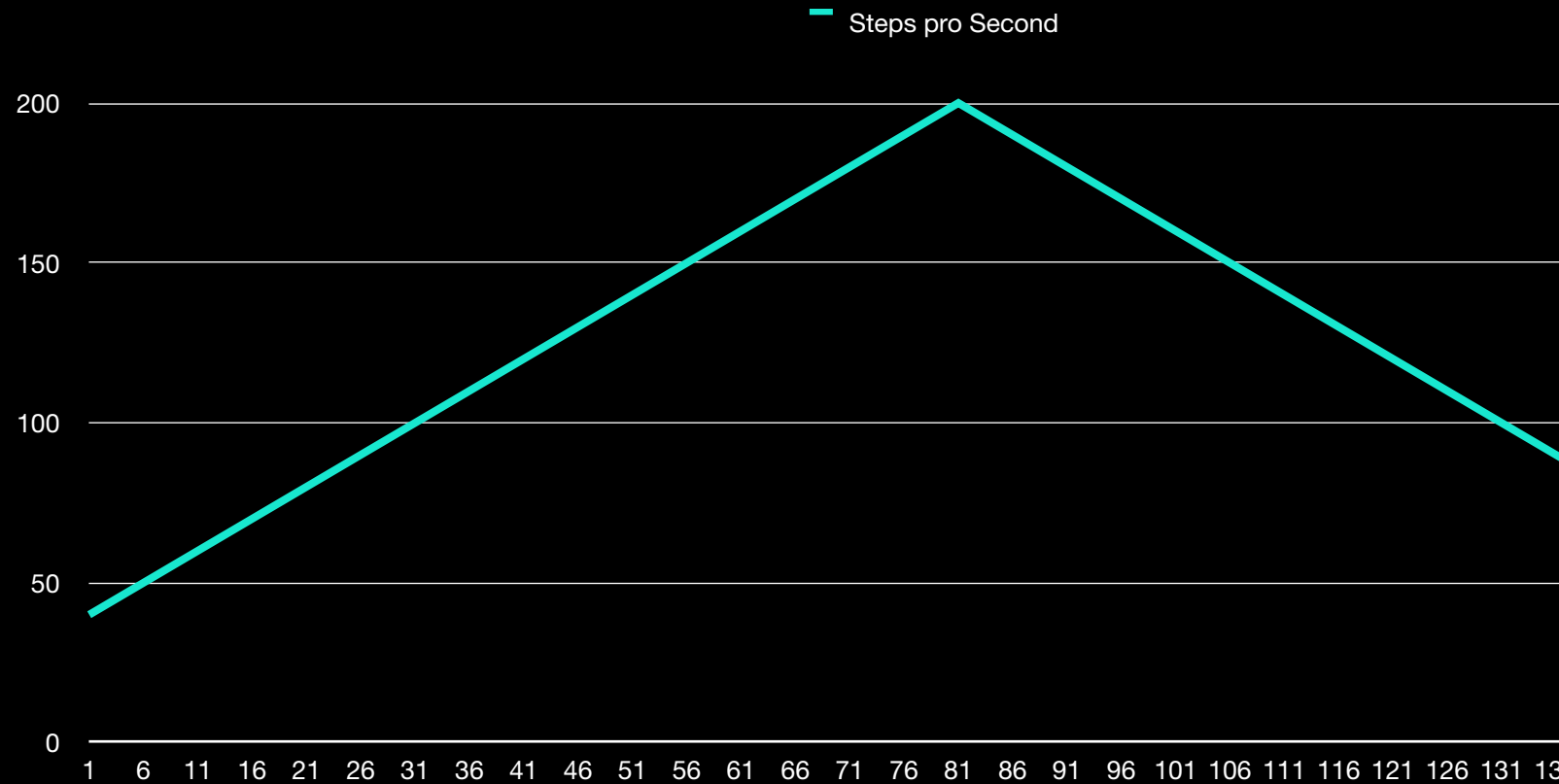


180 Deg Steps

| Steps | Steps pro Second |
|-------|------------------|
| 1     | 40               |
| 2     | 42               |
| 3     | 44               |
| 4     | 46               |
| 5     | 48               |
| 6     | 50               |
| 7     | 52               |
| 8     | 54               |
| 9     | 56               |
| 10    | 58               |
| 11    | 60               |
| 12    | 62               |
| 13    | 64               |
| 14    | 66               |
| 15    | 68               |
| 16    | 70               |
| 17    | 72               |
| 18    | 74               |
| 19    | 76               |
| 20    | 78               |
| 21    | 80               |
| 22    | 82               |
| 23    | 84               |
| 24    | 86               |
| 25    | 88               |
| 26    | 90               |
| 27    | 92               |
| 28    | 94               |
| 29    | 96               |
| 30    | 98               |
| 31    | 100              |
| 32    | 102              |
| 33    | 104              |
| 34    | 106              |
| 35    | 108              |
| 36    | 110              |
| 37    | 112              |
| 38    | 114              |
| 39    | 116              |
| 40    | 118              |
| 41    | 120              |
| 42    | 122              |
| 43    | 124              |



Every half-step is 0.9, therefore  $0.9 \times 180 = 161$  Steps needed for a 180 Degree rotation. The speed is being controlled by the input parameter >>step\_frequency<< where the minimum is 1 and maximum is 255 steps pro Second. Therefore the data below shows that the speed should increase linear to the the step. After the motor reach  $161/2 = 81$  Steps it should decrease its speed until it goes back into 40 Steps pro seconds and should therefore stop.

When the steps == 161 and the direction change, the steps should be reseted into 0

entity Crane\_Control  
port:

| Steps | Steps<br>pro<br>Second |
|-------|------------------------|
| 44    | 126                    |
| 45    | 128                    |
| 46    | 130                    |
| 47    | 132                    |
| 48    | 134                    |
| 49    | 136                    |
| 50    | 138                    |
| 51    | 140                    |
| 52    | 142                    |
| 53    | 144                    |
| 54    | 146                    |
| 55    | 148                    |
| 56    | 150                    |
| 57    | 152                    |
| 58    | 154                    |
| 59    | 156                    |
| 60    | 158                    |
| 61    | 160                    |
| 62    | 162                    |
| 63    | 164                    |
| 64    | 166                    |
| 65    | 168                    |
| 66    | 170                    |
| 67    | 172                    |
| 68    | 174                    |
| 69    | 176                    |
| 70    | 178                    |
| 71    | 180                    |
| 72    | 182                    |
| 73    | 184                    |
| 74    | 186                    |
| 75    | 188                    |
| 76    | 190                    |
| 77    | 192                    |
| 78    | 194                    |
| 79    | 196                    |
| 80    | 198                    |
| 81    | 200                    |
| 82    | 198                    |
| 83    | 196                    |
| 84    | 194                    |
| 85    | 192                    |
| 86    | 190                    |
| 87    | 188                    |

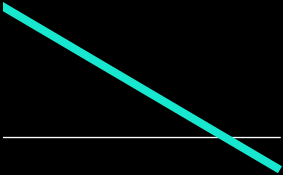
| Steps | Steps<br>pro<br>Second |
|-------|------------------------|
| 88    | 186                    |
| 89    | 184                    |
| 90    | 182                    |
| 91    | 180                    |
| 92    | 178                    |
| 93    | 176                    |
| 94    | 174                    |
| 95    | 172                    |
| 96    | 170                    |
| 97    | 168                    |
| 98    | 166                    |
| 99    | 164                    |
| 100   | 162                    |
| 101   | 160                    |
| 102   | 158                    |
| 103   | 156                    |
| 104   | 154                    |
| 105   | 152                    |
| 106   | 150                    |
| 107   | 148                    |
| 108   | 146                    |
| 109   | 144                    |
| 110   | 142                    |
| 111   | 140                    |
| 112   | 138                    |
| 113   | 136                    |
| 114   | 134                    |
| 115   | 132                    |
| 116   | 130                    |
| 117   | 128                    |
| 118   | 126                    |
| 119   | 124                    |
| 120   | 122                    |
| 121   | 120                    |
| 122   | 118                    |
| 123   | 116                    |
| 124   | 114                    |
| 125   | 112                    |
| 126   | 110                    |
| 127   | 108                    |
| 128   | 106                    |
| 129   | 104                    |
| 130   | 102                    |
| 131   | 100                    |

| Steps | Steps<br>pro<br>Second |
|-------|------------------------|
| 132   | 98                     |
| 133   | 96                     |
| 134   | 94                     |
| 135   | 92                     |
| 136   | 90                     |
| 137   | 88                     |
| 138   | 86                     |
| 139   | 84                     |
| 140   | 82                     |
| 141   | 80                     |
| 142   | 78                     |
| 143   | 76                     |
| 144   | 74                     |
| 145   | 72                     |
| 146   | 70                     |
| 147   | 68                     |
| 148   | 66                     |
| 149   | 64                     |
| 150   | 62                     |
| 151   | 60                     |
| 152   | 58                     |
| 153   | 56                     |
| 154   | 54                     |
| 155   | 52                     |
| 156   | 50                     |
| 157   | 48                     |
| 158   | 46                     |
| 159   | 44                     |
| 160   | 42                     |
| 161   | 40                     |

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\_\_\_\_\_

36 141 146 151 156 161





