



# MTV-9-( )

## VERSTELLPROPELLER VARIABLE PITCH PROPELLER

**EASA (32.130/65) / FAA (P24NE) / TCCA / RUS / Brasil CTA / Argentine CNA  
zugelassen / approved**

Hydraulisch verstellbarer 3-Blatt Propeller mit konstanter Drehzahl, mit oder ohne Fliehgewichte, mit oder ohne Segelstellung, mit oder ohne Reverse.

*Hydraulically controlled 3-blade constant speed propeller, with or without counterweights, with or without feathering, with or without reverse.*

### **NABE / HUB:**

Geschmiedete / gefräste Leichtmetall-Legierung.  
*Forged / milled aluminum alloy.*

### **BLÄTTER / BLADES:**

Natural-Composite-Gemischtbauweise mit FVK Mantel,  
Metall-Kantenschutz, Acryl-Lackierung.  
*Natural-Composite with fiber reinforced epoxy cover,  
metal erosion shields, acryl varnish.*

## **TECHNISCHE DATEN / TECHNICAL DATA**

Max. Leistung / <i>Max. Power:</i> (gem. Kennblatt / <i>according TCDS</i> )	Start-/Dauerleistung / <i>Take-Off/Continuous Power:</i> 314 kW (421 HP) @ 2700 rpm [175 – 213 cm] 336 kW (451 HP) @ 2030 rpm [175 – 250 cm] 314 kW (421 HP) @ 1975 rpm [175 – 260 cm]
Max. Leistung / <i>Max. Power (Design Limit):</i>	336 kW (451 HP) @ 2800 rpm (Piston) 440 kW (590 HP) @ 2800 rpm (Turbine)
Blattzahl / <i>Number of blades:</i>	3
Max. Durchmesser / <i>Max. diameter:</i>	260 cm (102")
Max. Verstellbereich / <i>Max. pitch range:</i>	-20° ↔ +82°
Masse mit 188 cm / <i>Weight with 74":</i>	24 kg (53 lbs)
Masse des Spinners / <i>Weight of the spinner:</i>	1,9 kg (5 lbs)
Propeller-Regler / <i>Propeller governor:</i>	1,1 kg (2.4 lbs)
Polares Trägheitsmoment mit 188 cm / <i>Polar moment of inertia with 74 ":</i>	1 kgm <sup>2</sup> (3418 lbin <sup>2</sup> )
Verfügbare Anschlußflansche / <i>Available mounting flanges:</i>	B = AS-127-D, SAE No. 2 mod., ½" bolts D = ARP-502, Typ 1 E = ARP 880 K = 135 mm bolt circle diameter with 6 each 9/16" studs, suitable for M-14 engines

Einbauzeichnung: siehe 2. Seite  
*Installation information: see 2<sup>nd</sup> page*

Diese Angaben sind nur zur Information und begründen keine Betriebsanweisungen.  
Technische Änderungen ohne Vorankündigung vorbehalten.

*The information herein do not constitute any operational limits or guidance.  
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March 2005



>HELIX SYSTEM< *CP*		MTV-9/190-18a		R0295M20 20.09.02							
Flughöhe	0 m	*Adv.R. J vo	0.30 -	entsp. V vo	92.3 km/h						
entspr.	0 ft		bi 1.30 -		bi 400.1 km/h						
			(= 20 Intervalle)								
P-Drehzahl	2700 1/min	*Cp*E-2 vo	2.0 -	>> P_eff vo	37.6 %						
Dchm.Prop.	1.90 m		bi 12.0 -		bi 225.6 %						
			(= 20 Intervalle)								
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<b>Wirkungsgrad etaP in Abhängigkeit von J und Cp</b>											
J =	Cp*E-2 =										
	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00
0.300	0.626	0.625	0.615	0.602	0.589	0.575	0.560	0.545	0.531	0.516	0.502
0.350	0.667	0.672	0.665	0.655	0.643	0.631	0.617	0.603	0.589	0.575	0.561
0.400	0.696	0.708	0.704	0.697	0.687	0.677	0.665	0.652	0.638	0.625	0.611
0.450	0.717	0.734	0.734	0.729	0.722	0.714	0.703	0.692	0.679	0.667	0.654
0.500	0.730	0.753	0.757	0.755	0.750	0.743	0.735	0.725	0.713	0.702	0.690
0.550	0.737	0.765	0.773	0.774	0.771	0.766	0.760	0.751	0.741	0.731	0.721
0.600	0.740	0.772	0.784	0.787	0.787	0.784	0.779	0.772	0.764	0.755	0.745
0.650	0.737	0.774	0.790	0.796	0.798	0.797	0.794	0.788	0.781	0.774	0.765
0.700	0.730	0.772	0.791	0.801	0.805	0.806	0.805	0.801	0.795	0.789	0.781
0.750	0.720	0.767	0.790	0.803	0.809	0.812	0.812	0.810	0.805	0.800	0.793
0.800	0.707	0.758	0.785	0.801	0.810	0.815	0.816	0.816	0.812	0.808	0.803
0.850	0.689	0.746	0.778	0.796	0.808	0.815	0.818	0.818	0.817	0.813	0.809
0.900	0.670	0.731	0.768	0.790	0.804	0.813	0.817	0.819	0.818	0.816	0.813
0.950	0.643	0.714	0.755	0.780	0.797	0.808	0.814	0.817	0.817	0.817	0.815
1.000	0.612	0.691	0.738	0.769	0.789	0.801	0.809	0.813	0.815	0.815	0.814
1.050	0.580	0.666	0.719	0.753	0.777	0.792	0.802	0.807	0.811	0.812	0.812
1.100	0.542	0.638	0.697	0.736	0.762	0.780	0.792	0.800	0.805	0.807	0.808
1.150	0.501	0.608	0.673	0.717	0.745	0.766	0.780	0.790	0.796	0.801	0.803
1.200	0.210	0.576	0.647	0.695	0.727	0.750	0.766	0.778	0.786	0.792	0.795
1.250	#####	0.541	0.620	0.671	0.707	0.733	0.751	0.765	0.775	0.782	0.787
1.300	#####	0.506	0.591	0.647	0.686	0.715	0.735	0.751	0.762	0.771	0.778
J =	Cp*E-2 =										
	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00
0.300	0.502	0.489	0.476	0.464	0.452	0.441	0.429	0.418	0.407	0.395	0.381
0.350	0.561	0.547	0.534	0.522	0.509	0.498	0.486	0.475	0.464	0.453	0.441
0.400	0.611	0.598	0.585	0.572	0.560	0.548	0.537	0.526	0.515	0.504	0.493
0.450	0.654	0.641	0.629	0.617	0.605	0.593	0.582	0.571	0.560	0.549	0.538
0.500	0.690	0.678	0.667	0.655	0.643	0.632	0.621	0.610	0.599	0.589	0.579
0.550	0.721	0.710	0.698	0.687	0.676	0.666	0.655	0.644	0.634	0.624	0.614
0.600	0.745	0.735	0.725	0.715	0.704	0.694	0.684	0.674	0.664	0.654	0.645
0.650	0.765	0.756	0.747	0.737	0.728	0.718	0.709	0.699	0.690	0.681	0.672
0.700	0.781	0.773	0.765	0.756	0.747	0.738	0.730	0.721	0.712	0.703	0.694
0.750	0.793	0.787	0.779	0.771	0.763	0.755	0.747	0.739	0.730	0.722	0.714
0.800	0.803	0.797	0.790	0.784	0.776	0.769	0.761	0.753	0.746	0.738	0.730
0.850	0.809	0.804	0.799	0.793	0.786	0.779	0.772	0.765	0.758	0.751	0.744
0.900	0.813	0.809	0.804	0.799	0.794	0.788	0.781	0.775	0.768	0.762	0.755
0.950	0.815	0.812	0.808	0.804	0.799	0.794	0.788	0.782	0.776	0.770	0.764
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1.200	0.795	0.798	0.799	0.799	0.798	0.796	0.794	0.791	0.788	0.785	0.781
1.250	0.787	0.790	0.792	0.793	0.793	0.792	0.791	0.789	0.786	0.784	0.780
1.300	0.778	0.782	0.785	0.787	0.788	0.788	0.787	0.785	0.784	0.781	0.779
Cp = P / (rho*n^3*D^5)			J = v / (n*D)				Ct = Cp*etaP/J				