

# NanoSpin™

## Instruction Manual

The Tulip Medical Products NanoSpin is assembled in the USA and is intended for use as a general purpose laboratory or operating room centrifuge.



### ADVANCED CLOSED-SYSTEM TISSUE PROCESSING

## 8-Place Angle Rotor Installation and Set-up

1. Remove the NanoSpin from the shipping container and inspect for any possible shipping damage. If the centrifuge appears to be damaged from shipping, please contact Tulip immediately and do not discard the container.
2. Read and fill out the warranty form online: [www.tulipmedical.com/warranty\\_form](http://www.tulipmedical.com/warranty_form). The warranty form documents your purchase. Failure to complete the warranty form may void any warranty claims on the unit.
3. Place the NanoSpin on a sturdy, level surface. Turn the lid latch to the UNLOCK position ("U"). Open to verify that there are no loose objects or packing materials inside the chamber. Confirm 8 syringe sleeves are seated in the angled 8-place rotor.
4. Verify the power switch on the front of the unit is in the OFF position. Connect the power cable to the power supply adapter, and then connect the power supply adapter to the back of the NanoSpin. Plug the power cable into an approved and properly grounded outlet.  
**Do not insert specimen syringes prior to initial test run.**
5. Close the lid. Turn the lid latch to the LOCKED position ("L") and turn power switch ON. Adjust to desired speed and set timer. Initiate NanoSpin and press RUN. There should be a smooth whirring sound with unit acceleration and little or no vibration. If there are loud, unusual sounds or if you experience excessive vibration, immediately turn the unit off. DO NOT OPERATE. Contact your distributor or Tulip Medical Products.

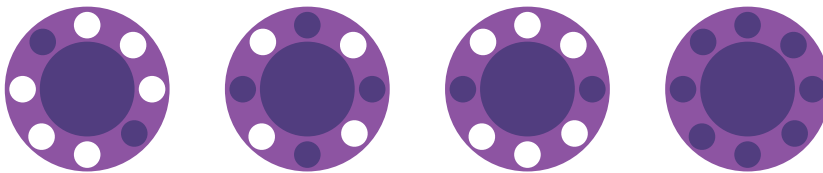


## Loading and Operating the Tulip NanoSpin

**WARNING: Always ensure rotor is secure before each use!**

**DO NOT OPEN WHILE SPINNING!**

1. The 10cc syringe sleeves are designed to hold crowned and capped 10cc syringes. Make sure syringe caps are installed and Tulip Crowns™ are secured prior to loading the syringes into the NanoSpin. Insert/Slide syringes into sleeves.
2. Spin only balanced loads. Make sure that the sleeves contain equal weight. Weigh the loaded syringes and make sure they are equal in weight. Syringes of equal weight and size should be placed opposite each other as pictured below. Use water-filled syringes for balance, if necessary. Proper sample balancing will improve sample separation and will extend the life of the NanoSpin. Out of balance loads may wobble, create excess noise, break or damage the NanoSpin. Please refer to the examples below.



3. After each run cycle has ended, the lid must be opened and closed before the next cycle is run. This allows for re-loading and re-balancing of each load.

## Cleaning & Maintenance

- 1 Clean and sterilize syringe sleeves according to Tulip Reusable Instruments Instructions for Use (included). Use only 10cc BD or 10cc Monoject syringes with syringe caps and the 10cc BD or 10cc Monoject Tulip Crowns.
2. Never force a syringe into the syringe sleeve. The syringe sleeves are designed to hold 10cc BD or 10cc Monoject syringes.
- 3 Keep the syringe sleeves clean. If sample leakage occurs, safely dispose of the sample and thoroughly clean and disinfect the inside and outside of the syringe sleeve per Tulip Reusable IFUs. Additional syringe sleeves are available for purchase from Tulip Medical Products..



## Motor and Electrical Maintenance

The NanoSpin utilizes a PMDC motor and its bearings are permanently lubricated. It should not need servicing for the life of the NanoSpin. Likewise, the electrical components were designed for high reliability and should not need regular service. However, if repairs should be needed, please contact Tulip Medical Products. Because of the safety issues with high g-forces in the NanoSpin, it is recommended that rotors and syringe sleeves be inspected every 6 months for corrosion and fatigue. If there is any indication of wear, the rotor and sleeves should be removed from service. Contact Tulip Medical Products for return instructions of rotor and sleeves for evaluation by a technician for repair and replacement. It is also recommended that after 2 years of service, rotors and syringe sleeves be returned to Tulip Medical Products for inspection. Following these procedures will ensure product quality and ensure laboratory/operating room safety.

## Specifications

Maximum nominal:	3,500 RPM (+/-5%)
Maximum nominal RCF:	1,534g
Max. Volume (8-Place Rotor):	80ml
Max Power:	12V, 6.0A
Height:	9.5 inches
Width:	11 inches
Weight:	9.5 lbs.
Boxed Dimensions:	13.5 x 12 x 15 inches
Boxed Weight:	12 lbs.

### Average Speeds for variable Unit (E8V)

Dial Setting:	RPM Range:
Low (7:00 position)	500 +/-5%
Medium (12:00 position)	1700 - 1950
Medium (3:00 position)	3150 3350
High (5:00 position)	3500 +/-5%

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## G-Force

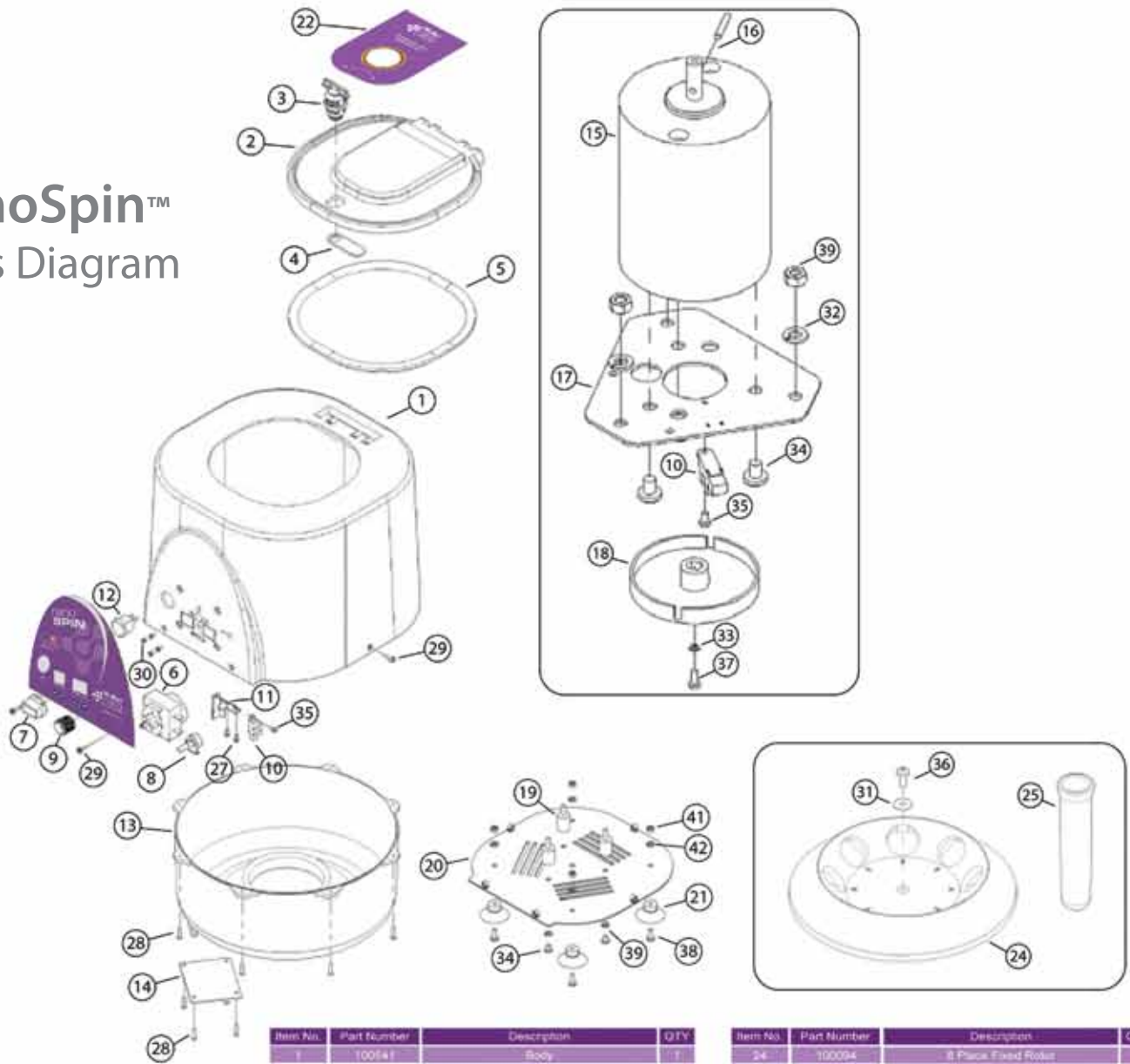
RCF (g's)	Radius (mm)	RPM
31	112	500
80	112	800
125	112	1000
180	112	1200
245	112	1400
282	112	1500
321	112	1600
406	112	1800
501	112	2000
606	112	2200
721	112	2400
846	112	2600
982	112	2800
1127	112	3000
1282	112	3200
1364	112	3300
1450	112	3400
1534	112	3400



ADVANCED CLOSED-SYSTEM TISSUE PROCESSING



# NanoSpin™ Parts Diagram



Item No.	Part Number	Description	QTY
1	100141	Body	1
2	100021	Lid	1
3	100073	Latch	1
4	100473	Cam Latch Plate	1
5	100204	Body & Lid Gasket	1
6	100203	60 Minute Timer	1
7	100140	Timer Knob	1
8	100519	Potentiometer	1
9	100564	Potentiometer Knob	1
10	100052	IR Sensor	2
11	100553	IR Sensor Bracket	1
12	100009	Dimmable Power Switch	1
13	100207	Bowl	1
14	100475	Motor Drive Board	1
15	100403	Motor, 80 W	1
16	100142	Motor Shaft Pin	1
17	100552	Motor Mount Plate	1
18	100087-8	Speed Sensor Wheel	1
19	100294	Motor Vibration Absorber	3
20	100206	Bean Plate	1
21	100004	Rubber Foot	4
22	100492	Lid Latch	1
23	100507	Variable Label	1
24	100508	Fixed Label	1

\* Item for Variable Speed model ONLY.

Item No.	Part Number	Description	QTY
24	100094	8 Piece Fixed Rotor	1
25	100097	8 Piece Fixed Rotor Tube Shield	8
26	100555	Tube Shield Insert	8
27	100088	#4 x 0.25" Thread Rolling Screw	2
28	100088	#4 x 0.5" Thread Rolling Screw	12
29	100530	6-32 x 0.375" PHMS Screw	5
30	100060	PHMS M2 x 0.8 x 6 Screw	4
31	100404	M4 Fender Washer	1
32	100067	Split Lock Washer M6	10
33	100091	Split Lock Washer M3	1
34	100063	PHMS M6 x 1.0 x 8 Screw	6
35	100061	PHMS M3 x 0.5 x 6 Screw	2
36	100060	PHMS M4 x 0.7 x 10 Screw	1
37	100298	PHMS M3 x 0.5 x 8 Screw	1
38	100064	PHMS M6 x 1.0 x 16 Screw	4
39	100057	Hex Nut M6 x 1.0	7
**40	100025	Power Jack Wiring Assembly	1
**41	100528	Power Connector Wiring Assembly	1
**42	100161	Lid Latch IR Sensor Cable	1
**43	100271	Speed Wheel IR Sensor Cable	1
**44	100010	Timer Cable Assembly	1
**45	100056	Power Requirement Specification Label	1
**46	100054	SA Fuse	1
**47	100100	Power Adapter, 12 V, 6.0 A	1
**48	100055	Line Power Cord	1

\*\* Items not shown.



Tulip Medical Products  
4360 Morena Blvd., Suite 100  
San Diego, CA 92117

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