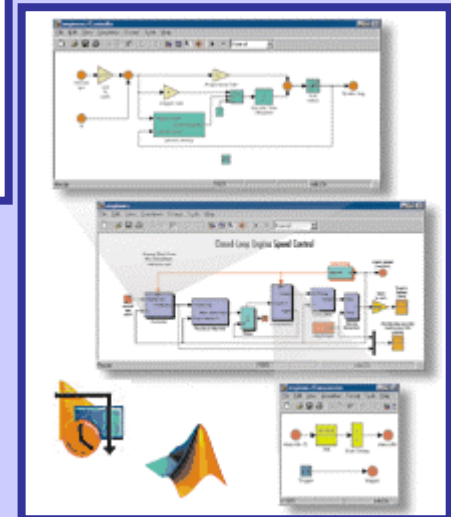
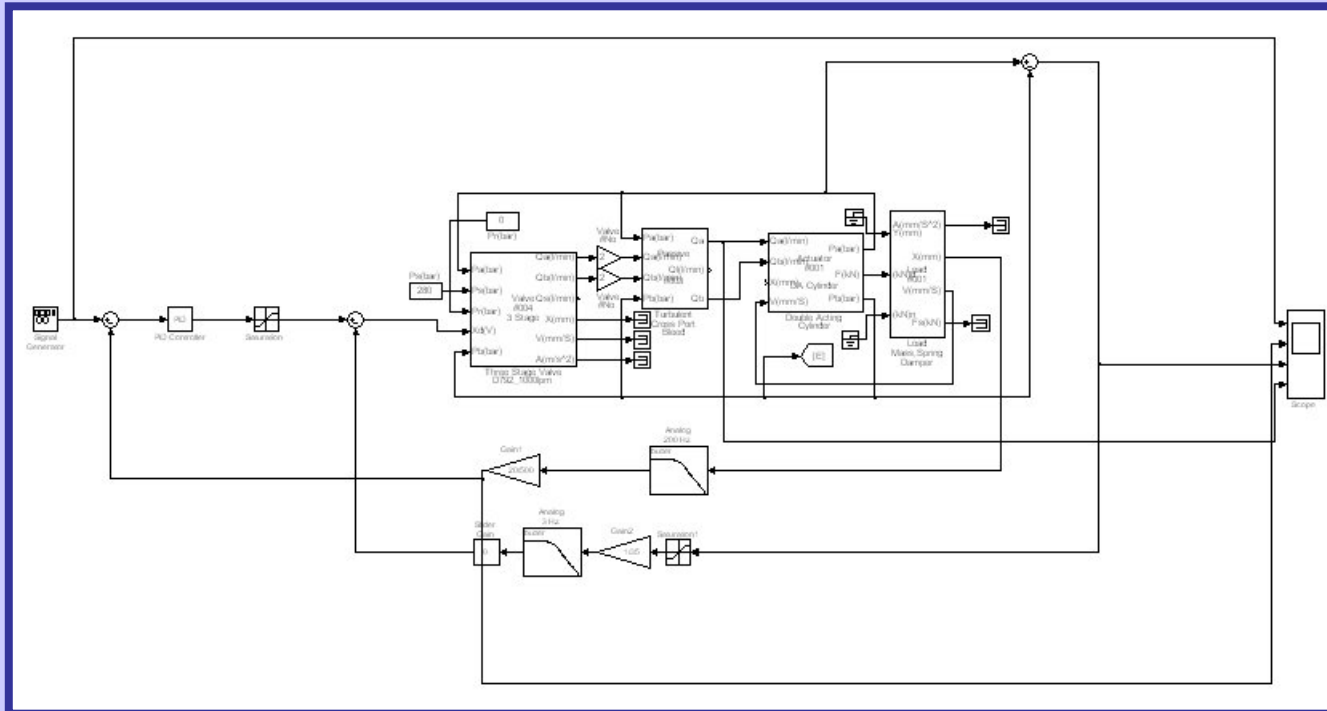
Frequenze di prova: fino a 50 Hz

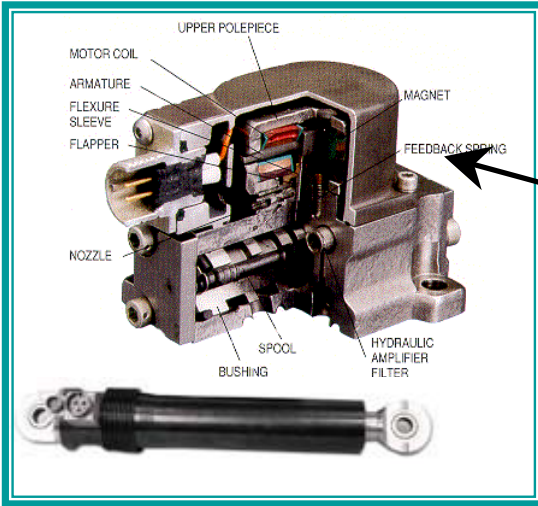
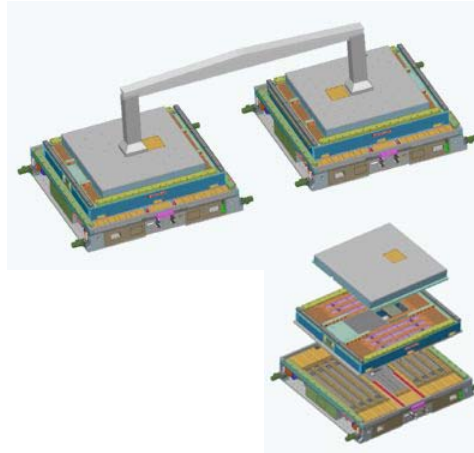
1	5.2566	0.19024
2	5.2597	0.19012
3	5.4033	0.18507









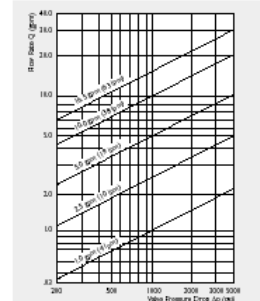


**MOOG**



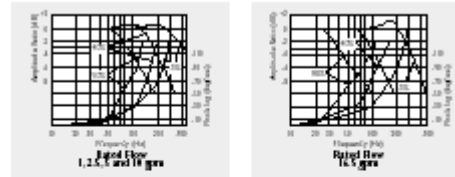
## D765 SERIES GENERAL TECHNICAL DATA

- Operating Pressure**  
ports E, X, A and B  
up to 4,500 psi (315 bar)  
up to 3,000 psi (210 bar)
- Temperature Range**  
Ambient  
-4°F to 140°F (-20°C to 60°C)  
Fluid  
-4°F to 176°F (-20°C to 80°C)  
Viscosity (cP), others on request
- Seal Material**  
Compatible with common hydraulic fluids, other fluids on request.
- Operating Fluid**  
Recommended viscosity  
60 - 450 SUS @ 100°F
- System Filtration** High pressure filter (without bypass, but with drain alarm) mounted in the main flow and, if possible, directly upstream of the valve.
- Class of Cleanliness** The cleanliness of the hydraulic fluid greatly affects the performance (spool positioning, high resolution) and wear (retaking a slip, pressure gain, leakage) of the servovalve.
- Recommended Cleanliness Class**  
For normal operation ISO 4406 < 14/11  
For longer life ISO 4406 < 13/10
- Filter Rating** recommended  
For normal operation  $\beta_{10} \geq 75$  (10  $\mu$ m absolute)  
For longer life  $\beta_{10} \geq 75$  (5  $\mu$ m absolute)
- Installation Operations**  
Any position, fixed or movable.
- Vibration**  
30 g<sub>r</sub> 1 sec
- Weight**  
2.43 lbs (1.1 kg)
- Degree of Protection**  
EN60529: class IP65, with mating connector mounted.
- Shipping Plate**  
Delivered with an oil sealed shipping plate.

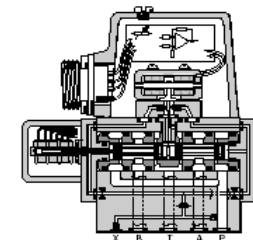
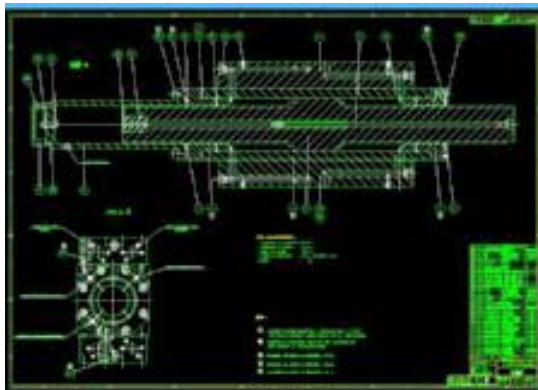
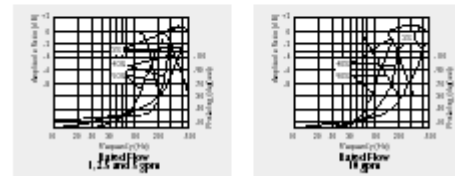


**Valve Flow Diagram**  
Valve flow for maximum valve opening (100% command signal) as a function of the valve pressure drop.

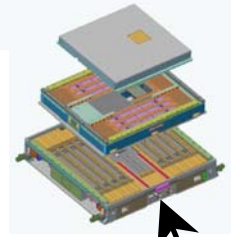
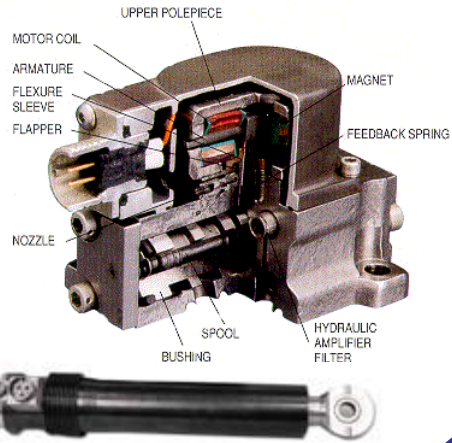
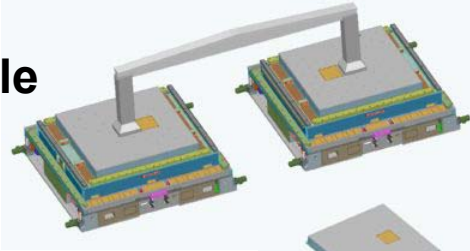
## Standard Valves



## High Response Valves



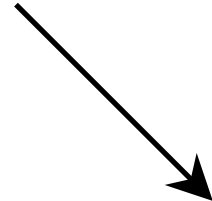
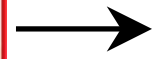
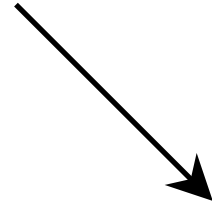
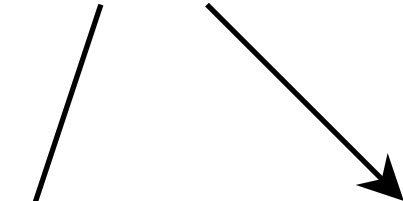
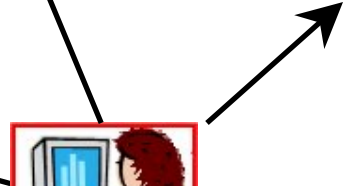
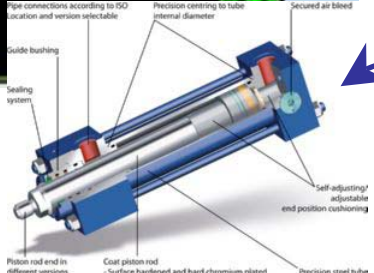
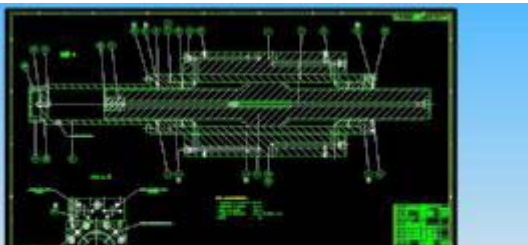
# Maxitavole



**MOOG**



**CAD**



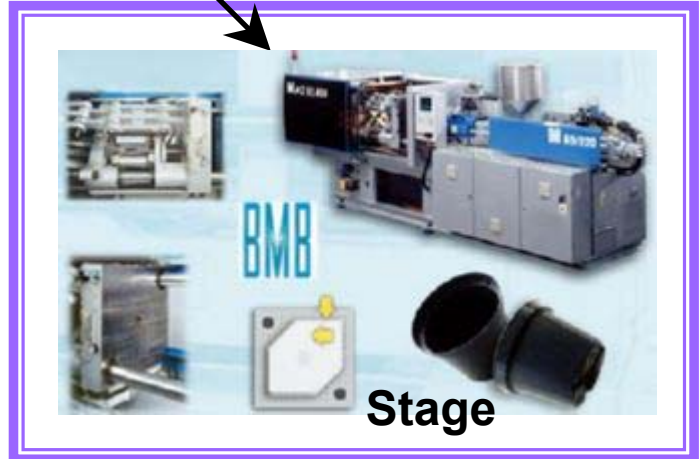
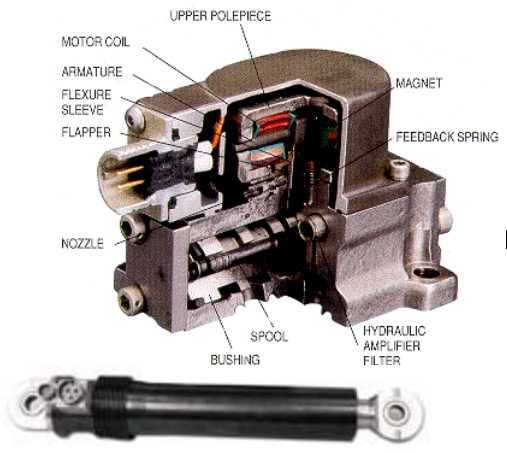
# Stage



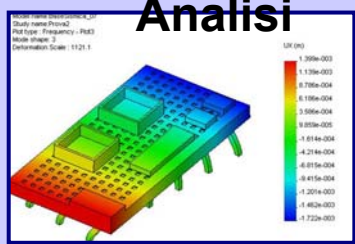
UNITS Q THE WZ SPECIFIED:		PAWT	DATE	
DIMENSIONS LIST BY WEIGHTS FOR FINISHES:	DEAWH			TITLE:
FRAC/DIMAL :	CHICATO			
ASSEMBLY WAZH :	FINC APPS			
FINIT PLAC/DICOMAL :	WIC APPS			
BY REFERENCE TO SPEC FOR MACHINE FOR				
PLATEAU	COMMENTS:			
\$ PRSHEET (Material)				SEE DWG. NO.
USD CM	\$ PRSHEET (Finish)			<b>A</b> Draw1
DO NOT SCALE DRAWING				REV



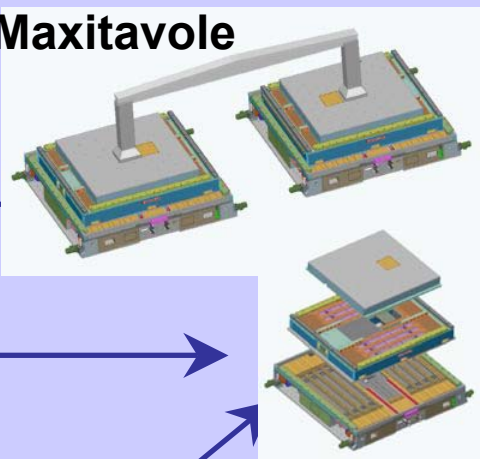
**MOOG**



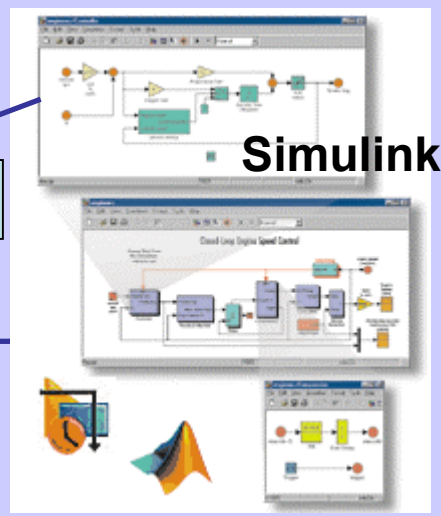
# Analisi



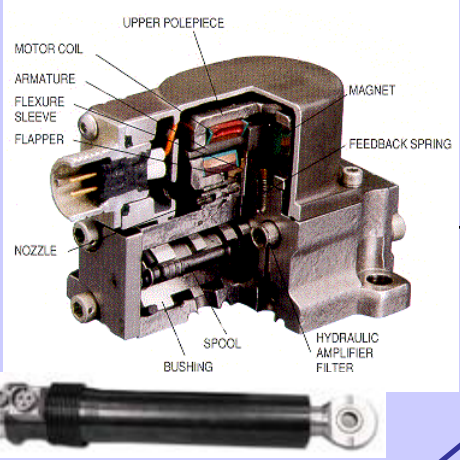
# Maxitavole



# Formazione



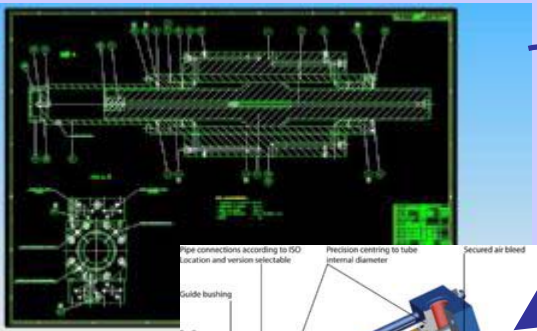
# Simulink



# MOOG



# Università



# CAD



# Stage

