

MDC Compact mold cylinders with limit switches

MDC



Features

MDC model is compact cylinders (CX-HC) with limit switches and touch rod to control the position of molds precisely. It's suitable for plastic mold ejection.

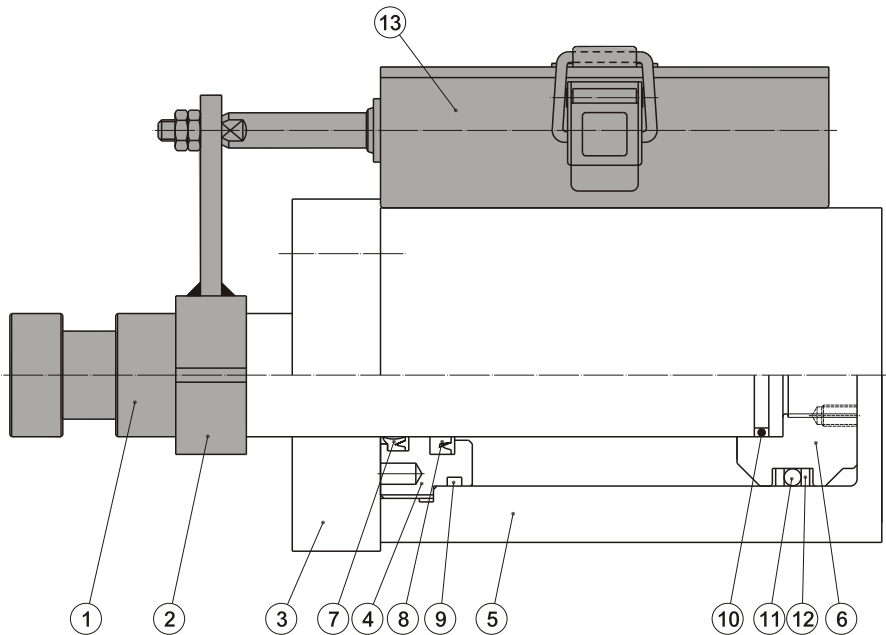
Theoretical output force

bore (mm)	rod (mm)	pressed area(cm ²)		output force (p=70kgf/cm ²)		output force (p=140kgf/cm ²)	
		push (kg)	pull (kg)	push (kg)	pull (kg)	push (kg)	pull (kg)
φ32	φ20	8	4.9	560	343	1120	686
φ40	φ25	12.6	7.7	880	536	1760	1072
φ50	φ30	19.6	12.6	1375	880	2750	1760
φ63	φ35	31.2	21.6	2182	1508	4343	3016
φ80	φ40	50.3	38	3519	2660	7038	5320
φ100	φ56	78.5	53.9	5495	3773	10990	7546

MDH Tie-rod mold cylinders
MDC Compact mold cylinders

MD internal structure & part name

MDH Tie-rod mold cylinders
MDC Compact mold cylinders



item	part name	q'ty	item	part name	q'ty
①	rod	1	⑧	rod packing	1
②	connecting plate	1	⑨	cover o-ring	1
③	flange	1	⑩	rod o-ring	1
④	rod cover	1	⑪	piston o-ring	1
⑤	body	1	⑫	piston back up ring	2
⑥	piston	1	⑬	control box	1
⑦	rod dust seal	1			

GENTLE AUTOMATIC SOLUTION SDN BHD

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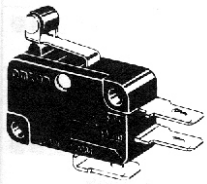
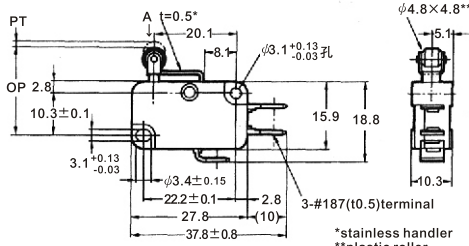
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MDC seal spec.

Item bore	7	8	9	10	11	12
	rod dust seal (PU)	rod packing (PU)	cover o-ring (IA)	rod o-ring (IA)	piston o-ring (IB)	piston back up ring (PTFE)
	1	1	1	1	1	2
32	DH20	UHS20	G25	P16	P26	P26
40	DH25	UHS25	G35	P21	P34	P34
50	DH30	UHS30	G45	G25	P44	P44
63	DH35	UHS35	G55	G30	P53	P53
80	DH40	UHS40	G75	G35	P70	P70
100	DH56	UHS56	G95	G50	P90	P90

MDH Tie-rod mold cylinders
MDC Compact mold cylinders

MDC features & spec. of limit switch

spec.	V-105-1A5	external dimension			
	 <p>*stainless handler **plastic roller</p>	OF (max.)	2.35N(240gf)		
		RF (min.)	0.49N(50gf)		
		PT (max.)	1.6mm		
		OT (max.)	0.8mm		
		MD(max.)	0.6mm		
		OP	20.7±0.6mm		
operating speed	0.1mm~1m/sec.(push button)				
operating frequency	mechanical	600 times/min			
	electrical feature	60 times/min			
insulated resistance	100MΩ 以上(DC500V MEGA)				
contact	15m Ω below(initiate)				
temperature	-25~+85°C		life	electrical feature	above 5000 million times
moisture	85%RH above(+5~+35°C)			mechanical feature	above 30 million times
protection	IP00 95%RH				

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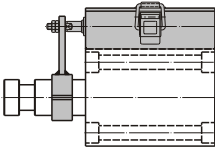
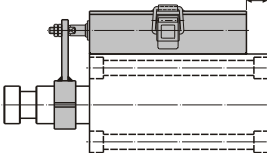
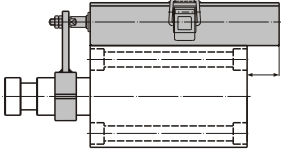
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Control box

bore(mm) : 50,60,80,100

MDH Tie-rod mold cylinders
MDC Compact mold cylinders

box kind	box length(mm)	bore(mm)	box position	A1	A2	A3							
				length of box=cylinder	length of box<cylinder	length of box>cylinder							
													
				stroke(mm)	stroke(mm)	stroke(mm)							
B1	127 (max.adjustable75mm)	50	=67	>67	<67								
						63	=60	>60	<60				
										80	=49	>49	<49
B2	177 (max.adjustable125mm)	50	=117	>117	<117								
						63	=110	>110	<110				
										80	=99	>99	<99
B3	227 (max.adjustable175mm)	50	=167	>167	<167								
						63	=160	>160	<160				
										80	=149	>149	<149
B4	277 (max.adjustable225mm)	50	=217	>217	<217								
						63	=210	>210	<210				
										80	=199	>199	<199

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Order form

MDC — A — FA — 50 × 30 — A1 — B1 — C1 — 1 — B2 — 02 — A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

MDH Tie-rod mold cylinders
MDC Compact mold cylinders

MDC : compact mold cylinders		
①	kinds	(1) A : double acting (2) C : dual rods
②	mounting	(1)SD : basic (2)FA : flange
③	bore(mm)	32,40,50,63,80,100
④	stroke(mm)	based on customer's request
⑤	rod end	(1)A1 : single neck type (2)A2 : dual necks type (3)A3 : external thread type (4)A4 : internal thread type
⑥	connecting plate	(1)B1 : thick round type (2)B3 : thin round type (3)B4 : thick round type (4)B5 : flat type
⑦	rod connector	(1)C1 : neck type (2)C2 : external thread type
⑧	seal	(1)1 : (PU)(standard use) (2)2 : (NBR) (3)3 : (FPM)
⑨	control box	(1)B1 : max.adjustable 75mm (2)B2 : max.adjustable 125mm (3)B3 : max.adjustable 175mm (4)B4 : max.adjustable 225mm
⑩	flow regulator	(1)02 : 1/4"(12 ℓ/min) (2)03 : 3/8"(20 ℓ/min) (3)04 : 1/2"(30 ℓ/min)
⑪	check valve	(1)A : 3/8"(50 ℓ/min) (2)B : 3/4"(125 ℓ/min) (3)C : 1 1/2"(320 ℓ/min)

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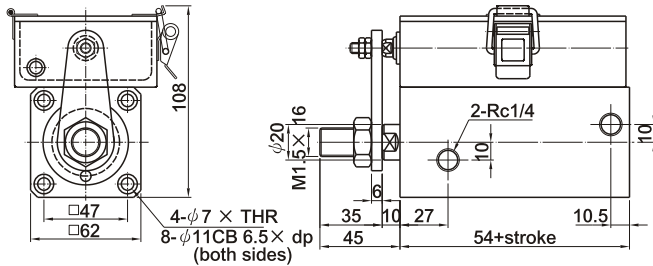
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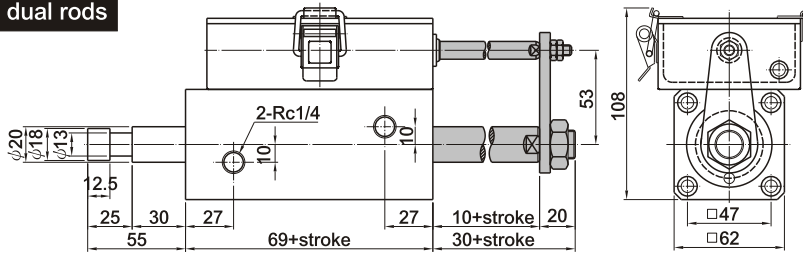
MDC external dimensions

$\phi 32$ rod dimension can be altered based on the customer's need.

MDCA standard



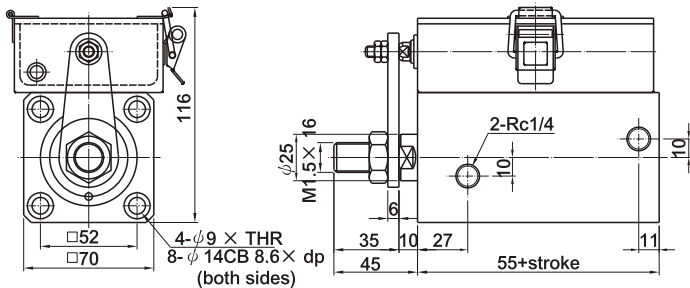
MDCC dual rods



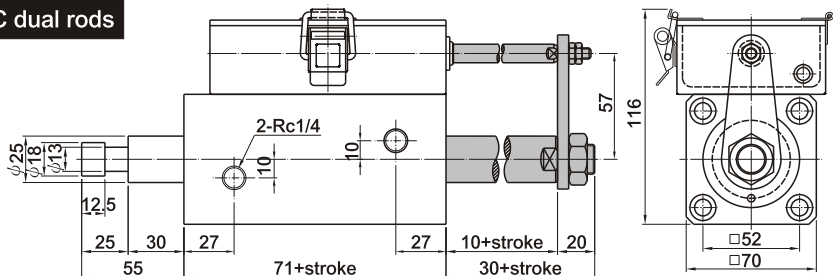
MDH Tie-rod mold cylinders
MDC Compact mold cylinders

$\phi 40$ rod dimension can be altered based on the customer's need.

MDCA standard



MDCC dual rods



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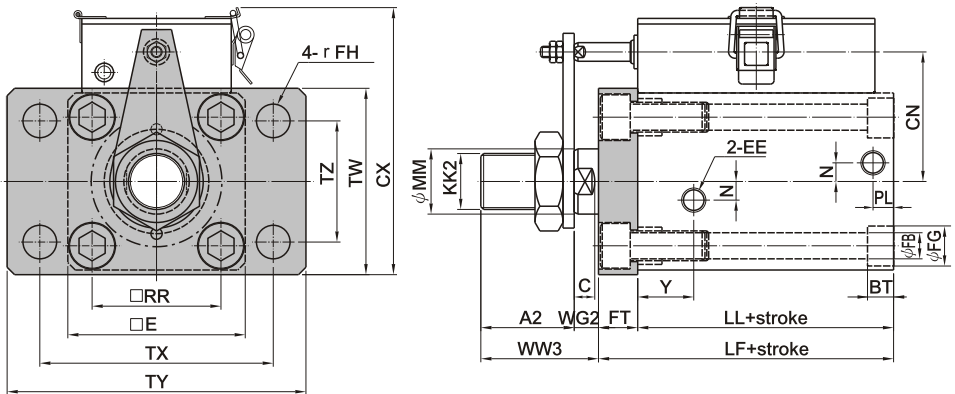
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MDC external dimensions

Single rod $\phi 50 \sim \phi 100$ rod dimension can be altered based on the customer's need.

MDCA - FA double acting, single rod and flange



MDH Tie-rod mold cylinders
MDC Compact mold cylinders

symbol bore	A2	KK2	BT	C	CN	CX	E	EE	FB	FG	FH	FT
50	48	M24×1.5	10.8	9	62	126	80	RC1/4	11	17.5	14	18
63	65	M30×1.5	13	11	69	140	94	RC1/4	14	20	18	21
80	75	M36×1.5	15.2	14	79	160	114	RC3/8	16	23	22	24
100	90	M48×1.5	17.5	14	89	180	134	RC3/8	18	26	22	30

symbol bore	LL	LF	WG2	WW3	MM	N	PL	RR	TW	TX	TY	TZ	Y
50	60	78	11	59	30	10	11	58	84	105	135	52	28
63	67	88	13	78	35	10	11	69	100	125	160	65	30
80	78	102	17	92	40	15	15	86	124	150	190	75	35
100	82	112	17	107	56	15	15	102	140	174	215	90	39

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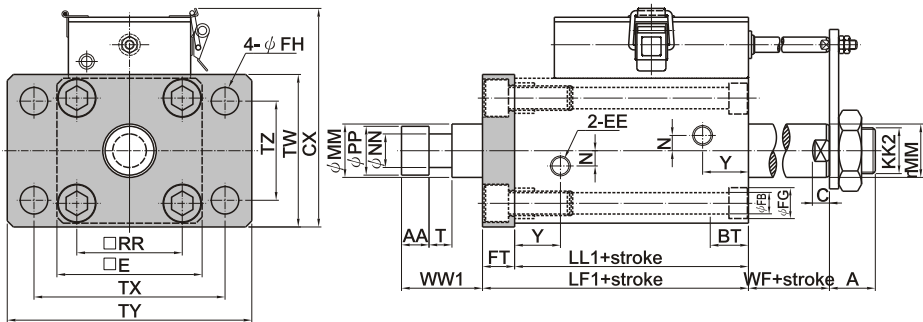
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MDC external dimensions

Dual rods 50~ 100 rod dimension can be altered based on the customer's need.

MDCC - FA double acting, dual rods and flange.



MDH Tie-rod mold cylinders
MDC Compact mold cylinders

symbol bore	A	AA	T	KK2	BT	C	CX	E	EE	FB	FG	FH	FT
50	25	15	15	M24×1.5	10.8	9	126	80	RC1/4	11	17.5	14	18
63	30	15	22	M30×1.5	13	11	140	94	RC1/4	14	20	18	21
80	32	18	22	M36×1.5	15.2	14	160	114	RC3/8	16	23	22	24
100	32	20	27	M48×1.5	17.5	14	180	134	RC3/8	18	26	22	30

symbol bore	LI1	Lf1	WF	WW1	MM	NN	PP	N	RR	TW	TX	TY	TZ	Y
50	77	95	11	55	30	22	30	10	58	84	105	135	52	28
63	83	104	13	55	35	25	34	10	69	100	125	160	65	30
80	95	119	17	55	40	28	39	15	86	124	150	190	75	35
100	106	136	17	65	56	38	49	15	102	140	174	215	90	39

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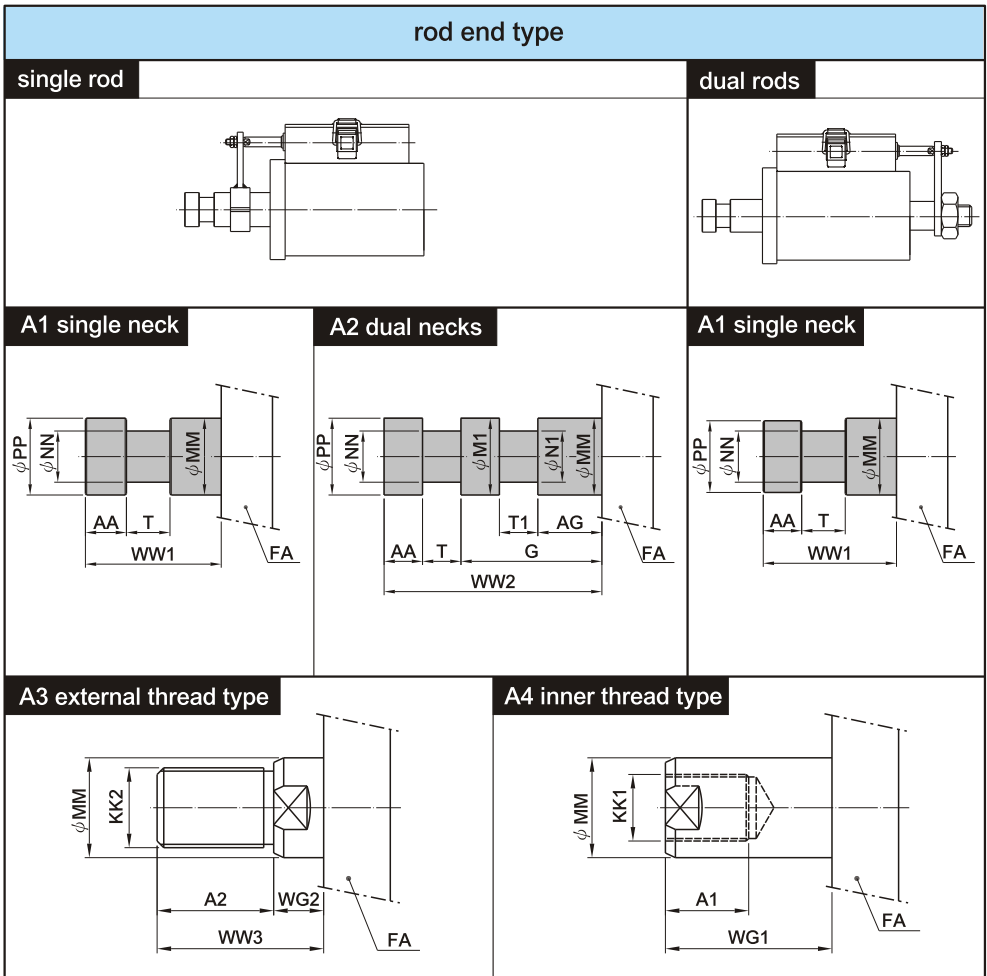
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MDC rod end

MDH Tie-rod mold cylinders
MDC Compact mold cylinders



Symbol bore	MM	A1	KK1	A2	KK2	PP	AA	AG	T	T1	M1	NN	N1	G	WG1	WG2	WW1	WW2	WW3	with b5 plate		
																				A2	WG2	WW3
50	30	24	M20×2.5	35	M24×1.5	30	15	5	15	22	30	22	25	40	55	55	55	70	46	48	11	59
63	35	33	M27×3.0	45	M30×1.5	34	18	5	22	22	35	25	30	40	55	55	55	77	58	65	13	78
80	40	33	M30×3.5	55	M36×1.5	39	18	5	22	22	40	28	35	40	55	55	55	80	72	75	17	92
100	56	40	M36×4.0	70	M48×1.5	49	20	5	27	22	56	38	50	45	65	65	65	92	87	90	17	107

※dimensions can be altered based on the customer's need.

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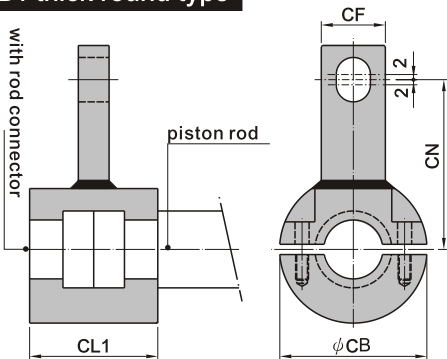
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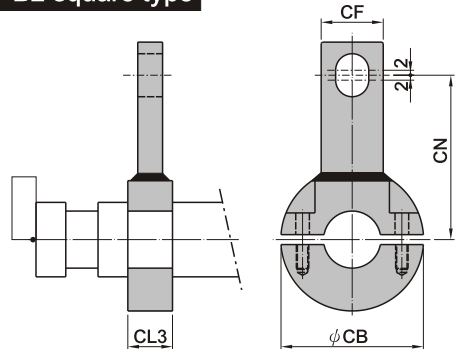
MDCconnecting platet

rod end type

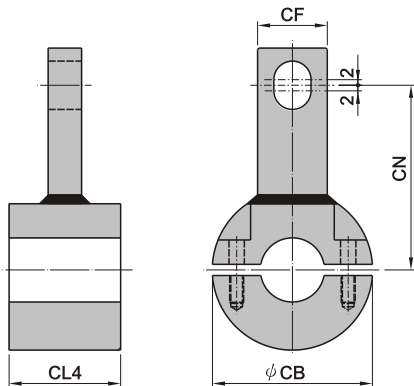
B1 thick round type



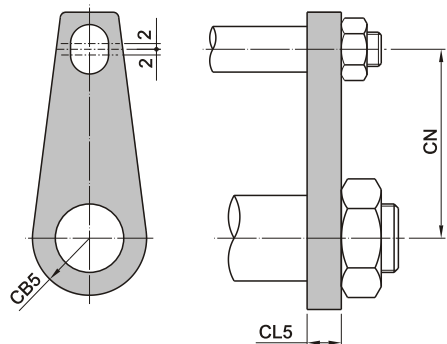
B2 square type



B3 thin round type



B5 flat type



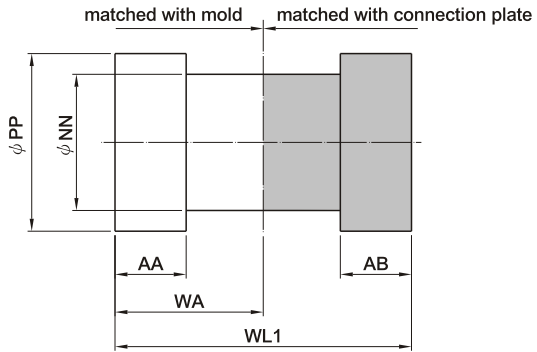
MDH Tie-rod mold cylinders
MDC Compact mold cylinders

symbol bore	MM	CB	CB5	CL1	CL3	CL4	CL5	CF	CN
50	30	69	R20	60	20	30	6	32	62
63	35	69	R25	80	20	30	6	32	69
80	40	69	R30	80	20	30	6	32	79
100	56	89	R40	87	20	40	6	38	89

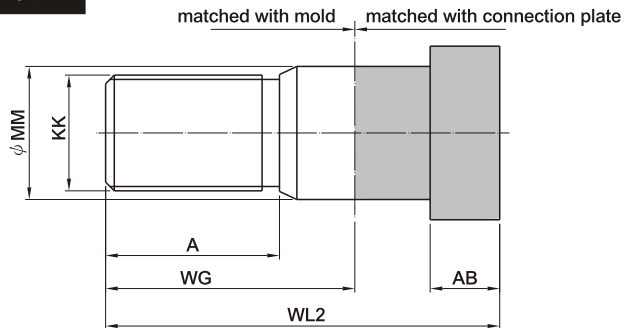
- ※1. B4 type is only suitable for A3 or A4 rod end types.
- 2. B5 type is only suitable for A3 rod end type.
- 3. dimensions can be altered based on the customer's need.

MDC rod connector

C1 : neck type



C2 : external thread type



symbol bore	MM	A	AA	AB	KK	NN	PP	WL1	WL2	WA	WG
50	30	35	15	15	M24×1.5	22	30	60	80	30	50
63	35	45	18	18	M30×1.5	25	34	80	100	40	60
80	40	55	18	18	M36×1.5	28	39	80	110	40	70
100	56	70	20	20	M48×1.5	38	49	87	125	47	85

※dimensions can be altered based on the customer's need.

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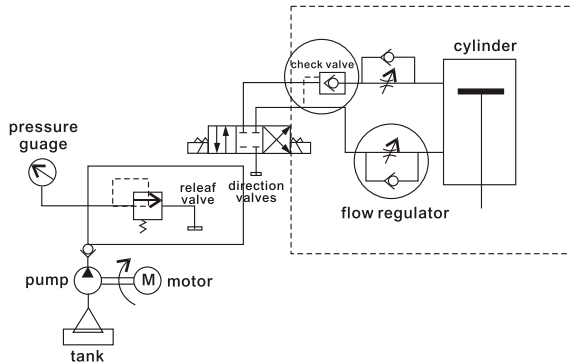
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Example for the use of check valves and flow regulators



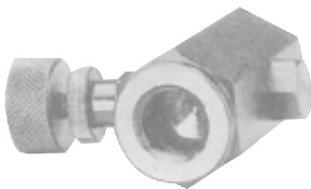

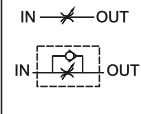
●hydraulic circuit diagram



note :

- 1.Regulate the speed of cylinders motions.
- 2.The control direction of flow speed regulator needs to be carefully taken while installing a regulator onto a cylinder.
- 3.speed regulator is very useful(1)to prevent an abnormal cylinder movement, (2)to hold off the back pressure caused by mold ejection or (3)to justify the pressure dropping due to tubing bore variation caused by temperature change.

MDH Tie-rod mold cylinders
MDC Compact mold cylinders

flow regulator					check valve				
									
									
Spec.	bore (rc)	1/4	3/8	1/2	Spec.	bore (rc)	3/8	3/4	1 1/2
	flow (l/min)	12	20	30		flow (l/min)	50	125	320
	order form	FL02	FL03	FL04		order form	PCV03	PCV06	PCV15
use	1.Regulate the speed of cylinder's motions 2.The correction of flow direction is necessary.				use	1.To prevent a stroke dropping dne to a load overweight or internal leakage 2.working pressure : 210kgf/cm ²			

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