

## DBDI Splice System

### D101A Dowel Bar, D102A 90° Hooked Dowel Bar, D103A 180° Hooked Dowel Bar, D104A Double-Ended Dowel Bar

The Dayton Superior Dowel Bar is a one-piece unit, integrally forged from deformed rebar material. The splicers are available in #4 through #11 rebar sizes to be used in conjunction with the corresponding size Dowel-In to accomplish a mechanical splice designed to achieve full mechanical ultimate.

The splicer can be furnished straight (D101A) cut to length, 90° and 180° hooked (D102A and D103A) and double-ended (D104A). The splicer can also be special-ordered with a reduced diameter washer flange or with the washer flange clipped (in more than one direction, if required) to provide adequate concrete cover, or to avoid interference.

The D104A Double-Ended Dowel Bar is used to establish a direct load path through a concrete section, thus avoiding multiple hooked rebar and eliminating rebar congestion. The double-ended unit can be configured in a "U" shape for special applications.

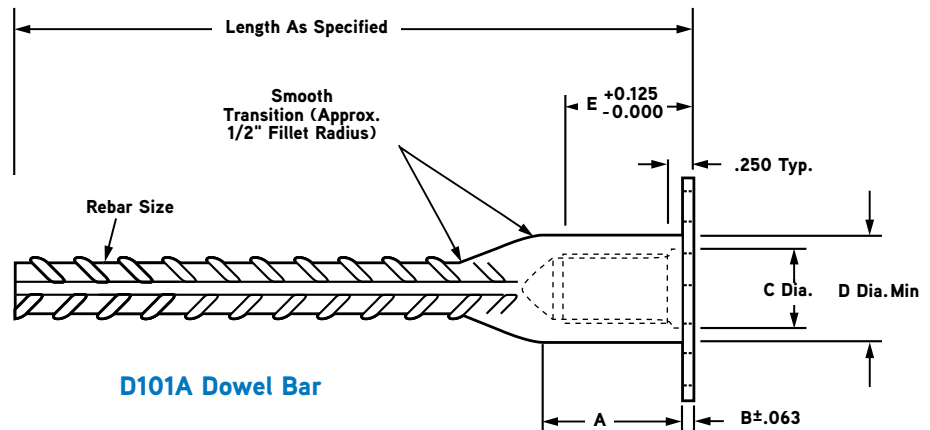
Bar Size Designation			Thread Size	A	B	C	D	E	Flange Diameter	100% P <sub>u</sub>
US	Metric (mm)	CN (M)								
#4	[13]	[10]	5/8" - 11 UNC	1-1/16"	1/8"	11/16"	55/64"	1"	1-7/8"	18,000
#5	[16]	[15]	3/4" - 10 UNC	1-9/16"	1/8"	13/16"	1-3/64"	1-1/8"	2-1/16"	27,900
#6	[19]	[20]	7/8" - 9 UNC	1-11/16"	1/8"	15/16"	1-15/64"	1-1/4"	2-1/4"	39,600
#7	[22]	-	1" - 8 UNC	1-27/32"	1/8"	1-1/16"	1-27/64"	1-3/8"	2-7/16"	54,000
#8	[25]	[25]	1-1/8" - 8 UN	2-1/16"	1/8"	1-3/16"	1-19/32"	1-1/2"	2-5/8"	71,100
#9	[29]	[30]	1-1/4" - 8 UN	2-3/16"	1/8"	1-5/16"	1-25/32"	1-5/8"	2-13/16"	90,000
#10	[32]	-	1-7/16" - 8 UN	2-7/16"	1/8"	1-1/2"	2"	1-13/16"	3"	114,000
#11	[36]	[35]	1-9/16" - 8 UN	2-9/16"	1/8"	1-5/8"	2-7/32"	1-15/16"	3-1/4"	140,400

P<sub>u</sub> = Minimum Tensile Strength of bar.

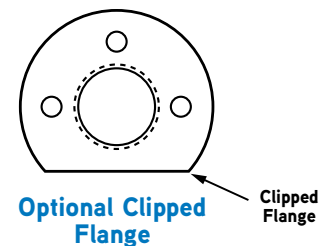
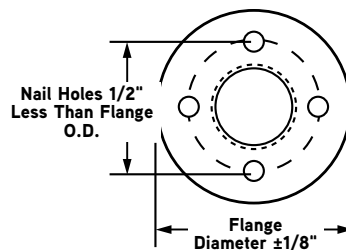
Bar Size Designation			D101A
US	Metric (mm)	CN (M)	Minimum MFG. Length DB-SAE
#4	[13]	[10]	12"
#5	[16]	[15]	14"
#6	[19]	[20]	16"
#7	[22]	-	16"
#8	[25]	[25]	16"
#9	[29]	[30]	16"
#10	[32]	-	16"
#11	[36]	[35]	16"

NOTE: To be manufactured as Single End

NOTE: No. 4, 5 and 6 splicers, 18", 24" and 36" long will usually have a stamped metal plug to protect threads; all other sizes will have a plastic cap plug.



D101A Dowel Bar



## Recommended Dowel Bar and Dowel-In Sizes

Specified or Required Dowel Bar					Recommended Dowel Bar Splicer and Dowel-In							
Bar Size			Grade 60 Rebar Loads (lbs.)		System Thread Size*	DB-SAE Bar Size	Dowel-In Bar Size	System Stress Area (min.)	Completed Splice (lbs.)			
US	Metric (mm)	CN (M)	P <sub>y</sub>	1.25 P <sub>y</sub>					P <sub>y</sub>	1.25 P <sub>y</sub>	100% P <sub>u</sub>	
#4	[13]	[10]	12,000	15,000	5/8" - 11	#4	#4	.20	12,000	15,000	18,000	
#5	[16]	[15]	18,600	23,250	3/4" - 10	#5	#5	.31	18,600	23,250	27,900	
#6	[19]	[20]	26,400	33,000	7/8" - 9	#6	#6	.44	26,400	33,000	39,600	
#7	[22]	—	36,000	45,000	1" - 8	#7	#7	.60	36,000	45,000	54,000	
#8	[25]	[25]	47,400	59,250	1-1/8" - 8	#8	#8	.79	47,400	59,250	71,100	
#9	[29]	[30]	60,000	75,000	1-1/4" - 8	#9	#9	1.00	60,000	75,000	90,000	
#10	[32]	—	76,200	95,250	1-7/16" - 8	#10	#10	1.27	76,200	95,250	114,000	
#11	[36]	[35]	93,600	117,000	1-9/16" - 8	#11	#11	1.56	93,600	117,000	140,400	

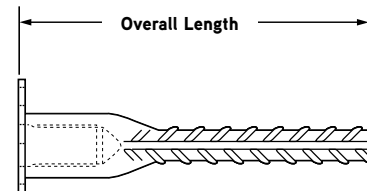
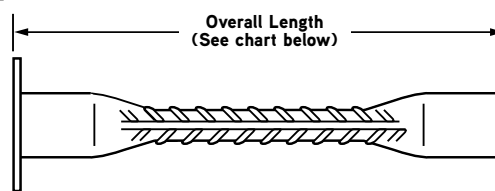
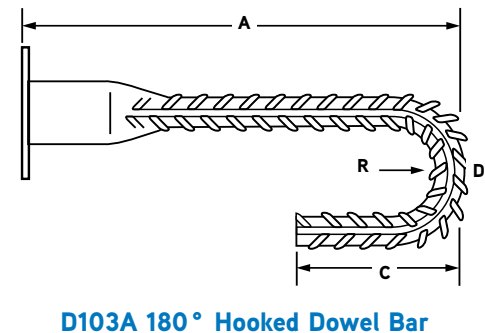
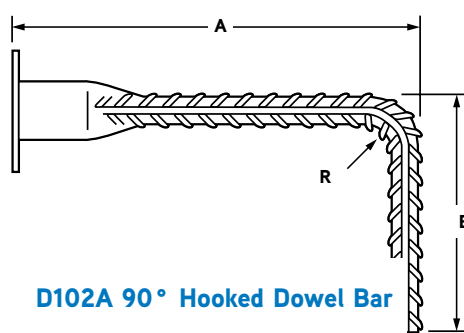
P<sub>y</sub> = Minimum Yield Strength of bar.

P<sub>u</sub> = Minimum Tensile Strength of bar.

\*5/8", 3/4", 7/8" and 1" sizes have UNC Threads. 1-1/8" and larger sizes are equipped with UN Threads.

Bar Size Designation			Bending DB or DI 90° only Minimum "A" Dimension
US	Metric (mm)	CN (M)	
#4	[13]	[10]	4" *
#5	[16]	[15]	5" *
#6	[19]	[20]	6" *
#7	[22]	—	7" *
#8	[25]	[25]	8" *
#9	[29]	[30]	9" *
#10	[32]	—	10" *
#11	[36]	[35]	11" *

\* Tolerance on Bending Plus 0 / Minus 1" on "A" Dimension



Bar Size Designation			D104A Double-Ended Min. Lengths	Tolerance Overall Length
US	Metric (mm)	CN (M)		
#4	[13]	[10]	13" O.A.	+0 - 3/8"
#5	[16]	[15]	13" O.A.	+0 - 3/8"
#6	[19]	[20]	14" O.A.	+0 - 1/2"
#7	[22]	—	16" O.A.	+0 - 5/8"
#8	[25]	[25]	16" O.A.	+0 - 3/4"
#9	[29]	[30]	16" O.A.	+0 - 1"
#10	[32]	—	16" O.A.	+0 - 1"
#11	[36]	[35]	16" O.A.	+0 - 1"

\*\* Based on barrels forged on each end. For lengths less than minimum, please check with manufacturing facility. We may supply forged DB one end, DI with Coupler and nailer washer other end.

See D108 Headed Dowel Bar.

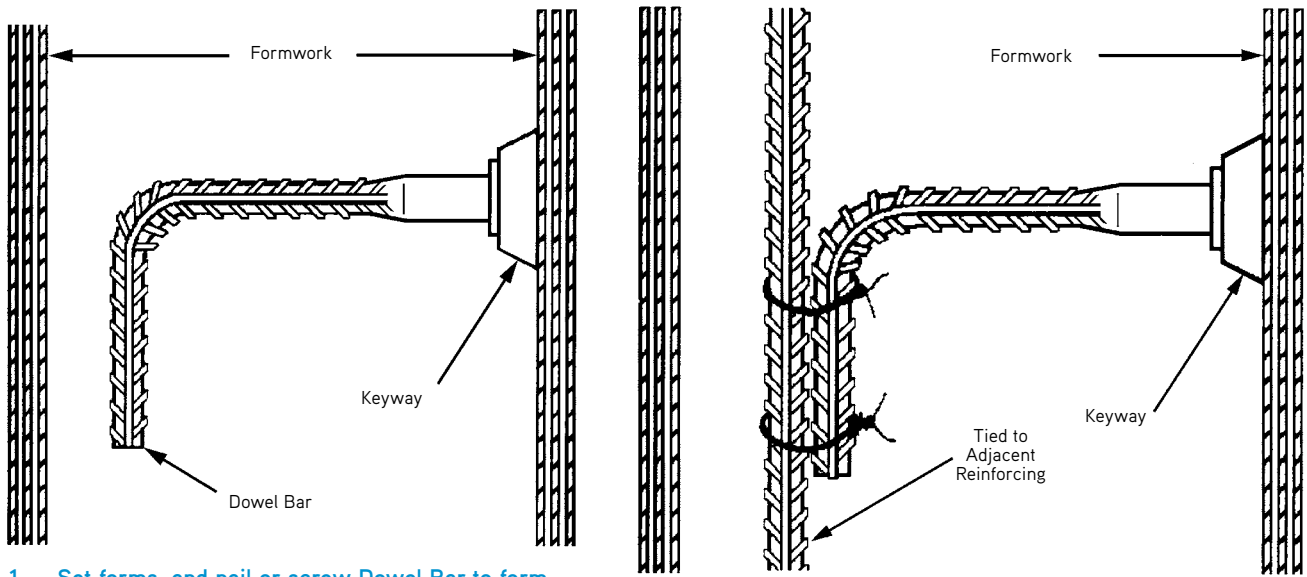
To Order:

Specify: (1) quantity, (2) name, (3) bar size (should be equivalent to the rebar being substituted for on the structural drawings), (4) dimensions required.

Example:

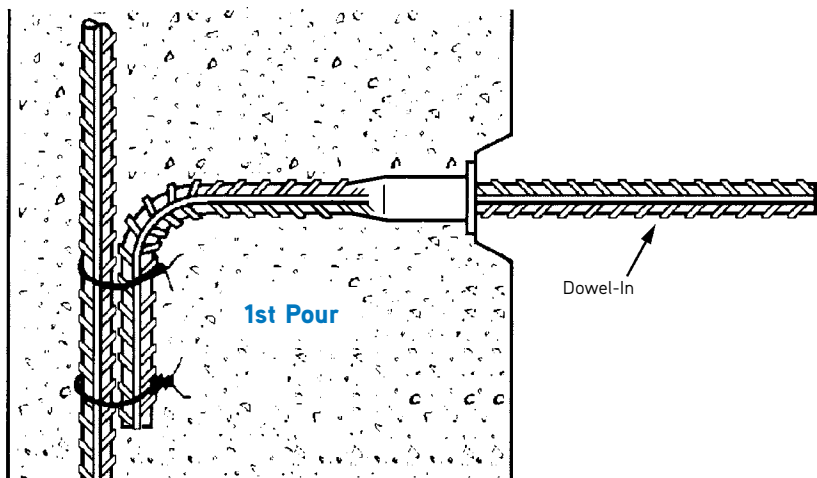
600, D101A Dowel Bars, #5 rebar, 36" long.

**Typical DBDI Installation**

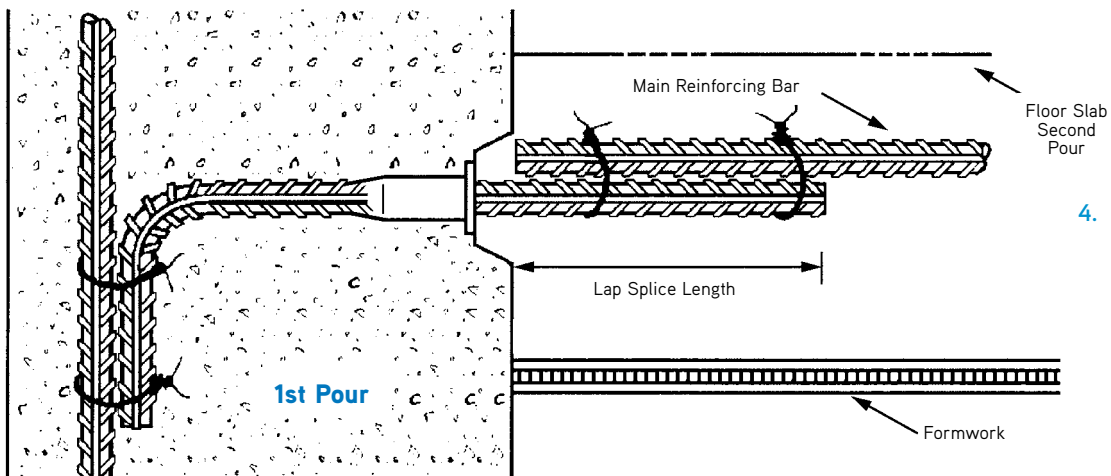


1. Set forms, and nail or screw Dowel Bar to form key.

2. Place required reinforcing steel.



3. After first pour has properly set, remove the formwork and screw Dowel-Ins into the exposed Dowel Bars.



4. Place second pour formwork and reinforcing steel.