



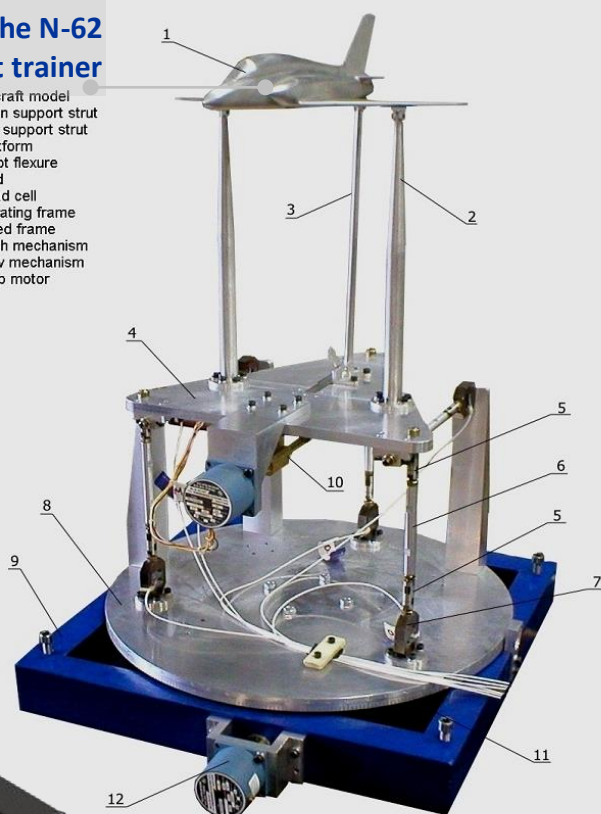
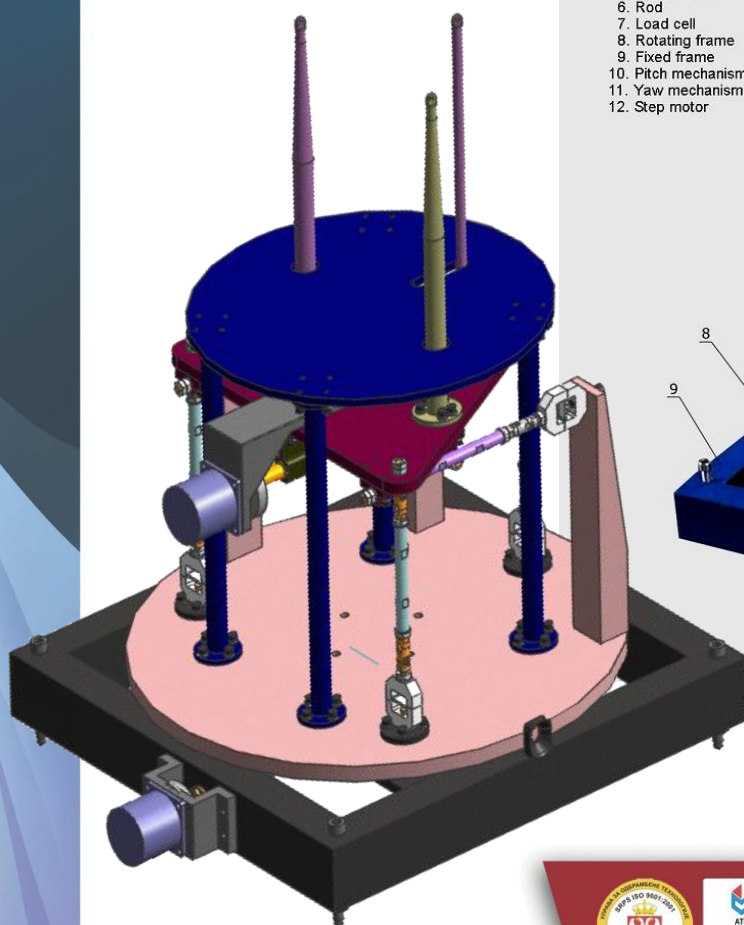
EXTERNAL SIX-COMPONENT WIND TUNNEL BALANCE

VTI has designed and produced an external six-component wind tunnel balance. Its principle of work is to apply measured forces and moments directly to load cells. Main features of the balance are the following:

- Six measured force components are resolved into three force and three moment components
- Components interactions are taken into account during calibration
- Maximum degree of repeatability achieved by design concept
- Convenient definition of axes
- Motorized control of pitch in the range of -20° to $+30^{\circ}$ and yaw in the range of $\pm 180^{\circ}$ (controlled by a PC)
- Wind speed range up to 50 m/s
- Suitable for the 0.4 m - 0.6 m wind tunnel test section
- Suitable for underfloor mounting

The 1:35 scaled wind tunnel model of the N-62 Galeb G-4 (Seagull G-4) combat trainer

1. Aircraft model
2. Main support strut
3. Tail support strut
4. Platform
5. Pivot flexure
6. Rod
7. Load cell
8. Rotating frame
9. Fixed frame
10. Pitch mechanism
11. Yaw mechanism
12. Step motor



LOAD RANGE AND ACCURACY

Lift force:	150 N	0.25% F.S.
Drag force:	100 N	0.25% F.S.
Side force:	75 N	0.25% F.S.
Pitching moment:	7.0 Nm	0.25% F.S.
Rolling moment:	3.5 Nm	0.25% F.S.
Yawing moment:	3.5 Nm	0.25% F.S.

