



## HEAD RUSH TECHNOLOGIES WHITE PAPER

# Trublue Manual Updates

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April 2019

Head Rush Technologies has recently gone through the process of upgrading the certification to all models of the TRUBLUE and TRUBLUE Speed Auto Belays. Due to changing international standards and in an effort to continue our longstanding tradition of being the Most Tested. Most Trusted. Most True. Auto Belay in the world Head Rush has subjected the TRUBLUE family to unprecedented third party testing and successfully renewed the certifications of the device. Because of these updated standards the TRUBLUE was tested to and a new certifying body used changes have been made to the manuals.

A summary of those changes can be seen below. You can always find the most up to date manuals for all of our products at **[www.headrushtech.com](http://www.headrushtech.com)**.

## TRUBLUE SPEED MANUAL UPDATES

Type of Change	Previous Manual	New Manual	Reason
Compliance Update	EN 341:1992 + A1:1997 Class A	"EU 2016/425 EN 341: 2011 Class 1A EN 360:2002 EU Declarations of Conformities found on website New Controlling and notifying bodies"	The TRUBLUE Speed has undergone new intensive third party testing and meets the highest safety standards in the industry
Compliance Update	CLASSIFICATION: Class A Descent Control Device	CERTIFICATION: IN ACCORDANCE WITH EN 341:2001-1A AND EN 360:2002	"The TRUBLUE has undergone new intensive third party testing and now meets the highest safety standards in the industry"
Information Added	N/A	"The theoretical lifespan of the TRUBLUE Speed Auto Belay is unlimited with proper care and performing the required annual service maintenance. For planning purposes, we recommend a planned lifespan of 15 years. "	It is impossible for any mechanical system to last indefinitely, through testing and field experience Head Rush has posted this lifespan estimate.
Information Added	N/A	"Secondary Connections: Based on the site risk analysis, a secondary connector may be recommended to be used with an Auto Belay. Head Rush Technologies offers several options for secondary connectors, or continuous connection systems."	Some organizations utilize multiple connections, or smart/continuous systems to mitigate risk
Information Added	N/A	Excessive nozzle wear could affect retraction of the webbing	New information from field testing points out another potential danger of worn nozzles
Information Added	N/A	The short webbing loop inside the device does not receive wear under normal operation and is not inspectable by the operator.	Further information to answer frequently asked customer questions
Information Added	N/A	EU importers may apply their name and address on the device to comply with government regulations next to the specification label	Information required by Regulation (2016)/425

Type of Change	Previous Manual	New Manual	Reason											
Information Modified	"Line Material 12.5 m: Nylon/Spectra 16 m: Nylon/Dyneema"	"Line Material 12.5 m: Polyamide/UHMWPE 16 m: UHMWPE/Polyamide"	More accurate representation of materials used in TB/TBXL webbing											
Information Modified	Text based specification and information labels	"Picture based specification and information labels with descriptions"	Adds simplicity and clarity to device labels for multiple languages											
Information Modified	1 x Carabiner	1 x Carabiner or EN 362 connector attached to the Webbing Lower Line	Units may ship with multiple attachment configurations											
Information Modified	A self-closing, self locking carbiner is supplied	"On some models, a triple locking self closing carabiner is supplied"	Change to reflect new webbing options											
Information Removed	Replacement part description and product numbers listed	N/A	Unnecessary information removed											
Nomenclature Modification	The term "climbing system device" appears in the manual	Modified to "climbing/descent system device"	"Clarifying role of device in a climbing system"											
Requirement Added	N/A	The installer and operator must fully understand these instructions. Any questions must be submitted in writing to Head Rush Technologies.	"To provide maximum user safety all parties working with TRUBLUE auto belays must read understand the user manual."											
Requirement Added	N/A	<table border="1"> <tbody> <tr> <td rowspan="2">OPERATING TEMPERATURE</td> <td>ALL MODELS</td> <td>-4° C (25° F)</td> <td>60° C (140° F)</td> </tr> <tr> <td>ALL MODELS (DRY)</td> <td>-10° C (14° F)</td> <td>60° C (140° F)</td> </tr> <tr> <td>STORAGE TEMPERATURE</td> <td>ALL MODELS</td> <td>-20° C (-4° F)</td> <td>60° C (140° F)</td> </tr> </tbody> </table>	OPERATING TEMPERATURE	ALL MODELS	-4° C (25° F)	60° C (140° F)	ALL MODELS (DRY)	-10° C (14° F)	60° C (140° F)	STORAGE TEMPERATURE	ALL MODELS	-20° C (-4° F)	60° C (140° F)	New third party testing distinguishes wet vs. dry operation. Operational envelope expanded.
OPERATING TEMPERATURE	ALL MODELS	-4° C (25° F)		60° C (140° F)										
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Type of Change	Previous Manual	New Manual	Reason
Requirement Added	N/A	"METRIC UNITS ARE THE CONTROLLING UNITS OF MEASURE IN THIS MANUAL. IMPERIAL UNITS ARE PROVIDED AS A COURTESY AND HAVE BEEN ROUNDED. IF THE OWNER/OPERATOR/INSTALLER MUST MAKE ANY UNIT COVERIONS, THE METRIC UNITS SHOULD BE REFERENCED."	Clarifying information provided
Requirement Added	N/A	"The Auto Belay is free to pivot in all directions and should not bind the mountings or be able to impact the surrounding structure."	Requirement added to maximize webbing life and device performance
Requirement Added	N/A	In outdoor installations increased inspections are required	"When exposed to harsh environments inspections must happen more often to ensure proper device function"
Requirement Added	N/A	A gate check must be performed after every connection	Potentially dangerous situations identified
Requirement Added	N/A	"A risk assessment shall be complete at the installation site to determine the necessary PPE for users"	Potentially dangerous situations identified
Requirement Added	N/A	"If the Auto Belay stops retracting for any reason while attached, STOP CLIMBING. If there is no slack in the line, jump onto the webbing and the Auto Belay will descend. Notify the operator immediately."	Potentially dangerous situations identified
Requirement Added	N/A	Avoid swinging while descending	"Swinging can cause unintended and harmful contact with structures, as well as accelerate webbing and device wear"

Type of Change	Previous Manual	New Manual	Reason																					
Requirement Added	N/A	"After climbing, reattach the connector to an appropriate connection point at the bottom of the wall"	This requirement minimizes uncontrolled retraction and down time in operation																					
Requirement Added	N/A	If the swivel does not rotate, lubricate per the manufacturer's recommendations... If full functionality cannot be restored, replace the entire webbing assembly	The swivel is an integral part of the Auto Belay and must function properly																					
Requirement Modified	<table border="1"> <tr> <th colspan="2">TRUBLUE SPEED 12.5 M (black webbing handle)</th> </tr> <tr> <td>MINIMUM MOUNTING HEIGHT*</td> <td>No minimum</td> </tr> <tr> <td>MAXIMUM MOUNTING HEIGHT*</td> <td>12.5 m (41 ft)</td> </tr> <tr> <th colspan="2">TRUBLUE SPEED 16 M (blue webbing handle)</th> </tr> <tr> <td>MINIMUM MOUNTING HEIGHT*</td> <td>12 m (39.5 ft)</td> </tr> <tr> <td>MAXIMUM MOUNTING HEIGHT*</td> <td>16 m (52.5 ft)</td> </tr> </table>	TRUBLUE SPEED 12.5 M (black webbing handle)		MINIMUM MOUNTING HEIGHT*	No minimum	MAXIMUM MOUNTING HEIGHT*	12.5 m (41 ft)	TRUBLUE SPEED 16 M (blue webbing handle)		MINIMUM MOUNTING HEIGHT*	12 m (39.5 ft)	MAXIMUM MOUNTING HEIGHT*	16 m (52.5 ft)	<table border="1"> <tr> <th rowspan="2">MOUNTING HEIGHT (NOZZLE TO GROUND)</th> <th colspan="2">TBSD150-20 12.5M (black webbing handle)</th> </tr> <tr> <td>7.5m (24.6 ft)</td> <td>12.5m (41.0 ft)</td> </tr> <tr> <th colspan="2">TBSD150-20 16M (blue webbing handle)</th> <td>12.0m (39.4 ft)</td> <td>16.0m (52.5 ft)</td> </tr> </table>	MOUNTING HEIGHT (NOZZLE TO GROUND)	TBSD150-20 12.5M (black webbing handle)		7.5m (24.6 ft)	12.5m (41.0 ft)	TBSD150-20 16M (blue webbing handle)		12.0m (39.4 ft)	16.0m (52.5 ft)	New minimum mounting heights for TBSD150-20 12.5 based on testing of arrival speeds
TRUBLUE SPEED 12.5 M (black webbing handle)																								
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TBSD150-20 16M (blue webbing handle)		12.0m (39.4 ft)	16.0m (52.5 ft)																					
Requirement Modified	Climber Weight 10-150 kg (22-330 lbs)	Climber Weight 10-136 kg (22-300 lbs)	User weight updated to comply with new third party testing																					
Requirement Removed	Additional anchor point Standards listed	Specific standards removed, mandate to consult with AHJ for required load capacities of anchors.	"Due to the numerous standards that may apply to installations worldwide Head Rush has eliminated citing specific bodies"																					
Requirement Removed	"All anchor points and connectors, hooks, D-rings, shackles must have a minimum load capacity of 10kN"	N/A	Redundant information removed																					
Requirement Removed	Section on Mounting removed	N/A	Redundant information removed																					
Requirement Removed	"It is recommended that a minimum distance of 100 mm (4 in) is maintained between the Auto Belay and any adjacent wall."	N/A	Unnecessary information removed																					

Type of Change	Previous Manual	New Manual	Reason
Requirement Re- moved	Never climb alongside or above the Auto Belay	N/A	Shock load testing passed in new third party testing
Warning Added	N/A	"HARMFUL CONTACT Do not allow solvents, acids, sharp edges etc to get into contact with the device, especially the webbing. If in contact the Auto Belay must be inspected."	Important warning added
Warning Modified	"Operation of a TRUBLUE Auto Belay without a current Certification Label will render the unit not fit for use and void all warranty"	Operation of a TRUBLUE Auto Belay without a current Certification Label visible is strictly forbidden. Severe bodily injury or death may occur.	Operating outside of annual service is a dangerous activity, stronger language added to warning

## TRUBLUE / TRUBLUE XL MANUAL UPDATES

Type of Change	Previous Manual	New Manual	Reason
Compliance Update	EN 341:1992 + A1:1997	"EN 341: 2011 Class 1A EN 360:2002 EU Declarations of Conformities found on website New Controlling and notifying bodies"	"The TRUBLUE has undergone new intensive third party testing and meets the highest safety standards in the industry"
Compliance Update	CLASSIFICATION: Class A Descent Control Device	CERTIFICATION: IN ACCORDANCE WITH EN 341:2011-1A AND EN 360:2002	"The TRUBLUE has undergone new intensive third party testing and now meets the highest safety standards in the industry"
Information Added	N/A	"The theoretical lifespan of the TRUBLUE and TRUBLUE XL Auto Belay is unlimited with proper care and performing the required annual service maintenance. For planning purposes, we recommend a planned lifespan of 15 years. "	It is impossible for any mechanical system to last indefinitely, through testing and field experience Head Rush has posted this lifespan estimate.
Information Added	N/A	Wet storage directions added	"Information added due to customer request and in order to extend webbing and device life"
Information Added	N/A	"Secondary Connections: Based on the site risk analysis, a secondary connector may be recommended to be used with an Auto Belay. Head Rush Technologies offers several options for secondary connectors, or continuous connection systems."	Some organizations utilize multiple connections, or smart/continuous systems to mitigate risk
Information Added	N/A	Excessive nozzle wear could affect retraction of the webbing	New information from field testing points out another potential danger of worn nozzles
Information Added	N/A	The short webbing loop inside the device does not receive wear under normal operation and is not inspectable by the operator.	Further information to answer frequently asked customer questions

Type of Change	Previous Manual	New Manual	Reason
Information Added	N/A	EU importers may apply their name and address on the device to comply with government regulations next to the specification label	Information required by Regulation (2016)/425
Information Modified	"Line Material TB: Nylon/Spectra TBXL: Nylon/Dyneema/ Technora"	"Line Material TB: Polyamide/UHMWPE TBXL: UHMWPE/Polyamide"	More accurate representation of materials used in TB/TBXL webbing
Information Modified	Text based specification and information labels	"Picture based specification and information labels with descriptions"	Adds simplicity and clarity to device labels for multiple languages
Information Modified	A self-closing, self locking carabiner is supplied	"On some models, a triple locking self closing carabiner is supplied"	Change to reflect new webbing options
Information Modified	Do not attempt to tighten shackle pin during inspection	Do not attempt to tighten or loosen shackle pin during inspection	Any movement of the shackle pin can break the locking compound and compromise the connection
Nomenclature Modification	The term "Climbing" appears throughout manual	Modified to climbing/descent	The TRUBLUE is used for various activities, new language reflects this
Nomenclature Modification	The term "recreational climbing industry" appears in the manual	Modified to include aerial adventure industry	"The TRUBLUE is used for various activities in multiple industries, new language reflects this"
Nomenclature Modification	The term "climber" is used repeatedly	Modified to "user"	The TRUBLUE is used for various activities, new language reflects this



Type of Change	Previous Manual	New Manual	Reason											
Nomenclature Modification	MAX LINE EXTENSION	MOUNTING HEIGHT (vertical distance from nozzle to ground)	Clarifying information provided											
Requirement Added	N/A	The installer and operator must fully understand these instructions. Any questions must be submitted in writing to Head Rush Technologies.	"To provide maximum user safety all parties working with TRUBLUE auto belays must read understand the user manual."											
Requirement Added	N/A	<table border="1"> <tr> <td rowspan="2">OPERATING TEMPERATURE</td> <td>ALL MODELS</td> <td>-4° C (25° F)</td> <td>60° C (140° F)</td> </tr> <tr> <td>ALL MODELS (DRY)</td> <td>-10° C (14° F)</td> <td>60° C (140° F)</td> </tr> <tr> <td rowspan="2">STORAGE TEMPERATURE</td> <td>ALL MODELS</td> <td>-20° C (-4° F)</td> <td>60° C (140° F)</td> </tr> </table>	OPERATING TEMPERATURE	ALL MODELS	-4° C (25° F)	60° C (140° F)	ALL MODELS (DRY)	-10° C (14° F)	60° C (140° F)	STORAGE TEMPERATURE	ALL MODELS	-20° C (-4° F)	60° C (140° F)	New third party testing distinguishes wet vs. dry operation. Operational envelope expanded.
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	Requirement Added	N/A	"METRIC UNITS ARE THE CONTROLLING UNITS OF MEASURE IN THIS MANUAL. IMPERIAL UNITS ARE PROVIDED AS A COURTESY AND HAVE BEEN ROUNDED. IF THE OWNER/OPERATOR/INSTALLER MUST MAKE ANY UNIT COVERSIONS, THE METRIC UNITS SHOULD BE REFERENCED."	Clarifying information provided										
Requirement Added	N/A	"The Auto Belay is free to pivot in all directions and should not bind the mountings or be able to impact the surrounding structure."	Requirement added to maximize webbing life and device performance											
Requirement Added	N/A	In outdoor installations increased inspections are required	"When exposed to harsh environments inspections must happen more often to ensure proper device function"											
Requirement Added	N/A	A gate check must be performed after every connection	Potentially dangerous situations identified											

Type of Change	Previous Manual	New Manual	Reason														
Requirement Added	N/A	"A risk assessment shall be complete at the installation site to determine the necessary PPE for users"	Potentially dangerous situations identified														
Requirement Added	N/A	"If the Auto Belay stops retracting for any reason while attached, STOP CLIMBING. If there is no slack in the line, jump onto the webbing and the Auto Belay will descend. Notify the operator immediately."	Potentially dangerous situations identified														
Requirement Added	N/A	Avoid swinging while descending	"Swinging can cause unintended and harmful contact with structures, as well as accelerate webbing and device wear"														
Requirement Added	N/A	"After climbing, reattach the connector to an appropriate connection point at the bottom of the wall"	This requirement minimizes uncontrolled retraction and down time in operation														
Requirement Added	N/A	If the swivel does not rotate, lubricate per the manufacturer's recommendations... If full functionality cannot be restored, replace the entire webbing assembly	The swivel is an integral part of the Auto Belay and must function properly														
Requirement Modified	"Max Line Extension TRUBLUE: 12.5 m (41 ft) TRUBLUE XL: 20 m (65.6 ft)"	<table border="1"> <thead> <tr> <th></th> <th>MODEL</th> <th>MINIMUM</th> <th>MAXIMUM</th> </tr> </thead> <tbody> <tr> <td rowspan="3">MOUNTING HEIGHT (NOZZLE TO GROUND)</td> <td>TB150-12C (7.5m)</td> <td>3.5m (11.5 ft)</td> <td>7.5m (24.6 ft)</td> </tr> <tr> <td>TB150-12C (12.5m)</td> <td>7.5m (24.6ft)</td> <td>12.5m (41.0 ft)</td> </tr> <tr> <td>TBXL150-20A</td> <td>12.0m (39.4 ft)</td> <td>20.0m (65.6 ft)</td> </tr> </tbody> </table>		MODEL	MINIMUM	MAXIMUM	MOUNTING HEIGHT (NOZZLE TO GROUND)	TB150-12C (7.5m)	3.5m (11.5 ft)	7.5m (24.6 ft)	TB150-12C (12.5m)	7.5m (24.6ft)	12.5m (41.0 ft)	TBXL150-20A	12.0m (39.4 ft)	20.0m (65.6 ft)	New clarifying language to cover all current TB/ TBXL model mounting. Minimum mounting heights added based on new certification testing.
	MODEL	MINIMUM	MAXIMUM														
MOUNTING HEIGHT (NOZZLE TO GROUND)	TB150-12C (7.5m)	3.5m (11.5 ft)	7.5m (24.6 ft)														
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Requirement Modified	Climber Weight 10-150 kg (22-330 lbs)	<table border="1"> <tbody> <tr> <td rowspan="2">USER WEIGHT</td> <td>TB150-12C</td> <td>10 kg (22 lbs)</td> <td>150kg (330 lbs)</td> </tr> <tr> <td>TBXL150-20A</td> <td>10 kg (22 lbs)</td> <td>136kg (300 lbs)</td> </tr> </tbody> </table>	USER WEIGHT	TB150-12C	10 kg (22 lbs)	150kg (330 lbs)	TBXL150-20A	10 kg (22 lbs)	136kg (300 lbs)	User weight updated to comply with new third party testing							
USER WEIGHT	TB150-12C	10 kg (22 lbs)		150kg (330 lbs)													
	TBXL150-20A	10 kg (22 lbs)	136kg (300 lbs)														
Requirement Removed	Additional anchor point Standards listed	Specific standards removed, mandate to consult with AHJ for required load capacities of anchors.	"Due to the numerous standards that may apply to installations worldwide Head Rush has eliminated citing specific bodies"														

Type of Change	Previous Manual	New Manual	Reason
Requirement Removed	"All anchor points and connectors, hooks, D-rings, shackles must have a minimum load capacity of 10kN"	N/A	Redundant information removed
Requirement Removed	Section on Mounting removed	N/A	Redundant information removed
Requirement Removed	"It is recommended that a minimum distance of 100 mm (4 in) is maintained between the Auto Belay and any adjacent wall."	N/A	Unnecessary information removed
Requirement Removed	Never climb alongside or above the Auto Belay	N/A	Shock load testing passed in new third party testing
Warning Added	N/A	ALWAYS USE THE CORRECT MOUNTING HEIGHT	Important warning added
Warning Added	N/A	"HARMFUL CONTACT Do not allow solvents, acids, sharp edges etc to get into contact with the device, especially the webbing. If in contact the Auto Belay must be inspected."	Important warning added
Warning Added	N/A	Emergency Response Plan mandated	Potentially dangerous situations identified

Type of Change	Previous Manual	New Manual	Reason
Warning Added	N/A	"Stop Use Warning for: Excessively fast webbing wear Increased descent speed The device stops retracting"	Potentially dangerous situations identified
Warning Added	N/A	Warning on external items preventing retraction	Potentially dangerous situations identified
Warning Modified	"Operation of a TRUBLUE Auto Belay without a current Certification Label will render the unit not fit for use and void all warranty"	Operation of a TRUBLUE Auto Belay without a current Certification Label visible is strictly forbidden. Severe bodily injury or death may occur.	Operating outside of annual service is a dangerous activity, stronger language added to warning

