



### 4-Flute Chatter-Free® Double Ended Econo-Sinks®

Severance 4-Flute chatter-free™ countersinks feature a 2+2 staggered cutting flute design. This tool provides lots of chip clearance and is ideal for non-ferrous materials including aluminum and plastics.

#### High Speed Steel

Head Dia.	Overall Length	Centerline Angle		30°	41°	45°	50°	55°	60°
		Included Angle		60°	82°	90°	100°	110°	120°
		Severance Name	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number	
1/8"	1-1/2"	ES-1/8-DE	01204	01212	01220	01228	01236	01244	
3/16"	1-7/8"	ES-3/16-DE	01205	01213	01221	01229	01237	01245	
1/4"	2"	ES-1/4-DE	01206	01214	01222	01230	01238	01246	
5/16"	2-1/8"	ES-5/16-DE	01207	01215	01223	01231	01239	01247	
3/8"	2-1/2"	ES-3/8-DE	01208	01216	01224	01232	01240	01248	
1/2"	3"	ES-1/2-DE	01209	01217	01225	01233	01241	01249	
5/8"	3 -1/4"	ES-5/8-DE	01210	01218	01226	01234	01242	01250	
3/4"	3 -1/2"	ES-3/4-DE	01211	01219	01227	01235	01243	01251	

#### Carbide

Head Dia.	Overall Length	Centerline Angle		30°	41°	45°	50°	55°	60°
		Included Angle		60°	82°	90°	100°	110°	120°
		Severance Name	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number	
1/8"	1-1/2"	ES-1/8-W-DE	01252	01260	01268	01276	01284	01292	
3/16"	2"	ES-3/16-W-DE	01253	01261	01269	01277	01285	01293	
1/4"	2"	ES-1/4-W-DE	01254	01262	01270	01278	01286	01294	
5/16"	2-1/8"	ES-5/16-W-DE	01255	01263	01271	01279	01287	01295	
3/8"	2-1/2"	ES-3/8-W-DE	01256	01264	01272	01280	01288	01296	
1/2"	3"	ES-1/2-W-DE	01257	01265	01273	01281	01289	01297	
5/8"	3 -1/4"	ES-5/8-W-DE	01258	01266	01274	01282	01290	01298	
3/4"	3-1/2"	ES-3/4-W-DE	01259	01267	01275	01283	01291	01299	



### Single Flute Double Ended Countersinks

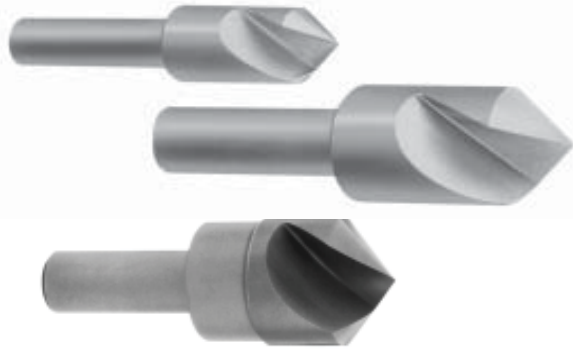
Severance Single Flute Countersinks features our positive shear cutting edge. Single flutes are ideal for non-rigid machining applications, or for machines with less than precision spindles.

#### High Speed Steel

Head Dia.	Overall Length	Centerline Angle		30°	41°	45°	50°	55°	60°
		Included Angle		60°	82°	90°	100°	110°	120°
		Severance Name	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number	
1/8"	1-1/2"	1/8-SF-DE	00536	00544	00552	00560	00568	00576	
3/16"	1-7/8"	3/16-SF-DE	00537	00545	00553	00561	00569	00577	
1/4"	2"	1/4-SF-DE	00538	00546	00554	00562	00570	00578	
5/16"	2-1/8"	5/16-SF-DE	00539	00547	00555	00563	00571	00579	
3/8"	2-1/2"	3/8-SF-DE	00540	00548	00556	00564	00572	00580	
1/2"	3"	1/2-SF-DE	00541	00549	00557	00565	00573	00581	
5/8"	3 -1/4"	5/8-SF-DE	00542	00550	00558	00566	00574	00582	
3/4"	3-1/2"	3/4-SF-DE	00543	00551	00559	00567	00575	00583	

#### Carbide

Head Dia.	Overall Length	Centerline Angle		30°	41°	45°	50°	55°	60°
		Included Angle		60°	82°	90°	100°	110°	120°
		Severance Name	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number	
1/8"	1-1/2"	1/8-SF-W-DE	00600	00609	00617	00625	00633	00641	
3/16"	2"	3/16-SF-W-DE	00601	00610	00618	00626	00634	00642	
1/4"	2"	1/4-SF-W-DE	00602	00611	00619	00627	00635	00643	
5/16"	2-1/8"	5/16-SF-W-DE	00603	00612	00620	00628	00636	00644	
3/8"	2-1/2"	3/8-SF-W-DE	00604	00613	00621	00629	00637	00645	
1/2"	3"	1/2-SF-W-DE	00605	00614	00622	00630	00638	00646	
5/8"	3-1/4"	5/8-SF-W-DE	00606	00615	00623	00631	00639	00647	
3/4"	3-1/2"	3/4-SF-W-DE	00607	00616	00624	00632	00640	00648	



## Single Flute Countersinks

Single flute countersinks produce excellent results for light burr-free countersinking operations, are excellent at small hole chamfers, can operate at slightly higher RPM's, and may be reground many times. Other Diameters and angles can be provided as specials. Countersinks larger than 1" are not pointed, but have flat ends.

### High Speed Steel

Head Dia.	Shank Dia.	Overall Length	Shank Length	Centerline Angle											
				30°		41°		45°		50°		55°		60°	
				Included Angle		60°		82°		90°		100°		110°	
				Severance Name	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number		
1/8"	1/8"	1-5/8"	1-5/8"	1/8-SF	00270	00288	00306	00324	00342	00360					
3/16"	3/16"	1-1/2"	1-1/2"	3/16-SF	00271	00289	00307	00325	00343	00361					
1/4"	3/16"	1-1/2"	3/4"	1/4-SF	00272	00290	00308	00326	00344	00362					
5/16"	1/4"	1-3/4"	7/8"	5/16-SF	00273	00291	00309	00327	00345	00363					
3/8"	1/4"	1-3/4"	7/8"	3/8-SF	00274	00292	00310	00328	00346	00364					
1/2"	3/8"	2-1/8"	1-1/8"	1/2-SF	00275	00293	00311	00329	00347	00365					
1/2"	1/4"	2-1/8"	1-1/8"	1/2-SF-1/4	00276	00294	00312	00330	00348	00366					
5/8"	3/8"	2-3/8"	1-1/8"	5/8-SF	00277	00295	00313	00331	00349	00367					
5/8"	1/4"	2-3/8"	1-1/8"	5/8-SF-1/4	00278	00296	00314	00332	00350	00368					
3/4"	1/2"	2-11/16"	1-5/16"	3/4-SF	00279	00297	00315	00333	00351	00369					
7/8"	1/2"	2-13/16"	1-5/16"	7/8-SF	00280	00298	00316	00334	00352	00370					
1"1/2"	2-13/16"	1-5/16"	1-SF	00281	00299	00317	00335	00353	00371						
1-1/4"	3/4"	3-3/8"	1-5/8"	1-1/4-SF	00282	00300	00318	00336	00354	00372					
1-1/2"	3/4"	3-1/2"	1-5/8"	1-1/2-SF	00283	00301	00319	00337	00355	00373					
1-3/4"	1"	4-1/4"	2-1/8"	1-3/4-SF	00284	00302	00320	00338	00356	00374					
2"	1"	4-3/8"	2-1/8"	2-SF	00285	00303	00321	00339	00357	00375					
2-1/2"	1"	4-3/4"	2-1/8"	2-1/2-SF	00286	00304	00322	00340	00358	00376					
3"	1"	5"	2-1/8"	3-SF	00287	00305	00323	00341	00359	00377					

### Carbide

Head Dia.	Shank Dia.	Overall Length	Shank Length	Centerline Angle											
				30°		41°		45°		50°		55°		60°	
				Included Angle		60°		82°		90°		100°		110°	
				Severance Name	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number	Order Number		
1/8"	1/8"	1-1/2"	1-1/2"	1/8-SF-W	00420	00440	00460	00480	00500	00520					
3/16"	3/16"	1-1/2"	1-1/2"	3/16-SF-W	00421	00441	00461	00481	00501	00521					
1/4"	3/16"	1-1/2"	1-1/16"	1/4-SF-W	00422	00442	00462	00482	00502	00522					
5/16"	1/4"	1-3/4"	1-5/8"	5/16-SF-W	00423	00443	00463	00483	00503	00523					
3/8"	1/4"	1-3/4"	1-7/16"	3/8-SF-W	00424	00444	00464	00484	00504	00524					
1/2"	3/8"	2-1/8"	1-3/8"	1/2-SF-W	00425	00445	00465	00485	00505	00525					
1/2"	1/4"	2-1/8"	1-3/8"	1/2-SF-W-1/4	00426	00446	00466	00486	00506	00526					
5/8"	3/8"	2-3/8"	1-5/16"	5/8-SF-W	00427	00447	00467	00487	00507	00527					
5/8"	1/4"	2-3/8"	1-21/64"	5/8-SF-W-1/4	00428	00448	00468	00488	00508	00528					
3/4"	1/2"	2-11/16"	1-5/16"	3/4-SF-W	00429	00449	00469	00489	00509	00529					
7/8"	1/2"	2-13/16"	1-5/16"	7/8-SF-W	00430	00450	00470	00490	00510	00530					
1"	1/2"	2-13/16"	1-5/16"	1-SF-W	00431	00451	00471	00491	00511	00531					
1-1/4"	3/4"	3-3/8"	1-5/8"	1-1/4-SF-W	00432	00452	00472	00492	00512	00532					
1-1/2"	3/4"	3-1/2"	1-5/8"	1-1/2-SF-W	00433	00453	00473	00493	00513	00533					
1-3/4"	1"	4-1/4"	2-1/8"	1-3/4-SF-W	00434	00454	00474	00494	00514	00534					
2"	1"	4-3/8"	2-1/8"	2-SF-W	00435	00455	00475	00495	00515	00535					