
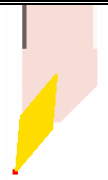
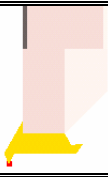
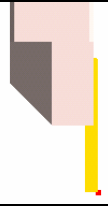
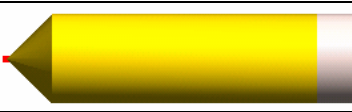


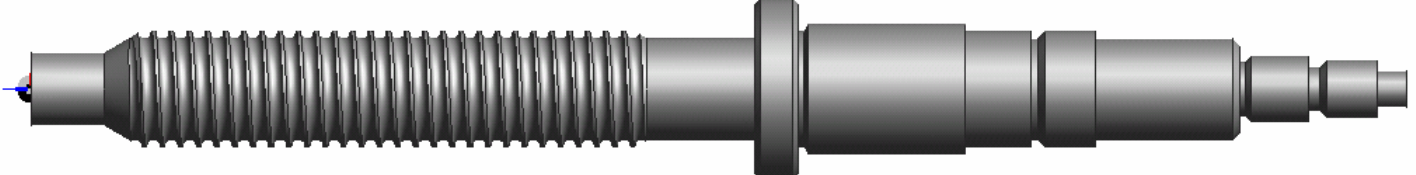
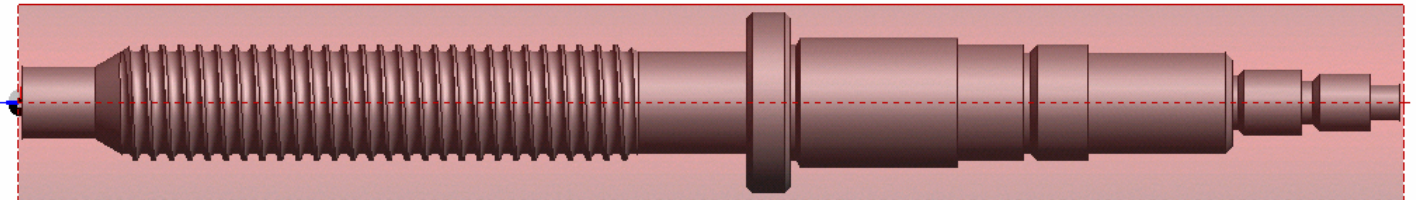
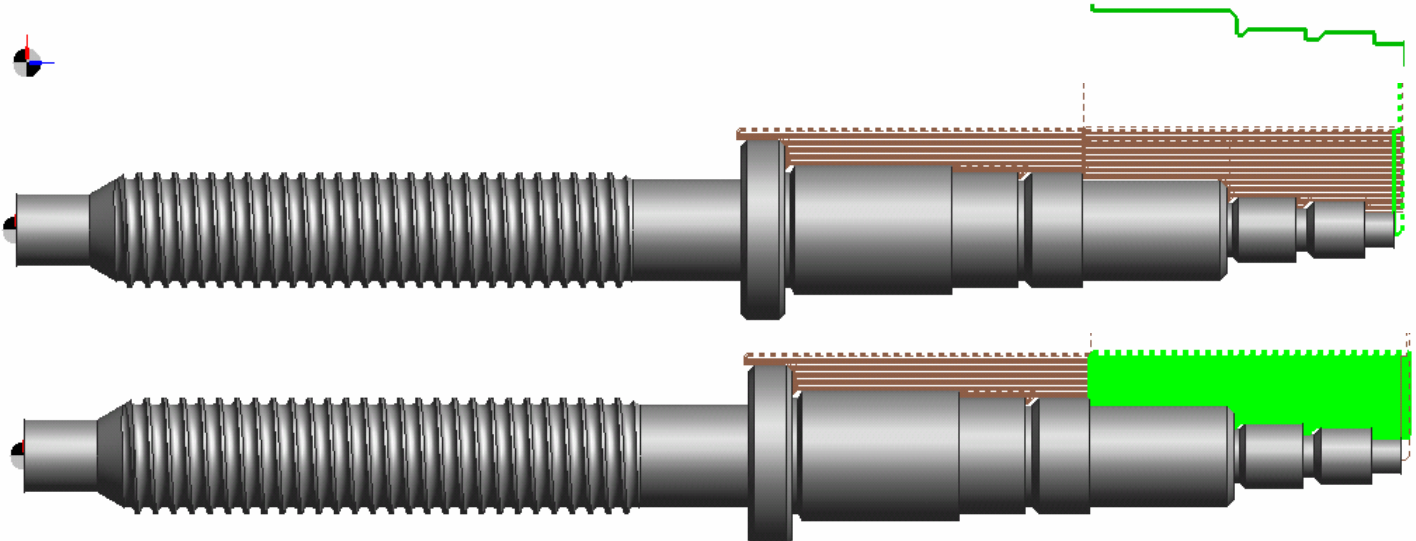


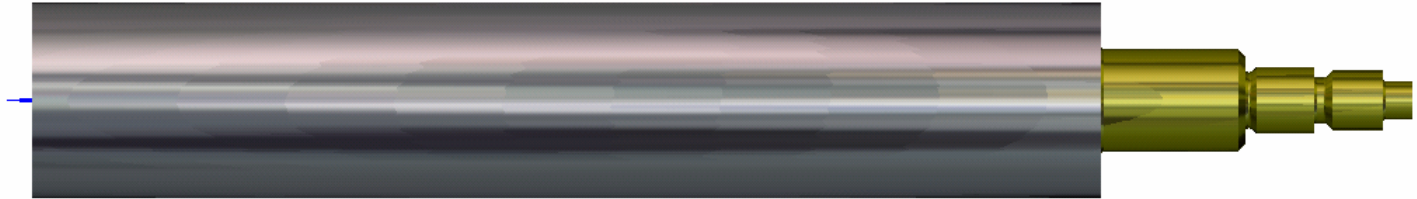
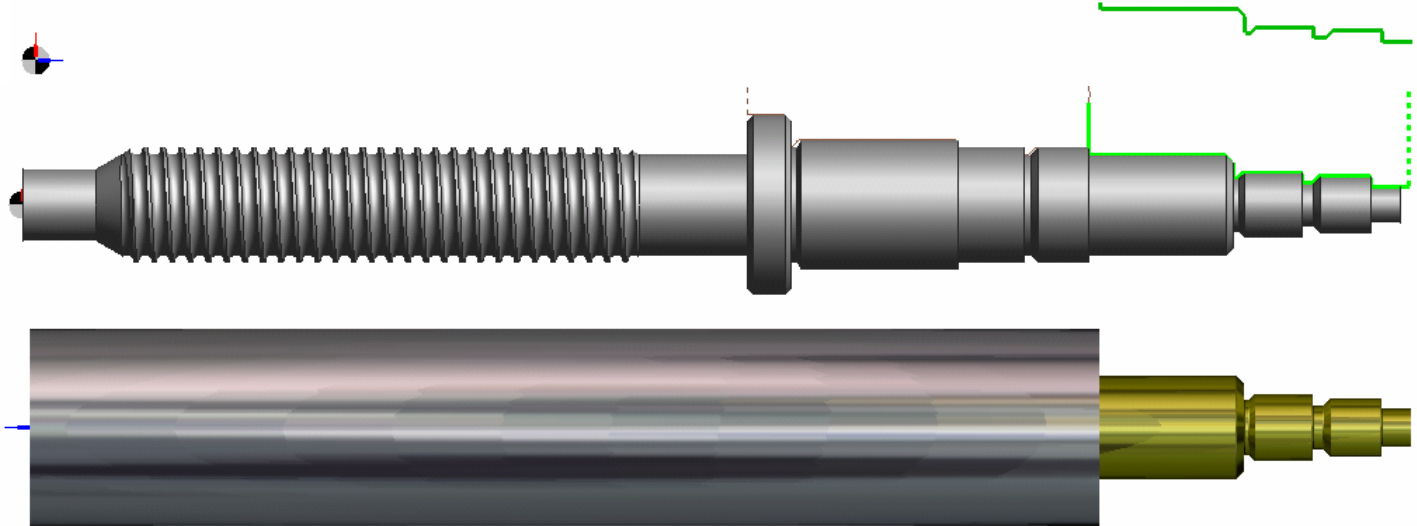
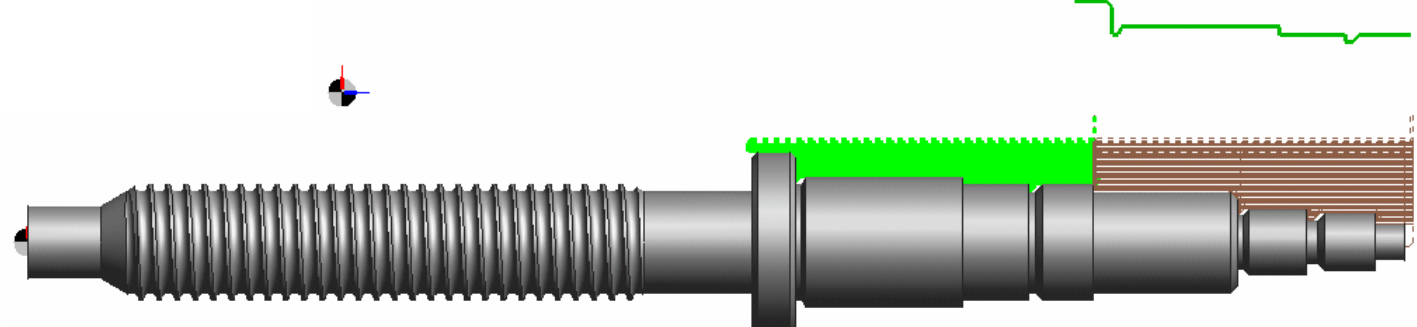
**ПРИМЕР  
ИЗГОТОВЛЕНИЯ  
ВАЛА  
С ИСПОЛЬЗОВАНИЕМ СЧПУ "ФЕНИКС"**

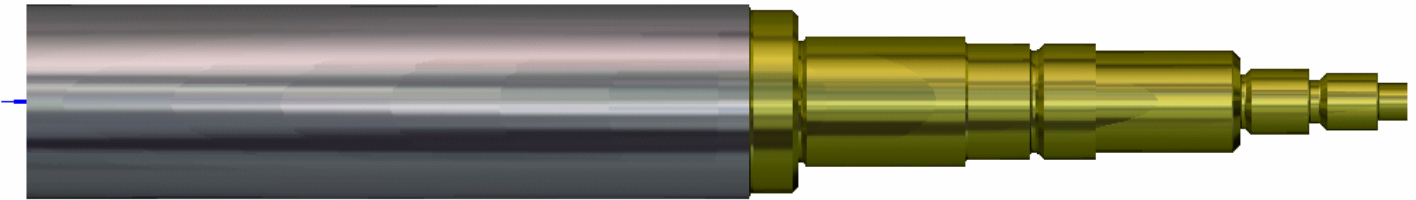
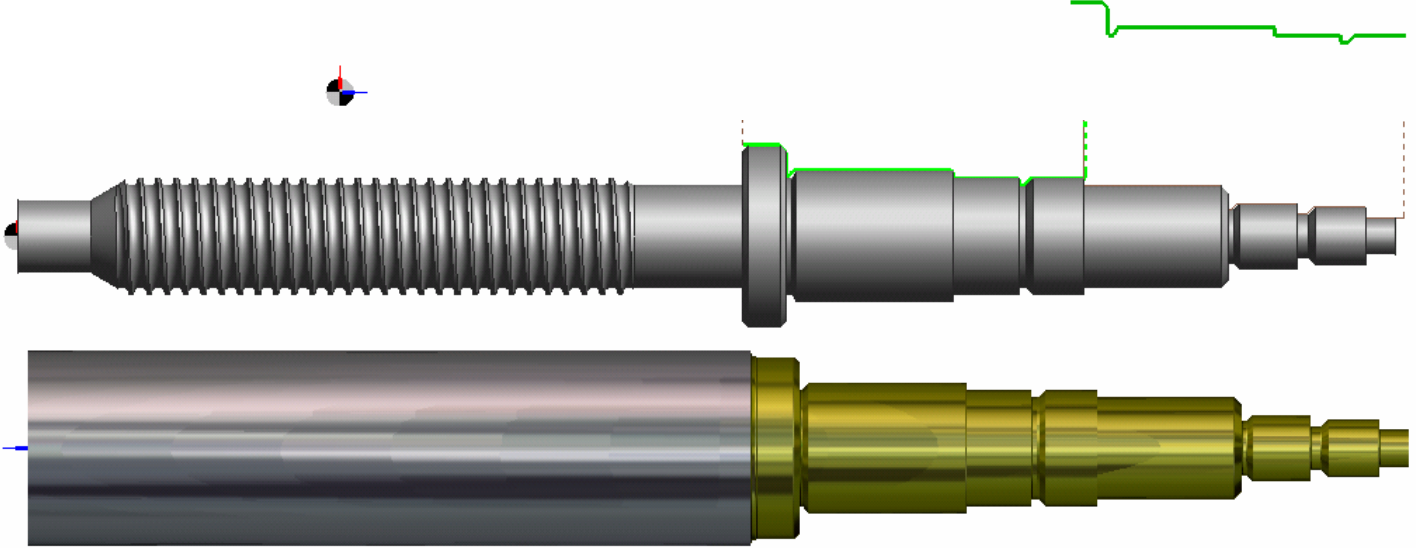
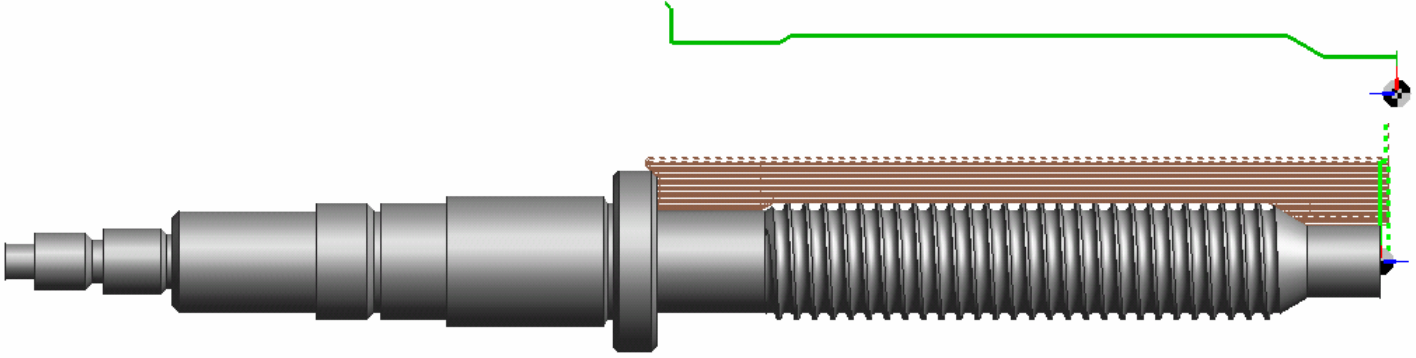
## 2. ИСПОЛЬЗУЕМЫЙ ИНСТРУМЕНТ

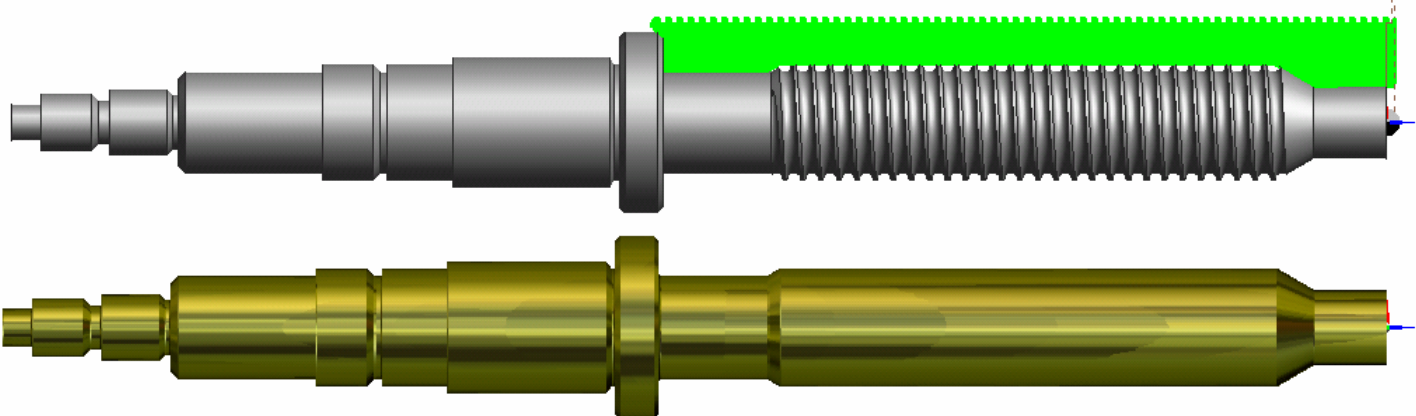
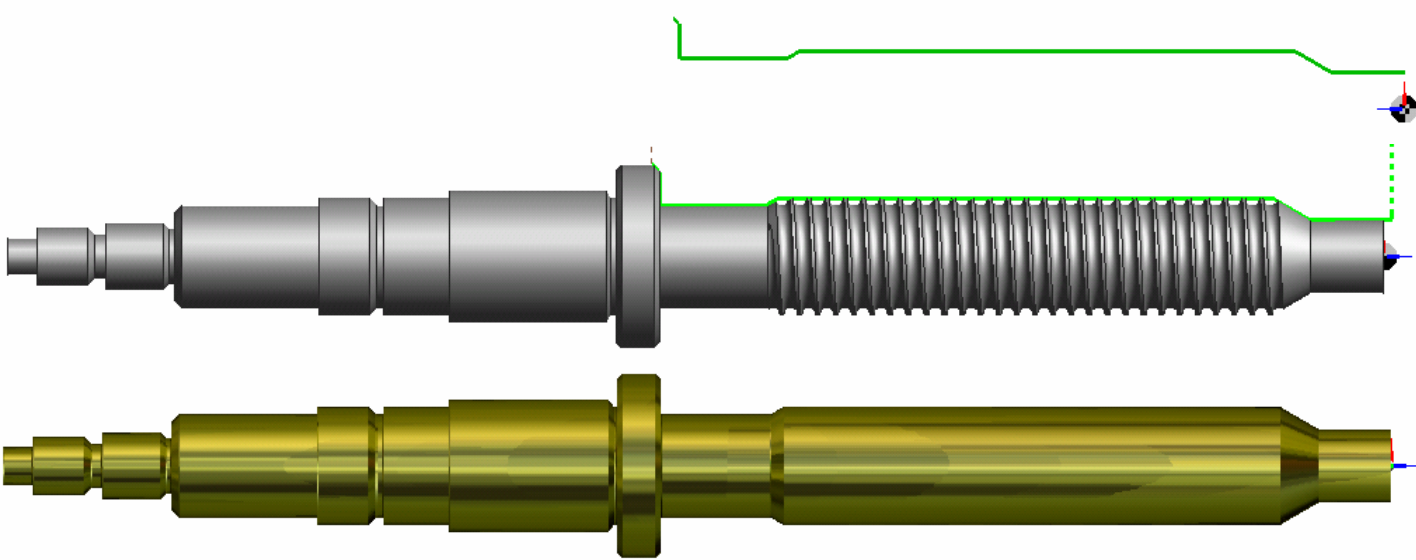

№ инстр.	Параметры	Примечание	Пример
1	$R = 0,8 \text{ мм}$ $\alpha = 93^\circ$ (V-35 ромбический) $L = 5 \text{ мм}$		PDJNR-2525-M15 0.8 General Turn GC4015
2	$R = 0,4 \text{ мм}$ $\alpha = 95^\circ$ (V-35 ромбический) $L = 5 \text{ мм}$		SVLBL-2020-K16 0.4 - Finish Turn GC1015
3	$R = 0,07 \text{ мм}$ $\alpha = 60^\circ$ $L = 3 \text{ мм}$		R166.4FGZ-3225-16 3 mm Ext Metric
4	$R = 0,3 \text{ мм}$ $D = 4 \text{ мм}$ $L = 20 \text{ мм}$		4mm Groove Tool GC2135
5	$\varnothing = 12 \text{ мм}$ $\alpha = 90^\circ$		13 mm Spot Drill
6	$\varnothing = 8 \text{ мм}$ $\alpha = 118^\circ$		8.0mm Coro Delta C
7	$R = 0,8 \text{ мм}$ $\alpha = 95^\circ$ (V-35 ромбический) $L = 5 \text{ мм}$		SVLBL-2525-K16 0.4 Rad Finish Turn

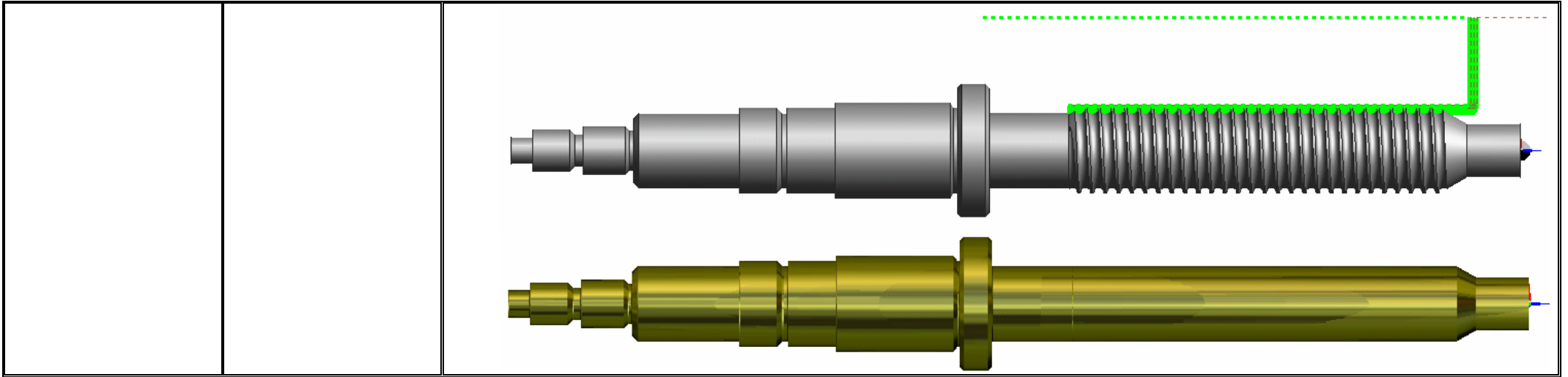
### 3. ТЕХНОЛОГИЯ ИЗГОТОВЛЕНИЯ

Описание	Параметры	Примечание
<b>Первый установ</b>		
Деталь		
Заготовка	Пруток: Сталь 45 $\text{Ø}54$ мм. Расстояние от правого торца заготовки до кулачков (вылет заготовки) 382 мм	
Подрезка торца и предварительная обработка контура	$F = 0,2$ мм/мин. $S = 450$ об/мин. Припуск = 0,2 мм	

		
<p>Чистовая обработка контура</p>	<p><math>F = 0,2</math> мм/мин. <math>S = 650</math> об/мин.</p>	
<p>Предварительная обработка контура</p>	<p><math>F = 0,2</math> мм/мин. <math>S = 450</math> об/мин. Припуск = 0,2 мм</p>	

		
<p>Чистовая обработка контура</p>	<p><math>F = 0,2 \text{ мм/мин.}</math> <math>S = 650 \text{ об/мин.}</math></p>	
<p><b>Второй установ</b></p>		
<p>Подрезка торца и предварительная обработка контура</p>	<p><math>F = 0,2 \text{ мм/мин.}</math> <math>S = 450 \text{ об/мин.}</math> Припуск = 0,2 мм</p>	

		
<p>Чистовая обработка контура</p>	<p><math>F = 0,2 \text{ мм/мин.}</math> <math>S = 650 \text{ об/мин.}</math></p>	
<p>Нарезание резьбы</p>	<p><math>F = 8 \text{ мм/мин.}</math> <math>S = 320 \text{ об/мин.}</math></p>	



Пробное изготовление проведено на станке 16Б16

#### 4. ПРОГРАММА

<b>Первый установ</b>	
№ инструмент: 1, описание: PDJNR-2525-M15 0.8 General Turn GC4015 № инструмент: 2, описание: SVLBL-2020-K16 0.4 - Finish Turn № инструмент: 1, описание: PDJNR-2525-M15 0.8 General Turn GC4015 № инструмент: 2, описание: SVLBL-2020-K16 0.4 - Finish Turn GC1015 // Total Machining Time (including Toolchange) - 59.191 Minutes	
Текст программы	Комментарий
% :1000 T1 G90 G95 G97 N1 G45 M41 N2 G851(2) N3 S450 M3 N4 G0 X320 Z381.719 M8 N5 X55.173 N6 Z380 N7 G1 X-2 F.2 N8 Z381.469 N9 G0 X0 Z382.469 N10 X55.173 N11 X54.129 N12 G1 Z294 F.2 N13 G0 X56.129 Z295 N14 Z382.469 N15 X53.135 N16 G1 Z294 N17 G0 X55.135 Z295 N18 Z382.469 N19 X52.141 N20 G1 Z294 N21 G0 X54.141 Z295 N22 Z382.469 N23 X51.147 N24 G1 Z294 N25 G0 X53.147 Z295 N26 Z382.469 N27 X50.153 N28 G1 Z294 N29 G0 X52.153 Z295 N30 Z382.469 N31 X49.16 N32 G1 Z294 N33 G0 X51.16 Z295 N34 Z382.469 N35 X48.166 N36 G1 Z294 N37 G0 X50.166 Z295 N38 Z382.469 N39 X47.172 N40 G1 Z294 N41 G0 X49.172 Z295 N42 Z382.469 N43 X46.178	Подрезка торца и предварительная обработка контура F = 0,2 мм/мин. S = 450 об/мин. Припуск =0,2 мм



Текст программы	Комментарий
N44 G1 Z294	
N45 G0 X48.178 Z295	
N46 Z382.469	
N47 X45.184	
N48 G1 Z294	
N49 G0 X47.184 Z295	
N50 Z382.469	
N51 X44.19	
N52 G1 Z294	
N53 G0 X46.19 Z295	
N54 Z382.469	
N55 X43.197	
N56 G1 Z294	
N57 G0 X45.197 Z295	
N58 Z382.469	
N59 X42.203	
N60 G1 Z294	
N61 G0 X44.203 Z295	
N62 Z382.469	
N63 X41.209	
N64 G1 Z294	
N65 G0 X43.209 Z295	
N66 Z382.469	
N67 X40.215	
N68 G1 Z294	
N69 G0 X42.215 Z295	
N70 Z382.469	
N71 X39.221	
N72 G1 Z294	
N73 G0 X41.221 Z295	
N74 Z382.469	
N75 X38.227	
N76 G1 Z294	
N77 G0 X40.227 Z295	
N78 Z382.469	
N79 X37.234	
N80 G1 Z294	
N81 G0 X39.234 Z295	
N82 Z382.469	
N83 X36.24	
N84 G1 Z294	
N85 G0 X38.24 Z295	
N86 Z382.469	
N87 X35.246	
N88 G1 Z294	
N89 G0 X37.246 Z295	
N90 Z382.469	
N91 X34.252	
N92 G1 Z294	
N93 G0 X36.252 Z295	
N94 Z382.469	
N95 X33.258	
N96 G1 Z294	
N97 G0 X35.258 Z295	
N98 Z382.469	

Текст программы	Комментарий
N99 X32.264	
N100 G1 Z294	
N101 G0 X34.264 Z295	
N102 Z382.469	
N103 X31.271	
N104 G1 Z294	
N105 G0 X33.271 Z295	
N106 Z382.469	
N107 X30.277	
N108 G1 Z294	
N109 X30.8	
N110 G0 X32.8 Z295	
N111 Z382.469	
N112 X29.283	
N113 G1 Z294	
N114 X30.277	
N115 G0 X32.277 Z295	
N116 Z382.469	
N117 X28.289	
N118 G1 Z331.493	
N119 G2 X28.4 Z331.2 I-1.489 K-0.293	
N120 G1 Z294	
N121 X29.283	
N122 G0 X31.283 Z295	
N123 Z382.469	
N124 X27.295	
N125 G1 Z332.084	
N126 X27.931 Z331.766	
N127 G2 X28.289 Z331.493 I-1.131 K-0.566	
N128 G0 X30.289 Z332.493	
N129 Z382.469	
N130 X26.301	
N131 G1 Z332.581	
N132 X27.295 Z332.084	
N133 G0 X29.295 Z333.084	
N134 Z382.469	
N135 X25.308	
N136 G1 Z333.078	
N137 X26.301 Z332.581	
N138 G0 X28.301 Z333.581	
N139 Z382.469	
N140 X24.314	
N141 G1 Z333.574	
N142 X25.308 Z333.078	
N143 G0 X27.308 Z334.078	
N144 Z382.469	
N145 X23.32	
N146 G1 Z333.957	
N147 G2 X23.931 Z333.766 I-0.52 K-0.757	
N148 G1 X24.314 Z333.574	
N149 G0 X26.314 Z334.574	
N150 Z382.469	
N151 X22.326	
N152 G1 Z334	
N153 X22.8	

Текст программы	Комментарий
N154 G2 X23.32 Z333.957 I0 K-0.8	
N155 G0 X25.32 Z334.957	
N156 Z382.469	
N157 X21.332	
N158 G1 Z334	
N159 X22.326	
N160 G0 X24.326 Z335	
N161 Z382.469	
N162 X20.338	
N163 G1 Z334	
N164 X21.332	
N165 G0 X23.332 Z335	
N166 Z382.469	
N167 X19.345	
N168 G1 Z334	
N169 X20.338	
N170 G0 X22.338 Z335	
N171 Z382.469	
N172 X18.351	
N173 G1 Z352.397	
N174 G0 X20.351 Z353.397	
N175 Z382.469	
N176 X17.357	
N177 G1 Z352.95	
N178 G2 X18.351 Z352.397 I-0.557 K-0.75	
N179 G0 X20.351 Z353.397	
N180 Z382.469	
N181 X16.363	
N182 G1 Z371.371	
N183 G0 X18.363 Z372.371	
N184 Z382.469	
N185 X15.369	
N186 G1 Z371.948	
N187 G2 X16.363 Z371.371 I-0.569 K-0.748	
N188 G0 X18.363 Z372.371	
N189 Z382.469	
N190 X14.375	
N191 G1 Z372	
N192 X14.8	
N193 G2 X15.369 Z371.948 I0 K-0.8	
N194 G0 X17.369 Z372.948	
N195 Z382.469	
N196 X13.382	
N197 G1 Z372	
N198 X14.375	
N199 G0 X16.375 Z373	
N200 Z382.469	
N201 X12.388	
N202 G1 Z372	
N203 X13.382	
N204 G0 X15.382 Z373	
N205 Z382.469	
N206 X11.394	
N207 G1 Z372	
N208 X12.388	

Текст программы	Комментарий
N209 G0 X14.388 Z373	
N210 Z382.469	
N211 X10.4	
N212 G1 Z372	
N213 X11.394	
N214 G0 X15.394 Z374	
N215 X16.363	
N216 Z372.371	
N217 G1 Z371.371	
N218 G2 X16.4 Z371.2 I-1.563 K-0.171	
N219 G1 Z357.2	
N220 G2 X16.363 Z357.029 I-1.6 K0	
N221 G1 Z353	
N222 X16.8	
N223 G2 X17.357 Z352.95 I0 K-0.8	
N224 G0 X19.357 Z353.95	
N225 Z357.029	
N226 X18.363	
N227 G1 X16.363	
N228 G2 X16.157 Z356.776 I-1.563 K0.171	
N229 G1 X15.369 Z356.146	
N230 Z353	
N231 X16.363	
N232 G0 X18.363 Z354	
N233 Z356.146	
N234 X17.369	
N235 G1 X15.369	
N236 X14.375 Z355.351	
N237 Z353	
N238 X15.369	
N239 G0 X17.369 Z354	
N240 Z355.351	
N241 X16.375	
N242 G1 X14.375	
N243 X13.382 Z354.555	
N244 Z353	
N245 X14.375	
N246 G0 X16.375 Z354	
N247 Z354.555	
N248 X15.382	
N249 G1 X13.382	
N250 X12.4 Z353.77	
N251 Z353	
N252 X13.382	
N253 G0 X15.382 Z354	
N254 X18.351	
N255 Z353.397	
N256 G1 Z352.397	
N257 G2 X18.4 Z352.2 I-1.551 K-0.197	
N258 G1 Z336.2	
N259 G2 X18.351 Z336.003 I-1.6 K0	
N260 G1 Z334	
N261 X19.345	
N262 G0 X21.345 Z335	
N263 Z336.003	

Текст программы	Комментарий
<p> N264 X20.351  N265 G1 X18.351  N266 G2 X18.157 Z335.776 I-1.551 K0.197  N267 G1 X17.357 Z335.136  N268 Z334  N269 X18.351  N270 G0 X20.351 Z335  N271 Z335.136  N272 X19.357  N273 G1 X17.357  N274 X16.363 Z334.341  N275 Z334  N276 X17.357  N277 G0 X19.357 Z335  N278 Z334.341  N279 X18.363  N280 G1 X16.363  N281 X15.937 Z334  N282 X16.363  N283 G0 X17.045 Z334.341  N284 X55.173  N285 Z382.469  N286 X320 M9  N287 Z400  :2001 T2 G90  N288 S650  N289 X12.828 M8  N290 G1 X10  N291 Z379.6  N292 Z372  N293 X15.2  N294 G2 X16 Z371.6 I0 K-0.4  N295 G1 Z357.6  N296 G2 X15.766 Z357.317 I-0.8 K0  N297 G1 X12 Z355.434  N298 Z353  N299 X17.2  N300 G2 X18 Z352.6 I0 K-0.4  N301 G1 Z336.6  N302 G2 X17.766 Z336.317 I-0.8 K0  N303 G1 X15 Z334.934  N304 Z334  N305 X23.2  N306 G2 X23.766 Z333.883 I0 K-0.4  N307 G1 X27.766 Z331.883  N308 G2 X28 Z331.6 I-0.566 K-0.283  N309 G1 Z294  N310 X57.2  N311 G0 X320 M9  N312 Z400  :1002 T1 G90  N313 S450  N314 Z294.367 M8  N315 X54.712  N316 X53.663 </p>	<p> Чистовая обработка контура  F = 0,2 мм/мин.  S = 650 об/мин. </p> <p> Предварительная обработка контура  F = 0,2 мм/мин.  S = 450 об/мин.  Припуск =0,2 мм </p>

Текст программы	Комментарий
N317 G1 Z198.7 F.2	
N318 X54.662	
N319 G0 X56.662 Z199.7	
N320 Z294.367	
N321 X52.664	
N322 G1 Z198.7	
N323 X53.663	
N324 G0 X55.663 Z199.7	
N325 Z294.367	
N326 X51.665	
N327 G1 Z198.7	
N328 X52.664	
N329 G0 X54.664 Z199.7	
N330 Z294.367	
N331 X50.666	
N332 G1 Z198.7	
N333 X51.665	
N334 G0 X53.665 Z199.7	
N335 Z294.367	
N336 X49.667	
N337 G1 Z210.398	
N338 X49.931 Z210.266	
N339 G2 X50.4 Z209.7 I-1.131 K-0.566	
N340 G1 Z198.7	
N341 X50.666	
N342 G0 X52.666 Z199.7	
N343 Z294.367	
N344 X48.668	
N345 G1 Z210.897	
N346 X49.667 Z210.398	
N347 G0 X51.667 Z211.398	
N348 Z294.367	
N349 X47.669	
N350 G1 Z211.397	
N351 X48.668 Z210.897	
N352 G0 X50.668 Z211.897	
N353 Z294.367	
N354 X46.67	
N355 G1 Z211.871	
N356 G2 X46.931 Z211.766 I-0.87 K-0.671	
N357 G1 X47.669 Z211.397	
N358 G0 X49.669 Z212.397	
N359 Z294.367	
N360 X45.671	
N361 G1 Z212	
N362 X45.8	
N363 G2 X46.67 Z211.871 I0 K-0.8	
N364 G0 X48.67 Z212.871	
N365 Z294.367	
N366 X44.672	
N367 G1 Z212	
N368 X45.671	
N369 G0 X47.671 Z213	
N370 Z294.367	
N371 X43.673	

Текст программы	Комментарий
N372 G1 Z212	
N373 X44.672	
N374 G0 X46.672 Z213	
N375 Z294.367	
N376 X42.674	
N377 G1 Z212	
N378 X43.673	
N379 G0 X45.673 Z213	
N380 Z294.367	
N381 X41.675	
N382 G1 Z212	
N383 X42.674	
N384 G0 X44.674 Z213	
N385 Z294.367	
N386 X40.676	
N387 G1 Z212	
N388 X41.675	
N389 G0 X43.675 Z213	
N390 Z294.367	
N391 X39.677	
N392 G1 Z212	
N393 X40.676	
N394 G0 X42.676 Z213	
N395 Z294.367	
N396 X38.678	
N397 G1 Z212	
N398 X39.677	
N399 G0 X41.677 Z213	
N400 Z294.367	
N401 X37.679	
N402 G1 Z212	
N403 X38.678	
N404 G0 X40.678 Z213	
N405 Z294.367	
N406 X36.68	
N407 G1 Z212	
N408 X37.679	
N409 G0 X39.679 Z213	
N410 Z294.367	
N411 X35.681	
N412 G1 Z257.868	
N413 G0 X37.681 Z258.868	
N414 Z294.367	
N415 X34.682	
N416 G1 Z258	
N417 X34.8	
N418 G2 X35.681 Z257.868	
N419 G0 X37.681 Z258.868	
N420 Z294.367	
N421 X33.683	
N422 G1 Z258	
N423 X34.682	
N424 G0 X36.682 Z259	
N425 Z294.367	
N426 X32.684	

Текст программы	Комментарий
N427 G1 Z258	
N428 X33.683	
N429 G0 X35.683 Z259	
N430 Z295.367	
N431 X32.4	
N432 G1 Z279.2	
N433 G2 X32.157 Z278.776 I-1.6 K0	
N434 G1 X31.685 Z278.398	
N435 Z275.867	
N436 G2 X32.4 Z275.2 I-0.885 K-0.667	
N437 G1 Z258	
N438 X32.684	
N439 G0 X34.684 Z259	
N440 Z278.398	
N441 X33.685	
N442 G1 X31.685	
N443 X30.686 Z277.599	
N444 Z276	
N445 X30.8	
N446 G2 X31.685 Z275.867 I0 K-0.8	
N447 G0 X33.685 Z276.867	
N448 Z277.599	
N449 X32.686	
N450 G1 X30.686	
N451 X29.687 Z276.799	
N452 Z276	
N453 X30.686	
N454 G0 X32.686 Z277	
N455 Z276.799	
N456 X31.687	
N457 G1 X29.687	
N458 X28.688 Z276	
N459 X29.687	
N460 G0 X33.687 Z278	
N461 X35.681	
N462 Z258.868	
N463 G1 Z257.868	
N464 G2 X36.4 Z257.2 I-0.881 K-0.668	
N465 G1 Z213.7	
N466 G2 X36.157 Z213.276 I-1.6 K0	
N467 G1 X35.681 Z212.895	
N468 Z212	
N469 X36.68	
N470 G0 X38.68 Z213	
N471 Z212.895	
N472 X37.681	
N473 G1 X35.681	
N474 X34.682 Z212.096	
N475 Z212	
N476 X35.681	
N477 G0 X37.681 Z213	
N478 X54.712	
N479 Z294.367	
N480 X320 M9	
N481 Z400	



Текст программы	Комментарий
:2003 T2 G90 N482 S650 N483 X34.828 M8 N484 G1 X32 N485 Z293.6 N486 Z279.6 N487 G2 X31.766 Z279.317 I-0.8 N488 G1 X28 Z277.434 N489 Z276 N490 X31.2 N491 G2 X32 Z275.6 I0 K-0.4 N492 G1 Z258 N493 X35.2 N494 G2 X36 Z257.6 N495 G1 Z214.1 N496 G2 X35.714 Z213.794 I-0.8 K0 N497 G1 X32 Z212.235 N498 Z212 N499 X46.2 N500 G2 X46.766 Z211.883 I0 K-0.4 N501 G1 X49.766 Z210.383 N502 G2 X50 Z210.1 I-0.566 K-0.283 N503 G1 Z200.1 N504 G0 X320 M9 N505 Z400 N506 M5 N507 M30	Чистовая обработка контура F = 0,2 мм/мин. S = 650 об/мин.

Второй установ	
№ инструмент: 1, описание: PDJNR-2525-M15 0.8 General Turn GC4015	
№ инструмент: 2, описание: SVLBL-2020-K16 0.4 - Finish Turn GC1015	
№ инструмент: 3, описание: R166.4FGZ-3225-16 3 mm Ext Metric	
// Total Machining Time (including Toolchange) - 69.442 Minutes	
Текст программы	Комментарий
% :1000 T1 G90 G95 G97 N1 G45 M41 N2 G851(2) N3 S450 M3 N4 G0 X100 Z1.72 M8 N5 X55.234 N6 Z0 N7 G1 X-2 F.2 N8 Z1.47 N9 G0 X0 Z2.47 N10 X55.234 N11 X54.19 N12 G1 Z-203.149 F.2 N13 X55.184 N14 G0 X57.184 Z-202.149 N15 Z2.47 N16 X53.197 N17 G1 Z-203.149 N18 X54.19	Подрезка торца и предварительная обработка контура F = 0,2 мм/мин. S = 450 об/мин. Припуск =0,2 мм

Текст программы	Комментарий
N19 G0 X56.19 Z-202.149	
N20 Z2.47	
N21 X52.203	
N22 G1 Z-202.87	
N23 X52.76 Z-203.149	
N24 X53.197	
N25 G0 X55.197 Z-202.149	
N26 Z2.47	
N27 X51.209	
N28 G1 Z-202.373	
N29 X52.203 Z-202.87	
N30 G0 X54.203 Z-201.87	
N31 Z2.47	
N32 X50.215	
N33 G1 Z-201.876	
N34 X51.209 Z-202.373	
N35 G0 X53.209 Z-201.373	
N36 Z2.47	
N37 X49.221	
N38 G1 Z-201.379	
N39 X50.215 Z-201.876	
N40 G0 X52.215 Z-200.876	
N41 Z2.47	
N42 X48.227	
N43 G1 Z-200.882	
N44 X49.221 Z-201.379	
N45 G0 X51.221 Z-200.379	
N46 Z2.47	
N47 X47.234	
N48 G1 Z-200.385	
N49 X48.227 Z-200.882	
N50 G0 X50.227 Z-199.882	
N51 Z2.47	
N52 X46.24	
N53 G1 Z-200.031	
N54 G2 X46.931 Z-200.234 I-0.44 K-0.769	
N55 G1 X47.234 Z-200.385	
N56 G0 X49.234 Z-199.385	
N57 Z2.47	
N58 X45.246	
N59 G1 Z-200	
N60 X45.8	
N61 G2 X46.24 Z-200.031 I0 K-0.8	
N62 G0 X48.24 Z-199.031	
N63 Z2.47	
N64 X44.252	
N65 G1 Z-200	
N66 X45.246	
N67 G0 X47.246 Z-199	
N68 Z2.47	
N69 X43.258	
N70 G1 Z-200	
N71 X44.252	
N72 G0 X46.252 Z-199	
N73 Z2.47	

Текст программы	Комментарий
N74 X42.264	
N75 G1 Z-200	
N76 X43.258	
N77 G0 X45.258 Z-199	
N78 Z2.47	
N79 X41.271	
N80 G1 Z-200	
N81 X42.264	
N82 G0 X44.264 Z-199	
N83 Z2.47	
N84 X40.277	
N85 G1 Z-200	
N86 X41.271	
N87 G0 X43.271 Z-199	
N88 Z2.47	
N89 X39.283	
N90 G1 Z-200	
N91 X40.277	
N92 G0 X42.277 Z-199	
N93 Z2.47	
N94 X38.289	
N95 G1 Z-200	
N96 X39.283	
N97 G0 X41.283 Z-199	
N98 Z2.47	
N99 X37.295	
N100 G1 Z-200	
N101 X38.289	
N102 G0 X40.289 Z-199	
N103 Z2.47	
N104 X36.301	
N105 G1 Z-200	
N106 X37.295	
N107 G0 X39.295 Z-199	
N108 Z2.47	
N109 X35.308	
N110 G1 Z-200	
N111 X36.301	
N112 G0 X38.301 Z-199	
N113 Z2.47	
N114 X34.314	
N115 G1 Z-200	
N116 X35.308	
N117 G0 X37.308 Z-199	
N118 Z2.47	
N119 X33.32	
N120 G1 Z-200	
N121 X34.314	
N122 G0 X36.314 Z-199	
N123 Z2.47	
N124 X32.326	
N125 G1 Z-30.952	
N126 G0 X34.326 Z-29.952	
N127 Z2.47	
N128 X31.332	

Текст программы	Комментарий
N129 G1 Z-30.053	
N130 X32.186 Z-30.792	
N131 G2 X32.326 Z-30.952 I-1.386 K-0.4	
N132 G0 X34.326 Z-29.952	
N133 Z2.47	
N134 X30.338	
N135 G1 Z-29.193	
N136 X31.332 Z-30.053	
N137 G0 X33.332 Z-29.053	
N138 Z2.47	
N139 X29.345	
N140 G1 Z-28.332	
N141 X30.338 Z-29.193	
N142 G0 X32.338 Z-28.193	
N143 Z2.47	
N144 X28.351	
N145 G1 Z-27.471	
N146 X29.345 Z-28.332	
N147 G0 X31.345 Z-27.332	
N148 Z2.47	
N149 X27.357	
N150 G1 Z-26.61	
N151 X28.351 Z-27.471	
N152 G0 X30.351 Z-26.471	
N153 Z2.47	
N154 X26.363	
N155 G1 Z-25.75	
N156 X27.357 Z-26.61	
N157 G0 X29.357 Z-25.61	
N158 Z2.47	
N159 X25.369	
N160 G1 Z-24.889	
N161 X26.363 Z-25.75	
N162 G0 X28.363 Z-24.75	
N163 Z2.47	
N164 X24.375	
N165 G1 Z-24.028	
N166 X25.369 Z-24.889	
N167 G0 X27.369 Z-23.889	
N168 Z2.47	
N169 X23.382	
N170 G1 Z-23.168	
N171 X24.375 Z-24.028	
N172 G0 X26.375 Z-23.028	
N173 Z2.47	
N174 X22.388	
N175 G1 Z-22.307	
N176 X23.382 Z-23.168	
N177 G0 X25.382 Z-22.168	
N178 Z2.47	
N179 X21.394	
N180 G1 Z-21.446	
N181 X22.388 Z-22.307	
N182 G0 X24.388 Z-21.307	
N183 Z2.47	

Текст программы	Комментарий
N184 X20.4	
N185 G1 Z-20.586	
N186 X21.394 Z-21.446	
N187 G0 X25.394 Z-19.446	
N188 X32.326	
N189 Z-29.952	
N190 G1 Z-30.952	
N191 G2 X32.4 Z-31.192 I-1.526 K-0.24	
N192 G1 Z-167.336	
N193 G2 X32.326 Z-167.576 I-1.6 K0	
N194 G1 Z-200	
N195 X33.32	
N196 G0 X35.32 Z-199	
N197 Z-167.576	
N198 X34.326	
N199 G1 X32.326	
N200 G2 X32.186 Z-167.736 I-1.526 K0.24	
N201 G1 X31.332 Z-168.475	
N202 Z-200	
N203 X32.326	
N204 G0 X34.326 Z-199	
N205 Z-168.475	
N206 X33.332	
N207 G1 X31.332	
N208 X30.338 Z-169.336	
N209 Z-200	
N210 X31.332	
N211 G0 X33.332 Z-199	
N212 Z-169.336	
N213 X32.338	
N214 G1 X30.338	
N215 X29.345 Z-170.196	
N216 Z-200	
N217 X30.338	
N218 G0 X32.338 Z-199	
N219 Z-170.196	
N220 X31.345	
N221 G1 X29.345	
N222 X28.4 Z-171.014	
N223 Z-200	
N224 X29.345	
N225 G0 X31.345 Z-199	
N226 Z-171.196	
N227 X55.234	
N228 Z2.47	
N229 X100 M9	
N230 Z50	
:2001 T2 G90	
N231 S650	
N232 X22.828 Z250 M8	
N233 G1 X20	
N234 Z-0.4	
N235 Z-20.293	
N236 X31.893 Z-30.592	
N237 G2 X32 Z-30.792 I-0.693 K-0.2	

Чистовая обработка контура  
F = 0,2 мм/мин.  
S = 650 об/мин.

Текст программы	Комментарий
<p> N238 G1 Z-166.936  N239 G2 X31.893 Z-167.136 I-0.8 K0  N240 G1 X28 Z-170.507  N241 Z-200  N242 X46.2  N243 G2 X46.766 Z-200.117 I0 K-0.4  N244 G1 X51.18 Z-202.324  N245 G0 X100 M9  N246 Z50  :3002 T3 G90  N247 S320  N248 X34 Z-19.423 M8  N249 Z-20  N250 G32(0,0) X31.6 Z-170 F5.0  N251 G0 X102 Z-20.115  N252 X36 Z-19  N253 G32(0,0) X31.6 Z-169 F5.0  N254 G0 X104 Z-19.423  N255 X38 Z-18  N256 G32(0,0) X31.6 Z-168 F5.0  N257 G0 X106 Z-19.423  N258 X40 Z-17  N259 G32(0,0) X31.6 Z-167 F5.0  N260 G0 X100 Z-19.423  N261 X33.6 Z-20  N262 G32(0,0) X31.2 Z-170 F5.0  N263 G0 X102 Z-20.115  N264 X35.6 Z-19  N265 G32(0,0) X31.2 Z-169 F5.0  N266 G0 X104 Z-19.423  N267 X37.6 Z-18  N268 G32(0,0) X31.2 Z-168 F5.0  N269 G0 X106 Z-19.423  N270 X39.6 Z-17  N271 G32(0,0) X31.2 Z-167 F5.0  N272 G0 X100 Z-19.423  N273 X33.2 Z-20  N274 G32(0,0) X30.8 Z-170 F5.0  N275 G0 X102 Z-20.115  N276 X35.2 Z-19  N277 G32(0,0) X30.8 Z-169 F5.0  N278 G0 X104 Z-19.423  N279 X37.2 Z-18  N280 G32(0,0) X30.8 Z-168 F5.0  N281 G0 X106 Z-19.423  N282 X39.2 Z-17  N283 G32(0,0) X30.8 Z-167 F5.0  N284 G0 X100 Z-19.423  N285 X32.8 Z-20  N286 G32(0,0) X30.4 Z-170 F5.0  N287 G0 X102 Z-20.115  N288 X34.8 Z-19  N289 G32(0,0) X30.4 Z-169 F5.0  N290 G0 X104 Z-19.423  N291 X36.8 Z-18 </p>	<p> Нарезание резьбы  F = 8 мм/мин.  S = 320 об/мин. </p>

Текст программы	Комментарий
N292 G32(0,0) X30.4 Z-168 F5.0	
N293 G0 X106 Z-19.423	
N294 X38.8 Z-17	
N295 G32(0,0) X30.4 Z-167 F5.0	
N296 G0 X100 Z-19.423	
N297 X32.4 Z-20	
N298 G32(0,0) X30 Z-170 F5.0	
N299 G0 X102 Z-20.115	
N300 X34.4 Z-19	
N301 G32(0,0) X30 Z-169 F5.0	
N302 G0 X104 Z-19.423	
N303 X36.4 Z-18	
N304 G32(0,0) X30 Z-168 F5.0	
N305 G0 X106 Z-19.423	
N306 X38.4 Z-17	
N307 G32(0,0) X30 Z-167 F5.0	
N308 G0 X100 Z-19.423	
N309 X32 Z-20	
N310 G32(0,0) X29.6 Z-170 F5.0	
N311 G0 X102 Z-20.115	
N312 X34 Z-19	
N313 G32(0,0) X29.6 Z-169 F5.0	
N314 G0 X104 Z-19.423	
N315 X36 Z-18	
N316 G32(0,0) X29.6 Z-168 F5.0	
N317 G0 X106 Z-19.423	
N318 X38 Z-17	
N319 G32(0,0) X29.6 Z-167 F5.0	
N320 G0 X100 Z-19.423	
N321 X31.6 Z-20	
N322 G32(0,0) X29.2 Z-170 F5.0	
N323 G0 X102 Z-20.115	
N324 X33.6 Z-19	
N325 G32(0,0) X29.2 Z-169 F5.0	
N326 G0 X104 Z-19.423	
N327 X35.6 Z-18	
N328 G32(0,0) X29.2 Z-168 F5.0	
N329 G0 X106 Z-19.423	
N330 X37.6 Z-17	
N331 G32(0,0) X29.2 Z-167 F5.0	
N332 G0 X100 Z-19.423	
N333 X31.2 Z-20	
N334 G32(0,0) X28.8 Z-170 F5.0	
N335 G0 X102 Z-20.115	
N336 X33.2 Z-19	
N337 G32(0,0) X28.8 Z-169 F5.0	
N338 G0 X104 Z-19.423	
N339 X35.2 Z-18	
N340 G32(0,0) X28.8 Z-168 F5.0	
N341 G0 X106 Z-19.423	
N342 X37.2 Z-17	
N343 G32(0,0) X28.8 Z-167 F5.0	
N344 G0 X100 Z-19.423	
N345 X30.8 Z-20	
N346 G32(0,0) X28.4 Z-170 F5.0	

Текст программы	Комментарий
N347 G0 X102 Z-20.115 N348 X32.8 Z-19 N349 G32(0,0) X28.4 Z-169 F5.0 N350 G0 X104 Z-19.423 N351 X34.8 Z-18 N352 G32(0,0) X28.4 Z-168 F5.0 N353 G0 X106 Z-19.423 N354 X36.8 Z-17 N355 G32(0,0) X28.4 Z-167 F5.0 N356 G0 X100 Z-19.423 N357 X30.4 Z-20 N358 G32(0,0) X28 Z-170 F5.0 N359 G0 X102 Z-20.115 N360 X32.4 Z-19 N361 G32(0,0) X28 Z-169 F5.0 N362 G0 X104 Z-19.423 N363 X34.4 Z-18 N364 G32(0,0) X28 Z-168 F5.0 N365 G0 X106 Z-19.423 N366 X36.4 Z-17 N367 G32(0,0) X28 Z-167 F5.0 N368 G0 X100 Z-17 M9 N369 Z50 N370 M5 N371 M30	