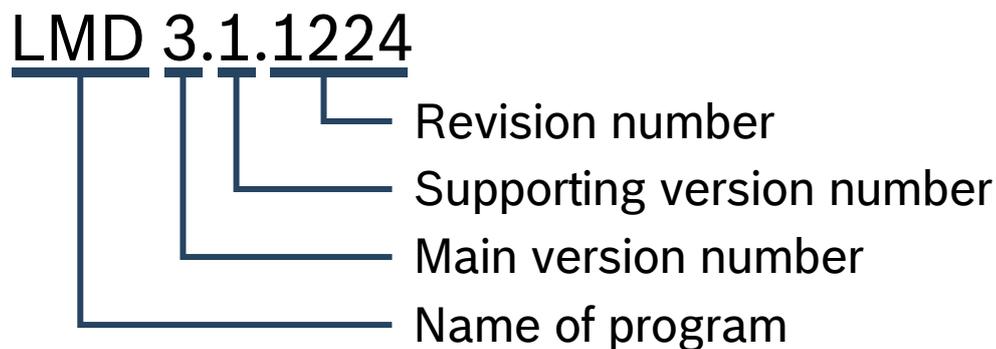


# LINEAR MOTION DESIGNER

## Release Notes

# PROGRAM-VERSIONING



**Main version number:** - Increase of the number at extensive program change  
- The program is no longer backward compatible

**Sup. version number:** - Increase of the number at new functions  
- The program remains backward compatible

**Revision number:** - Increase of the number at troubleshooting  
- The program remains backward compatible

VERSION 1.0 2008

PROGRAM LAUNCH

VERSION 1.1 2012

| SUBJECT  | MODIFICATION | DESCRIPTION                  |
|----------|--------------|------------------------------|
| Database | Updated      | Product line „eLINE“ removed |

VERSION 2.0 2013

| SUBJECT  | MODIFICATION  | DESCRIPTION   |
|----------|---|---|
| General  | (NEW) Dimensioning of Screw Assemblies                  | All standard Ball- und Planetary- Screw Assemblies available          |
|          | Updated Help page                                       |   |
| Database | (NEW): Roller Rail System-Types                         | R1822, R1823, R1854   |
|          | (NEW): Ball Rail System-Types                           | R1672   |
|          |   | R2002, R2012 (High Speed)<br>R2000, R2002, R2010, R2012 (Resist NRII) |
| SA       | Further calculation to maximum acceleration             | Ball Screw Assemblies   |
| PRS / SA | Further security checks and warning messages integrated |   |
|          | Drop Down-Menu at masses and forces                     | All masses/forces and positions on one view                           |
|          | Automated short stroke factor calculation               |   |

VERSION 2.1 JULY 2014

| SUBJECT         | MODIFICATION   | DESCRIPTION  |
|-----------------|--|--|
| <b>General</b>  | Extension of start page                                    | Switch or choose between SA and PRS at any time                  |
|                 | Further languages  | French, Spanish, Chinese   |
|                 | Updated Help page  |  |
| <b>Database</b> | Updated  | Higher load capacity and moments at Ball- and Roller Rail System |
| <b>SA</b>       | Adjusted formula to maximum acceleration                   | Ball Screw Assemblies  |
|                 | Necessary interval time calculation at 100% switch-on-time | Planetary Screw Assemblies                                       |

VERSION 2.1 UPDATE FEBRUARY 2015

| SUBJECT           | MODIFICATION   | DESCRIPTION                          |
|-------------------|--|--------------------------------------|
| <b>General</b>    | Updated Help page  |                                      |
| <b>Database</b>   | Updated  | Ball Screw Assemblies                |
| <b>SA</b>         | Info button to sealing on data page  | Description to different sealing     |
|                   | Adjusted formula to short stroke factor  | Specification from development dept. |
| <b>PRS / SA</b>   | Optional short stroke factor   |                                      |
|                   | Printout also in Spanish, French, Chinese  |                                      |
| <b>Correction</b> | Calculated lifetime at "Input in terms of percentages of time" and "Input in terms of strokes" | Ball Screw Assemblies                |

| SUBJECT         | MODIFICATION  | DESCRIPTION  |
|-----------------|---|--|
| <b>General</b>  | Dynamic cycle   | Changes possible inside the dynamic cycle  |
|                 | Updated Disclaimer  |  |
| <b>Database</b> | Updated   | SA: Higher load capacities<br><b>(NEW)</b> SA: nut type FED-E-B<br><b>(NEW)</b> PRS: runner block type CompactLine |
|                 | Nut type FED-E-B: Comparison the load capacity of the nut with permissible axial load | Max. permissible axial force at FED-E-B  |
| <b>SA</b>       | New tolerance class "T3"  | <b>(NEW)</b>   |
|                 | Changed preload classes   | <b>(NEW)</b> (same as Profiled Rail System)  |
|                 | Operating factor at accuracy class T7 and T9  | <b>(NEW)</b>   |
| <b>PRS</b>      | Limit for load ratio removed  | Lifetime is showing up to $C/Fq = 1,0$   |
|                 | Operating factor at BSCL  | <b>(NEW)</b>   |
|                 | Operating factor kf changed to fw   | Due to operating factor at BSCL  |
| <b>PRS / SA</b> | Changed text to screw strength  | Based on the new standard ISO 12090-1  |
|                 | Number of cycles will be calculated   | Additional result  |
|                 | Printout in new design  | New Corporate Design   |

| SUBJECT         | MODIFICATION  | DESCRIPTION  |
|-----------------|---|--|
| <b>General</b>  | (NEW) New Corporate Design  | Modern and general DC-Design   |
|                 | Help functions  | Mouseover function for descriptions  |
|                 | Updated Help page   |  |
|                 | Release notes integrated  |  |
|                 | Calculation planning guide integrated   | Calculation and dimensioning support   |
|                 | (NEW) Connection to Configurator and eShop  | Seamless Toolchain   |
| <b>Database</b> | Upgrade   | SA: Load capacities to end bearings<br>SA: End forms   |
|                 | Updated   | SA (BASA): Add preload class C00<br>FEM-E-B and ZEM-E-S<br>SA: Nut type FSZ-E-B, FSZ-E-S,<br>FDM-E-D and FEM-E-D removed<br>SA: New spindle ends |
|                 | (NEW) Matching the load capacity of the end bearing with the load capacity of the nut | More security query  |
| <b>SA</b>       | (NEW) Matching the maximum drive torque with the max. allowed drive torque (Mp)       | More security query  |
|                 | Shown the total stiffness of the drive  | Additional Information   |
|                 | Chart to „position dependent, critical speed“   | Additional Information   |
|                 | Calculation and selection of the AGK has been removed                                 | Will be included in the program „LinSelect“  |
| <b>PRS / SA</b> | Printout  | Result page improved   |

VERSION 3.1 MAI 2020

| SUBJECT  | MODIFICATION  | DESCRIPTION   |
|----------|---|---|
| LB       | (NEW) Calculation of the Linear Bushings  | Lifetime, matching the max. bending angle   |
| PRS / SA | (NEW) Lubrication   | Interval and quantity of the lubricant  |
| General  | (NEW) Automatically update-function   | Automatically comparison of the current program version   |
|          | Updated Help page   | With help topics to bushings and lubrication  |
|          | Updated Calculation planning guide  | With general information to Linear technology   |
| Database | Updated   | (NEW) SA: nut size 8x5 at FEM-E-B and ZEM-E-S   |
|          |   | (NEW) SA: nut with lead 25mm and 30mm at FEM-E-C; FED-E-B<br>Nut type changed FEM-E-C -> FEM-E-B and FDM-E-C -> FDM-E-B<br>PRS: roller runner block size 25 gen. II |
| PRS      | Calculation of the deflection   | 1 guide rail / 1 runner block<br>1 guide rail / 2 runner blocks<br>2 guide rails / 1 runner block   |
|          | Selection support integrated  | Support for runner block selection via branch / application   |
|          | Permissible values to screw connection  | Adapt modification in February 2021   |
| SA       | Max. permissible drive torque with mass inertia and acceleration inertia from the moving mass | More exact calculation at drive torque  |
|          | (NEW) Pillow block unit   | Selection of the spindle with matching pillow block units   |
| PRS / SA | (NEW) Service life  | Calculation of the required service life  |
|          | (NEW) Predefined motion profiles  | Simplified input via stroke and time  |
|          | Printout revised  | PRS/SA with results to lubrication  |

## VERSION 3.2

NOVEMBER 2021

| SUBJECT            | MODIFICATION   | DESCRIPTION  |
|--------------------|--|--|
|                    | Updated Disclaimer   |  |
| <b>General</b>     | Data name in windows frame   | Name of the data in the windows frame after saving   |
|                    | Further language   | Italy  |
|                    | Updated help page  |  |
|                    | Add function at predefined dynamic profile                             | Back stroke and break selectable   |
| <b>Database</b>    | Updated  | (NEW) SA: BASA 80x40   |
|                    |  | SA: Flange bearing SEE with matching spindle ends<br>PRS: Ball runner block Super integrated                       |
| <b>SA</b>          | Pillow block unit  | Speed and adjustment with the max. permissible speed of the nut  |
|                    | PLSA: Warning message at comparing the friction power has been adapted | If the break time cannot be retained further measures are possible to use a PLSA                                   |
| <b>PRS / SA</b>    | Printout expanded  | Version number in all documents<br>PRS: Friction force on the runner block<br>PRS: Type code from the runner block |
| <b>Lubrication</b> | Add function   | Distinction at liquid grease with hand or with central lubrication via piston distributor                          |

## VERSION 3.3

JUNI 2022

| SUBJECT         | MODIFICATION                      | DESCRIPTION                                |
|-----------------|-----------------------------------|--|
| <b>General</b>  | Further language                  | RO / KO / PL / HU / TR / CS                |
| <b>Database</b> | Updated                           | (NEU) PRS: High-speed runner block size 45 |
| <b>SA</b>       | Pillow block unit / Bearings      | Display lifetime of the bearings           |
| <b>PRS</b>      | Integrated Measuring System (IMS) | Check for use                              |