

Bill of Materials

Item	Description	Material	Amount Needed	Price	Unit cost	Vendor
Spring	spring to be compressed	Stainless steel	based on force data	TBD		TBD McMaster Carr
Housing	holds components	Stainless steel 316 round 1" diameter	5" long	35.29 per ft	\$14.70	McMaster Carr
Pull	internal shaft connecting indenter and handle	Stainless steel 316 round 1/8" diameter	5" long	4.90 per ft	\$2.04	McMaster Carr
Handle	handle for user to control indenter	Stainless steel 316 round 1" diameter	2" long	35.29 per ft	\$5.88	McMaster Carr
Indenter	provides indentation and ensures alignment	Stainless steel 316 round 1" diameter	2" long	35.29 per ft	\$5.88	McMaster Carr
Rear Cap	provides back part which holds the assembly together	Stainless steel 316 round 1" diameter	1" long	35.29 per ft	\$2.94	McMaster Carr
Depth Gauge	post-indentation measuring device	Stainless steel 316 round 1/8" diameter	5" long	4.90 per ft	\$2.04	McMaster Carr
Guide Plate	reference and guide for depth gage	Stainless steel 316 round 1" diameter	1" long	35.29 per ft	\$2.94	McMaster Carr
Screws	screws to hold internals in place and ensure alignment	Stainless steel 316 low profile socket head screws 4mm x 0.7mm fully threaded 6mm long	2	6.36 for 50	\$0.25	McMaster Carr
Raw Total					\$36.69	

Labor Estimate

Labor machining	Hours		\$70	\$420	COE Machine Shop
turning/drilling indenter	Hours	0.75			
turning/drilling housing	Hours	0.5			
turning/drilling pull	Hours	0.75			
drilling rear cap	Hours	0.25			
drilling holes for screws	Hours	0.25			
milling housing	Hours	0.5			
tapping and threading	Hours	2			
miscellaneous	Hours	1			
total	Hours	6			
Labor assembly	done by team	Hours	N/A		Team Members

Shopping List

Vendor	Material	Amount Needed	Stock Size	Price per Stock
McMaster	Stainless steel 316 round 1" diameter	11"	1 ft	\$35.29 per ft
	Stainless steel 316 round 1/8" diameter	10"	1 ft	\$4.90 per ft
	Stainless steel 316 low profile socket head screws 4mm x 0.7mm fully threaded 6mm long	2	50 screws	\$6.36 per pack
	Spring	1	TBD	TBD
COE Machine Shop	Labor	6	1 hr	\$70 per hour
Project Cost				466.55