Achieving Smooth Speed Control

# KITO AIR HOISTS







# 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.

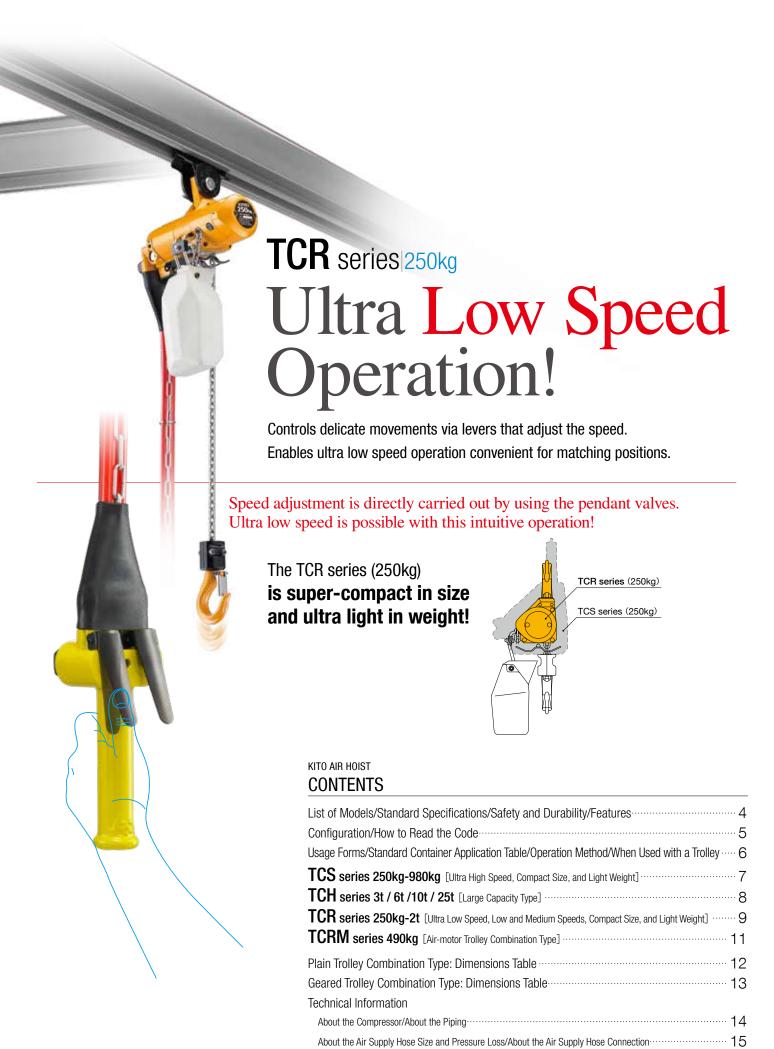
KITO Air Hoists reduce the burden for operators and supports improved work efficiency.

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.

<sup>\*1:</sup> Light cranes and manual trolleys are available.



# **KITO Air Hoists: List of Models**

	Mode		Capacity (t)									
	Model					2	3	6	10	25		
	TCS	High speed, compact size, light weight	•	•	•							
Hook suspended type (Single unit)	TCR	Low and medium speeds, compact size, light weight	•	•	•	•						
	TCH	Large capacity					•	•	•	•		
Air-motor trolley combination type												

<sup>\*</sup> 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 60°C
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

<sup>\* 1</sup>MPa=10bar=145psi

# **Safety and Durability**

# Ultra-strong nickel-plated load chain

(Except for the TCH 10t, 25t)

# 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-2t, TCH 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

(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.

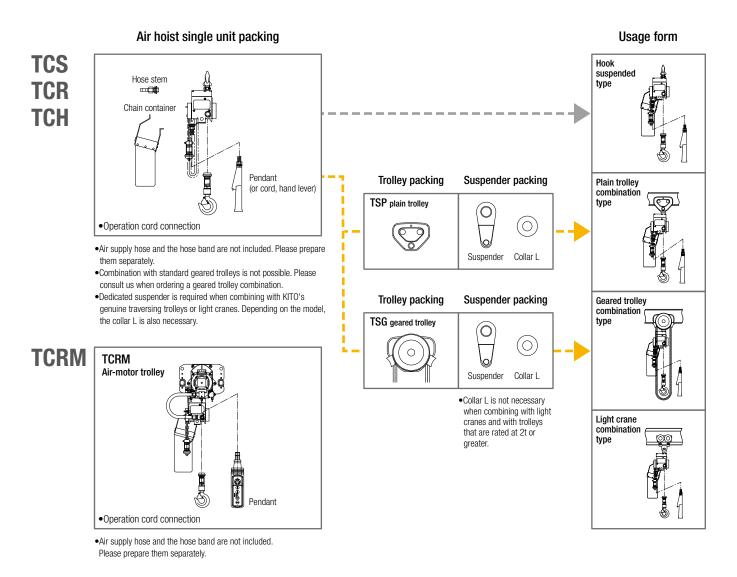
# **Features**

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.

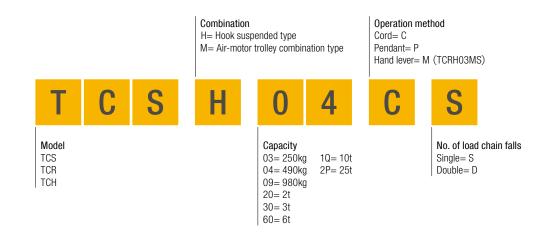
# **Configuration**

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.



# **How to Read the Code**



_	Capacity		Operation			Usage form		
Series	(t)	Code	method	Hook suspended type	Air-motor trolley combination type	Geared trolley combination type	Plain trolley combination type	Light crane combination type
	250kg	TCSH03CS	Cord	•	_	_	•	•
	Zouky	TCSH03PS	Pendant	•	_	_	•	•
TCS	490kg	TCSH04CS	Cord	•	_	_	•	•
163	490kg	TCSH04PS	Pendant	•	_	_	•	•
	980kg	TCSH09CD	Cord	•	_	_	•	•
	Source	TCSH09PD	Pendant	•	_	_	•	•
		TCRH03CS	Cord	•	_	_	•	•
	250kg	TCRH03PS	Pendant	•	_	_	•	•
		TCRH03MS	Hand lever	•	_	_	•	•
	4001/2	TCRH04CS	Cord	•	_	•	•	•
	490kg	TCRH04PS	Pendant	•	-	•	•	•
TCR	980kg	TCRH09CD	Cord	•	_	•	•	•
		TCRH09PD	Pendant	•	_	•	•	•
		TCRH09CS	Cord	•	_	•	•	•
		TCRH09PS	Pendant	•	_	•	•	•
	2	TCRH20CD	Cord	•	-	•	•	_
	2	TCRH20PD	Pendant	•	_	•	•	_
	3	TCHH30CS	Cord	•	_	•	•	-
	3	TCHH30PS	Pendant	•	_	•	•	_
		TCHH60CD	Cord	•	-	•	_	_
TOLL	6	TCHH60PD	Pendant	•	_	•	_	_
TCH	10	TCHH1QCD	Cord	•	_	_	_	_
	10	TCHH1QPD	Pendant	•	_	_	_	_
	OF.	TCHH2PCD	Cord	•	_	_	_	-
	25	TCHH2PPD	Pendant	•	-	-	-	_
TCRM	490kg	TCRM04PS	Pendant	_	•	_	_	_

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

• : Setting required • : Setting required (The suspender and collar L are required) • : Setting required (The suspender is required) - : Setting not required

# Standard Containers

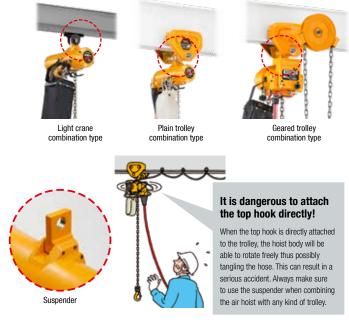




# **Operation Method**

# When Used with a Trolley





# TCS series 250kg-980kg

Ultra High Speed, Compact Size, and Light Weight

Main application fields

Shipyards	Various types of generating sta
ivil engineering	Aircraft
works	maintenar

pes of power ng stations factorie:
Craft Marine reso developm

Ironworks
Ship outfitting

Steelworks
Rubber factories

Petrochemical plants

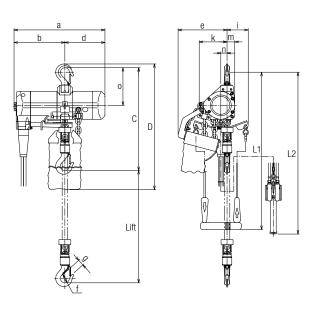
Coating plants

Gas chemica plants Coal mines

Mines Other

•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

# TCS specifications

			Standard	Cord	Pendant	During rated loading		When unloaded		Air	Load chain			Net	Net weight
Capacity (kg)	Code	Operation method	lift (m)	length: L1 (m)	hose length: L2 (m)	Lifting speed (m/min)	Lowering speed (m/min)	Lifting speed (m/min)	Lowering speed (m/min)		diameter (mm) x No. of falls	Test load (t)	Air inlet	weight (kg)	for additional 1m of lift (kg)
250	TCSH03CS	Cord		1.7	-	34.0	63.0	63.0	38.0			313kg		20	0.88
250	TCSH03PS	Pendant		-	2.5	34.0	03.0	03.0	36.0		ø6.3×1	STORY		21	1.12
400	TCSH04CS	Cord	2	1.7	-	17.0	04.0	22.0	10.0	0.1	νο.3×1	COEL	Dod /0	20	0.88
490	TCSH04PS	Pendant	3	-	2.5	17.0	34.0	33.0	19.0	2.1		625kg	Rc1/2	21	1.12
000	TCSH09CD	Cord		1.7	-	0.5	17.0	10.5	0.5		aC 0 0	1.00		26	1.76
980	TCSH09PD	Pendant		-	2.5	8.5 17	17.0	16.5	9.5		ø6.3×2	1.23		27	2

<sup>•</sup> 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	е	f	g	i	k	m	n	0
250	TCSH03CS									85				
250	TCSH03PS	414	555				197	36	25	56	112	31	25	151
490	TCSH04CS	414	333	365	204	161	197	30	20	85	112	31	20	101
490	TCSH04PS			300	204	101				56				
980	TCSH09CD	456	577				221	40	29	70	136	37	49	173
900	TCSH09PD	456	3//				221	40	29	70	130	37	49	1/3

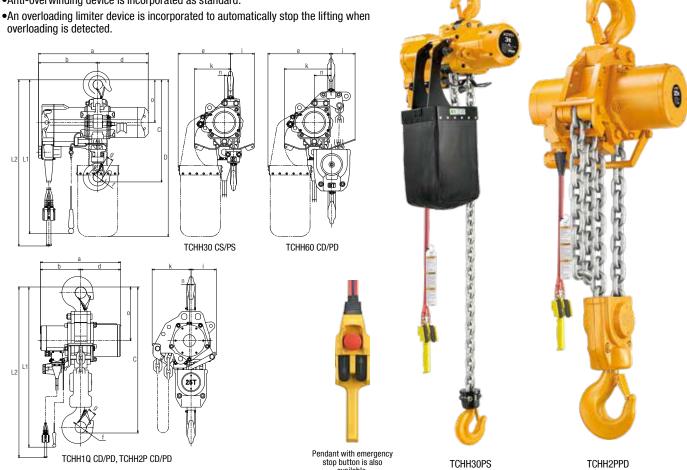
<sup>•</sup>The D dimension is the value for the standard lift. •The values described above are the nominal dimensions.



Shipyard(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.

•Anti-overwinding device is incorporated as standard.

overloading is detected.



# **TCH Specifications**

. O Op	Ton opcomodations														
			Chandard		Dandant	During rat	ted loading	When u	nloaded	A:-	l and abain			Net	Net weight
Capacity (t)	Code	Operation method	Standard lift (m)		Pendant hose length: L2 (m)	Lifting speed (m/min)	Lowering speed (m/min)	Lifting speed (m/min)	Lowering speed (m/min)	Air consumption (m³/min)	Load chain diameter (mm) x No. of falls	Test load (t))	Air inlet	weight (kg)	for additional 1m of lift (kg)
3	TCHH30CS	Cord		1.8	-	5.40	11.60	11.20	6.90		ø12.5 x 1	3.75		101	3.42
ა	TCHH30PS	Pendant		-	2.6	3.40	11.00	11.20	0.90		W12.3 X 1	3.73		102	3.42
6	TCHH60CD	Cord		1.9	-	2.70	5.20	5.30	3.20	4.3	ø12.5 x 2	7.5	Rc1	133	6.84
0	TCHH60PD	Pendant	2	-	2.7	2.70	3.20	5.50	3.20	4.3	W12.3 X Z	7.5	nt i	134	0.04
10	TCHH1QCD	Cord	3	1.9	-	1.60	3.20	3.30	1.90		ø16 x 2	12.5		205	11.4
10	TCHH1QPD	Pendant		-	2.7	1.00	3.20	3.30	1.90		Ø10 X Z	12.5		206	11.4
0.5	TCHH2PCD	Cord		2.0	-	1 40	2.00	0.70	0.00	10.0	#00 F v 0	01.05	Ded 1/0	579	04.4
25	TCHH2PPD	Pendant		-	2.9	1.40	3.00	2.70	2.00 10.8	10.8 ø23.5 x 2	31.25	Rc1 1/2	581	24.4	

available.

# TCH dimensions (mm)

	· ,													
Capacity (t)	Code	Headroom: C	D	a	b	d	е	f	g	i	k	n	0	
3	TCHH30CS TCHH30PS	537	823	576	211	265	275	50	34	125	189	32	224	
6	TCHH60CD TCHH60PD	770	885	3/6	311	200	331	65	42	126	245	88	286	
10	TCHH1QCD TCHH1QPD	850		582	315	267		60	40	188	280	0	298	
25	TCHH2PCD TCHH2PPD	1,290	-	708	352	356	-	100	71	223	343	15	473	

<sup>•</sup>The values described above are the nominal dimensions.

<sup>•</sup> 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.

<sup>•</sup>The air consumption is the maximum value during use.

# TCR series 250kg-2t Ultra Low Speed, Low and Medium Speeds Compact Size, and Light Weight

Main application fields

Shipyards	
Civil engineering works	

Various types of power generating stations Aircraft maintenance Automobile factories Marine resource development

Ironworks
Ship outfitting

Steelworks
Rubber factories

plants

Coating plants

ants Tex

plants

Textile mills

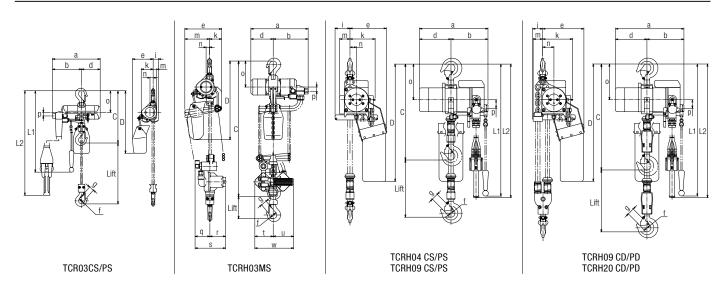
Coal mines
Foundries

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)





# **TCR** specifications

			Standard	Cord	Pendant	During rat	ed loading	When u	ınloaded	Air	Load chain			Net	Net weight for additional
Capacity (t)	Code	Operation method	lift (m)	length: L1 (m)	hose length: L2 (m)	Lifting speed (m/min)	Lowering speed (m/min)	Lifting speed (m/min)	Lowering speed (m/min)		diameter (mm) x No. of falls	Test load (t)	Air inlet	weight (kg)	for additional 1m of lift (kg)
	TCRH03CS	Cord	3	1.7	-	9.0	17.4	18.6	13.8	1				7	0.35
250kg	TCRH03PS	Pendant	3		2.2	8.1	16.5	16.7	12.4	0.9	ø4.0×1	313kg	Rc3/8	8.6	0.76
	TCRH03MS	Hand lever	2	-	_	8.0	10.3	10.7	12.4	0.9				11	-
400kg	TCRH04CS	Cord		1.9		10.0	16.0	19.0	13.0		ø6.3×1	COELa		30	0.88
490kg	TCRH04PS	Pendant		-	2.4	10.0	10.0	19.0	13.0		₩0.5×1	625kg		31	1.12
	TCRH09CD	Cord		1.9	-	5.0	8.1	9.6	6.4		ø6.3×2			34.5	1.76
0001/0	TCRH09PD	Pendant	3	-	2.4	5.0	0.1	9.0	0.4	1.7	Ø0.3×2	1.23	Do1 /0	35.5	2
980kg	TCRH09CS	Cord	3	1.9	-	5.8	9.3	10.5	6.5	1.7	a7 11	1.23	Rc1/2	33	1.1
	TCRH09PS	Pendant		-	2.4	0.0	9.3	10.3	0.0		ø7.1×1			34	1.34
2	TCRH20CD	Cord		1.9	-	2.0	17	5.2	2.0		a7.1v0	2.5		39	2.2
2	TCRH20PD	Pendant		-	2.4	2.9 4.7	4./	5.3	3.2		ø7.1×2	2.5		40	2.44

<sup>•</sup>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	е	f	g	i	k	m	n	0	p	q	r	s	t	u	w
	TCRH03CS	305	375	247	135		124			34	71	21			-						
250kg	TCRH03PS	300	3/3	286	174	112		36	25	0.			19	130	21	_	-	-	-	-	-
	TCRH03MS	837	392	200	174		184			-	61	123			21	74	78	152	92	102	194
490kg	TCRH04CS	462	582				181			74	124	52	32								
490kg	TCRH04PS	402	302							-		02	02								
	TCRH09CD	519	667				205	40		50	149	50	56	177							
000kg	TCRH09PD	319	007	342	186	156	200	40	29	-	110	47			42						
980kg	TCRH09CS	466	582	342	100	130	181		29	74	124	52	32		42	-	-	-	-	-	-
	TCRH09PS	400	302							-		02	02								
2	TCRH20CD	597	701				208	45		47	152	50	59	211							
	TCRH20PD	397	701					40		-	, 02										

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

# TCRM series 490kg Air-motor Trolley Combination Type

Main application fields

Shipyards	Various types of generating sta
ivil engineering	Aircraft
works	maintenan

Automobile factories Marine resour developmen

Ironworks
Ship outfitting

Steelworks
Rubber factories

Petrochemical plants

Coating plants

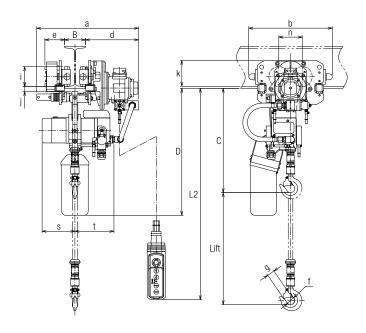
Gas chen plants

emical Coal mines

Mines 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.
- •Traversing speed can be adjusted to a low speed by the adjustment valve installed on the 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.
- •The trolley is equipped with a maximum speed adjustment mechanism.





TCRM04PS

# **TCRM** specifications

Canacity		Operation	Standard	Pendant	During rat	ed loading	When u	nloaded	Lifting air	Traversing	Traversing air	Load chain	Test	Applicable rail width	Air	Net	Net weight for
Capacity (kg)	Code	method	lift (m)	hose length: L2 (m)	Lifting speed (m/min)	Lowering speed (m/min)	Lifting speed (m/min)	Lowering speed (m/min)	consumption (m³/min)	speed (m/min)	consumption (m³/min)	diameter (mm) x No. of falls	load (t)	(Minimum curve radius): B (mm)	inlet	weight (kg)	additional 1m of lift (kg)
490	TCRM04PS	Pendant	2	2.2	10.0	16.0	19.0	13.0	1.7	20.0	1.5	ø6.3×1	625kg	58 to 137	R3/4	81	1.13
430	TOTIVIO41 3	i Giluaiit	J	2.2	10.0	10.0	19.0	13.0	1.7	20.0	1.0	WU.3X1	UZJNY	(3500)	110/4	01	1.13

<sup>•</sup> 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.

# **TCRM dimensions (mm)**

Capacity (kg)	Code	Headroom: C	D	a	b	d	е	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

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

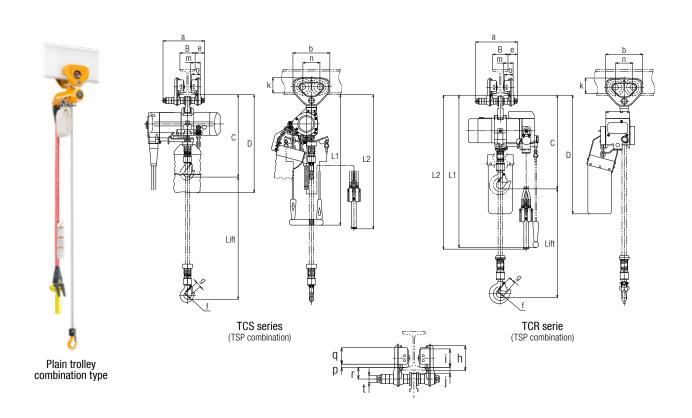
<sup>•</sup>When selecting the compressor, consider the total of the lifting air consumption and traversing air consumption amounts. •The minimum turning radius is common for all the applicable rail widths.

# **Plain Trolley Combination Type: Dimensions Table**

# TSP combination dimensions (mm)

Capacity (kg)	Code	Operation method	Headroom : C	Cord length : L1 (m)	Pendant hose length : L2 (m)		Minimum curve radius (mm)	D	a	b	е	f	g	h	i	j	k	m	n	0	р	q	r	t
	TCSH03CS	Cord	410	1.7	-											10								
	TCSH03PS	Pendant	410	-	2.5			550								19								
250	TCRH03CS	Cord	000	1.7	-			070																
	TCRH03PS	Pendant	300	-	2.2			370				36	25			19.5								
	TCRH03MS	Hand lever	835	-	-	50 to 102	1100	390	204	182	46			82	60		76	47.5	84	42		54	38	22
	TCSH04CS	Cord	410	1.7	-			550								10								
400	TCSH04PS	Pendant	410	-	2.5			550								19								
490	TCRH04CS	Cord	460	1.9	-			F00								- 4								
	TCRH04PS	Pendant	400	-	2.4			580								14					10			
	TCSH09CD	Cord	445	1.7	-			565																
	TCSH09PD	Pendant	440	-	2.5			303				40												
980	TCRH09CD	Cord	530	1.9	-	58 to 127	1300	505	249	226	56	40	29	106	71	24	95	56	112	50		69	50	25
900	TCRH09PD	Pendant	550	-	2.5	30 10 127	1300	393	249	230	50		29	100	71	24	95	50	112	50		09	50	20
	TCRH09CS	Cord	490	1.8	-			605																
	TCRH09PS	Pendant	490	-	2.5			003																
2t	TCRH20CD	Cord	560	1.9	-	82 to 153	1500	580	300	280	69	45		127	85	35	112	71	131	63		83	62	31
۷۱	TCRH20PD	Pendant	500	-	2.4	02 10 103	1500	360	300	200	09	40		127	65	30	112	71	131	US		00	UZ	31
3t	TCHH30CS	Cord					For mo	ra infe	ormati	on inc	luding	dime	neion	e nles	20.00	ntact	KITO							
Ji	TCHH30PS	Pendant					1 01 1110	ne IIII	Jillalli	ori, iric	iuuiili	uiiile	1101011	o, pica	100 00	iilaul	MIU.							

<sup>•</sup>The D dimensions is the value for the standard lift.
•The value described above are the nominal dimensions.

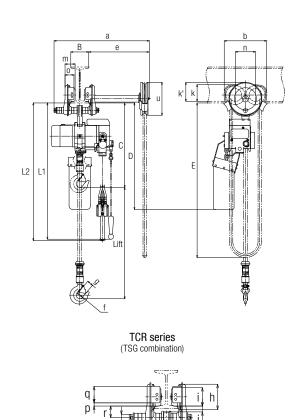


# **Geared Trolley Combination Type: Dimensions Table**

# TSG combination dimensions (mm)

Capacity (kg)	Code	Operation method	Headroom : C	Cord length : L1 (m)	Pendant hose length : L2 (m)		Minimum curve radius (mm)	D	a	b	е	f	g	h	i	j	k	k'	m	n	0	p	q	r	t	u
490	TCRH04CS	Cord	470	1.9	-			595			338					19				102						
490	TCRH04PS	Pendant	470	-	2.4			393			330					19				102						
	TCRH09CD	Cord	540	1.9	-	E0 to 107	1200	600	E01	വാട		40		106	71		95	107	56		50		69	50	25	
000	TCRH09PD	Pendant	340	-	2.5	58 to 127	1300	000	531	230	56	40	200	106		15 5		107	90	110	50	10	09	30	23	100
980	TCRH09CS	Cord	400	1.8	-			COF			90		29			15.5				112		10				183
	TCRH09PS	Pendant	490	-	2.5			605																		
2t	TCRH20CD	Cord	560	1.9	-	82 to 153	1500	500	ഭാവ	200	69	45		127	85	20	110	109	71	101	63		83	62	32	
Zl	TCRH20PD	Pendant	360	-	2.4	02 10 103	1300	580	030	200	09	40		121	00	30	112	109	/ 1	131	03		00	02	32	
3t	TCHH30CS	Cord																								
ા ગા	TCHH30PS	Pendant					Fax 10		-fa	ation	باممان	din a	م ما الم		ممامد			VITO								
C+	TCHH60CD	Cord					For m	iore ii	iiorm	auon,	IIICIU	uirig (	uimer	ISIONS	, piea	ise co	mact	KIIU.								
6t	TCHH60PD	Pendant																								





# **Technical Information**

# **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 1m³/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  $\leq$  Compressor horsepower

# **About the Piping**

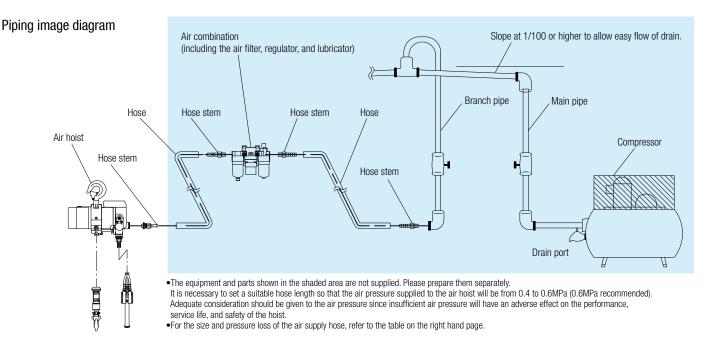
When using the air hoists, prepare the piping as shown in the "Piping image diagram" below.

\* 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.



Lubricating locations	Recommend	ded lubricating grease	Lubricating mathed	Lubricating amount and fraguency
Lubricating locations	Grease name	Grade	Lubricating method	Lubricating amount and frequency
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)

<sup>•</sup> 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.

<sup>•</sup> Regularly apply lubricating oil to the load chain.

# About the Air Supply Hose Size and Pressure Loss

Hose	The recommended hose length for the						Free a	ir amount (r	m³/min) flow	ing through	a 10m long	hose.				
internal diameter dimension	model used is 10m or less. *5m or less is	Hose inlet pressure (MPa)	0.75	1	1.5	2	2.5	3	4	5	6	7	8	9	10	11
(mm)	recommended for the TCS.	(1111 4)							Pressure I	loss (MPa)						
		0.4	0.0987	0.1757												
9.5	TCR series	0.5	0.0879	0.1461	0.3306											
9.5	(250kg)	0.6	0.074	0.1326	0.2835											
		0.7	0.0626	0.1155	0.2492											
	TCR series	0.4	0.0249	0.0424	0.0932											
12.7	(490kg-2t)	0.5	0.0203	0.036	0.078											
12.7	TCS series	0.6	0.0173	0.0309	0.0688	0.1184	0.1849									
	TCRM series	0.7	0.0155	0.0269	0.0588	0.0999	0.1561									
		0.4		0.0014	0.0032	0.0056	0.0085	0.0123	0.0193	0.0302	0.0466					
25.4	TCH series	0.5		0.0012	0.0027	0.0048	0.007	0.0103	0.0161	0.0252	0.0388					
25.4	(3t, 6t,10t)	0.6		0.001	0.0023	0.0041	0.006	0.0088	0.0138	0.0216	0.0333					
		0.7		0.0009	0.002	0.0036	0.0054	0.0073	0.0121	0.0189	0.0291					
		0.4				0.0007	0.0011	0.0016	0.0029	0.0046	0.0066	0.0089	0.0117	0.0147	0.0182	0.0221
25.4	TCH series	0.5				0.0006	0.001	0.0013	0.0024	0.0038	0.0055	0.0074	0.0097	0.0123	0.0152	0.0184
25.4	25.4 (25t)	0.6				0.0006	0.0008	0.0012	0.0021	0.0033	0.0047	0.0064	0.0083	0.0106	0.0131	0.0158
		0.7				0.0005	0.0007	0.001	0.0018	0.0029	0.0041	0.0056	0.0073	0.0092	0.0114	0.0138

<sup>•</sup>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.

Ex.) the TCR series 250kg When the hose inlet pressure is 0.6MPa and a free air amount of 1.0m³/min is flowing through a 10m hose, the pressure loss will be 0.1326MPa.

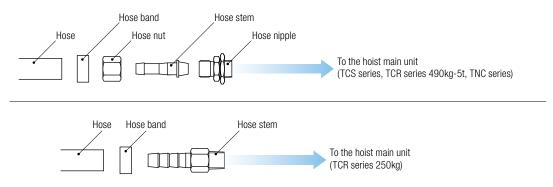
# About the Air Supply Hose Connection

- (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.

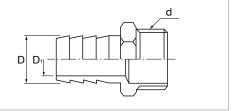
Mount the hose nipple in the hoist main unit. Then, use the hose band to fix the hose to the hose stem.

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.



Model	Canacity (t)		Dimensions (mm)	
iviodei	Capacity (t)	D	D <sub>1s</sub>	d
TCS seires	250kg - 980kg	14.5	10	R 1/2
TCR series	250kg - 980kg	15	9.5	R 3/8
TON SELLES	490kg - 2	14.5	10	R 1/2
TCH series	3 - 25		n/a	



<sup>•</sup>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.

<sup>•</sup>Please check the air consumption (m³/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.





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