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### Main overview:

VSM-40 Démant (Diamond) is fully wooden shoulder-wing sailplane, which was at the time of its design intended primarily for performing professional sports flights and after his discard from group of planes used for national representation was placed to aero clubs for standard sport flying. Ailerons, rudder and elevator are wooden design covered with canvas. The cabin cover from transparent organic glass is sliding forward. The sailplane is equipped by retractable main wheel under the fuselage and rigid skid type spur on the tail. In the design of wing following profiles were used: NACA 65 515 (root), 63 615 (centre), 4412 (end of wing).

### History:

The first maiden flight of competitive free class sailplane VSM 40 Démant was performed in Brno Medlánky in November 3 1955. Démant was given to fully operation in 1956 as a free class competitive sailplane. Totally 8 pieces were built with very nice performances (first flight was 500 km long triangle in our territory etc.). One VSM 40 flew in former USSR and achieved world records (pilot Samosadová). Rudolf Měšťan occupied the 3rd place with Démant on Word championship in Lešno in 1958 – it was the best place of Czechoslovak design sailplane. The lattermost VSM 40 Démant can be seen only in aero club Zbraslavice. Mr. Zejda on our VSM-40 OK-6203 flown, in its time record-breaking, 518 km triangle, Vrchlabí-Trenčín-Vrchlabí with speed average of 65 km/h. Currently on this sailplane the maximum speed is limited to 150 km / h.

### Main technical data:

|                      |          |   |
|----------------------|----------|---|
| Wingspan             | 18 m     |   |
| Length               | 7,35 m   |   |
| Height               | 1,7 m    |   |
| Wing area            | 16,15 m  | 2 |
| Max. take-off weight | 440 kg   |   |
| Empty weight         | 280 kg   |   |
| Never exceed speed   | 250 km/h |   |
| Minimum speed        | 68 km/h  |   |
| Glide ratio          | 1:33     |   |
| Descending speed     | 0,68 m/s |   |