BULLETIN NO. AHGE1609-02

KITO

Achieving Smooth Speed Control

KITO AIR HOISTS

TCS series|250kg-980kg

Ultra High Speed Operation!

Makes improved work efficiency and stress-free ultra high speed operation possible.
Enables separate adjustment of the lifting and the lowering speed ranges.

Lifting or lowering all at once!
Ultra high speed operation reduces wasted time!

KITO Air Hoists provides a selection of the operation speeds, allowing variations in work efficiency.

KITO Air Hoists reduce the burden for operators and supports improved work efficiency.
A wide lineup is available, from models offering smooth low speed operation to models with stress-free high speed operation.
There are also outstandingly portable, compact and light weight models as well as large-capacity models for handling heavy loads.
As a comprehensive material-handling equipment manufacturer, KITO enables the building of total crane systems*1 that match customers' requests and the conditions at sites.

*1: Light cranes and manual trolleys are available.

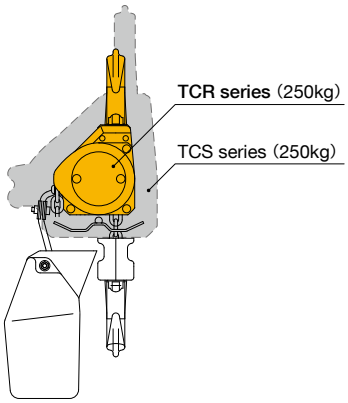
TCR series 250kg

Ultra Low Speed Operation!

Controls delicate movements via levers that adjust the speed.
Enables ultra low speed operation convenient for matching positions.

Speed adjustment is directly carried out by using the pendant valves.
Ultra low speed is possible with this intuitive operation!

The TCR series (250kg)
is super-compact in size and ultra light in weight!



KITO AIR HOIST

CONTENTS

KITO Air Hoists: List of Models

Model			Capacity (t)					
			250kg	490kg	980kg	2	10	25
Hook suspended type (Single unit)	TCS	High speed, compact size, light weight	●	●	●			
	TCR	Low and medium speeds, compact size, light weight	●	●	●	●		
	TNC	Large capacity					●	●
Air-motor trolley combination type	TCRM	Air-motor trolley		●				

* The TCRM hoist main unit is a TCR model.

Standard Specifications

Used air pressure	0.4MPa to 0.6MPa (Recommended pressure: 0.6MPa)
Ambient temperature	-10 to 60ºC
Usage humidity	85% RH or less
Usage environment	Indoors
Color	KITO Yellow (Equivalent to Munsell 7.2YR6.5/14.5)
Operation method	Cord, pendant, or hand lever

* 1MPa=10bar=145psi

Safety and Durability

Ultra-strong nickel-plated load chain
(Except for the TNC series)

Uses KITO's original world-renowned chains!

- Special alloy steel quenched chains offer high quality in all aspects of strength, durability, and precision.

Overload limiter
(TCR series 490kg-5t, TNC series, TCRM series)

Prevents accidents when there is abnormal loading!

- This prevents the hoist main unit and the load chain from damage due to abnormal loading, such as overloading and ground lifting. When shipped from the factory, the hoist is set to operate within 125% of the load capacity under the used air pressure of 0.6MPa.

Anti-overwinding device
(All models)

Protects the hoist main unit!

- This protects the hoist main unit and the load chain from damage caused by overwinding.

Pendant with emergency stop button
(Standard for the TNC series, and available as an optional order for other models)

Immediately stops the hoist in abnormal operation!

- This protects operators as well as the hoist main unit.

Environment-friendly
(All models)

Friendly to the environment and to people!

- No usage of the 15 substances regulated by KITO as environmentally hazardous, including the 6 substances covered by the European Union RoHS Directive.

Features

1	The small motor makes the hoist compact and light weight.	4	The possibility of catching fire is low because the motor is powered by air, not electricity.
2	Fine adjustment of the lifting and lowering speeds is easy using the operating valves. (Variable speed changes)	5	There is no need for adjusting the hoist to the local power voltage and frequency because no electricity is used.
3	The air motor is free from burnouts and can be used frequently.	6	A wide variety of capacities are available, from 250kg up to 25t.

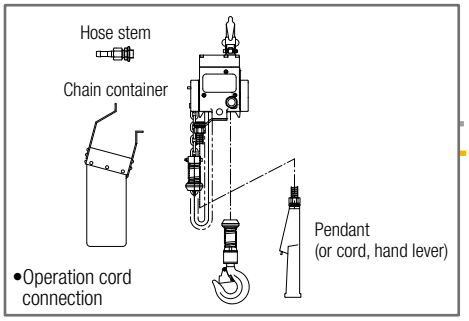
Configuration

KITO offers a full lineup of unique supplied system structures as shown below.
This enables customers to make more economical purchases of usage forms that best matches their requirements.

Air hoist single unit packing

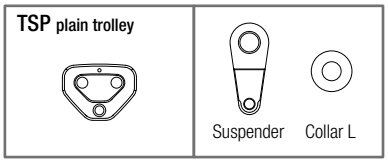
Usage form

TCS TCR

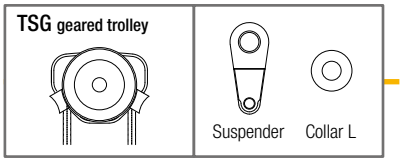


- Air supply hose and the hose band are not included. Please prepare them separately.
- Combination with standard geared trolleys is not possible. Please consult us when ordering a geared trolley combination.
- Dedicated suspender is required when combining with KITO's genuine traversing trolleys or light cranes. Depending on the model, the collar L is also necessary.

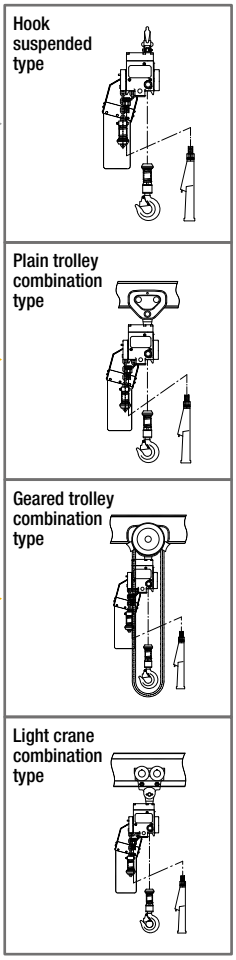
Trolley packing / **Suspender packing**



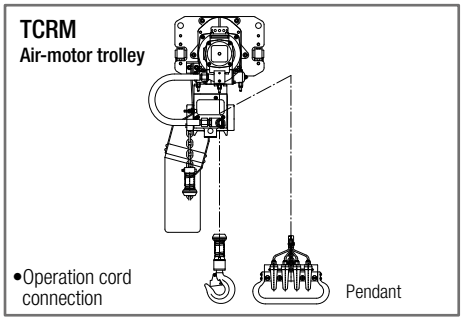
Trolley packing / **Suspender packing**



- Collar L is not necessary when combining with light cranes and with trolleys that are rated at 2t or greater.

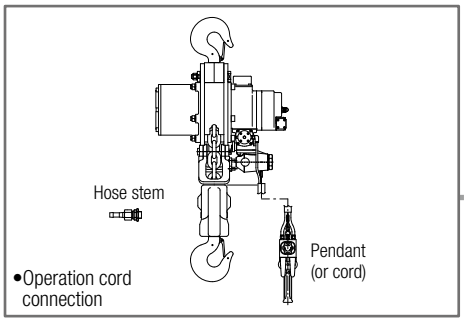


TCRM

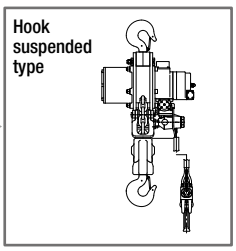


- Air supply hose and the hose band are not included. Please prepare them separately.

TNC



- Air supply hose and the hose band are not included. Please prepare them separately.



How to Read the Code

T	C	S	H	0	4	C	S

Model
TCS
TCR
TNC

Combination
H= Hook suspended type
M= Air-motor trolley combination type

Capacity
03= 250kg
04= 490kg
09= 980kg
20= 2t
1Q= 10t
2P= 25t

Operation method
Cord= C
Pendant= P
Hand lever= M (TCRH03MS)

No. of load chain falls
Single= S
Double= D

KITO Air Hoists: Usage Forms

Series	Capacity (t)	Code	Operation method	Usage form				
				Hook suspended type	Air-motor trolley combination type	Geared trolley combination type	Plain trolley combination type	Light crane combination type
TCS	250kg	TCSH03CS	Cord	●	–	–	●	●
		TCSH03PS	Pendant	●	–	–	●	●
	490kg	TCSH04CS	Cord	●	–	–	●	●
		TCSH04PS	Pendant	●	–	–	●	●
	980kg	TCSH09CD	Cord	●	–	–	●	●
		TCSH09PD	Pendant	●	–	–	●	●
TCR	250kg	TCRH03CS	Cord	●	–	–	●	●
		TCRH03PS	Pendant	●	–	–	●	●
		TCRH03MS	Hand lever	●	–	–	●	●
	490kg	TCRH04CS	Cord	●	–	●	●	●
		TCRH04PS	Pendant	●	–	●	●	●
	980kg	TCRH09CD	Cord	●	–	●	●	●
		TCRH09PD	Pendant	●	–	●	●	●
		TCRH09CS	Cord	●	–	●	●	●
		TCRH09PS	Pendant	●	–	●	●	●
	2	TCRH20CD	Cord	●	–	●	●	–
		TCRH20PD	Pendant	●	–	●	●	–
TNC	10	TNCH1QCD	Cord	●	–	–	–	–
		TNCH1QPD	Pendant	●	–	–	–	–
	25	TNCH2PCD	Cord	●	–	–	–	–
		TNCH2PPD	Pendant	●	–	–	–	–
TCRM	490kg	TCRM04PS	Pendant	–	●	–	–	–

●: Setting required ●: Setting required (The suspender and collar L are required) ●: Setting required (The suspender is required)
▲: Custom made (designed to order) –: Setting not required

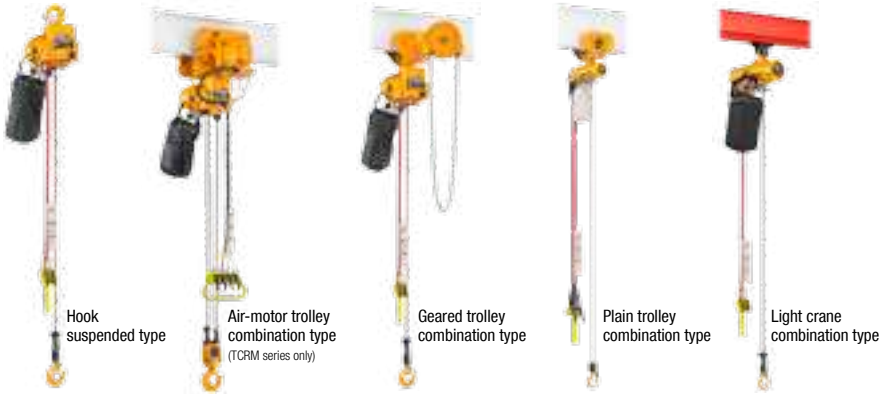
Standard Container Application Table

Container applicable range			
~4m	4.1~6m	6.1~7m	7.1~8m
(~2m)			

Standard Containers

Made from canvas　Made from plastic

Made from plastic
Made from canvas
Special order support
(Due to the special order manufacturing, the container will be set to match the lift of the hoist.)
Not supported



Hook suspended type
Air-motor trolley combination type (TCRM series only)
Geared trolley combination type
Plain trolley combination type
Light crane combination type

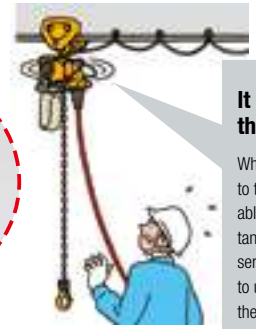
Operation Method

Cord　Pendant　Hand lever (TCRH003MS only)

When Used with a Trolley

Light crane combination type
Plain trolley combination type
Geared trolley combination type

Suspender



It is dangerous to attach the top hook directly!

When the top hook is directly attached to the trolley, the hoist body will be able to rotate freely thus possibly tangling the hose. This can result in a serious accident. Always make sure to use the suspender when combining the air hoist with any kind of trolley.

TCS series 250kg-980kg

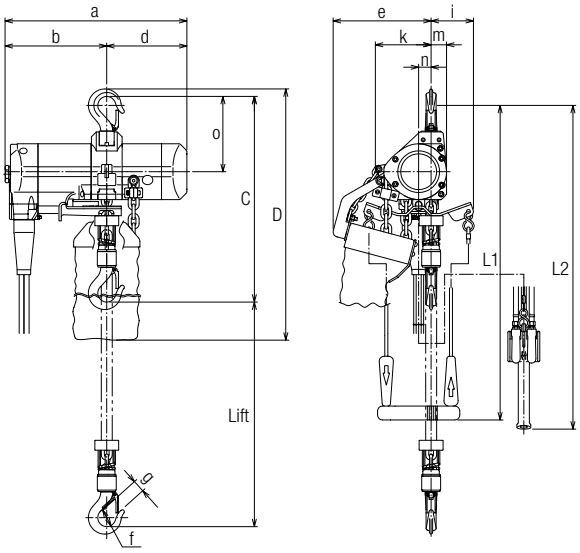
Ultra High Speed, Compact Size, and Light Weight

Main application fields

Shipyards	Various types of power generating stations	Automobile factories	Ironworks	Steelworks	Petrochemical plants	Gas chemical plants	Coal mines	Mines
Civil engineering works	Aircraft maintenance	Marine resource development	Ship outfitting	Rubber factories	Coating plants	Textile mills	Foundries	Other

Please consult with KITO when hoists are to be used in special environments.

- Achieves ultra high speed operation*1.
  *1: The lifting speed is 63m/min in the TCS series 250kg when unloaded.
- The speed can be adjusted according to how strongly the valves are pressed, allowing intuitive operation.
- The range of the lifting and lowering speeds can be adjusted separately.
- The compact size and light weight features make transportation and transfer easy.
- Anti-overwinding device is incorporated as standard.
- KITO's original ultra-high strength, rust-resistant nickel-plated chain is incorporated as standard.



TCSH04CS

TCSH04PS

Emergency stop button included
(for optional special order manufacture)

TCS specifications

Capacity (kg)	Code	Operation method	Standard lift (m)	Cord length: L1 (m)	Pendant hose length: L2 (m)	During rated loading		When unloaded		Air consumption (m^3/min)	Load chain diameter (mm) x No. of falls	Test load (t)	Air inlet	Net weight (kg)	Net weight for additional 1m of lift (kg)
						Lifting speed (m/min)	Lowering speed (m/min)	Lifting speed (m/min)	Lowering speed (m/min)						
250	TCSH03CS	Cord	3	1.7	-	34.0	63.0	63.0	38.0	2.1	ø6.3×1	313kg	Rc1/2	20	0.88
	TCSH03PS	Pendant		-	2.5									21	1.12
490	TCSH04CS	Cord		1.7	-	17.0	34.0	33.0	19.0			625kg		20	0.88
	TCSH04PS	Pendant		-	2.5									21	1.12
980	TCSH09CD	Cord		1.7	-	8.5	17.0	16.5	9.5		ø6.3×2	1.23		26	1.76
	TCSH09PD	Pendant		-	2.5									27	2

•Each performance value is the numerical value when the used air pressure is 0.6MPa. •The net weight is the value for the standard lift. •The air consumption is the maximum value during use.

TCS dimensions (mm)

Capacity (kg)	Code	Headroom: C	D	a	b	d	e	f	g	i	k	m	n	o
250	TCSH03CS	414	555	365	204	161	197	36	25	85	112	31	25	151
	TCSH03PS									56				
490	TCSH04CS									85				
	TCSH04PS									56				
980	TCSH09CD	456	577				221	40	29	70	136	37	49	173
	TCSH09PD													

•The D dimension is the value for the standard lift. •The values described above are the nominal dimensions.

TCR series 250kg-2t

Ultra Low Speed, Low and Medium Speeds, Compact Size, and Light Weight

Main application fields

Shipyards	Various types of power generating stations	Automobile factories	Ironworks	Steelworks	Petrochemical plants	Gas chemical plants	Coal mines	Mines
Civil engineering works	Aircraft maintenance	Marine resource development	Ship outfitting	Rubber factories	Coating plants	Textile mills	Foundries	Other

Please consult with KITO when hoists are to be used in special environments.

- The compact size and light weight features make the hoist outstandingly portable.
- The speed can be adjusted according to how strongly the valves are pressed, allowing intuitive operation.
- Ultra low speed operation is possible, convenient for matching positions. (250kg)
- Anti-overwinding device is incorporated as standard.
- KITO's original ultra-high strength, rust-resistant nickel-plated chain is incorporated as standard.
- An overloading limiter device is incorporated to automatically stop the lifting when overloading is detected. (490kg to 5t)

TCRH03CS

TCRH03PS

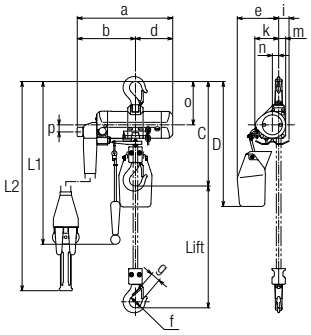
Emergency stop button included
(for optional special order manufacture)

TCRH03MS

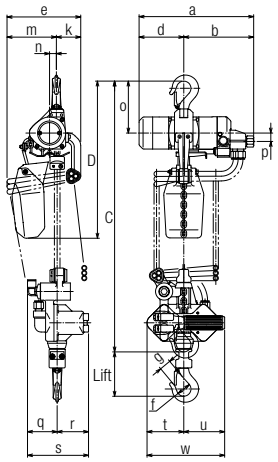
Emergency stop button included
(for optional special order manufacture)

TCRH09PS

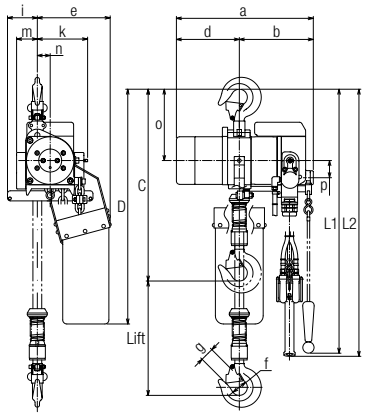
Emergency stop button included
(for optional special order manufacture)



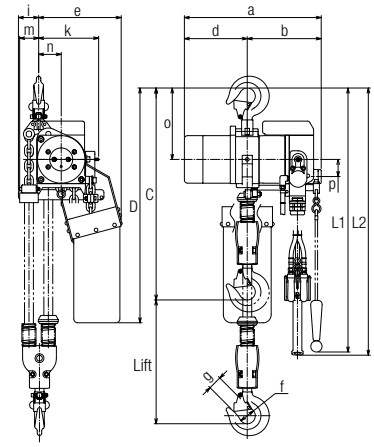
TCR03CS/PS



TCRH03MS



TCRH04 CS/PS
TCRH09 CS/PS



TCRH09 CD/PD
TCRH20 CD/PD

TCR specifications

Capacity (t)	Code	Operation method	Standard lift (m)	Cord length: L1 (m)	Pendant hose length: L2 (m)	During rated loading		When unloaded		Air consumption (m^3/min)	Load chain diameter (mm) x No. of falls	Test load (t)	Air inlet	Net weight (kg)	Net weight for additional 1m of lift (kg)
						Lifting speed (m/min)	Lowering speed (m/min)	Lifting speed (m/min)	Lowering speed (m/min)						
250kg	TCRH03CS	Cord	3	1.7	-	9.0	17.4	18.6	13.8	1	ø4.0×1	313kg	Rc3/8	7	0.35
	TCRH03PS	Pendant		-	2.2	8.1	16.5	16.7	12.4	0.9				8.6	0.76
	TCRH03MS	Hand lever	2		-	8.0								11	-
490kg	TCRH04CS	Cord		1.9		10.0	16.0	19.0	13.0		ø6.3×1	625kg		30	0.88
	TCRH04PS	Pendant		-	2.4									31	1.12
980kg	TCRH09CD	Cord		1.9	-	5.0	8.1	9.6	6.4	1.7	ø6.3×2	1.23	Rc1/2	34.5	1.76
	TCRH09PD	Pendant	3	-	2.4									35.5	2
	TCRH09CS	Cord		1.9	-	5.8	9.3	10.5	6.5		ø7.1×1			33	1.1
	TCRH09PS	Pendant		-	2.4									34	1.34
2	TCRH20CD	Cord		1.9	-	2.9	4.7	5.3	3.2		ø7.1×2	2.5		39	2.2
	TCRH20PD	Pendant		-	2.4									40	2.44

•Each performance value is the numerical value when the used air pressure is 0.6MPa. •The net weight is the value for the standard lift. •The air consumption is the maximum value during use.
•The L2 dimension will be 2.3m when the TCRH03PS with emergency stop button is selected.

TCR dimensions (mm)

Capacity (t)	Code	Headroom: C	D	a	b	d	e	f	g	i	k	m	n	o	p	q	r	s	t	u	w
250kg	TCRH03CS	305	375	247	135	112	124	36	25	34	71	21	19	130	-	-	-	-	-	-	-
	TCRH03PS			286	174										21						
	TCRH03MS	837	392				184			-	61	123				74	78	152	92	102	194
490kg	TCRH04CS	462	582	342	186	156	181	40	29	74	124	52	32	177	42	-	-	-	-	-	-
	TCRH04PS									-											
980kg	TCRH09CD	519	667				205			50	149	50	56								
	TCRH09PD									-		47									
	TCRH09CS	466	582				181			74	124	52	32								
	TCRH09PS									-											
2	TCRH20CD	597	701				208	45		47	152	50	59	211							
	TCRH20PD									-											

•The D dimension is the value for the standard lift. •The values described above are the nominal dimensions.

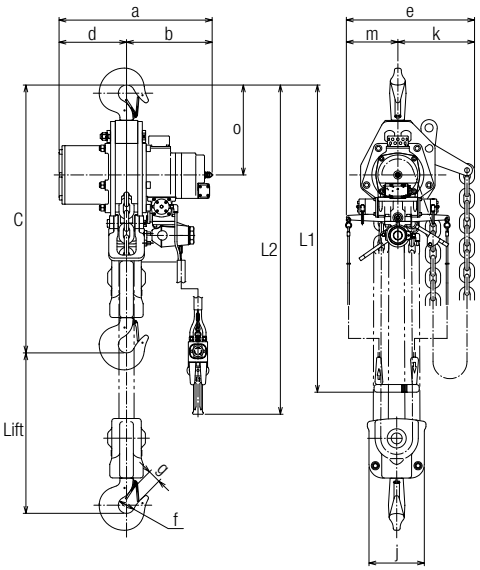
TNC series 10t/25t Large Capacity Type

Main application fields

- Shipyards (New vessel construction and ship repairs)
- Offshore oilfield plants
- Petrochemical plants
- Other plants

Please consult with KITO when hoists are to be used in special environments.

- This compact, large-capacity air hoist is ideal for use in sites with limited work space such as shipyards that do repairs.
- Ideal for work in shipyard sites such as incorporating/disassembling of propellers and propeller shafts of large-sized vessels.
- Anti-overwinding device is incorporated as standard.
- An overloading limiter device is incorporated to automatically stop the lifting when overloading is detected.
- The pendant type incorporates an emergency stop button as standard.



TNCH1QCD

TNCH1QPD
An emergency stop button is provided as standard.

TNC specifications

Capacity (t)	Code	Operation method	Standard lift (m)	Cord length: L1 (m)	Pendant hose length: L2 (m)	During rated loading		When unloaded		Air consumption (m^3/min)	Load chain diameter (mm) x No. of falls	Test load (t)	Air inlet	Net weight (kg)	Net weight for additional 1m of lift (kg)
						Lifting speed (m/min)	Lowering speed (m/min)	Lifting speed (m/min)	Lowering speed (m/min)						
10	TNCH1QCD	Cord	3	2.0	-	1.5	2.3	2.2	1.8	6	ø16.0x2	12.5	Rc1	215	5.7
	TNCH1QPD	Pendant		-	2.9									220	6.1
25	TNCH2PCD	Cord		2.2	-	0.5	0.7	0.7	0.5	5.8	ø22.0x2	31.25		490	10.7
	TNCH2PPD	Pendant		-	3.0									495	11.1

- Each performance value is the numerical value when the used air pressure is 0.6MPa. • The net weight is the value for the standard lift. • The air consumption is the maximum value during use.

TNC dimensions (mm)

Capacity (t)	Code	Headroom: C	a	b	d	e	f	g	j	k	m
10	TNCH1QCD	890	560	313	247	468	60	40	214	280	188
	TNCH1QPD										
25	TNCH2PCD	1440	710	346	364	449	125	80	330	313	136
	TNCH2PPD										

- The values described above are the nominal dimensions.

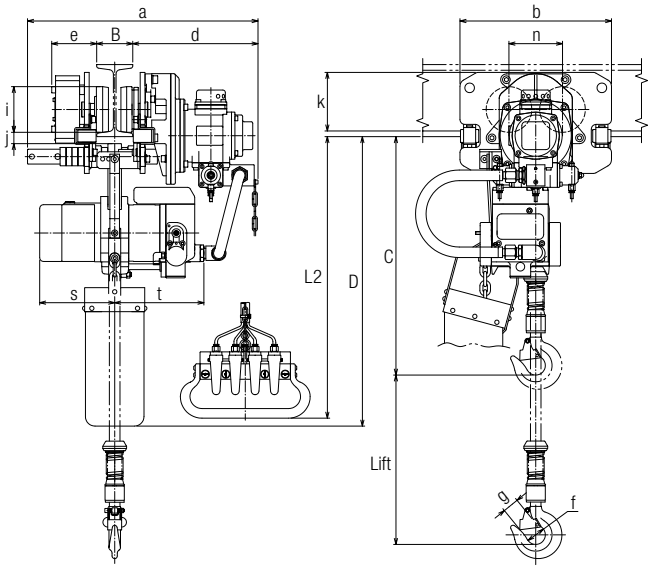
TCRM series 490kg Air-motor Trolley Combination Type

Main application fields

Shipyards	Various types of power generating stations	Automobile factories	Ironworks	Steelworks	Petrochemical plants	Gas chemical plants	Coal mines	Mines
Civil engineering works	Aircraft maintenance	Marine resource development	Ship outfitting	Rubber factories	Coating plants	Textile mills	Foundries	Other

Please consult with KITO when hoists are to be used in special environments.

- Transporting of heavy loads is easy due to the air-motor trolley combination.
- Lifting, lowering, and traversing can be operated at variable speeds using the 4-point type pendant.
- Anti-overwinding device is incorporated as standard.
- KITO's original ultra high strength, rust-resistant nickel-plated chain is incorporated as standard.
- An overloading limiter device is incorporated to automatically stop the lifting when overloading is detected.



TCRM04PS

TCRM specifications

Capacity (kg)	Code	Operation method	Standard lift (m)	Pendant hose length: L2 (m)	During rated loading		When unloaded		Lifting air consumption (m³/min)	Traversing speed (m/min)	Traversing air consumption (m³/min)	Load chain diameter (mm) x No. of falls	Test load (t)	Applicable rail width (Minimum curve radius): B (mm)	Air inlet	Net weight (kg)	Net weight for additional 1m of lift (kg)
					Lifting speed (m/min)	Lowering speed (m/min)	Lifting speed (m/min)	Lowering speed (m/min)									
490	TCRM04PS	Pendant	3	2.2	10.0	16.0	19.0	13.0	1.7	20.0	1.5	ø6.3×1	625kg	58 to 137 / (3500)	R3/4	82	1.13

- Each performance value is the numerical value when the used air pressure is 0.6MPa. • The net weight is the value for the standard lift. • The air consumption is the maximum value during use.
- When selecting the compressor, consider the total of the lifting air consumption and traversing air consumption amounts. • The minimum turning radius is common for all the applicable rail widths.

TCRM dimensions (mm)

Capacity (kg)	Code	Headroom: C	D	a	b	d	e	f	g	i	j	k	n	s	t
490	TCRM04PS	490	604	555	315	261	94	40	29	95	23	122	111.3	156	186

- The D dimension is the value for the standard lift. • The values described above are the nominal dimensions.

Plain Trolley Combination Type: Dimensions Table

TCS series (TSP combination) dimensions (mm)

Capacity (kg)	Code	Headroom: C	Cord length : L1 (m)	Pendant hose length : L2 (m)	Applicable rail width : B (mm)	Minimum curve radius (mm)	D	a	b	e	f	g	h	i	j	k	m	n	o	p	q	r	t
250	TCSH03CS	410	1.7	-	50 to 102	1100	550	204	182	46	36	25	82	60	19	76	47.5	84	42	10	54	38	22
	TCSH03PS		-	2.5																			
490	TCSH04CS		1.7	-																			
	TCSH04PS		-	2.5																			
980	TCSH09CD	445	1.7	-	58 to 127	1300	565	249	236	56	40	29	106	71	24	95	56	112	50		69	50	25
	TCSH09PD		-	2.5																			

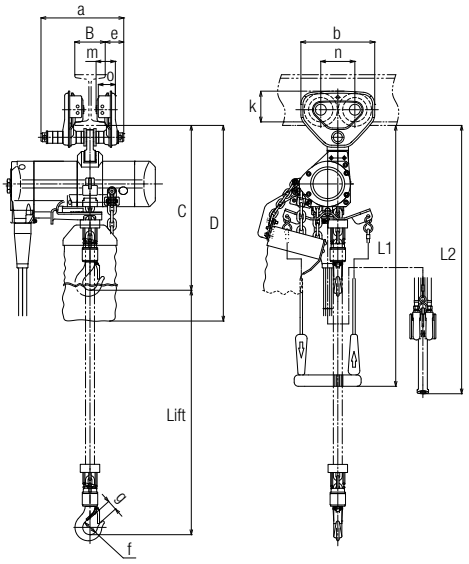
•The D dimension is the value for the standard lift. •The values described above are the nominal dimensions.

TCR series (TSP combination) dimensions (mm)

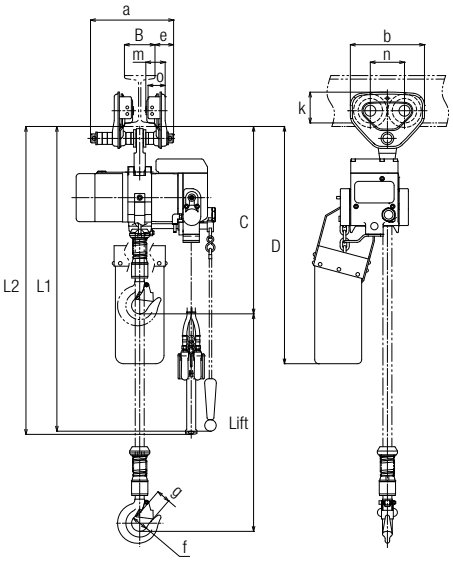
Capacity (t)	Code	Headroom: C	Cord length : L1 (m)	Pendant hose length : L2 (m)	Applicable rail width : B (mm)	Minimum curve radius (mm)	D	a	b	e	f	g	h	i	j	k	m	n	o	p	q	r	t
250kg	TCRH03CS	300	1.7	-	50 to 102	1100	370	204	182	46	36	25	82	60	19.5	76	47.5	84	42	10	54	38	22
	TCRH03PS		-	2.2																			
	TCRH03MS	835	-	-			390																
490kg	TCRH04CS	460	1.9	-			580								14								
	TCRH04PS		-	2.4																			
980kg	TCRH09CD	530	1.9	-	58 to 127	1300	595	249	236	56	40	29	106	71	24	95	56	112	50		69	50	25
	TCRH09PD		-	2.5																			
	TCRH09CS	490	1.8	-			605																
	TCRH09PS		-	2.5																			
2	TCRH20CD	560	1.9	-	82 to 153	1500	580	300	280	69	45		127	85	35	112	71	131	63		83	62	32
	TCRH20PD		-	2.4																			

•The D dimension is the value for the standard lift. •The values described above are the nominal dimensions.

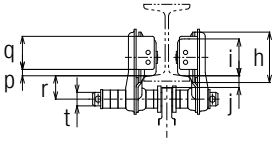
Plain trolley combination type



TCS series
(TSP combination)



TCR serie
(TSP combination)



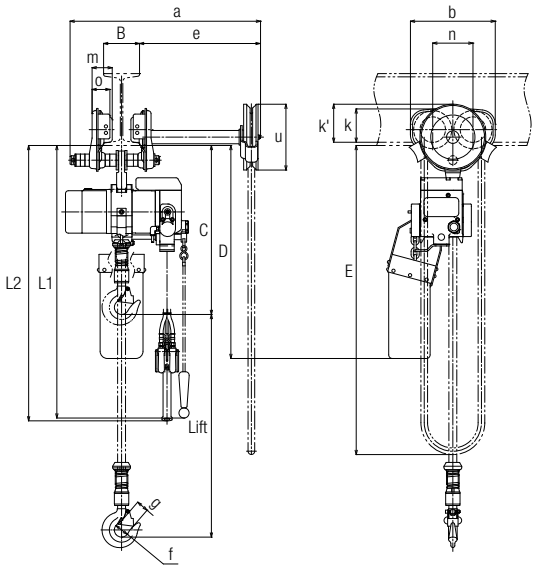
Geared Trolley Combination Type: Dimensions Table

TCR series (TSG combination) dimensions (mm)

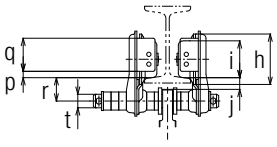
Capacity (t)	Code	Headroom: C	Cord length : L1 (m)	Pendant hose length : L2 (m)	Applicable rail width : B (mm)	Minimum curve radius (mm)	D	a	b	e	f	g	h	i	j	k	k'	m	n	o	p	q	r	t	u
490kg	TCRH04CS	470	1.9	-	58 to 127	1300	595	531	236	338	40	29	106	71	19	95	107	56	102	50	10	69	50	25	183
	TCRH04PS		-	2.4																					
980kg	TCRH09CD	540	1.9	-			600			56					15.5				112						
	TCRH09PD		-	2.5																					
	TCRH09CS	490	1.8	-			605																		
	TCRH09PS		-	2.5																					
2	TCRH20CD	560	1.9	-	82 to 153	1500	580	630	280	69	45		127	85	30	112	109	71	131	63		83	62	32	
	TCRH20PD		-	2.4																					

•The D dimension is the value for the standard lift. •The values described above are the nominal dimensions.
•The geared trolley (TSG) that is combined with the air hoist is specifically for use with air hoists. When placing your order, please specify the "geared trolley (TSG) for combination with air hoists".
* Combination with standard geared trolleys is not possible.

Geared trolley combination type



TCR series
(TSG combination)



About the Compressor

KITO air hoists are designed to be used at air pressures from 0.4 to 0.6MPa (0.6MPa recommended).
While hoists are being operated, each model requires the air consumption amount that is stipulated in each specification column.
Therefore, the compressor air discharge amount must be greater than the total of the air consumption amounts of all the hoists that are being used simultaneously.
It is desirable to prepare a compressor with a discharge amount that is approximately 20% greater than the total consumption amount, in consideration of the piping loss and pressure reduction. In general, the engine horsepower for each $1m^3$/min of compressor discharge amount will be approximately 10 horsepower.
If the discharge amount is insufficient, the air hoist will have a reduced capacity. Please select a compressor horsepower that provides surplus air.

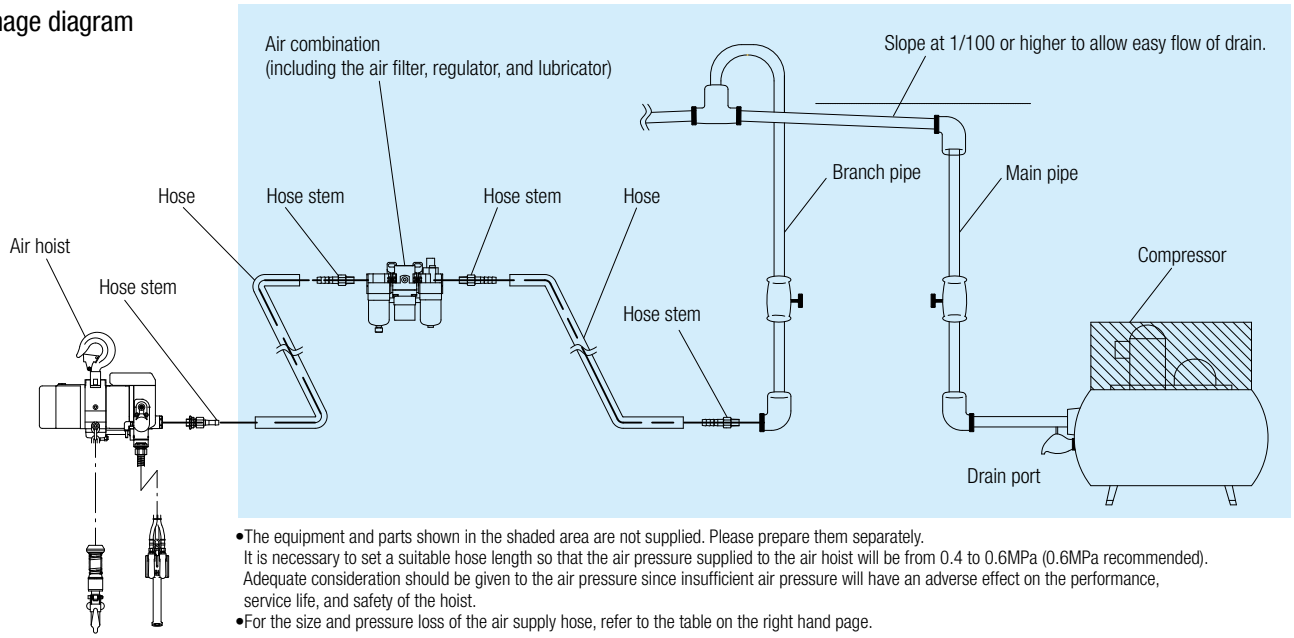
(Air consumption x 10) x No. of units used ≤ Compressor horsepower

About the Piping

When using the air hoists, prepare the piping as shown in the "Piping image diagram" below.
* However, note that the shaded part should be prepared by the customer.

In some circumstances, the operation of air hoists becomes impossible due to fine particles of dust or moisture.
In addition, insufficient lubrication will rapidly hasten the generation of heat and wear on parts, causing problems in operation and reduction in performance.
In order to avoid these problems, be certain to always use the air combination.
* Carry out an inspection of the amount of oil in the lubricator before using the hoist.

Piping image diagram



- The equipment and parts shown in the shaded area are not supplied. Please prepare them separately.
  It is necessary to set a suitable hose length so that the air pressure supplied to the air hoist will be from 0.4 to 0.6MPa (0.6MPa recommended).
  Adequate consideration should be given to the air pressure since insufficient air pressure will have an adverse effect on the performance, service life, and safety of the hoist.
- For the size and pressure loss of the air supply hose, refer to the table on the right hand page.

Lubricating locations	Recommended lubricating grease		Lubricating method	Lubricating amount and frequency
	Grease name	Grade		
Air-motor	Turbine oil JIS type 2	Product equivalent to ISO VG-32 to 56	Install a lubricator in the piping for lubrication	The drop-feed amount is 10-15 drops/minute (0.2-0.3cc)

- Daily lubrication for the reduction gear unit of this product is not required. During disassembly work, replace the grease. Caution: For the disassembly work, please place an order with KITO.
- Regularly apply lubricating oil to the load chain.

About the Air Supply Hose Size and Pressure Loss

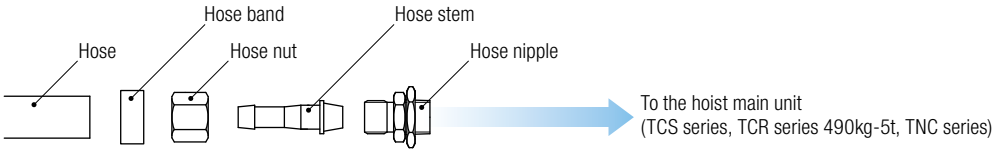
Hose internal diameter dimension (mm)	The recommended hose length for the model used is 10m or less. *5m or less is recommended for the TCS.	Hose inlet pressure (MPa)	Free air amount (m^3/min) flowing through a 10m long hose													
			0.5	0.75	1	1.25	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
			Pressure loss (MPa)													
9.5	TCR series (250kg)	0.4	0.0439	0.0987	0.1757	0.2549										
		0.5	0.0382	0.0879	0.1461	0.227	0.3306									
		0.6	0.0328	0.074	0.1326	0.1971	0.2835									
		0.7	0.0294	0.0626	0.1155	0.1732	0.2492									
12.7	TCR series (490kg-2t) TCS series (250kg-980kg) TCRM series (490kg-980kg)	0.4	0.0107	0.0249	0.0424	0.0648	0.0932									
		0.5	0.0091	0.0203	0.036	0.0541	0.078									
		0.6	0.0078	0.0173	0.0309	0.0464	0.0668	0.1184	0.1849							
		0.7	0.0071	0.0155	0.0269	0.0424	0.0588	0.0999	0.1561							
19.0	TCR series (2.5t-5t) TCRM series (2t-5t)	0.4	0.0001	0.0033	0.0057	0.0089	0.0124	0.022	0.0346	0.0459	0.0656	0.0857	0.1084	0.1338	0.1619	
		0.5	0.0001	0.0028	0.0047	0.0075	0.0108	0.0184	0.0288	0.0415	0.0547	0.0714	0.0904	0.1116	0.1351	
		0.6	0.0001	0.0025	0.0041	0.0065	0.0093	0.0159	0.0248	0.0355	0.0469	0.0612	0.0775	0.0956	0.1157	
		0.7		0.0016	0.0036	0.0043	0.0081	0.0144	0.0217	0.0312	0.041	0.0536	0.0678	0.0837	0.1013	
25.4	TNC series (10t and 25t)	0.4			0.0014	0.0016	0.0032	0.0056	0.0085	0.0123	0.014	0.0193	0.0244	0.0302	0.0365	0.0466
		0.5			0.0012	0.0019	0.0027	0.0048	0.007	0.0103	0.0123	0.0161	0.0204	0.0252	0.0305	0.0388
		0.6			0.001	0.0017	0.0023	0.0041	0.006	0.0088	0.0106	0.0138	0.0175	0.0216	0.0261	0.0333
		0.7			0.0009	0.0014	0.002	0.0036	0.0054	0.0073	0.0092	0.0121	0.0153	0.0189	0.0228	0.0291

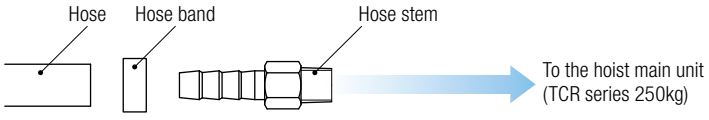
- The values shown in the table are the pressure loss values for each pressure and each flow amount. Therefore, the secondary pressure at the hose outlet is equal to the value when the pressure loss is subtracted from the hose inlet pressure.
- When the hose length is longer than 10m, the relationship between the length and the pressure loss will be proportional. Therefore, if the hose length is 20m, the corresponding pressure loss will be two times greater than the pressure loss value shown in the table.
- Please check the air consumption (m^3/min) of the air hoist to be used and the pressure (MPa) at the hose inlet. See the table mentioned above and confirm that the appropriate air pressure (0.4 to 0.6MPa) is supplied. *0.6MPa recommended.

Ex.) the TCR series 250kg
When the hose inlet pressure is 0.6MPa and a free air amount of 1.0m^3/min is flowing through a 10m hose, the pressure loss will be 0.1326MPa.

About the Air Supply Hose Connection

(1) Wrap sealing tape around the hose nipple, and firmly mount it in the hoist.
(2) Confirm that the main valve of the compressor is closed and the compressed air is cut off.
(3) Before connecting the hose to the hoist, apply approximately 10 drops of lubricating oil to the connection port.
(4) Insert the hose stem into the hose nipple, and fix it with the hose nut.
Mount the hose nipple in the hoist main unit. Then, use the hose band to fix the hose to the hose stem.
For the TCR series 250kg model, mount the hose stem in the hoist main unit. Then, use the hose band to fix the hose to the hose stem.
* The air supply hose and the hose band are not provided. Please prepare them separately.





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