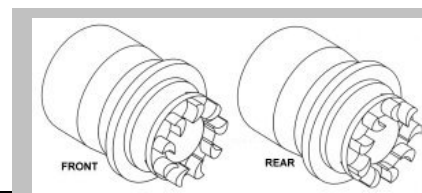


Accessories for XC and SS Continued

XC and SuperSonic (SS) rotors and caps are different. However, short XC and SS caps are interchangeable – noted XC/SS.



XC4 Part #	5 mm XC or SS Part #	7 mm XC or SS Part #	10 mm XC/SS Part #	Description	Price
Caps for THICK Wall Rotors – fastest spinning					
99705	96432	96462	96436	XC/SS Kel-F Short Thick Cap Pair	\$155
99702	99844	99637		XC Only- Kel-F Long Thick Cap Pair	155
99684	99822	99816		XC/SS GFT Short Thick Cap Pair (glass filled torlon)	175
99685	99821			XC Only- GFT Long Thick Cap Pair (glass filled torlon)	175
96431	96457	96466	96438	XC/SS Aurum Short Thick Cap Pair	175
96433	99839	99641		XC Only- Aurum (or Torlon*) Long Thick Cap Pair	175
----	----	96468	96449	SS Kel-F O-Ring Cap Pair	250
----	----	96469	96451	SS Aurum O-Ring Cap Pair	250
Caps for THIN Wall Rotors					
99699	96434	96464	96471	XC/SS Kel-F Short Thin Cap Pair	\$155
99697	99835	99635		XC Only- Kel-F Long Thin Cap Pair	155
99686	99824	99817		XC/SS GFT Short Thin Cap Pair (glass filled torlon)	175
99687	99823			XC Only- GFT Long Thin Cap Pair (glass filled torlon)	175
99722	99834	96465	96473	XC/SS Aurum (or Torlon*) Short Thin Cap Pair	175
99723	99833	99636		XC Only- Aurum (or Torlon*) Long Thin Cap Pair	175
-----	96472	90613		SS Only-Torlon Long Thin Cap Pair	175
Cap Pullers and Accessories					
96182	96182	96360	96174	Puller for Turbine Caps	\$210
----	----	96170	96190	Threaded Cap Puller for O-ring Caps	110
01026	06019	06023	----	Rotor Holder – use with plungers below	45
01028	06021	43761	----	Plunger - thick wall- to push out caps or sealing cells	35
01029	06022	42039	----	Plunger - thin wall- to push out caps or sealing cells	35
99683	96511	96113	96508	XC Sample Packing Set for Thick Wall Rotors	\$160
99682	96513	96114	96507	XC Sample Packing Set for Thin Wall Rotors	160
----	96509	96510	96508	SS Sample Packing Set for Thick Wall Rotors	\$160
----	96515	96517	96507	SS Sample Packing Set for Thin Wall Rotors	160

MAS Turbine Cap Spinning Speeds

Maximum Spinning Speeds (kHz) For Caps at Room Temperature

Cap Style	4 mm XC	5-mm XC or SuperSonic	7-mm XC or SuperSonic	10-mm XC or SuperSonic
Kel-F	11	10	7	5
Caps with o-rings	-----	-----	7	5
Aurum	24	20	14	10
Torlon or GFT	24	20	14	10

This chart represents only material characteristics for caps. Check the Probe and Rotor Specifications.

* Torlon has very similar NMR properties and may be substituted if Aurum is not available.

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

Accessories for the XC and SuperSonic (SS) MAS Spinners

XC Rotors

4 mm XC4 Length =20.95 mm			
Sample – 66 µL to 124 µL			
Low density* Spinning maximum kHz			
# 43255	Silicon Nitride XC Thick Wall Rotor	24	\$800
# 43483	Zirconia XC Thin Wall Rotor	11	620

5 mm XC5 Length =22.25 mm			
Sample – 82 µL to 201 µL			
Low density* Spinning maximum kHz			
# 13265	Silicon Nitride XC Thick Wall Rotor	18	\$800
# 13266	Zirconia XC Thick Wall Rotor	13	560
# 13267	Silicon Nitride XC Thin Wall Rotor	16	875
#13268	Zirconia XC Thin Wall Rotor	9	620

7 mm XC7 Length =29.00 mm			
Sample – 241 µL to 564 µL			
Low density* Spinning maximum kHz			
# 43526	Silicon Nitride XC Thick Wall Rotor	12	\$800
# 43528	Zirconia XC Thick Wall Rotor	8	560
# 43527	Silicon Nitride XC Thin Wall Rotor	11	875
# 43529	Zirconia XC Thin Wall Rotor	7	620

10 mm XC10 Length =35.00 mm			
Sample volume – .6 mL to 1.10 mL			
Low density* Spinning maximum kHz			
# 44265	Zirconia XC Thick Wall Rotor	8.5	\$735
# 44266	Zirconia XC Thin Wall Rotor	4.5	775



SuperSonic Rotors

5 mm SuperSonic Length =14.93 mm			
Sample volume – 56 µL to 110 µL			
Low density* Spinning maximum kHz			
# 13251	Silicon Nitride SS Thick Wall Rotor	18	\$600
# 13252	Zirconia SS Thick Wall Rotor	13	425
# 42388	Silicon Nitride SS Thin Wall Rotor	16	650
# 42396	Zirconia SS Thin Wall Rotor	9	450

7 mm SuperSonic Length =22.10 mm			
Sample volume – 215 µL to 360 µL			
Low density* Spinning maximum kHz			
# 13857	Silicon Nitride SS Thick Wall Rotor	12	\$ 600
# 13858	Zirconia SS Thick Wall Rotor	8	425
# 13859	Silicon Nitride SS Thin Wall Rotor	11	650
# 13861	Zirconia SS Thin Wall Rotor	7	450

10 mm SuperSonic Length =27.50 mm			
Sample volume – .6 mL to 1.10 mL			
Low density* Spinning maximum kHz			
# 42113	Silicon Nitride SS Thick Wall Rotor	8.5	\$ 725
# 42138	Zirconia SS Thick Wall Rotor	6	725
# 42193	Silicon Nitride SS Thin Wall Rotor	8	775
# 42173	Zirconia SS Thin Wall Rotor	4.5	775

- Thick wall rotors and GFT or Torlon caps are provided for **fastest spinning** and ease in packing. Thin wall rotors and caps are available for maximum signal to noise. The maximum speed of thin wall rotors is about 50% the speed of thick wall rotors. Long caps are provided for highest homogeneity and rf field strength.
- **For XC probes**, (beginning in 2000) XC "Slow MAS" is provided for stable very slow spinning of tissues, liquids, and CC by a change in "nozzle caps" only. **The same turbine caps are used.** All choices of XC rotors and caps may be used with slow spin nozzle caps. A 50% reduction in maximum spinning speeds should be expected for each type. See page 4 for more specifications.
- XC, SuperSonic, DI, High Speed, and Standard accessories are **not** interchangeable unless specified. If unsure about correct supplies, contact us with the probe DSI-serial number and we can help.

* Please refer to the APPENDIX for the **speeds/density spinning speed chart** and for material information.

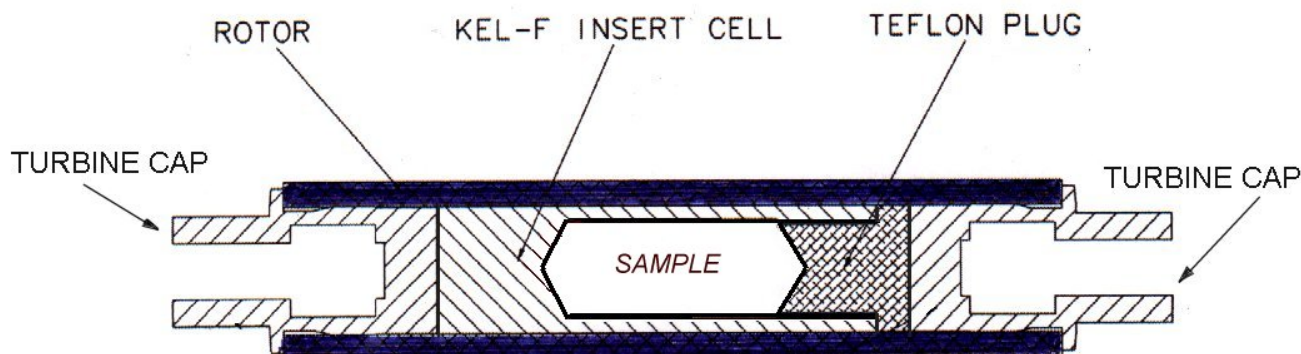
(US\$ – Foreign prices higher, plus taxes)

DI and XC

Sealing Cells for Liquids and Semi-Solids

All sealing cells are for use inside XC and 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/cm³ for teflon, 1.4 g/cm³ for PVC).



DI and XC Kel-F (or Ultem) Insert Cell With Plug for Liquids or Semi-solid Samples

Note: DI rotors use a front turbine and a rear tip cap, not the rear turbine as shown in the sealing cell picture above.

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

Kel-F cells with teflon plugs or Ultem cells with PVC plugs. Use with thin-walled rotors and caps.

	Kel-F Part #	Ultem Part #	Sample Volume	Price
DI4	95142	95143	50 μL	\$35
DI4	95141	95139	20 μL	35

5 mm XC5 Sealing Cells. (For thin wall rotors)

Kel-F cells with teflon plugs or Ultem cells with PVC plugs. Use with thin-walled rotors and short XC caps.

	Kel-F Part #	Ultem Part #	Sample Volume	Price
XC5	99801	99793	75 μL	\$35
XC5	99799	99792	50 μL	35
XC5	99797	99789	20 μL	35

4 mm XC4 Sealing Cells. (For thin wall rotors)

Kel-F cells with teflon plugs or Ultem cells with PVC plugs. Use with thin-walled rotors and short XC caps.

	Kel-F Part #	Ultem Part #	Sample Volume	Price
XC4	99694	99691	40 μL.....	\$35
XC4	99693	99689	20 μL	35
XC4	99692	99688	10 μL	35
XC4	99802	99796	4 μL	35

7 mm XC7 Sealing Cells. (For thin wall rotors)

Kel-F cells with teflon plugs or Ultem cells with PVC plugs. Use with thin-walled rotors and short XC caps.

	Kel-F Part #	Ultem Part #	Sample Volume	Price
XC7	99629	99633	225 μL	\$35
XC7	99628	99632	100 μL	35
XC7	99627	99631	50 μL	35