



MATERIAL HANDLING

Ver.2.00





Contents

About TOKU Hoists	p3
ATEX Certification	p4-5
TCS Series	p6
TCR Series	p7-8
TMH Series	p9
TNC Series	p10
Manipulator Series	p11
TMTCR and TMTMH Series	p12
TAW Series	p13
External Dimension	p14-17
Chain Specification	p18
Product Specification Table	p19

About TOKU Hoists

Main features of TOKU pneumatic hoists

- High quality vane motor and planetary gear with long life grease
- Overload protection
- High strength cast steel housing for durability
- Failsafe automatic disc brake
- Emergency stop
- Mechanical end stop system
- Choice of cord or pendant control
- Various speed control
- Safe from hazard of electric explosion

Applications in various industries

- Offshore oil industry
- Assembly line
- Power plant
- Refinery
- Mechanical engineering
- Shipyard
- Foundry
- Mining
- Chemical industry
- Food industry

Model Classifying

TMH - 6000 P 2 E				
Model		Lifting Capacity		Controller
TCS	Extreme High speed operation model for 250kg~1000kg	250	250 kg	C Cord
TCR	Standard operation model	500	500 kg	P Pilot Pendant
TMH	High speed operation model for 3000kg~30000kg	1,000	990 or 1,000 kg (See p19)	DP Direct Pendant
TNC	Large capacity model	2,000	2,000 kg	M Manipulator
TMTCR/TMTMH	Trolley Hoist	3,000	3,000 kg	
		6,000	6,000 kg	
		10T	10,000 kg	
TMM	Manipulating operation model with wire	25T	25,000 kg	
		30T	30,000 kg	
TAW	Air winch	140A	140kg	

Chain falls	Emergency
2	E with Emergency stop button to stop in unexpected situation

ATEX Certification



ATEX Directive

ATEX is the abbreviation of the French words "ATmospheres EXplosibles" which is the name commonly given to the two European Directives used for controlling explosive atmospheres. The Aim of the directive 94/9/EC is to allow free trade of ATEX equipment within the EU, and some other parts of the World who have also adopted the ATEX directive.

- Directive 94/9/EC (ATEX 95) is for the manufacturers of equipments which are used in explosive atmospheres.
- Directive 99/92/EC (ATEX 137) is for the health and safety protection of workers and manufacturers of installations within a potentially explosive atmosphere.



TOKU Spark Resistant Hoists

Explosive atmospheres can be caused by flammable gases, mists or vapours, or by combustible dust. If there is enough of a substance mixed with air then all it needs is a source of ignition to cause an explosion. Preventing release of dangerous substances and controlling potential sources of ignition are two widely used ways of reducing risk.

TOKU hoists are for mechanical non electrical equipment which are capable of causing their own source of ignition. The TCS, TCR, TMH and TNC ranges of hoists are heavy duty units with a wide range of uses in a variety of industries. These ATEX certified hoists are built to stand up to different environments making them safe to use in explosive atmospheres.

Explosion Atmospheres

Gas groups	
Gases are divided into two groups:	
Group I: For mines susceptible to Methane	
Group II: For gases in locations other than mines, which are divided into three sub groups:	
IIA: For atmospheres containing propane or gases of an equivalent hazard	
IIB: For atmospheres containing ethylene or gases of an equivalent hazard	
IIC: For atmospheres containing hydrogen or gases of an equivalent hazard	
Equipment for Group II used in an explosive area is also classified by the gas group.	
Gas group of the explosive atmosphere	Equipment with the same or higher gas group marking can be used in the area
IIA	IIA,IIB,IIC
IIB	IIB,IIC
IIC	IIC

Explosion zone classification		
Category	(Formerly known as risk zone)	Description
1G	ZONE 0 (Gas/vapours)	An area in which an explosive mixture is continuously present or present for long periods.
2G	ZONE 1 (Gas/vapours)	An area in which an explosive mixture is likely to occur in normal operation.
3G	ZONE 2 (Gas/vapours)	An area in which an explosive mixture is not likely to occur in normal operation and if it occurs it will exist only for a short time.
1D	ZONE 20 (Dust)	An area in which an explosive mixture is continuously present or present for long periods.
2D	ZONE 21 (Dust)	An area in which an explosive mixture is likely to occur in normal operation.
3D	ZONE 22 (Dust)	An area in which an explosive mixture is not likely to occur in normal operation and if it occurs it will exist only for a short time.

ATEX Certification

ATEX marking

CE Ex II 2 GD IIA c T4 (135°C)							
CE-MARK permitted by the European Committee for the technical standardisation	IDENTIFICATION for protection against explosions	EQUIPMENT GROUP I - Mining application II - Non mining application	SAFETY CATEGORY 1 - Extremely high 2 - High 3 - Normal	EXPLOSIVE ATMOSPHERE G - Gas D - Dust	TYPICAL GAS IIA - (for example) propane IIB - (for example) ethylene IIC - (for example) acetylene	PROTECTION TYPE p = pressurised enclosure d = flame-proof enclosure e = increased safety nA = non-sparking I = intrinsic safety c = construction safety b = ignition source monitoring k = liquid immersion	TEMPERATURE CLASS T1 - max. 450°C* T2 - max. 300°C* T3 - max. 200°C* T4 - max. 135°C* T5 - max. 100°C* T6 - max. 85°C* *Max. Surface Temperature

Classification of combustible gases, vapours and mists Explosion groups and temperature classes of a selection of gases and vapours

EX Group	Temperature Classes					
	T1	T2	T3	T4	T5	T6
	Ignition temperature range of the mixture					
	450°C < T1	300°C < T2 ≤ 450°C	200°C < T3 ≤ 300°C	200°C < T2 ≤ 135°C	135°C < T2 ≤ 100°C	100°C < T2 ≤ 85°C
II A	Permissible max. surface temperature of the equipment					
	450°C	300°C	200°C	135°C	100°C	85°C
	Acetone	Ethanol	Petrol	Acetaldehyde		
	Ammonium	i- Amyl Acetate	Diesel fuels			
II B	Benzene	n-Butane	Aircraft fuels			
	Ethane	n-Butanol	Fuel oil DIN 51603			
	Ethyl Acetate	Cyclohexane	n-Hexane			
	Ethyl Chloride	Acetic Anhydride				
	Carbon Monoxide					
	Methane					
	Methanol					
	Methyl Chloride					
	Naphthalene					
	Phenol					
II C	Propane					
	Toluene					
II B	City Gas	Ethylene	Ethylene Glycol	Ethyl Ether		
		Ethylene Oxide	Hydrogen			
II C	Hydrogen	Acetylene				Carbon Disulphide

TCS Series

250-990 kg Capacity

Extreme High Speed Hoist



TCS-500PE

Main Features

- Extreme high speed
- Classification(ISO): M4
- Precise variable speed control
- ATEX specification:
 - II3 GD IIA T4 (Standard)
 - II2 GD IIB T4 (Option)
- Lubrication free vane(Option)
- Compact design
- Light weight aluminium housing
- Failsafe automatic internal disc brake
- Overtraveling limiter
- Alloy safety swivel hooks with safety catch



Cord



Pendant with
Emergency Stop Button



Chain Basket

Specifications

Model	Lifting Capacity	No.of Chain Falls	Lifting		Lowering		Weight W/O Chain	Min Hook Distance	Chain Dimension	Hose Size
			Speed	Air Cons	Speed	Air Cons				
TCS-250C	250 kg	1	34.0 m/min	1.7 m³/min	63.0 m/min	2.0 m³/min	17 kg	414 mm	6.3 X 19 mm	12.7 mm
TCS-250PE	250 kg	1	34.0 m/min	1.7 m³/min	63.0 m/min	2.0 m³/min	18 kg	414 mm	6.3 X 19 mm	12.7 mm
TCS-500C	490 kg	1	17.0 m/min	1.7 m³/min	34.0 m/min	2.0 m³/min	17 kg	414 mm	6.3 X 19 mm	12.7 mm
TCS-500PE	490 kg	1	17.0 m/min	1.7 m³/min	34.0 m/min	2.0 m³/min	18 kg	414 mm	6.3 X 19 mm	12.7 mm
TCS-1000C2	990 kg	2	8.5 m/min	1.7 m³/min	17.0 m/min	2.0 m³/min	20 kg	456 mm	6.3 X 19 mm	12.7 mm
TCS-1000P2E	990 kg	2	8.5 m/min	1.7 m³/min	17.0 m/min	2.0 m³/min	21 kg	456 mm	6.3 X 19 mm	12.7 mm

Operating air pressure is 0.6 MPa.

TCR Series

250 kg Capacity

Light and Compact Hoist



TCR-250DPE

Main Features

- Precise variable speed control
- Classification(ISO): M4
- Compact design
- Lightweight aluminium housing
- ATEX specification:
 - II2 GD IIA T4 (Standard)
 - II2 GD IIB T4 (Option)
 - II2 GD IIC T4 (Option)
- Failsafe automatic internal disc brake
- Overtraveling limiter
- Alloy safety swivel hooks with safety catch



Cord



Pendant with
Emergency Stop Button



Chain Basket

Specifications

Model	Lifting Capacity	No.of Chain Falls	Lifting		Lowering		Weight W/O Chain	Min Hook Distance	Chain Dimension	Hose Size
			Speed	Air Cons	Speed	Air Cons				
TCR-250C	250 kg	1	9.0 m/min	0.8 m³/min	17.4 m/min	0.9 m³/min	5.8 kg	305 mm	4 X 12 mm	9.5 mm
TCR-250DPE	250 kg	1	8.1 m/min	0.7 m³/min	16.5 m/min	0.8 m³/min	8.4 kg	305 mm	4 X 12 mm	9.5 mm

Operating air pressure is from 0.4 to 0.6 MPa.

TCR Series

500-2000 kg Capacity

All Rounder Type Hoist



TCR-1000C

Main Features

- Built-in load limiter without loss of headroom
- Precise variable speed control
- ATEX specification:
 - II2 GD IIA T4 (Standard)
 - II2 GD IIB T4 (Option)
 - II2 GD IIC T4 (Option)
- Compact design
- Failsafe automatic internal disc brake
- Durable cast iron housing
- Alloy safety swivel hooks with safety catch



Cord



Pendant with Emergency Stop Button



Chain Basket

Specifications

Model	Lifting Capacity	No. of Chain Falls	Lifting		Lowering		Weight W/O Chain	Min Hook Distance	Chain Dimension	Hose Size
			Speed	Air Cons	Speed	Air Cons				
TCR-500C	500 kg	1	10.0 m/min	1.4 m³/min	16.0 m/min	1.6 m³/min	27 kg	462 mm	6.3 X 19 mm	12.7 mm
TCR-500PE	500 kg	1	10.0 m/min	1.4 m³/min	16.0 m/min	1.6 m³/min	29 kg	462 mm	6.3 X 19 mm	12.7 mm
TCR-1000C2	1000 kg	2	5.0 m/min	1.4 m³/min	8.1 m/min	1.6 m³/min	28 kg	519 mm	6.3 X 19 mm	12.7 mm
TCR-1000P2E	1000 kg	2	5.0 m/min	1.4 m³/min	8.1 m/min	1.6 m³/min	30 kg	519 mm	6.3 X 19 mm	12.7 mm
TCR-1000C	1000 kg	1	5.8 m/min	1.4 m³/min	9.3 m/min	1.7 m³/min	29 kg	466 mm	7.1 X 21 mm	12.7 mm
TCR-1000PE	1000 kg	1	5.8 m/min	1.4 m³/min	9.3 m/min	1.7 m³/min	31 kg	466 mm	7.1 X 21 mm	12.7 mm
TCR-2000C2	2000 kg	2	2.9 m/min	1.4 m³/min	4.7 m/min	1.7 m³/min	31 kg	580 mm	7.1 X 21 mm	12.7 mm
TCR-2000P2E	2000 kg	2	2.9 m/min	1.4 m³/min	4.7 m/min	1.7 m³/min	33 kg	580 mm	7.1 X 21 mm	12.7 mm

Operating air pressure is from 0.4 to 0.6 MPa.

TMH Series

3000-30000 kg Capacity

New and Multi-Utility Hoist



TMH-3000PE

Main Features

- The fastest operation speed in each class(3t, 6t, 25t, 30t)
- Low head clearance
- Classification(ISO): M4
- Built-in load limiter without loss of headroom
- Precise variable speed control
- Usage with flexible operation air pressure: 0.4MPa~0.6MPa (except TMH-30T)
- ATEX specification:
 - II3 GD IIA T4 (Standard)
 - II2 GD IIB T4 (Option)
 - II2 GD IIC T4 (Option)
- Failsafe automatic internal disc brake
- Durable cast iron housing
- Alloy safety swivel hooks with safety catch



Cord



Pendant with Emergency Stop Button



Chain Basket

Specifications

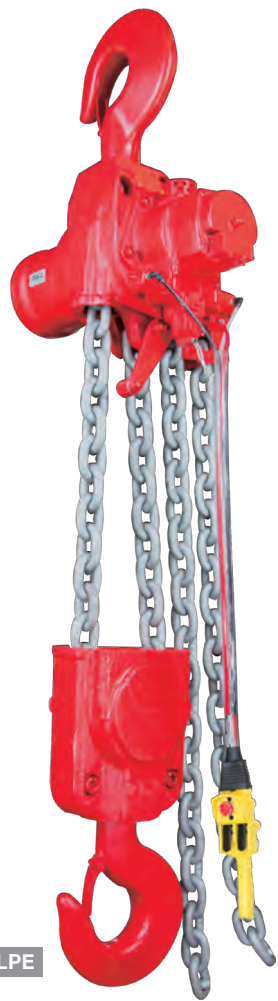
Model	Lifting Capacity	No. of Chain Falls	Lifting		Lowering		Weight W/O Chain	Min Hook Distance	Chain Dimension	Hose Size
			Speed	Air Cons	Speed	Air Cons				
TMH-3000C	3000 kg	1	5.4 m/min	3.5 m³/min	10.5 m/min	4.3 m³/min	86 kg	537 mm	13 X 36 mm	19 mm
TMH-3000PE	3000 kg	1	5.4 m/min	3.5 m³/min	10.5 m/min	4.3 m³/min	87 kg	537 mm	13 X 36 mm	19 mm
TMH-6000C2	6000 kg	2	2.7 m/min	3.5 m³/min	5.2 m/min	4.3 m³/min	104 kg	742 mm	13 X 36 mm	19 mm
TMH-6000P2E	6000 kg	2	2.7 m/min	3.5 m³/min	5.2 m/min	4.3 m³/min	105 kg	742 mm	13 X 36 mm	19 mm
TMH-25TC2	25000 kg	2	1.4 m/min	6.5 m³/min	3.0 m/min	10.8 m³/min	471 kg	1290 mm	23.5 X 66 mm	38.1 mm
TMH-25TP2E	25000 kg	2	1.4 m/min	6.5 m³/min	3.0 m/min	10.8 m³/min	473 kg	1290 mm	23.5 X 66 mm	38.1 mm
TMH-30TC2	30000 kg	2	1.0 m/min	6.5 m³/min	2.7 m/min	10.0 m³/min	471 kg	1290 mm	23.5 X 66 mm	38.1 mm
TMH-30TP2E	30000 kg	2	1.0 m/min	6.5 m³/min	2.7 m/min	10.0 m³/min	473 kg	1290 mm	23.5 X 66 mm	38.1 mm

Operating air pressure is from 0.4 to 0.6 MPa for THM-3000, 6000, 25T, and 0.5 to 0.6 MPa for TMH-30T

TNC Series

10000kg Capacity

Large Capacity Hoist



TNC-10TWALPE

Main Features

- Built-in load limiter without loss of headroom
- Precise variable speed control
- ATEX specification:
 - II3 GD IIA T4 (Standard)
 - II2 GD IIB T4 (Option)
 - II2 GD IIC T4 (Option)
- Failsafe automatic internal disc brake
- Durable cast iron housing
- Alloy safety swivel hooks with safety catch



Cord



Pendant with Emergency Stop Button

Specifications

Model	Lifting Capacity	No. of Chain Falls	Lifting		Lowering		Weight W/O Chain	Min Hook Distance	Chain Dimension	Hose Size
			Speed	Air Cons	Speed	Air Cons				
TNC-10TWALC	10000 kg	2	1.5 m/min	5.0 m ³ /min	2.3 m/min	6.0 m ³ /min	170 kg	890 mm	16 X 45 mm	25.4 mm
TNC-10TWALPE	10000 kg	2	1.5 m/min	5.0 m ³ /min	2.3 m/min	6.0 m ³ /min	175 kg	890 mm	16 X 45 mm	25.4 mm

TNC-10TWALC, TNC-10TWALPE will be replaced with TMH-10PC2 and TMH-10TP2E in the near future
Operating air pressure is from 0.4 to 0.6 MPa.

Manipulator Series

140kg and 250kg Capacity

Flexible Material Handling



TMM-140AE



TCR-250ME

Main Features

TMM-140AE / TCR-250ME

- Handle mounted pendant for one handed operation
- Precise variable speed control
- Left-handed operation by changing handle direction
- Failsafe automatic internal disc brake
- Durable cast iron housing (TMM-140AE) / Light weight aluminium housing (TCR-250ME)
- Alloy safety swivel hooks with safety catch

Specifications

Model	Lifting Capacity	No. of Chain Falls	Lifting		Lowering		Weight W/O Chain	Wire Diameter/ Chain Dimension	Hose Size
			Speed	Air Cons	Speed	Air Cons			
TMM-140ME	140 kg	1	11.0 m/min	0.63 m ³ /min	18.0 m/min	0.65 m ³ /min	10 kg	4 mm	9.5 mm
TCR-250ME	250 kg	1	8.0 m/min	0.7 m ³ /min	16.5 m/min	0.8 m ³ /min	10 kg	4 X 12 mm	9.5 mm

TMM-140ME is wire lifting machine. The number on specifications is wire diameter.
Operating air pressure is from 0.4 to 0.6 MPa.

TMTCR and TMTMH Series

500-6000 kg
Capacity

Trolley Hoist



TMTCR-2000P2E

Main Features

- Beam-size adjustable trolley
- 4 Button Pendant with emergency stop for hoist and trolley control
- ATEX specification:
II3 GD IIB T4 (Option)
- 2 flangeless wheel and 2 drive wheels for low friction
- Automatic brake function
- Durable cast iron housing



4 Button Pendant with Emergency Stop Button



Chain Basket

Specifications

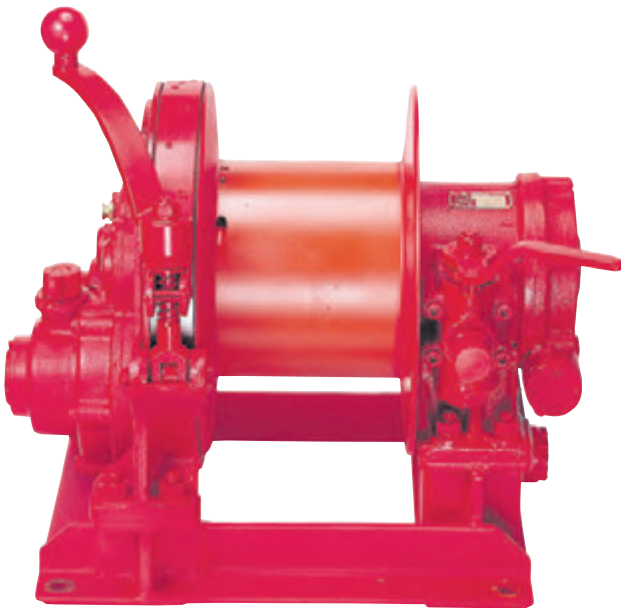
Model	Lifting Capacity	Trolley Model	Hoist Model	No. of Chain Falls	Lifting		Lowering		Weight W/O Chain	Chain Dimension	Traveling Speed	Apply Beam Size	Min. Radius of Beam	Hose Size
					Speed	Air Cons	Speed	Air Cons						
TMTCR-500PE	500 kg	TMTNC-1	TCR-500PE	1	10.5 m/min	1.5 m³/min	17.9 m/min	1.6 m³/min	82 kg	6.3 X 19 mm	20 m/min	75 mm	3500 mm	19 mm
												100 mm	800 mm	
												125 mm	800 mm	
TMTCR-1000P2E	1000 kg	TMTNC-1	TCR-1000P2E	2	5.3 m/min	1.5 m³/min	9.0 m/min	1.6 m³/min	87 kg	6.3 X 19 mm	20 m/min	75 mm	3500 mm	19 mm
												100 mm	800 mm	
												125 mm	800 mm	
TMTCR-1000PE	1000 kg	TMTNC-1	TCR-1000PE	1	6.0 m/min	1.5 m³/min	10.3 m/min	1.7 m³/min	86 kg	7.1 X 21 mm	20 m/min	75 mm	3500 mm	19 mm
												100 mm	800 mm	
												125 mm	800 mm	
TMTCR-2000P2E	2000 kg	TMTNC-3	TCR-2000P2E	2	3.0 m/min	1.5 m³/min	5.2 m/min	1.8 m³/min	105 kg	7.1 X 21 mm	20 m/min	100 mm	3500 mm	19 mm
												125 mm	800 mm	
												150 mm	800 mm	
TMTMH-3000PE	3000 kg	TMTNC-3	TMH-3000PE	1	5.4 m/min	3.5 m³/min	10.5 m/min	4.3 m³/min	167 kg	13 X 36 mm	20 m/min	100 mm	1300 mm	19 mm
												125 mm	800 mm	
												150 mm	800 mm	
TMTMH-6000P2E	6000 kg	TMTNC-6	TMH-6000P2E	2	2.7 m/min	3.5 m³/min	5.2 m/min	4.3 m³/min	223 kg	13 X 36 mm	20 m/min	100 mm	2000 mm	19 mm
												125 mm	2000 mm	
												150 mm	2000 mm	

Operating air pressure is from 0.4 to 0.6 MPa.

TAW Series

300 - 2000 kg
Pulling Capacity

Air Winch



TAW-500

Main Features

- Light weight and compact
- Quick engage clutch
- Dual brake system: failsafe brake and manual band brake
- Durable cast iron housing

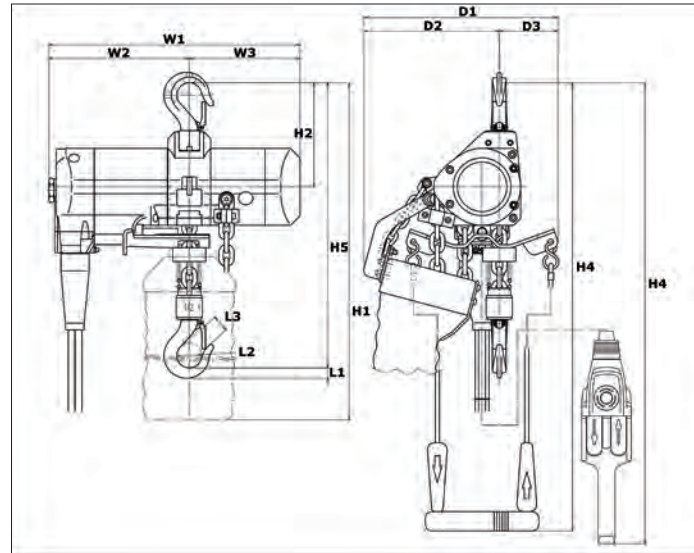
Specifications

Model	Lifting Capacity	Lifting Speed	Air Cons	Wire Rope Dimension	Weight W/O Rope	Hose Size	Mounting Bolts
TAW-300B	300 kg	27.0 m/min	3.4 m³/min	6 m X 37 m	42 kg	19 mm	M10 X 4
TAW-500	500 kg	20.0 m/min	3.4 m³/min	8 m X 61 m	75 kg	19 mm	M12 X 4
TAW-1000	1000 kg	11.5 m/min	3.9 m³/min	10 m X 91 m	90 kg	19 mm	M12 X 6
TAW-1500	1500 kg	8.5 m/min	4.1 m³/min	12 m X 60 m	90 kg	19 mm	M12 X 6
TAW-2000	2000 kg	5.7 m/min	4.9 m³/min	16 m X 45 m	130 kg	19 mm	M12 X 6

Operating air pressure is from 0.4 to 0.6 MPa.

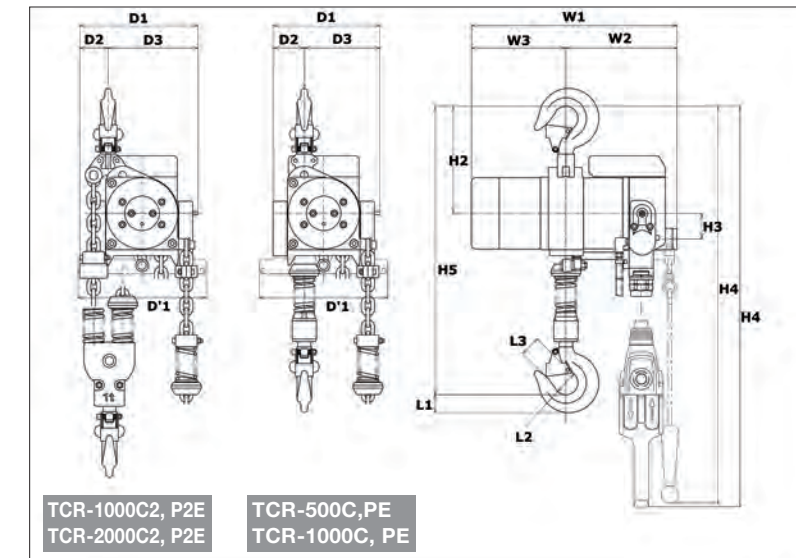
External Dimension

TCS Series 250-1000 kg Capacity



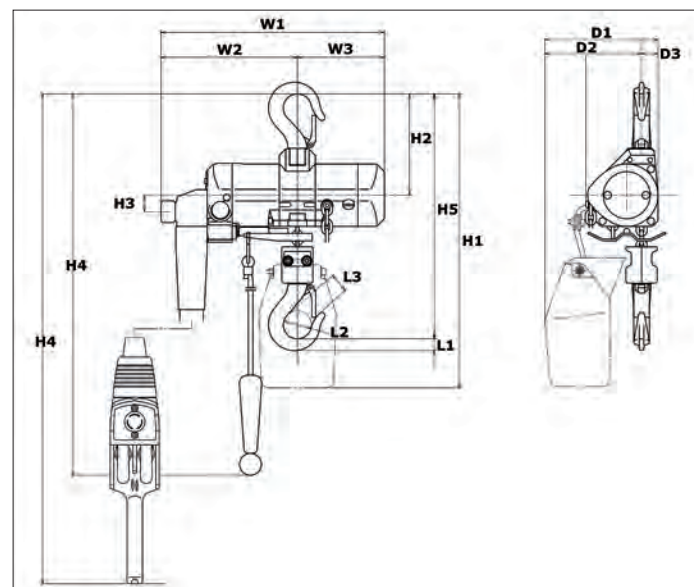
Model	W1	W2	W3	H1	H2	H4	H5	D1	D2	D3	L1	L2	L3
TCS-250C	365	204	161	555	151	1700	Min 414	282	197	85	15	36	25
TCS-250PE	365	204	161	555	151	2480	Min 414	282	197	85	15	36	25
TCS-500C	365	204	161	555	151	1700	Min 414	282	197	85	15	36	25
TCS-500PE	365	204	161	555	151	2480	Min 414	282	197	85	15	36	25
TCS-1000C2	365	204	161	577	173	1720	Min 456	291	221	70	29.5	40	29
TCS-1000P2E	365	204	161	577	173	2502	Min 456	291	221	70	29.5	40	29

TCR Series 500-2000 kg Capacity



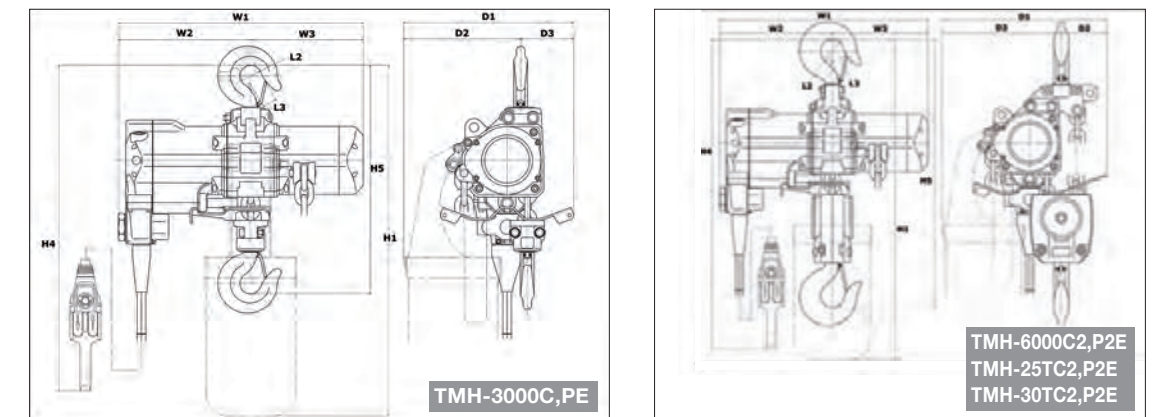
Model	W1	W2	W3	H2	H3	H4	H5	D1	D'1	D2	D3	L1	L2	L3
TCR-500C	342	186	156	177	42	1860	Min 462	149	212	52	124	29	40	29
TCR-500PE	342	186	156	177	42	2400	Min 462	149	-	52	124	29	40	29
TCR-1000C2	342	186	156	177	42	1860	Min 519	180	212	47	148	29	40	29
TCR-1000P2E	342	186	156	177	42	2400	Min 519	180	-	47	148	29	40	29
TCR-1000C	342	186	156	177	42	1860	Min 466	157	212	40	124	29	40	29
TCR-1000PE	366	210	156	177	47	2400	Min 466	157	-	40	124	29	40	29
TCR-2000C2	342	186	156	211	42	1860	Min 597	194	212	50	152	37	45	29
TCR-2000P2E	366	210	156	211	47	2400	Min 597	194	-	50	152	37	45	29

TCR Series 250 kg Capacity



Model	W1	W2	W3	H1	H2	H3	H4	H5	D1	D2	D3	L1	L2	L3
TCR-250C	247	135	112	375	130	-	1660	Min 305	145	124	21	15	36	25
TCR-250DPE	286	174	112	375	130	21	2414	Min 305	145	124	21	15	36	25

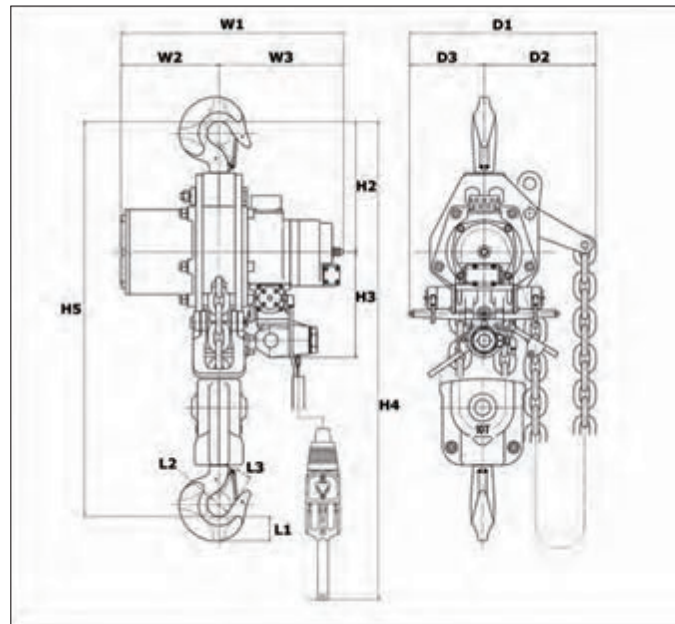
TMH Series 3000-30000 kg Capacity



Model	W1	W2	W3	H1	H4	H5	D1	D2	D3	L2	L3
TMH-3000C	576	311	265	823	1800	Min 537	400	275	125	50	34
TMH-3000PE	576	311	265	823	2690	Min 537	400	275	125	50	34
TMH-6000C2	576	311	265	885	1862	Min 742	458	331	127	65	42
TMH-6000P2E	576	311	265	885	2752	Min 742	458	331	127	65	42
TMH-25TC2	708	356	352	1473	2024	Min 1290	1028	805	223	100	71
TMH-25TP2E	708	356	352	1473	2980	Min 1290	1028	805	223	100	71
TMH-30TC2	708	356	352	1473	2024	Min 1290	1028	805	223	100	71
TMH-30TP2E	708	356	352	1473	2980	Min 1290	1028	805	223	100	71

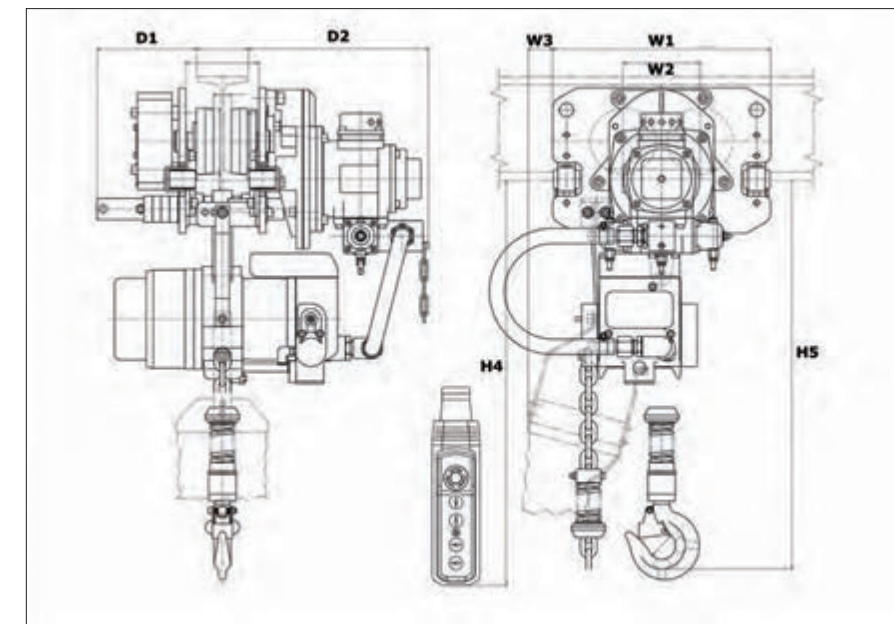
External Dimension

TNC Series 10000 kg Capacity



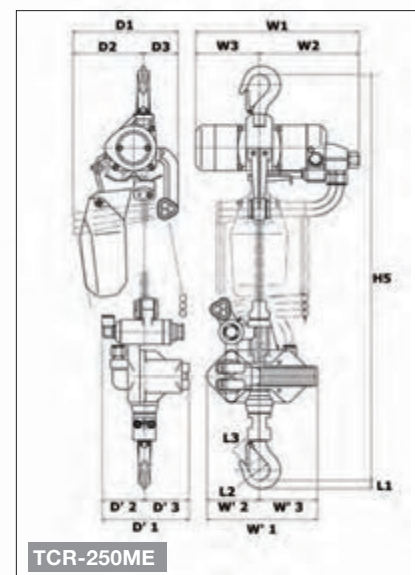
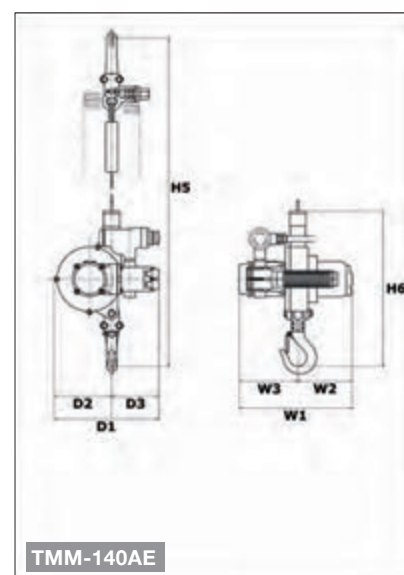
Model	W1	W2	W3	H2	H3	H4	H5	D1	D2	D3	L1	L2	L3
TNC-10TWALC	560	247	313	329	241	1500	Min 890	468	280	188	62	60	40
TNC-10TWALPE	560	247	313	329	263	2772	Min 890	468	280	188	62	60	40

TMTCR and TMTMH Series (Trolley only)



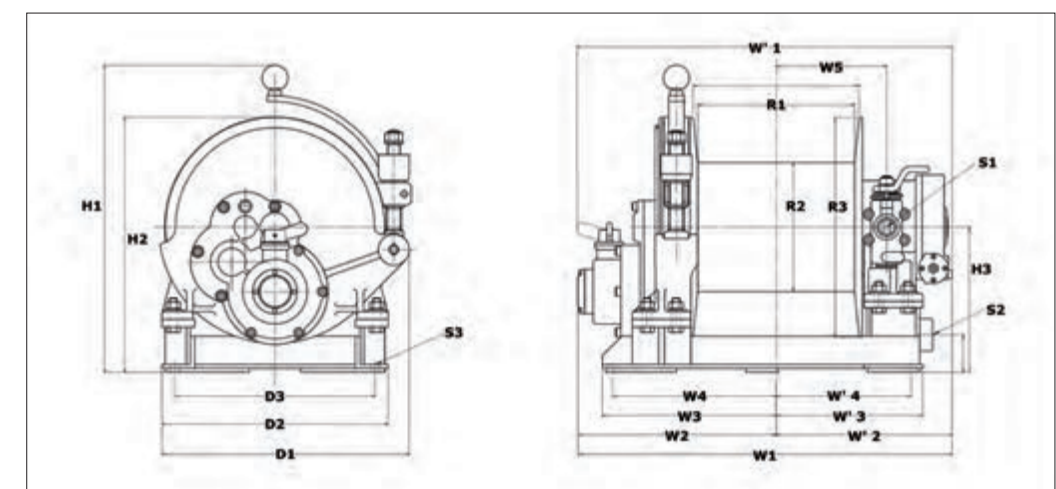
Model	W1	W2	W3	H4	H5	D1	D2	Beam Size
TMTCR-500PE	315	111.3	35	2240	Min 490	Max 144	261	See page12
TMTCR-1000P2E	315	111.3	59	2240	Min 547	Max 144	261	See page12
TMTCR-1000PE	315	111.3	35	2240	Min 496	Max 144	261	See page12
TMTCR-2000P2E	340	140	50	2240	Min 609	Max 163	266	See page12
TMTCR-3000PE	340	140	74	2240	Min 549	Max 163	266	See page12
TMTMH-6000P2E	400	156	87	2240	Min 706	Max 208	276	See page12

Manipulator Series 140 kg and 250 kg



Model	W1	W2	W3	W'1	W'2	W'3	H5	H6	D1	D2	D3	D'1	D'2	D'3	L1	L2	L3
TMM-140AE	224	108	116	-	-	-	Min 573	308	208	114	94	-	-	-	15	36	25
TCR-250ME	286	174.5	111.5	194	92	102	Min 837	-	184	123	61	152	74	78	15	36	25

TAW Series



Model	W1	W'1	W2	W'2	W3	W'3	W4	W'4	W5	H1	H2	H3	D1	D2	D3	R1	R2	R'2	S1	S2	F1
TAW-300B	396.5	-	198	198.5	101.5	117.5	87	103	97.5	395	279	160	293	282	260	102	162	238	3/4	1-1/4	4-Φ11
TAW-500	480	481	255	225	220	180	200	160	125	468	379	225	366	350	310	150	180	306	3/4	1-1/4	4-Φ14
TAW-1000	579	580	307	272	269	227	253	209	171	496	398	225	383	350	310	243	200	340	3/4	1-1/4	6-Φ14
TAW-1500	579	580	307	272	269	227	253	209	171	496	398	225	383	350	310	243	200	340	3/4	1-1/4	6-Φ14
TAW-2000	579	580	306.5	272.5	269	226	249.5	206.5	171.5	606	517	287	507	460	420	236	300	460	3/4	1-1/4	6-Φ14

Chain Specification

Model	No.of Chain Falls	Chain Length (3m lift)	3m Chain Weight (3m lift)	Chain Weight (per/m)	Chain Basket (Plastic)	Chain Basket (Fabric)	Chain Basket (Steel)
TCS-250C/PE	1	3.5 m	3.1 kg	0.88 kg	·	3~35 m	·
TCS-500C/PE	1	3.5 m	3.1 kg	0.88 kg	·	3~35 m	·
TCS-1000C2/P2E	2	7.0 m	6.2 kg	0.88 kg	·	3~17 m	·
TCR-250C/DPE	1	3.3 m	1.2 kg	0.35 kg	3~4 m	5~15 m	·
TCR-250ME	1	3.8 m	1.0 kg	0.35 kg	2 m	·	·
TCR-500C/PE	1	3.5 m	3.1 kg	0.88 kg	·	3~15 m	16~40 m
TCR-1000C2/P2E	2	7.0 m	6.2 kg	0.88 kg	·	3~7 m	8~20 m
TCR-1000C/PE	1	3.5 m	3.9 kg	1.1 kg	·	3~12 m	15~40 m
TCR-2000C2/P2E	2	7.0 m	7.7 kg	1.1 kg	·	3~6 m	7~20 m
TNC-10TWALC/WALPE	2	8.0 m	45.6 kg	5.7 kg	·	·	3~36 m
TMH-3000C/PE	1	3.8 m	14.4 kg	3.8 kg	·	·	3~36 m
TMH-6000C2/PE2	2	7.3 m	27.0 kg	3.8 kg	·	·	3~18 m
TMH-25TC2/P2E	2	9.0 m	109.8 kg	12.2 kg	·	·	
TMH-30TC2/P2E	2	9.0 m	109.8 kg	12.2 kg	·	·	

Product Specification Table

Model		Lifting Capacity	No.of Chain Falls	Lifting		Operation Air Pressure	Lowering		Weight W/O Chain	Min Hook Distance	Chain(Wire) Dimension	Hose Size
				Speed	Air Cons		Speed	Air Cons				
TCS	TCS-250C	250 kg	1	34.0 m/min	1.7 m³/min	0.6 MPa	63.0 m/min	2.0 m³/min	17 kg	414 mm	6.3 X 19 mm	12.7 mm
	TCS-250PE	250 kg	1	34.0 m/min	1.7 m³/min	0.6 MPa	63.0 m/min	2.0 m³/min	18 kg	414 mm	6.3 X 19 mm	12.7 mm
	TCS-500C	490 kg	1	17.0 m/min	1.7 m³/min	0.6 MPa	34.0 m/min	2.0 m³/min	17 kg	414 mm	6.3 X 19 mm	12.7 mm
	TCS-500PE	490 kg	1	17.0 m/min	1.7 m³/min	0.6 MPa	34.0 m/min	2.0 m³/min	18 kg	414 mm	6.3 X 19 mm	12.7 mm
	TCS-1000C2	990 kg	2	8.5 m/min	1.7 m³/min	0.6 MPa	17.0 m/min	2.0 m³/min	20 kg	456 mm	6.3 X 19 mm	12.7 mm
	TCS-1000P2E	990 kg	2	8.5 m/min	1.7 m³/min	0.6 MPa	17.0 m/min	2.0 m³/min	21 kg	456 mm	6.3 X 19 mm	12.7 mm
TCR	TCR-250C	250 kg	1	9.0 m/min	0.8 m³/min	0.4-0.6 Mpa	17.4 m/min	0.9 m³/min	5.8 kg	305 mm	4 X 12 mm	9.5 mm
	TCR-250DPE	250 kg	1	8.1 m/min	0.7 m³/min	0.4-0.6 Mpa	16.5 m/min	0.8 m³/min	8.4 kg	305 mm	4 X 12 mm	9.5 mm
	TCR-500C	500 kg	1	10.0 m/min	1.4 m³/min	0.4-0.6 Mpa	16.0 m/min	1.6 m³/min	27 kg	462 mm	6.3 X 19 mm	12.7 mm
	TCR-500PE	500 kg	1	10.0 m/min	1.4 m³/min	0.4-0.6 Mpa	16.0 m/min	1.6 m³/min	29 kg	462 mm	6.3 X 19 mm	12.7 mm
	TCR-1000C2	1000 kg	2	5.0 m/min	1.4 m³/min	0.4-0.6 Mpa	8.1 m/min	1.6 m³/min	28 kg	519 mm	6.3 X 19 mm	12.7 mm
	TCR-1000P2E	1000 kg	2	5.0 m/min	1.4 m³/min	0.4-0.6 Mpa	8.1 m/min	1.6 m³/min	30 kg	519 mm	6.3 X 19 mm	12.7 mm
	TCR-1000C	1000 kg	1	5.8 m/min	1.4 m³/min	0.4-0.6 Mpa	9.3 m/min	1.7 m³/min	29 kg	466 mm	7.1 X 21 mm	12.7 mm
	TCR-1000PE	1000 kg	1	5.8 m/min	1.4 m³/min	0.4-0.6 Mpa	9.3 m/min	1.7 m³/min	31 kg	466 mm	7.1 X 21 mm	12.7 mm
	TCR-2000C2	2000 kg	2	2.9 m/min	1.4 m³/min	0.4-0.6 Mpa	4.7 m/min	1.7 m³/min	31 kg	580 mm	7.1 X 21 mm	12.7 mm
	TCR-2000P2E	2000 kg	2	2.9 m/min	1.4 m³/min	0.4-0.6 Mpa	4.7 m/min	1.7 m³/min	33 kg	580 mm	7.1 X 21 mm	12.7 mm
TMH	TMH-3000C	3000 kg	1	5.4 m/min	3.5 m³/min	0.4-0.6 MPa	10.5 m/min	4.3 m³/min	86 kg	537 mm	13 X 36 mm	19 mm
	TMH-3000PE	3000 kg	1	5.4 m/min	3.5 m³/min	0.4-0.6 MPa	10.5 m/min	4.3 m³/min	87 kg	537 mm	13 X 36 mm	19 mm
	TMH-6000C2	6000 kg	2	2.7 m/min	3.5 m³/min	0.4-0.6 MPa	5.2 m/min	4.3 m³/min	104 kg	742 mm	13 X 36 mm	19 mm
	TMH-6000P2E	6000 kg	2	2.7 m/min	3.5 m³/min	0.4-0.6 MPa	5.2 m/min	4.3 m³/min	105 kg	742 mm	13 X 36 mm	19 mm
	TMH-25TC2	25000 kg	2	1.4 m/min	6.5 m³/min	0.4-0.6 MPa	3.0 m/min	10.8 m³/min	471 kg	1290 mm	23.5 X 66 mm	38.1 mm
	TMH-25TP2E	25000 kg	2	1.4 m/min	6.5 m³/min	0.4-0.6 MPa	3.0 m/min	10.8 m³/min	473 kg	1290 mm	23.5 X 66 mm	38.1 mm
	TMH-30TC2	30000 kg	2	1.0 m/min	6.5 m³/min	0.5-0.6 MPa	2.7 m/min	10.0 m³/min	471 kg	1290 mm	23.5 X 66 mm	38.1 mm
	TMH-30TP2E	30000 kg	2	1.0 m/min	6.5 m³/min	0.5-0.6 MPa	2.7 m/min	10.0 m³/min	473 kg	1290 mm	23.5 X 66 mm	38.1 mm
TNC	TNC-10TWALC	10000 kg	2	1.5 m/min	5.0 m³/min	0.4-0.6 MPa	2.3 m/min	6.0 m³/min	170 kg	890 mm	16 X 45 mm	25.4 mm
	TNC-10TWALPE	10000 kg	2	1.5 m/min	5.0 m³/min	0.4-0.6 MPa	2.3 m/min	6.0 m³/min	175 kg	890 mm	16 X 45 mm	25.4 mm
TMTCR / TMTMH	TMTCR-500PE	500 kg	1	10.5 m/min	1.5 m³/min	0.4-0.6 MPa	17.9 m/min	1.6 m³/min	82 kg	490 mm	6.3 X 19 mm	19 mm
	TMTCR-1000P2E	1000 kg	2	5.3 m/min	1.5 m³/min	0.4-0.6 MPa	9.0 m/min	1.6 m³/min	87 kg	547 mm	6.3 X 19 mm	19 mm
	TMTCR-1000PE	1000 kg	1	6.0 m/min	1.5 m³/min	0.4-0.6 MPa	10.3 m/min	1.7 m³/min	86 kg	496 mm	7.1 X 21 mm	19 mm
	TMTCR-2000P2E	2000 kg	2	3.0 m/min	1.5 m³/min	0.4-0.6 MPa	5.2 m/min	1.8 m³/min	105 kg	609 mm	7.1 X 21 mm	19 mm
	TMTMH-3000PE	3000 kg	1	5.4 m/min	3.5 m³/min	0.4-0.6 MPa	10.5 m/min	4.3 m³/min	167 kg	549 mm	13 X 36 mm	19 mm
	TMTMH-6000P2E	6000 kg	2	2.7 m/min	3.5 m³/min	0.4-0.6 MPa	5.2 m/min	4.3 m³/min	223 kg	706 mm	13 X 36 mm	19 mm
TCR / TMM	TMM-140ME	140 kg	1	11.0 m/min	0.63 m³/min	0.4-0.6 MPa	18.0 m/min	0.65 m³/min	10 kg	573 mm	4 mm	9.5 mm
	TCR-250ME	250 kg	1	8.0 m/min	0.7 m³/min	0.4-0.6 MPa	16.5 m/min	0.8 m³/min	10 kg	837 mm	4 X 12 mm	9.5 mm

Model		Lifting Capacity	Lifting		Operation Air Pressure	Wire Rope Dimension	Weight W/O Rope	Hose Size	Mounting Bolts
			Speed	Air Cons					
TAW	TAW-300B	300 kg	27.0 m/min	3.4 m³/min	0.4-0.6 MPa	6 m X 37 m	42 kg	19 mm	M10 X 4
	TAW-500	500 kg	20.0 m/min	3.4 m³/min	0.4-0.6 MPa	8 m X 61 m	75 kg	19 mm	M12 X 4
	TAW-1000	1000 kg	11.5 m/min	3.9 m³/min	0.4-0.6 MPa	10 m X 91 m	90 kg	19 mm	M12 X 6
	TAW-1500	1500 kg	8.5 m/min	4.1 m³/min	0.4-0.6 MPa	12 m X 60 m	90 kg	19 mm	M12 X 6
	TAW-2000	2000 kg	5.7 m/min	4.9 m³/min	0.4-0.6 MPa	16 m X 45 m	130 kg	19 mm	M12 X 6



Main Plant



Kamimine Plant



Kishima Plant



Hirokawa Plant



Kiyama Plant



Yamada Plant

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