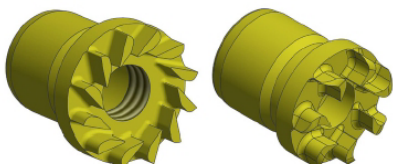

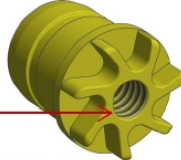



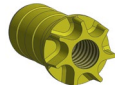

## Accessories For 4 mm DI (Drop-in) Spinners

We have new, more robust turbines for DI-3 and DI-4 rotors. We are phasing these in beginning with Torlon and GFT. The new design includes modified turbine blades and a threaded hole with a different thread pitch thus necessitating a new Insertion and Removal Tool with matching thread. (New spacers will have the new thread as well.) We will continue to supply which-ever turbine puller you need (or both).

Item	Turbine and Spacer Insertion and Removal Tool	Thread
 DI-4 Turbines		<b>Part No: 01003</b>  <b>1-72 THREAD</b>
Note how the turbine blades are connected to form a ring around the threaded hole.  New DI-4 Turbine		<b>Part No: 06027</b>  <b>0-80 THREAD</b>

➤ Thick wall rotors and Torlon caps are provided for **fastest spinning**. DI4 Thin wall rotors and caps are available for maximum signal to noise. The maximum speed of thin wall rotors is about 50% the maximum speed of thick wall rotors. Teflon, Kel-F or PPS spacers are provided for highest homogeneity and rf field strength.

For material specifications: <http://dotynmr.com/download/Materials-and-Speeds-Data.pdf>

<b>4 mm DI-4</b> <b>Rotor Length = 24.95 mm</b> Low density* Spinning max Thick Wall rotor – Max. 18 kHz		DI4 Sample Volume : Thick Wall = 122 $\mu$ l, with Spacers = 60 $\mu$ l Thin Wall = 158 $\mu$ l, with Spacers = 77 $\mu$ l	Front DI Turbine 	Rear DI Tip Cap 
<b>Please note: Although the front turbine and rear tip cap are sold separately, a pair consisting of a front turbine and a rear tip cap are needed for spinning.</b>				
DI4 #	Price	Description	Maximum SpinSpeed*	
<b>Thick Wall Rotors and Caps</b>			<b>4 mm</b>	
45127	<b>\$712</b>	DI 4mm Thick Wall Rotor – Silicon Nitride	<b>18 kHz</b>	
45127-P	<b>790</b>	DI 4mm Thick Wall Rotor – Silicon Nitride - <b>Painted</b> *	<b>18 kHz</b>	
45129	<b>\$82</b>	DI 4mm Front Turbine Cap for Thick Wall – <b>GFT</b> (glass filled torlon)	<b>18 kHz</b>	
46136	<b>82</b>	DI 4mm Rear Tip Cap for Thick Wall – <b>GFT</b> (glass filled torlon)	<b>18 kHz</b>	
46142	<b>82</b>	DI 4mm Front Turbine Cap for Thick Wall – <b>Torlon</b>	<b>18 kHz</b>	
46140	<b>82</b>	DI 4mm Rear Tip Cap for Thick Wall – <b>Torlon</b>	<b>18 kHz</b>	
46142-A	<b>82</b>	DI 4mm Front Turbine Cap for Thick Wall – <b>Aurum</b>	<b>15 kHz</b>	
46140-A	<b>82</b>	DI 4mm Rear Tip Cap for Thick Wall – <b>Aurum</b>	<b>15 kHz</b>	
45130	<b>82</b>	DI 4mm Front Turbine Cap for Thick Wall – <b>Kel-F</b>	<b>9 kHz</b>	
46137	<b>82</b>	DI 4mm Rear Tip Cap for Thick Wall – <b>Kel-F</b>	<b>9 kHz</b>	
45137	<b>30</b>	DI 4mm Spacer for Thick Wall Rotors – <b>Teflon</b>	Restricts/centers the sample to within the coil region). <b>Two are required.</b>	
46206	<b>30</b>	D 4mm Spacer for Thick Wall Rotors – <b>Kel-F</b>		
46401	<b>30</b>	D 4mm Spacer for Thick Wall Rotors – <b>PPS</b>		

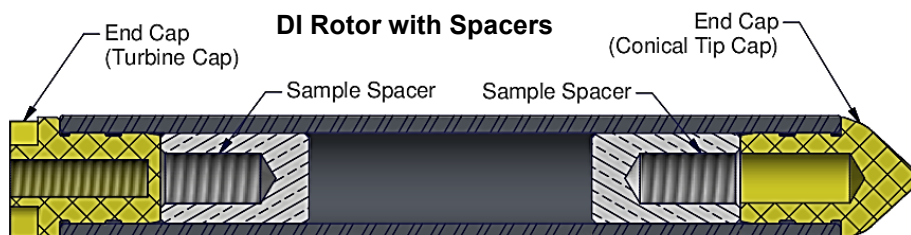
\* Painted rotors are for probes with optical detection

(US\$ – Foreign prices higher, plus taxes.)

4mm DI Continued...

## Accessories For 4 mm DI (Drop-in) Spinners

DI4 #	Price	DI4 Thin Wall Rotors and Caps	Maximum Spin Speed
03136	<b>\$712</b>	DI 4mm Thin Wall Rotor – Silicon Nitride	12 kHz
03136-P	<b>790</b>	DI 4mm Thin Wall Rotor – Silicon Nitride - <b>Painted</b> <b>Painted rotors are for probes with optical detection</b>	12 kHz
45128	<b>648</b>	DI 4mm Thin Wall Rotor – Zirconia (Use Only With Probe with Optical detection)	10 kHz
45131	<b>82</b>	DI 4mm Front Turbine Cap for Thin Wall – <b>GFT</b> (glass filled torlon)	12 kHz
46138	<b>82</b>	DI 4mm Rear Tip Cap for Thin Wall – <b>GFT</b> (glass filled torlon)	12 kHz
46141	<b>82</b>	DI 4mm Front Turbine Cap for Thin Wall – <b>Torlon</b>	12 kHz
46169	<b>82</b>	DI 4mm Rear Tip Cap for Thin Wall – <b>Torlon</b>	12 kHz
46141-A	<b>82</b>	DI 4mm Front Turbine Cap for Thin Wall – <b>Aurum</b>	12 kHz
46169-A	<b>82</b>	DI 4mm Rear Tip Cap for Thin Wall – <b>Aurum</b>	12 kHz
45132	<b>82</b>	DI 4mm Front Turbine Cap for Thin Wall – <b>Kel-F</b>	9 kHz
46139	<b>82</b>	DI 4mm Rear Tip Cap for Thin Wall – <b>Kel-F</b>	9 kHz
45138	<b>30</b>	DI 4mm Spacer for Thin Wall Rotors – <b>Teflon</b>	Restricts/centers the sample to within the coil region). <b>Two are required.</b>
46207	<b>30</b>	DI 4mm Spacer for Thin Wall Rotors – <b>Kel-F</b>	
46402	<b>30</b>	DI 4mm Spacer for Thin Wall Rotors – <b>PPS</b>	
DI4 #	Price	Cap Pullers and Accessories	
01003 or 06027	<b>\$82</b>	DI4 Turbine or Spacer Insertion and Removal Tool (Used for both turbine caps and spacers - since 10/2012)	
96188	<b>130</b>	Rotor Holder and Plungers – tools for tip cap and rear spacer removal	
99683	<b>190</b>	Sample Packing Set For Thick Wall DI 4 Rotors	
99682	<b>190</b>	Sample Packing Set For Thin Wall DI 4 Rotors	



### DI-4 Sealing Cells for Liquids and Semi-Solids

Sealing cells are for use inside DI thin-walled ceramic rotors. The plastic cells are available in Kel-F with teflon plugs for proton NMR, or in ultem with polyvinyl-chloride (PVC) plugs for fluorine NMR.

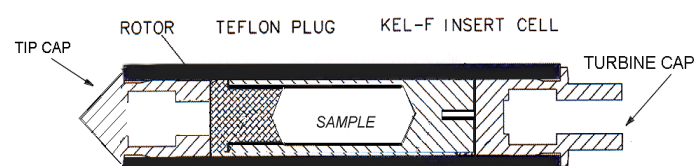
All cells are suitable for long-term sample storage without loss. They may be used with all common solvents, including acetone, alcohols, benzene, DMSO, ethers, methylene chloride, strong bases, and most strong acids – as long as the sample density does not exceed the density of the plug (2.2 g/cm<sup>3</sup> for teflon, 1.4 g/cm<sup>3</sup> for PVC).

#### 4 mm DI4 Sealing Cells. (For thin wall rotors )

Kel-F cells with teflon plugs or Ultem cells with PVC plugs.

	Kel-F Part #	Ultem Part #	Sample Volume	Price
DI4	95142	95143	50 µL .....	\$52
DI4	95141	95139	20 µL .....	52

#### DI 4 Rotor with sealing cell in place



(US\$ –Foreign prices higher, plus taxes.)