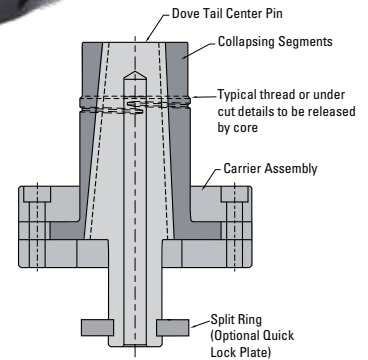


# DoveTail Collapsible Cores



## DoveTail Core Advantages

- Positive mechanically actuated Collapsible Core
- Collapse amount: 5% to 7% per side
- Eliminates costly Rack and Gear Systems
- Enables faster mold cycle times
- Patented Quick Lock Plate (optional) helps cut service time
- Built-in center cooling channel
- Standard and custom sizes available

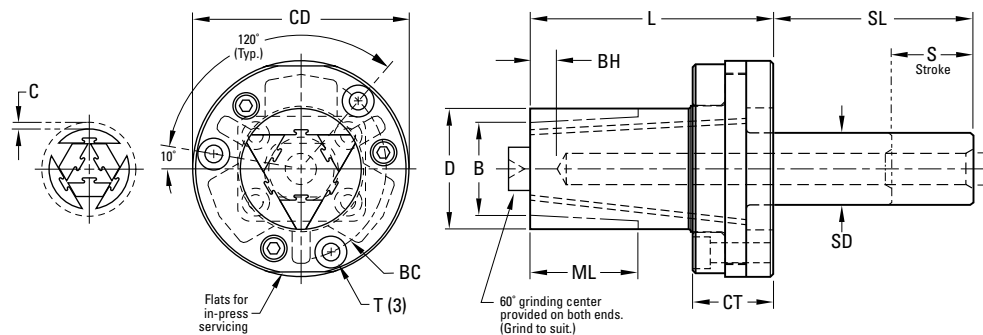


## Simplified Mold Design Maximizes Cost Savings

The Collapsible Core DT Series provides a more compact and simplified solution to molding challenging internal undercut features such as o-ring grooves, slots and snap-fit designs. Available in four original standard sizes and in customized sizes, the DT Collapsible Core Series eliminates the need for unscrewing mechanisms.

## Dove Tail Collapsible Cores Enable Application Design Flexibility

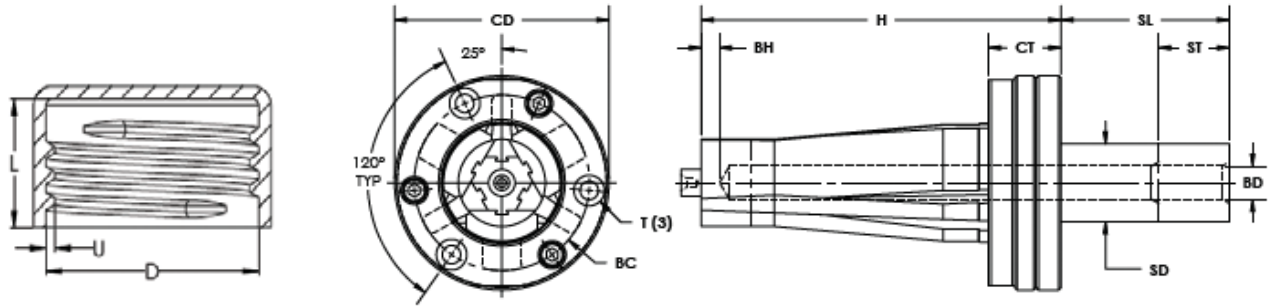
- All standard DT Series Collapsible Cores offer 360 degree molding of threads or other undercut features
- Molded parts are not required to be closed at one end; they may be partially or completely open
- DME offers customized DT Cores with pre-machined part detail
- A variety of coatings and treatments are available
- For an engineering review, email your part drawing or application to [dme\\_mech\\_eng@milacron.com](mailto:dme_mech_eng@milacron.com)



ITEM NUMBER	D MINIMUM OUTER DIAMETER	B MINIMUM INNER DIAMETER +3'/SIDE	ML MAXIMUM MOLDING LENGTH	C MAXIMUM COLLAPSE	CD CARRIER DIAMETER +0.00 - 0.05	CT CARRIER ASSEMBLY THICKNESS ± 0.05	L CORE LENGTH +0.1 - 0.0	SL SHAFT LENGTH	SD SHAFT DIAMETER +0.00 - 0.02	BD COOLING HOLE DIAMETER	BH DISTANCE TO COOLING HOLE	BC MOUNTING SCREW BOLT CIRCLE	T MOUNTING SCREWS	S MAXIMUM COLLAPSE STROKE
DT18	21	17	22	1.1	53	21	60	60	16	6	6	40	M5 x 25	34
DT28	33	25	28	1.6	60	22	67	60	20	8	8	47	M5 x 25	38
DT38	42	33	43	2.1	76	28	85	60	25	10	10	60	M6 x 35	54
DT48	54	42	50	2.4	98	37	104	70	30	12	12	78	M8 x 40	62

NOTE: All dimensions and tolerances are in millimeters

# DoveTail Collapsible Cores

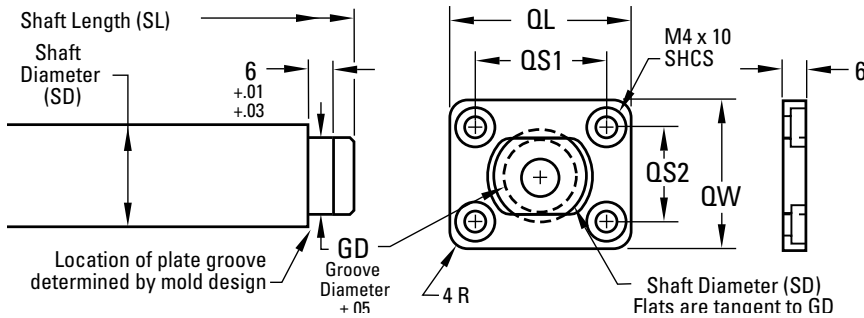


ITEM NUMBER	D MAXIMUM OUTER DIA	U MAX UNDERCUT	L MAX MOLDING LENGTH	ST MAX COLLAPSE STROKE	H CORE LENGTH	SD SHAFT DIAMETER	BD COOLING HOLE DIAMETER	BH DISTANCE TO COOLING HOLE	SL SHAFT LENGTH	CD CARRIER DIAMETER	CT CARRIER ASSEMBLY THICKNESS	BC MOUNTING SCREW BOLT CIRCLE	T MOUNTING SCREWS (SHCS)
DT1010	10.00-10.99mm .394-.433in	.36mm .014in	7.5mm .295in	43.5mm 1.713in	87mm 3.425in	10.5mm .413in	3mm .1in	5mm .2in	58mm 2.283in	50mm 1.969in	21mm .827in	37mm 1.457in	M5 x 25
DT1111	11.00-11.99mm .433-.472in	.41mm .016in	8mm .315in	44.5mm 1.752in									
DT1212	12.00-12.99mm (.472-.511in)	.46mm .018in	8.5mm .335in	45.5mm 1.791in	87mm 3.425in	12mm .472in	4mm .2in	5mm .2in	59mm 2.323in	52mm 2.047in	21mm .827in	38mm 1.496in	M6 x 35
DT1313	13.00-13.99mm .512-.551in	.51mm .020in	9mm .354in	46.5mm 1.831in									
DT1414	14.00-14.99mm .551-.590in	.56mm .022in	9.5mm .374in	47mm 1.850in	87mm 3.425in	14mm .551in	5mm .2in	5mm .2in	60mm 2.362in	54mm 2.126in	21mm .827in	41mm 1.614in	M5 x 25
DT1515	15.00-15.99mm .591-.630in	.61mm .024in	10mm .394in	47.5mm 1.870in									
DT1616	16.00-16.99mm .630-.669in	.66mm .026in	10.5mm .413in	48mm 1.890in	87mm 3.425in	15.5mm .610in	6mm .2in	5mm .2in	62mm 2.441in	56mm 2.205in	21mm .827in	43mm 1.693in	M5x25
DT1717	17.00-17.99mm .669-.708in	.71mm .028in	11mm .433in	48.5mm 1.909in									
DT1819	18.00-18.99mm .709-.787in	.82mm .032in	12mm .472in	50mm 1.969in	99mm 3.898in	18mm .709in	8mm .3in	6mm .2in	61mm 2.402in	63mm 2.480in	24mm .945in	49mm 1.929in	M6x30
DT2021	20.00-20.99mm .787-.866in	.92mm .036in	12.5mm .492in	55mm 2.165in									
DT2224	22.00-24.99mm .866-.984in	1.04mm .041in	13mm .512in	59mm 2.323in	109mm 4.291in	22mm .866in	10mm .4in	6mm .2in	64mm 2.520in	69mm 2.717in	24mm .945in	55mm 2.165in	M6x30
DT2527	25.00-27.99mm .984-1.102in	1.20mm .047in	15mm .591in	66.5mm 2.618in									
DT2830	28.00-30.99mm 1.102-1.220in	1.36mm .053in	18mm .709in	71mm 2.795in	129mm 5.079in	28mm 1.102in	12mm .5in	6mm .2in	60mm 2.362in	77mm 3.031in	26mm 1.024in	63mm 2.480in	M6x30
DT3133	31.00-33.99mm 1.220-1.338in	1.50mm .059in	21mm .827in	78mm 3.071in									
DT3436	34.00-36.99mm 1.339-1.456in	1.73mm .068in	22mm .866in	79mm 3.110in	139mm 5.472in	34mm 1.339in	14mm .6in	6mm .2in	64mm 2.520in	93mm 3.661in	27mm 1.063in	75mm 2.953in	M8x30
DT3739	37.00-39.99mm 1.457-1.574in	1.88mm .074in	24mm .945in	85mm 3.346in									
DT4042	40.00-42.99mm 1.575-1.693in	2.06mm .081in	25mm .984in	86mm 3.386in	151mm 5.945in	39mm 1.535in	17mm .7in	6mm .2in	65mm 2.559in	101mm 3.976in	32mm 1.260in	83mm 3.268in	M8x35
DT4345	43.00-45.99mm 1.693-1.811in	2.24mm .088in	27mm 1.063in	93mm 3.661in									
DT4648	46.00-48.99mm 1.811-1.929in	2.42mm .095in	28mm 1.102in	94mm 3.701in	161mm 6.339in	42mm 1.654in	20mm .8in	6mm .2in	69mm 2.717in	110mm 4.331in	32mm 1.260in	90mm 3.543in	M8x35
DT4951	49.00-51.99mm 1.929-1.047in	2.57mm .101in	31mm 1.220in	99mm 3.898in									
DT5254	52.00-54.99mm 2.047-2.165in	2.77mm .109in	32mm 1.260in	100mm 3.937in	183mm 7.205in	50mm 1.969in	22mm .9in	6mm .2in	85mm 3.346in	130mm 5.118in	39mm 1.535in	107mm 4.213in	M10x45
DT5557	55.00-57.99mm 2.165-2.283in	2.95mm .116in	34mm 1.339in	106mm 4.173in									
DT5860	58.00-60.99mm 2.208-2.401in	3.10mm .122in	36mm 1.417in	111mm 4.370in									



# DoveTail Collapsible Cores

DT Series Collapsible Cores Optional Quick Lock Plate

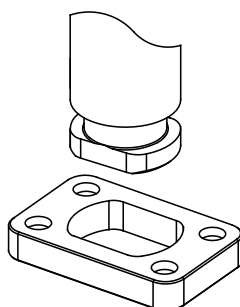
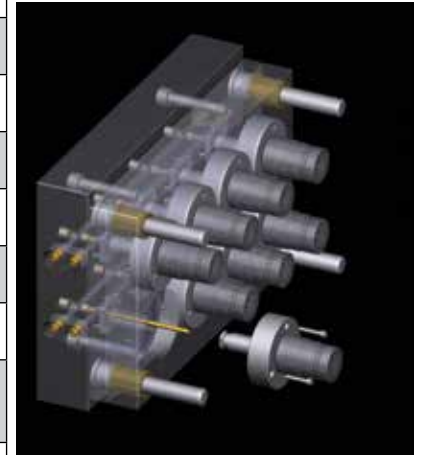


## OPTIONAL QUICK LOCK PLATE

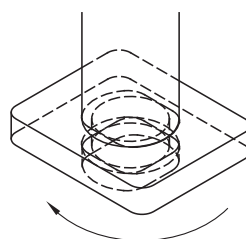
Material: A-2, 54-57 HRC

Utilizing the exclusive Quick Lock mounting configuration, the DT Core can be removed and serviced while the mold remains in the press. The feature allows for a higher cavitation percentage and lower maintenance costs than other tool design approaches

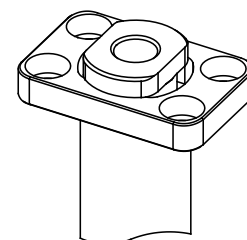
ITEM NUMBER	USE WITH DT CORE	GD	QL +0.00 -0.05	QW +0.00 -0.05	QS1	QS2	H	B (MOUNTING SCREWS)
DTQLP1011	DT1010 DT1111	7.43mm .93in	26.01mm 1.024in	18.01mm .709in	17.50mm .689in	9.50mm .774in	4mm .1575in	M3
DTQLP1213	DT1212 DT1313	9.02mm .355in	27.99mm 1.102in	18.01mm .709in	19.51mm .768in	9.50mm .374in	4mm .1575in	M3
DTQLP1415	DT1414 DT1515	9.81mm .386in	30mm 1.181in	19.99mm .787in	21.49mm .846in	11.51mm .453in	5mm .1969in	M3
DTQLP1617	DT1616 DT1717	10.60mm .417in	32mm 1.260in	22mm .866in	23.50mm .925in	13.49mm .531in	5mm .1969in	M3
DTQLP1821	DT1819 DT2021	12.99mm .511in	35mm 1.378in	24.99mm .984in	24.99mm .984in	15.01mm .591in	6mm .2362in	M4
DTQLP2227	DT2224 DT2527	16.16mm .636in	38mm 1.496in	27.99mm 1.102in	27.99mm 1.102in	18.01mm .709in	6mm .2362in	M4
DTQLP2833	DT2830 DT3133	21.72mm .855in	43.99mm 1.732in	32mm 1.260in	34.01mm 1.339in	22mm .866in	6mm .2362in	M4
DTQLP3439	DT3436 DT3739	25.69mm 1.011in	51.99mm 2.047in	40.01mm 1.575in	40.01mm 1.575in	27.99mm 1.102in	8mm .3150in	M5
DTQLP4045	DT4042 DT4345	30.45mm 1.199in	56.01mm 2.205in	43.99mm 1.732in	43.99mm 1.732in	32mm 1.260in	8mm .3150in	M5
DTQLP4651	DT4648 DT4951	34.42mm 1.355in	57.99mm 2.283in	46mm 1.811in	46mm 1.811in	34.01mm 1.339in	8mm .3150in	M5
DTQLP5260	DT5254 DT5557 DT5860	39.18mm 1.543in	65.99mm 2.598in	54mm 2.126in	53.01mm 2.087in	41mm 1.614in	10mm .3937in	M6
DTQLP18	DT18	12mm .472in	35mm 1.378in	22mm .866in	25mm .984in	12mm .472in	6mm .2362in	M4
DTQLP28	DT28	15mm .591in	38mm 1.496in	25mm .984in	28mm 1.102in	15mm .591in	6mm .2362in	M4
DTQLP38	DT38	19mm .748in	41mm 1.614in	31mm 1.220in	30mm 1.181in	20mm .787in	6mm .2362in	M4
DTQLP48	DT48	23mm .906in	44mm 1.732in	35mm 1.378in	34mm 1.339in	25mm .984in	6mm .2362in	M4



Align and push end of Center Pin through Quick Lock Plate



Rotate Center Pins clockwise 90° to lock into plate



Bottom view of Center Pin and Quick Lock Plate in locked position

# DoveTail Collapsible Cores

DT Series Collapsible Cores Split Rings & Optional Retention Sleeve

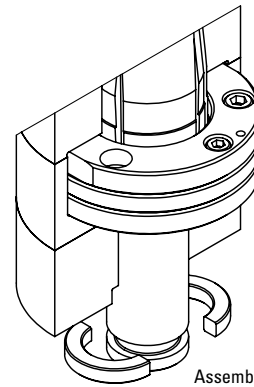
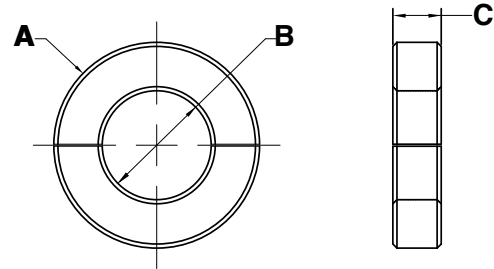


## Split Ring

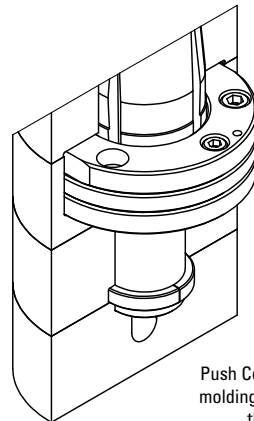
Material: A-2, 54-57 HRC

Utilizing the split ring allows for a simpler attachment method.

ITEM NUMBER	USE WITH DT CORE	A OUTER DIAMETER	B INNER DIAMETER	C THICKNESS
DTSR1011	DT1010 DT1111	16mm .63in	7.95mm .313in	3.99mm .157in
DTSR1213	DT1212 DT1313	17.53mm .69in	9.53mm .375in	3.99mm .157in
DTSR1415	DT1414 DT1515	20.32mm .80in	10.31mm .406in	5mm .197in
DTSR1617	DT1616 DT1717	21.08mm .83in	11.13mm .438in	5mm .197in
DTSR1821	DT1819 DT2021	25.40mm 1.00in	13.49mm .531in	5.99mm .236in
DTSR2227	DT2224 DT2527	28.70mm 1.13in	16.66mm .656in	5.99mm .236in
DTSR2833	DT2830 DT3133	34.29mm 1.35in	22.23mm .875in	5.99mm .236in
DTSR3439	DT3436 DT3739	42.16mm 1.66in	26.19mm 1.031in	8mm .315in
DTSR4045	DT4042 DT4345	46.99mm 1.85in	30.96mm 1.219in	8mm .315in
DTSR4651	DT4648 DT4951	50.80mm 2.00in	34.93mm 1.375in	8mm .315in
DTSR5260	DT5254 DT5557 DT5860	59.69mm 2.35in	39.70mm 1.563in	9.98mm .393in
DTSR18	DT18	24.89mm .98in	12.70mm .500in	6.35mm .250in
DTSR28	DT28	27.94mm 1.10in	15.88mm .625in	6.35mm .250in
DTSR38	DT38	34.80mm 1.37in	20.62mm .812in	6.35mm .250in
DTSR48	DT48	37.59mm 1.48in	25.40mm 1.000in	6.35mm .250in



Assemble Core into the Mold.  
Then collapse the core to install the split ring.

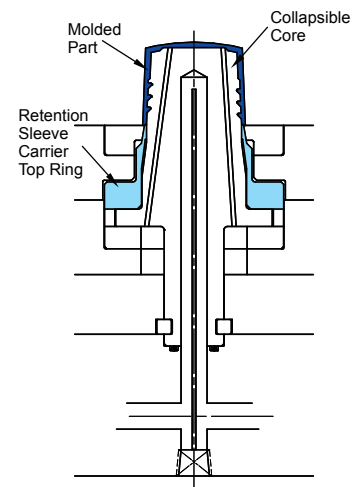
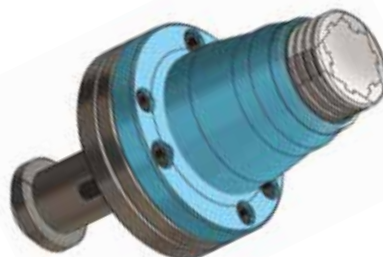


Push Center Pin forward to molding position and install the back plate

## Optional Retention Sleeve

Material: D-2, 60-62 HRC

Retention Sleeves for the DoveTail Cores assure the position of the molded part during core collapse and part ejection. Email [dme\\_mech\\_eng@milacron.com](mailto:dme_mech_eng@milacron.com) for more information.



# RT-Series Collapsible Cores

Standard and Mini Collapsible Cores



## Standard - Economically produce complex plastic parts

The Collapsible Core is a major breakthrough for molding plastic parts requiring internal threads, undercuts, protrusions or cut-outs. The patented design incorporates only three moving parts, which utilize conventional mold movements.

The Collapsible Core's automatic operation makes it possible for you to produce parts that, previously, had been considered impossible to mold. Parts with internal protrusions, dimples, interrupted threads and cut-outs can now be economically produced on a high- or low-volume basis.

ITEM NUMBER	A MAX O.D. OF THREAD OR CONFIG		B MIN I.D. OF THREAD OR CONFIG		H CENTER PIN DIAMETER (AT TOP OF CORE)		L MAX WORKING LENGTH (INCL MOLD SHUT-OFF)		C COLLAPSE PER SIDE AT TOP OF CORE**				O.A.L. OVERALL LENGTH OF COLLAPSIBLE CORE (ONLY)	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	*inch	*mm	inch	mm
CC125PC	.720	18.29	.620	15.75	.490	12.45	.800	20.32	.027	.69	.032	.81	5.605	142.37
CC150PC	.850	21.59	.700	17.78	.580	14.73	1.000	25.40	.037	.94	.042	1.07	6.615	168.02
CC175PC	.970	24.64	.760	19.30	.640	16.26	1.000	25.40	.043	1.09	.048	1.21	6.615	168.02
CC200PC	1.270	32.25	.910	23.11	.785	19.93	1.150	29.21	.043	1.09	.048	1.21	7.315	185.80
†CC250PC	1.270	32.25	.910	23.11	.785	19.93	1.150	29.21	.043	1.09	.048	1.21	5.440	138.17
CC202PC	1.390	35.30	1.010	25.65	.885	22.47	1.150	29.21	.055	1.39	.064	1.62	7.315	185.80
†CC252PC	1.390	35.30	1.010	25.65	.885	22.47	1.150	29.21	.055	1.39	.064	1.62	5.440	138.17
CC302PC	1.740	44.19	1.270	32.25	1.105	28.06	1.400	35.56	.068	1.72	.083	2.10	7.315	185.80
†CC352PC	1.740	44.19	1.270	32.25	1.105	28.06	1.400	35.56	.068	1.72	.083	2.10	6.065	154.05
CC402PC	2.182	55.42	1.593	40.46	1.388	35.25	1.700	43.18	.090	2.28	.103	2.61	7.815	198.50
CC502PC	2.800	71.12	2.060	52.32	1.750	44.45	1.900	48.26	.115	2.92	.125	3.17	9.625	244.47
CC602PC	3.535	89.78	2.610	66.29	2.175	55.24	2.400	60.96	.140	3.55	.148	3.75	11.250	285.75
CC652PC	3.800	96.52	2.890	73.41	2.450	62.23	2.400	60.96	.150	3.81	.160	4.06	11.250	285.75
CC702PC	4.225	107.31	3.350	85.09	2.875	73.02	2.400	60.96	.165	4.19	.170	4.32	11.250	285.75

## Mini - Easily mold parts with closures as small as 13mm

The Collapsible Mini-Core broadens the applications of collapsible core molds for closures as small as 13mm. Due to the smaller diameters involved, these Mini-Cores employ three larger collapsing segments combined with three narrow, non-collapsing blades, which are an integral part of the center pin.

As a result, up to 80% full threads or undercuts can be molded. The function of the collapsing core also permits threads to stop at any point along the molded length – threads need not run out to the top of the core as with unscrewing molds. If a seal is required in the top of the closure, an undercut can be molded into the part to hold such a seal in place.

Three standard sizes of Collapsible Mini-Cores are available, for 13-16, 17-20 and 21-24mm closures.

ITEM NUMBER	FOR CLOSURE DIAMETER RANGE	A MAX O.D. OF THREAD OR CONFIG		B MIN I.D. OF THREAD OR CONFIG		H CENTER PIN DIAMETER (AT TOP OF CORE)		WIDTH OF (3) NON-COLLAPSING CENTER OF PIN BLADES (AT TOP OF CORE)		L MAX WORKING LENGTH (INCL MOLD SHUT-OFF)		C COLLAPSE PER SIDE AT TOP OF CORE*	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
CCM0001	13-16	.645	16.38	.425	10.80	.300	7.62	.170	4.32	.850	21.59	.052	1.32
CCM0002	17-20	.805	20.45	.560	14.22	.420	10.67	.190	4.83	.850	21.59	.057	1.45
CCM0003	21-24	.965	24.51	.710	18.03	.560	14.22	.200	5.08	1.000	25.40	.059	1.50