Risk Assessment according to AS1418.10 Appendix A	Manufacturer: Zhejiang Dingli Machinery Co., Ltd Machine: Mobile Elevated Work Platform Serial number: BT30RT, BT28RT, BT26SRT, BT26RT, BT24RT, BA28RT, BA24RT, BT22RT	author: Dingli date: 2021.1.2	

1	Determination of limits, intended use	See below		Reference to additional documents
1.1	use allowed	The mobile elevated work platform allows users to work at a certain height		Manual
1.2	restrictions, limits of use allowed	The machine cannot be used to other propose		Manual
1.3	foreseeable misuse/misapplication	See EN 280:2013+A1:2015 clause 1: scope.		Manual
2	Field of use	See below		
	private	N/A		N/A
	commercial	Professional		Manual
3	User population	Task	Qualification	
	qualified personnel	Required	YES	Training Evidence
	laities	N/A	N/A	N/A
	apprentices	N/A	N/A	N/A
	private use only:			
	children (declare age class)	☐ age above years		N/A
	older people	☐		N/A
	handicapped	☐ kind of handicap		N/A
4	Materials	See below		
4.1	dangerous operating supplies	☒ Electricity ☒ Hydraulic ☐ Pneumatic ☐ Thermal ☐ Radiation		Manual
4.2	Dangerous materials in the parts the machine is consisting of	The machine is not consisting of dangerous materials		Manual
4.3	Dangerous materials which may be processed by the machine	No dangerous materials processed by the machine		N/A

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

The phases of life according to EN 12100-1 include: transport, assembling, installation, placing into operation, setup, teaching, programming, changeover, working process, cleaning, process interferences, troubleshooting, fault clearance, maintenance, placing out of operation, disassembling, waste disposal

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Risk Assessment according to AS1418.10 Appendix A	Manufacturer: Zhejiang Dingli Machinery Co., Ltd Machine: Mobile Elevated Work Platform Serial number: BT30RT, BT28RT, BT26SRT, BT26RT, BT24RT, BA28RT, BA24RT, BT22RT	author: Dingli date: 2021.1.2	Dingli

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
1 Transport, assembling, installation											
1.1	Hazards associated with all tasks	☒ Errors of fitting ☒ Lifting ☒ Loading ☒ Packing ☒ Transportation ☒ Unloading ☒ Unpacking ☒ Packing ☒ Adjustments ☒ Assembly ☒ Connecting to disposal system (e.g. exhaust system, waste water installation) ☒ Connection to power supply ☒ Demonstration ☒ Feeding, filling, loading of ancillary fluids (e.g.	☒ Crushing ☒ Cutting or severing ☐ Friction or abrasion ☒ Impact ☐ Injection ☒ Shearing ☒ Stabbing or puncture	Machine , components and accessories	Inherently safe machinery design and inform users of the residual risks: Detail description for transportation, assembling and installation of machine are mentioned in manual.	EN 280:2013+A1:2015 and MSD as reference,					OK

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
		lubricant, grease, glue)									
1.2	Hazards associated with all tasks	☒ Fixing, anchoring ☒ Preparations for the installation (e.g. foundations, vibration isolators) ☒ Running the machine without load ☒ Testing ☒ Trials with load or maximum load ☐ Fencing	See above	See above	See above	EN 280:2013+A1:2015 and MSD as reference,					OK
2 Placing into operation											
2.1	Hazards associated with all tasks	Refer to 1+3	Refer to 1+3	Refer to 1+3	Refer to 1+3	Refer to 1+3					OK
3 Setup, teaching, programming, changeover											
3.1	Hazards	☒ Adjustment and	☒ Crushing	Machine and components	Inherently safe machinery design	EN					OK

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
	associated with all tasks	setting of protective devices and other components ☒ Adjustment and setting or verification of functional parameters of the machine ☐ Clamping /fastening the workpiece ☐ Feeding, filling, loading of raw material ☒ Functional test, trials ☒ Mounting or changing tools, tool setting ☐ programming verification ☒ Verification of the final product	☒ Cutting or severing ☐ Friction or abrasion ☒ Impact ☐ Injection ☒ Shearing ☒ Stabbing or puncture		and inform users of the residual risks: Refer to EN 280:2013+A1:2015, clause 7 and manual	280:2013+A1:2015 + EN 60204-1:2006+A1:2009 + MSD as reference,					

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
4 Working process											
4.1	Mechanical Hazards	☒ Acceleration, deceleration (kinetic energy) ☒ Angular parts ☒ Approach of a moving element to a fixed part ☒ Cutting parts ☒ Elastic elements ☒ Falling objects ☒ Gravity (stored energy) ☒ Height from the ground ☒ High pressure ☒ Machinery mobility ☒ Rotating elements ☒ Rough, slippery	☒ Being run over ☐ Being thrown ☒ Crushing ☒ Cutting or severing ☒ Drawing-in or trapping ☒ Entanglement ☒ Friction or abrasion ☒ Impact ☐ Injection ☒ Shearing ☒ Slipping, tripping and falling ☒ Stabbing or puncture		Inherently safe machinery design and construction, take necessary protection measures and inform users of the residual risks: Refer to EN 280:2013+A1:2015, clause 7 and manual	EN 280:2013+A1:2015 + EN 60204-1:2006+A1:2009					ok

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
		surface ☒ Sharp edges ☒ Stability ☐ Vacuum	☐ Suffocation								
4.2	See 4.1/4.3	See 4.1/4.3	See 4.1/4.3	See 4.1/4/3	See 4.1/4.3	See 4.1/4/3					See 4.1/4.3
4.3	Electrical Hazards	☐ Arc ☐ Electromagnetic phenomena ☒ Electrostatic phenomena ☒ Live parts ☐ Not enough distance to live parts under high voltage ☒ Overload ☒ Parts which have become live under fault conditions ☒ Short-circuit ☐ Thermal	☒ Burn ☐ Chemical effects ☐ Effects on medical implants ☒ Electrocution ☒ Falling, being thrown ☒ Fire ☐ Projection of molten particles ☒ Shock	Any risk related to electrical fault will be checked automatically and view check according to manual	Inherently safe machinery design and construction: Refer to EN 280:2013+A1:2015 +EN60204-32 No electronic circuit for safety circuit	EN 280:2013+A1:2015 +EN60204-32 as reference,					See 4.1

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
		radiation									
4.4	Thermal Hazards	☐ Explosion ☐ Flame ☐ Objects or materials with a high or low temperature ☐ Radiation from heat sources	☐ Bun ☐ Dehydration ☐ Discomfort ☐ Frostbite ☐ Injuries by the radiation of heat sources ☐ Scald	Not relevant	Not relevant	N/A					N/A
4.5	Noise hazards	☐ Cavitation phenomena ☐ Exhausting system ☐ Gas leaking at high speed ☒ Manufacturing process (stamping, cutting etc) ☒ Moving parts ☐ Scraping surfaces ☐ Unbalanced	☒ Discomfort ☐ Loss of awareness ☐ Loss of balance ☐ Permanent hearing loss ☒ Stress ☐ Tinnitus ☐ Tiredness ☐ Any other (e.g. mechanical,	Refer to comments.	Inform users of the residual risks: The manual has indicated the sound pressure level below 70dB	EN 280:2013+A1:2015+ MSD					OK

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
		rotating parts ☐ Whisting pneumatics ☒ Worn parts	electrical) as a consequence of an interference with speech communication or with acoustic signals								
4.6	Vibration Hazards	☐ Cavitation phenomena ☒ Misalignment of moving parts ☒ Mobile equipment ☐ Scraping surfaces ☐ Unbalanced rotating parts ☐ Vibrating equipment ☒ Worn parts	☒ Discomfort ☐ Low-back morbidity ☐ Neurological discorder ☐ Osteo-articular discorder ☐ Trauma of the spine ☐ Vascular disorder	Vibration will neither make the passenger uncomfortable nor damage the structure	Inherently safe machinery design protects the vibration from discomforting passengers and from damaging the structure. Dynamic load test performed and found satisfactory	EN 280:2013+A1:2015					OK
4.7	Radiation Hazards	☐ Lionising radiation source ☐ Low frequency	☐ Burn ☐ Damage to eyes and skin	Not relevant	Not relevant	N/A					N/A

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
		electromagnetic radiation ☐ Optical radiation linfrared, visible and ultraviolet), including laser ☐ Radio frequency electromagnetic radiation	☐ Effects on reproductive capability ☐ Genetic mutation ☐ Headache, insomnia, etc.								
4.8	Material/ substance hazards	☐ Aerosol ☐ Biological and microbiological (viral or bacterial) agent ☐ Combustible ☐ Dust ☐ Explosive ☐ Fibre ☐ Flammable ☒ Fluid ☐ Fume ☐ Gas	☐ Breathing difficulties, suffocation ☐ Cancer ☐ Corrosion ☐ Effects on reproductive capability ☒ Fire ☐ Infection ☐ Mutation ☐ Poisoning ☐ Sensitization	Not relevant	Not relevant	N/A					N/A

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
		☐ Mist ☐ Oxidizer	☐ Static electricity risk								
4.9	Ergonomic hazards	☒ Access ☐ Disign or location of indicators and visual displays units ☒ Design, location or identification of control devices ☐ Effort ☐ Flicker, dazzling, shadow, stroboscopic effect ☐ Local lighting ☐ Mental overload/underload ☐ Posture ☐ Repetitive activity	☒ Discomfort ☐ Fatigue ☐ Musculoskeletal disorder ☐ Stress ☐ Any other (e.g.mechanical, electrical) as a consequence of human error	The position of control device need to be taken into account The access means need to be taken into account	Inherently safe machinery design	EN 280:2013+A1:2015 as reference,					OK

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
		☐ Visibility									
4.10	Hazards associated with environment in which the machine is used	☒ Dust and fog ☒ Electromagnetic disturbance ☒ Lighting ☐ Moisture ☒ Pollution ☒ Snow ☒ Temperature ☒ Water ☒ Wind ☐ Lack of oxygen	☐ Burn ☐ Slight disease ☒ Slipping, falling ☐ Suffocation ☒ Any other as a consequence of the effect caused by the sources of the hazards on the machine or parts of the machine	Working condition and EMC need to be considered	Inherently safe machinery design and construction and inform users of the residual risks: 1.2204/108/EEC addressed 2. Lighting for the control panel is provided and the lighting for access is indicated in the manual 3. Snow, wind loads are considered in the design and structural calculation 4. Ambient temperature is defined in the manual 5. All electric parts are protected by the enclosure with enough IP degree according to EN 280:2013+A1:2015	EN 280:2013+A1:2015 + MSD as reference,					OK
4.11	Combination of hazards	☐ E.g.repetitive activity + effort + high environmental temperature	☐ E.g. dehydration, loss of awareness, heat stroke	Not relevant	Not relevant	N/A					N/A
4.12	Energy loss ,breaking down hazards	☒ Failure of energy supply (incl. control circuits)	☐ Being thrown ☒ Cutting or	All risk related to unexpected starting or energy loss need to be taken into account	Inherently safe machinery design and construction, take necessary protection measures:	EN 280:2013+A1:2015 + EN 60204-1:2006+A1:2009 +					OK

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
		☒ Unexpected ejection of machine parts or fluid ☐ Errors of fitting	severing ☒ Drawing-in or trapping ☐ Entanglement ☒ Friction or abrasion ☒ Impact ☐ Injection ☒ Shearing ☒ Slipping, tripping and falling ☒ Stabbing or puncture ☐ Suffocation		1. Brakes and cut-off valves are designed to be engaged as soon as the power losses, preventing the lift from falling.	MSD as reference,					

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Risk Assessment according to AS1418.10 Appendix A	Manufacturer: Zhejiang Dingli Machinery Co., Ltd Machine: Mobile Elevated Work Platform Serial number: BT30RT, BT28RT, BT26SRT, BT26RT, BT24RT, BA28RT, BA24RT , BT22RT	author: Dingli date: 2021.1.2	Dingli

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
5 Cleaning											
5.1	Hazards associated with all tasks	☒ Adjustments ☐ Cleaning, disinfection ☐ Dismantling /removal of parts, components, devices of the machine ☐ Housekeeping ☒ Isolation end energy dissipation ☒ Lubrication ☒ Replacement of worn parts ☐ Resetting ☐ Restoring fluid levels ☐ Verification of parts, components, devices of the machine	☒ Crushing ☒ Cutting or severing ☒ Friction or abrasion ☒ Impact ☐ Injection ☒ Shearing ☒ Stabbing or puncture	Machine , components and accessories	Inherently safe machinery design and inform users of the residual risks: Refer to EN 280:2013+A1:2015 and manual	EN 280:2013+A1:2015 + MSD as reference,					OK

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
6 Process interferences, troubleshooting, fault clearance											
6.1	Hazards associated with all tasks	☒ Adjustments ☒ Dismantling /removal of parts, components, devices of the machine ☒ Faultfinding ☒ Isolation end energy dissipation ☒ Recovering from control and protective devices failure ☐ Recovering from jam ☒ Repairing ☒ Replacement of parts, components, devices of the machine ☒ Rescue of	☒ Crushing ☒ Cutting or severing ☐ Friction or abrasion ☒ Impact ☐ Injection ☒ Shearing ☒ Stabbing or puncture	Machine , components and accessories	Inherently safe machinery design and inform users of the residual risks: Refer to EN 280:2013+A1:2015 clause 5 and manual	EN 280:2013+A1:2015+ EN 60204 -1 + MSD as reference					OK

Copyright: TÜV SÜD Product Service GmbH

Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
		trapped persons ☒ Resetting ☒ Verification of parts, components, devices of the machine									
7 Maintenance											
7.1	Hazards associated with all tasks	☒ Adjustments ☐ Cleaning, disinfection ☒ Dismantling /removal of parts, components, devices of the machine ☐ Housekeeping ☒ Isolation end energy dissipation ☒ Lubrication ☒ Replacement of worn parts	☐ Crushing ☒ Cutting or severing ☐ Friction or abrasion ☒ Impact ☐ Injection ☒ Shearing ☒ Stabbing or puncture	Machine , components and accessories	Inherently safe machinery design and inform users of the residual risks: Refer to EN 280:2013+A1:2015 clause 7	EN 280:2013+A1:2015 as reference					OK

Copyright: TÜV SÜD Product Service GmbH

Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement
		☒ Resetting ☐ Restoring fluid levels ☒ Verification of parts, components, devices of the machine									
8 Placing out of operation, disassembling, waste disposal											
8.1	Hazards associated with all tasks	☒ Disconnection and energy dissipation ☒ Dismantling ☒ Lifting ☒ Loading ☒ Packing ☒ Transportation ☒ Unloading	☐ Crushing ☒ Cutting or severing ☐ Friction or abrasion ☒ Impact ☐ Injection ☒ Shearing ☒ Stabbing or puncture	Machine , components and accessories	Inherently safe machinery design and inform users of the residual risks: Refer to EN 280:2013+A1:2015	EN 280:2013+A1:2015 as reference					OK

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.

Risk Assessment according to AS1418.10 Appendix A	Manufacturer: Zhejiang Dingli Machinery Co., Ltd Machine: Mobile Elevated Work Platform Serial number: BT30RT, BT28RT, BT26SRT, BT26RT, BT24RT, BA28RT, BA24RT , BT22RT	author: Dingli date: 2021.1.2	Dingli

Identification of hazards				Risk evaluation			Risk estimation, EN 13849-1 or EN954 or type I/II/III				
Phase of life	Hazard group, type	Origin group, type	Potential consequences	occurrence or protection goal	Description of solution	Standards	S	F	P	pl	Statement

Copyright: TÜV SÜD Product Service GmbH
Gottlieb-Daimler-Straße
70794 Filderstadt
phone: +49 (0)711 7005-295; Fax: -587

This form was developed by TÜV SÜD Product Service GmbH. The user is responsible for the content.