»I was really surprised about the agility for a two-seater. The moving masses are, of course, higher compared to a single-seater. But the rudder vote can be described as extremely successful. The harmony in the controls sets standards in its class.« *Gustav Remschnig*

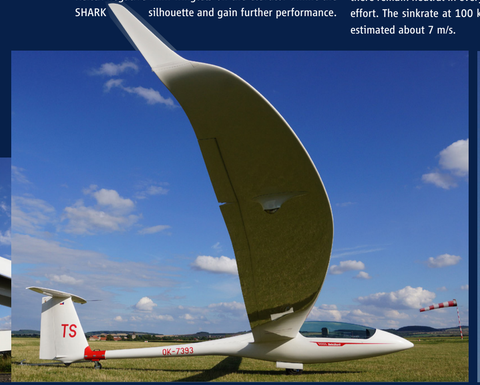
PROUDLY PRODUCED BY HPH TEAM

CALCULATED PERFORMANCE LEADS THE 20M FLAPPED CLASS

Modern aerodynamics are a premise for easy and safe long-range flying. The good performance of the TWIN SHARK is the result of extensive aerodynamic studies and wind-tunnel tests as well as of a longterm test phase in real atmosphere. It also builds on the experience gained in the development of the single-seater SHARK.

- A wing area of 15.3 m² plus an aspect ratio of 26.5 deliver class-leading performance, and advanced manufacturing techniques provide wing loadings as low as 39 kg/m². At 850 kg maximum load, the loading is 55.5 kg/m².
- The optimal curved leading edge and SHARK winglets are maintained through high-end CNC techniques.
- Reflex-negative mini-winglets on the elevator mimic the SHARK silhouette and gain further performance.

The inflight agility is striking. Curve change 45° left to 45° right go in all damper positions even at speeds around 90 km/h (or even below) extremely fast. The coordination of the rudder is simply perfect, with little impact and absolutely easy to maneuver without sliding. Climbing in thermals with flap +2 at 90–95 km/h and 45° bank is easy even with wing loading of about 46kg/m². Even very slow circling (down to 80km/h) the TS doesn't resent – it still climbs neatly. Despite its agility, the TS flies calmly, not nervous at all. The wing is pleasantly stiff and displays thermals very well.
The airbrakes are very effective and pleasant to use: After unlocking, they open about 20% of the track and from there remain neutral in every position without any manual effort. The sinkrate at 100 km/h, brakes fully extended is estimated about 7 m/s.



CLASS-LEADING COCKPIT ENVIRONMENT

Of course, the TWIN SHARK meets the high standards of ergonomic and quality characteristics known from the HPH Shark series. The spacious cockpit easily accomodates tall pilots, and those of generous build.

- A single-piece, side-opening canopy and extended reflex over the wing deliver outstanding visibility for both pilots;
- The key cockpit features which made the SHARK cockpit popular have been maintained in the TWIN SHARK;
- A cockpit ventilation system, in addition to the canopy vent, keeps temperatures comfortable.
- The cockpit noise is incredibly low – even at very high speeds.

This is where you enjoy staying for hours – make it a comfortable experience for you and your second crew member!

THE TRUSTWORTHY SELF-LAUNCHER

We implement the proven Binder-Solo 2625-02 engine system based on the Solo motor which provides 62 hp.

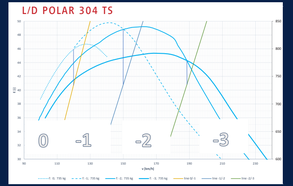
- The 32-liter fuselage tank capacity can be supplemented with wing-tanks for range extension;
- Both motor extension and starter are operated by separate new-age batteries which offer a substantial weight saving capability;
- HPH new digital engine control system with CAN BUS;
- For high reliability industry-standard components are implemented.

Initial climb at 105 km/h, continuous climb at 95 km/h. Engine at about 6400 rpm, climb 2.5–3.5 m/s (21°C outside temp); Very good engine cooling. After climb idle for approx. 1 min. until CHT 50°C, then shut down and drive in propeller.

TECHNICAL DATA	TWIN SHARK MS
GEOMETRY	
Wing span	20 m I 65.6 ft
Wing area	15.3 m² I 165 ft²
Aspect ratio	26.5
Fuselage length	8.95 m I 29.36 ft
Profile	PW 10-145/125 14.5-12.5%
WEIGHTS	
Empty weight (without battery and fuel)	495 kg I 1091 lb
Max. take-off weight	850 kg I 1874 lb
Max. water ballast (solo flight)	240 l I 63.4 US gal
Min. wing loading	39 kg/m² I 8 lb/ft²
Max. wing loading	55.5 kg/m² I 11.4 lb/ft²
GLIDE PERFORMANCE	
Best glide ratio	49
at speed	128 km/h I 69 kt
Min. sink rate (min. weight)	0.5 m/s I 98 ft/min
at speed	92 km/h I 50 kt
LIMITATIONS	
Stall speed (max. weight)	68 km/h I 37 kt
V_{NE}	275 km/h I 148 kt
Fuel tank	32 l

Performance is based on calculation data.

L/D POLAR 304 TS



WWW.HPH.CZ

HpH sailplanes

SELFLAUNCHING TWO-SEATER

TwinShark

The digital engine monitor

THE SHARK FAMILY

304 C WASP	15m FAI Standard Class
304 S SHARK	18m FAI Class
304 JS SHARK	18m FAI Class, with Jet TSS (Turbine Sustainer System)
304 MS SHARK	18m FAI Class, Selflauncher with BSS (Binder Solo System)
304 e SHARK	18m FAI Class, Front electric sustainer (FES system)
304 TS TWIN SHARK	20m FAI Class Two-Seater, Selflauncher with BSS

HpH Ltd.
Čáslavská 234
28401 Kutná Hora (CZ)
tel.+420. 327. 512 633
info@hph.cz

N 49° 56' 47.9''
E 15° 17' 7.87''

© photography: Jens Trabolt, Nordic Gliding; Petr Kolmann; Kryštof Peterka; Joerg Spichtig
MB Medien Berlin I mail@macht.de
11/2019 I Specifications subject to change without notice.

LOVE TO FLY SINCE 1964