

Profession Comes From Focus DIE ENGINEERING CORPORATION

www.die-eg.com

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[D.I.E VACUUM SYSTEM TRADING (SHANGHAI)CO.,LTD]

₹200002

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(Toyama local office)

〒939-8216

IMS Building 2F 2-13-1 Kurosekitamachi

Toyama city Toyama Prefecture

TEL: 076-420-9531

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(DIE ENGINEERING

(THAILAND) CO.,LTD.]

168/61 Baan Chayada@Work, Buanakarin Rd, Tambon Bang Kaeo, Amphoe Bang Phli, Chang Wat Samut Prakan 10540

TEL: +66(0)84-916-7342



For your satisfied smile

Our company contributes to recycling society through design, development, manufacture and sale of vacuum units of vacuum die cast which is the basis of manufacturing industry.

Corporation principle

As a recognized corporation, we contribute to society by meeting the need of society positively and providing high performance product.

Management policy

Aim at being a corporation to be loved by this society

Providing products which contribute to this society and

Cherishing our business partner

Vacuum valve

Various model which can apply to die lock force from 50ton to 2250ton die cast machine.

Vacuum chill vent

Various model (two used) which can apply to die lock force from 125ton to 500ton die cast machine.

Vacuum device

This vacuum device can draw out the function of vacuum valve and chill vent completely.



System for Vacuum die cast

The molten metal is filled into cavity at high speed and high pressure, then the adiabatic compression causes defective products.

Our vacuum system can reduce the defective percentage effectively.

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Development

DIE ENGINEERING

Jul.2000	DIE limited company established. Vacuum valve of vacuum die casting on sale by Mr. Morikawa
Jan.2002	Vacuum device of vacuum die casting on sale
Nov.2002	Ueda sale and technical center established
Sept.2005	Name of company changed into DIE ENGINEERING CORPORATION
Dec.2005	Three years plan started
	High quality vacuum system for aluminum die casting development
	Clamping force 2500KN cold chamber die casting machine introduction
	New cooling machine, New injection, New vacuum die casting development
Sept.2007	ISO9001 ·ISO14001 certification acquisition
Apr.2008	Mold cooling device development ·sale
jan.2010	Shanghai branch company established
Apr.2012	Vacuum chill vent on sale
Oct.2014	President Ka Sei inauguration
Jul.2016	Thailand branch company established
Oct.2016	Customers 290 Exporting country 13
	Main export country: China, Korea, Vietnam, Philippines, Thailand, Malaysia, Indonesia, India, Spain, America, Mexico, Brazil, Australia
June.2018	Head office integrated from Toyama City to Ueda Nagano Prefecture

Branch company



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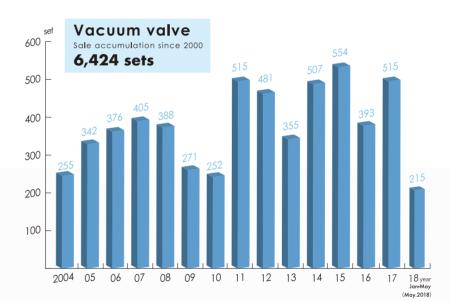


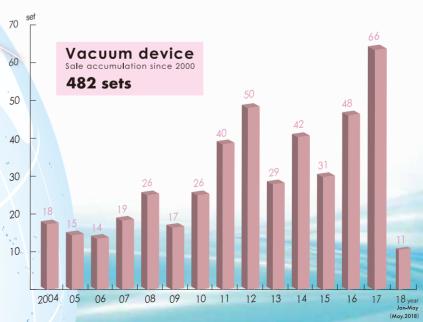
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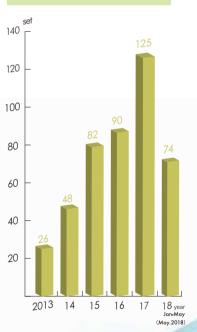
TEL: +66(0)84-916-7342

Sale record





Vacuum chill vent sale accumulation since 2000 445 sets



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Vacuum valve for vacuum die cast

ZM012 ZM038 ZM079 ZM154 ZM020 ZM056 ZM113 ZM201



ZM series valve are adopted actively by our customers for its fast speed.

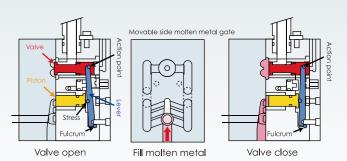




Fast speed

• The action principle of valve is that the molten metal impact on lever which connects to valve to close the vacuum valve.

To take advantage of this principle, the valve of our company can close in a very short time.



Various model

 ZM series has various model which can apply to die lock force from 50 ton to 2250 ton die cast machine.

Easy maintenance

 All the mechanical component concentrates on fixed side of valve, it is unnecessary to dismantle mold when vacuum valve is removed.
 All the consumables like piston or valve can be changed at any time.

Low price

• For the same performance and quality, the price of our company is half or one third as much as the market price.



Model		Dime	nsion	Diameter of chip	Applicable die cast machine model	
Model	Α	В	С	D	(mm)	(ton)
ZM012	35	62	37.3	16	~Ф50	~100
ZM020	40	67.5	47.5	20	Ф50~Ф60	~150
ZM038	60	92.5	60	40	Φ60~Φ70	~350
ZM056	80	115	65	50	Φ70~Φ80	~500
ZM079	90	120	70	50	Ф80~Ф100	~650
ZM113	100	145	75	50	Ф100~Ф120	~800
ZM154	105	162.5	80	50	Ф120~Ф140	~1250
ZM201	105	180	90	50	Φ140~Φ160	~2250

ZM Series

Dimension

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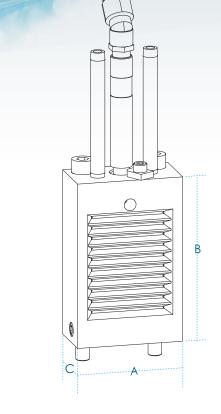
Vacuum chill vent for vacuum die cast

CVV60-C CVV60-D CVV80-C CVV100-C CVV100-D

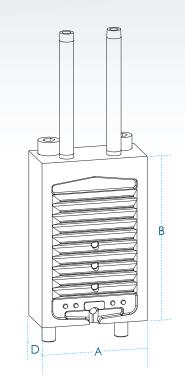




CVV series chill vent is designed on the basis of vacuum system research and is best choice for vacuum system.



CVV Series Dimension



Special design for vacuum system

• The exhaust groove and ridge shape are designed on the basis of vacuum die cast.

Easy maintenance

- It is unnecessary to dismantle mold to remove the chill vent.
- If the lubricant are sprayed properly, it is unnecessary to do regular maintenance frequently.

Various model

- CVVseries can cope with 125t ~ 500t die casting machine and plentiful sizes to be chose.
- C series has cooling system.
- D series has no cooling system but compact design.

Vacuum chill vent infomation

Model			Dime	nsion		Diamete	_	Appliable die cast machine model (ton)			
			В	С	D	one used	two used	one used	two used		
	CVV60-C	60	125	42.5	37.5	Ф50	Φ70	~125	~250		
C se	CVV80-C	80	125	42.5	37.5	Ф55	Φ80	~125	~250		
series	CVV100-C	100	125	42.5	37.5	Ф65	Φ90	~250	~350		
	CVV120-C	120	125	42.5	37.5	Φ70	Ф100	~250	~500		
	CVV60-D	60	125	35	30	Ф50	Φ70	~125	~250		
D se	CVV80-D	80	125	35	30	Ф55	Φ80	~125	~250		
series	CVV100-D	100	125	35	30	Φ65	Φ90	~250	~350		
	CVV120-D	120	125	35	30	Ф70	Ф100	~250	~500		

Standard attachment

Fixed block×one · Movable block×one · Vacuum suction hose×one (tube connection)
Cooling system hose×four sets(C series only) · Fixation screw× four
Note: vacuum suction hoseφ12, one touch connection.



(Patent No.5763584)

Molten metal detected shut off valve



EV series has fastest action speed in this world.







• EVseries can cope with 125t~4200t die cast machine.

Easy maintenance

 It is no necessary to dismantle mold for intallation of this valve. All the parts are in fixed side, so it is easy to do the maintenance.
 Otherwise, the main consumption are valve and valve bush which is available for change.

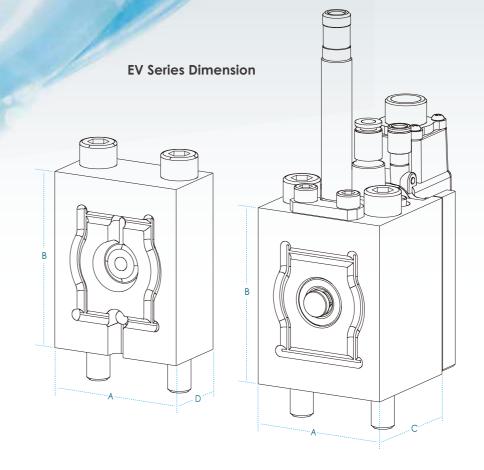
Compact

• EVseries has more compact design than ZM series.

Action speed

EV020	0.004±0.0005 sec
EV037	0.004 ± 0.0005 sec
EV060	0.004±0.0005 sec
EV086	0.005±0.0005 sec
EV114	0.005±0.0005 sec
EV151	0.005±0.0005 sec
EV191	0.006±0.0005 sec
EV291	0.006±0.0005 sec
EV371	0.006±0.0005 sec

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EV valve information

Model		Dime	ension	Diameter of chip	Appliable die cast machine model	
Model	Α	В	С	D	(mm)	(ton)
EV020	50	67.5	67.5	30	Φ40~Φ50	~150
EV037	60	70	67.5	32.5	Φ55~Φ65	~350
EV060	80	100	70	35	Φ70~Φ85	~500
EV086	90	110	75	37.5	Φ85~Φ100	~650
EV114	100	120	77.5	40	Φ100~Φ120	~800
EV151	110	132.5	80	42.5	Ф110~Ф135	~1250
EV191	117.5	140	82.5	45	Φ125~Φ155	~2250
EV291	125	150	87.5	47.5	Φ155~Φ190	~3700
EV371	130	165	95	57.5	Φ175~Φ210	~4200

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Vacuum device for vacuum die cast

DIEVS series has a substantial control system and are adopted actively by our customers.

DIEVS80-CVC2 DIEVS120-CVC2 DIEVS200-CVC2 DIEVS300-CVC2









Substantial control system

 After the input signal from die cast machine is accepted, the delay time and action time can be set as precisely as 0.1sec. Special setup according to actual environment is possible.

(Five different operation files can be saved in this device)

- This vacuum device can apply to new or old die cast machine.
- Once the abnormal valve or chill vent is detected, the abnormal signal will be output. After the signal is accepted, the produce can stop in one cycle or stop immediately.
- Compare to analogue timer and relay control vacuum pump, this digital control vacuum device has higher credibility.

Simple operation

- •LCD screen which can make all sets more convenient and easily.
- All operation sets are very simple.

Clean

- 80ℓ which uses ejector to make vacuum suction has no oil and pollution to air.
- 120,200,300ℓ which uses oil sealed pump, but the 99.99% oil can be absorbed by exhaust filter which installed inside the pump.

Compact

- Controlled by sequencer makes the size of vacuum device more compact.
- The installation of caster makes movement more easily.
- The startup of system can be completed in a short time.

Convenient maintenance

• The design of vacuum device is easy to make maintenance and reduce cost effectively.

Main	Main maintenance										
common	Exchange of filter										
200ℓ	Exchange of pump oil Exchange of fillter element Exchange of exhaust filter										
80 l	Clean of vacuum ejector, Exchange of outlet filter										

To draw out ZM,CVV's function

- Two independent vacuum systems. It can connect either two vacuum valves or two chill vents at most.
- Air blow (backwash) is installed to detect clogged valve in every die cast cycle and to make sure stable vacuum function.
- As ZM's (Vacuum valve) special function, air for valve(valve closed compulsorily) stable air which all contribute to smooth die cast.
- The cleaning function reduces the defective causes which are involved when mold closes.

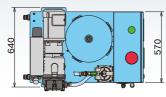
CVC2 series action chart

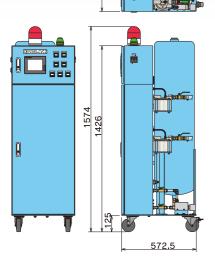
	0.1.						Cycle	e Time	(sec)									
	Subject		6 7		11	12 13					20 2	21 22	23	24 25	26	28 29		Remark
	Mold Close																	Die Close Start Signal
Die	Molten Metal Input																	Die Close Finish Signal
	Injuction boldy																	
C	Injection																	Injection Signal
Stir	Cooling																	
Ω	Mold Open																	
na	Extrusion Delay																	
Casting machine	Extrusion • Product Take Out																	Extrusion signal
<u>ब</u>	Spray																	
	Air Blow																	
	Cleaning Delay																	
	Cleaning																	
<	Stable Air Delay																	
o c	Stable Air																	Act Until Cleaning Is Finish
Vacuum	Air Blow Delay																	
۵	Air Blow																	
gevice	Vacuum Suction Delay									- 1								
0	Vacuum Suction																	
	Vacuum Recovery																	When pressurization
	Air For Valve			 									1 1			i	i	signal is off
	(Note: Act By Choose)																	(No Vacuum Suction)
	Close																	
'	acuum Valve Action Open										_							
	Opon.														1		-	

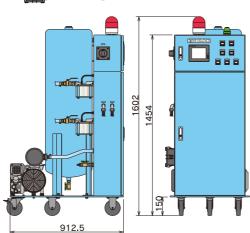
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DIEVS80-CVC2

DIEVS120-CVC2







Specification

DIEVOS OVOS					
Model DIEV\$80-CVC2 DIEV\$120-CVC2					
Vacuum valve (Two at most) ZM020 ZM038 ZM056 ZM056 ZM079 ZM113					
Vacuum chill vent (Two at most)					
Tank volume 80ℓ 120 ℓ					
Vacuum method Vacuum ejector Vacuum pump BUSCH RA0040F					
'acuum Highest vacuum degree -82kPa -93kPa					
norphosis Common vacuum degree -74kPa \sim -75kPa -89kPa \sim -90kPa					
Air Consumption 185(\(\ell \) /min) –					
Above 0.45MPa Above 0.4MPa					
Air supply Air supply ability Above $185(\ell/\min)$ Above $100(\ell/\min)$	Above 100(ℓ/min)				
Voltage	[60Hz]				
Output 60W 1.6kW ~ 1.8kW	1.6kW ~ 1.8kW				
Dimension W485×D572.5×H1574 W640×D912.5×H1602					
Weight About 118kg About 201kg					
Vacuum suction hose for valve ϕ 19 hose nipple connection ϕ 19 hose nipple or ϕ 25 hose nipple connection (Hose band fixation) ϕ 19 hose nipple or ϕ 25 hose nipple connection (Hose band fixation)	ϕ 19 hose nipple or ϕ 25 hose nipple connection				
Air for valve tube ϕ 6 one touch connection	n connection				
Connection Stable air tube for valve ϕ 6 one touch connection	n connection				
Vacuum suction tube for chill vent φ 12 one touch connection (Connection diameter PT1/2) φ 12 one touch connection (Connection diameter PT1/2)	· ·				

■Common specification

Dev	rice Join	t Action Signal (I/O Signal)
I)	nput	Die close start signal, Die close finish signal, Injection signal (injection position signal), Extrusion signal(spray start signal), High speed no surge pressure signal %1
0	utput	Device abnormal signal or device normal signal (it can switch by touch panel), Buzzer alarm during abnormality
	elation nction	Die close signal(start-finish) : Die cleaning , Injection signal : Vacuum suction , Extrusion signal : Valve cleaning , High speed no surge pressure signal : Air for valve during try shot
Signal	l property	a contact signal with no voltage

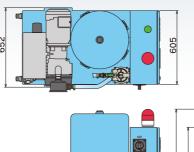
*1 High speed no surge pressure sognal: Please make sure signal is output when Dcmachine is under high speed no surge pressure mode.

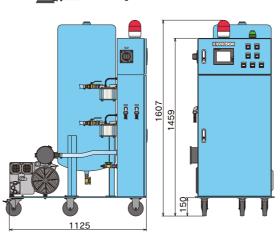
Abnormal	signal	outpu

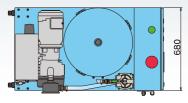
Abnormal	■Clogged valve ■Unreachable vacuum degree ■Vacuum recovery time ■Air for valve pressure
Content	●Vacuum tank pressure ●Inadequate air supply

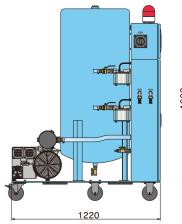
DIEVS200-CVC2

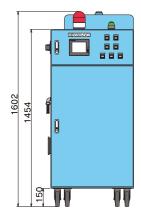
DIEVS300-CVC2











Specification

		DIEVS200-CVC2	DIEVS300-CVC2									
Vacuum v	valve (Two at most)	ZM079 ZM113 ZM154	ZM113 ZM154 ZM201									
Vacuum c	:hill vent (Two at most)	CVV60~CVV120										
Tar	nk volume	200 l	300 ℓ									
	Vacuum method	Vacuum BUSCH R										
Vacuum	Highest vacuum degree	-93kPa										
morphosis	Common vacuum degree	-89kPa ~ -90kPa										
	Air Consumption	-										
A ! l	Air pressure	Above 0.4MPa										
Air supply	Air supply ability	Above 100(ℓ /min)										
Power supply	Voltage	Three phase AC190V~AC208V or 380V~415V [50Hz] Three phase AC220V or 400V [60Hz] Three phase AC220V~AC230V or 440V~460V [60Hz]										
	Output	2.1kW ~ 2.5kW										
D 1 01	Dimension	W652×D1125×H1607	W680×D1220×H1602									
Body Size	Weight	About 250kg	About 298kg									
	Vacuum suction hose for valve	ϕ 19 hose nipple or ϕ 25 hose nipple connection (Hose band fixation)	φ 25 hose nipple connection (Hose band fixation)									
	Air for valve tube	ϕ 6 one touch	connection									
Connection	Stable air tube for valve	ϕ 6 one touch	connection									
detail	Vacuum suction tube for chill vent	φ 12 one touch (Connection d (According to customer's request, φ	iameter PT1/2)									
	Air supply hose	40PM(Nitto Koki Connection diameter PT1/2)										

■Common bundled items

· Power supply cable · Signal cable · Dcmachine side connector · Vacuum suction hose or tube · Air supply hose

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