PS-PERMAG: Comparison of Version 2.4 to 3.0

Remark: All versions are downward compatible. This means that calculations from e.g. version 2.4 can be read into version 3.0 and can be used for new calculations and analyses.

Feature	Vers. 2.4	Vers. 2.5	Vers. 2.6	Vers. 2.7/2.8	Vers. 3.0	Remarks
D Cylinder diametrical	√	√	√	√	√	
M Cylinder homogeneously multipolar	√	√	√	√	√	
L Cylinder laterally multipolar	√	√	√	√	√	
A Cylinder axially multipolar	√	√	√	√	√	Version 2.5 or higher: optional forces and soft magnetic plates
AS cylinder segments, axially multipolar				√ since Vers. 2.7	√	including arbitrary pole patterns and pole gaps
AL Cylinder axially lateral					√	Bow shaped magnetization on head faces of cylinders and cylinder rings
C Cuboid homogeneously multipolar	√	√	√	√	√	Version 2.5 or higher: optional forces and soft magnetic plates
CS cuboid segments, axially multipolar				√ since Vers. 2.7	√	including arbitrary pole patterns and pole gaps
R Cylinder radially multipolar		√	√	√	√	
RS cylinder segments, radially multipolar				√ since Vers. 2.8	√	including arbitrary pole patterns and pole gaps
H Halbach cylinders			√	√	√	treats both cases of continuous and segmented magnetization
2D-M 2D electrical machine, homogeneously multipolar		√	√	√	√	Vers. 2.6: includes computation of motor characteristic curves
2D-R 2D electrical machine, radially multipolar		√	√	√	√	Vers. 2.6: includes computation of motor characteristic curves
3D models of magnet assembly and calculation path					√	3D models of magnet and path of field calculation to check adequacy of problem input
circular path for <u>arbitrary</u> sorts of magnets	for cylinders only	√	√	√	√	
linear path for <u>arbitrary</u> sorts of magnets	for cuboids only	√	√	√	√	
Field components in cylindrical and Cartesian coordinates for <u>all</u> sorts of magnets		√	√	√	√	
Fourier series of fields for periodic configurations	√	√	√	√	√	
Fourier transform of fields for non periodic configurations		√	√	√	√	continuous frequency distribution
graphical diagrams of frequency distributions		√	√	√	√	
Soft magnetic bodies		√	√	√	√	for magnetic systems A,C, 2D-M and 2D-R
Force evaluation		√	√	√	√	by soft magnetic plates on magnets A and C

Computation of motor characteristic curves			√	√	√	for magnetic systems 2D-M and 2D-R for DC motors
max. no. of data points circular path	90 per pole	3600	3600	3600	3600	
max. no. of data points linear path	500	1000	1000	1000	1000	
resolution of field angles	< 0.1°	< 0.01°	< 0.01°	< 0.01°	< 0.01°	
max no. of poles per side of magnet	512	256	256	256	256	maximum 36 for systems H (Halbach systems)
Extended graphical adjustments			√	√	√	sorts of diagram grid, strength of curves, fonts, axes
HTML help system			√	√	√	
Listings for circular paths	fields in front of one pole	arbitrary angular range	arbitrary angular range	arbitrary angular range	arbitrary angular range	