

Profession Comes From Focus DIE ENGINEERING CORPORATION

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

〒200002

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TEL: +86-21-6320-3896 FAX: +86-21-6320-3957 *(DIE ENGINEERING*

(THAILAND) CO.,LTD.]

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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

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.

02 die engineering

Development

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	Mr. Morikawa became chairman of company					
	Ms. Jia became president of company					
Jul.2016	Thailand branch company established					
June.2018	Head office moved from Toyama city to Ueda city					
2018	Focus on research development of EV vacuum system					
the present						

Branch company



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Sale record

Our vacuum system has been adopted by more than 320 companies in 21 countries.

Overseas sale country

- · America · China · Italy · India · Indonesia · Australia · Spain · Thailand
- Denmark Germany Turkey Philippines Finland Brazil
- France Vietnam Malaysia Mexico Russia Korea Taiwan





Sale accumulation since 2000

8,123 sets



631 sets



Vacuum chill vent
Sale accumulation since 2000

955 sets



Shut off valve

EV series has fastest action speed in this world.



Vacuum device

Device which can be applicable to EV valve.







06 die engineering

Vacuum valve for vacuum die cast

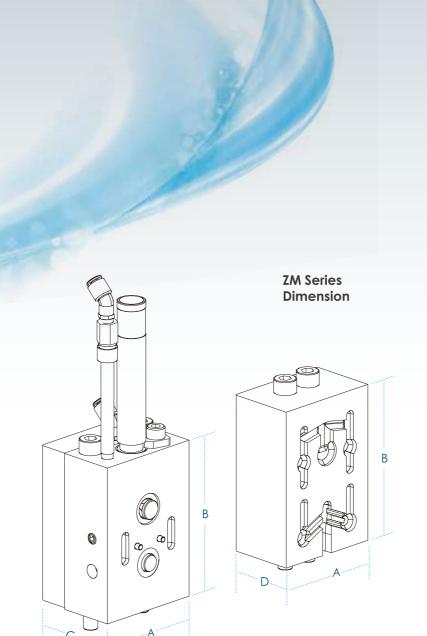
ZM012 ZM038 ZM079 ZM154 ZM020 ZM056 ZM113 ZM201



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



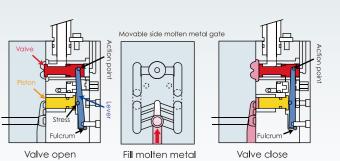




Fast speed

• 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.

Vacuum valve infomation

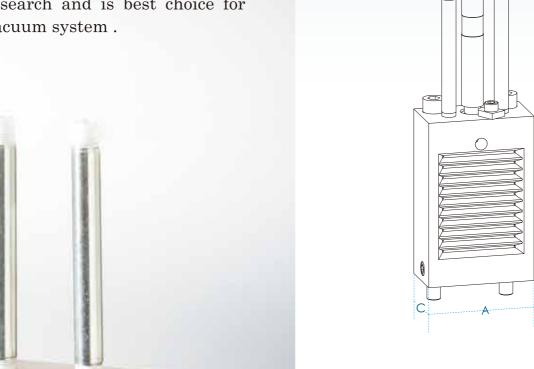
Model		Dime	nsion	Diameter of chip	Applicable die cast machine model	
Model	Α	В	С	D	(mm)	(ton)
ZM012	35	62	37.3	16	~Ф50	~100
ZM020	40	67.5	47.5	20	Φ50~Φ60	~150
ZM038	60	92.5	60	40	Φ60~Φ70	~350
ZM056	80	115	65	50	Φ70~Φ80	~500
ZM079	90	120	70	50	Φ80~Φ100	~650
ZM113	100	145	75	50	Φ100~Φ120	~800
ZM154	105	162.5	80	50	Φ120~Φ140	~1250
ZM201	105	180	90	50	Ф140~Ф160	~2250

Vacuum chill vent for vacuum die cast

CVV60-C CVV60-D CVV80-C CVV80-D CVV100-C CVV100-D CVV120-C CVV120-D



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



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.



Model			Dime	nsion		Diamete (m		Appliable die cast machine model (ton)			
		Α	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	Ф80	~125	~250		
series	CVV100-C	100	125	42.5	37.5	Φ65	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	Φ70	Ф100	~250	~500		

CVV Series Dimension

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.





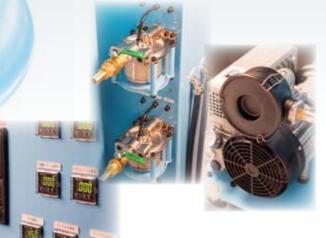
(Patent No.5763584)

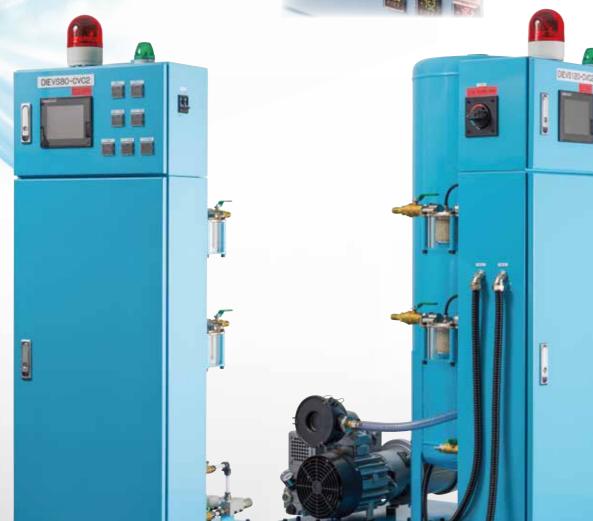
Vacuum device for vacuum die cast

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 is 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	maintenance
common	Exchange of filter
200 l	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.									Сус	le Time	e ((sec)											
	Subject	1 2	4 5	6			10		2 13						20 2	21 22	23		25			28 29		Remark
	Mold Close																							Die Close Start Signal
<u></u>	Molten Metal Input																							Die Close Finish Signal
	Injection belay																							
	Injection																							Injection Signal
SI	Cooling																							
Ω ¬	Mold Open																							
a	Extrusion Delay																							
Casting machine	Extrusion • Product Take Out																							Extrusion signal
ā	Spray																							
	Air Blow																							
	Cleaning Delay																							
	Cleaning													1 1										
<	Stable Air Delay																							
Ö	Stable Air																							Act Until Cleaning Is Finish
Vacuum	Air Blow Delay																							
٥	Air Blow																							
gevice	Vacuum Suction Delay					- 1																		
0	Vacuum Suction																							
	Vacuum Recovery																							When pressurization
	Air For Valve		 		- 1			-	- 1	1 1		-	-	1 1		- 1					- :	- 1	- 1	signal is off
	(Note: Act By Choose)																1						T	(No Vacuum Suction)
	Close																							
1	acuum Valve Action Open																							
			 						-			_	-			_	_	-		-			-	

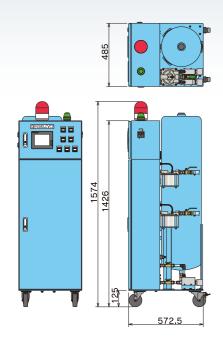
12 DIE ENGINEERING

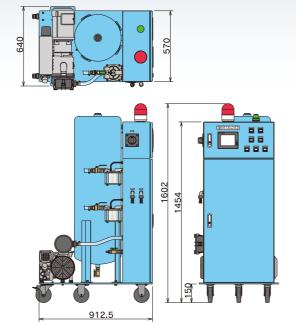
DIEVS80-CVC2

DIEVS120-CVC2

DIEVS200-CVC2

DIEVS300-CVC2





Specification

	ation							
	Model	DIEVS80-CVC2	DIEV\$120-CVC2					
Vacuum	valve (Two at most)	ZM020 ZM038 ZM056	ZM056 ZM079 ZM113					
Vacuum chi∎ vent (Two at most)		CVV60~CVV120						
Tank volume		80 l	120 ℓ					
	Vacuum method	Vacuum ejector	Vacuum pump BUSCH RA0040F					
Vacuum	Highest vacuum degree	-82kPa	-93kPa					
morphosis	Common vacuum degree	-74kPa \sim -75kPa	-89kPa ∼ -90kPa					
	Air Consumption	185(ℓ/min)	_					
A !	Air pressure	Above 0.45MPa	Above 0.4MPa					
Air supply	Air supply ability	Above 185(ℓ/min)	Above 100(ℓ/min)					
Power supply	Voltage	Single phase AC100V~AC240V [50/60Hz]	Three phase AC190V \sim AC208V or 380V \sim 415V [50Hz] Three phase AC220V or 400V [60Hz] Three phase AC220V \sim AC230V or 440V \sim 460V [60Hz]					
	Output	60W	1.6kW ~ 1.8kW					
D - d - Ci	Dimension	W485×D572.5×H1574	W640×D912.5×H1602					
Body Size	Weight	About 118kg	About 201kg					
	Vacuum suction hose for valve	ϕ 19 hose nipple connection (Hose band fixation)	ϕ 19 hose nipple or ϕ 25 hose nipple connection (Hose band fixation)					
Air for valve tube		ϕ 6 one touc	h connection					
Connection	Stable air tube for valve	ϕ 6 one touc	h connection					
detail	Vacuum suction tube for chill vent	ϕ 12 one touch connection (Connection diameter PT1/2)	φ 12 one touch connection (Connection diameter PT1/2) (According to customer's request, φ 16 one touch connection is possible.)					
	Air supply hose	40PM(Nitto Koki Connection diameter PT1/2)						

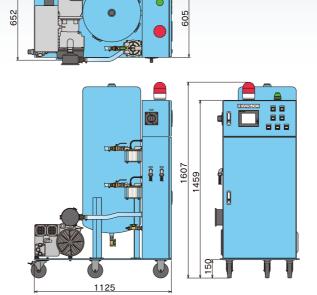
■ Common specification

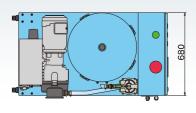
Device .	oint Action Signal (I/O Signal)
Input	Die close start signal, Die close finish signal, Injection signal (injection position signal), Extrusion signal(spray start signal), High speed no surge pressure signal <u>*</u> 1
Outpu	Device abnormal signal or device normal signal (it can switch by touch panel), Buzzer alarm during abnormality
Relatio functio	
Signal prop	a contact signal with no voltage

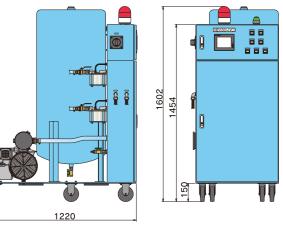
*1 High speed no surge pressure sognal: Please make sure signal is output when Dcmachine is under high speed no surge pressure mode.

Abnormal	signal	outpu

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







Specification

Specific	ation										
		DIEVS200-CVC2	DIEV\$300-CVC2								
Vacuum	valve (Two at most)	ZM079 ZM113 ZM154	ZM113 ZM154 ZM201								
Vacuum c	chill vent (Two at most)	CVV60~CVV120									
Tai	nk volume	200 l	300 ℓ								
	Vacuum method	Vacuum BUSCH R									
Vacuum	Highest vacuum degree	-93k	kPa								
morphosis	Common vacuum degree	-89kPa ~	-90kPa								
	Air Consumption	_									
A !	Air pressure	Above 0.4MPa									
Air supply	Air supply ability	Above 100(ℓ/min)									
Voltage Power supply		Three phase AC190V \sim AC208V or 380V \sim 415V [50Hz] Three phase AC220V or 400V [60Hz] Three phase AC220V \sim AC230V or 440V \sim 460V [60Hz]									
	Output	2.1kW ~ 2.5kW									
- · · · ·	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 di (According to customer's request, φ 1	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

14 DIE ENGINEERING 15