

TORQUE ACTIVATED CORE CHUCK

DF-2000

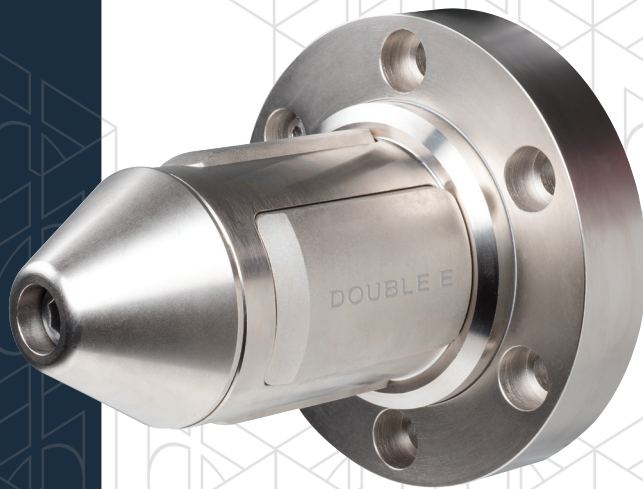
**Highest Roll Weight
Capacity**

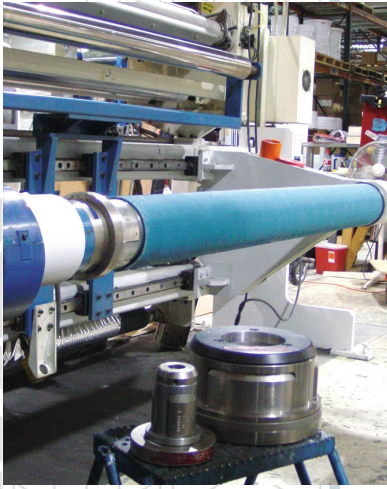
Highest Torque Capacity

Low Maintenance

**No Core Burnout
or Slippage**

No End of Roll Waste





BACKGROUND

The DF-2000 is the world's best-selling shaftless core chuck. It delivers numerous cost saving and productivity increasing benefits which other chucks simply cannot match. The chuck is easy to care for and extremely dependable.

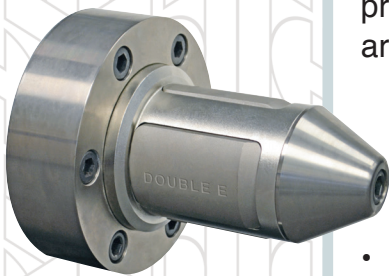
BENEFITS OF THE DESIGN

The DF-2000 automatically lifts and centers the roll.

- Roll bounce is eliminated.
- Web tension is easily controlled.
- Parts replacement is rare.
- Lubrication is unnecessary so dust does not accumulate.
- No need for maintenance, no jamming and consistent, easy removal of spent cores.

D2 TOOL STEEL AVAILABLE

- Increased longevity.
- Highest torque capacity.



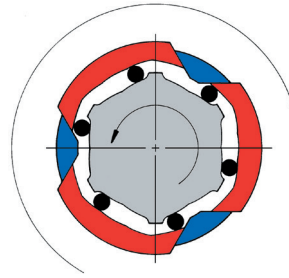
The EHD model provides 40% more contact area for increased gripping performance

Double E DF-2000 core chucks are available in many sizes and configurations.

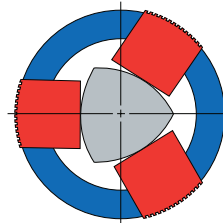
TORQUE-ACTIVATED DESIGN

The DF-2000's patented torque-activated design is simple and effective. Six precision ground steel rollers are mechanically linked to travel up and down bi-directional ramps created by the back of the jaws and the hexagonal cam.

- Minimizes friction.
- Used in the lightest to heaviest tension applications.
- Eliminates the complexity of pneumatic or hydraulic chucks.
- Rotary unions are not necessary.



Patented roller expansion of the DF-2000 reduces friction to assure concentric expansion and long life.



Less efficient torque activated chucks slide on flattened surfaces increasing friction and wear within the chuck.

Serrated jaws damage cores.

NO SIDEARM FORCE

The DF-2000 uses torque for expansion and smooth jaws to grip the core.

- No penetration of the internal wall.
- Cores can be reused.
- Rolls can be run down to the last wrap.
- Eliminates dust.
- Decrease in maintenance and downtime.

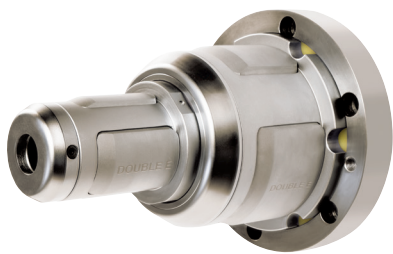
ROLLER DESIGN

The DF-2000 works with an advanced low friction roller design, while competing torque-activated chucks use sliding ramps for activation. These chucks can't overcome the friction created by the roll weight to lift and center the roll. A non-centering action results, causing roll bounce and possible jamming.

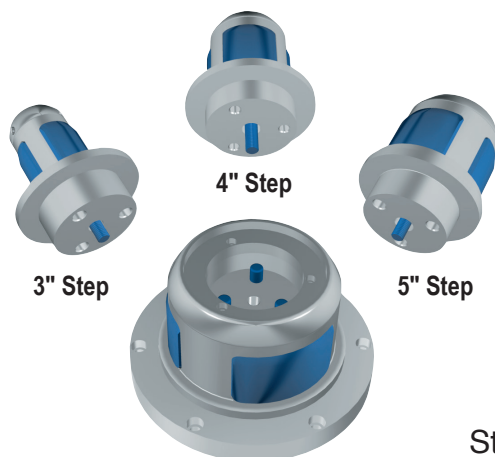


VERSATILITY OF DESIGN

Step Chucks save time when running multiple core sizes



- Ideal for applications that require multiple core sizes and where roll stand width capacity is not a concern.
- Available in any size, with the base chuck being the largest.
- Usually mounted to the roll stand with a custom flange.



8" BASE CHUCK
(chuck can be any size)

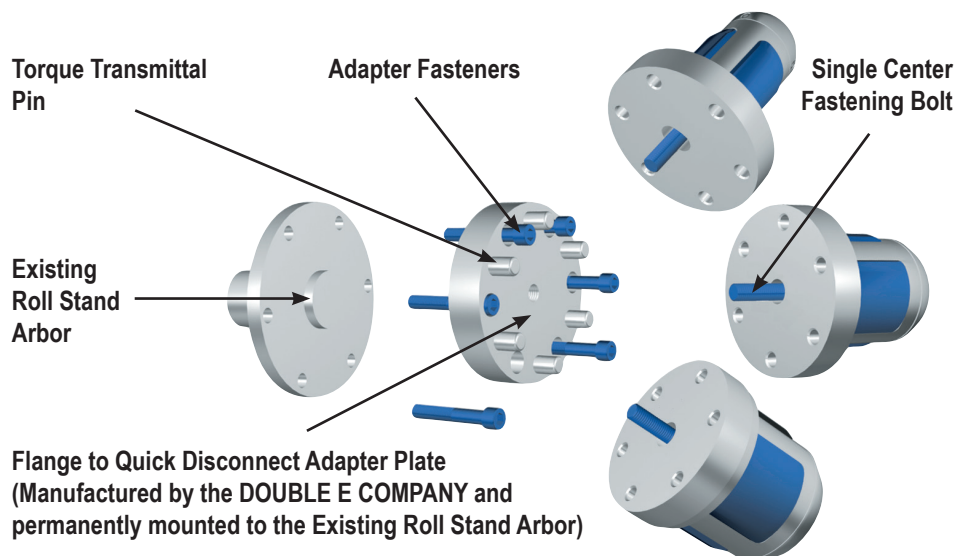
Top chuck mounts on the base chuck in a "Quick Disconnect" design.

- Easily and quickly swap top chucks if running multiple core sizes.
- Leave top chuck permanently mounted if only two core sizes are being used.

Step chucks allow machines to run any two core sizes interchangeably. When running the larger size core, the entire chuck fits inside. When running the smaller size, the core stops at the flange between the two chucks.

WHEN ROLL STAND WIDTH CAPACITY IS LIMITED, QUICK DISCONNECT CHUCKS FACILITATE CORE SIZE CHANGES

- Quick changes among a variety of core sizes.
- Swap on the fly with single center bolt.
- Ideal when roll stand width capacity is limited and changes of core sizes are frequent.



Flange to Quick Disconnect Adapter Plate
(Manufactured by the DOUBLE E COMPANY and permanently mounted to the Existing Roll Stand Arbor)

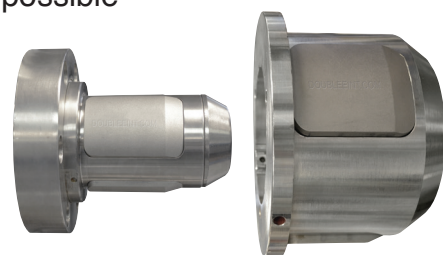
AUTOMATIC CORE EJECTION



The Double E "Core Kicker" features a core ejection device which kicks the core off the chuck as the roll stand opens.

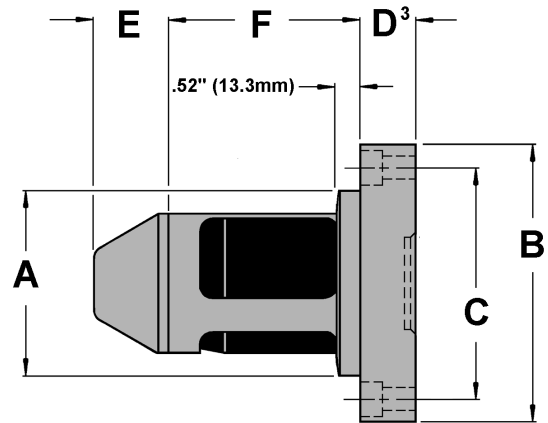
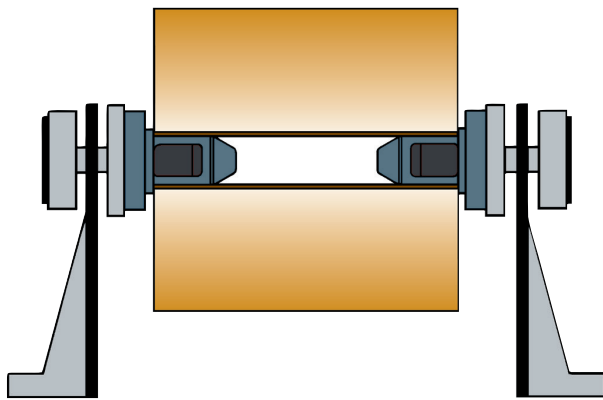
CHUCK ADAPTERS

Slide-on adapters are possible when multiple core sizes are used, quick changeovers are needed, and roll weights are not prohibitive.



Blow hole option available for easy cleaning.

DF-2000® PRODUCT SPECIFICATIONS



PRODUCT INFORMATION ON STANDARD FLANGE MOUNTED CHUCKS

The DF-2000 can be made in virtually any size. This chart only contains information on common sizes.

CORE SIZE IN. [mm]	2.80 [70.0]	3.00 [76.2]	3.00 [76.2]	3.00 [76.2]	3.94 [100.0]	3.94 [100.0]	4.72 [120.0]	4.72 [120.0]	5.00 [127.0]	5.00 [127.0]	5.90 [150.0]	5.90 [150.0]	6.00 [152.4]	6.00 [152.4]	8.00 [203.2]	10.00 [254.0]	11.81 [300.0]
TYPE	STD	SHORT	STD	EHDL	STD	EHDL	STD	EHDL	STD	EHDL	STD	EHDL	STD	EHDL	STD	STD	STD
COLLAPSED DIA. IN. [mm]	2.72 [69.0]	2.98 [75.7]	2.98 [75.7]	2.98 [75.7]	3.89 [98.8]	3.89 [98.8]	4.67 [118.6]	4.67 [118.6]	4.94 [125.5]	4.94 [125.5]	5.83 [148.0]	5.83 [148.0]	5.93 [150.6]	5.93 [150.6]	7.88 [200.2]	9.84 [250.0]	11.65 [296.0]
EXPANDED DIA. IN. [mm]	2.95 [75.0]	3.27 [83.1]	3.27 [83.1]	3.27 [83.1]	4.20 [106.7]	4.20 [106.7]	4.99 [126.7]	4.99 [126.7]	5.25 [133.4]	5.25 [133.4]	6.16 [156.5]	6.16 [156.5]	6.25 [158.8]	6.25 [158.8]	8.31 [211.1]	10.41 [264.4]	12.40 [315.0]
DIAMETER "A" IN. [mm]	3.70 [94.0]	3.97 [100.8]	3.97 [100.8]	3.97 [100.8]	4.97 [126.2]	4.97 [126.2]	5.71 [145.3]	5.71 [145.3]	5.97 [151.6]	5.97 [151.6]	6.97 [177.0]	6.97 [177.0]	6.97 [177.0]	6.97 [177.0]	9.00 [228.6]	11.00 [279.4]	12.8 [325.1]
DIAMETER "B" IN. [mm]	5.59 [141.9]	5.85 [148.6]	5.85 [148.6]	5.85 [148.6]	6.87 [174.5]	6.87 [174.5]	7.80 [198.0]	7.80 [198.0]	7.97 [202.4]	7.97 [202.4]	8.00 [203.2]	8.00 [203.2]	9.00 [228.6]	8.85 [225.0]	10.87 [276.1]	12.87 [327.0]	14.87 [377.5]
DIAMETER "C" MIN. IN. [mm]	4.61 [117.1]	4.87 [123.5]	4.87 [123.5]	4.87 [123.5]	5.87 [149.0]	5.87 [149.0]	6.78 [172.0]	6.78 [172.0]	6.87 [174.5]	6.87 [174.5]	6.81 [173.0]	6.81 [173.0]	8.00 [203.2]	7.85 [199.5]	9.87 [250.5]	11.87 [301.5]	13.87 [352.5]
"D" MIN. IN. [mm]	1.00 [25.4]	1.00 [25.4]	1.00 [25.4]	1.00 [25.4]	1.06 [27.0]	1.19 [30.2]	1.06 [27.0]	1.26 [32.0]	1.06 [27.0]	1.26 [32.0]	1.13 [28.7]	1.22 [31.0]	1.13 [28.7]	1.22 [31.0]	1.19 [30.0]	1.19 [30.0]	1.06 [26.9]
"E" MIN. IN. [mm]	1.00 [25.4]	.74 [18.8]	1.00 [25.4]	1.00 [25.4]	.92 [23.5]	.92 [23.5]	.76 [19.3]	.89 [22.6]	.76 [19.3]	.89 [22.6]	.43 [10.9]	.65 [16.5]	.43 [10.9]	.65 [16.5]	.62 [15.8]	.65 [16.5]	.65 [16.5]
"F" IN. [mm]	4.00 [101.6]	2.84 [72.1]	4.11 [104.4]	5.28 [134.1]	4.11 [104.4]	5.11 [129.8]	4.11 [104.4]	5.61 [142.5]	4.11 [104.4]	5.61 [142.5]	4.11 [104.4]	5.61 [142.5]	4.11 [104.4]	5.61 [142.5]	4.11 [104.4]	4.11 [104.4]	4.11 [104.4]
MAX. TORQUE PER CHUCK INCH-LB. [NM]	3800 [420]	3800 [420]	5600 [630]	6300 [710]	8600 [980]	12000 [1400]	11300 [1300]	18000 [2000]	12000 [1400]	18000 [2000]	18000 [2000]	18000 [2000]	18000 [2000]	18000 [2000]	24000 [2700]	28800 [3300]	36000 [4100]

NOTES:

1. Minimum torque to engage per chuck (INCH-LB) = Roll Weight (LB) x .2 or (NM) = Roll Weight (KG) x .05.
2. Dimensions B, C, D, E, and pilot dimensions specified by customer.
3. Tabulated minimums for dimensions B and C apply if 1/2-13 or M12 S.H.C.S. are used.
4. Minimum dimension D may vary depending on pilot dimensions.
5. Dimensions C and D may be less than tabulated minimums with "scaloped retainer" option.

DF-2000 SPECIFICATIONS

Company: _____ Date: _____

Name: _____ Title: _____

Address: _____

City/State/ZIP: _____

Telephone: _____ Fax: _____ email: _____

What type of chuck do you use now and what problems are you trying to solve? _____

CORE SPECIFICATIONS

Core Material: Paper/Cardboard Steel Aluminum Plastic Steel Capped EE Composite Other

Core Inside Diameter: _____ Core I. D. Tolerance \pm : _____ Number of Core Reuses: _____

ROLL SPECIFICATIONS

Max. Roll Weight: _____ Max. Roll Diameter: _____ Max. Roll Width: _____

Max. Tension (lb./linear in.): _____ Max Web Speed (ft./min.): _____ Web Thickness/Wt.: _____

Web Material: Board Paper Film Foil Other: _____

Min. Emer. Stopping Time: _____ Acceleration Time: _____ Deceleration Time: _____

ROLL STAND SPECIFICATIONS

Roll Stand Manufacturer: _____

Max. Opening Distance between Roll-Stand Mounting Flanges: _____

Unwind Rewind Single Brake/Drive Dual Brake/Drive

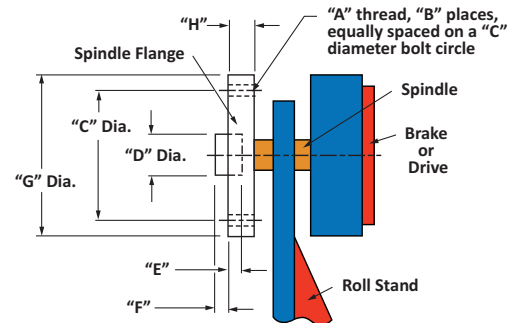
SPECIFICATIONS FOR STANDARD FLANGE MOUNTED CHUCK

"A" Thread Size: _____ "B" Places Equally Spaced: _____

"C" Diameter Bolt Circle: _____ "D" Arbor Pilot Diameter: _____

"E" Pilot Depth Female: _____ "F" Pilot Width Male: _____

"G" Spindle Flange O.D.: _____ "H" Spindle Flange Width: _____



QUICK DISCONNECT MOUNTING

Double E can provide an ADAPTER PLATE to allow your flange type arbor to accommodate Single-Center-Bolt / Dowel Pin Type "Quick Disconnect" multiple size core chucks for QUICK CHANGEOVER.

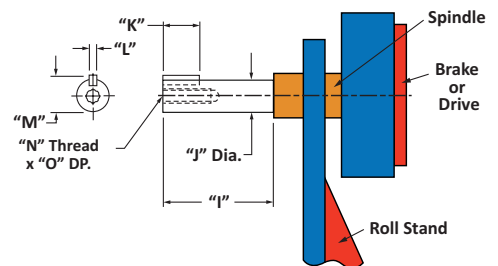
SPECIFICATIONS FOR STUB-ARBOR MOUNTING

"I" Arbor Length: _____ "J" Arbor Diameter: _____

"K" Key Length: _____ "L" Key Width: _____

"M" Distance Between Key Top / Shaft Bottom: _____

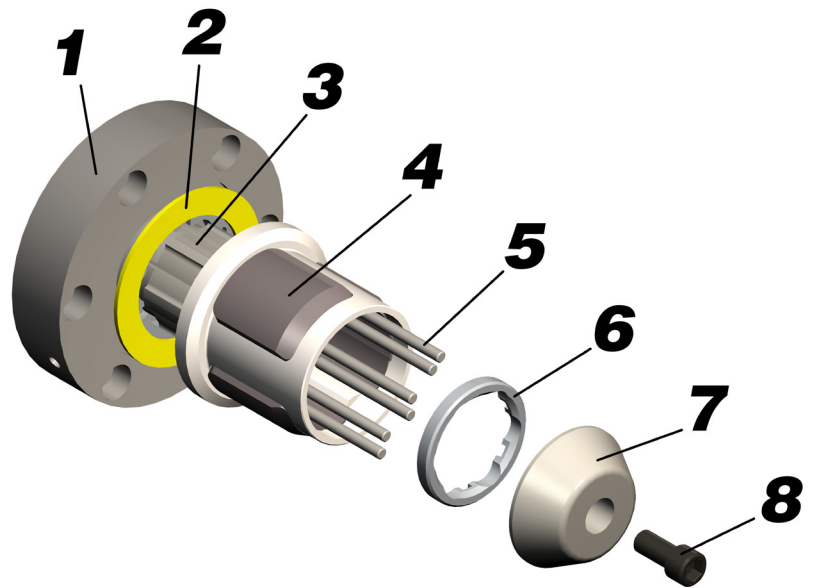
"N" Center Thread Size: _____ "O" Center Thread Depth: _____



NOTE: Double E stub-arbor mount chucks require a CENTER TAPPED HOLE, minimum 5/8" (16mm) diameter to ensure structurally adequate and safe stub-arbor mounting. The arbor must be in good condition, with uniform diameter to enable a close fit of the chuck onto the arbor; typically .002" (.05mm) diametral clearance to .0012" (.03mm) diametral interference. The key requires a close clearance fit. If the arbor has a shoulder, the chuck should be bored deep enough to permit clamping against the shoulder. THIS MOUNTING CONFIGURATION IS NOT RECOMMENDED IF FREQUENT CHUCK REMOVAL, TO CHANGE OVER SIZE, IS REQUIRED. An adapter plate can be made, as mentioned above, to convert the roll stand to either flange mount or quick disconnect.

THE DF-2000 CORE CHUCK

1. Custom machined mounting flange adapts core chuck to any roll stand
2. Teflon thrust washer helps to ensure free movement of chuck
3. Central hex
4. Smooth gripping jaws with large surface area provide no-slip grip on any core material without damaging cores
5. Rollers travel on hex cams with little friction to provide free expansion of jaws. Jaws grip effectively in light or heavy tension applications
6. Roller cage
7. End cap
8. Socket head cap screw



FEATURE	ADVANTAGE	BENEFIT
Smooth Gripping Jaws	Interior wall of core is not damaged.	Multiple core reuse.
	Serrations are not used so dust is not created.	No maintenance or jamming, no contamination.
Torque Activation	Extreme sidearm force is not necessary.	Less core distortion and no end-of-roll waste.
		Rolls won't bow.
		Less roll stand fatigue; extended roll stand life.
Patented Roller Design	Reliable grip regardless of torque magnitude.	Run heavy and/or light rolls with any tension.
	True concentric expansion.	Roll bounce is minimized or eliminated.
	Lubrication isn't needed; dust won't accumulate.	Easier to control web tension.
	Little friction inside chuck; less wear on parts.	No jamming; chuck won't get stuck in cores.
	Wide range of expansion.	Little, if any, maintenance and longer chuck life.
Step Design	Single chuck can run various core sizes.	Run butt rolls and rolls with core inconsistencies.
Quick Disconnect Design	Interchangeable chucks mount to same plate on machines with width limitations.	Roll changes are effortless; even between sizes.
		One center bolt allows quick change to various core sizes.

