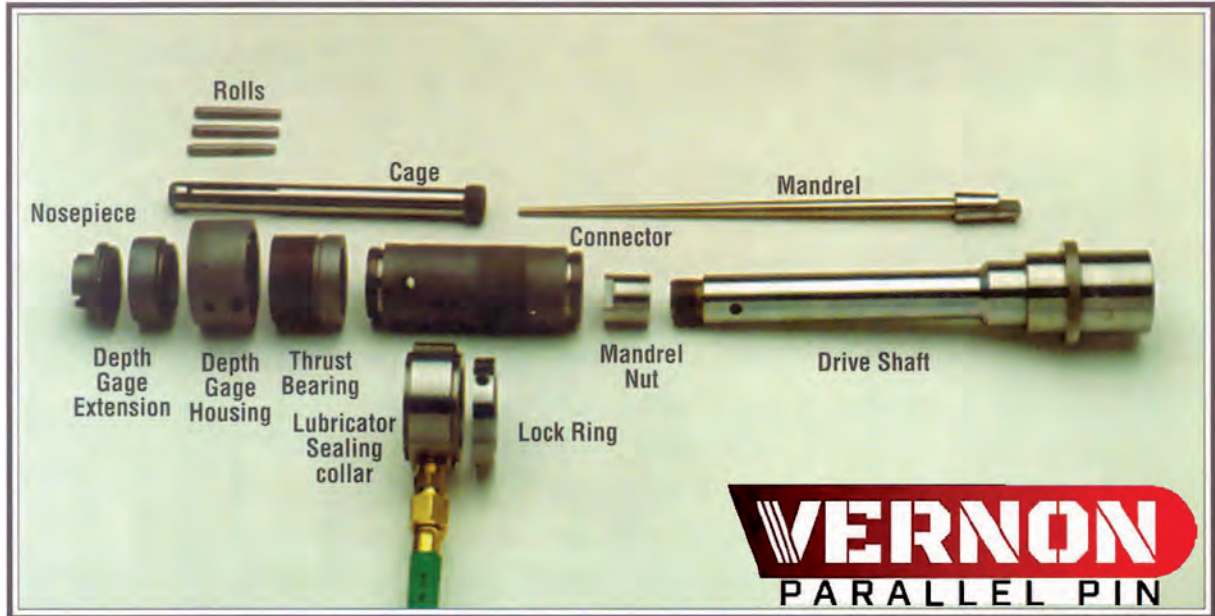


VERNON "S" TYPE TUBE EXPANDERS

TUBE O.D. RANGE: 1/2" THRU 2"



TUBE

TOOLING SELECTION GUIDE

DEPTH GAGE

O.D.	BWG	I.D. (AVG.) WALL	EFFECTIVE ROLL LENGTH	MAX ROLLING DEPTH	Expander Part No.	Minimum Diameter	Maximum Diameter	Roll Set Part No.	Mandrel Part No.	Housing Part No.	Ext. Piece	Nose Piece	Thrust Bearing
1/2"	14	0.384	1-1/8"	5"	4-14S	0.324	0.374	001S	4S	L5	ES	4NP	LTB-3/4
	16	0.370			4-16S	0.360	0.422	1/2S	3S				
	17	0.384			5-11S	0.373	0.435	1/2S					
	18	0.402			4-18S	0.393	0.455	0S					
	19	0.418			4-18S	0.393	0.455	0S					
	20	0.430	1-3/16"		5-13S	0.426	0.485	1A	5S				
5/8"	11	0.385	1-1/8"	5"	5-11S	0.373	0.435	1/2S	3S	L5	E5	5NP	LTB-3/4
	12	0.407			5-12S	0.393	0.455	0S					
	13	0.435	1-3/16"		5-13S*	0.426	0.485	1A	5S				
	14	0.459			5-14S	0.453	0.515	2S					
	15	0.481			5-15S	0.462	0.525	3S					
	16	0.495			5-16S	0.472	0.537	4S					
	17	0.509			5-17S	0.490	0.553	5S					
	18	0.527			5-18S	0.512	0.575	6S					
	19	0.541			5-18S	0.512	0.575	6S					
	20	0.555	1-7/16"	5-1/2"	6-13S	0.534	0.611	9S	6S				

*use 1/2" Connector Extension

Vernon Hydraulic Tube Expansion

Type "S" Vernon Tooling

VERNON "S" TYPE TUBE EXPANDERS

TUBE O.D. RANGE: 1/2" THRU 2"

TUBE

TOOLING SELECTION GUIDE

DEPTH GAGE

O.D.	BWG	I.D. (AVG.) WALL	EFFECTIVE ROLL LENGTH	MAX ROLL DEPTH	Expander Part No.	Minimum Diameter	Maximum Diameter	Roll Set Part No.	Mandrel Part No.	Housing Part No.	Ext. Piece	Nose Piece	Thrust Bearing
5/8"	21	0.561	1-7/16"	5-1/2"	6-13S	0.534	0.611	9S	6S	LS	E5	5NP	LTB-3/4
	22	0.569			6-13S	0.534	0.611	9S					
3/4"	10	0.482	1-3/16"	5"	5-15S	0.462	0.525	3S	5S	L6	E6	6NP	LTB-3/4
	11	0.510			5-17S	0.490	0.553	5S					
	12	0.532			5-18S	0.512	0.575	6S					
	13	0.560	1-7/16"		6-13S	0.534	0.611	9S	6S				
	14	0.584			6-14S	0.550	0.627	10S					
	15	0.606			6-15S	0.574	0.651	11S					
	16	0.620			6-16S	0.598	0.675	12S					
	17	0.634			6-17S	0.610	0.687	9S	8S				
	18	0.652			6-18S	0.626	0.703	10S					
	19	0.666			6-18S	0.626	0.703	10S					
	20	0.680			6-20S	0.650	0.727	11S					
	21	0.686			6-20S	0.650	0.727	11S					
22	0.964			6-20S	0.650	0.727	11S						
7/8"	9	0.579	1-7/16"	5-1/2"	6-14S	0.550	0.627	10S	6S	L6	E6	7NP	LTB-3/4
	10	0.607			6-15S	0.574	0.651	11S					
	11	0.635			6-17S	0.610	0.687	9S	8S				
	12	0.657			6-18S	0.626	0.703	10S					
	13	0.685			8-9S	0.668	0.730	13S	7S				
	14	0.709			8-9S	0.680	0.742						
	15	0.731			8-10S	0.700	0.762	14S					
	16	0.745			8-11S	0.724	0.787	15S					
	17	0.759			8-11S	0.724	0.787	15S					
	18	0.777			8-12S	0.773	0.835	16S					
	19	0.791			8-13S	0.766	0.843	20S	8S				
	20	0.805			8-13S	0.766	0.843						
21	0.811			8-13S	0.766	0.843							
22	0.819			8-14S	0.800	0.877	18S						
1"	8	0.670	1-7/16"	5-1/2"	8-8S	0.650	0.712	12½ S	7S	L8	E8	8NP	LTB-3/4
	9	0.704			8-9S	0.680	0.742	13S					
	10	0.732			8-10S	0.700	0.762	14S					
	11	0.760			8-11S	0.724	0.787	15S					
	12	0.782			8-12S	0.773	0.835	16S					

Longer reach expanders are available upon request

VERNON "S" TYPE TUBE EXPANDERS

TUBE O.D. RANGE: 1/2" THRU 2"

TUBE

TOOLING SELECTION GUIDE

DEPTH GAGE

O.D.	BWG	I.D. (AVG.) WALL	EFFECTIVE ROLL LENGTH	MAX ROLL DEPTH	Expander Part No.	Minimum Diameter	Maximum Diameter	Roll Set Part No.	Mandrel Part No.	Housing Part No.	Ext. Piece	Nose Piece	Thrust Bearing
1"	13	0.810	1-7/16"	5-1/2"	8-13S	0.766	0.843	20S	8S	L8	E8	8NP	LTB-3/4
	14	0.834			8-14S	0.800	0.877	18S	8S				
	15	0.856			8-15S	0.823	0.900	19S	8S				
	16	0.870			8-16S	0.844	0.921	20S	10S				
	17	0.884			8-18S	0.869	0.946	18S					
	18	0.902			8-18S	0.881	0.958						
	19	0.916			8-18S	0.881	.958						
	20	0.930			8-20S	0.901	0.978	19S					
	21	0.936			8-20S	0.901	0.978						
	22	0.944			8-20S	0.901	0.978						
	1-1/8"	8	0.795	1-7/16"	5-1/2"	8-13S	0.766	0.843	20S	8S	LS	ES	9NP
9		0.829			8-14S	0.800	0.877	18S					
10		0.857			8-15S	0.823	0.900	19S					
11		0.885			8-18S	0.869	0.946	18S	10S				
12		0.907			8-18S	0.881	0.958						
13		0.935	2-1/4"		10-9S	0.923	1.000	21S					
14		0.959			10-9S	0.923	1.000	21S					
15		0.981			10-10S	0.944	1.017	22S					
16		0.995			10-11S	0.975	1.052	23S					
17		1.009			10-11S	0.975	1.052						
18	1.027			10-12S	0.999	1.076	24S						
1-1/4"	8	0.920	2-1/4"	5-1/2"	10-9S	0.905	0.983	21S	10S	L8	E8	10NP	LTB-3/4"
	9	0.959			10-9S	0.923	1.000						
	10	0.982			10-10S	0.944	1.017	22S					
	11	1.010			10-11S	0.975	1,052	23S					
	12	1.032			10-12S	0.999	1.076	24S					
	13	1.060			10-14S	1.047	1.124	26S					
	14	1.064			10-14S	1.047	1.124						
	15	1.106			10-16S	1.095	1.172	28S					
	16	1.120			10-16S	1.095	1.172						
	17	1.134			10-17S	1.109	1.186	29S					
18	1.152			10-18S	1.127	1.204	30S						
1-3/8"	8	1.045	2-1/4"	5-1/2"	10-12S	.999	1.076	24S	10S	L8	E8	10NP	LTB-3/4"
	9	1.079			10-14S	1.047	1.124	26S					

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Vernon Hydraulic Tube Expansion

Type "S" Vernon Tooling

VERNON "S" TYPE TUBE EXPANDERS

TUBE O.D. RANGE: 1/2" THRU 2"

TUBE

TOOLING SELECTION GUIDE

DEPTH GAGE

O.D.	BWG	I.D. (AVG.) WALL	EFFECTIVE ROLL LENGTH	MAX ROLLING DEPTH	Expander Part No.	Minimum Diameter	Maximum Diameter	Roll Set Part No.	Mandrel Part No.	Housing Part No.	Ext. Piece	Nose Piece	Thrust Bearing
1-3/8"	10	1.107	2-1/8"	5-1/2"	10-16S	1.095	1.172	28S	10S	L8	E8	11NP	LTB-3/4
	11	1.135			10-17S	1.109	1.186	29S					
	12	1.157			10-13S	1.127	1.204	30S					
	13	1.185			12-8S	1.161	1.238	32S					
	14	1.209			12-10S	1.200	1.277	33S					
	15	1.231			12-10S	1.200	1.277	33S					
	16	1.245			12-11S	1.226	1.303	34S					
1-1/2"	8	1.170	2-1/8"	5-1/2"	12-8S	1.161	1.238	32S	10S	L8	E8	12NP	LTB-3/4
	9	1.204			12-8S	1.161	1.238	32S					
	10	1.232			12-10S	1.200	1.277	33S					
	11	1.260			12-11S	1.226	1.303	34S					
	12	1.282			12-12S	1.250	1.327	35S					
	13	1.310			12-13S	1.266	1.343	36S					
	14	1.334			12-14S	1.303	1.380	37S					
	15	1.356			12-15S	1.326	1.403	39S					
	16	1.370			12-16S	1.340	1.417	40S					
	17	1.384			12-16S	1.340	1.417	40S					
	18	1.402			12-18S	1.374	1.451	42S					
	19	1.416			12-18S	1.374	1.451	42S					
	20	1.430			14-9S	1.419	1.579	40S-20	12S				LTB-1
1-5/8"	8	1.295	2-1/8"	5-1/2"	12-13S	1.266	1.343	36S	10S	L8	E13	13NP	LTB-3/4
	9	1.329			12-14S	1.303	1.380	37S					
	10	1.357			12-15S	1.326	1.403	39S					
	11	1.385			12-18S	1.374	1.451	42S					
	12	1.407			12-18S	1.374	1.451						
	13	1.435			14-9S	1.419	1.579	40S-20	12S	L15	E14		LTB-1
	14	1.459			14-9S	1.419	1.579						
	15	1.481			14-9S	1.419	1.579						
16	1.495			14-9S	1.419	1.579							
1-3/4"	9	1.454	2-1/8"	5-1/2"	14-9S	1.419	1.579	40S-20	12S	L15	E14	14NP	LTB-1
	10	1.482			14-9S	1.419	1.579						
	11	1.510			14-11S	1.491	1.651	41S					

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VERNON "S" TYPE TUBE EXPANDERS

TUBE O.D. RANGE: 1/2" THRU 2"

TUBE

TOOLING SELECTION GUIDE

DEPTH GAGE

O.D.	BWG	I.D. (AVG.) WALL	EFFECTIVE ROLL LENGTH	MAX ROLLING DEPTH	Expander Part No.	Minimum Diameter	Maximum Diameter	Roll Set Part No.	Mandrel Part No.	Housing Part No.	Ext. Piece	Nose Piece	Thrust Bearing
1-3/4"	12	1.532	2-1/4"	5-1/2"	14-11S	1.491	1.651	41S	12S	L15	E14	14NP	LTB-1
	13	1.560			14-11S	1.491	1.651						
	14	1.584			14-11S	1.491	1.651						
	15	1.606			14-16S	1.591	1.751	46S					
	16	1.620			14-16S	1.591	1.751						
1-7/8"	8	1.545	2-1/4"	5-1/2"	14-11S	1.491	1.651	41S	12S	L15	E15	15NP	LTB-1
	9	1.579			14-11S	1.491	1.651						
	10	1.607			14-16S	1.591	1.751	46S					
	11	1.635			14-16S	1.591	1.751						
	12	1.657			14-16S	1.591	1.751	46S					
	13	1.685		5-1/4"	16-9S	1.635	1.795	49S					
	14	1.709			16-9S	1.635	1.795						
	15	1.731			16-9S	1.635	1.795						
	16	1.745			16-9S	1.635	1.795						
2"	8	1.670	2-1/4"	5-1/4"	16-9S	1.635	1.795	49S	12S	L15	E15	16NP	LTB-1
	9	1.704			16-9S	1.635	1.795						
	10	1.732			16-9S	1.635	1.795						
	11	1.760			16-11/15S	1.743	1.903	51S					
	12	1.782			16-11/15S	1.743	1.903						
	13	1.810			16-11/15S	1.743	1.903						
	14	1.834			16-11/15S	1.743	1.903						
	15	1.856			16-11/15S	1.743	1.903						
	16	1.870			16-16S	1.841	2.001	56S					
	18				16-18S	1.908	2.068	63S					
	20			6"	16-20S	1.940	2 1/16	63S					

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