## DHV TEST REPORT LTF 2003

MAC PARA MAGUS XC 2	21		
		MAC Para Mague YC 21	
	Type test reference no	MAC Para Magus XC 21 DHV GS-01-1752-08	
		MAC Para Technology Itd	
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	Classification		
	Winch towing		
ľ	Number of seats min / max		
	Accelerator		
	Trimmers		
		BEHAVIOUR AT MIN WEIGHT IN FLIGHT (70KG)	BEHAVIOUR AT MAX WEIGHT IN
Take off			FLIGHT (85KG)
Гаke off		¦ <b>2</b>	¦ <b>2</b>
		unevenly, delayed	evenly, immediately
	Rising behaviour	comes over pilot delayed	comes over pilot delayed
	Take off speed	average	average
	Take off handling	average	average
Straight flight		2	2
	Roll damping	average	average
Turn handling		2	2
<del>-</del>	Spin tendency	±	average
	Control travel	•	average
		average	average
	Agility	average	average
Symmetric stell		2-3	2-3
Symmetric stall			-4
	Deep-stall limit	,	early < 60 cm
	Full stall limit	early < 65 cm	early < 65 cm
	Increase in steering power	average	slight
Front collapse		2-3	2
	Pre-acceleration	average	slight
	Opening behaviour	not spontaneously	spontaneous, delayed
		with pumping	
Asymmetric collapse		2-3	2-3
	Turn tendency	180 - 360 degrees	180 - 360 degrees
	Change of course	-	180 - 360 degrees
	Ghange of course		high
	Rate of turn	high	
	Rate of turn		-
	Max. roll/pitch angle	greater than 45 degrees	greater than 45 degrees
	Max. roll/pitch angle Loss of altitude	greater than 45 degrees high	greater than 45 degrees high
	Max. roll/pitch angle Loss of altitude Stabilization	greater than 45 degrees high spontaneous	greater than 45 degrees high spontaneous
	Max. roll/pitch angle Loss of altitude Stabilization	greater than 45 degrees high	greater than 45 degrees high
	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour	greater than 45 degrees high spontaneous spontaneous, delayed	greater than 45 degrees high spontaneous spontaneous
Countersteering an asy	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour	greater than 45 degrees high spontaneous	greater than 45 degrees high spontaneous spontaneous
Countersteering an asy	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour mmetric collapse	greater than 45 degrees high spontaneous spontaneous, delayed	greater than 45 degrees high spontaneous spontaneous
Countersteering an asy	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour mmetric collapse	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy	greater than 45 degrees high spontaneous spontaneous
Countersteering an asy	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour mmetric collapse Stabilization	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding
Countersteering an asy	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight
Countersteering an asy	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel Control pressure increase Turn in opposite direction	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight slight
Countersteering an asy	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel Control pressure increase Turn in opposite direction	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average easy, no tendency to stall	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight slight demanding, tendency to stall
	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel Control pressure increase Turn in opposite direction	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average easy, no tendency to stall	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight slight demanding, tendency to stall
Full stall, symm. exit	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel Control pressure increase Turn in opposite direction Opening behaviour	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average easy, no tendency to stall spontaneous, delayed	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight slight demanding, tendency to stall spontaneous, delayed
Full stall, symm. exit Spin out of straight flig	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel Control pressure increase Turn in opposite direction Opening behaviour	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average easy, no tendency to stall spontaneous, delayed  2-3 2	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight slight demanding, tendency to stall spontaneous, delayed
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Full stall, symm. exit Spin out of straight flig Spin out of turn	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel Control pressure increase Turn in opposite direction Opening behaviour	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average easy, no tendency to stall spontaneous, delayed  2-3 2 2-3 2 average	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight slight demanding, tendency to stall spontaneous, delayed  2 2 2 2
Full stall, symm. exit Spin out of straight flig Spin out of turn	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel Control pressure increase Turn in opposite direction Opening behaviour  ght Entry Spin tendency	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average easy, no tendency to stall spontaneous, delayed  2-3 2 2-3 2 average	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight slight demanding, tendency to stall spontaneous, delayed  2 2 2 average average average
Full stall, symm. exit Spin out of straight flig Spin out of turn Spiral dive	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel Control pressure increase Turn in opposite direction Opening behaviour  ght Entry Spin tendency	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average easy, no tendency to stall spontaneous, delayed  2-3 2 2-3 2 average average average turn continues through < 180 degrees	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight slight demanding, tendency to stall spontaneous, delayed  2 2 2 average average average
Full stall, symm. exit Spin out of straight flig Spin out of turn Spiral dive	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel Control pressure increase Turn in opposite direction Opening behaviour  ght Entry Spin tendency Exit	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average easy, no tendency to stall spontaneous, delayed  2-3 2 2-3 2 average average average turn continues through < 180 degrees	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight slight demanding, tendency to stall spontaneous, delayed  2 2 2 average average average turn continues through 180 - 360 degree
Full stall, symm. exit Spin out of straight flig Spin out of turn Spiral dive	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel Control pressure increase Turn in opposite direction Opening behaviour  ght  Entry Spin tendency Exit Sink rate after 720 °[m/s]	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average easy, no tendency to stall spontaneous, delayed  2-3 2 2-3 2 average average average turn continues through < 180 degrees	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight slight demanding, tendency to stall spontaneous, delayed  2 2 2 2 average average average turn continues through 180 - 360 degree
Countersteering an asy Full stall, symm. exit Spin out of straight flig Spin out of turn Spiral dive B-line stall	Max. roll/pitch angle Loss of altitude Stabilization Opening behaviour  mmetric collapse Stabilization Control travel Control pressure increase Turn in opposite direction Opening behaviour  ght  Entry Spin tendency Exit Sink rate after 720 °[m/s]	greater than 45 degrees high spontaneous spontaneous, delayed  2 countersteering easy slight average easy, no tendency to stall spontaneous, delayed  2-3 2 2-3 2 average average average turn continues through < 180 degrees 10	greater than 45 degrees high spontaneous spontaneous  2-3 countersteering demanding slight slight demanding, tendency to stall spontaneous, delayed  2 2 2 average average average turn continues through 180 - 360 degree

Big ears	2		1-2
	<b>Entry</b> easy		easy
	Recovery not s	spontaneously	spontaneous, quickly
Landing	2		2
La	nding behaviour avera	age	average
Front collapse (accelerated)	2-3		2-3
	Pre-acceleration slight	t	slight
Ор	ening behaviour not s	spontaneously	spontaneous, delayed
	with	pumping	
Asymmetric collapse (accelerate	d) 2-3		2-3
	Turn tendency 180	- 360 degrees	180 - 360 degrees
	change of course 180	- 360 degrees	180 - 360 degrees
	Rate of turn high		high
Max.	roll/pitch angle great	ter than 45 degrees	greater than 45 degrees
	Loss of altitude high		high
	Stabilization spon	taneous	spontaneous
Ор	ening behaviour spon	taneous, delayed	spontaneous
Big ears accelerated	2		1-2
	<b>Entry</b> easy		easy
	Recovery not s	spontaneously	spontaneous, quickly
Supplementary remarks			
		netric collapse and asymetric collapse elerated): tendency for reactionary	

(accelerated): tendency for reactionary collapse on opposing canopy side with flight path directional change and difficult recovery.

B-Stall: Unstabil mit Neigung zu Frontrosette und Verhängertendenz

by jursa consulting