

## Punktlektion: FlexiCAM CNC



Denne Punktlektion har til formål at guide dig igennem brugen af FlexiCAM Viper CNC, fra start af maskinen og til færdig emne. Dette vil være delt ind i flere afsnit. Læs overskrifterne i indholdsfortegnelsen igennem inden du/i begynder.






### Indhold

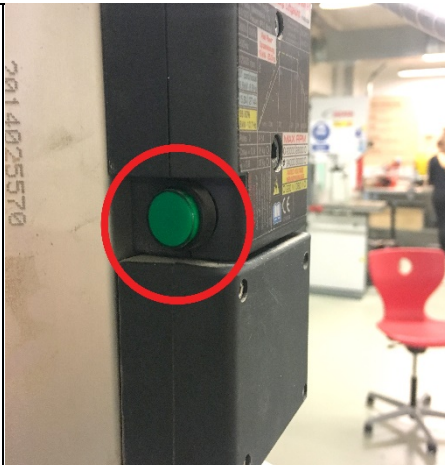
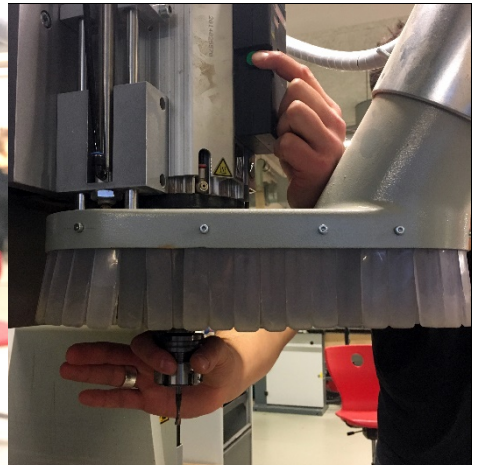
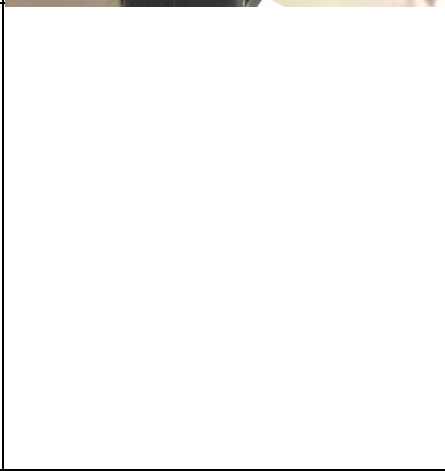

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## Punktlektion: CNC

Denne punktlektion har til formål at hjælpe dig igennem brugen af maskinen, fra start af maskinen og til færdig emne. Dette vil blive delt ind i flere afsnit.

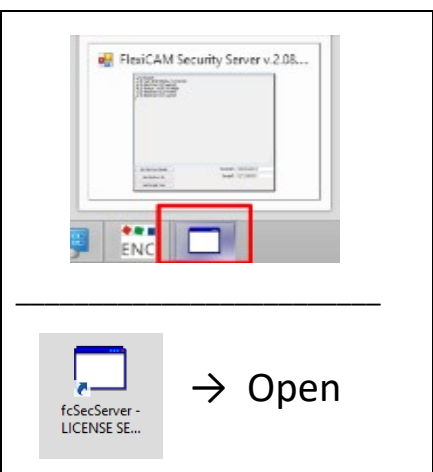
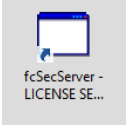
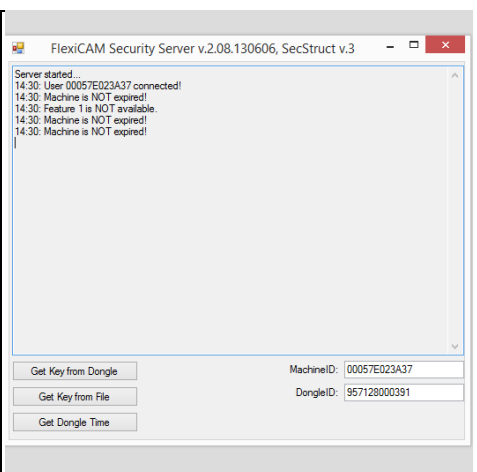
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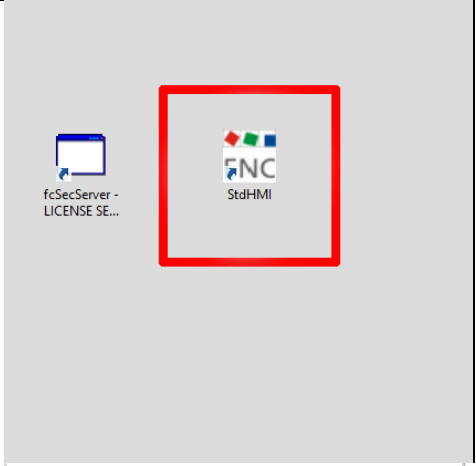
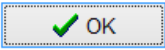
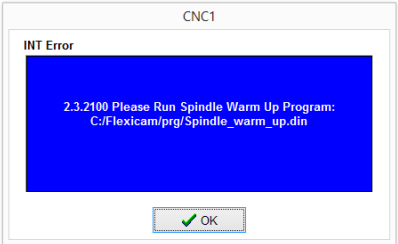

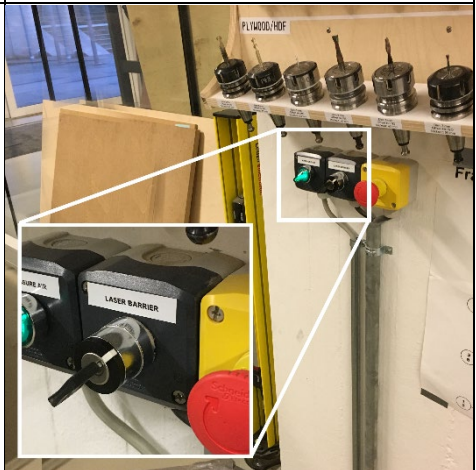

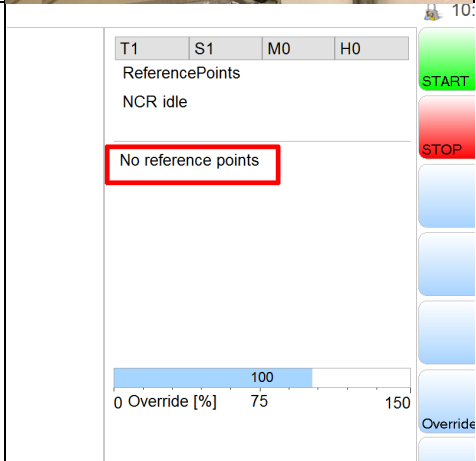
Tekst	Symbol	Billede
<p><b>1.1</b></p> <p>Tænd for strøm.</p>		
<p><b>1.2</b></p> <p>Tænd for CNC på den grønne knap.</p>	<p>0 → I</p>	
<p><b>1.3</b></p> <p>Tænd for "Pressure Air".</p>		

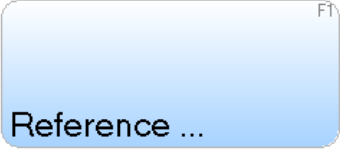
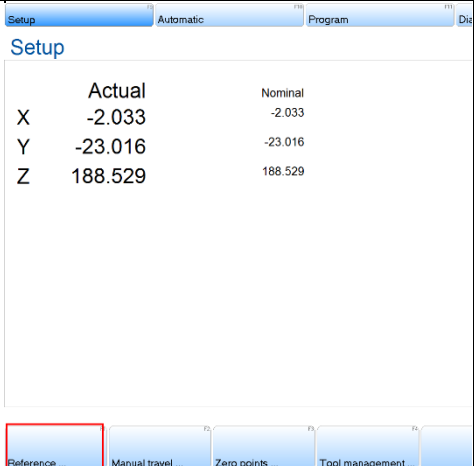

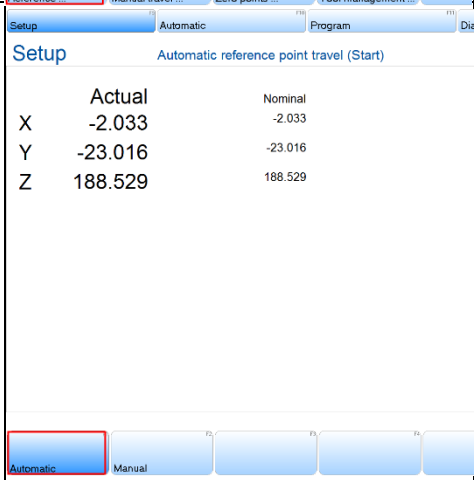

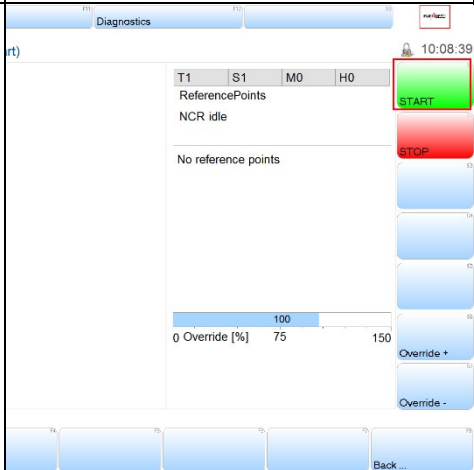

<p><b>1.4</b></p> <p>Fjern værktøj fra spindlen.</p> <p>Hold fast is værktøjet of tryk på den grønne knap.</p>		
<p><b>1.5</b></p> <p>Fjern værktøj tool holderen.</p>		

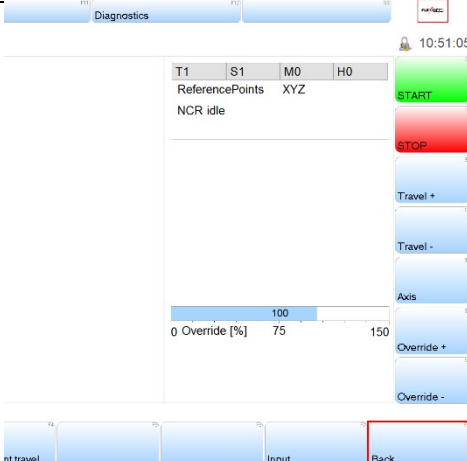
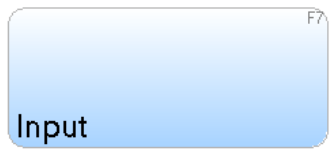
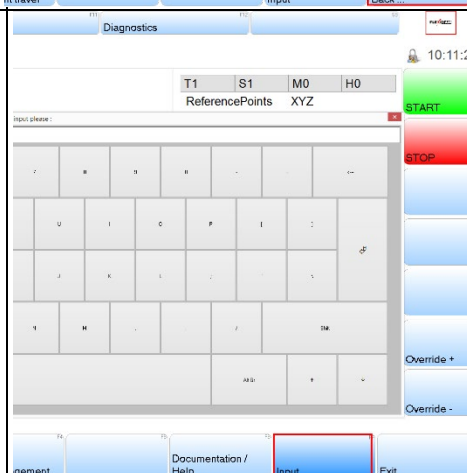
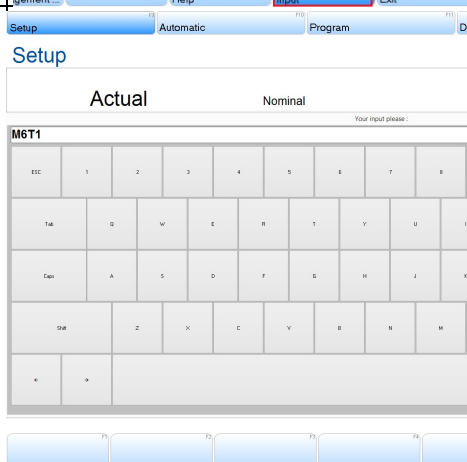
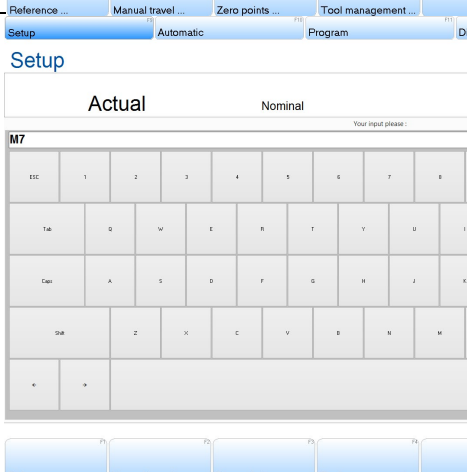
## 2: Opsætning af CNC Maskine


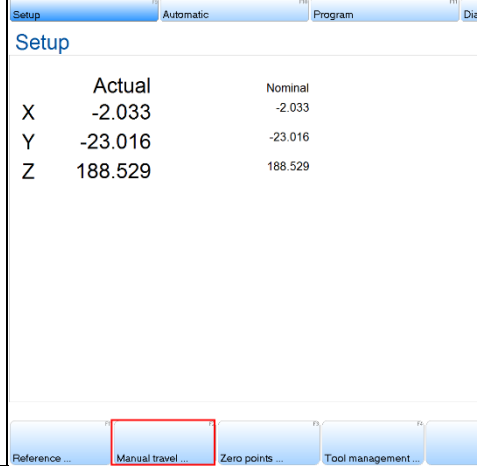
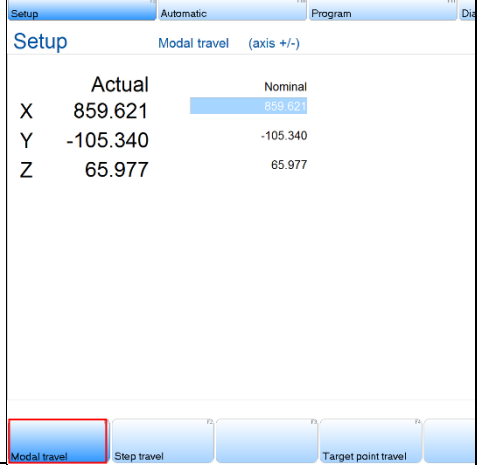
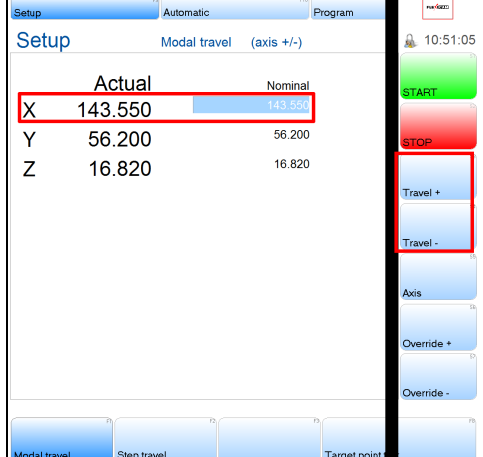
Du starter computeren, og følger derefter punkterne nedenunder.

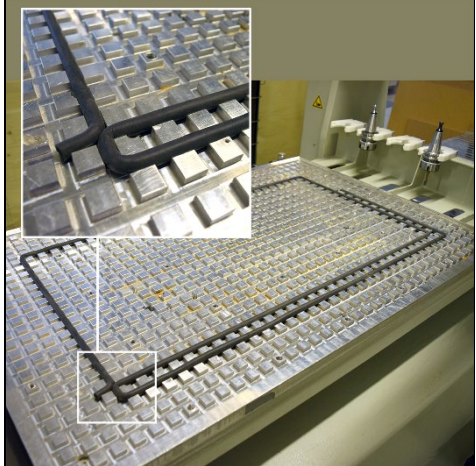
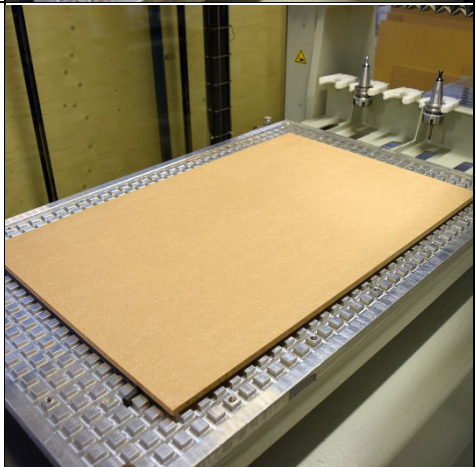
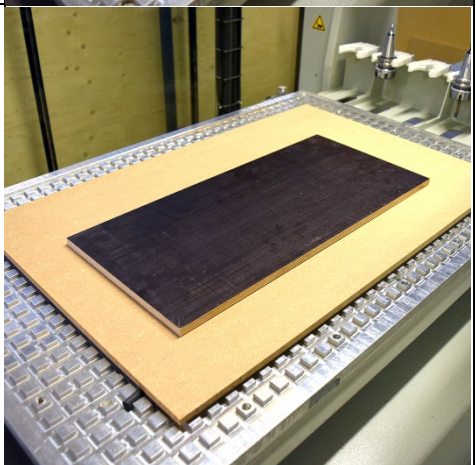

<p><b>2.1 VALGFRI</b></p> <p>Check så at <b>LICNECE SERVER</b> kør (fcSecServer LICENSE SERVER)</p> <hr/> <p>Hvis ikke, tryk på fcSecServer LICENSE SERVER iconet</p>	  → Open	
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<p><b>2.2</b></p> <p>Tryk på StdHMI ikonet, på skrivebordet for at åben Flexicam.</p>		
<p><b>2.3</b></p> <p>Tryk på OK</p>		
<p><b>2.4</b></p> <p>Aktivere Lys barrieren gennem at vride på nøglen.</p>		
<p><b>2.5</b></p> <p>Fjerne reference point error</p> <p>Tryk på Setup Tab</p>		


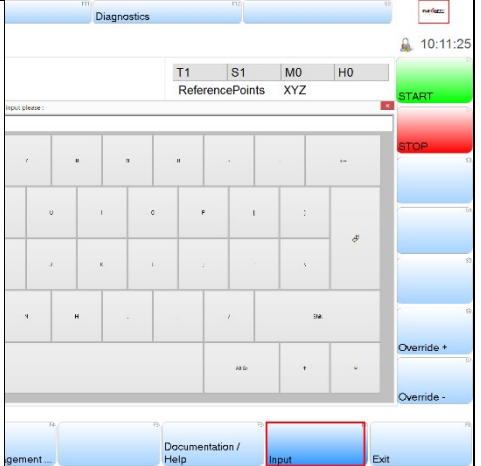
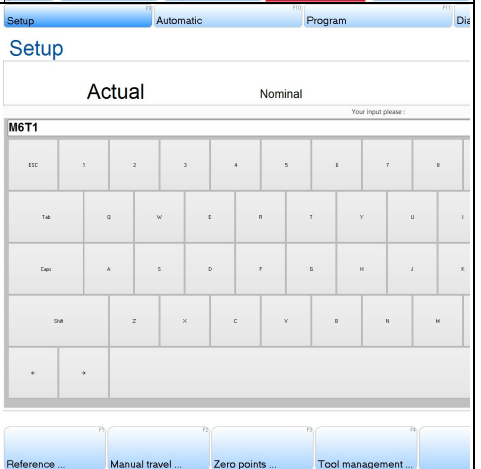
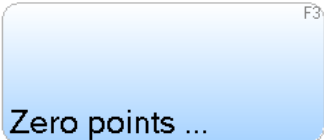
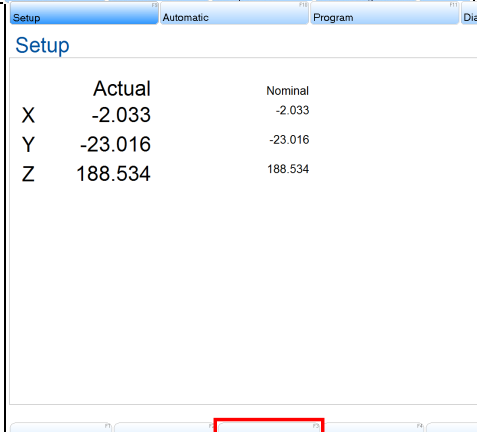
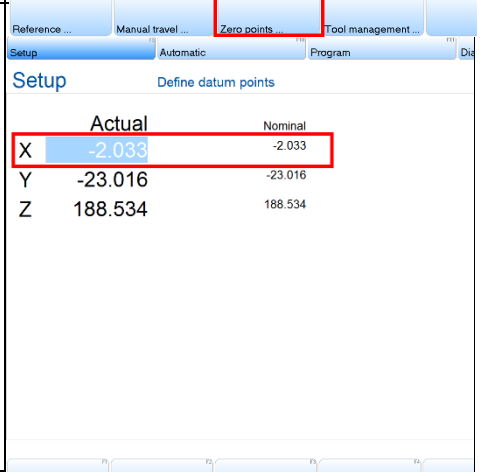
<p><b>2.6</b></p> <p>Tryk på Reference</p>		 <p>Setup</p> <table border="1"> <thead> <tr> <th></th> <th>Actual</th> <th>Nominal</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>-2.033</td> <td>-2.033</td> </tr> <tr> <td>Y</td> <td>-23.016</td> <td>-23.016</td> </tr> <tr> <td>Z</td> <td>188.529</td> <td>188.529</td> </tr> </tbody> </table>		Actual	Nominal	X	-2.033	-2.033	Y	-23.016	-23.016	Z	188.529	188.529
	Actual	Nominal												
X	-2.033	-2.033												
Y	-23.016	-23.016												
Z	188.529	188.529												
<p><b>2.7</b></p> <p>Tryk på Automatic</p>		 <p>Setup</p> <p>Automatic reference point travel (Start)</p> <table border="1"> <thead> <tr> <th></th> <th>Actual</th> <th>Nominal</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>-2.033</td> <td>-2.033</td> </tr> <tr> <td>Y</td> <td>-23.016</td> <td>-23.016</td> </tr> <tr> <td>Z</td> <td>188.529</td> <td>188.529</td> </tr> </tbody> </table>		Actual	Nominal	X	-2.033	-2.033	Y	-23.016	-23.016	Z	188.529	188.529
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<p><b>2.8</b></p> <p>Tryk på Start.</p> <p>Maskinen kør nu til sin pre-definerede 0 punkt</p>		 <p>Diagnostics</p> <p>10:08:39</p> <p>T1 S1 M0 H0</p> <p>ReferencePoints</p> <p>NCR idle</p> <p>No reference points</p> <p>0 Override [%] 75 150</p> <p>Override +</p> <p>Override -</p>												
<p><b>2.9</b></p> <p>Sæt værktøjer i maskinen</p>														

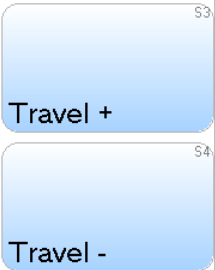
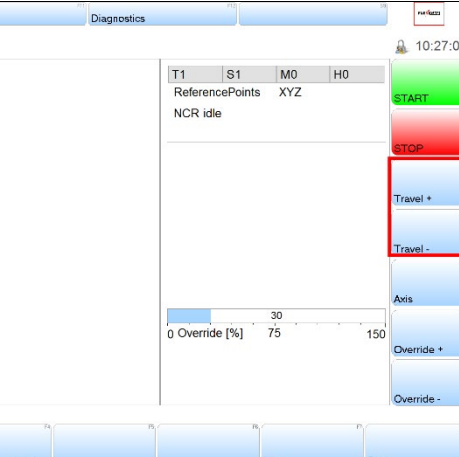
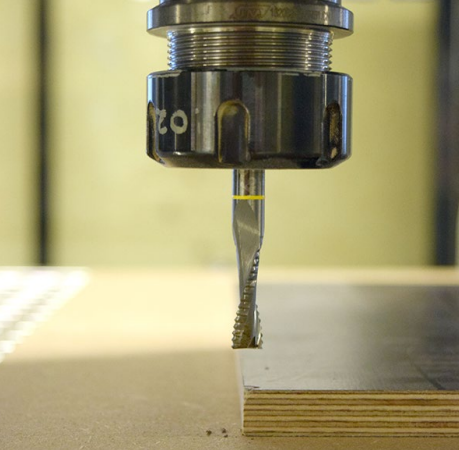
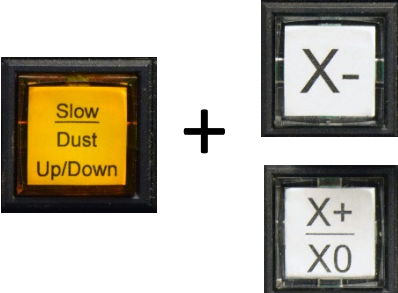

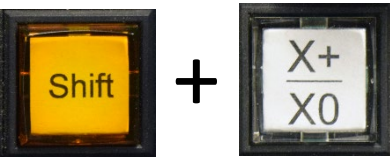

<p><b>2.10</b></p> <p>Tryk på BACK for at gå et steg tilbage i menuen.</p>		
<p><b>2.11</b></p> <p>Måling af værktøjs længder.</p> <p>Tryk på INPUT</p>		
<p><b>2.12</b></p> <p>Tast M6T1 afslut med ENTER for at vælge det første værktøj.</p> <p><i>M6: Skift værktøj</i> <i>T1: Valg at værktøj</i></p>	<p>M6T1 → ENTER</p>	
<p><b>2.13</b></p> <p>Tast M7 afslut med ENTER før automatisk opmåling af værktøjet.</p>	<p>M7 → ENTER</p>	

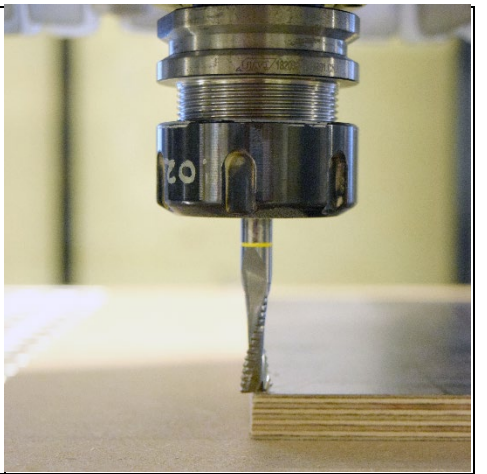
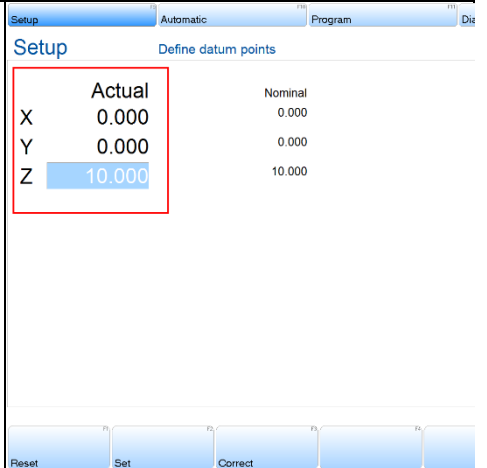
<p><b>2.14</b></p> <p>Repetere <b>2.11 - 2.13</b> for alle dine værktøjer.</p>	<p style="text-align: right;">F7</p> <p style="text-align: center;">Input</p> <p>M6T3 → ENTER M7 → ENTER M6T4 → ENTER M7 → ENTER ...</p>													
<p><b>2.15 VALGFRI</b></p> <p>Hvis du har brug bedre tilgang til skær bordet. Kan man flytte det manuelt</p> <p>Tryk på Manual Travel</p>	<p style="text-align: right;">F2</p> <p style="text-align: center;">Manual travel ...</p>	 <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>Actual</th> <th>Nominal</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>-2.033</td> <td>-2.033</td> </tr> <tr> <td>Y</td> <td>-23.016</td> <td>-23.016</td> </tr> <tr> <td>Z</td> <td>188.529</td> <td>188.529</td> </tr> </tbody> </table>		Actual	Nominal	X	-2.033	-2.033	Y	-23.016	-23.016	Z	188.529	188.529
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Y	-23.016	-23.016												
Z	188.529	188.529												
<p><b>2.16 VALGFRI</b></p> <p>Tryk på Modal Travel</p>	<p style="text-align: right;">F1</p> <p style="text-align: center;">Modal travel</p>	 <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>Actual</th> <th>Nominal</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>859.621</td> <td>859.621</td> </tr> <tr> <td>Y</td> <td>-105.340</td> <td>-105.340</td> </tr> <tr> <td>Z</td> <td>65.977</td> <td>65.977</td> </tr> </tbody> </table>		Actual	Nominal	X	859.621	859.621	Y	-105.340	-105.340	Z	65.977	65.977
	Actual	Nominal												
X	859.621	859.621												
Y	-105.340	-105.340												
Z	65.977	65.977												
<p><b>2.17 VALGFRI</b></p> <p>Med X aksel valgt, brug <b>TRAVEL +</b> og <b>TRAVEL -</b></p>	<p style="text-align: right;">S3</p> <p style="text-align: center;">Travel +</p> <p style="text-align: right;">S4</p> <p style="text-align: center;">Travel -</p>	 <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>Actual</th> <th>Nominal</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>143.550</td> <td>143.550</td> </tr> <tr> <td>Y</td> <td>56.200</td> <td>56.200</td> </tr> <tr> <td>Z</td> <td>16.820</td> <td>16.820</td> </tr> </tbody> </table>		Actual	Nominal	X	143.550	143.550	Y	56.200	56.200	Z	16.820	16.820
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Y	56.200	56.200												
Z	16.820	16.820												

<p><b>2.18</b></p> <p>Læg tætnings pakningen rundt om vakuum hullerne i størrelse med dit emne.</p> <p>Sikre dig at det slutter helt tæt</p>		
<p><b>2.19</b></p> <p>Placere en "offerplade"</p> <p>(Skal vare i MDF hvis du vil trække vakuum igennem)</p>		
<p><b>2.20</b></p> <p>Placere dit materiale ovenpå "offerplade"</p>		
<p><b>2.21</b></p> <p>Tryk på fodpedalen for at starte vakuum.</p>		

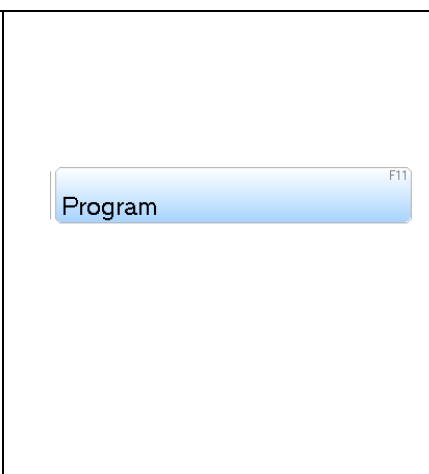
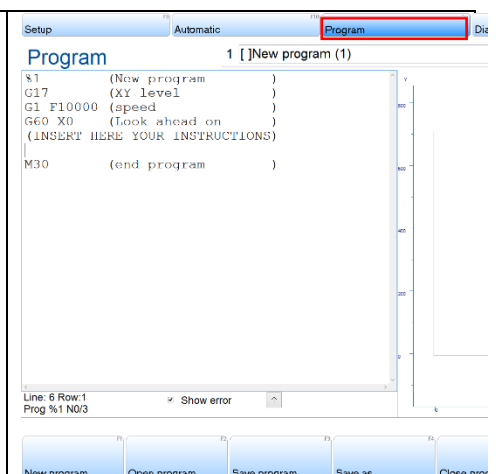


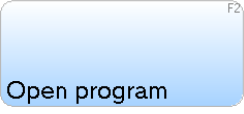
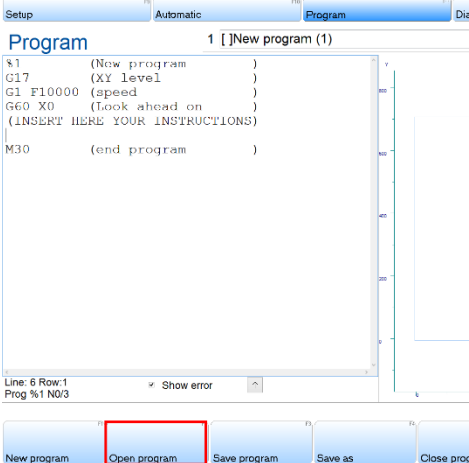
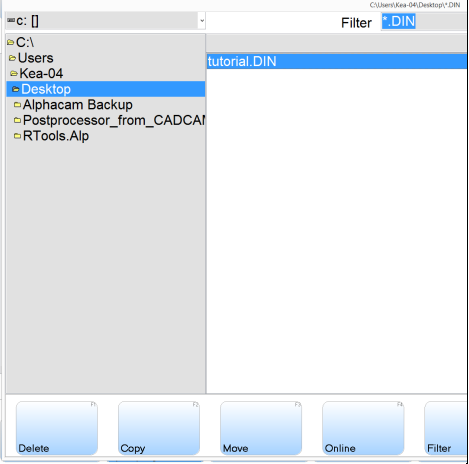
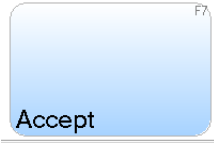
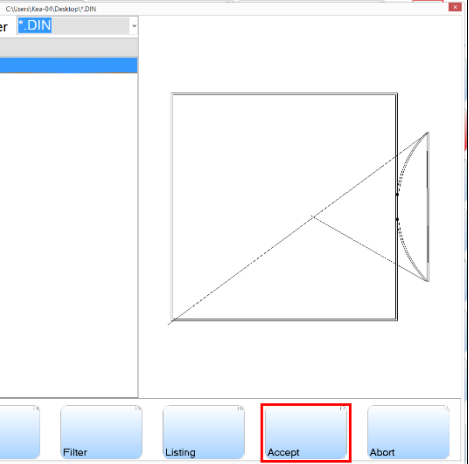
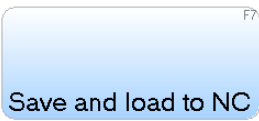
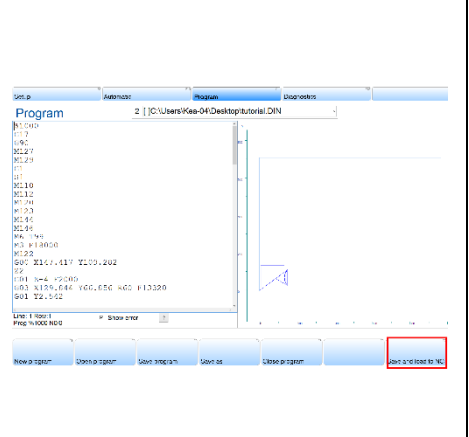
<p><b>2.22</b></p> <p>Valg dit første værktøj.</p> <p>Tryk på input.</p>		
<p><b>2.23</b></p> <p>Tast M6T1 afslut med ENTER for at vælge det første værktøj.</p> <p><i>M6: Skift værktøj</i> <i>T1: Valg at værktøj</i></p>	<p>M6T1 → ENTER</p>	
<p><b>2.24</b></p> <p>Definere 0 punktet så det matcher 0 punktet i din Alphacam fil.</p> <p>Tryk på <b>ZERO POINT</b></p>		
<p><b>2.25</b></p> <p>Valg en X</p>		

<p><b>2.26</b></p> <p>Tryk Plus eller Minus</p>		
<p><b>2.27</b></p> <p>Repetere punkt 2.25 - 2.26 for Y og Z aksel.</p>		
<p><b>2.28</b></p> <p>Finjustere 0 punktet</p> <p>Tag hånd kontrolleren ved maskinen</p> <p>Hold in <b>SLOW</b> knappen og flytte spindel med <b>X-</b> og <b>X+</b> til ønsked position.</p>		
<p><b>2.29</b></p> <p>Gem ny 0 Punkt X</p> <p>Hold in <b>SHIFT</b> knappen og tryk på <b>X0</b> for at gemme den nye X position som X 0.</p>		


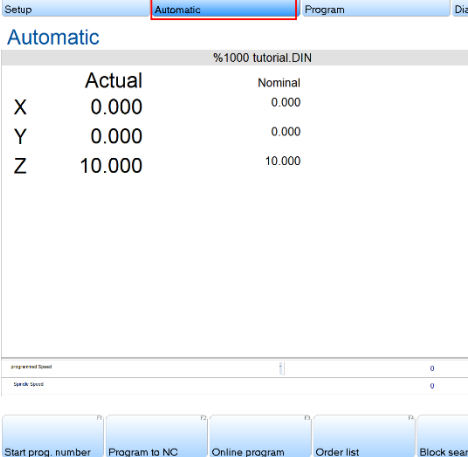
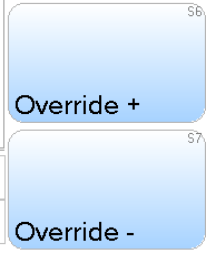
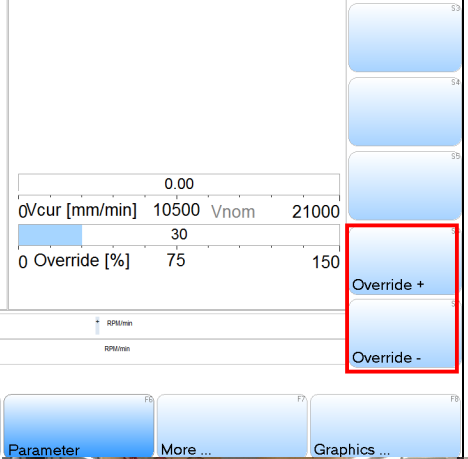


<p><b>2.30</b></p> <p>Repetere punkt 2.28 -2.29 for Y og Z aksel</p>	<p>SLOW + Y-/Y+ SHIFT + Y0 SLOW + Z-/Z+ SHIFT + Z0</p>													
<p><b>2.31</b></p> <p>Kontrollere at talerne er sat korrekt.</p> <p><b>Z skal vare 10.000</b></p>	<p>!</p>	 <table border="1"> <thead> <tr> <th></th> <th>Actual</th> <th>Nominal</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td>Y</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td>Z</td> <td>10.000</td> <td>10.000</td> </tr> </tbody> </table>		Actual	Nominal	X	0.000	0.000	Y	0.000	0.000	Z	10.000	10.000
	Actual	Nominal												
X	0.000	0.000												
Y	0.000	0.000												
Z	10.000	10.000												


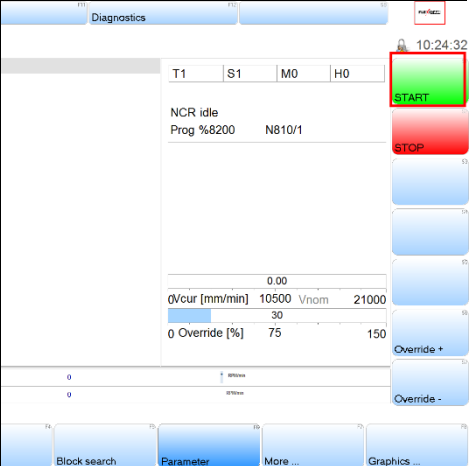
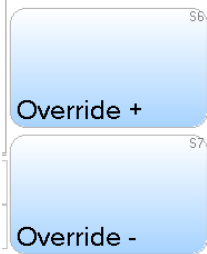
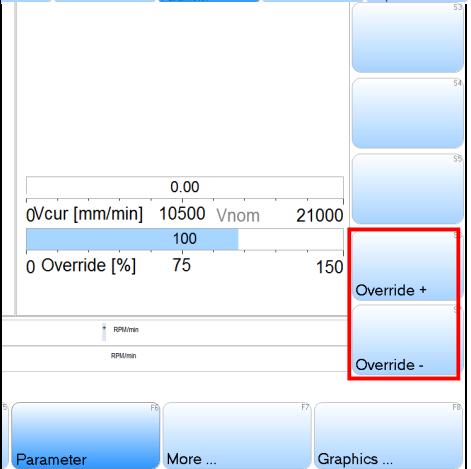

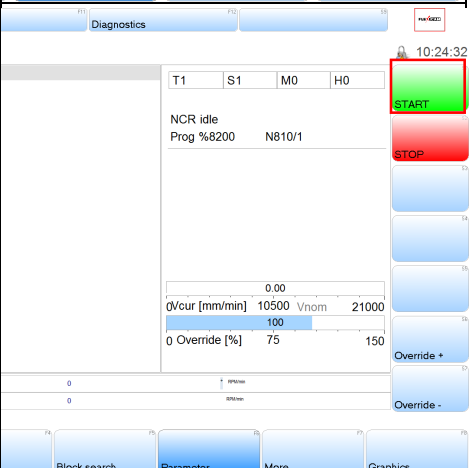
### 3: Importere fil

<p><b>3.1</b></p> <p>Tryk på <b>Program</b></p>		 <pre> N1 (New program ) G17 (XY level ) G1 F10000 (speed ) G60 X0 (Look ahead on ) (INSERT HERE YOUR INSTRUCTIONS) M30 (end program )     </pre>
---	--	--

<p><b>3.2</b></p> <p>Tryk på <b>Open Program</b></p>		
<p><b>3.3</b></p> <p>Valg din .DIN fil.</p> <p>Desktop Path: C:/USER/KEA.04/Desktop</p>		
<p><b>3.1</b></p> <p>Tryk på <b>Accept</b></p>		
<p><b>3.1</b></p> <p>Tryk på <b>SAVE AND LOAD TO NC</b></p>		

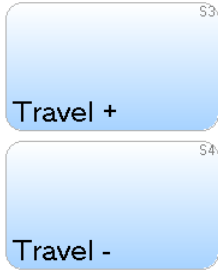
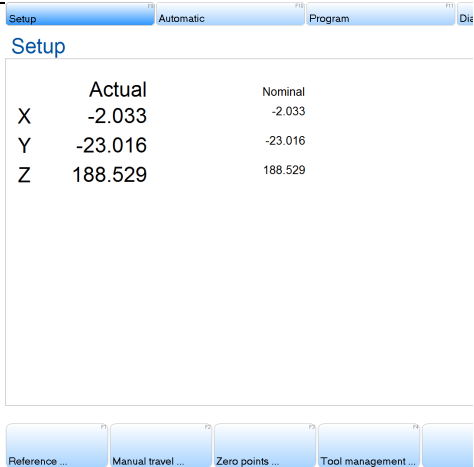



4: Kør fil


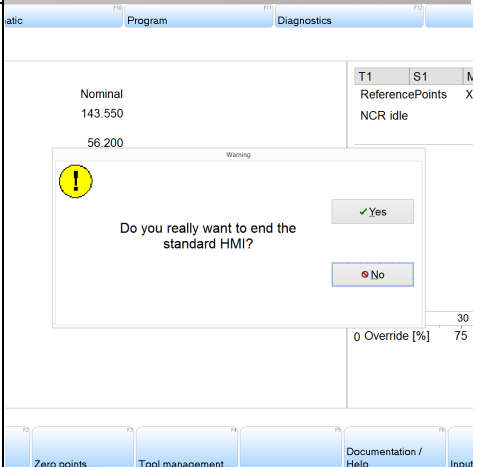

<p><b>4.1</b></p> <p>Tryk på <b>AUTOMATIC</b></p>		 <table border="1"> <thead> <tr> <th></th> <th>Actual</th> <th>Nominal</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td>Y</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td>Z</td> <td>10.000</td> <td>10.000</td> </tr> </tbody> </table>		Actual	Nominal	X	0.000	0.000	Y	0.000	0.000	Z	10.000	10.000
	Actual	Nominal												
X	0.000	0.000												
Y	0.000	0.000												
Z	10.000	10.000												
<p><b>4.2</b></p> <p>Sæt Override til 30%</p>														
<p><b>4.3</b></p> <p>Ta beskyttelsesbriller og høreværn på.</p>														

<p><b>4.4</b></p> <p>Tryk Start</p>		
<p><b>4.5</b></p> <p>Hvis det hele kør fint Sæt Override til 100%</p>		
<p><b>4.6</b></p> <p>Ved værktøjs skift vil maskinen gå i pause mode. Tryk <b>START</b> for at fortsætte programmet</p>		

## 5: Nedlukning og oprydning:

Ved ned luk er det vigtigt at du, samt at du får ryde ordentligt op efter dig selv.

<p><b>5.1</b></p> <p>Kør spindlen op (Z+) med <b>Modal Travel</b> (se punkt 2.15-2.17 )</p>		 <table border="1"> <thead> <tr> <th></th> <th>Actual</th> <th>Nominal</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>-2.033</td> <td>-2.033</td> </tr> <tr> <td>Y</td> <td>-23.016</td> <td>-23.016</td> </tr> <tr> <td>Z</td> <td>188.529</td> <td>188.529</td> </tr> </tbody> </table>		Actual	Nominal	X	-2.033	-2.033	Y	-23.016	-23.016	Z	188.529	188.529
	Actual	Nominal												
X	-2.033	-2.033												
Y	-23.016	-23.016												
Z	188.529	188.529												
<p><b>5.2</b></p> <p>Værktøj tilbage på deres korrekte position. (Se offset nummer)</p>														
<p><b>5.3</b></p> <p>Støvsuge maskinen og rundt om.</p>														

<p><b>5.4</b></p> <p>Slet dine filer fra computeren.</p>	<p>DEL</p>	
<p><b>5.5</b></p> <p>Luk FlexiCAM.</p>	<p>Exit</p>	
<p><b>5.5</b></p> <p>Sluk maskinen.</p>	<p><math>I \rightarrow 0</math></p>	



## 6: Fejl, problemer og Løsninger:

Der kan opstå forskellige fejl og problemer når du skal til at starte dit job, derfor er der nogle løsninger her under på de mest opstående problemer og fejl.

FEJL/PROBLEM	FORKLARING	LØSNING
<b>6.1 GRW Error</b> 1.1.12 Download: configured device not found	Glemt at tænde før CNC	Se punkt 1.1 - 1.2
<b>6.2 SPS Error</b> 2.10.106 Return Waiting for Dust Collector Up Signal	Glemt at tænde for kompressoren.	Se punkt 1.3 – 1.5
<b>6.3 SPS Error</b> 210.113 Light Barrier Not Active	Glemt at tænde for lys barrieren	Se punkt 2.4
<b>6.4 ??? Error</b> 2.3.2311 No Reference Point	Glemt at sætte reference point	Se punkt 2.6 – 2.8
<b>6.5 ZST Error</b> 291108 PLG Report Emergency Stop	Nogen har trykt på Nød Stop eller slukket maskinen og ikke FlexiCAM	Sluk maskinen, se punkt 5.5 Luk FlexiCAM, Tænd maskinen, se punkt 1.1 Åbne FlexiCAM, se punkt 2.2
<b>6.6 ZST Error</b> 	License server kør reden	Tryk Quit
<b>6.6</b> 	License server kør reden	Tryk Quit

<b>6.5</b> Cannot Establish connection with Secure Server	License service kør ikke.	Genstart license service, se punkt 2.2
<b>6.5</b> Machine Validity Expired!	License service kør ikke.	Genstart license service, se punkt 2.2