



COLLAPSIBLE CORES

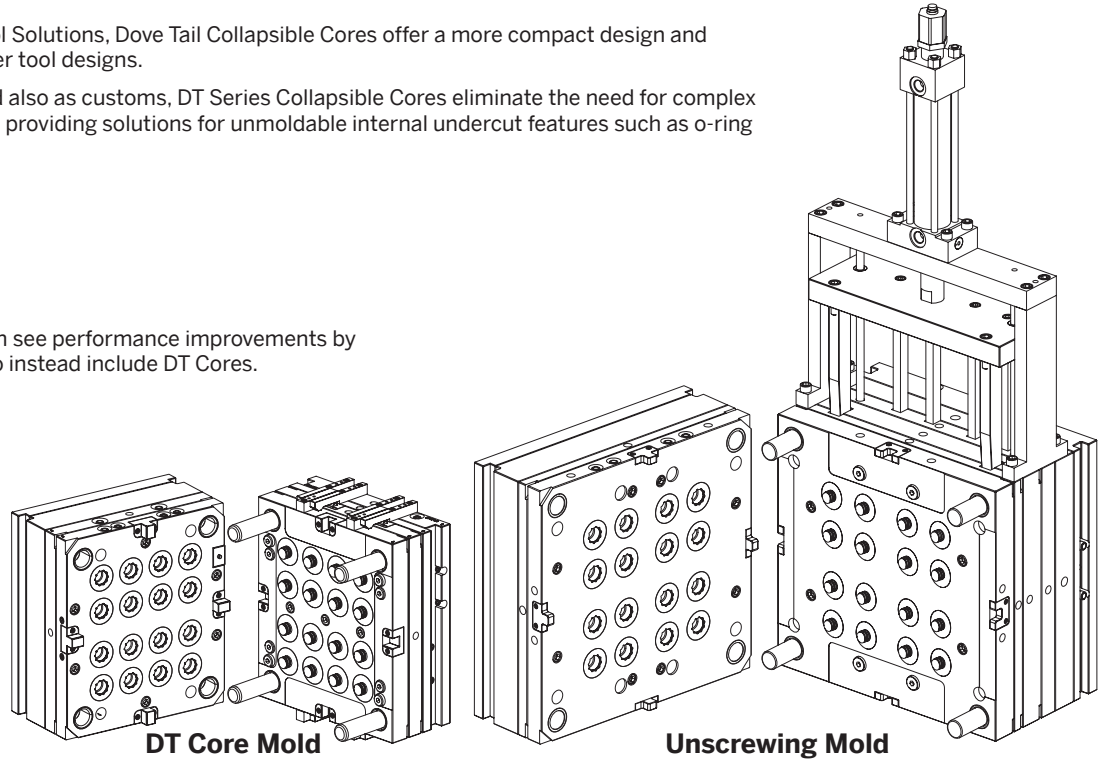
DT SERIES

Through an alliance with Roehr Tool Solutions, Dove Tail Collapsible Cores offer a more compact design and simplified mold approach over other tool designs.

Available in four standard sizes and also as customs, DT Series Collapsible Cores eliminate the need for complex unscrewing mechanisms as well as providing solutions for unmoldable internal undercut features such as o-ring grooves, slots, and snap fit details.

DT Cores allow for:

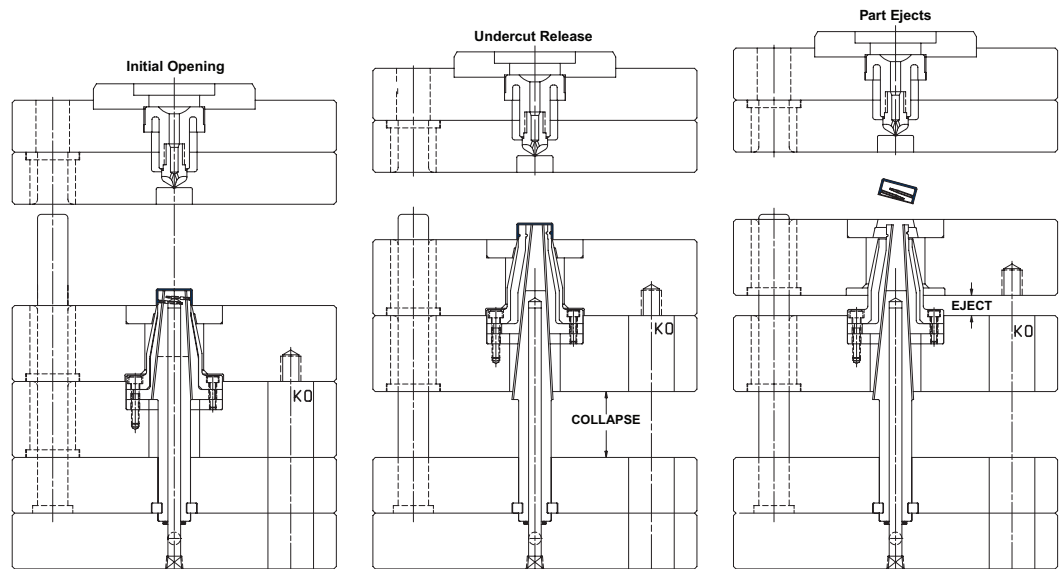
- Simplified, smaller molds
- Faster cycle times
- Improved part quality
- Reduced mold maintenance
- Existing unscrewing molds can see performance improvements by converting the movable half to instead include DT Cores.



The DT Collapsible Core is a positive, mechanically actuated collapsible core that eliminates complex gear and rack approaches, resulting in a simpler mold and a faster cycle time.

The maintenance advantage is dramatic due to a patented quick-lock feature that allows removal and servicing of the core unit while the mold is still in the press.

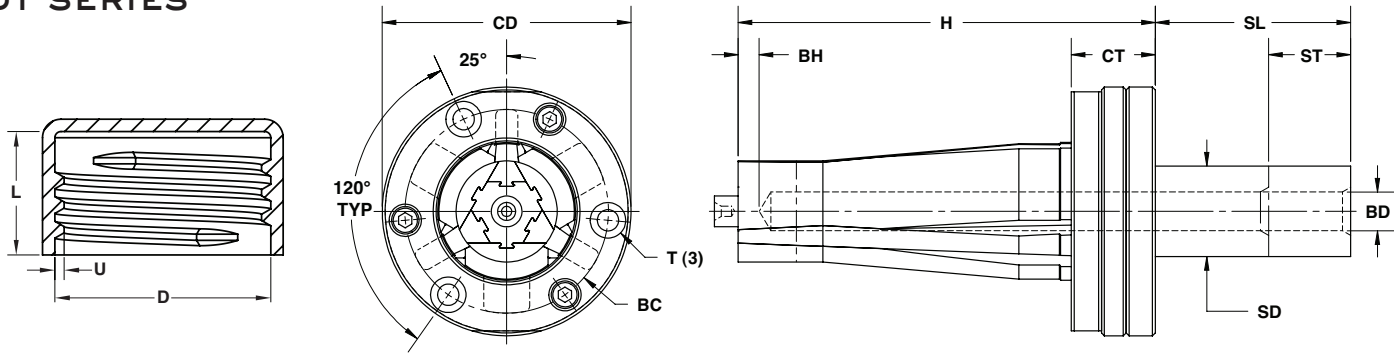
The DT Core's compact design allows for shorter stack height, tighter cavity spacing, and also creates opportunities for use in slides or on the stationary side of the mold.



DT Cores use a simple single stage collapse/eject sequence typically run by the machine KO.

COLLAPSIBLE CORES

DT SERIES



CATALOG NUMBER	D Maximum Outer Diameter	U Max Undercut	L Maximum Molding Length	ST Maximum 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		12mm .472in	4mm .2in	5mm .2in	59mm 2.323in	52mm 2.047in	21mm .827in	38mm 1.496in	
DT1212	12.00-12.99mm .472-.511in	.46mm .018in	8.5mm .335in	45.5mm 1.791in	87mm 3.425in	14mm .551in	5mm .2in	5mm .2in	60mm 2.362in	54mm 2.126in	21mm .827in	41mm 1.614in	M5x25
DT1313	13.00-13.99mm .512-.551in	.51mm .020in	9mm .354in	46.5mm 1.831in		15.5mm .610in	6mm .2in	5mm .2in	62mm 2.441in	56mm 2.205in	21mm .827in	43mm 1.693in	
DT1414	14.00-14.99mm .551-.590in	.56mm .022in	9.5mm .374in	47mm 1.850in	87mm 3.425in	18mm .709in	8mm .3in	6mm .2in	61mm 2.402in	63mm 2.480in	24mm .945in	49mm 1.929in	M6x30
DT1515	15.00-15.99mm .591-.630in	.61mm .024in	10mm .394in	47.5mm 1.870in		22mm .866in	10mm .4in	6mm .2in	64mm 2.520in	69mm 2.717in	24mm .945in	55mm 2.165in	
DT1616	16.00-16.99mm .630-.669in	.66mm .026in	10.5mm .413in	48mm 1.890in	99mm 3.898in	28mm 1.102in	12mm .5in	6mm .2in	60mm 2.362in	77mm 3.031in	26mm 1.024in	63mm 2.480in	M6x30
DT1717	17.00-17.99mm .669-.708in	.71mm .028in	11mm .433in	48.5mm 1.909in		34mm 1.339in	14mm .6in	6mm .2in	64mm 2.520in	93mm 3.661in	27mm 1.063in	75mm 2.953in	
DT1819	18.00-19.99mm .709-.787in	.82mm .032in	12mm .472in	50mm 1.969in	129mm 5.079in	39mm 1.535in	17mm .7in	6mm .2in	65mm 2.559in	101mm 3.976in	32mm 1.260in	83mm 3.268in	M8x35
DT2021	20.00-21.99mm .787-.866in	.92mm .036in	12.5mm .492in	55mm 2.165in		151mm 6.339in	50mm 1.969in	22mm .9in	6mm .2in	85mm 3.346in	130mm 5.118in	39mm 1.535in	
DT2224	22.00-24.99mm .866-.984in	1.04mm .041in	13mm .512in	59mm 2.323in	139mm 5.472in	42mm 1.654in	20mm .8in	6mm .2in	69mm 2.717in	110mm 4.331in	32mm 1.260in	90mm 3.543in	M8x35
DT2527	25.00-27.99mm .984-1.102in	1.20mm .047in	15mm .591in	66.5mm 2.618in		183mm 7.205in	50mm 1.969in	22mm .9in	6mm .2in	85mm 3.346in	130mm 5.118in	39mm 1.535in	
DT2830	28.00-30.99mm 1.102-1.220in	1.36mm .053in	18mm .709in	71mm 2.795in	151mm 5.945in	42mm 1.654in	20mm .8in	6mm .2in	69mm 2.717in	110mm 4.331in	32mm 1.260in	90mm 3.543in	M8x35
DT3133	31.00-33.99mm 1.220-1.338in	1.50mm .059in	21mm .827in	78mm 3.071in		183mm 7.205in	50mm 1.969in	22mm .9in	6mm .2in	85mm 3.346in	130mm 5.118in	39mm 1.535in	
DT3436	34.00-36.99mm 1.339-1.456in	1.73mm .068in	22mm .866in	79mm 3.110in	151mm 5.945in	42mm 1.654in	20mm .8in	6mm .2in	69mm 2.717in	110mm 4.331in	32mm 1.260in	90mm 3.543in	M8x35
DT3739	37.00-39.99mm 1.457-1.574in	1.88mm .074in	24mm .945in	85mm 3.346in		183mm 7.205in	50mm 1.969in	22mm .9in	6mm .2in	85mm 3.346in	130mm 5.118in	39mm 1.535in	
DT4042	40.00-42.99mm 1.575-1.693in	2.06mm .081in	25mm .984in	86mm 3.386in	151mm 5.945in	42mm 1.654in	20mm .8in	6mm .2in	69mm 2.717in	110mm 4.331in	32mm 1.260in	90mm 3.543in	M8x35
DT4345	43.00-45.99mm 1.693-1.811in	2.24mm .088in	27mm 1.063in	93mm 3.661in		183mm 7.205in	50mm 1.969in	22mm .9in	6mm .2in	85mm 3.346in	130mm 5.118in	39mm 1.535in	
DT4648	46.00-48.99mm 1.811-1.929in	2.42mm .095in	28mm 1.102in	94mm 3.701in	151mm 5.945in	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 1.929-2.047in	2.57mm .101in	31mm 1.220in	99mm 3.898in		183mm 7.205in	50mm 1.969in	22mm .9in	6mm .2in	85mm 3.346in	130mm 5.118in	39mm 1.535in	
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		183mm 7.205in	50mm 1.969in	22mm .9in	6mm .2in	85mm 3.346in	130mm 5.118in	39mm 1.535in	
DT5860	58.00-60.99mm 2.283-2.401in	3.10mm .122in	36mm 1.417in	111mm 4.370in	183mm 7.205in	50mm 1.969in	22mm .9in	6mm .2in	85mm 3.346in	130mm 5.118in	39mm 1.535in	107mm 4.213in	M10x45

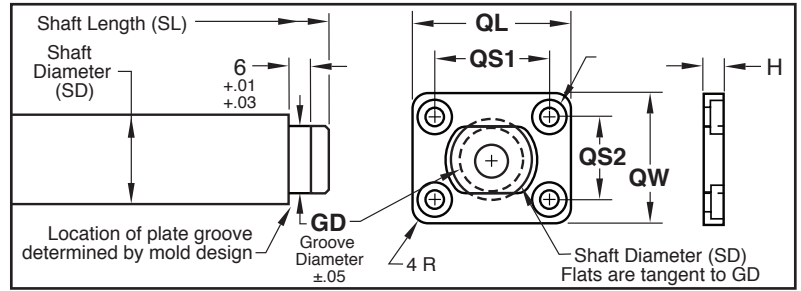
For sizes larger than 60mm, contact Roehr directly.



COLLAPSIBLE CORES

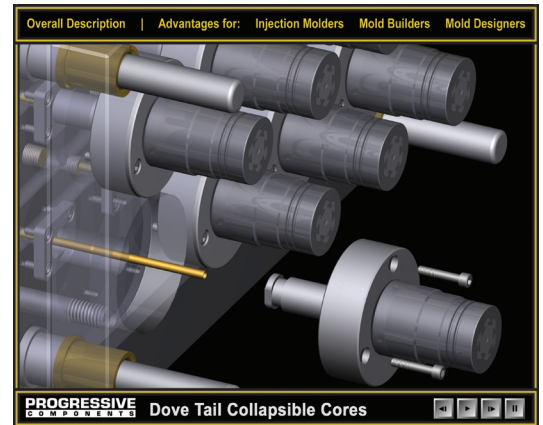
DT SERIES QUICK LOCK PLATE

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

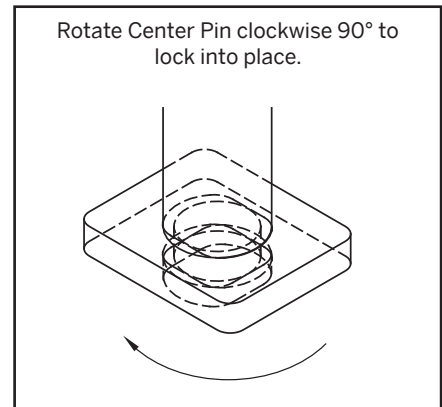
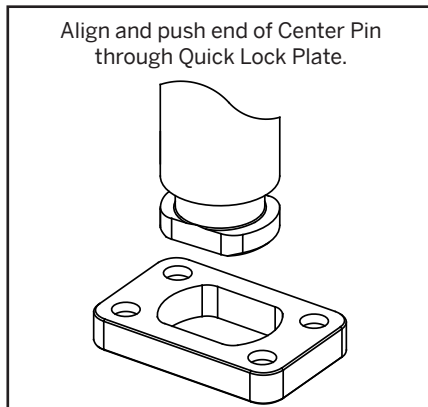
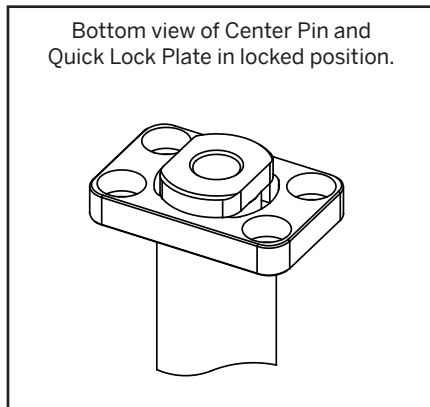


M A-2 **H** 54-57 HRC

CATALOG NUMBER	GD	QL +0.00 -0.05	QW +0.00 -0.05	QS1	QS2	H	B Mounting Screws
DTQLP1011	7.43mm .93in	26.01mm 1.024in	18.01mm .709in	17.50mm .689in	9.50mm .374in	4mm .1575in	M3 LHCS
DTQLP1213	9.02mm .355in	27.99mm 1.102in	18.01mm .709in	19.51mm .768in	9.50mm .374in	4mm .1575in	M3 LHCS
DTQLP1415	9.81mm .386in	30mm 1.181in	19.99mm .787in	21.49mm .846in	11.51mm .453in	5mm .1969in	M3 SHCS
DTQLP1617	10.60mm .417in	32mm 1.260in	22mm .866in	23.50mm .925in	13.49mm .531in	5mm .1969in	M3 SHCS
DTQLP1821	12.99mm .511in	35mm 1.378in	24.99mm .984in	24.99mm .984in	15.01mm .591in	6mm .2362in	M4 SHCS
DTQLP2227	16.16mm .636in	38mm 1.496in	27.99mm 1.102in	27.99mm 1.102in	18.01mm .709in	6mm .2362in	M4 SHCS
DTQLP2833	21.72mm .855in	43.99mm 1.732in	32mm 1.260in	34.01mm 1.339in	22mm .866in	6mm .2362in	M4 SHCS
DTQLP3439	25.69mm 1.011in	51.99mm 2.047in	40.01mm 1.575in	40.01mm 1.575in	27.99mm 1.102in	8mm .3150in	M5 SHCS
DTQLP4045	30.45mm 1.199in	56.01mm 2.205in	43.99mm 1.732in	43.99mm 1.732in	32mm 1.260in	8mm .3150in	M5 SHCS
DTQLP4651	34.42mm 1.355in	57.99mm 2.283in	46mm 1.811in	46mm 1.811in	34.01mm 1.339in	8mm .3150in	M5 SHCS
DTQLP5260	39.18mm 1.543in	65.99mm 2.598in	54mm 2.126in	53.01mm 2.087in	41mm 1.614in	10mm .3937in	M6 SHCS
DTQLP18	12mm .472in	35mm 1.378in	22mm .866in	25mm .984in	12mm .472in	6mm .236in	M4 SHCS
DTQLP28	15mm .591in	38mm 1.496in	25mm .984in	28mm 1.102in	15mm .591in	6mm .236in	M4 SHCS
DTQLP38	19mm .748in	41mm 1.614in	31mm 1.220in	30mm 1.181in	20mm .787in	6mm .236in	M4 SHCS
DTQLP48	23mm .906in	44mm 1.732in	35mm 1.378in	34mm 1.339in	25mm .984in	6mm .236in	M4 SHCS

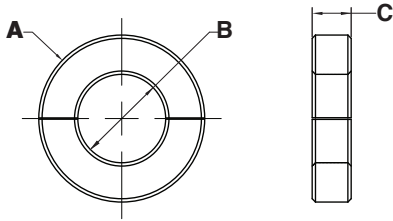


View the ability to remove a core from parting line at www.procomps.com/demo.

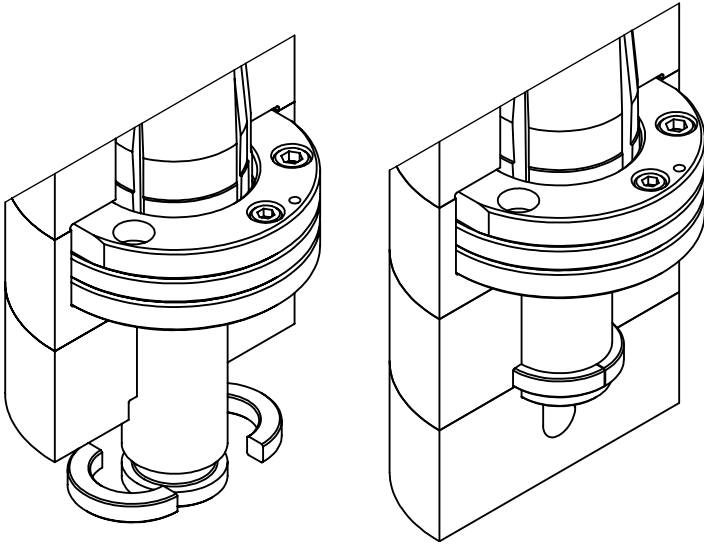


COLLAPSIBLE CORES

DT SERIES SPLIT RING



Utilizing the optional split ring allows for an alternative attachment method.



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

Push Center pin forward to molding position and install back plate

M A-2 **H** 54-57 HRC

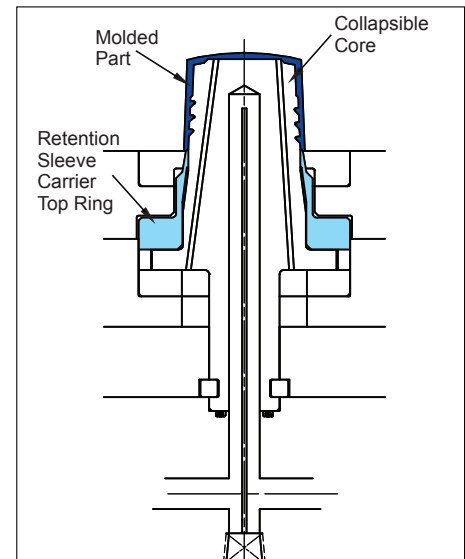
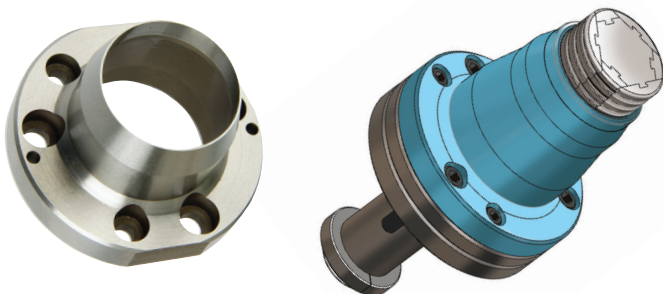
CATALOG NUMBER	A Outer Diameter	B Inner Diameter	C Thickness
DTSR1011	16mm .63in	7.95mm .313in	3.99mm .157in
DTSR1213	17.53mm .69in	9.53mm .375in	3.99mm .157in
DTSR1415	20.32mm .80in	10.31mm .406in	5mm .197in
DTSR1617	21.08mm .83in	11.13mm .438in	5mm .197in
DTSR1821	25.40mm 1.00in	13.49mm .531in	5.99mm .236in
DTSR2227	28.70mm 1.13in	16.66mm .656in	5.99mm .236in
DTSR2833	34.29mm 1.35in	22.23mm .875in	5.99mm .236in
DTSR3439	42.16mm 1.66in	26.19mm 1.031in	8mm .315in
DTSR4045	46.99mm 1.85in	30.96mm 1.219in	8mm .315in
DTSR4651	50.80mm 2.00in	34.93mm 1.375in	8mm .315in
DTSR5260	59.69mm 2.35in	39.70mm 1.563in	9.98mm .393in
DTSR18	24.89mm .98in	12.70mm .500in	6.35mm .250in
DTSR28	27.94mm 1.10in	15.88mm .625in	6.35mm .250in
DTSR38	34.80mm 1.37in	20.62mm .812in	6.35mm .250in
DTSR48	37.59mm 1.48in	25.40mm 1.000in	6.35mm .250in

COLLAPSIBLE CORES

DT SERIES RETENTION SLEEVE

Retention Sleeves for DoveTail Collapsible Cores assure the position of the molded part during core collapse and part ejection.

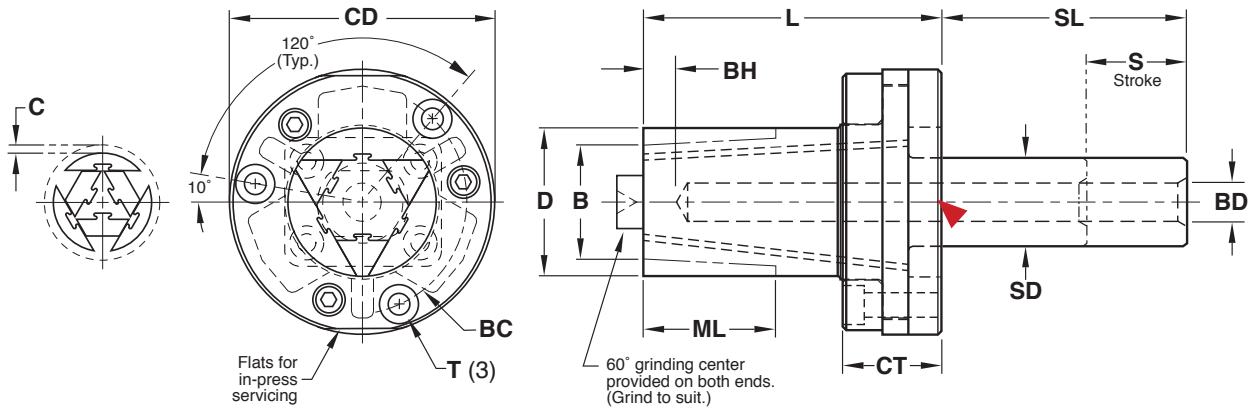
M D-2 **H** 60-62 HRC





COLLAPSIBLE CORES

DT SERIES



CAD insertion point

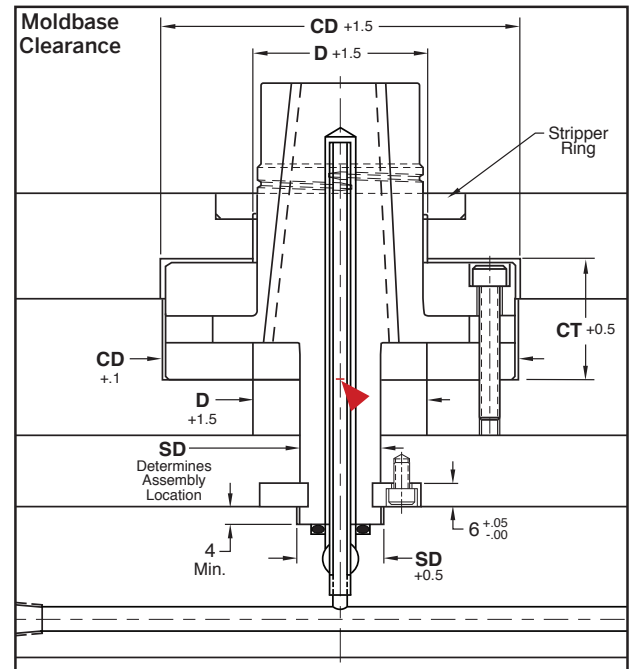
CATALOG NUMBER	D Maximum Outer Diameter	B Minimum Inner Diameter +3°/Side	ML Maximum Molding Length	C Maximum Collapse	CD Carrier Diameter +0.00 -0.05	CT Carrier Assembly Thickness ± 0.05	L Core Length +0.1 -0.0	SL Shaft Length	SD Shaft Diameter +0.00 -0.02	BD Cooling Hole Diameter	BH Distance to Cooling Hole	BC Mounting Screw Bolt Circle	T Mounting Screws	S Maximum Collapse Stroke
DT18	21mm .827in	17mm .669in	22mm .866in	1.1mm .043in	53mm 2.087in	21mm .827in	60mm 2.362in	60mm 2.362in	16mm .630in	6mm .236in	6mm .236in	40mm 1.575in	M5 x 25	34mm 1.339in
DT28	33mm 1.299in	25mm .984in	28mm 1.102in	1.6mm .063in	60mm 2.362in	22mm .866in	67mm 2.638in	60mm 2.362in	20mm .787in	8mm .315in	8mm .315in	47mm 1.850in	M5 x 25	38mm 1.496in
DT38	42mm 1.654in	33mm 1.299in	43mm 1.693in	2.1mm .083in	76mm 2.992in	28mm 1.102in	85mm 3.346in	60mm 2.362in	25mm .984in	10mm .394in	10mm .394in	60mm 2.362in	M6 x 35	54mm 2.126in
DT48	54mm 2.126in	42mm 1.654in	50mm 1.969in	2.4mm .094in	98mm 3.858in	37mm 1.457in	104mm 4.094in	70mm 2.756in	30mm 1.181in	12mm .472in	12mm .472in	78mm 3.071in	M8 x 40	62mm 2.441in

Each Dove Tail Collapsible Core includes:

- DT Series Core/Pin/Carrier Assembly
- Split Ring
- All mounting screws

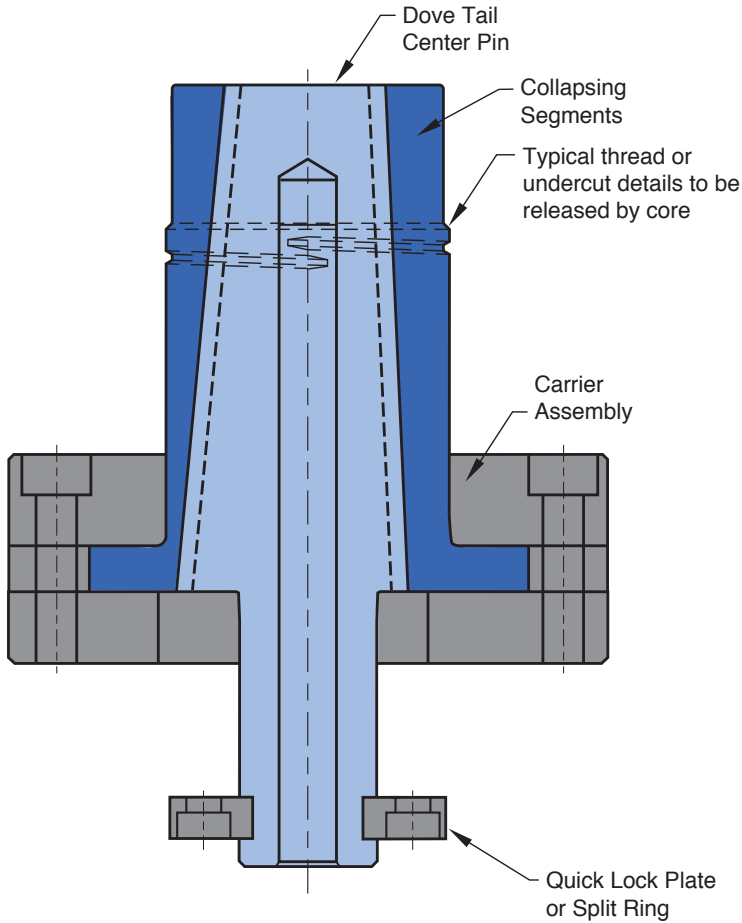
Application Guidelines

- All standard DT Cores offer 360° molding of threads or other undercuts.
- Molded parts do not need to be closed at one end. They may be partially or completely open.
- In the chart above, the actual collapse is dependent upon the final major diameter ground onto DT core. Please email information@roehrtool.com for an application review prior to ordering the DT Cores.
- Stripper ring can be provided by moldmaker with either a tapered or straight fit, as shown in the machining guidelines at right.
- Parts with size requirements that fall outside of the standard sizes are available on a custom order basis.
- Roehr Tool can provide DT Cores with your thread and undercut details already machined. In addition, coatings and treatments may also be provided. Email your part drawing or application to information@roehrtool.com for a review.



COLLAPSIBLE CORES

DT SERIES OVERVIEW



Collapsing Segments

M A-2 **H** 54-57 HRC

- Designed to mechanically collapse when the center pin is withdrawn.
- The fit between the segments is controlled to permit flash-free molding.

Center Pin

M D-2 **H** 60-62 HRC

- Serves to expand the segments of the core to their molding position
- The pin may be flush to the core face.

Carrier Assembly

M D-2 **H** 60-62 HRC

- Mounts DT Core assembly to the mold carrier plate.
- Provides guided and anti-rotational segment movement.

GRINDING FIXTURES



M A-2 **H** 54-57 HRC **S** Black Oxide

CATALOG NUMBER	CORE SIZE
DTGF1011	DT1011
DTGF1213	DT1213
DTGF1415	DT1415
DTGF1617	DT1617
DTGF1821	DT1821
DTGF2227	DT2227
DTGF2833	DT2833
DTGF3439	DT3439
DTGF4045	DT4045
DTGF4651	DT4651
DTGF5260	DT5260

CATALOG NUMBER	CORE SIZE
DTGF18	DT18
DTGF28	DT28
DTGF38	DT38
DTGF48	DT48

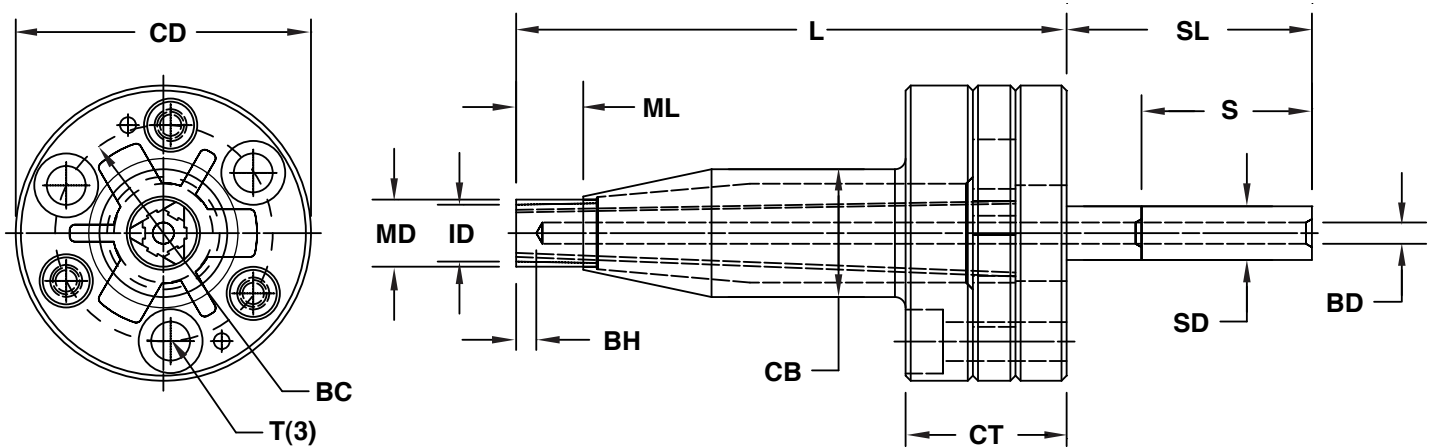


COLLAPSIBLE CORES

DT CORE SUB-IOMM SERIES

The Sub-10mm DT Cores make it possible to release very small threads and undercuts in molded caps, connectors and small medical applications.

- Allows molding of parts with 7-10mm ID.
- Quick Lock plates enable core removal from parting line.
- Simpler alternative to unscrewing molds.
- Reduces cycle time and maintenance requirements.

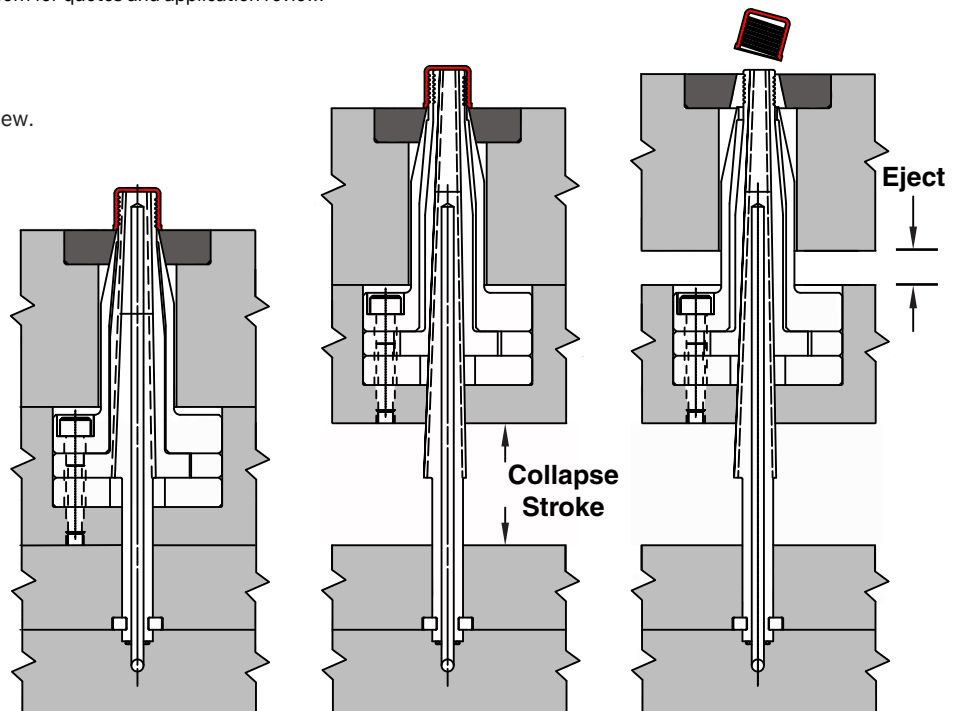


CATALOG NUMBER	MD Maximum Molding Diameter	ID Minimum Molding Diameter	ML Maximum Molding Length	UC Maximum Undercut	CD Carrier Assembly Diameter	CB Carrier Assembly Body	CT Carrier Assembly Thickness	L Length	SL Shaft Length	SD Shaft Diameter	S Maximum Collapse Stroke	BD Cooling Hole Diameter	BH Cooling Hole Height	BC Mounting Bolt Circle	T Mounting Bolt (3)
S10-Custom	10	7	10	.38	44	19	24	82	36	8	50	3	3	32	M5x25

NOTE: Submit part geometry to information@roehrtool.com for quotes and application review.

Application Guidelines:

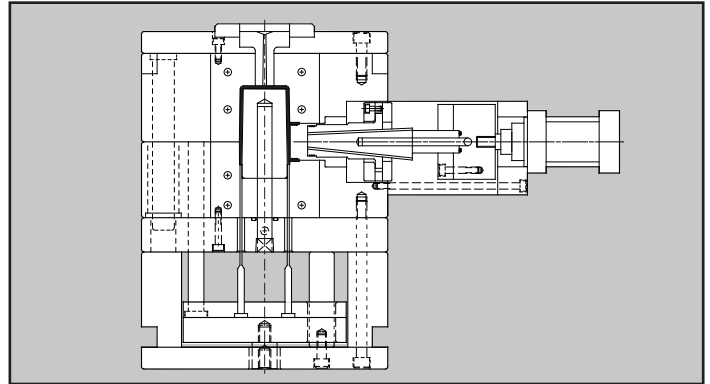
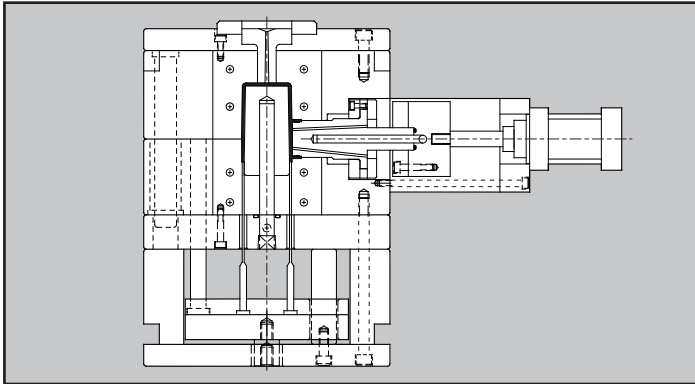
- Maximum undercut depth is determined by final molding diameter from application review.
- Collapse stroke is determined by undercut depth from application review.
- Cores are supplied complete with machined molding details.



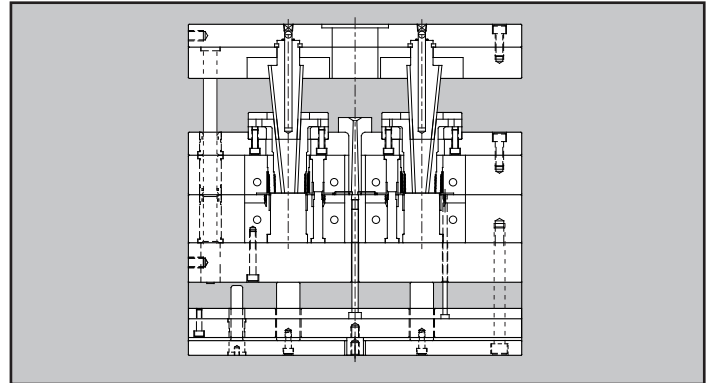
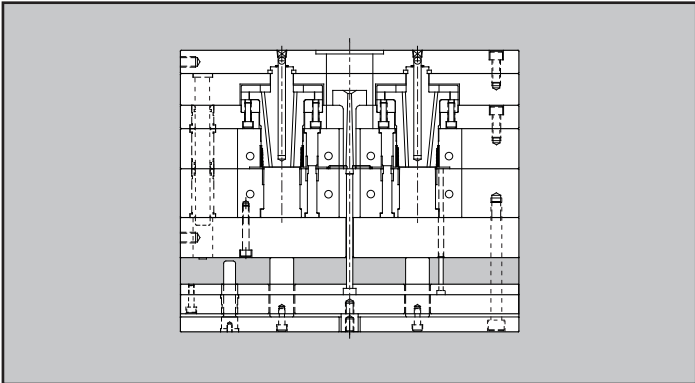
COLLAPSIBLE CORES

DT SERIES APPLICATIONS

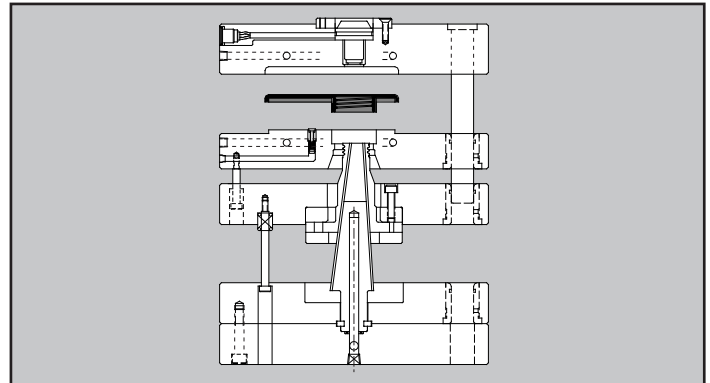
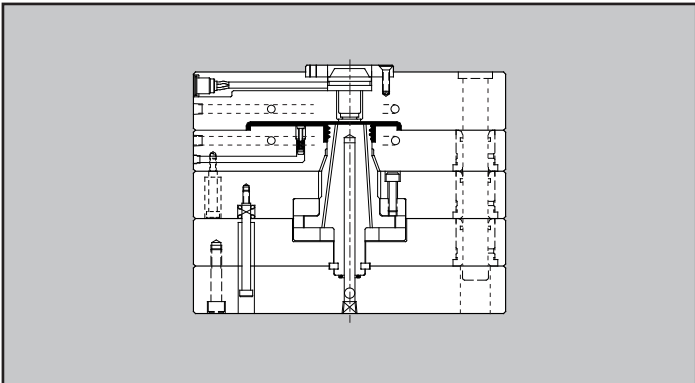
Side Action



Cavity Side



Boss Detail



Seal Ring

