Electronics & Software

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jBEAM Durability

Type 2842A

Software for data analysis, visualization and report generation for durability testing

jBEAM Durability is a software for data analysis, visualization and report generation specifically targeted at durability testing. With jBEAM measurement data analysis is made easy.

The benefits of jBEAM Durability:

- Better and faster analysis of your data thanks to perfect presentation through extensive visualization tools
- Accomplish the required analysis quickly and efficiently with the interactive toolset
- Save time for creating reports with the automated reporting in different standard file formats
- Powerful calculations to simplify your durability workflows

Description

jBEAM Durability is a comprehensive post-processing software with extensive analysis, visualization and reporting capabilities. With its platform independence and multi-language support, durability customers worldwide use the software for quick analysis as well as for managing complex projects. jBEAM supports the import of multiple measurement file formats commonly used in durability testing as well as multimedia formats to combine your measurement data with images, audio, and video. The extensive analysis functions range from simple arithmetic operations, curve analysis and FFT calculations to matrix operations, signal filters, statistics, spike detection and load spectra. With comprehensive visualization capabilities ranging from simple text, forms and tables to all types of 2D and 3D graphs, there is always a suitable format to display your measurement data and analysis results. You can also use the controls to create interactive visualizations and reports.

jBEAM Durability is available in Starter, Professional and Ultimate editions as a single user, dongle or floating license that can be used by multiple users on the same network. With the command line interface, folder and file watching, and script support, there are also several options for automating the analysis functionality. For a comparison of the three available variants, please see the section "Technical data".
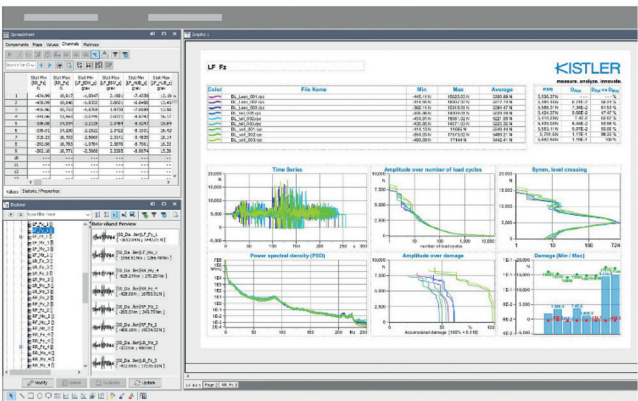
System requirements and recommendations

The system requirements for jBEAM Durability Starter/Professional/Ultimate very much depend on your analysis needs. The following system configuration is recommended for a setup that covers most use cases:

Operating system	Windows 10 or 11 Linux MacOS (Intel-based)
Processor	Intel Core i5-7500, 2.7 GHz or better (recommended)
Memory	4 GB (minimum)
Mass storage	SSD (recommended) 2 GB free disk space for installation (minimum)
Display resolution	1920 x 1080 / full HD (recommended)

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Technical data

	Starter	Professional	Ultimate
Data import			
Data file AFT-4Measure (txt)			✓
ASAM-MDF (v3/ v4) (mdf, dat)	✓	✓	✓
ASAM ODS (atf, atfx)			✓
ASCII (txt, csv, …)	✓	✓	✓
ASCII-Matrix		✓	✓
AVL iFile			✓
Catalog Container (cml)		✓	✓
Clipboard import	✓	✓	✓
DASYLab v7		✓	✓
dBase v3-v5			✓
DCM (BOSCH)			✓
DeweSoft (d7d, d7x, dxd)		✓	✓
DIAdem™ (dat, tdm, tdms)		✓	✓
DiagRA Vehicle Diagnostics			✓
EdasWin			✓
FAMOS (fam, dat, raw)		✓	✓
Gantner Universal-Bin-File			✓
HBM Catman (bin)		✓	✓
HBM MGCplus-Harddisk files		✓	✓
HBM Perception (pnrf)		✓	✓
Hioki HiCORDER (mem)			✓
INCA CVX (csv)			✓
ISO 13499 (mme)			✓
Kistler Andromeda Data File (adf)	✓	✓	✓
Kistler Como (ComoNeo, ComoScout, CDC, AkvisIO) (csv)	✓	✓	✓
Kistler HIS Combustion Indexing	✓	✓	✓
Kistler KiBox 2 (mdf)	✓	✓	✓
Kistler maXYmos (csv)	✓	✓	✓
Kistler Open File (open)	✓	✓	✓
LabVIEW™ (lvm)		✓	✓
LMS Test Lab (tdf)		✓	✓
LS-Dyna (dat)			✓
Matlab (mat)		✓	✓
messWERK (adf)			✓
Microsoft Access (MDB)			✓
Microsoft Excel (xls, xlsx)	✓	✓	✓
MTS Damper System (dpd, dpb)		✓	✓
MTS RPC III (rpc, rsp, drv)	✓	✓	✓
NetCDF (cdf, nc, nc2, he5)			✓
Nicolet (wft)			✓

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		Starter	Professional	Ultimate
	Nicolet FT-IR Spectral Data File (spa)			✓
	PAtools (Kratzer)			✓
	PerkinElmer (tma)			✓
	PerkinElmer Pyris data analysis file (txt)			✓
	Q-DAS (dfq)	✓	✓	✓
	Racelogic VBox (aft)		✓	✓
	Rigsys (Instron IST)		✓	✓
	Rohde & Schwarz			✓
	Somat (sie, sit, sif)		✓	✓
	Tecplot			✓
	Tektronix ISF			✓
	Uniplot-UTX (dat, adl, tdl)			✓
	Universal File Format (15 & 58) (unv, uff)		✓	✓
	Vehicle Bus Files CAN/ LIN (blf, asc, dbc)		✓	✓
	Yokogawa (hdr, wdf)			✓
	Zwick (erg)		✓	✓
	Zwick testXpert (zs2)			✓
GPS data	FAI (igc)		✓	✓
	Garmin (fit)		✓	✓
	Garmin-Database-File (hst, tcx, crs)		✓	✓
	Google (kml)		✓	✓
	GPS Exchange (gpx)		✓	✓
	NMEA (gps)		✓	✓
Database	ASAM-ODS			✓
Multimedia	Audio (au, rmf, mid, wav, aif, aiff)	✓	✓	✓
	Audio recording			✓
	Converter numeric channel to playable audio signal			✓
	DIAS Infrared video (irdx)		✓	✓
	G Streamer Video Technology		✓	✓
	Images (bmp, gif, jpeg, jpg, png, svg, wbmp)	✓	✓	✓
	Video (avi, mpg, mov, mp4, m4v)		✓	✓
	Video recording			✓
Layouts				
	DIAdem™ Version 9			✓
	INCA XDA			✓
	jBEAM XML Layout (import & export)		✓	✓
	Multilanguage Protocol-Layouts	✓	✓	✓
	Page Management	✓	✓	✓
	Sublayout Management	✓	✓	✓

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		Starter	Professional	Ultimate
Data export				
Data file	ASAM-MDF (mdf)	✓	✓	✓
	ASAM-ODS (atf, atfx)			✓
	ASCII	✓	✓	✓
	Catalog Export		✓	✓
	DIAdem™ v8 (dat) & v9 (tdm)		✓	✓
	GPS Exchange Format (gpx)		✓	✓
	ISO 13499 (mme)			✓
	Matlab		✓	✓
	Microsoft Excel (xls, xlsx)		✓	✓
	Microsoft Excel with template (xls, xlsx)		✓	✓
	NetCDF			✓
	Rigsys (Instron IST)		✓	✓
	RPCIII	✓	✓	✓
	Tecplot			✓
Report	Graphics (png, jpeg, svg)		✓	✓
	HTML pages		✓	✓
	Microsoft Excel (table graphs)		✓	✓
	Microsoft Powerpoint (pptx)		✓	✓
	Microsoft Word document		✓	✓
	PDF document (high resolution)	✓	✓	✓
	SVG File		✓	✓
	Screen video (recording of dynamic analysis)			✓
Automation				
Importer utilities	Channel name and unit mapping	✓	✓	✓
	Datasource manager		✓	✓
	Importer cleaner		✓	✓
	Import-File watcher		✓	✓
	Multi-File importer		✓	✓
Measurement				
Measurement modules	ASAM-MDF logger			✓
	Gantner-IDL100, eBloxx or e-Gate			✓
	HBM QuantumX			✓
	NI-DAQ			✓
	Online signal editor			✓
	OPC UA			✓
	Vector CAN module (Vector hardware needed)			✓

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		Starter	Professional	Ultimate
Calculations				
Calculation templates	Group of calculations		✓	✓
Arithmetic	Bit calculations, boolean algebra with relations, FlipFlops		✓	✓
	Coordinate transformation (polar ↔ cartesian)		✓	✓
	Formula editor for numeric channels (line by line)	✓	✓	✓
	Formula editor for numeric objects	✓	✓	✓
	Formula editor with text resolver		✓	✓
	Integration, Derivative, Double-Integration	✓	✓	✓
	Matlab wrapper		✓	✓
	User-defined Java calculations class (needs JDK)		✓	✓
	User-defined Java function (needs JDK)		✓	✓
	X-values, Pythagoras	✓	✓	✓
Curve calculations	Complex channel extractor			✓
	Envelope curve	✓	✓	✓
	Integration of hysteresis curves		✓	✓
	Least Mean Square fit	✓	✓	✓
	Manual channel adjustment		✓	✓
	Memory		✓	✓
	Move tests		✓	✓
	Offset and drift correction		✓	✓
	Partial curve (controlled)		✓	✓
	Resample angle-based		✓	✓
	Resampling		✓	✓
	Resolve Newton formula		✓	✓
	Signal calibration		✓	✓
	Sort channel values		✓	✓
	Spike correction		✓	✓
	Split channel by date		✓	✓
	Split channel into matrix		✓	✓
	Synchronize curves		✓	✓
	Synchronize via time channel (date/ time)		✓	✓
	Synchronize hysteresis curves		✓	✓
	Visual Signal Editor		✓	✓
	X-data change		✓	✓
	Y (X) synchronization		✓	✓
Curve analysis	Compression work			✓
	Correlation of 2 signals	✓	✓	✓
	Elastic modules (E-Modulus)	✓	✓	✓
	Gearwheel analysis	✓	✓	✓
	Multiple events analysis	✓	✓	✓
	Peak area detection	✓	✓	✓

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	Peak detection	✓	✓	✓
	Plateau analysis	✓	✓	✓
	Plausibility of channels	✓	✓	✓
	Step - response		✓	✓
	Value ranges around boolean trigger	✓	✓	✓
Vibration analysis (FFT)	Auto correlation		✓	✓
	Auto spectrum		✓	✓
	Conherence quotient		✓	✓
	Complex FFT		✓	✓
	Convolution		✓	✓
	Cross correlation		✓	✓
	Cross spectrum		✓	✓
	Effective value of an oscillation (RMS)		✓	✓
	FFT spectrum (amplitude & phase)	✓	✓	✓
	Inverse FFT		✓	✓
	Order analysis		✓	✓
	Real FFT		✓	✓
	Spectrogram & Waterfall diagrams			✓
	Terz/ Octave analysis (FFT-based)		✓	✓
Signal filters	Analog filters (Butterworth, Bessel, Chebyshev)			✓
	Bandpass (FFT-based)		✓	✓
	CFC filter (FFT-based)		✓	✓
	Filter editor (FFT-based)		✓	✓
	FIR filter		✓	✓
	ISO 2631 filter		✓	✓
	Moving average	✓	✓	✓
	Universal signal filter		✓	✓
Data filters	Manual value filter	✓	✓	✓
	Matrix columns filter/sorter		✓	✓
	Selections			✓
	Value filter		✓	✓
	View on data objects			✓
Statistics	Append values (event triggered)		✓	✓
	Append values (statistical or formula)		✓	✓
	Box-Whisker statistic		✓	✓
	Extract statistical values	✓	✓	✓
	Extract values by indexlist	✓	✓	✓
	Part average analysis (PAA) parameter		✓	✓
	Statistic over channels	✓	✓	✓
	Statistic over matrix columns	✓	✓	✓
	Statistical distributions (normal, Chi2, ...)	✓	✓	✓

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		Starter	Professional	Ultimate
Counting procedures	1D classification	✓	✓	✓
	Amplitude transformation	✓	✓	✓
	Counting matrices calculation	✓	✓	✓
	Damage accumulation	✓	✓	✓
	Dwell time		✓	✓
	Load spectrum	✓	✓	✓
	Min/ Max classification	✓	✓	✓
	Multiaxial loading		✓	✓
	Operation mode distribution		✓	✓
	Pivot table analysis		✓	✓
	Rainflow analysis	✓	✓	✓
	Rainflow superposition	✓	✓	✓
	Reversal points		✓	✓
	Statistical frequency 1D	✓	✓	✓
	Statistical frequency 2D		✓	✓
Conversions	Absolute date time → Relative time	✓	✓	✓
	Change item creation time			✓
	Channel → Group of values	✓	✓	✓
	Channels → Matrix	✓	✓	✓
	Concatenate channels	✓	✓	✓
	Concatenate channels with transition		✓	✓
	Concatenate producers	✓	✓	✓
	Concatenate values	✓	✓	✓
	Convert date time	✓	✓	✓
	Convert string to numeric value		✓	✓
	Counter to physical values	✓	✓	✓
	Cuts through maps and matrices		✓	✓
	Data objects switch	✓	✓	✓
	Grouping data objects	✓	✓	✓
	Index for relative time	✓	✓	✓
	Integer channel to bit matrix	✓	✓	✓
	Key ↔ Label	✓	✓	✓
	List of properties	✓	✓	✓
	Position vectors ↔ Matrix	✓	✓	✓
	Property ↔ Data item	✓	✓	✓
	Ungroup group of data objects	✓	✓	✓
	Video → Timed images		✓	✓
	YMDHMS → Date/Time	✓	✓	✓
Data Mining	Apriori		✓	✓
	Data Mining generator		✓	✓
	DBScan			✓
	FP-Growth		✓	✓

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		Starter	Professional	Ultimate
	K-Means		✓	✓
	Linear and periodic predicition		✓	✓
	OPTICS			✓
	Principal Component Analysis (PCA)		✓	✓
	Support Vector Machines (SVM)		✓	✓
Geodesy	Geofencing		✓	✓
	GPS → Distance/Heading/Speed		✓	✓
	GPS → Distance/Heading (2 point)			✓
	GPS ↔ Gauss-Krueger		✓	✓
	GPS ↔ UTM		✓	✓
	Longitude/Latitude/Altitude ↔ XYZ		✓	✓
	Split GPS-polygons		✓	✓
Stress analysis	Hole drill 2D-calculation		✓	✓
	Hole drill 3D-calculation		✓	✓
	Ring kernel		✓	✓
	Rosette		✓	✓
Characteristic maps	Characteristic map trace			✓
	Engine map statistics			✓
	Iso torque curves			✓
	Turbocharger map statistics		✓	✓
Graphic functions				
Simple forms	Line, Rectangle, Circle, Curved line	✓	✓	✓
	Speechbox	✓	✓	✓
Text elements	Formatted text	✓	✓	✓
	MathML graphic	✓	✓	✓
	Plain string (rotatable)	✓	✓	✓
	Plain text	✓	✓	✓
	Variables as text	✓	✓	✓
Tables	Chart legend as table	✓	✓	✓
	Free table	✓	✓	✓
	Graphic objects	✓	✓	✓
	Interactive table (multiple column lines for display and controls)	✓	✓	✓
	Item property table	✓	✓	✓
	Matrix table	✓	✓	✓
	Spreadsheet	✓	✓	✓
	Table of content	✓	✓	✓
Realtime graphics	Bar graph (multicolor, voice output)	✓	✓	✓
	Boolean display	✓	✓	✓
	Controlled arrow	✓	✓	✓
	Controlled image		✓	✓
	Curved line (controlled)	✓	✓	✓

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		Starter	Professional	Ultimate
	Digital display	✓	✓	✓
	Moving images	✓	✓	✓
	Multi digital display	✓	✓	✓
	Needle indicator	✓	✓	✓
	Realtime table	✓	✓	✓
	Statistic and history dialog			✓
	TY stripchart	✓	✓	✓
	Vector display	✓	✓	✓
Graphs/Charts	Universal 2D graph (accepts any combination of following diagrams)	✓	✓	✓
	- Box-Whisker diagram		✓	✓
	- Bubbles diagram	✓	✓	✓
	- Engine map (characteristic field)			✓
	- Error bars diagram		✓	✓
	- Isoline/ Contour diagram		✓	✓
	- Line/ Points diagram	✓	✓	✓
	- Graph objects diagram	✓	✓	✓
	- Matrix diagram	✓	✓	✓
	- Moving map (needs a map service)		✓	✓
	- Moving sprites	✓	✓	✓
	- Scaled images	✓	✓	✓
	- Timed images	✓	✓	✓
	- Turbocharger map (characteristic field)			✓
	- Vector field diagram		✓	✓
	Axis charts (reference points and sub axes)			✓
	Box-Whisker graph		✓	✓
	Difference engine map graph		✓	✓
	Difference turbocharger map graph		✓	✓
	Grid chart		✓	✓
	Isolines/Contour graph (dynamic for 3D matrices)		✓	✓
	Line/Points graph (polar coordinates)		✓	✓
	Net grid chart		✓	✓
	Radar chart			✓
	Vectorfield graph (incl. difference field)			✓
	Number of curves per 2D chart	10	100	1.000
	Number of axis per 2D chart	2	50	500
	Spectrogram			✓
	Universal 3D graph (OpenGL based) (accepts any combination of following diagrams)	✓	✓	✓
	- 3D bar diagram	✓	✓	✓
	- 3D points diagram	✓	✓	✓
	- 3D surface diagram (incl. Z projection)	✓	✓	✓
	- 3D waterfall diagram	✓	✓	✓

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		Starter	Professional	Ultimate
	- 4D surface diagram	✓	✓	✓
	- Stereoscopic representation		✓	✓
Other graphs	HTML viewer		✓	✓
	Pie graph	✓	✓	✓
Multimedia graphic	Audio player (synchronized)		✓	✓
	Dynamic image graph	✓	✓	✓
	Image graph	✓	✓	✓
	Video mixer graph			✓
	Video player (synchronized)		✓	✓
Control elements	Button (to run a command)	✓	✓	✓
	Button (to start an action)	✓	✓	✓
	Checkbox for boolean values	✓	✓	✓
	Combobox (selector for strings)	✓	✓	✓
	Command field	✓	✓	✓
	Command push button	✓	✓	✓
	Data item reference holder	✓	✓	✓
	Data item selector	✓	✓	✓
	Dialog configurator	✓	✓	✓
	Import controller	✓	✓	✓
	Iterable graph input controller	✓	✓	✓
	Multi-button line (to start different actions)	✓	✓	✓
	Property editor	✓	✓	✓
	Radio buttons (selector for strings)	✓	✓	✓
	Slider (selector for numeric values)	✓	✓	✓
	Switch/Toggle button (for boolean values)	✓	✓	✓
	Tabbed graphic area	✓	✓	✓
	Text input field	✓	✓	✓
	Time controller	✓	✓	✓
	(Turning) knob	✓	✓	✓
	Value input field (for numbers)	✓	✓	✓
Miscellaneous				
Configuration management	Component collections		✓	✓
	Project analyzer		✓	✓
	Template library (template manager)		✓	✓
	Data object loop (multiple data objects processor)		✓	✓
Messaging elements	Data object observing trigger		✓	✓
	E-mail component		✓	✓
Test stand preparation	Omission		✓	✓
Protocol generator	Batch report generator			✓
	Page formatter			✓

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		Starter	Professional	Ultimate
	Report generator (section types: event analysis, table of contents, template, speed chart)		✓	✓
Data generator	Actual time		✓	✓
	Basic graphic objects	✓	✓	✓
	Grouped maps			✓
	Numeric channel	✓	✓	✓
	Numeric matrix (2D & 3D)	✓	✓	✓
	Property map	✓	✓	✓
	Signal data		✓	✓
	Text channel	✓	✓	✓
	Text matrix (2D)		✓	✓
	Time channel		✓	✓
Map services	Bing (Microsoft)		✓	✓
	Google		✓	✓
	HERE		✓	✓
	OpenStreetMap (OSM)		✓	✓
General				
	Axis synchronization service		✓	✓
	Data analysis windw		✓	✓
	EnCom client		✓	✓
	EnCom server		✓	✓
	Generic unit service	✓	✓	✓
	Graphic user interface	✓	✓	✓
	GUI language (english & german)	✓	✓	✓
	Multi language GUI (11 languages see below)	✓	✓	✓
	Release Notes dialog	✓	✓	✓
	Resolver for text embedded formulas	✓	✓	✓
	Scripts (Java, Bean shell, Groovy, Python syntax)		✓	✓
	Scripts (native Python support)	✓	✓	✓
	Toolbox	✓	✓	✓
Project size				
	Number of importers & calculations	100	3.000	10.000
	Number of graphic objects	500	50.000	79.000

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	Starter	Professional	Ultimate
Languages			
Arabic	✓	✓	✓
Chinese	✓	✓	✓
Czech	✓	✓	✓
English	✓	✓	✓
French	✓	✓	✓
German	✓	✓	✓
Italian	✓	✓	✓
Portuguese	✓	✓	✓
Russian	✓	✓	✓
Spanish	✓	✓	✓
Swedish	✓	✓	✓

Services & trainings for jBEAM Durability software
(please contact sales-software@kistler.com for requests)

jBEAM Durability (18047116)
jBEAM Durability Subscription

Services
• First Level supprt
• Maintenance
• Template service

Training (44002613)
• jBEAM Basic User Training
• jBEAM Advanced User Training
• jBEAM Expert User Training

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