



## **Service Manual**

# Washing machine Frontloader FL 5105/A

Model Version

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Date: 22.08.2005 (Mod.01) Document-No.: 4812 722 23294

5.10.2004 / Page 2	FL 5105/A	Whirlpool Europe	CEDVIC
Ooc. No: 4812 722 23294	8570 510 10780	Customer Service	SERVIC

Technical data		
Dimensions		
Height Width Depth	81.5 - 84 59.5 57.3	cm cm cm
Weight		
Net weight With package	~72 ~74	kg kg
Main Connection		
Voltage Frequency Power consumption Fuse rating	230 50 ~2.3 10	V ± 10% Hz kW A
Drum		
Volume Wash spin Ramp spin Speed spinning max.	42 54 95 1000	l rpm rpm rpm
Capacity of dry laundry		
Cotton/coloured Cotton rapid Cotton short Synthetics Synthetics rapid Synthetics short Delicate Wool Handwash/Silk Daily	5 3 5 2.5 1.5 2.5 1.5 1 1	kg kg kg kg kg kg kg
Pressostat		
Kind of switch  Type  Nominal voltage		essoswitch flow contact 223 V
Water Level Level 1 (11 - 12/14) Switching point Switching back point	60 ± 5 35 ± 5	mmWc mmWc
Overflow (11 - 16)	300 ± 20	mmWc
Pilot lamp		
Type Nominal voltage	17.9 230	V

Nominal voltage

230

#### **Nominal currents**

4 (4)	Α
0.1 (0.1)	Α
16 (4)	Α
1 (1)	Α
	0.1 (0.1) 16 (4)

#### Door lock

Kind of switch	Switch with PTC heater of bimetal
Туре	DA
Nominal voltage	230 (90 - 264) V
Nominal current: Contact 4 - 5	16 (4) A
Lock time Unlock time	≤6" ≤35 - 65/180"

#### **Heating element**

Tubular heating element with NTC - sensor
230 +10%, -15% V
$2050  ext{ W } \pm 5\%$
$23.9/25.8 \Omega \pm 5\%$
152/167 °C
< 0.8 mA

#### NTC sensor

Resistance NTC:

0 °C	35.9	$k\Omega \pm 5.8\%$
30 °C	9.8	$k\Omega \pm 3.7\%$
40 °C	6.6	$k\Omega \pm 3.1\%$
50 °C	4.6	$k\Omega \pm 2.6\%$
60 °C	3.2	$k\Omega \pm 2.0\%$
70 °C	2.3	$k\Omega \pm 2.5\%$
95 °C	1.1	$k\Omega \pm 3.7\%$

#### Inlet valve

Kind of valve	1-way valve for cold water, electrical connection with Rast 2.5	
Water temperature Rated flow >1 bar Pressure range Nominal voltage Frequency Nominal current Nominal power Nominal resistance	<60 8 0.2 - 10 220 - 240 50 35 6 3.8/4.1	$^{\circ}$ C I/min ± 10% bar V Hz mA W ± 10% k $\Omega$ ± 10%

#### **Technical data**

#### Drain pump (synchronous)

Туре	72735	
Nominal Voltage	230	V
Nominal/max. current	0.3/0.5	Α
Rotation speed	3000	rpm
Nominal power	34	W
Frequency	50	Hz
Resistor (coil) (20 °C)	155	$\Omega$
Capacity (0.55 - 1.0 m)	$14 \pm 2$	l/min

#### Program timer

Type Timer basic Timer programmed	AA1 4619 710 4619 751	
Program	32	positions

#### Motor

Type	MCA 38/64-148/WHE 3		
Belt ratio	i = 1·15 9		

#### Resistance contacts (20 °C)

Stator (full field)	2.04	$\Omega \pm 7\%$
Rotor	2.25	$\Omega \pm 7\%$
Tachogenerator	68.70	$\Omega \pm 7\%$

#### Input power (230 V AC)

Washing	190	$W \pm 7\%$
Rinsing	260	$W \pm 7\%$
Spinning	360	W ± 10%

#### Radio interference filter

Rated voltage	250	V
Rated current	16	Α
Frequency	50/60	Hz
Nominal capacity	240/250 ± 20%	nFX1+2x22nFY
Nominal resistance	1	$M\Omega \pm 5\%$
Derivation current (u = 250 V AC)	≤ 4.15 (2	2 x 2.075) mA

#### Main switch

Туре	1DLF10	06
Nominal voltage	250	V
Nominal current	16 (5)	Α
Poles	2	
Functionality	Normall	y opened
Connection in RAST 5	6.3	pins
Connection lamp	2.8	pins

#### Option switch

Nominal voltage	5	V DC
Nominal current	1	mA
Poles	1	
Functionality	Norma	lly opened
Connection	RAST 2	2.5

#### Temperature/spin speed selector

	04-0084	.0006
	7	
е	5	V DC
nt	1	mΑ
	1	
	RAST 2.	5
ors ± 5%:		
pos.1	< 10	$\Omega$
pos.2	0.68	$k\Omega$
pos.3	1.10	$k\Omega$
pos.4	1.80	$k\Omega$
pos.5	2.70	$k\Omega$
pos.6	3.60	$k\Omega$
pos.7	4.70	$k\Omega$
	pos. ± 5%: pos.1 pos.2 pos.3 pos.4 pos.5 pos.6	7 e 5 at 1 RAST 2. ors ± 5%: pos.1 <10 pos.2 0.68 pos.3 1.10 pos.4 1.80 pos.5 2.70 pos.6 3.60

#### Push button switch

ON/OFF	SM
Eco	OPT. 1
Rapid	OPT. 2
Intensive rinse	OPT. 3
Rinse hold	OPT. 4

### Spare part list

Model FL 5105/A Service No. 857051010780 Version 857051010780

Pos. No. 12NC Code	Description	Pos. No.	. 12NC Code	Description
001 0 4812 440 10784	Cabinet GW Flap round GW Traverse Adjust. foot M8, 112mm Front	480 0	4812 321 78222	Cable AA1D-MOT 6/PP
002 0 4812 440 10778		490 0	4819 321 18136	Cable, mains 2m SA
003 0 4812 464 48101		491 0	4812 321 28367	Strain relief
011 0 4812 500 18099		491 1	4812 502 38152	Screw 4.8x19
021 0 4812 440 11225		500 0	4812 282 19842	Timer ALPHA
024 0 4819 440 19892	Panel, rear	571 0	4812 271 28375	Valve, magnet Single
025 0 4812 440 19817	Support control board	581 0	4812 271 28518	Pressostat 60/35 R 2.5
030 0 4812 310 18936	Table top VBL 42I GW	620 0	4819 410 28998	Switch options
040 0 4812 417 18787	Hinge	621 0	4819 410 29004	Switch ON/OFF
050 0 4812 440 10779	Plinth GW	622 0	4812 273 48002	Selector Temp./Spin
061 0     4812 466 88458       061 1     4812 466 88607       061 2     4819 310 39227       061 3     4819 310 39228       081 0     4812 529 18038	Counterweight upper	630 0	4812 280 58044	Door lock
	Counterweight front	651 0	4812 134 48331	Light guide VBL
	Mounting kit Weight top	691 0	4812 282 19485	Sensor NTC SC1
	Mounting kit Weight bottom	701 0	4812 530 29329	Hose, inlet EN 11770 Reflex
	Shock absorber until 1200	702 0	4819 530 29019	Hose intern
084 0 4812 466 58001	Silent block	707 0	4812 526 48031	Nozzle Distribution
086 2 4812 401 18412	Stopper	707 1	4812 526 48028	Nozzle
110 0 4812 498 18261	Handle, door GW	708 1	4812 530 48143	Bend
130 0 4812 417 28047	Plate Door lock	711 0	4812 418 88025	Dispenser BK, WH-3CH
130 1 4812 417 28048	Plate Door lock Lower	712 0	4812 418 88051	Drawer Detergent
131 0     4812 417 28046       131 1     4812 417 28045       131 2     4812 492 58022       135 1     4812 498 18262       135 2     4812 492 58023	Lock Door	713 0	4812 418 89037	Flap Detergent Cont. 3 ch. GW
	Pin Door Lock	717 0	4819 321 28092	Bowden cable
	Spring Door Lock	717 1	4812 321 38013	Lever, Nozzle
	Knob Door Safety GW	717 2	4812 321 38012	Holder, adjust.
	Spring Door Safety	717 3	4812 278 88018	Slide
135 3 4812 290 68153	Holder, adjust. Door Safety	717 4	4812 492 38359	Spring, Nozzle
140 0 4812 450 58983	Door glass	717 5	4812 233 18004	Cam 3 C. incl. adapter
143 0 4812 440 10817	Glass door frame VBL WH GW	717 7	4812 502 18409	Screw cam actuator
144 0 4812 440 19589	Frame, door glass DE-WT	718 0	4812 526 48157	Siphon 3 Chamber GW
144 3 4812 502 18669	Screw 4.0x12	718 1	4812 418 88018	Separator 3ch
191 0 4812 460 68532	Door bellow WH grease resistance	753 1	4819 418 68234	Chamber, air
191 1 4812 492 18017	Strap	754 0	4812 530 28826	Drain hose
191 2 4812 492 98011	Strap	754 1	4812 530 28832	Lock eco
200 1 4812 418 18529	Tub, half front 42I	754 2	4812 530 28829	Flange eco
200 2 4812 418 18531	Tub, half rear 42I	760 0	4819 480 58106	Cover, pump
200 4 4812 290 88054	Clamp for tub	781 0	4819 530 28847	Hose, draining
220 0 4819 418 18333	Drum	782 0	4812 530 28827	Hose Pressostat
271 0 4812 358 18056	V-ribbed belt WH 1250 J5	787 0	4812 530 28813	Steam hose
272 0 4812 528 58027	Pulley DIAM. 298	787 2	4819 401 18174	Clamp, hose 25-45 mm
272 3 4812 505 18371	Nut M 12	794 2	4812 530 58005	O-Ring
292 0 4812 530 58101	Gasket Tub	794 5	4812 530 58098	Gasket Airtrap
301 0 4812 452 14897	Control panel FL 5105/A	900 0	4812 255 18204	Holder Hose outlet
303 0 4812 498 18386	Handle, drawer symbols	900 1	4812 290 88049	Bracket
331 0 4812 414 58249	Knob, timer VBL, daily, 1000	900 2	4812 401 18501	Clamp, hose 19.2 mm
331 1 4812 414 58235	Knob thermostat WH VBL GW	900 3	4812 401 18446	Cable clamp
331 2 4812 414 58237	Knob, potentiom. 1000 GW	900 4	4812 401 18414	Clamp, hose
332 0 4812 513 18133	Button Options GW	900 5	4819 401 18529	Clamp, hose
339 1 4812 233 18006	Adapter f. Knob	900 6	4812 290 18031	Clamp heating element+screw
351 0 4812 134 18011	Lamp	900 7	4812 255 18205	Holder Pressostat
400 0 4819 361 58259	Motor MCA 38/64-148/WHE 3	900 9	4812 401 48569	Clamp hose pressostat
400 1     4812 502 18382       409 0     4812 362 48004       421 0     4812 121 18142       430 0     4812 310 28144       451 0     4812 259 28819	Screw M8 X 35 Brush, carbon motor CESET Interf. filter 1,00 μ F Pump, draining KIT Heating element with hole	910 1 911 7 930 0 941 0 941 1	4812 502 48344 4812 903 08196 4819 492 38139 4812 520 28066 4812 520 28002	Screw Screw M 5X14-Z Spring Suspension Bearing, ball 6204 Bearing, ball 6203 2Z C3

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#### Spare part list

 Model
 FL 5105/A

 Service No.
 857051010780

 Version
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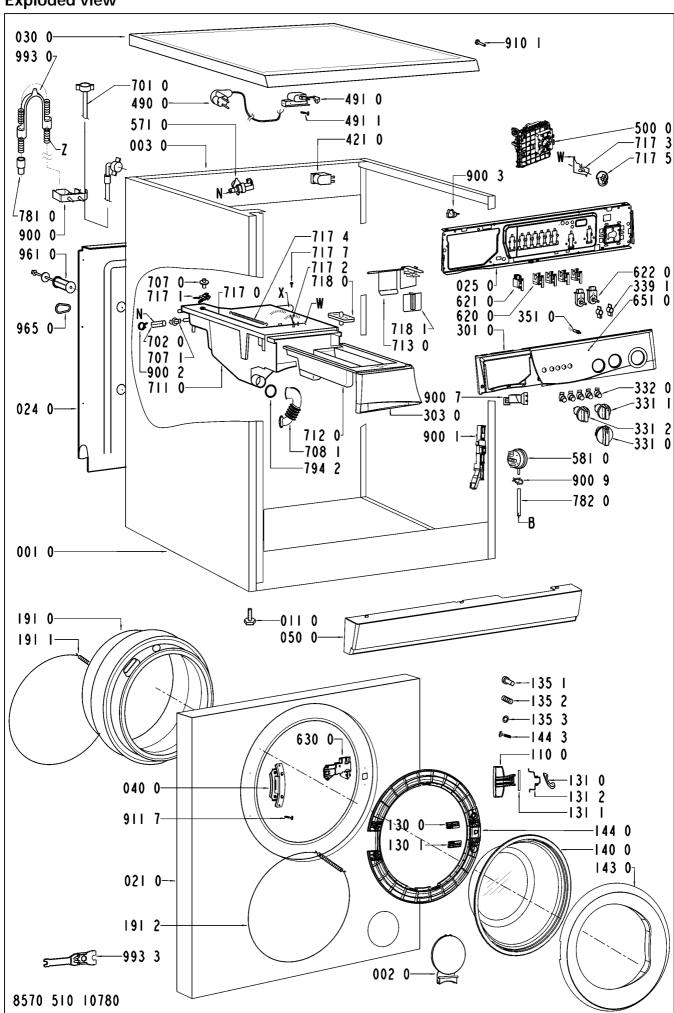
Pos. No. 12NC Code Description

953 0 **4819 532 78224** Ring 961 0 **4819 532 68829** Spacer

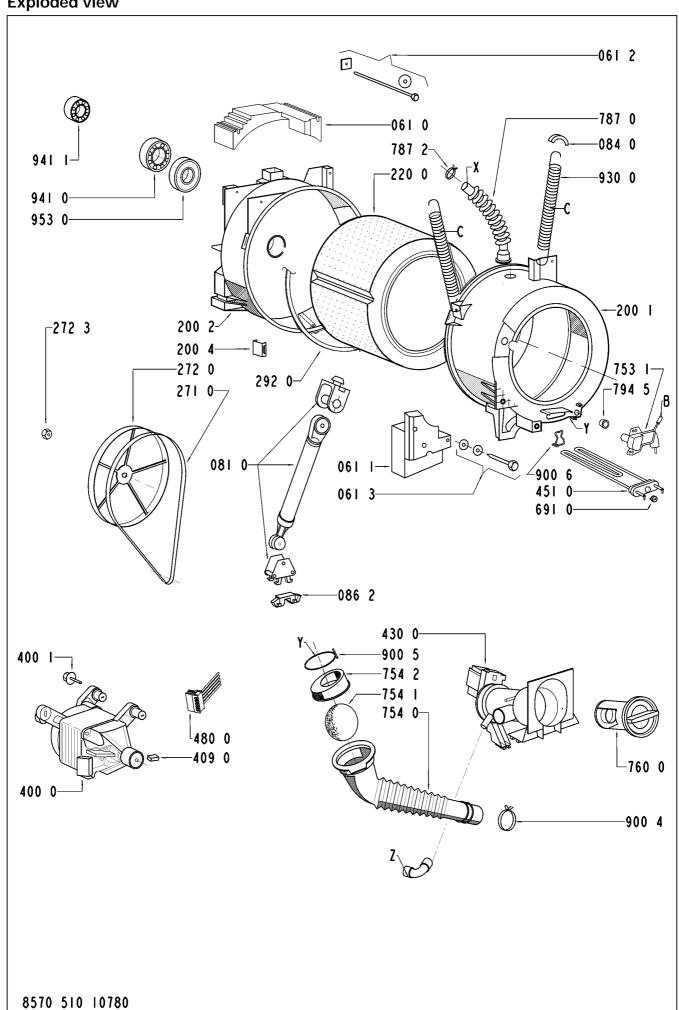
965 0 **4812 466 68545** Cover BK/WH

993 0 **4812 530 29269** Bow 993 3 **4812 395 58004** Tool

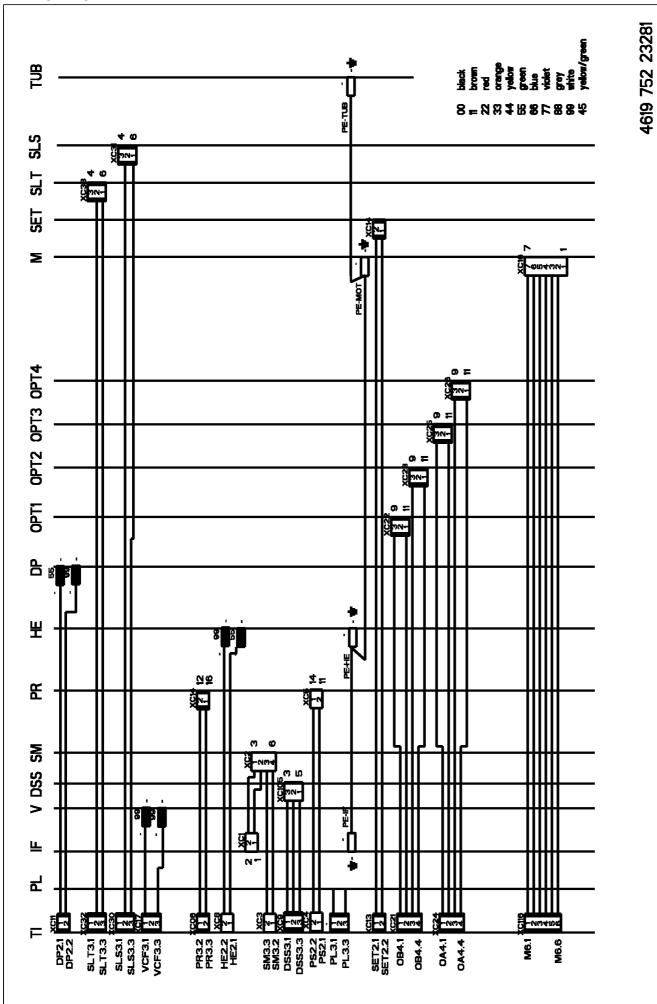
#### **Exploded view**



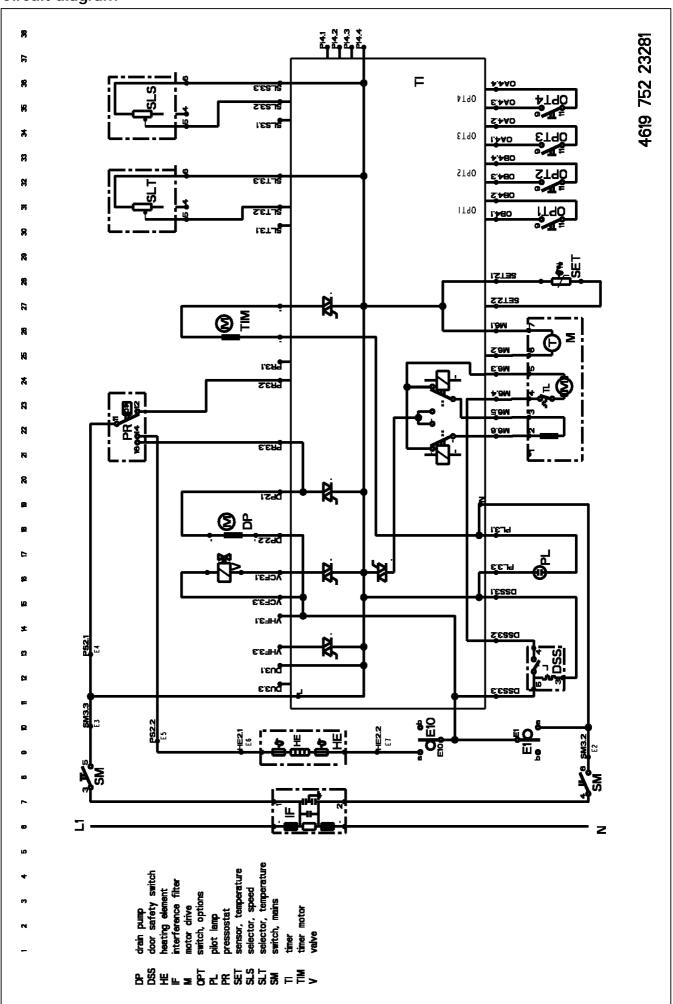
#### **Exploded view**



#### Wiring diagram

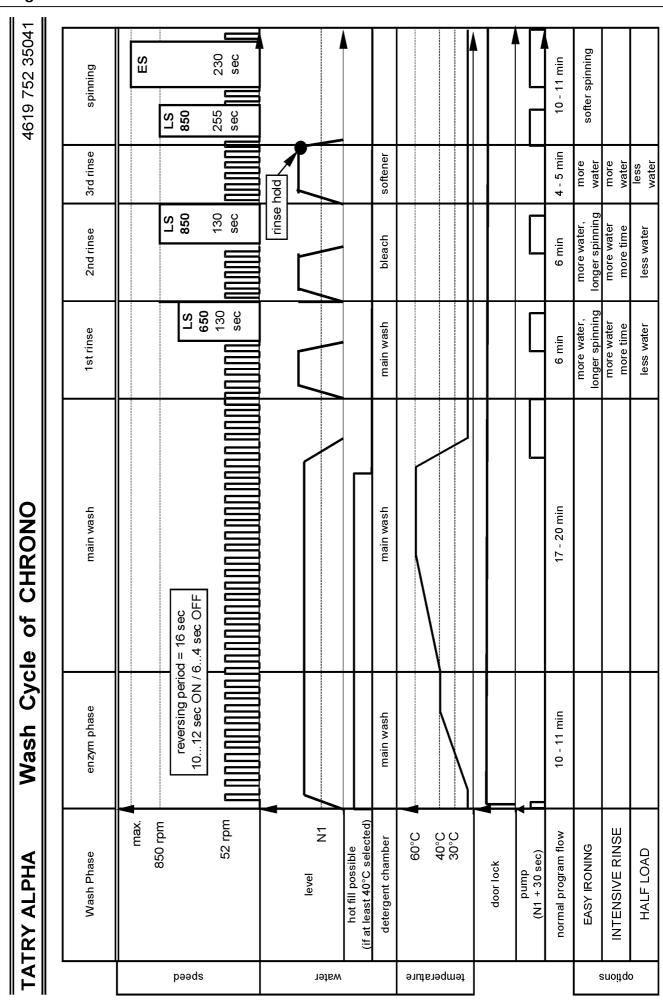


#### Circuit diagram

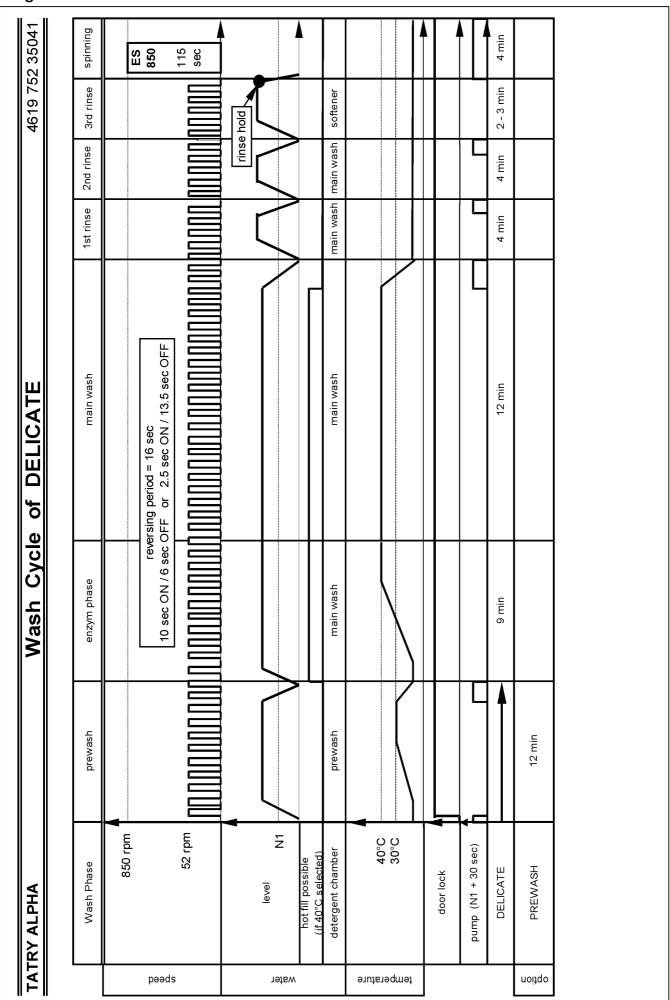


TATRY ALPHA		Wash Cycl	le of COTTON				4619 752 35041
Wash Phase	prewash	enzym phase	main wash	1st rinse	2nd rinse	3rd rinse	spinning
тах. 850 грт 54 грт		reversing period = 16 sec 1012 sec ON / 64 sec OI	d = 16 sec 54 sec OFF	18	850 850 LS 185		ES
level N1 hot fill possible (if at least 40°C selected) detergent chamber	prewash	Cool down (till 6	cool down (till 60°C, max. 45 sec)	main wash	rinse hold	hold	
Tsel 40°C 30°C							
door lock pump (N1 + 30 sec) normal program flow		13 - 14 min	50 - 70 min	10 min	10 min	5-6 min	14 - 15 min
ECO HALF LOAD QUICK / RAPID			90°C, 70°C -> 60°C and 60°C, 50°C -> 40°C /+ 10 min <= 60°C / 10 - 20 min	less water less time	less water	less water less wat.	
EASY IRONING PREWASH	15 min	10 min	35 - 55 min	more water, softer spinning	more water, softer spinning	more water	softer spinning
INTENSIVE RINSE				more water more time	more water more time	more water	

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ТАТКҮ АLРНА		Wash Cycle	e of SYNTHETIC			4619 752 35041	2 35041
Wash Phase	prewash	enzym phase	main wash	1st rinse	2nd rinse	3rd rinse	spinning
850 rpm 52 rpm		reversing period = 16 sec 1012 sec ON / 64 sec OFF	riod = 16 sec / 64 sec OFF	Sec	850 850 255 860		850 850 860 860
level N1 hot fill possible (if at least 40°C selected)	prewash	cool down (till	(fill 40°C, max. 60 sec)	main wash	rins	rinse hold	
Tsel A 40°C 30°C							
doorl lock SC1-A2 pump (N1 + 30 sec) SYNTHETIC		7 - 8 min	25 - 40 min	10 min	10 min	4 - 5 min	8 - 9 min
ECO HALF LOAD QUICK / RAPID			<= 40°C / +5 min 20-30 min	less water	less water	less water less wat,	
EASY IRONING PREWASH INTENSIVE RINSE	10 min	7 min	35 min	more water, softer spinning more water	more water, softer spinning more water	more water	softer spinning



4 min

3 - 4 min 3 - 4 min

4 min 4 min

15 min 20 min

pump (N1 + 30 sec)

SILK, HANDWASH

WOOL

4 min 4 min

## and HANDWASH spinning 115 sec ES 3rd rinse softener rinse hold main wash 2nd rinse main wash 1st rinse Wash Cycles of WOOL, 30°C mainly 2.5 sec ON / 13.5 sec OFF 2.5 sec ON / 29.5 sec OFF reversing period = 16 / 32 sec WOOL: 40°C SILK, HANDWASH: main wash main wash T max: partly 850 rpm hot fill possible (only for WOOL 40°C, not for SILK) 40°C 42 rpm Σ detergent chamber Wash Phase door lock eve TATRY ALPHA pəəds water temperature

