

# Yale *CPV*

Electric chain hoist



# FLEXIBLE CONFIGURATIONS FOR OPTIMAL USE

## THE EXTENDED CPV SERIES

The electric chain hoist model CPV combines modern design and technical innovation. The robust construction makes the hoist suitable for a variety of applications. The integrated limit switch for the highest and lowest hook position considerably extends the lifetime of the friction clutch, motor and gearbox.

The electric chain hoists CPV series are developed, produced, assembled and tested by Columbus McKinnon in Wuppertal, Germany & Hangzhou China. Each hoist is tested to the rated capacity with the overload protection device set accordingly. The order in-take, processing, hoist assembly and shipment are optimized for a rapid delivery. Columbus McKinnon offer a quick supply of spare parts.

## YALE PRODUCT FAMILY

As well as the Yale CPV the powered hoist range also offers the Yale CPE electric chain hoist. The CPE series provides load capacities from 1.6 t up to 10 t and is characterized in particular by the extremely robust cast iron housing and a long service life.



The image shows the electric chain hoist CPE, produced by Yale in Germany since 1994.





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COMPLETE SERIES CPV

**CAPACITIES  
125 - 5000KG**

WITH

**SUSPENSION HOOK  
AS STANDARD,**

**SUSPENSION LUG  
AS AN OPTION,**

**PUSH, GEARED OR  
ELECTRIC TROLLEY**

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# Yale CPV

The electric chain hoist series CPV combines modern design and technical innovation. The robust construction makes the hoist a versatile tool for various professional applications, and offers the proven performance at much more compact dimensions. The service-friendly modular design enables easy access to all critical parts for time-saving maintenance and periodic inspections.

## CAPACITIES 125 - 5000 KG

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### BENEFITS & FEATURES

#### SAFETY AND WARRANTY

The solid structure of the hoist and the selected quality of the critical units such as gearbox, brake, motor, slip clutch and controls enable safe operation of the hoist throughout its service life. The periodic inspections and maintenance are simple as all critical parts are easily accessible. Yale grants 1 year warranty (excluding wear parts) and a lifetime lubricated gearbox.

#### CONTROLS

The hoists series CPV are equipped with the low voltage control 42V as standard. This low voltage combined with the IP 65 protected pendant provides more operational safety. The hoist also features a main contactor which cuts the voltage supply as soon as the emergency stop is activated.

#### OVERLOAD PROTECTION

All CPV hoists are also protected against overload by means of a slip clutch. The clutch protects from overloading not only the hoist, but also the chain, hooks, bearing construction and cranes, attached slings and lifting accessories. The slip clutch is designed to guarantee a permanent connection between the load and the brake to meet higher safety requirements.

#### BRAKE

The electromagnetic spring pressure brake is maintenance-free and features a pre-set gap. It is easily accessible to inspect the gap during the periodic maintenance. It is normally-closed with the braking force applied by the pressure springs and holds the load safely even in the event of a power failure.

#### POWERED MOVEMENT AND LIMIT SWITCHES

The hoist comes with a fine tolerance, case hardened round steel chain in the length as specified in the client's order. A smooth run of the chain is ensured by the chain guide. The limit switches are located at the chain guide and activate as soon as the hook reaches its highest or lowest position. The activation occurs when the rubber buffers, placed at the hook and at the chain end stop, trip the limit switches.

#### SUSPENSIONS

CMCO offers different Yale types of suspensions: The top hook is a more universal suspension for various places of use, the suspension lug ensures compact low headroom and easy integration in close headroom applications. Adapter suspensions for light crane systems or special customized adapters are also available. The most common suspension is, however, the hoist integrated with push, geared or electric trolley.

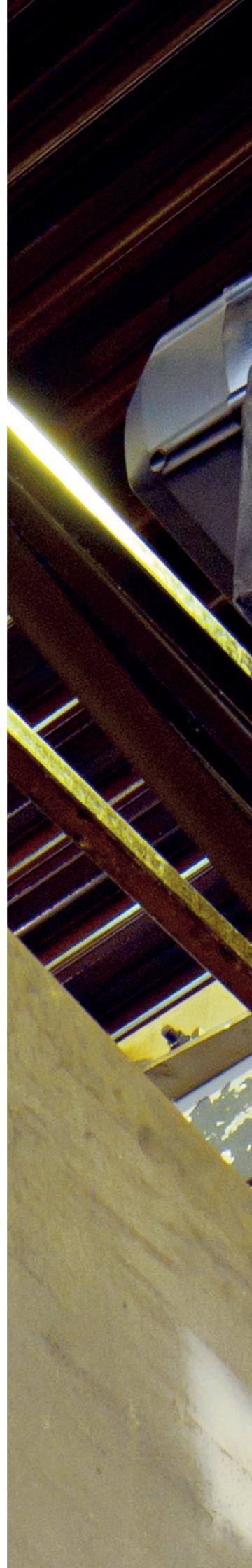
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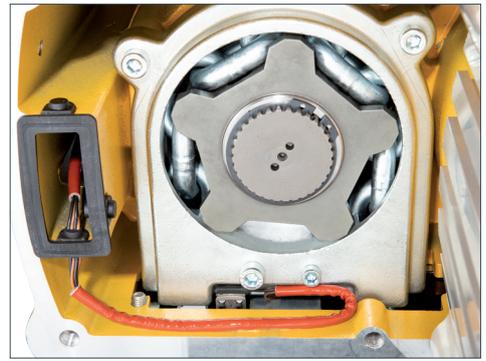
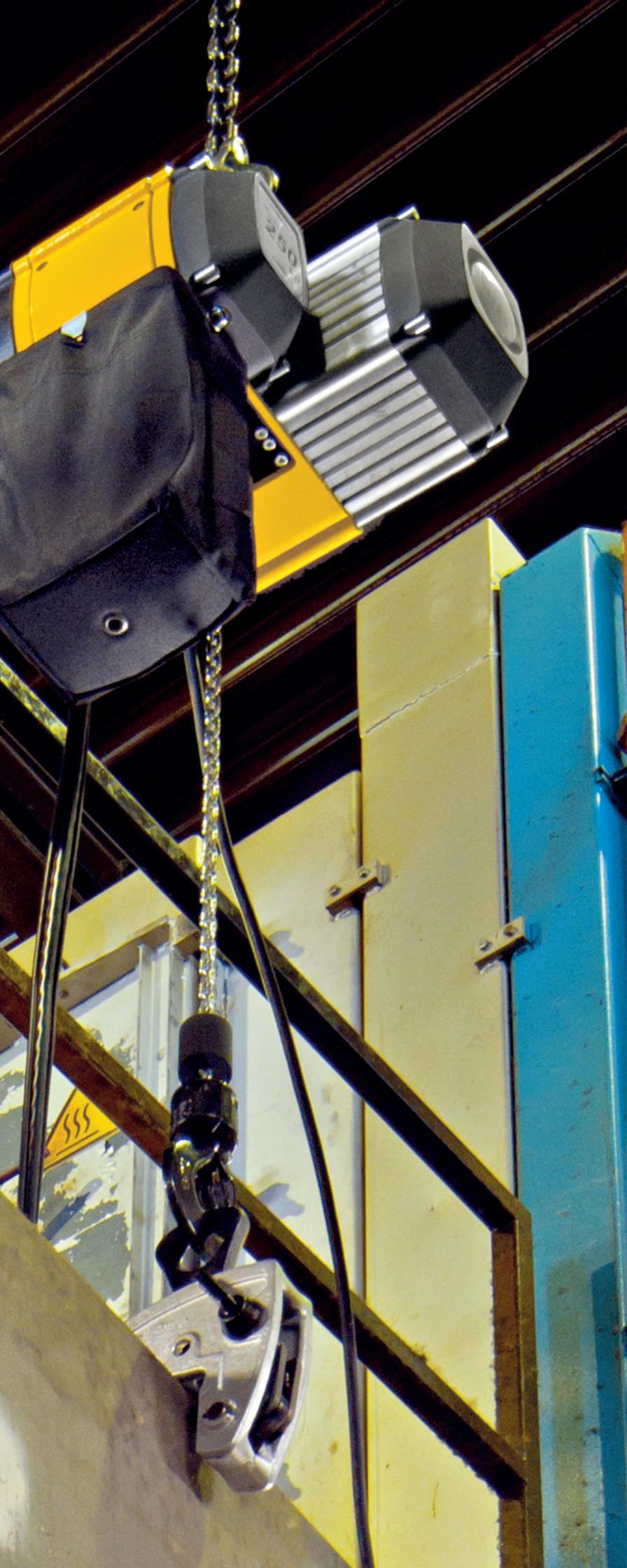
### CUSTOMER-ORIENTED

Many options offer application possibilities to meet various requirements, like

- For out-door use.
- For long lifting heights.
- For holding loads above persons.

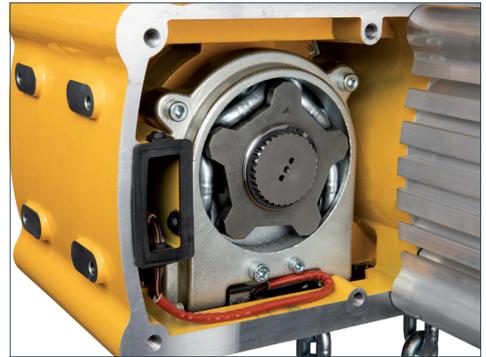
For more information see pages 10-11.





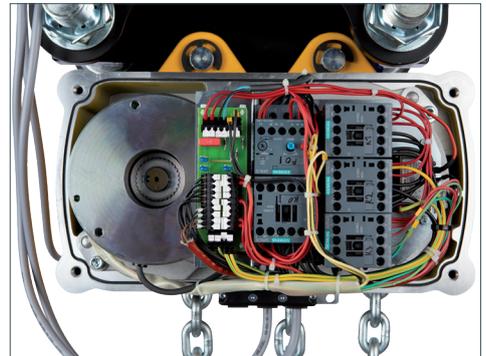
#### **CHAIN GUIDE**

The 5-pocket load sprocket, all-steel chain guide, micro switches and service-friendly cable routing.



#### **OPTIMAL CABLE ROUTING**

4 thread holes on the body side, to mount e.g. counter weights, radio controls etc.



#### **LOW VOLTAGE CONTROL**

The 42V low voltage control is a PCB or manually wired (with CPVF 25-8/50-4 on the image).



#### **LIMIT SWITCHES AS STANDARD**

End limit switches are bronze studs in the lower chain guide, which activate the well-protected micro-switches.

# FEATURES AND FINISH

## STANDARD FEATURES

- Increased operating safety through 42V control voltage (low voltage control) and the main contactor.
- The integrated limit switch for the highest and lowest hook position considerably extends the service life of the slip clutch, motor and gearbox.
- Overload protection (slip clutch) in all CPV hoists is outside force flow to meet higher safety requirements.
- Electromagnetic spring pressure brake holds the load safely even in the event of power failure.
- Different suspension types available such as top hook, lug or an integrated trolley. A retro-fit to another type of suspension is possible.
- Any chain length (lifting height) as per customer order.
- Oil bath gearbox (or semifluid grease with CPV/F 2-8 and 5-4 as well as CPV 2-4 and 5-2) with helical gearing for particularly smooth service and enhanced lifetime.
- All-steel chain guide.
- The chain guide of the smallest hoist CPV/F 2-8 and 5-4 as well as CPV 2-4 and 5-2 is a thermoplastic (POM) chain guide that is integral with the housing.
- CPV series are protected up to IP55.
- 1 year warranty (excluding wear parts) and a lifetime lubricated gearbox.

## FURTHER STANDARDS

To meet further customer expectations, the Yale CPV is also available in other standard versions, e.g.

- CPV with direct control, see page 7

## OPTIONS AND FEATURES FOR APPLICATIONS

see pages 10-11



**STANDARD**  
The image shows the electric chain hoist **CPVF 5-8** with suspension hook.



## MOTOR

The hoist features a ribbed aluminium motor housing in which the stator is pressed. The fan provides for a regular air movement along the ribs for better heat dissipation. The motor is IP55 protected and has a sufficiently high duty cycle to prevent the motor from overheating even at longer lifting heights. Under the fan, there is the adjusting screw used to set the slip clutch (overload protection). Thus, to inspect the setting or to re-adjust the slip clutch is quick and easy.

# TECHNICAL DATA

## CPVF - 400V, 3-PHASE, 50 HZ

Capacity kg	Model	Number of chain falls	Chain dimensions d x p mm	Classification FEM/ISO	Lifting speed		Hoist motor kW	Motor rating ED %	Weight at standard lift (3 m) <sup>1</sup>		
					main lift m/min	fine lift m/min			suspension lug kg	push trolley <sup>2</sup> kg	electric trolley <sup>3</sup> kg
125	CPVF 2-8	1	4x12.2	3m/M6	8	2	0.75/0.18	50/25	18	27	32
250	CPVF 2-8	1	4x12.2	1Am/M4	8	2	0.75/0.18	33/17	18	27	32
250	CPVF 2-18	1	5x15.1	1Am/M4	18	4.5	0.75/0.18	33/17	27	42	50
320	CPVF 5-8	1	5x15.1	3m/M6	8	2	0.75/0.18	33/17	27	42	50
500	CPVF 5-4	2	4x12.2	1Am/M4	4	1	0.75/0.18	33/17	21	30	35
500	CPVF 5-8	1	5x15.1	1Am/M4	8	2	0.75/0.18	33/17	27	42	50
500	CPVF 5-18	1	7.1x20.5	1Am/M4	18	4.5	1.5/0.37	33/17	59	78	85
630	CPVF 10-8	1	7.1x20.5	3m/M6	8	2	1.5/0.37	33/17	59	78	85
1000	CPVF 10-4	2	5x15.1	1Am/M4	4	1	0.75/0.18	33/17	29	44	52
1000	CPVF 10-8	1	7.1x20.5	1Am/M4	8	2	1.5/0.37	33/17	59	78	85
1500	CPVF 20-4	2	7.1x20.5	2m/M5	4	1	1.5/0.37	33/17	64	83	90
2000	CPVF 20-4	2	7.1x20.5	1Am/M4	4	1	1.5/0.37	33/17	64	83	90
2000	CPVF 25-8	1	11.3x31	2m/M5	8	2	3.6/0.9	33/17	85	147	161
2500	CPVF 25-8	1	11.3x31	1Am/M4	8	2	3.6/0.9	33/17	85	147	161
3200	CPVF 50-4	2	11.3x31	3m/M6	4	1	3.6/0.9	33/17	98	160	174
5000	CPVF 50-4	2	11.3x31	1Am/M4	4	1	3.6/0.9	33/17	98	160	174

## DIRECT CONTROLS

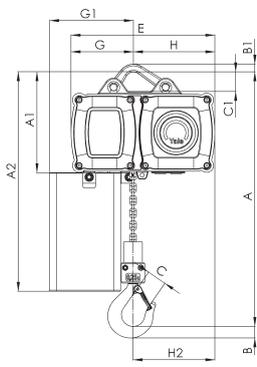
Capacity kg	Model	Number of chain falls	Chain dimensions d x p mm	Classification FEM/ISO	Lifting speed		Hoist motor kW	Motor rating ED %	Weight at standard lift (3 m) <sup>1</sup>		
					main lift m/min	fine lift m/min			suspension lug kg	push trolley <sup>2</sup> kg	electric trolley <sup>3</sup> kg
125	CPVF 2-8 DC	1	4x12.2	3m/M6	8	2	0.75/0.18	50/25	18	27	32
250	CPVF 2-8 DC	1	4x12.2	1Am/M4	8	2	0.75/0.18	33/17	18	27	32
250	CPVF 2-18 DC	1	5x15.1	1Am/M4	18	4.5	0.75/0.18	33/17	27	42	50
320	CPVF 5-8 DC	1	5x15.1	3m/M6	8	2	0.75/0.18	33/17	27	42	50
500	CPVF 5-4 DC	2	4x12.2	1Am/M4	4	1	0.75/0.18	33/17	21	30	35
500	CPVF 5-8 DC	1	5x15.1	1Am/M4	8	2	0.75/0.18	33/17	27	42	50
500	CPVF 5-18 DC	1	7.1x20.5	1Am/M4	18	4.5	1.5/0.37	33/17	59	78	85
630	CPVF 10-8 DC	1	7.1x20.5	3m/M6	8	2	1.5/0.37	33/17	59	78	85
1000	CPVF 10-4 DC	2	5x15.1	1Am/M4	4	1	0.75/0.18	33/17	29	44	52
1000	CPVF 10-8 DC	1	7.1x20.5	1Am/M4	8	2	1.5/0.37	33/17	59	78	85
1500	CPVF 20-4 DC	2	7.1x20.5	2m/M5	4	1	1.5/0.37	33/17	64	83	90
2000	CPVF 20-4 DC	2	7.1x20.5	1Am/M4	4	1	1.5/0.37	33/17	64	83	90
2000	CPVF 25-8 DC	1	11.3x31	2m/M5	8	2	3.6/0.9	33/17	85	147	161
2500	CPVF 25-8 DC	1	11.3x31	1Am/M4	8	2	3.6/0.9	33/17	85	147	161
3200	CPVF 50-4 DC	2	11.3x31	3m/M6	4	1	3.6/0.9	33/17	98	160	174
5000	CPVF 50-4 DC	2	11.3x31	1Am/M4	4	1	3.6/0.9	33/17	98	160	174

## TROLLEY

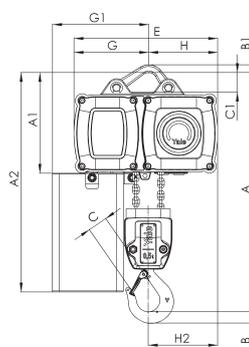
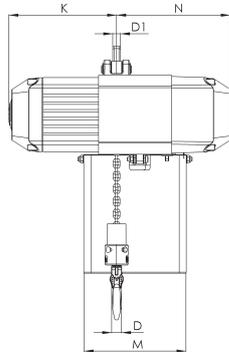
Suitable for	All trolleys					Electric trolley	
	Capacity of the trolley kg	Size	Beam flange width b mm	Beam flange thickness t max. mm	Curve radius min. m	travel speed m/min at 50Hz	motor kW at 50Hz
CPVF 2-8/5-4	500	A	58 - 180	19	0.9	11 or 18	0.09
CPVF 2-8/5-4	500	B	180 - 300	19	0.9	11 or 18	0.09
CPVF 5-8/10-4, CPVF 2-18	1000	A	58 - 180	19	0.9	18 or 18/4.5	0.18 or 0.18/0.06
CPVF 5-8/10-4, CPVF 2-18	1000	B	180 - 300	19	0.9	18 or 18/4.5	0.18 or 0.18/0.06
CPVF 10-8/20-4, CPVF 5-18	2000	A	58 - 180	19	1.15	18 or 18/4.5	0.18 or 0.18/0.06
CPVF 10-8/20-4, CPVF 5-18	2000	B	180 - 300	19	1.15	18 or 18/4.5	0.18 or 0.18/0.06
CPVF 25-8/50-4	5000	A	98 - 180	27	2.0	11 or 11/2.8	0.37 or 0.3/0.09
CPVF 25-8/50-4	5000	B	180 - 300	27	1.8	11 or 11/2.8	0.37 or 0.3/0.09

# DIMENSIONS CPVF

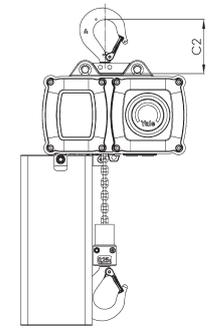
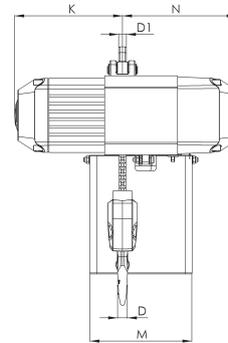
Model	CPVF 2-8	CPVF 5-4	CPVF 2-18 CPVF 5-8	CPVF 10-4	CPVF 5-18 CPVF 10-8	CPVF 20-4	CPVF 25-8	CPVF 50-4
A, mm	357	393	357	430	431	528	514	658
A1, mm	196	196	196	196	234	234	288	288
A2 (dimension with chain container), mm								
- Size I (for lift-height, m)	476 (10 m)	476 (5 m)	476 (10 m)	476 (5 m)	564 (12 m)	564 (6 m)	580 (13 m)	580 (6 m)
- Size II (for lift-height, m)	526 (22 m)	526 (11 m)	526 (22 m)	526 (11 m)	644 (18 m)	644 (9 m)	764 (25 m)	764 (12 m)
- Size III (for lift-height, m)	606 (40 m)	606 (20 m)	606 (40 m)	606 (20 m)	734 (25 m)	734 (12 m)	854 (30 m)	854 (15 m)
- Size IV (for lift-height, m)	798 (64 m)	798 (32 m)	798 (64 m)	798 (32 m)	934 (40 m)	934 (20 m)	-	-
B, mm	22	22	22	29	29	37	37	37
B1, mm	15	15	15	15	20	20	33	33
C, mm	29	29	29	35	35	40	46	46
C1, mm	38	38	38	38	45	45	71	71
C2, mm	105	105	105	105	154	154	194	194
D, mm	15	15	15	21	21	26	35	35
D1, mm	15	15	15	15	15	15	25	25
E, mm	277	277	277	277	326	326	409	409
G, mm	120	144	120	144	140	173	179	179
G1 (size I), mm	142	166	142	166	175	208	264	264
G1 (size II), mm	162	186	162	186	175	208	264	264
G1 (size III), mm	162	186	162	186	175	208	265	265
G1 (size IV), mm	162	186	162	186	175	208	-	-
H, mm	157	133	157	133	186	154	230	230
H2, mm	158	158	158	158	186	186	230	180
K, mm	208	208	208	208	285	285	335	335
M (size I), mm	162	162	162	162	209	209	300	300
M (size II), mm	197	197	197	197	209	209	300	300
M (size III), mm	197	197	197	197	209	209	301	301
M (size IV), mm	197	197	197	197	209	209	-	-
N, mm	219	219	219	219	274	274	299	299



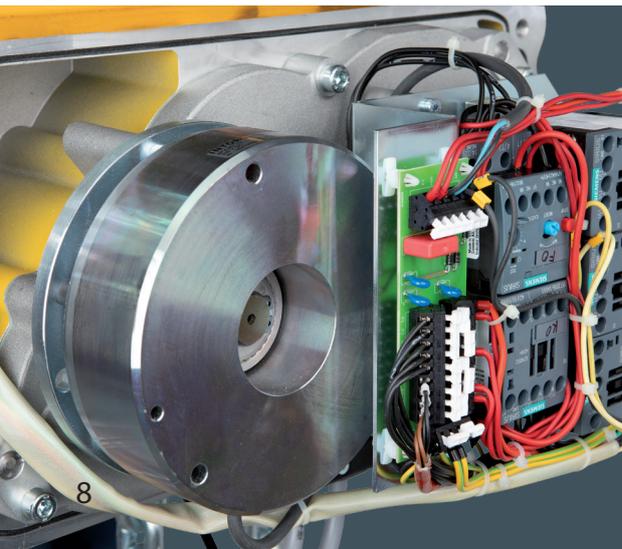
CPVF  
with suspension lug, 125 - 2500 kg, single fall



CPVF  
with suspension lug, 500 - 5000 kg, double fall



CPVF  
with suspension hook,  
125 - 2500 kg



## ELECTROMAGNETIC BRAKE

The braking torque is applied by the pressure springs and thus the brake is normally-closed, holding the load safely even in the event of power failure. As the brake is located inside the load force flow, the hoist can be upgraded to meet higher safety requirements for applications like e.g. holding stationary loads above persons (see page 10).

The brake is maintenance-free and must only undergo general function tests and a gap check during periodic inspections.





# OPTIONS AND FEATURES FOR APPLICATIONS

## OPTIONS

- Other operating and control voltages.
- Flexible chain containers.
- Radio remote controls, also acc. to EN 13849-1 PL "d" and "e".
- Wall mounted controls.
- Rotary limit switch as a back-up to standard limit switches.
- Frequency controllers, stepless and ramp controls.
- Suspensions 90° turned.
- Thermal sensors.



**OPTION:**  
Radio remote control

## FOR CORROSIVE ENVIRONMENT AND FOOD INDUSTRY

- Stainless steel load chains.
- Stainless steel load hooks for single fall hoists.
- Zinc-, copper- or bronze-plated bottom blocks.
- Zinc plated trolleys and/or 2-component topcoat.
- Food industry approved gearbox lubricants and grease (H1).
- Textile rain coats for hoists and trolleys.



## FOR STATIONARY LOADS ABOVE PERSONS

Columbus McKinnon offers Yale electric chain hoists designed for holding stationary loads above persons in accordance with the EN 14492-2:2019.

- Top hook suspension, rigid
- Backup brake
- Non-inverted version

Model	Art.-No.	Capacity kg	Number of chain falls	Lifting speed m/min
CPV 2-8 DB	192054103	125	1	8
CPV 5-4 DB	192054104	250	2	4
CPV 5-8 DB	192054105	250	1	8
CPV 10-4 DB	192054107	500	2	4
CPV 10-8 DB	192054108	500	1	8
CPV 20-4 DB	192054109	1000	2	4



# OPTIONS AND FEATURES FOR APPLICATIONS

## FOR SIMULTANEOUS LIFTING

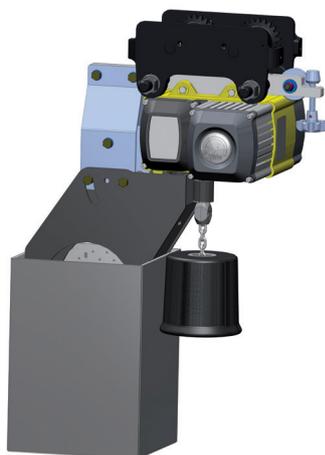
Yale offers solutions for lifting loads with two or more electric chain hoists simultaneously. Depending on the customer's application, the hoist system must meet various and sometimes very demanding requirements.

- Radio or cable controls.
- Movement selection: single or group movement.
- On trolleys or as point hoists.
- Coupled trolleys.

**Please contact Columbus McKinnon to find a suitable solution.**

## FOR CRANE BUILDING

- Beam locking device for trolleys.
- Rubber buffers for trolleys.
- Trolley travel end buffer stops.
- 90° suspension on trolley.
- Hour and switch counters.
- Trolley travel end limit switches.
- Signal horn or lamp for crane applications.
- Festoon cable systems or other power supply.
- Suspensions for light crane systems.
- Crane operation pendants.



## FOR WIND ENERGY

- Chain lengths up to 200 m.
- Electric chain hoists with high lifting speed.
- Chain containers for longer chains and with special suspensions.
- Increased corrosion-resistance.
- Special suspensions.
- Load hooks with protective cover.



# Asia

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