

**ROTAX.****TECHNICAL DATA**

Db. 554 - E

Jan. 1996

**ROTAX engine type 100 KART DS, model 1996**

Design no. 35.100.1600.00.355 DS D-R, "O"-cylinder  
 35.100.2600.00.505 DS D-L, "O"-cylinder

**HOMOLOGATION:** FIA/CIK: 206 M/95  
 model R/100, DS D-L/95  
 FIA/CIK: 207 M/95  
 model R/100, DS D-R/95  
 valid from 01.01.1995

**CATEGORY:** FORMULA A, FORMULA SUPER A

**DESCRIPTION:** ROTAX single-cylinder-, two-stroke-, rotary valve engine,  
 oil-in-fuel lubrication, free air cooled.  
 DS D-R: right-side-drive  
 DS D-L: left-side-drive

**BORE:** 49,54 mm

**STROKE:** 51,5 mm

**DISPLACEMENT:** 99,27 cm<sup>3</sup>

**THEORETICAL MAX. BORE:** 49,72 mm

**CAPACITY:** no specification

**TORQUE:** no specification

**MAX. ALLOWED R.P.M.:** 18 000 r.p.m.

**PISTON:** Aluminium cast piston with coating and one L-piston ring  
 tolerance

	part no.	group	diameter
standard:	295 684	red	49,44 mm
	295 685	green	49,45 mm

**CYLINDER:** light-alloy-"O"-cylinder with gray cast iron sleeve  
 tolerance

	part no.	group	diameter
standard:	613 095	(1) red	49,54 - 49,55 mm
	613 095	(2) green	49,55 - 49,56 mm

**CYLINDER/PISTON CLEARANCE:** 0,10 mm - 0,12 mm

**- 2 -**

<b>PISTON CENTER PROTRUDING OVER CYLINDER TOP:</b>	3,7 mm (to be adjusted with cylinder-base gasket)
<b>CYLINDERHEAD VOLUME:</b>	cylinder head (part no. 223 844) 8,77 cm <sup>3</sup> (+2 cm <sup>3</sup> for the spark plug thread)
<b>VOLUME OF THE COMBUSTION CHAMBER:</b>	6,6 cm <sup>3</sup> (+2 cm <sup>3</sup> for the spark plug thread)
<b>SQUICH GAP:</b>	0,95 mm
<b>COMPRESSION :</b>	theoretical: 16,0
<b>IGNITION UNIT:</b>	breakerless PVL magneto generator 105 458
<b>IGNITION TIMING:</b>	2,3 mm (= 21,8 °) before T.D.C., at 10 000 r.p.m. adjustment to ignition timing mark
<b>SPARK PLUG:</b>	NGK BR 10EG (part no. 297 830) thread M14 x 1,25
<b>ELECTRODE GAP:</b>	NGK: 0,5 - 0,6 mm
<b>INTAKE SYSTEM:</b>	rotary valve
<b>ROTARY VALVE:</b>	part no. 224 605, rotary valve cut-off section = 162,3 °
<b>ROTARY VALVE TIMING:</b>	opens: 132 ° before T.D.C. closes: 75 ° after T.D.C.
<b>CARBURETOR:</b>	according to reglementation (not extent of delivery of ROTAX)
<b>FUEL PUMP:</b>	diaphragm pump on carburetor
<b>FUEL:</b>	SUPER-gasoline (unleaded), octane number not below ROZ 98
<b>LUBRICATION:</b>	oil in fuel lubrication, SHELL Super M Racing, mixing ratio 1 : 20 (5%)
<b>COOLING:</b>	free air by air stream
<b>DIRECTION OF ROTATION:</b>	DS D-R clockwise, viewed towards p.t.o.-side DS D-L counter clockwise, viewed towards p.t.o.-side
<b>STANDARD SPROCKET:</b>	10 teeth (part no. DS D-R 236 031, DS D-L 236 290) also available are sprockets with 9 and 11 teeth

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**- 3 -**

DIMENSION OF CHAIN:	7,75 x 4,6 x 4,5
INTAKE SILENCER:	homologated intake silencers (not extent of delivery of ROTAX)
EXHAUST SYSTEM:	not extent of delivery of ROTAX
STARTER:	no starting device, push start
WEIGHT:	12 kg without carburetor and exhaust system