



Ohio Tool Works

Tooling Catalog



www.ohiotoolworks.com

OTW Tooling Catalog

Please Click on **Blue** Links to Go Directly to Your Tooling of Interest
Sunnen/GHC Reference Numbers (“SPC”) Listed Throughout

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OTW Tooling & Accessories

Unmatched Quality & Precision

To Our Valued Customers,

Welcome and thank you for taking a moment to review the Ohio Tool Works *Tooling Catalog*. We hope you'll find this *Catalog* to be a useful and efficient way to explore OTW's complete line up of medium and heavy duty honing tools – unmatched for their design, quality, and precision.

As you'll see, OTW's honing tools span the full range of applications, diameters, lengths, configurations, and abrasives types and can be supplied in a variety of packages to meet your specific needs, including:

Standard & Custom OTW Tooling Assemblies

Standard & Custom OTW Tooling Components

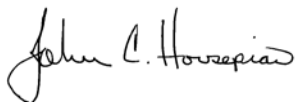
Replacement Tooling for All Major Honing Brands

No matter what brand of honing machine you currently use, Ohio Tool Works has a tooling solution for you. With more than 100 years of in house honing expertise and a dedicated staff of customer-facing engineers, we are proud to provide our customers with superior tooling solutions – whether fixtured to Ohio Tool Works equipment or any other major brand including Sunnen, Barnes, General Hone, and more.

All of OTW's honing tools are designed and manufactured – with uncompromising care – at our 80,000 sq. ft. plant in Ashland, Ohio. The result is clear: Ohio Tool Works honing tools consistently outperform our competitors in terms of precision and tool life.

As you explore OTW's *Tooling Catalog*, please do not hesitate to give us a call if you have any questions. We look forward to providing you the right tooling for your specific honing needs.

Sincerely,

A handwritten signature in black ink that reads "John C. Hovsepian".

John Hovsepian
President
Ohio Tool Works
Ashland, Ohio, USA



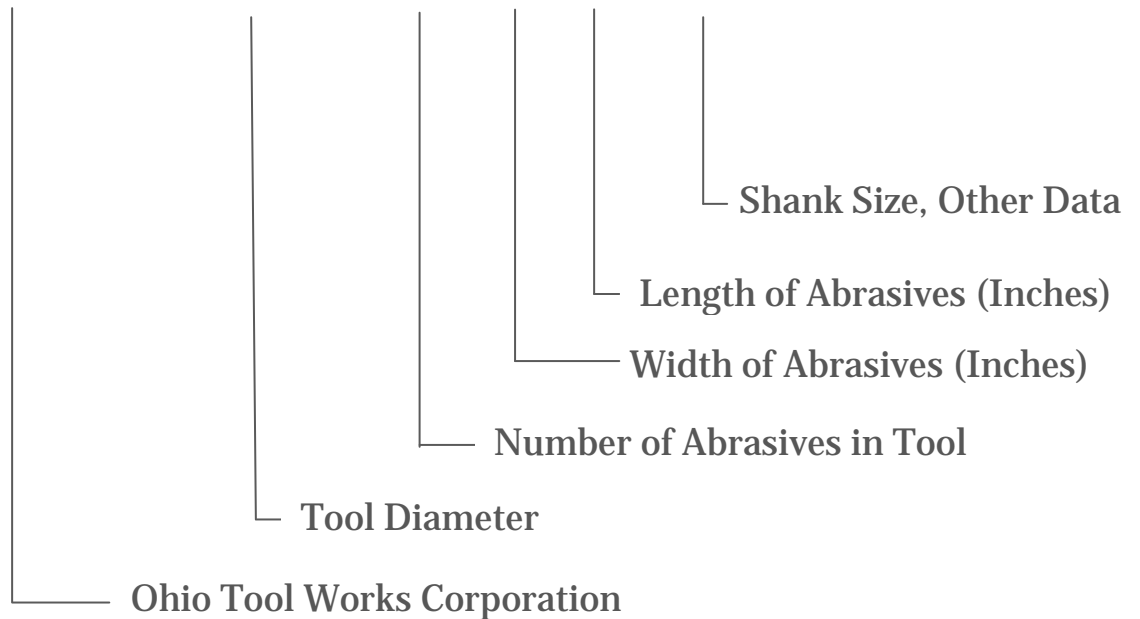
No matter what brand
of honing machine
you currently use – or
how challenging your
application appears –
**Ohio Tool Works has
the precise tooling
solution for you**

Please call us to
discuss your specific
tooling needs

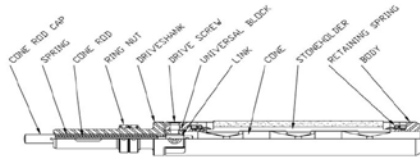
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Ohio Tool Works Tool Assembly Legend

OTW – 3.0 – 5 38 8-1341



1. Tooling Assemblies



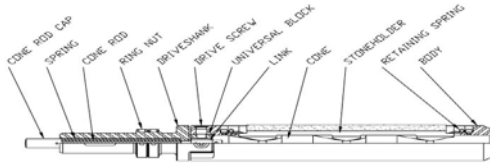
Slotted Tool Bodies

Available as Assembly & Bodies

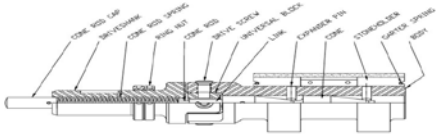
Model Number	Shank Size	Range	Body Type	Abrasive Size
OTW-.750-3184-0000 Integral Driveshaft	N/A	.72-1.12	Slotted	1/8x1/8x4 SA
OTW-.750-3184-0000 Integral Driveshaft	N/A	.72-1.12	No Spring Slots	1/8x1/8x4 SA
OTW-1.0-3184-0000 Integral Driveshaft	N/A	.92-1.25	Slotted	.209x.154x4 VIT or SA
OTW-1.0-3184-0000 Integral Driveshaft	N/A	.92-1.25	No Spring Slots	.209x.154x4 VIT or SA
OTW-1.25-3146-1992	3/4"	1.19-1.50	Slotted	1/4x7/32x6
OTW-1.25-3146-1993	3/4"	1.19-1.50	No Spring Slots	1/4x7/32x6
OTW-1.5-35166-1301	3/4"	1.43-1.81	Slotted	5/16x5/16x6
OTW-1.5-35166-1302	7/8"	1.43-1.81	Slotted	5/16x5/16x6
OTW-1.5-35166-1303	3/4"	1.43-1.81	No Spring Slots	5/16x5/16x6
OTW-1.5-35166-1304	7/8"	1.43-1.81	No Spring Slots	5/16x5/16x6
OTW-1.75-45166-1311	7/8"	1.65-2.01	Slotted	5/16x5/16x6
OTW-1.75-45166-1312	1 1/8"	1.65-2.01	Slotted	5/16x5/16x6
OTW-1.75-45166-1313	7/8"	1.65-2.01	No Spring Slots	5/16x5/16x6
OTW-1.75-45166-1314	1 1/8"	1.65-2.01	No Spring Slots	5/16x5/16x6
OTW-2.0-4388-1321	7/8"	1.93-2.50	Slotted	3/8x3/8x8
OTW-2.0-4388-1322	1 1/8"	1.93-2.50	Slotted	3/8x3/8x8

Slotted Tool Bodies

Available as Assembly & Body Only



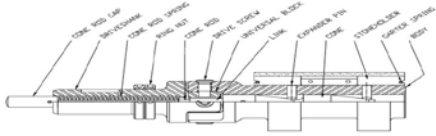
Model Number	Shank Size	Range	Body Type	Abrasive Size
OTW-2.0-4388-1323	7/8"	1.93-2.50	No Spring Slots	3/8x3/8x8
OTW-2.0-4388-1324	1 1/8"	1.93-2.50	No Spring Slots	3/8x3/8x8
OTW-2.5-4388-1331	1 1/8"	2.41-3.18	Slotted	3/8x3/8x8
OTW-2.5-4388-1332	1 1/2"	2.41-3.18	Slotted	3/8x3/8x8
OTW-2.5-4388-1333	1 1/8"	2.41-3.18	No Spring Slots	3/8x3/8x8
OTW-2.5-4388-1334	1 1/2"	2.41-3.18	No Spring Slots	3/8x3/8x8
OTW-3.0-5388-1341	1 1/8"	2.91-3.93	Slotted	3/8x3/8x8
OTW-3.0-5388-1342	1 1/2"	2.91-3.93	Slotted	3/8x3/8x8
OTW-3.0-5388-1343	1 3/4"	2.91-3.93	Slotted	3/8x3/8x8
OTW-3.0-5388-1344	1 1/8"	2.91-3.93	No Spring Slots	3/8x3/8x8
OTW-3.0-5388-1345	1 1/2"	2.91-3.93	No Spring Slots	3/8x3/8x8
OTW-3.0-5388-1346	1 3/4"	2.91-3.93	No Spring Slots	3/8x3/8x8



Flanged Tool Bodies

Available as Assembly & Body Only

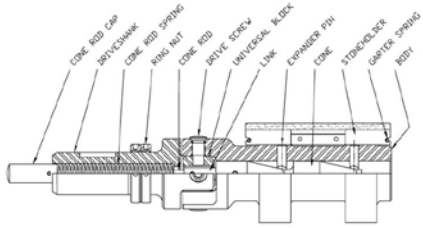
Model Number	Shank Size	Range	Body Type	Abrasive Size
OTW-3.5-5388-1351	1 ½"	3.41-4.00	Flange	3/8x3/8x8
OTW-3.5-5388-1352	1 ¾"	3.41-4.00	Flange	3/8x3/8x8
OTW-4.0-5128-1361	1 ½"	3.88-5.00	Flange	1/2x1/2x8
OTW-4.0-5128-1362	1 ¾"	3.88-5.00	Flange	1/2x1/2x8
OTW-4.0-5128-1363	2 ¼"	3.88-5.00	Flange	1/2x1/2x8
OTW-5.0-5128-1381	1 ½"	4.88-6.13	Flange	1/2x1/2x8
OTW-5.0-5128-1382	1 ¾"	4.88-6.13	Flange	1/2x1/2x8
OTW-5.0-5128-1383	2 ¼"	4.88-6.13	Flange	1/2x1/2x8
OTW-6.0-6128-1391	1 ¾"	5.76-7.06	Flange	1/2x1/2x8
OTW-6.0-6128-1392	2 ¼"	5.76-7.06	Flange	1/2x1/2x8
OTW-6.0-6128-1393	3"	5.76-7.06	Flange	1/2x1/2x8
*OTW-6.0-8128-0000S	2 ¼"	5.76-7.06	Flange	1/2x1/2x8
OTW-7.0-6128-1401	1 ¾"	6.76-8.06	Flange	1/2x1/2x8
OTW-7.0-6128-1402	2 ¼"	6.76-8.06	Flange	1/2x1/2x8
OTW-7.0-6128-1403	3"	6.76-8.06	Flange	1/2x1/2x8



Flanged Tool Bodies

Available as Assembly & Body Only

Model Number	Shank Size	Range	Body Type	Abrasive Size
OTW-8.0-8128-1421	1 3/4"	7.76-9.06	Flange	1/2x1/2x8
OTW-8.0-8128-1422	2 1/4"	7.76-9.06	Flange	1/2x1/2x8
OTW-8.0-8128-1423	3"	7.76-9.06	Flange	1/2x1/2x8
OTW-9.0-8128-1431	1 3/4"	8.76-10.06	Flange	1/2x1/2x8
OTW-9.0-8128-1432	2 1/4"	8.76-10.06	Flange	1/2x1/2x8
OTW-9.0-8128-1433	3"	8.76-10.06	Flange	1/2x1/2x8
OTW-10/11-8128-1442	2 1/4"	9.63-12.25	Flange	1/2x1/2x8
OTW-10/11-8128-1443	3"	9.63-12.25	Flange	1/2x1/2x8
OTW-12/13-8128-1452	2 1/4"	11.63-14.25	Flange	1/2x1/2x8
OTW-12/13-8128-1453	3"	11.63-14.25	Flange	1/2x1/2x8
OTW-14/15-8128-1462	2 1/4"	13.63-16.25	Flange	1/2x1/2x8
OTW-14/15-8128-1463	3"	13.63-16.25	Flange	1/2x1/2x8
OTW-16/17-8128-1472	2 1/4"	15.63-18-25	Flange	1/2x1/2x8



Flanged Tool Bodies

Available as Assembly & Body Only

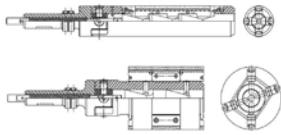
Model Number	Shank Size	Range	Body Type	Abrasive Size
OTW-16/17-8128-1473	3"	15.63-18-25	Flange	1/2x1/2x8
*OTW-18/19-8128-1482	2 1/4"	17.63-20.25	Flange	1/2x1/2x8
*OTW-18/19-8128-1483	3"	17.63-20.25	Flange	1/2x1/2x8
*OTW-20/21-8128-1492	2 1/4"	19.63-22.25	Flange	1/2x1/2x8
*OTW-20/21-8128-1493	3"	19.63-22.25	Flange	1/2x1/2x8
*OTW-22/23-8128-1502	2 1/4"	21.63-24.25	Flange	1/2x1/2x8
*OTW-22/23-8128-1503	3"	21.63-24.25	Flange	1/2x1/2x8
*OTW-24/25-8128-	3"	24.63-26.25	Flange	1/2x1/2x8
*OTW-24/25-8128-	3"	24.63-26.25	Flange	1/2x1/2x8

* Non-Standard Special Order Tools

Medium Duty Tool Bodies

Available as Assembly & Body Only

Model Number	Shank Size	Range	Body Type	Abrasive Size
OTW-1.5-35166-1301	¾"	1.43-1.81	Slotted	5/16x5/16x6
OTW-1.5-35166-1302	7/8"	1.43-1.81	Slotted	5/16x5/16x6
OTW-1.5-35166-1303	¾"	1.43-1.81	No Spring Slots	5/16x5/16x6
OTW-1.5-35166-1304	7/8"	1.43-1.81	No Spring Slots	5/16x5/16x6
OTW-1.75-45166-1311	7/8"	1.65-2.02	Slotted	5/16x5/16x6
OTW-1.75-45166-1312	1 1/8"	1.65-2.02	Slotted	5/16x5/16x6
OTW-1.75-45166-1313	7/8"	1.65-2.02	No Spring Slots	5/16x5/16x6
OTW-1.75-45166-1314	1 1/8"	1.65-2.02	No Spring Slots	5/16x5/16x6
OTW-2.0-3386-xxxx	7/8"	1.94-2.50	Slotted	3/8x3/8x6
OTW-2.0-4386-9877	1 1/8"	1.94-2.50	Slotted	3/8x3/8x6
OTW-2.0-4386-xxxx	7/8"	1.94-2.50	No Spring Slots	3/8x3/8x6
OTW-2.0-4386-xxxx	1 1/8"	1.94-2.50	No Spring Slots	3/8x3/8x6
OTW-2.5-4386-1336	1 1/8"	2.38-3.12	Slotted	3/8x3/8x6
OTW-2.5-4386-xxxx	1 ½"	2.38-3.12	Slotted	3/8x3/8x6
OTW-2.5-4386-xxxx	1 1/8"	2.38-3.12	No Spring Slots	3/8x3/8x6



Medium Duty Tool Bodies

Model Number	Shank Size	Range	Body Type	Abrasive Size
OTW-3.0-4386-xxxx	1 1/2"	2.94-3.50	Flange	3/8x3/8x6
OTW-3.0-4386-3813	1 3/4"	2.94-3.50	Flange	3/8x3/8x6
OTW-3.5-4386- 6832	1 1/8"	3.43-4.30	Flange	3/8x3/8x6
OTW-3.5-4386- xxxx	1 3/4"	3.43-4.30	Flange	3/8x3/8x6
OTW-4.0-4386- 6741	1 1/8"	3.88-5.18	Flange	3/8x3/8x6
OTW-4.0-4386- 5126	1 3/4"	3.88-5.18	Flange	3/8x3/8x6
OTW-4.0-4386- xxxx	2 1/4"	3.88-5.18	Flange	3/8x3/8x6
OTW-5.0-4386- xxxx	1 1/8"	4.83-6.00	Flange	3/8x3/8x6
OTW-5.0-4386- 7262	1 3/4"	4.83-6.00	Flange	3/8x3/8x6
OTW-5.0-4386- xxxx	2 1/4"	4.83-6.00	Flange	3/8x3/8x6
OTW-6.0-4386- xxxx	1 1/8"	5.76-7.00	Flange	3/8x3/8x6
OTW-6.0-4386- 7263	1 3/4"	5.76-7.00	Flange	3/8x3/8x6
OTW-6.0-4386- xxxx	2 1/4"	5.76-7.00	Flange	3/8x3/8x6
OTW-7.0-4386- xxxx	1 1/8"	6.76-8.00	Flange	3/8x3/8x6
OTW-7.0-4386- 7264	1 3/4"	6.76-8.00	Flange	3/8x3/8x6
OTW-7.0-4386- xxxx	2 1/4"	6.76-8.00	Flange	3/8x3/8x6

MD Modular Tooling

- 7265 Hub Assembly 8"/16" (1.75" Shank)

<u>Part #</u>	<u>Description</u>	<u>Range</u>
7266	Ring Kit 8"/9"	7.75" – 10.19"
7267	Ring Kit 10"/11"	9.75" – 12.19"
7268	Ring Kit 12"/13"	11.75" – 14.19"
7687	Ring Kit 14"/15"	13.77" – 16.19"

Stoneholders: See [page 20](#) (8" thru 16") 3/8" x 3/8" x 6" (4) set

- 8913 Hub Assembly 14"/22" (1.75" Shank)

8914	Ring Kit 14"/15"	13.75" – 16.19"
8915	Ring Kit 16"/17"	15.75" – 18.19"
8919	Ring Kit 18"/19"	17.75" – 20.19"
8920	Ring Kit 20"/21"	19.75" – 22.19"

Stoneholders: See [page 20](#) (14" thru 22") 3/8" x 3/8" x 6" (6) set

HD Modular Tooling

- 5677 Hub Assembly 14/26" (2 1/4" Shank)

- 5676 Hub Assembly 14/26" (3" Shank)

<u>Part #</u>	<u>Description</u>	<u>Range</u>
5684	Ring Kit 14/15"	13.63" – 16.25"
5685	Ring Kit 16/17"	15.63" – 18.25"
5686	Ring Kit 18/19"	17.63" – 20.25"
5687	Ring Kit 20/21"	19.63" – 22.25"
5688	Ring Kit 22/23"	21.63" – 24.25"
5689	Ring Kit 24/25"	23.63" – 26.25"

Stoneholders: See [page 18](#) (13" thru 26") 1/2" x 1/2" x 8" (8) set

- 6239 Hub Assembly 26/41" (3" Shank)

6240	Ring Kit 26–28"	25.62" – 29.12"
6241	Ring Kit 29-31"	28.62" – 32.12"
6242	Ring Kit 32-34"	31.62" – 35.12"
6243	Ring Kit 35-37"	34.62" – 38.12"
6244	Ring Kit 38-40"	37.62" – 41.12"

Stoneholders: 1/2" x 1/2" x 6" (2) See [page 22](#) (10) set



Driveshanks

Tool Size	Shank 1	Shank 2	Shank 3
.750"	N/A		
1.00"	N/A		
1.25"	.750" - OTW1588		
1.50"	.875" - OTW1591	.750" - OTW1590	
1.75"	.875" - OTW1592	1.125" - OTW1593	
2.00"	1.125" - OTW1595	.875" - OTW1594	
2.50"	1.125" - OTW1596	1.50" - OTW1597	
3.00"	1.75" - OTW1600	1.125" - OTW1598	1.50" - OTW1599
3.50"	1.75" - OTW1600	1.50" - OTW1599	
4.00"	1.75" - OTW1530	2.25" - OTW1532	1.50" - OTW1528
5.00"	1.75" - OTW1531	2.25" - OTW1214	1.50" - OTW1529
6.00" to 9.00"	2.25" - OTW1535	3.0" - OTW1536	1.75" - OTW 1534
10.00" to 22.00"	3.00" - OTW1996	2.25" - OTW1995	



Standard Angleback Stoneholders

Tool Size	OTW Part #	SPC/GHC Part #	Height	Range	Abrasive Size
.500"	OTW1232	G14A105	.120	.48-.50	.12x.07x.25" Super abrasive only
	OTW1233	G14A105-1	.151	.54-.56	
	OTW1234	G14A105-2	.182	.60-.62	
	OTW1235	G14A105-3	.213	.66-.69	
.750"	4607	G14B195	.187	.724-.873	.12x.12x4" Super abrasive only
	4608	G14B195-1	.218	.786-.937	
	4609	G14B195-2	.250	.850-.999	
	4610	G14B195-3	.281	.912-1.061	
		G14B195-4	.312	Not Recom.	
1.0"	2938	G14B186-1	.218	.92-1.00	.209x.154x4" Vitrified or Super abrasive
	2939	G14B186-2	.250	.98-1.06	
	2940	G14B186-3	.281	1.04-1.12	
	2941	G14B186-4	.312	1.11-1.18	
	2942	G14B186-5	.343	1.17-1.25	
	2943	G14B186-6	.375	Not Recom.	
1.25"	OTW1284	G14B187	.312"	1.19-1.25	(.25x.218x 6) Super abrasive only
	OTW1285	G14B187-1	.343"	1.25-1.31	
	OTW1286	G14B187-2	.375"	1.31-1.37	
	OTW1287	G14B187-3	.406"	1.37-1.43	
	OTW1288	G14B187-4	.437"	1.43-1.50	
1.50"	OTW1270	G14B125	.312"	1.43-1.53	5/16x5/16x6
	OTW1271	G14B139	.357"	1.53-1.62	
	OTW1272	G14B140	.402"	1.62-1.71	
	OTW1273	G14B182	.447"	1.71-1.81	



Standard Angleback Stoneholders

Tool Size	OTW Part #	SPC/GHC Part #	Height	Range	Abrasive Size
1.75"	OTW1270	G14B125	.312"	1.65-1.74	5/16x5/16x6
	OTW1271	G14B139	.357"	1.74-1.83	
	OTW1272	G14B140	.402"	1.83-1.92	
	OTW1273	G14B182	.447"	1.92-2.01	
1.75" SPC/GHC only	OTW1297	G14B139-1	.325"	1.65-1.74	5/16x5/16x6
	OTW1298	G14B140-1	.370"	1.74-1.83	
	OTW1299	G14B182-1	.415"	1.83-1.92	
	OTW1300	G14B182-2	.460"	1.92-2.01	
2.0"	OTW1274	G14B168-1	.412"	1.93-2.00	3/8x3/8x8
	OTW1275	G14B171-1	.484"	2.06-2.12	
	OTW1276	G14B172-1	.546"	2.19-2.25	
	OTW1277	G14B173-1	.609"	2.31-2.37	
	OTW1278	G14B174-1	.671"	2.44-2.50	
2.5"	OTW1279	G14B130	.625"	2.41-2.68	3/8x3/8x8
	OTW1280	G14B131	.750"	2.66-2.93	
	OTW1281	G14B132	.875"	2.91-3.18	
3.0"	OTW1280	G14B131	.750"	2.91-3.18	3/8x3/8x8
	OTW1281	G14B132	.875"	3.16-3.47	
	OTW1282	G14B133	1.00"	3.41-3.68	
	OTW1283	G14B178	1.125"	3.66-3.93	

Standard Flatback Stoneholders



Tool Size	OTW Part #	SPC/GHC Part #	Height	Range	Abrasive Size
3.50"	OTW1198	G14C150	.406"	3.41-3.50	3/8x 3/8 x8
	OTW1201	G14C115	.475"	3.54-3.63	
	OTW1204	G14C162	.531"	3.66-3.75	
	OTW1207	G14C116	.600"	3.79-3.88	
	OTW1210	G14C168	.656"	3.91-4.00	
4.0"	OTW1250	G14C108	.375"	3.88-4.00	1/2x1/2x8
	OTW1251	G14C109	.500"	4.13-4.25	
	OTW1252	G14C110	.625"	4.37-4.50	
	OTW1253	G14C111	.750"	4.63-4.75	
	OTW1254	G14C114	.875"	4.88-5.00	
5.0"	OTW1252	G14C110	.625"	4.88-5.13	1/2x1/2x8
	OTW1253	G14C111	.750"	5.13-5.38	
	OTW1254	G14C114	.875"	5.38-5.63	
	OTW1255	G14C112	1.00"	5.63-5.88	
	OTW1256	G14C113	1.125"	5.88-6.13	
6.0" thru 9.0"	OTW1254	G14C114	.875"	5.76-6.06	1/2x1/2x8
	OTW1255	G14C112	1.00"	6.01-6.31	
	OTW1256	G14C113	1.125"	6.26-6.56	
	OTW1257		1.250"	6.51-6.81	
	OTW1258		1.375"	6.76-7.06	
10.0" thru 24.0"	OTW1260		2.00"	9.63-10.25	1/2x1/2x8
	OTW1261		2.25"	10.13-10.75	
	OTW1262		2.50"	10.63-11.25	
	OTW1263		2.75"	11.13-11.75	
	OTW1264		3.00"	11.63-12.25	

Medium Duty Stoneholders

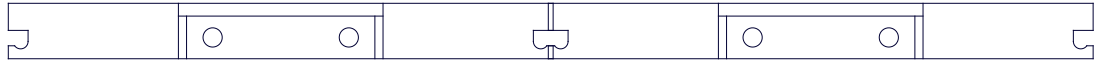


Tool Size	OTW Part #	SPC Part #	Height	Range	Abrasive Size
1 1/2"	1270	G14B125	.312	1.437-1.531	5/16x5/16x6 Mtd.
	1271	G14B139	.357	1.531-1.625	
	1272	G14B140	.402	1.625-1.718	
	1273	G14B182	.447	1.718-1.812	
1 3/4"	1297	G14B139-1	.325	1.650-1.750	5/16x5/16x6 Mtd.
	1298	G14B140-1	.370	1.740-1.840	
	1299	G14B182-1	.415	1.830-1.930	
	1300	G14B182-2	.460	1.920-2.020	
2"	2200	G14B152	.421	1.940-2.000	3/8x3/8x6 Mtd.
	2201	G14B153	.484	2.070-2.120	
	2202	G14B154	.546	2.190-2.250	
	2203	G14B146	.609	2.320-2.370	
	2204	G14B155	.671	2.440-2.500	
2 1/2"	6378	G14B146	.625	2.375-2.625	3/8x3/8x6 Mtd.
	6379	G14B148	.750	2.625-2.875	
	6380	G14B149	.875	2.875-3.125	
3"	1236	G14C178-1	.312	2.937-3.000	3/8x3/8x6 Mtd.
	1237	G14C178-2	.374	3.062-3.125	
	1238	G14C178-3	.437	3.187-3.250	
	1239	G14C178-4	.500	3.312-3.375	
	1240	G14C178-5	.562	3.437-3.500	
3 1/2"	1236	G14C178-1	.312	3.430-3.550	3/8x3/8x6 Mtd.
	1237	G14C178-2	.374	3.550-3.680	
	1238	G14C178-3	.437	3.680-3.800	
	1239	G14C178-4	.500	3.800-3.930	
	1240	G14C178-5	.562	3.930-4.050	

Medium Duty Stoneholders

Tool Size	OTW Part#	SPC Part #	Height	Range	Abrasive Size
4"	1239	G14C178-4	.500	3.880-4.180	3/8x3/8x6 Mtd.
	1241	G14C178-6	.625	4.130-4.430	
	1243	G14C178-8	.750	4.380-4.680	
	1245	G14C178-10	.875	4.680-4.930	
5"	5644	G14C129	.725	4.825-5.250	3/8x3/8x6 Mtd.
	5645	G14C130	.850	5.075-5.500	
	5646	G14C131	.975	5.325-5.750	
	5647	G14C132	1.100	5.575-6.000	
6"	5646	G14C131	.975	5.760-6.250	3/8x3/8x6 Mtd.
	5647	G14C132	1.100	6.010-6.500	
	7269	G14C133	1.225	6.250-6.750	
	7270	G14C134	1.350	6.510-7.000	
7"	5646	G14C131	.975	6.760-7.250	3/8x3/8x6 Mtd.
	5647	G14C132	1.100	7.010-7.500	
	7269	G14C133	1.225	7.250-7.750	
	7270	G14C134	1.350	7.510-8.000	
8" thru 22" Modular	7271		1.473	7.75-8.32	3/8x3/8x6 Mtd.
	7272		1.661	8.13-8.70	
	7273		1.911	8.63-9.19	
	7274		2.161	9.13-9.70	
	7275		2.406	9.62-10.19	

Tandem Stoneholders



Tool Size	OTW Part #	SPC Part #	Height	Range	Abrasive Size	
2 1/2"	3365	G14B165	.625	2.375-2.625	3/8x3/8x6 (2) Angleback	
	1266	G14B166	.750	2.625-2.875		
	2568	G14B167	.875	2.875-3.125		
3"	1266	G14B166	.750	2.875-3.000	3/8x3/8x6 (2) Angleback	
	2567	G14B163	.812	3.000-3.250		
	2569	G14B164	.937	3.250-3.500		
	1268	G14B169	1.062	3.500-3.750		
3 1/2"	2249	G14C184-1	.406	3.375-3.500	3/8x3/8x6 (2)	
	2250	G14C184-2	.531	3.625-3.750		
	6575	G14C184-3	.593	3.750-3.875		
	6576	G14C184-4	.656	3.875-4.000		
	6577	G14C184-5	.781	4.125-4.250		
4"	1292	G14C174-4	.375	3.875-4.000	1/2x1/2x8 (2)	
	1291	G14C174-3	.500	4.125-4.250		
	1293	G14C174-2	.625	4.375-4.500		
	2964	G14C174-1	.750	4.625-4.750		
	1294	G14C173-7	.850	4.825-5.000		
5"	1293	G14C174-2	.625	4.875-5.125	1/2x1/2x8 (2)	
	2964	G14C174-1	.750	5.125-5.375		
	1294	G14C173-7	.850	5.375-5.575		
	4469	G14C173-8	.975	5.575-5.825		
	4470	G14C173-9	1.100	5.825-6.075		
*6"	1294	G14C173-7	.850	5.760-6.062	1/2x1/2x8 (2)	
Thru	4469	G14C173-8	.975	6.010-6.312		
	4470	G14C173-9	1.100	6.260-6.562		
	4471	G14C173-10	1.225	6.510-6.812		
	*9"	4472	G14C173-11	1.350		6.760-7.062

*Tandem Stoneholders 6" thru 9" have the same range with 1" larger increments.



Large Modular Tool Tandem Stoneholders

Tool Sizes	OTW Part #	Range	Height
26" – 28"	9835	25.62" – 26.50"	3.000"
29" – 31"	9836	26.50" – 27.37"	3.440"
32" – 34"	9837	27.37" – 28.25"	3.875"
35" – 37"	9838	28.25" – 29.12"	4.312"
38" – 40"			

Abrasives: Two (2) ½" x ½" x 6" tandem in line
Note: Each tool add 3.0" for the next tools range

Flange Kit Numbers for Extra-Large Tool Kits using Hub 6239

6240 26/28

9835 – 25.62-26.50
9836 – 26.50-27.37
9837 – 27.37-28.25
9838 – 28.25-29.12

6243 35/37

9835 – 34.62-35.50
9836 – 35.50-36.37
9837 – 36.37-37.25
9838 – 37.25-38.12

6241 29/31

9835 – 28.62-29.50
9836 – 29.50-30.37
9837 – 30.37-31.25
9838 – 31.25-32.12

6244 38/40

9835 – 37.62-38.50
9836 – 38.50-39.37
9837 – 39.37-40.25
9838 – 40.25-41.12

6242 32/34

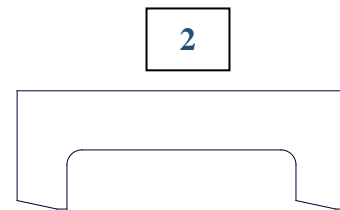
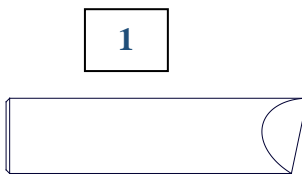
9835 – 31.62-32.50
9836 – 32.50-33.37
9837 – 33.37-34.25
9838 – 34.25-35.12



2. Tooling Components

Tooling Components

- 1-Expander Pins
- 2-Expander Plates

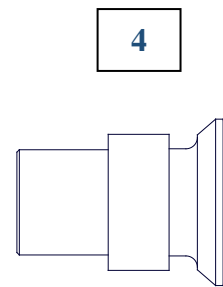


Tool Size	Part #
3.5"	OTW-1621
4.0"	OTW-1522
5.0"	OTW-1523
6.0"	OTW-1524
7.0"	OTW-1525
8.0"	OTW-1526
9.0"	OTW-1527
10"/11"	OTW-1997
12"/13"	OTW-1998
14"/15"	OTW-1999
16"/17"	OTW-2000

Abrasive Length	Angles
2" and below	1
2" thru 4"	2
4"	2
5"	2
6"	2
6"	3
8"	2
8"	3

Tooling Components

3-Universal Blocks 4-Drive Screws and Pins



Tool Size	OTW Part Number	SPC #
1 ¼"	OTW-1562	G15A120
1 ½"	OTW-1562	G15A120
1 ¾"	OTW-1563	G15A121
2"	OTW-1564	G15A104
2 ½"	OTW-1565	G15A110
3"	OTW-1566	G15A111
3 ½"	OTW-1566	G15A111
4"	OTW-1221	G15A101
5"	OTW-1221	G15A101
6"	OTW-1539	G15A112
7"	OTW-1539	G15A112
8"	OTW-1539	G15A112
9"	OTW-1539	G15A112
10"	OTW-1110	
12"	OTW-1110	
14"	OTW-1110	
16"	OTW-1110	

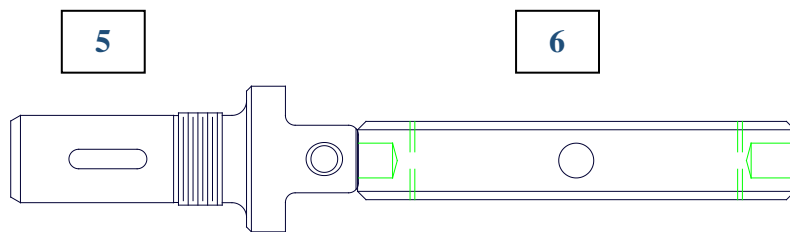
Tool Size	OTW Part Number	SPC #
1 ¼"	OTW-1585 Pin	G16A139
1 ½"	OTW-1605 Pin	G16A122
1 ¾"	OTW-1606 Pin	G16A138
2"	OTW-1219 Screw	G16A102
2 ½"	OTW-1218 Screw	G16A109
3"-3 ½"	OTW-1217 Screw	G16A116
4"	OTW-1216 Screw	G16A112
5"	OTW-1213 Screw	G16A101
6"-16"	OTW-1540 Screw	G16A105

Drive Screw – Pilot Dimensions

1585	.250" x .41" long
1605	.250" x .53" long
1606	.312" x .62" long
1219	.371" x .26" long
1218	.433" x .39" long
1217	.433" x .45" long
1216	.620" x .54" long
1213	.620" x .57" long
1540	.748" x .68" long

Tooling Components

5-Drive Shanks 6-Ring Nuts

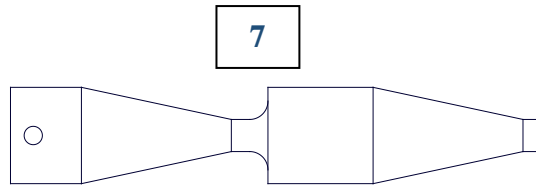


Tool Size	OTW Part Number
1 ¼"	OTW-1588 (.75")
1 ½"	OTW-1590 (.75") OTW-1591 (.87")
1 ¾"	OTW-1592 (.87") OTW-1593 (1.12")
2"	OTW-1594 (.87") OTW-1595 (1.12")
2 ½"	OTW-1596 (1.12") OTW-1597 (1.50")
3"	OTW-1598 (1.12") OTW-1599 (1.50") OTW-1600 (1.75")
3 ½"	OTW-1599 (1.50") OTW-1600 (1.75")
4"	OTW-1528 (1.50") OTW-1530 (1.75") OTW-1532 (2.25")
5"	OTW-1529 (1.50") OTW-1531 (1.75") OTW-1214 (2.25")
6"-9"	OTW-1534 (1.75") OTW-1535 (2.25") OTW-1536 (3.00")
10"-22"	OTW-1995 (2.25") OTW-1996 (3.00")

Tool Size	OTW Part Number	SPC Part #
1 ¼"	OTW-1547 (.75")	G19A144
1 ½"	OTW-1547 (.75") OTW-1548 (.87")	G19A144 G19A118
1 ¾"-2"	OTW-1548 (.87") OTW-1549 (1.12")	G19A118 G19A111
2 ½"	OTW-1549 (1.12") OTW-1550 (1.50")	G19A111 G19A109
3"	OTW-1549 (1.12") OTW-1550 (1.50") OTW-1551 (1.75")	G19A111 G19A109 G19A139
3 ½"	OTW-1550 (1.50") OTW-1551 (1.75")	G19A109 G19A139
4"-5"	OTW-1550 (1.50") OTW-1551 (1.75") OTW-1215 (2.25")	G19A109 G19A139 G19A101
6"-9"	OTW-1551 (1.75") OTW-1215 (2.25") OTW-1553 (3.00")	G19A139 G19A101 G19A107
10"-22"	OTW-1215 (2.25") OTW-1553 (3.00")	G19A101 G19A107
Driveshafts		
2" Shank	OTW-1883	G19A102
2 ½" Shank	OTW-1884	G19A103
3" Shank	OTW-1885	G19A108

Tooling Components

7-Cones



Tool Size	Angles	Part Number
1"	3	OTW-2072
1 ¼"	3	OTW-2132
1 ½"	3	OTW-1580
1 ¾"	3	OTW-1581
2"	3	OTW-1582
2 ½"	3	OTW-1583
3"	3	OTW-1584
3 ½"	2	OTW-2277
4"	2	OTW-2278
5"	2	OTW-2279
6"	2	OTW-2280
7"-9"	2	OTW-1521
10"-16"	2	OTW-1109

Tooling Components

8-Cone Rod Components

Tool Size
1 ¼"
1 ½" – 1 ¾"
2" – 3"
3 ½" – 5"
6" – 9"
10" – 24"

1" thru 1 ¾" utilize a one piece cone rod with no link

Utilization

Tool Size	Cone Rod Link	Feed Rod	Feed Rod Cap	Spring
1 ¼"	N/A	4390 (.75)	1607	1940
1 ½"	N/A	1610 (.75)	1607	1940
		1611 (.87)	1608	1941
1 ¾"	N/A	1612 (.87)	1608	1941
		1612 (1.12)	1609	1941
2"	1616	1613 (.87)	1609	1941
		1613 (1.12)	1545	1941
2 ½"	1617	1614 (1.12)	1608	1941
		1615 (1.50)	1609	1942
3"	1617	1614 (1.12)	1609	1941
		1615 (1.50)	1545	1942
		1615 (1.75)	1545	1942



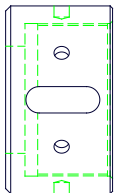
Utilization

Tool Size	Cone Rod And Link	Feed Rod	Feed Rod Cap	Spring
3 ½"	2272	1615 (1.50) 1615 (1.75)	1545 1545	1942 1942
4"	2271	1541 (1.50) 1541 (1.75) 1541 (2.25)	1545 1545 1546	1942 1942 1943
5"	2271	1541 (1.50) 1541 (1.75) 1541 (2.25)	1545 1545 1546	1941 1942 1943
6"	2271	1542 (1.75) 1542(2.25) 1542 (3.00)	1543 1113 1113	1942 1943 1943
7" – 9"	1544	1542 (1.75) 1542(2.25) 1542 (3.00)	1543 1113 1113	1943 1943 1943
10" – 16"	1120	1112 (2.25) 1112 (3.00)	1113 1113	1943 1943



Tooling Components

9-Spindle Nuts
10-Spindle Drive Keys
11-Split Collars



9

Shank Size	OTW Part #	SPC Part #
#4 MT		
#5 MT		
#6 MT	1946	G20B103
#7 MT		
1.25" Spline		
1.75" Spline		
2.25" Spline		

11

Shank Size	OTW Part #
1.25" Spline	
1.75" Spline	
2.25" Spline	

10

Shank Size	OTW Part #	SPC Part #
#4 MT		G22A121
#5 MT		G22A120
#6 MT	1844	G22A128

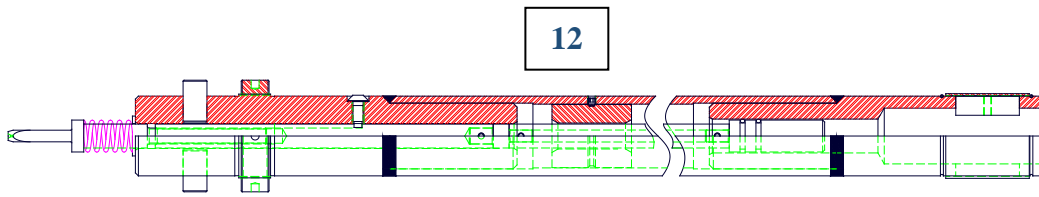
Utilization

Utilization	Shank Size	OTW Part #	SPC Part #
GH210	#6 MT	1946	G20B103
GH310	#6 MT	1946	G20B103
4014 Barnes	#5 MT		G20B102
	#6 MT		G19B112
307 Barnes	#4 MT		G20B101
	#5 MT		G19B108
10H300 Micro	#6 MT		G200D343-1



Tooling Components

12-Driveshaft Assemblies



Driveshaft Diameter
Up to 1"
1" to 2"
2" to 3"
3" to 4"
4" to 6"

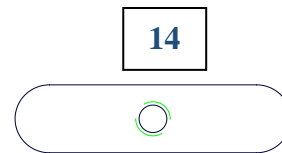
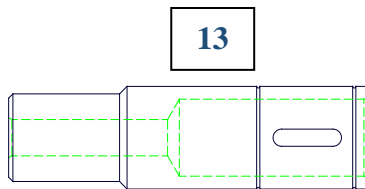
Diameter To Hone	Recommendation
1 ¼"	OTW-2.5P-1.12-.75
1 ½"	OTW-2.5P-1.25-.87
1 ¾"	OTW-2.5P-1.25-.87
2"	OTW-2.5P-1.56-1.12
2 ½"	OTW-2.5P-1.56-1.12
3"	OTW-2.5P-2.5-1.75
4"	OTW-2.5P-3.0-2.25
5"	OTW-2.5P-3.0-2.25
6"-12"	OTW-2.5P-3.0-2.25
14"-24"	OTW-2.5P-4.0-3.0

Tooling Components

13-Driveshaft Socket

14-Drive Keys

15-Key Sleeve



Socket I.D.	OD	OTW Number	SPC Part #
3/4"		OTW2915	G43B118
7/8"		OTW4490	G43B125
1 1/8"	1 9/16"	OTW1888	G43B104
1 3/4"	2 1/2"	OTW1828	G43B101
2 1/4"	3"	OTW1889	G43B103
2 1/4"	3 1/4"	OTW1842	
3"	4"	OTW3289	

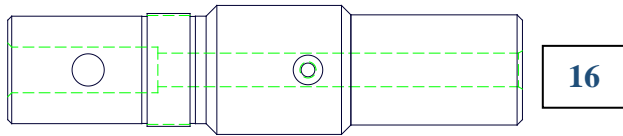
Socket I.D.	OTW Number	SPC Part #
3/4"	OTW1847	G22A108
7/8"	OTW1848	G22A114
1 1/8"	OTW1849	G22A105
1 1/2"	OTW1850	G22A102
1 3/4"	OTW1851	G22A106
2 1/4" (3" OD)	OTW1851	G22A106
2 1/4" (3 1/4" OD)	OTW1853	
3"	OTW1852	G22A104
3" OTW	OTW3295	

Socket I.D.	OTW Number	SPC Part #
3/4"	OTW1876	G35A136
7/8"	OTW1877	G35A155
1 1/8"	OTW1878	G35A103
1 1/2"	OTW1879	G35A102
1 3/4"	OTW1845	G35A101
2 1/4" (3" OD)	OTW1880	G35A104
2 1/4" (3 1/4" OD)	OTW1846	
3"	OTW3291	

Drive Key Dimensions (W x H x L)

OTW1847	.249" x .281" x .748"
OTW1848	.249" x .300" x 1.248"
OTW1849	.249" x .328" x 1.248"
OTW1850	.375" x .560" x 1.998"
OTW1851	.498" x .600" x 1.998"
OTW1853	.498" x .720" x 1.998"
OTW1852	.623" x .913" x 2.498"

Tooling Components



16-Driveshaft Shanks

Shank Size	OTW Part #	SPC Part #
2"	2.0P/R	#4 GHB
2 1/2"	2.5P/R	#4C & #5GHB
3"	3P/R	#6GHB
MPS Yoke	7656	

*Specify Adjusting Head or Push Feed

Utilization

Driveshaft	OTW Shank Part #	SPC Part #	Driveshaft	OTW Shank Part #	SPC Part #
2.0P-1.12-.75			2.5P-2.50-1.75	1899	G42B101
2.0P-1.25-.87			2.5P-3.0-2.25	1894	G42B105
2.0P-1.56-1.12	1905		3.0P-2.5-1.75	1826	
2.0P-2.50-1.75			3.0P-3.0-2.25		
2.0P-3.0-2.25			3.0P-3.25-2.25	1840	
2.5P-1.12-.75					
2.5P-1.25-.87	4493				
2.5P-1.56-1.12	1922	G42B106			

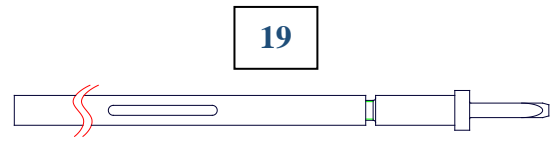
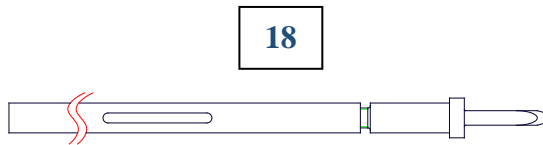
Tooling Components

17-Feed Rod Cap

Socket Size	OTW Part #
3/4"	2916
7/8"	2916
1 1/8"	1911
1 1/2"	1907
1 3/4"	1907
2 1/4"	1907
3"	1833
4"	1833

Tooling Components

18-Feed Screw Assembly 19-Rotary Feed Screw



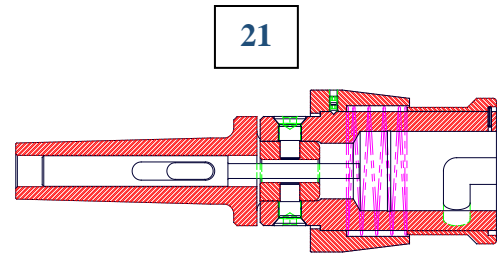
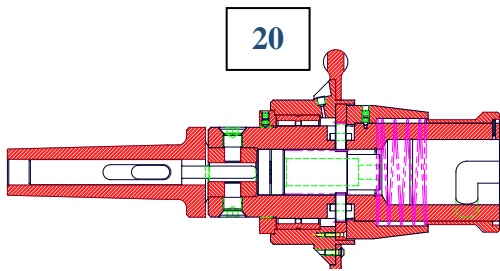
Driveshank Size	OTW Part #	SPC PART #
2"	1855	G17C111
2 1/2"	1855	G17C111
2" & 2 1/2"	1856	Socket
2" & 2 1/2"	1857	Screw
2 1/2" left	3821	
3"	1829/ 1830	

Standard Feed Screws

- Feed Screw
- Square Extension
- Feed Nut
- Snap Ring
- Roll Pins

Tooling Components

20-Adjusting Head 21-Drive Adapters



Specify Handwheel or Palmwheel (Included)

Specify Morse Taper (Included)

OTW Model #	Socket Size
OTW-3-H-4	2"
2171	2 1/2"
OTW-3-H-6	3"
OTW-3-H-7	4"

OTW Model #	Socket Size
OTW-4	2"
2620	2 1/2"
OTW-6	3"
OTW-7	4"

MPS Drive Adapter

OTW7947 MPS Drive Adapter Assembly

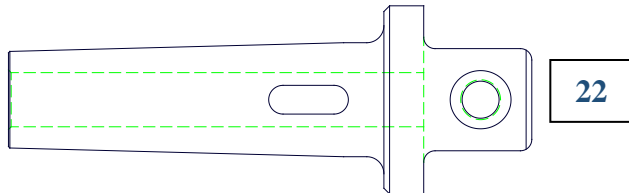
Specify universal block or rigid

Reversing Keys

A/H D/A	OTW Part #
H-4	2501
H-5	2302
H-6	
H-7	



Tooling Components



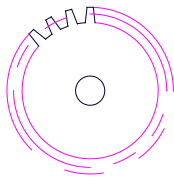
22-Morse Taper Shanks

Utilization	Morse Taper	OTW Part #	SPC Part #
OTW-4	#4	5655	G18B109
	#5		G18B107
	#6		G18B109
OTW-5	#5	2169	G18C113
	#6	2108	G18C112
OTW-6	#5		G18C118
	#6		G18C117
OTW-7	#6		G18C125
Feed Rod		2109	

Tooling Components

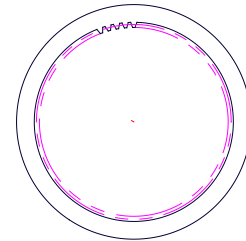
23-Adjusting Head Gears

Idler



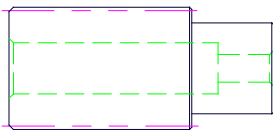
Utilization	OTW Part #	SPC Part #
OTW-4/6M	1917	G32A112
OTW-5	1618	G32A109
OTW-6		G32A117
OTW-7	1693	G32A105

Ring



Utilization	OTW Part #	SPC Part #
OTW-4/6M		G32A115
OTW-5	2143	G32A110
OTW-6		G32A118
OTW-7	1695	G32B101

Pinion



Utilization	OTW Part #	SPC Part #
OTW-4/6M		
OTW-5	1619	G32A107
OTW-6	1619	G32A107
OTW-7	1694	G32B102

Adjusting Head Feed Rods

Utilization	Morse Taper	OTW Part #	SPC Part #
OTW-4B 4C 4M 5 5M	#4		G17B109
OTW-4C 4M 5 5M	#5 #6	2170 2109	G17B107 G17B108
OTW-6	#5 #6	2170 2109	G17B107 G17B108
OTW-7	#6		G17B119

Tooling Components

- 24-Retaining Springs
- 25-Spanner Wrenches
- 26-Pigtail Springs

24

25

Spring Dimensions	OTW Part #	Tooling Used
1/16" x 6"	100165	1.5" Double Bank
3/32" x 12"	100105	Driveshafts
1/8" x 12"	100106	Tooling
5/32" x 12"	100107	Tooling
3/16" x 12"	100108	3 1/2"-5" Tools
1/4" x 12"	100109	6"-20" Tooling

OTW Part #	Type
	3/16" Pin (3/4"-2")
100448	1/4" Pin (1 1/4"-3")
100603	1/4" Pin (2"-4 3/4")
	Hook (2"-4 3/4")

26

OTW Part #	SPC Part #	Tooling Used
1586	G21A104	1 1/4" Tools
1220	G21A134	1 1/2" + Tools

12 ea. Minimum order on springs.



OTW Fixtures

OTW-2508 Heavy Duty Chain Type Fixtures

- Includes OTW-1664 60-3 chain clamps
- Includes 11' OTW-100048 60-3 cottered chain

OTW-2509 Heavy Duty Chain Type Fixtures

- Includes OTW-1667 60-6 chain clamps
- Includes 11' OTW-100049 60-6 cottered chain

Fixture Components

Chain Clamps:

- OTW-1664 60-3 Chain Clamps
- OTW-1667 60-6 Chain Clamps

Cottered Chain:

- OTW-100048 60-3 Cottered Chain
- OTW-100049 60-6 Cottered Chain

Replacement Fingers:

- OTW-1666 60-3
- OTW-1669 60-6

3. Coolants & Accessories

OTW Honing Coolants

OTW-8915-55....	55 gal. Pre-Mixed Honing Oil
OTW-8915-275	275 gal. Tote Pre-Mixed Honing Oil
OTW-8920-55	55 gal. 50/50 Blend Pre-Mixed
OTW-8920-275	50/50 Blend Tote Pre-Mixed Honing Oil
OTW-ASF-5	5 gal. Coolant Additive

Conventional Abrasive Adhesive

OTW-1-55 Flake Shellac

1-10 lbs. 11-25 lbs. 26-54 lbs. 55+ lbs.

Superabrasive Epoxy

OTW-7012 2 oz. Bottle

OTW-7014 4 oz. Bottle

Provided with assembly and disassembly instructions.



4. OTW Honing Machines





OTW-1000

Model #	Description	Comments
OTW-1000-5-2 M	2 M Stroke Horizontal Honing Machine	5 HP Spindle 4.7 HP Recip. 460 V; 0 Traveling Support
OTW-1000-5-3 M	3 M Stroke Horizontal Honing Machine	5 HP Spindle 4.7 HP Recip. 460 V; 0 Traveling Support
OTW-1000-5-4 M	4 M Stroke Horizontal Honing Machine	5 HP Spindle 4.7 HP Recip. 460 V; 1 Traveling Support
OTW-1000-5-6 M	6 M Stroke Horizontal Honing Machine	5 HP Spindle 4.7 HP Recip. 460 V; 2 Traveling Supports
	OTW-1000 (Options)	
	10 HP Spindle Drive w/6.7 HP Reciprocation	
	Traveling Driveshaft Support Assembly	
	Median Size Control System	Included
	Driveshaft Support Bushings	
	Driveshaft Wiper Assembly	
	Tool Support Cradle w/Lift	
	OTW 6365 Transformer (460-230 Voltage)	
	Left Hand Operation	
	OTW Coolant System (Options)	
	DMD-150 Magnetic Separator	
	DTE 150 Deep Bed Paper filter	Standard paper bed filter
	DTE 100 Deep Bed Paper filter	Optional for small diameters
	DCO-100Magnetic over Paper Filter	
	OTW Drive Adapter Options	
10558	OTW Drive Adapter Rotary-Push	Includes reversing keys
6848	LD Drive Adapter	
7947	MPS Drive Adapter Assembly	
6327	Chain Clamp Block & Bolt	
6328	Chain Clamp Block	





OTW-3000

Model #	Description	Comments
OTW-3000-20-4M	14' Stroke Horizontal Honing Machine	25 HP Spindle 460 V; 1 Traveling Support
OTW-3000-20-8M	26' Stroke Horizontal Honing Machine	25 HP Spindle 460 V; 2 Traveling Support
OTW-3000-30-11M	36' Stroke Horizontal Honing Machine	25 HP Spindle 460 V; 3 Traveling Support
	3" way bars	
	OTW-3000 (Options)	
	Rotary Feed System	
	High Speed Spindle (500 RPM)	
	Traveling Driveshaft Support Assembly	
	Transformer (460-230 Voltage)	Consult Factory
	Spindle Load Meter	
	Wiper Assembly	Specify Diameter
	D/S Support Bushing	Specify Diameter
	Way Shoe Assembly	
	Driveshaft Storage Rack	4M& 8M, 11M
6607	Short part fixture accessory	
	OTW Coolant System (Options)	
	Magnetic Separator DMD-400	
	Deep Bed Paper filter DTE 250	
	Magnetic over Paper filter DCO 250	
	OTW Fixturing Options	
	60-3 Cotter Chain	
	60-6 Cotter Fixture Chain	
	OTW Drive Adapter	Includes Reversing Keys and Drive Key





OTW-5000

Model #	Description	Comments
OTW-5000-50-14M	14' Stroke Horizontal Honing Machine	50 HP Spindle 460 V; 1 Traveling Support
OTW-5000-50-22M	22' Stroke Horizontal Honing Machine	50 HP Spindle 460 V; 1 Traveling Support
OTW-5000-50-26M	25' Stroke Horizontal Honing Machine	50 HP Spindle 460 V; 1 Traveling Support
OTW-5000-50-32M	32' Stroke Horizontal Honing Machine	50 HP Spindle 460 V; 2 Traveling Support
OTW-5000-50-42M	42' Stroke Horizontal Honing Machine	50 HP Spindle 460 V; 3 Traveling Support
	OTW-5000 (Options)	
	Rotary Feed System	
	High Speed Spindle (500 RPM)	
	Traveling Driveshaft Support Assembly	
	Dual Feed Pressure Transformer (460-230 Voltage)	
	Spindle Load Meter	
	Wiper Assembly	Specify Diameter
	D/S Support Bushing	Specify Diameter
4927	Way Shoe Assembly	
8336	Driveshaft Storage Rack	Holds 3 driveshafts
6607	Short part fixture accessory	
	OTW Coolant System (Options)	
	Magnetic Separator DMD-400	
	Deep Bed Paper filter DTE 250	
	Magnetic over Paper filter DCO 250	
8516	Seal Kit – Feed System	Push Hydraulic
	OTW Fixturing Options	
	60-3 Cotter Chain	
	60-6 Cotter Fixture Chain	
2620	OTW Drive Adapter	Includes Reversing Keys and Drive Key





OTW-9000

Model #	Description	Comments
OTW-9000-5-48M	48" Stroke Vertical Honing Machine	5 HP Spindle Drive; Standard Feed; 460V
OTW-9000-5-60M	60" Stroke Vertical Honing Machine	5 HP Spindle Drive; Standard Feed; 460V
OTW-9000-5-72M	72" Stroke Vertical Honing Machine	5 HP Spindle Drive; Standard Feed; 460V
	OTW-9000 (Options)	
	10 HP Spindle Drive	
	15 HP Spindle Drive	
	20 HP Spindle Drive	
	Median Size Control System	Standard Feature
	Hydraulic End Clamping Fixture w Chuck	
6365	Transformer (460-230 Voltage)	
	OTW Coolant System (Options)	
	DMD 050 Magnetic Separator	
	DTE 150 Deep Bed Paper filter	Standard paper bed filter
	DTE 100 Deep Bed Paper filter	Optional for small diameters
	DCO 150 Magnetic over Paper Filter	
	OTW Drive Adapter Options	
	OTW Drive Adapter Rotary-Push	Includes reversing keys
6848	LD Drive Adapter	



5. Operational & Troubleshooting Guides



Speed Conversion Chart

SFM to RPM

Spindle Speed-RPM

Aluminum Oxide 110-130 SFPM

CBN/Diamond: 200-250 SFPM

Surface Speed in FPM

	70	75	80	85	90	95	100	110	120	130	140	150	160	170	180	190	200	250	
Bore Dia.																			
1.000	267	286	305	325	344	363	382	420	458	497	535	573	612	649	687	726	764	955	
1.125	238	255	272	289	306	323	340	374	408	442	476	510	544	578	612	646	680	850	
1.250	214	230	249	260	275	291	306	337	367	398	428	459	490	520	551	581	612	765	
1.375	195	209	222	236	250	264	278	306	334	361	389	417	445	473	500	528	556	695	
1.500	178	191	204	217	230	242	255	281	306	332	358	383	408	435	460	486	512	640	
1.625	165	176	188	200	212	223	235	259	282	306	329	353	376	400	423	447	470	587	
1.750	153	164	174	185	196	207	218	240	262	283	305	327	349	371	392	414	436	545	
1.875	143	153	163	173	184	194	204	224	245	265	287	306	326	347	367	388	408	510	
2.000	133	143	153	162	172	182	191	210	229	248	268	287	306	325	344	363	382	477	
2.250	119	128	136	145	153	162	170	187	204	221	238	255	272	289	306	323	340	425	
2.500	107	115	122	130	138	145	153	168	183	199	214	230	245	260	275	290	306	382	
2.750	97	104	111	118	125	132	139	153	167	181	195	209	222	236	250	264	278	347	
3.000	89	96	102	108	115	121	128	140	153	166	179	192	204	217	230	243	255	319	
3.250	82	88	94	100	106	112	118	129	141	152	165	176	188	200	212	223	235	292	
3.500	77	82	88	93	99	104	110	120	131	142	153	164	175	186	197	208	219	274	
3.750	71	77	82	88	92	97	102	112	122	133	143	153	163	173	184	194	204	255	
4.000	67	72	77	81	86	91	96	105	115	125	134	144	153	163	173	182	191	239	
4.250	63	68	72	77	81	86	90	99	108	117	126	135	144	153	162	171	180	225	
4.500	60	64	68	72	77	81	85	94	102	111	119	128	136	145	153	162	170	213	
4.750	56	60	64	68	72	76	81	89	97	105	113	121	129	137	145	153	161	201	
5.000	54	57	61	65	69	73	76	84	92	99	107	117	122	130	137	145	152	190	
5.500	49	52	56	59	63	66	70	76	83	90	97	104	111	118	125	132	139	174	
6.000	45	48	51	54	57	61	64	70	76	83	89	96	102	108	115	121	127	159	
6.500	41	43	47	50	53	56	59	64	70	76	82	87	94	100	106	111	117	147	
7.000	38	41	44	46	49	52	55	60	65	71	76	82	87	93	98	103	109	136	
7.500	36	38	41	43	46	48	51	56	61	66	71	77	82	87	92	97	102	128	
8.000	33	36	38	41	43	45	48	53	57	62	67	72	76	81	86	91	96	120	
8.500	32	34	36	38	41	43	45	50	54	59	63	68	72	77	81	86	90	113	
9.000	30	32	34	36	38	40	43	47	51	55	60	64	68	72	77	81	85	107	
9.500	28	30	32	34	36	38	40	44	48	52	56	60	64	69	73	77	81	102	
10.00	27	29	31	32	34	36	38	42	46	50	53	57	61	65	69	73	76	95	
11.00	24	26	28	29	31	33	35	38	42	45	49	52	56	59	62	66	69	87	
12.00	22	24	26	27	29	30	32	35	38	41	45	48	51	54	57	61	64	80	
13.00	21	22	24	25	26	28	29	32	35	38	41	44	47	50	53	56	59	74	
14.00	19	20	22	23	25	26	27	30	33	35	38	41	44	46	49	52	55	69	
15.00	18	19	20	22	23	24	26	28	31	33	36	38	41	43	46	48	51	64	
16.00	17	18	19	20	22	23	24	26	29	31	33	36	38	41	43	45	48	60	
17.00	16	17	18	19	20	21	23	25	27	29	32	34	36	38	41	43	45	57	
18.00	15	16	17	18	19	20	21	23	25	28	30	32	34	36	38	40	42	53	
19.00	14	15	16	17	18	19	20	22	24	26	28	30	32	34	36	38	40	50	
20.00	13	15	15	16	17	18	19	21	23	25	27	29	31	32	34	36	38	48	



Honing Reactions

RPM-Reciprocation-Feed Pressure

Increase RPM

1. Makes abrasives act harder
2. Will obtain finer finish
3. Abrasive will stop cutting if increase too much

Increase Reciprocation

1. Makes abrasives act softer
2. Will obtain courser finish
3. Will decrease abrasive life

Increase Feed Pressure

1. Makes abrasives act softer
2. Will increase abrasives aggressiveness and not glaze
3. Will remove stock quicker
4. Will increase torque
5. Will generate more heat
6. Will give courser finish

Decrease RPM

1. Makes abrasives act softer
2. Will obtain courser finish
3. Will increase abrasives aggressiveness and not glaze
4. Will increase torque

Decrease Reciprocation

1. Abrasive will act harder
2. Will give finer surface finish
3. Will decrease a abrasive's ability to stay sharp and not glaze
4. Will remove stock slower if too slow

Decrease Feed Pressure

1. Will cause abrasives to act harder
2. Will decrease a abrasives ability to stay sharp and not glaze
3. Will remove stock more slowly
4. Will decrease torque
5. Will contribute to better geometry
6. Will decrease wear on machine
7. Will generate less heat
8. Will generate less noise
9. Will give finer surface finish
10. Will increase cycle time



Honing Spindle Speed

Spindle speeds are decided by the following factors:

1. Material Specifications
2. Bore Diameter
3. Abrasive Size
4. Surface Finish

Guidelines

Material	Hardness	Surface Feet per Minute
Steel	Mild	120-150
Steel	Hardened	80-100
Cast Iron	Mild	160-180
Cast Iron	Hardened	90-110

Surface Feet Conversion: See Chart

Increase RPM = Abrasive act Harder, finish is finer

Decrease RPM = Abrasives act Softer, finish is courser

Reciprocation: 60-90 Feet per minute

Increase Reciprocation = Abrasives act Softer, finish is rougher

Decrease Reciprocation = Abrasives act Harder, finish is fine



Honing Trouble Shooting

<u>Condition</u>	<u>Correction in order of Importance</u>
Abrasive glazing.....	2-3-5-15-13-18-11
Abrasive loading.....	2-3-15-7-17-19-11
Abrasive galling.....	2-3-7-15-9-17-19-24-11
Finish too rough.....	1-4-6-17-16-7-12
Finish too smooth.....	2-3-5-18-15-8-13
Excessive abrasive usage.....	1-4-6-16-7
Tapered stone wear.....	14-22-21-16
Slow stock removal.....	5-3-2-8-11-15-18
Excessive part heat.....	10-6-8-11-24-15-20
Part out of roundness.....	6-2-3-12-14-15-25
Part bell mouth/taper.....	26-12-14-25
Part not axially straight.....	32-14-25-33
Part being honed eccentric to OD.....	14-29-30
Bore not square to face.....	29-14-33
Washout around keyways, ports.....	6-17-28

Corrections

- | | |
|---|---|
| 1. Increase spindle RPM | 18. Use Courser grit abrasives |
| 2. Decrease spindle RPM | 19. Use less porous abrasives |
| 3. Increase reciprocation | 20. Use more porous abrasives |
| 4. Decrease reciprocation | 21. Check abrasive grade |
| 5. Increase feed rate | 22. Check tool for wear |
| 6. Decrease feed rate | 23. Trial other abrasives |
| 7. Increase coolant's base content | 24. Use more coolant |
| 8. Decrease coolant's base content | 25. Check fixture is not distorting part |
| 9. Check filtration of coolant | 26. Adjust over-run of stroke |
| 10. Check refrigeration of coolant | 27. Use guides |
| 11. Check coolant for hydraulic oil contamination | 28. Use fibre clad abrasives |
| 12. Increase run-out time | 29. Tram part face to check square to spindle |
| 13. Decrease run-out time | 30. Rotate part occasionally while honing |
| 14. Check spindle to part alignment | 31. Use light feed pressure at start of cycle |
| 15. Use softer abrasives | 32. Use longer abrasives |
| 16. Use harder abrasives | 33. Check part accuracy prior to honing |
| 17. Use finer grit abrasives | |

