



Professional cranes & hoists for lifting



Generation II Air Chain Hoist



CHENG DAY MACHINERY WORKS CO., LTD.

No. 173, Wen Chiu Road, Dajia District, Taichung City, 437 Taiwan.
Tel: +886-4-2688-1581 Fax: +886-4-2688-1509
Website: www.chengday.com E-mail: info@chengday.com.tw

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1 Gearbox

Sealed planetary gearbox complies with heavy duty cycles, gears are heat treated and mounted on high strength low friction bearings to extend its life span.

2 Load Chain & Chain Guide

G80 load chain applied. The chain guide leads load chain working rapidly and smoothly on sprocket without twisting.

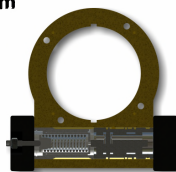
3 Controller

Toggle Cord (TC) & Pendant Control (PC, Optional) for users choice. They can offer dual speed control with accurate & precise positioning of loads.

4 Brake

Non-asbestos disc brake is applied automatically when the air shut-off.

5 Main Air Supply Shut - Off Type Overload Limiter System



Two overload limiter devices for extra safety - a Mechanical Clutch type [MCT] & a Main Air Supply Shut-off [MASSO] valve type . These devices are pre-set at the factory to an overload limit capacity value of the hoist rated WLL x 125% and are adjustable.



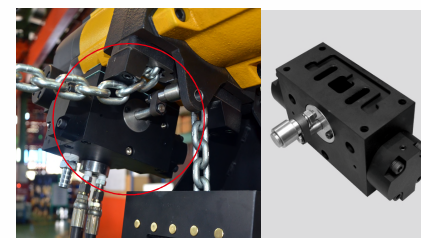
Explosion-Proof Classification and Marking

Type	Ex Environment	Marking	Model (e.g.)
With increased spark protection	Zone 1	II 2G Ex h IIB T4 Gb II 2D Ex h IIB T135°C Db	YSA-025Ex
Standard	Zone 2	II 3G Ex h IIA T4 Gc II 3D Ex h IIB T135°C Dc	YSA-025

The main air supply shut - off overload limiter device MASSO valve which is integrated into the air motor monitors the air pressure differential between the incoming air pressure and the exhaust air pressure.

When the overload limit capacity is reached the reduced exhaust air pressure is sensed and the higher incoming air pressure over comes the valve spring tension and closes the valve thereby closing the supply of air to the brake which then engages. However the hoist can still function in the DOWN mode to allow the load to be lowered.

6 Upper and Lower Load Chain Travel Limit Switch System (LSS)



To ensure that the load chain and hoist body are not damaged which can compromise safety, it is essential to limit the maximum up/down travel limits of the load chain and load hook.

Chain stops are attached to the load chain at the UP/DOWN travel limit points on either end of the load chain. Such Chain Stops activate the limit switch when the UP/ DOWN chain travel points are reached. When activated the limit switch mechanically closes the main air supply control piston to stop the air supply to the air motor. When the hoist is operated in the reverse direction from the limit point the pressure on the limit switch is released which allows the main air supply control piston spring to open the main air valve and the hoist to operate.

Such LSS is incorporated into both the pendant control and toggle cord operating control types of YSA hoists.

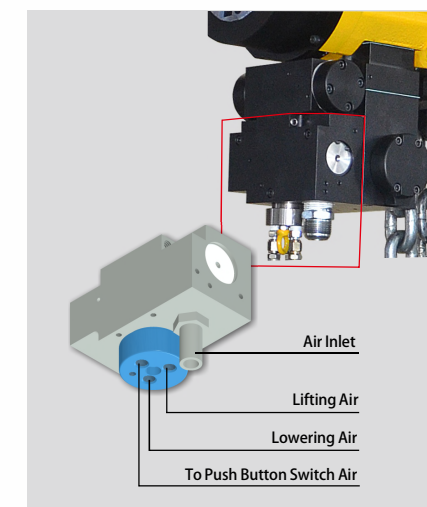
7 Hoist Housing

High strength FCD cast-iron housing ensures shocks, bumps and corrosion resistance.

8 Air-Lift Motor

Motor rotor vanes are lifted by specially directed compressed air stream ensuring high starting torque and optimum motor performance.

9 Emergency Stop Device (Optional)

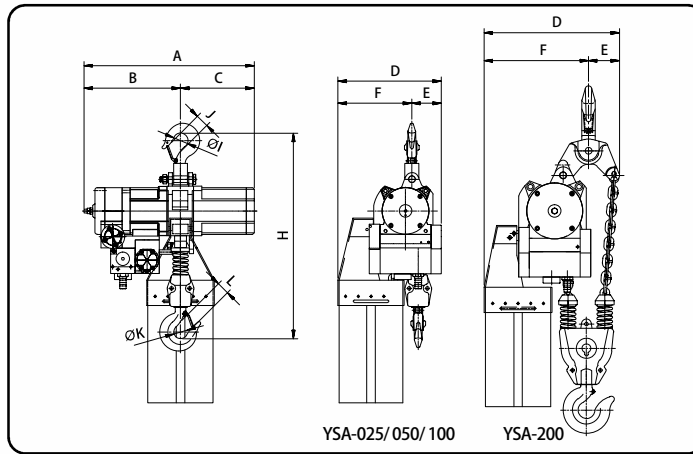


The air stream from either the Red or Blue hose ports, as indicated above, operate and activate the Emergency Stop Valve when the Emergency Stop Button on the Pendant Control Handle is depressed.

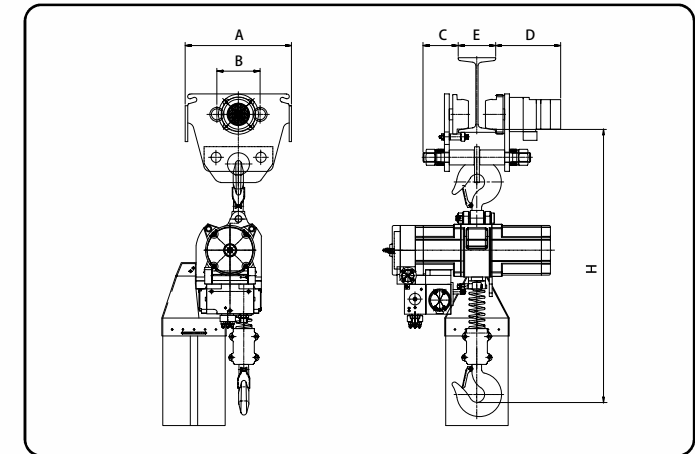
On activation the Emergency Stop Valve located on the air motor housing shuts-off the incoming main air supply to the air motor.



YSA Series



Hoist with trolley



Model	Capacity (ton)	Fall no.	Dimension (mm)											N.W (kg)
			H	A	B	C	D	E	F	I	J	K	L	
YSA-025 YSA-025Ex	0.25	1	615	371	197	174	244	70	174	40	32	40	32	32
YSA-050 YSA-050Ex	0.5	1	615	402	228	174	244	70	174	40	32	40	32	36
YSA-100 YSA-100Ex	1	1	620	460	255	205	251	65	186	40	32	40	32	51
YSA-200 YSA-200Ex	2	2	840	460	255	205	319	73	246	46	40	46	40	60

● Ex: Zone 1 ; Blank: Zone 2

Model	Capacity (ton)	Dimension (mm)					
		H	A	B	C	D	E
YSA-025+PT-050 YSA-025Ex+PT-050Ex	0.25	590	236	89	35	35	50~150
YSA-050+PT-050 YSA-050Ex+PT-050Ex	0.5	590	236	89	35	35	50~150
YSA-100+AT-100 YSA-100Ex+AT-100Ex	1	621	294	116	95	208	75~125
YSA-200+AT-200 YSA-200Ex+AT-200Ex	2	751	322	135	100	209.5	100~150

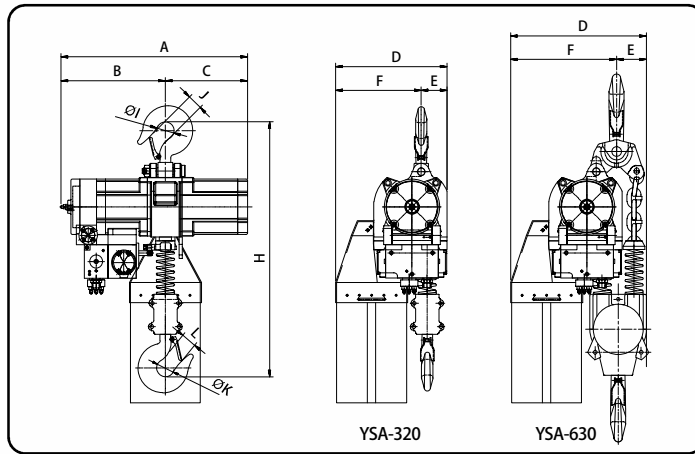
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Model	Capacity (ton)	Fall no.	Load chain (mm)	Lift (m)	Classification	Operation	Working air pressure (kg/cm ²)	Motor (kw)	Speed (m/min)	Air consumption (m ³ /min)	Brake type	Limit switch	Air inlet (in)	Level of noise (dB)		Main line air supply (in)
														Load	No load	
YSA-025 YSA-025Ex	0.25	1	Ø6.3x19.1	3	2m	Toggle Cord (TC) or Pendant Control (PC)	6	1.5	18	2	Disk type brake	Upper/Lower limit	1/2"	85	82	3/4"
YSA-050 YSA-050Ex	0.5	1	Ø6.3x19.1	3	2m		4	0.8	8	1			1/2"	85	82	3/4"
YSA-100 YSA-100Ex	1	1	Ø7.1x20.2	3	2m		6	1.5	11	2			1/2"	85	82	3/4"
YSA-200 YSA-200Ex	2	2	Ø7.1x20.2	3	2m		4	0.8	5	1			1/2"	85	82	3/4"
							6	2.0	7.6	2						
							4	1.0	3.4	1						
							6	2.0	3.8	2						
							4	1.0	1.7	1						

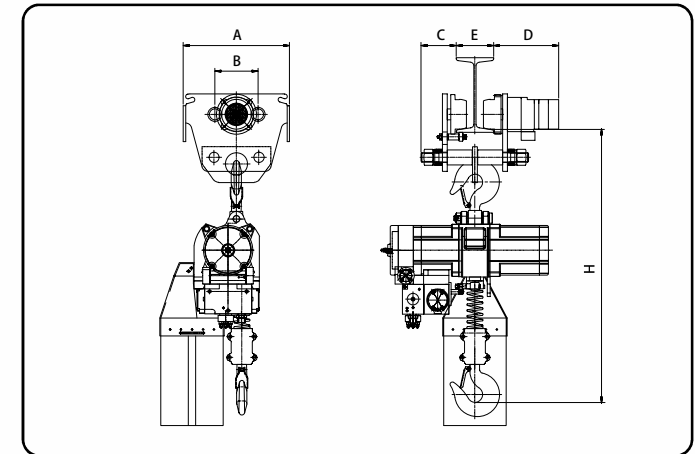
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YSA Series



Hoist with trolley



Model	Capacity (ton)	Fall no.	Dimension (mm)											N.W (kg)
			H	A	B	C	D	E	F	I	J	K	L	
YSA-320 YSA-320Ex	3.2	1	814	559	313	246	334	77	257	52	47	52	47	108
YSA-630 YSA-630Ex	6.3	2	1022	559	313	246	334	77	257	62	52	62	52	138

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Model	Capacity (ton)	Dimension (mm)					
		H	A	B	C	D	E
YSA-320+AT-320 YSA-320Ex+AT-320Ex	3.2	902	356	144	117.5	217	125~175
YSA-630+AT-630 YSA-630Ex+AT-630Ex	6.3	1125	386	183	132.5	219	125~175

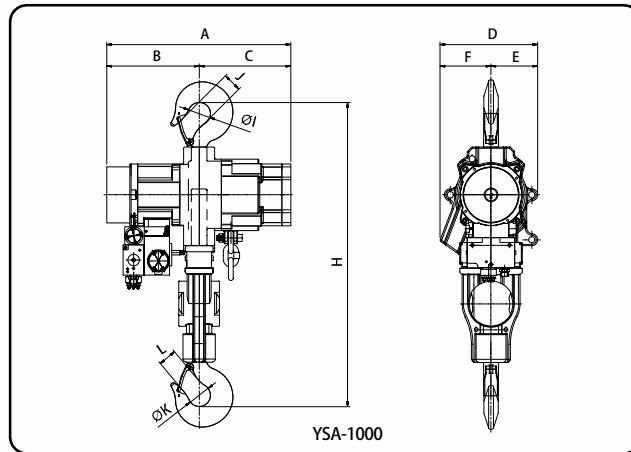
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Model	Capacity (ton)	Fall no.	Load chain (mm)	Lift (m)	Classification	Operation	Working air pressure (kg/cm ²)	Motor (kw)	Speed (m/min)	Air consumption (m ³ /min)	Brake type	Limit switch	Air inlet (in)	Level of noise (dB)		Main line air supply (in)
														Load	No load	
YSA-320 YSA-320Ex	3.2	1	Ø13x36	3	2m	Toggle Cord (TC) or Pendant Control (PC)	6	3.5	4.8	4	Disk type brake	Upper/Lower limit	3/4"	90	87	2"
							4	1.8	2.2	2						
YSA-630 YSA-630Ex	6.3	2	Ø13x36	3	2m		6	3.5	2.4	4			3/4"	90	87	2"
							4	1.8	1.1	2						

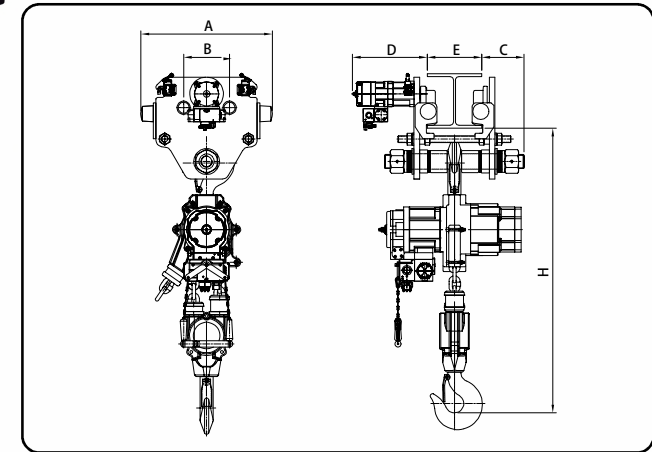
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YSA Series



Hoist with trolley



Model	Capacity (ton)	Fall no.	Dimension (mm)											N.W (kg)
			H	A	B	C	D	E	F	I	J	K	L	
YSA-1000 YSA-1000Ex	10	2	1100	616	308	308	326	156	170	85	70	85	70	186

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Model	Capacity (ton)	Dimension (mm)					
		H	A	B	C	D	E
YSA-1000+AT-1000 YSA-1000Ex+AT-1000Ex	10	1191	601	210	194	342	250~300

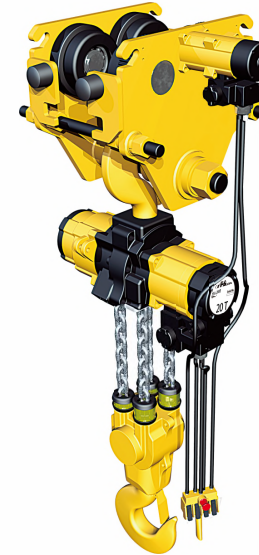
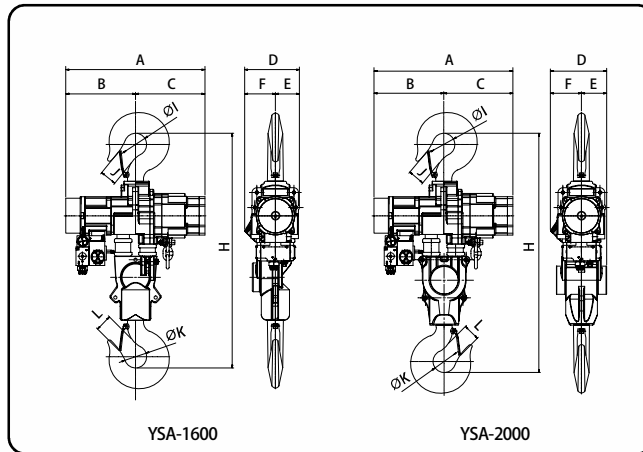
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Model	Capacity (ton)	Fall no.	Load chain (mm)	Lift (m)	Classification	Operation	Working air pressure (kg/cm ²)	Motor (kw)	Speed (m/min)	Air consumption (m ³ /min)	Brake type	Limit switch	Air inlet (in)	Level of noise (dB)		Main line air supply (in)
														Load	No load	
YSA-1000 YSA-1000Ex	10	2	Ø16x45	3	18m	Toggle Control or Pendant Control (P)	6	3.5	1.6	4	Disk type brake	Upper/Lower limit	1"	90	87	2"
							4	1.8	0.7	2						

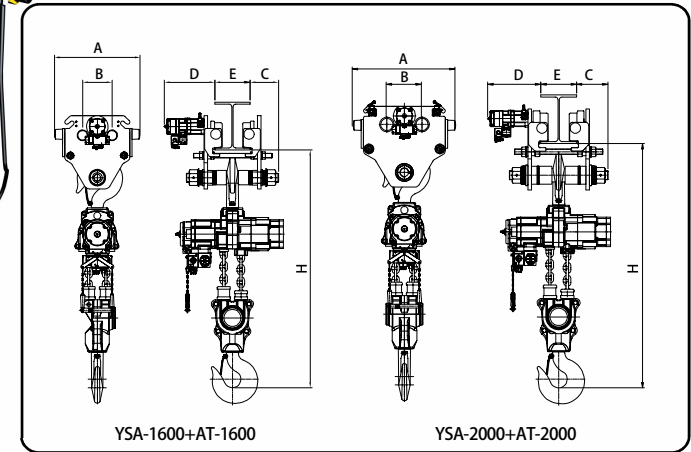
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YSA Series



Hoist with trolley



Model	Capacity (ton)	Fall no.	Dimension (mm)											N.W (kg)
			H	A	B	C	D	E	F	I	J	K	L	
YSA-1600 YSA-1600Ex	16	3	1200	746	374	372	295	129	166	100	78	100	78	327
YSA-2000 YSA-2000Ex	20	4	1360	746	374	372	301	135	166	120	90	120	90	383

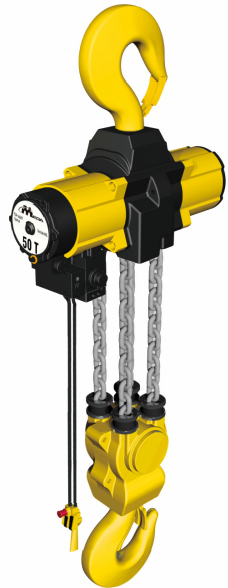
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Model	Capacity (ton)	Dimension (mm)					
		H	A	B	C	D	E
YSA-1600+AT-1600 YSA-1600Ex+AT-1600Ex	16	1360	609	210	202	360	250~300
YSA-2000+AT-2000 YSA-2000Ex+AT-2000Ex	20	1458	718	246	220	372	250~300

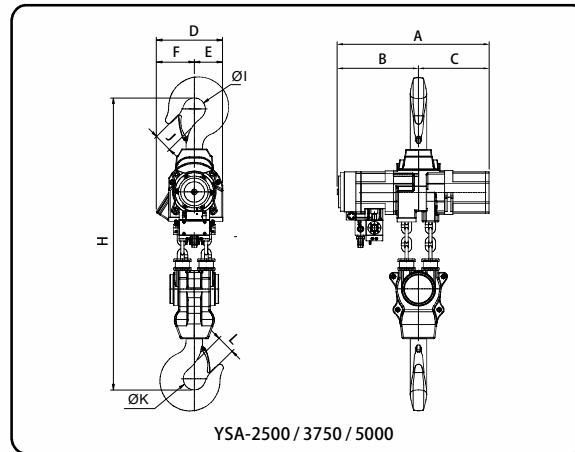
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Model	Capacity (ton)	Fall no.	Load chain (mm)	Lift (m)	Classification	Operation	Working air pressure (kg/cm²)	Motor (kw)	Speed (m/min)	Air consumption (m³/min)	Brake type	Limit switch	Air inlet (in)	Level of noise (dB)		Main line air supply (in)
														Load	No load	
YSA-1600 YSA-1600Ex	16	3	Ø16x45	3	1Bm	Toggle Cord (TC) or Pendant Control (PC)	6	3.5	1.0	4	Disk type brake	Upper/Lower limit	1"	90	87	2"
							4	1.8	0.4	2						
YSA-2000 YSA-2000Ex	20	4	Ø16x45	3	1Bm		6	3.5	0.72	4			1"	90	87	2"
							4	1.8	0.3	2						

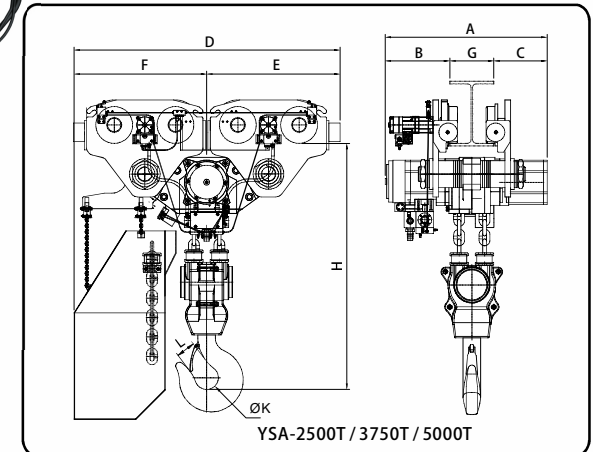
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YSA Series



Hoist with trolley



Model	Capacity (ton)	Fall no.	Dimension (mm)											N.W. (kg)
			H	A	B	C	D	E	F	I	J	K	L	
YSA-2500 YSA-2500Ex	25	2	1561	983	481	502	426	131	295	140	113	140	113	580
YSA-3750 YSA-3750Ex	37	3	1840	1163	541	622	516	126	390	150	120	150	120	880
YSA-5000 YSA-5000Ex	50	4	1840	1163	571	592	426	161	265	160	130	160	130	980

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Model	Capacity (ton)	Fall no.	Dimension (mm)										N.W. (kg)
			H	A	B	C	D	E	F	G	K	L	
YSA-2500T YSA-2500TEx	25	2	1177	1029	352	377	1264	632	632	200~300	140	113	1000
YSA-3750T YSA-3750TEx	37	3	1425	1174	431	443	1674	837	837	200~300	150	120	1500
YSA-5000T YSA-5000TEx	50	4	1425	1174	431	443	1674	837	837	200~300	160	130	1650

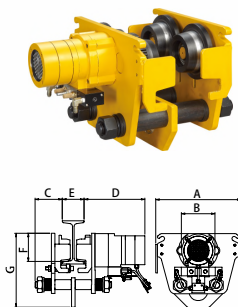
Model		Capacity (ton)	Motor (kw)	Working air pressure (kg/cm ²)	Traversing Speed (m/min)	Air consumption (m ³ /min)	Brake type	Air inlet (in)
AT-2500	AT-2500Ex	25	1.5	6	14	2.6		1/2"
AT-3750	AT-3750Ex	37	1.5	6	14	2.6		1/2"
AT-5000	AT-5000Ex	50	1.5	6	14	2.6		1/2"

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Model		Capacity (ton)	Fall no.	Load chain (mm)	Lift (m)	Classification	Operation	Working air pressure (kg/cm ²)	Motor (kw)	Speed (m/min)	Air consumption (m³/min)	Brake type	Limit switch	Air inlet (in)	Level of noise (dB)		Main line air supply (in)
															Load	No load	
YSA-2500	YSA-2500Ex	25	2	Ø23.5 x 66	3	1Bm	Toggle Cord (TC) or Pendant Control (PC)	6	6.3	1.25	6.5	Disk type brake	Upper/Lower limit	1½"	85	82	2"
YSA-2500T	YSA-2500TEx																
YSA-3750	YSA-3750Ex	37	3	Ø23.5 x 66	3	1Bm		6	6.3	0.75	6.5			1½"	85	82	2"
YSA-3750T	YSA-3750TEx																
YSA-5000	YSA-5000Ex	50	4	Ø23.5 x 66	3	1Bm		6	6.3	0.55	6.5			1½"	85	82	2"
YSA-5000T	YSA-5000TEx																

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Air Trolley (AT)

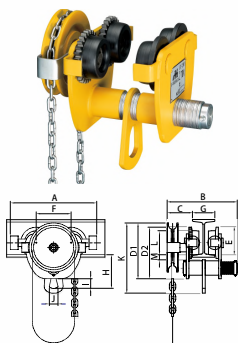


Model	Capacity (ton)	Dimension (mm)							Min radius of curve (m)	N.W. (kg)
		A	B	C	D	E	F	G		
AT-100 AT-100Ex	1	294	116	95	208	75-125	98	256	1.0	34
AT-200 AT-200Ex	2	322	135	100	209.5	100-150	116	279	1.3	38
AT-320 AT-320Ex	3.2	356	144	117.5	217	125-175	119	297	1.5	50
AT-630 AT-630Ex	6.3	386	183	132.5	219	125-175	169	521	2.2	140
AT-1000 AT-1000Ex	10	601	210	194	342	250-300	220	466	3.8	220
AT-1600 AT-1600Ex	16	609	210	202	360	250-300	220	466	4.0	240
AT-2000 AT-2000Ex	20	718	246	220	372	250-300	228	565	4.4	285

Model	Capacity (ton)	Motor (Kw)	Working air pressure (kg/cm ²)	Traversing Speed (m/min)	Air consumption (m ³ /min)	Brake type	Air inlet (in)
AT-100 AT-100Ex	1	0.2	6	20	0.6	Disk type brake	1/2"
AT-200 AT-200Ex	2	0.2	6	20	0.6		1/2"
AT-320 AT-320Ex	3.2	0.2	6	20	0.6		1/2"
AT-630 AT-630Ex	6.3	0.2	6	20	0.6		1/2"
AT-1000 AT-1000Ex	10	0.7	6	12	1.3		1/2"
AT-1600 AT-1600Ex	16	0.7	6	12	1.3		1/2"
AT-2000 AT-2000Ex	20	0.7	6	12	1.3		1/2"

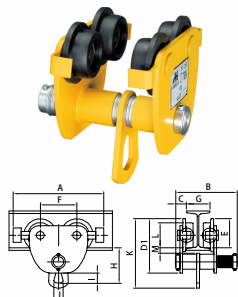
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Geared Trolley (GT)



Model	Capacity (ton)	Dimensions (mm)															Min radius of curves (m)	N.W. (kg)
		A	B	C	D1	D2	E	F	H	I	J	K	L	M	G			
GT-050 GT-050Ex	0.5	236	266	81	150	151	69	89	115	33	28	199	60	32	50-150	1	8.8	
GT-100 GT-100Ex	1	259	273	84	170	167	78	100	125	35	31	221	70	29	75-150	1	13.5	
GT-200 GT-200Ex	2	289	309	91	224	207	91	116	171	55	56	301	80	31	100-175	1.3	19.8	
GT-300 GT-300Ex	3	312	346	96	241	239	103	130	215	79	60	355	90	35	100-200	1.5	30.3	
GT-500 GT-500Ex	5	352	350	98	235	251	117	140	218	84	60	370	100	33	125-200	1.6	37	
GT-750 GT-750Ex	7.5	410	382	110	280	292	135	184	260	103	76	435	120	40	150-200	2.2	64	
GT-1000 GT-1000Ex	10	440	389	114	301	322	152	197	275	105	76	467	140	35	150-200	2.2	86	

Plain Trolley (PT)

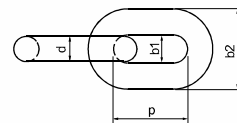


Model	Capacity (ton)	Dimensions (mm)													Min radius of curve (m)	N.W. (kg)
		A	B	C	D1	E	F	H	I	J	K	L	M	G		
PT-050 PT-050Ex	0.5	236	220	35	151	69	89	115	33	28	199	60	32	50-150	1	6.4
PT-100 PT-100Ex	1	259	227	39	167	78	100	125	35	31	218	70	29	75-150	1	10.6
PT-200 PT-200Ex	2	289	260	43	207	91	116	171	55	56	284	80	31	100-175	1.3	16.8
PT-300 PT-300Ex	3	312	300	50	239	103	130	215	79	60	353	90	35	100-200	1.5	25.8
PT-500 PT-500Ex	5	352	304	52	251	117	140	218	84	60	370	100	33	125-200	1.6	32.6
PT-750 PT-750Ex	7.5	410	343	72	292	135	184	260	103	76	435	120	40	150-200	2.2	59.5
PT-1000 PT-1000Ex	10	440	350	75	322	152	197	275	105	76	467	140	35	150-200	2.2	81.4

Chain Bucket No. Selection Table

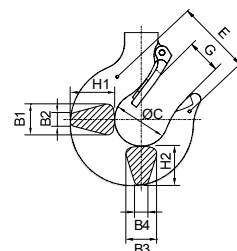
Model	Chain Size (mm)	Lift (m)										Bucket No.	Bucket Size (mm)	Material
		≤3	≤6	≤12	≤20	≤24	≤30	≤40	≤45	≤50	≤60			
YSA-025(Ex)	Ø6.3			YA#1		YA#6		YA#7		YA#8		YA#1	154x150x230	Canvas
												YA#2	180x154x222	Canvas
												YA#3	210x210x320	Canvas
												YA#4	180x154x302	Canvas
YSA-050(Ex)	Ø6.3			YA#1		YA#6		YA#7		YA#8		YA#5	210x210x560	Canvas
												YA#6	216x216x450	Canvas
												YA#7	250x200x660	Steel
												YA#8	250x200x830	Steel
YSA-100(Ex)	Ø7.1		YA#2	YA#4		YA#9		YA#10			YA#12	YA#9	180x154x570	Canvas
												YA#10	270x190x695	Steel
												YA#11	270x190x850	Steel
												YA#12	270x190x1000	Steel
YSA-200(Ex)	Ø7.1	YA#2	YA#4	YA#9	YA#10		YA#12					YA#13	300x300x607	Steel
												YA#14	300x300x940	Steel
												YA#15	300x300x1000	Steel
												YA#16	300x300x1200	Steel
YSA-320(Ex)	Ø13		YA#3	YA#5		YA#13		YA#14	YA#15					
YSA-630(Ex)	Ø13	YA#3	YA#5	YA#13	YA#14	YA#15	YA#16							

Load Chain



Diameter d (mm)	Model Reference Being Used	Inner Length p (mm)	Inner Width b1 (mm)	Outer Width b2 (mm)	Breaking Load (kN)
Ø6.3	YSA-025(Ex), YSA-050(Ex)	19.1	7.9	21.4	50
Ø7.1	YSA-100(Ex), YSA-200(Ex)	20.2	8.1	23.2	63.3
Ø13	YSA-320(Ex), YSA-630(Ex)	36	15.6	44.2	212
Ø16	YSA-1000(Ex), YSA-1600(Ex) YSA-2000(Ex)	45	19.2	54.4	322
Ø23.5	YSA-2500(Ex), YSA-3750(Ex) YSA-5000(Ex), YSA-2500T(Ex) YSA-3750T(Ex), YSA-5000T(Ex)	66	27	76.6	750

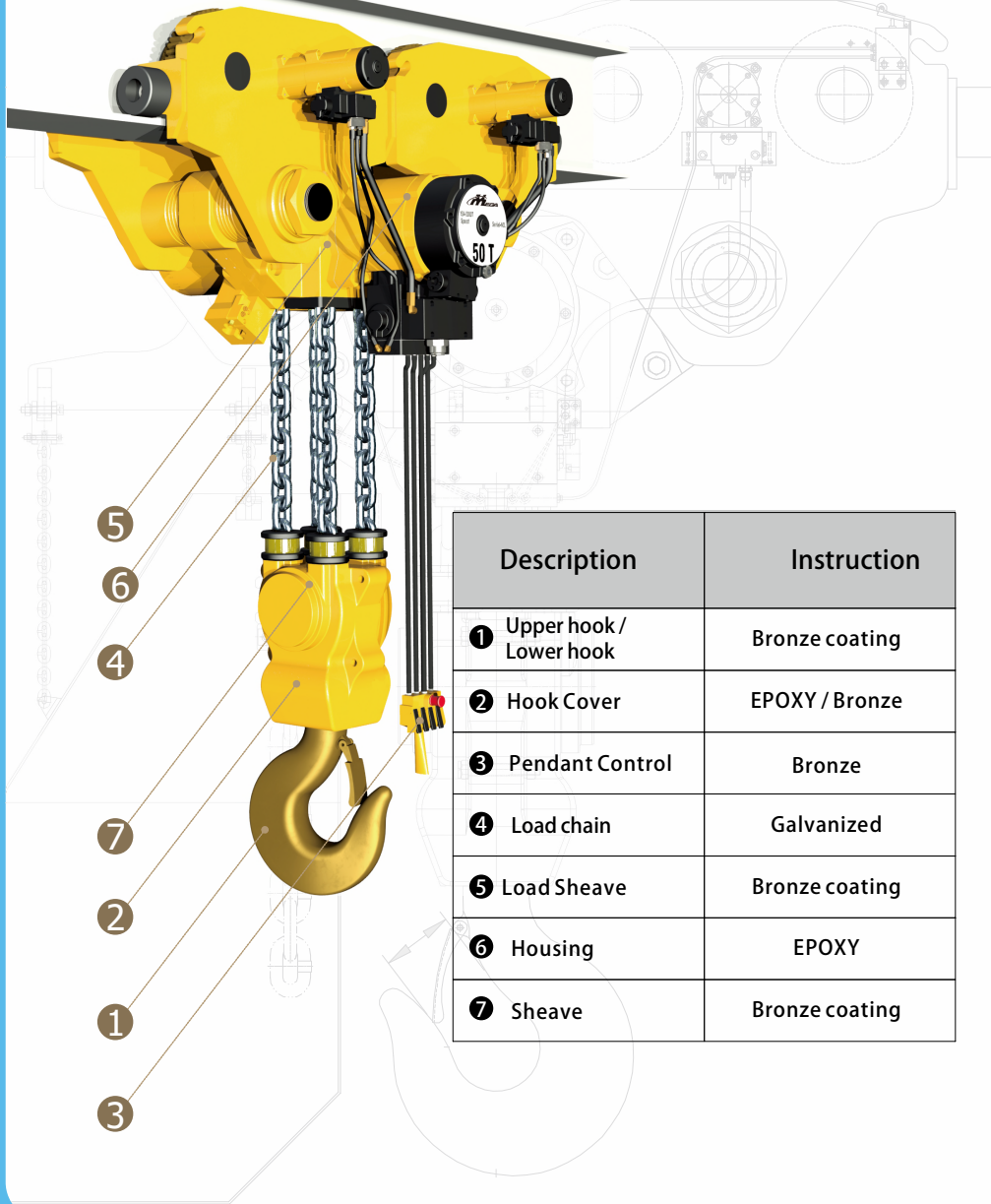
Hook



Model	Capacity (ton)	T/B	Dimensions (mm)								Allow Stress (kg/mm ²)	Hook Block Weight (kg)
			H1	B1	B2	H2	B3	B4	C	G	E	
YSA-025(Ex) YSA-050(Ex) YSA-100(Ex)	0.25 0.5, 1	T/B	33	23	9	29	23	9	40	28	60	70
YSA-200(Ex)	2	T/B	45	31	10	41	31	10	46	36	75	70
YSA-320(Ex)	3.2	T/B	55	34	19	48	34	19	52	40	90	70
YSA-630(Ex)	6.3	T/B	66	44	23	60	44	23	62	45	100	70
YSA-1000(Ex)	10	T/B	85	61	22	77	61	22	85	62	140	100
YSA-1600(Ex)	16	T/B	100	70	28	95	65	28	100	70	133	100
YSA-2000(Ex)	20	T/B	120	85	32	110	83	32	120	82	165	100
YSA-2500T(Ex)	25	B	138	98	36	128	93	36	140	105	220	100
YSA-3750T(Ex)	37	B	150	115	55	140	110	55	150	112	230	100
YSA-5000T(Ex)	50	B	168	120	70	150	120	70	160	122	240	100

● T=Top hook / B=Bottom hook

Explosion proof

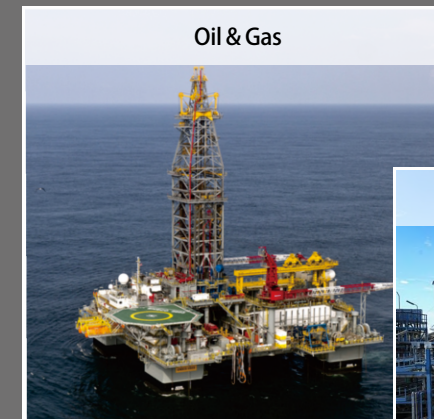


Description	Instruction
① Upper hook / Lower hook	Bronze coating
② Hook Cover	EPOXY / Bronze
③ Pendant Control	Bronze
④ Load chain	Galvanized
⑤ Load Sheave	Bronze coating
⑥ Housing	EPOXY
⑦ Sheave	Bronze coating

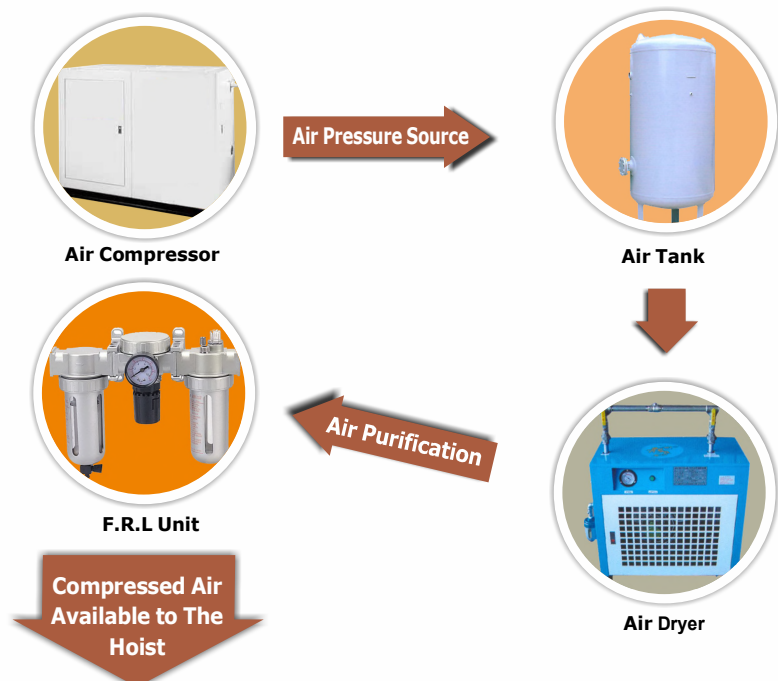
Pneumatic hoists utilize compressed air as a power source to their integrated air motors and therefore, unlike electrically powered hoists, pneumatically powered chain hoist motors are electric spark-free. This makes pneumatic chain hoists safe for use in wet and hazardous flammable environments & atmospheres.

Further special preparation of this Ex range of pneumatic hoists makes them suitable and certified for use in such hazardous environments & atmospheres in accordance with the ATEX regulations (ATEX Directive 2014/34/EU) by the use of special non-sparking materials for certain components to prevent spark generation in the event of surface impact contact. The temperature operating range of the Ex hoists min & max environmental temperatures -20 ~ +60 Deg. C

Our hoists in their various formats are suitable for use in mines, shipyards, power plants, cement plants, onshore & offshore oil industries & gas production platforms.



■ Air Flow System



- **Compressor** : above 30hp to match air storage supplement.
- **Air Filter** : need to clean & replace regularly.
- **Pressure Regulator**: 8kg / cm² at least.
- **Lubricator** : 6 drops / min or more adjusted according to operating status.
- Connect the main air supply hose to the main air inlet of the hoist. Supply hose i.d. sizes :
0.25 ton ~ 2 ton : i.d. 1/2" ; 3.2 ton ~ 6.3 ton : i.d. 3/4" ;
10 ton ~ 20 ton : i.d. 1" ; 25 ton ~ 50 ton : i.d. 1 1/2".
- Air supply pressure range needs to be Working Air Pressure 4~6 Kg / cm². The hoist performance and lifting / lowering speed is affected by the W.A.P.
- Use a dedicated air supply line to the hoist to prevent air starvation to the hoist which can occur if used on the same air supply line as other pneumatic equipment.

■ Federation Europeenne De La Manutention

Cubic mean value Definitions		Average operating time per day in hours							
1 (light)	($k \leq 0.50$) Mechanisms or parts thereof, usually subject to very small loads and in exceptional cases only to maximum loads.	0.25-0.5	0.5-1	1-2	2-4	4-8	8-16	> 16	
2 (medium)	($0.50 < k \leq 0.63$) Mechanisms or parts thereof, usually subject to small loads but rather often to maximum loads.	0.12-0.25	0.25-0.5	0.5-1	1-2	2-4	4-8	8-16	> 16
3 (heavy)	($0.63 < k \leq 0.80$) Mechanisms or parts thereof, usually subject to medium loads but frequently to maximum loads.	≤ 0.12	0.12-0.25	0.25-0.5	0.5-1	1-2	2-4	4-8	8-16
4 (very heavy)	($0.80 < k \leq 1$) Mechanisms or parts thereof, usually subject to maximum or almost to maximum loads.	≤ 0.12	0.12-0.25	0.25-0.5	0.5-1	1-2	2-4	4-8	
Classification of Mechanisms FEM 9.511		1 Dm	1 Cm	1 Bm	1 Am	2 m	3 m	4 m	5 m

■ ISO/FEM (9.511)

Classification of mechanisms into groups

1 Dm	1 Cm	1 Bm	1 Am	2 m	3 m	4 m	5 m
M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8

Classification of mechanisms

Load spectrum	Cubic mean value	Class of operation time									
		V0.06	V0.12	V0.25	V0.5	V1	V2	V3	V4	V5	
		T0	T1	T2	T3	T4	T5	T6	T7	T8	
		≤ 0.12	≤ 0.25	≤ 0.5	≤ 1	≤ 2	≤ 4	≤ 8	≤ 16	> 16	
1 L1	$k \leq 0.50$			1 Dm	1 Cm	1 Bm	1 Am	2 m	3 m	4 m	
2 L2	$0.50 < k \leq 0.63$		1 Dm	1 Cm	1 Bm	1 Am	2 m	3 m	4 m	5 m	
3 L3	$0.63 < k \leq 0.80$	1 Dm	1 Cm	1 Bm	1 Am	2 m	3 m	4 m	5 m		
4 L4	$0.80 < k \leq 1.00$	1 Cm	1 Bm	1 Am	2 m	3 m	4 m	5 m			

Class of operation time

Class of operation time	Average operating time per day (in hours)	Calculated total operating time in hours
V0.06 T0	≤ 0.12	200
V0.12 T1	≤ 0.25	400
V0.25 T2	≤ 0.5	800
V0.5 T3	≤ 1	1600
V1 T4	≤ 2	3200
V2 T5	≤ 4	6300
V3 T6	≤ 8	12500
V4 T7	≤ 16	25000
V5 T8	≤ 16	50000

■ Operation Cycle

