5.Compact cylinders-CXHC

working pressure：140kgf/cm^2

TÜV *ISO-9001：2000 quality certified*

■■■ Index ■■■

GENTLE AUTOMATIC SOLUTION SDN BHD
No. 36 Jalan Industri USJ 1/13, Taman Perindustrian USJ 1, 47600 Subang Jaya, Selangor.
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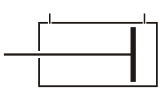
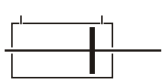
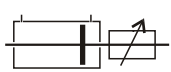
theoretical force

unit : kg

bore(mm)	rod(mm)	pressed area(cm^2)		theoretical force ($p=70kgf/cm^2$)		theoretical force ($p=140kgf/cm^2$)	
		push	pull	push	pull	push	pull
20	12	3.1	2	217	140	434	280
25	14	4.9	3.4	343	238	686	476
32	20	8.0	4.9	560	343	1120	686
40	25	12.6	7.7	880	536	1760	1072
50	30	19.6	12.6	1375	88	2750	1760
63	35	31.2	21.65	2182	1508	4343	3016
80	40	50.3	38	3519	2660	7038	5320
100	56	78.5	53.9	5498	3774	10995	7548

types and installations

type	symbol	drawing	heat proof	mounting	bore (mm)
doubling acting	CXHC-A		CXHC-A-J	SD basic 	20 25 32 40 50 63 80 100
double rods	CXHC-C		CXHC-C-J	LA foot 	
double rods with stroke alignment	CXHC-D		CXHC-D-J		

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Spec.

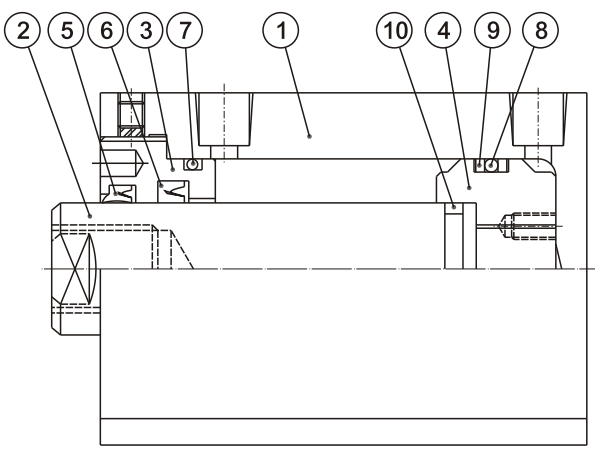
material / oil / symbol	(PU)	(NBR)	(FPM)
	1	2	3
mineral	○	○	○
water solutions	×	○	○
soluble	×	○	○
phosphate ester	×	×	○
temperature	-10℃～+80℃		-10℃～+200℃
	20～400mm²/s{cSt}		

note：
1.mineral oil e,g:CPC-R68.
2.If mineral oil is used,"PU"seals wil be used on standard hydraulic products with no need to specify selections of materials.
3.FPM must be selected should phos phate ester oil or high temperature(>80℃) is applied
4.note○：O.K. ×：can not be used

Standard stroke

stroke / bore	5	10	15	20	25	30	40	50
20								
25								
32	●	●	●	●	●	●	●	●
40	●	●	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
63	●	●	●	●	●	●	●	●
80								
100								

structures and part names



item	part name	q'ty
①	tube	1
②	piston rod	1
③	rod cover	1
④	piston	1
⑤	dust seal	1
⑥	rod packing	1
⑦	rod cover o-ring	1
⑧	piston o-ring	1
⑨	piston back-up ring	2
⑩	piston o-ring	1

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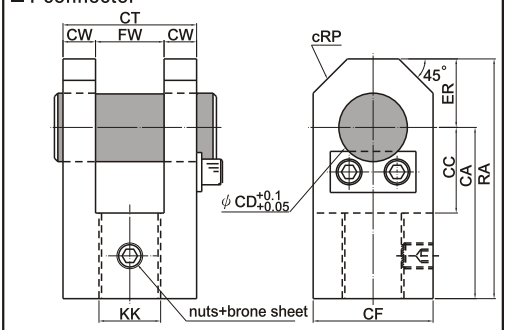
Spec.

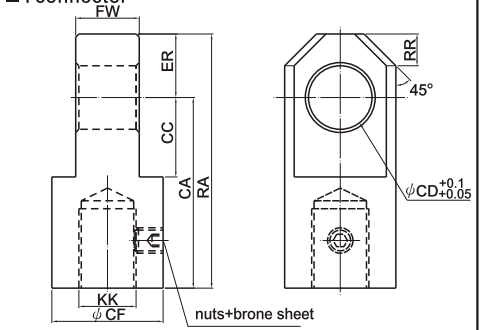
item	⑤	⑥	⑦	⑧	⑨	⑩
name / q'ty	dust seal (PU)	rod packing (PU)	rod cover o-ring (IA)	piston o-ring (IB)	piston back-up ring (PTFE)	piston o-ring (IA)
bore	1	1	1	1	2	1
20	PDU12	P12+BUR	P24	P16	P16	P9
25	DH14	UHS14	P28	P21	P21	P10A
32	DH20	UHS20	G30	P24	P24	P16
40	DH25	UHS25	G35	P34	P34	P21
50	DH30	UHS30	G45	P44	P44	P25
63	DH35	UHS35	G55	P53	P53	G30
80	DH40	UHS40	G75	P70	P70	G35
100	DH56	UHS56	G95	P90	P90	G50

Connectors

■Y connector



■ I connector



symbol / bore	KK	FW		CA		RA		CF		CD	CT	CC		ER	CW	RP	RR
		Y	I	Y	I	Y	I	Y	I			Y	I				
32	M16×1.5	20 +0.40 +0.10	20 -0.10 -0.40	49	69	65	85	32	38	16	45	24	24	16	12.5	8	8
40	M20×1.5	20 +0.40 +0.10	20 -0.10 -0.40	49	69	65	85	32	38	16	45	24	24	16	12.5	8	8
50	M24×1.5	25 +0.40 +0.10	25 -0.10 -0.40	60	80	80	100	40	44	20	55	35	30	20	15	10	10
63	M30×1.5	30 +0.40 +0.10	30 -0.10 -0.40	75	105	105	135	60	60	31.5	63	40	45	30	16.5	15	15
80	M36×1.5	30 +0.40 +0.10	30 -0.10 -0.40	75	105	105	135	60	60	31.5	63	40	45	30	16.5	15	15
100	M48×1.5	40 +0.40 +0.10	40 -0.10 -0.40	100	120	140	160	70	70	40	78	50	50	40	19	20	20

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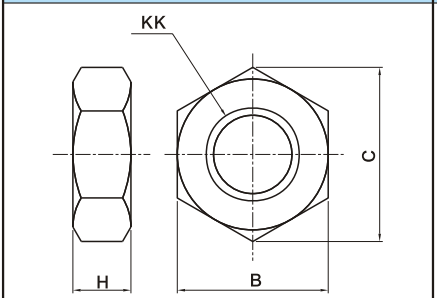
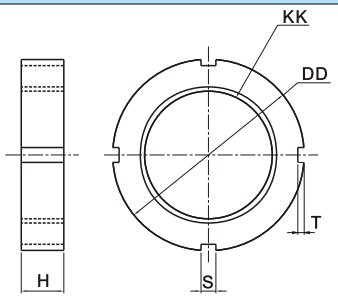
Rod nuts

●bore：ϕ20~ ϕ80



●bore：ϕ 100 (M48×1.5)



KK	B	C	H
M8×1.25	13	15	6.5
M10×1.5	17	19.6	8
M16×1.5	24	27	10
M20×1.5	30	34	11

KK	B	C	H	DD	S	T
M24×1.5	36	41	13	—	—	—
M30×1.5	41	47	17	—	—	—
M36×1.5	50	57	18	—	—	—
M48×1.5	—	—	18	70	6	2.5

Order form

CXHC A — J — IN — SD — 50 × 30 — 25mm — 1 — 02 — A

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

CXHC：compact cylinders		
❶	types	(1) A：doubling acting (2)C：double rods (3)D：double rods with stroke alignment
❷	options	(2)J：with heat/erosion proof (note："space"if not be used)
❸	rod thread	(1) IN：inner thread (2) EX：external thread
❹	installations	(1) SD：basic (2) LA：foot
❺	bore(mm)	20 , 25 , 32 , 40 , 50 , 63 , 80 , 100
❻	stroke(mm)	refer to"standard stroke"table
❼	stroke alignment	"only for forwarding alignment"
❽	packing material	(1)1：(PU)(standard usage) (2)2：(NBR) (3)3：(FPM)
❾	flow requlator	(1)02：1/4"(12ℓ/min) (2)03：3/8"(20ℓ/min) (3)04：1/2"(30ℓ/min)
❿	check valve	(1)A：3/8"(50ℓ/min) (2)B：3/4"(125ℓ/min) (3)C：1 1/2"(320ℓ/min)

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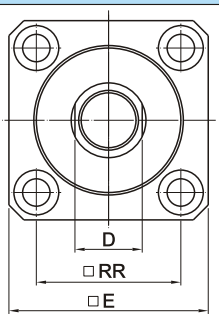
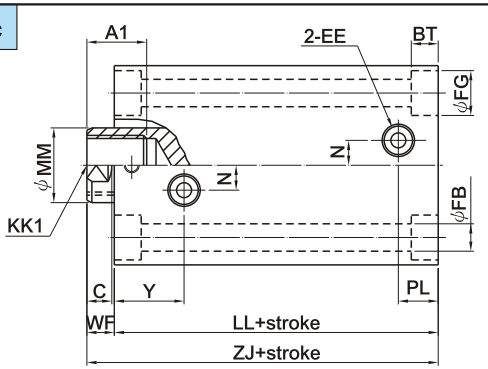
External dimensions

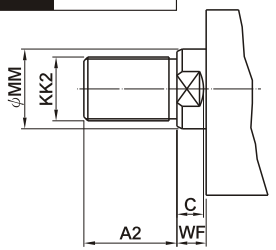
CXHC-A-SD double acting,basic

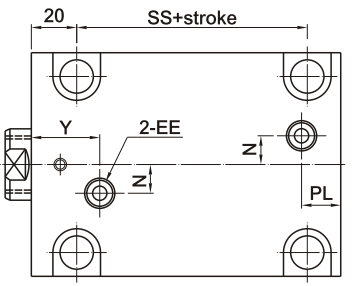
IN





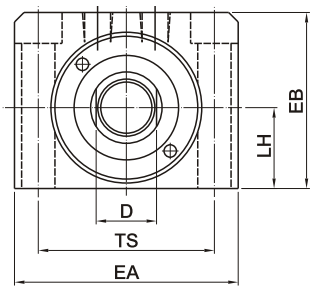
EX SD / LA

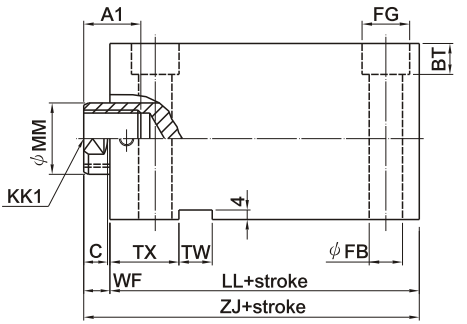




CXHC-A-LA double acting,foot flange

IN





Symbol / bore	IN		EX		C	D	E	EA	EB	EE	LH	LL	MM	N	BT		FB		FG		PL	SS	TS	RR	TW	TX	WF	Y	ZJ
	A1	KK1	A2	KK2											SD	LA	SD	LA	SD	LA									
20	10	M8×1.25	15	M8×1.0	7	10	44	—	—	Rc1/8	—	43	12	0	5.4	—	5.5	—	9.5	—	12	—	—	30	—	—	8	20.5	51
25	12	M10×1.5	20	M10×1.5	7	13	50	—	—	Rc1/8	—	45	14	0	5.4	—	5.5	—	9.5	—	12	—	—	36	—	—	8	20.5	53
32	15	M12×1.75	25	M16×1.5	9	17	62	70	56	Rc1/4	25	54	20	10	6.5	8.6	7	9	11	14	10.5	24	56	47	12	28	10	27	64
40	20	M16×2.0	30	M20×1.5	9	21	70	80	64	Rc1/4	29	55	25	10	8.6	10.8	9	11	14	17.5	11	23	62	52	12	28	10	27	65
50	24	M20×2.5	35	M24×1.5	9	27	80	94	74	Rc1/4	34	60	30	10	10.8	13	11	14	18	20	11	27	74	58	14	29	11	28	71
63	33	M27×3.0	45	M30×1.5	11	32	94	114	89	Rc1/4	42	67	35	10	13	15.2	14	16	20	23	11	32	90	69	16	31	13	30	80
80	33	M30×3.5	55	M36×1.5	14	37	114	134	109	Rc3/8	52	78	40	15	15.2	15.2	16	16	23	23	15	41	110	86	16	34	17	35	95
100	40	M36×4.0	70	M48×1.5	14	50	134	160	129	Rc3/8	62	82	56	15	17.5	17	18	18	26	26	15	44	134	102	16	34	17	39	99

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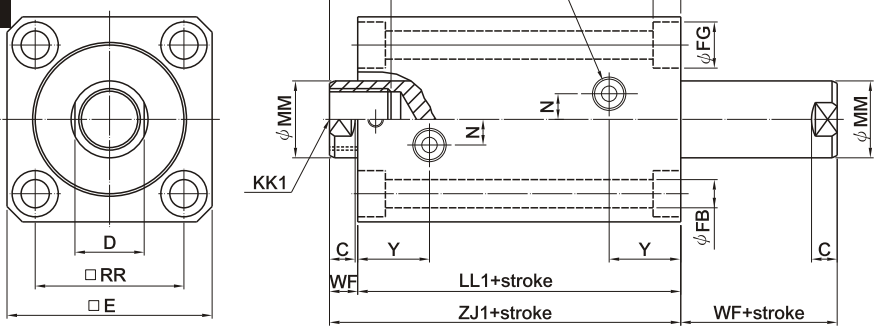
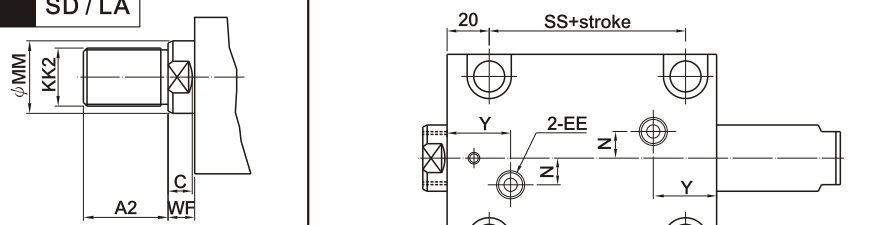
External dimensions

CXHC-C-SD ： double rods,basic

IN

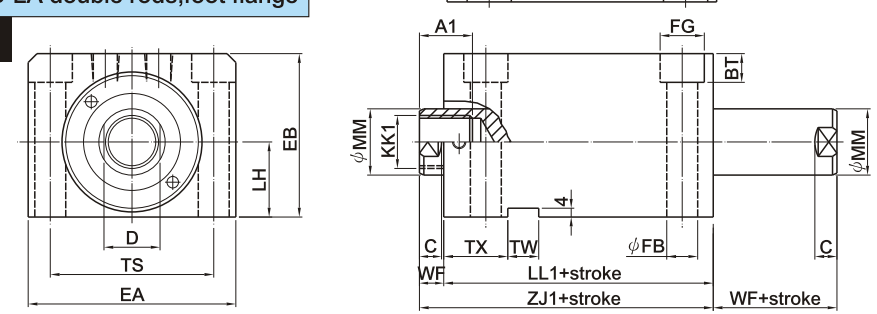


EX SD / LA



CXHC-C-LA double rods,foot flange

IN



Symbol / bore	IN		EX		C	D	E	EA	EB	EE	LH	LL1	MM	N	BT		FB		FG		SS	TS	RR	TW	TX	WF	Y	ZJ1
	A1	KK1	A2	KK2											SD	LA	SD	LA	SD	LA								
20	10	M8×1.25	15	M8×1.0	7	10	44	—	—	Rc1/8	—	54	12	0	5.4	—	5.5	—	9.5	—	—	—	30	—	—	8	20.5	62
25	12	M10×1.5	20	M10×1.5	7	13	50	—	—	Rc1/8	—	56	14	0	5.4	—	5.5	—	9.5	—	—	—	36	—	—	8	20.5	64
32	15	M12×1.75	25	M16×1.5	9	17	62	70	56	Rc1/4	25	69	20	10	6.5	8.6	7	9	11	14	24	56	47	12	28	10	27	79
40	20	M16×2.0	30	M20×1.5	9	21	70	80	64	Rc1/4	29	71	25	10	8.6	10.8	9	11	14	17.5	23	62	52	12	28	10	27	81
50	24	M20×2.5	35	M24×1.5	9	27	80	94	74	Rc1/4	34	77	30	10	10.8	13	11	14	18	20	27	74	58	14	29	11	28	88
63	33	M27×3.0	45	M30×1.5	11	32	94	114	89	Rc1/4	42	83	35	10	13	15.2	14	16	20	23	32	90	69	16	31	13	30	96
80	33	M30×3.5	55	M36×1.5	14	37	114	134	109	Rc3/8	52	95	40	15	15.2	15.2	16	16	23	23	41	110	86	16	34	17	35	112
100	40	M36×4.0	70	M48×1.5	14	50	134	160	129	Rc3/8	62	106	56	15	17.5	17	18	18	26	26	44	134	102	16	34	17	39	123

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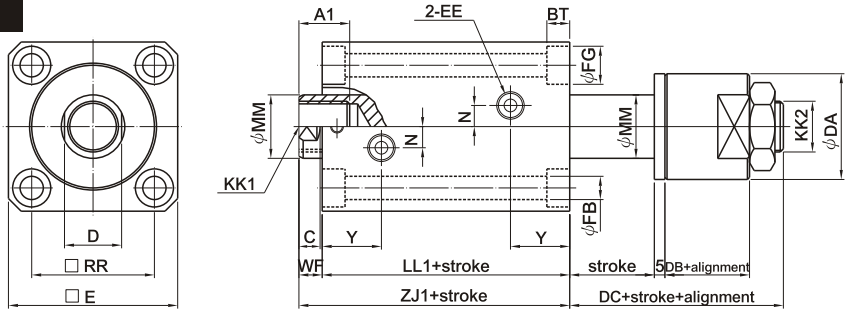
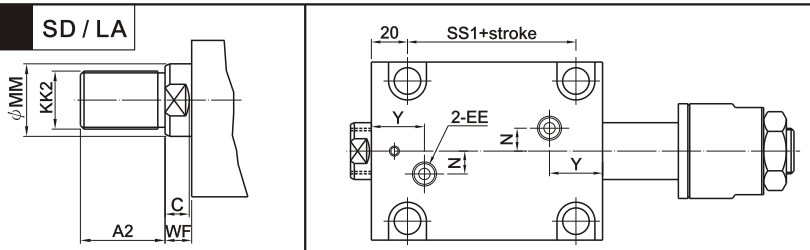
External dimensions

CXHC-D-SD ： double rods with stroke alignment, basic

IN

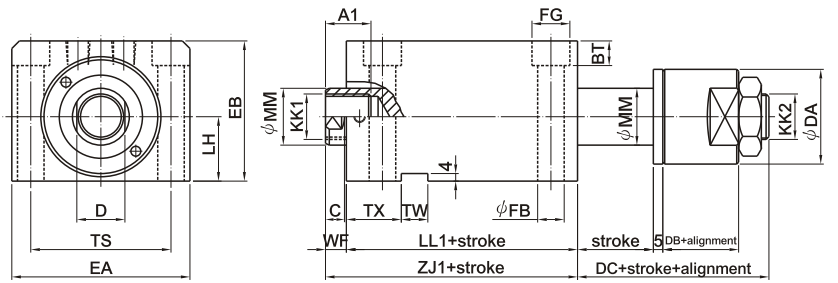


EX **SD / LA**



CXHC-D-LA double rods with stroke alignment, end flange

IN



Symbol / bore	IN		EX		C	D	DA	DB	DC	E	EA	EB	EE	LH	LL1	MM	N	BT		FB		FG		SS1	TS	RR	TW	TX	WF	Y	ZJ1
	A1	KK1	A2	KK2														SD	LA	SD	LA	SD	LA								
20	10	M8×1.25	15	M8×1.0	7	10	20	16	30	44	—	—	Rc1/8	—	54	12	0	5.4	—	5.5	—	9.5	—	—	—	30	—	—	8	20.5	62
25	12	M10×1.5	20	M10×1.5	7	13	25	18	34	50	—	—	Rc1/8	—	56	14	0	5.4	—	5.5	—	9.5	—	—	—	36	—	—	8	20.5	64
32	15	M12×1.75	25	M16×1.5	9	17	38	20	36	62	70	56	Rc1/4	25	69	20	10	6.5	8.6	7	9	11	14	24	56	47	12	28	10	27	79
40	20	M16×2.0	30	M20×1.5	9	21	44	25	42	70	80	64	Rc1/4	29	71	25	10	8.6	10.8	9	11	14	17.5	23	62	52	12	28	10	27	81
50	24	M20×2.5	35	M24×1.5	9	27	50	25	46	80	94	74	Rc1/4	34	77	30	10	10.8	13	11	14	18	20	27	74	58	14	29	11	28	88
63	33	M27×3.0	45	M30×1.5	11	32	55	25	49	94	114	89	Rc1/4	42	83	35	10	13	15.2	14	16	20	23	32	90	69	16	31	13	30	96
80	33	M30×3.5	55	M36×1.5	14	37	60	25	52	114	134	109	Rc3/8	52	95	40	15	15.2	15.2	16	16	23	23	41	110	86	16	34	17	35	112
100	40	M36×4.0	70	M48×1.5	14	50	80	35	62	134	160	129	Rc3/8	62	106	56	15	17.5	17	18	18	26	26	44	134	102	16	34	17	39	123

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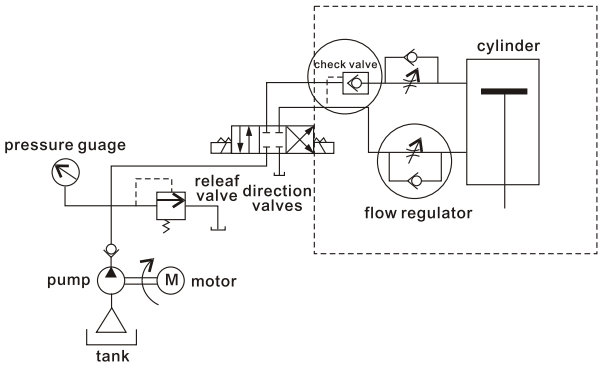
Example for the use of check valves and flow requlators

●hydraulic circuit diagram



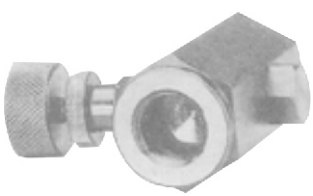
note：

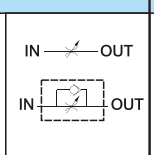
1.Regulate the speed of cylinders motions.

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.

flow speed regulator





use

1.Regulate the speed of cylinders motions.
2.The correction of flow direction is necessary.

spec.

bore(RC)	1/4	3/8	1/2
flow(ℓ/min)	12	20	30
order form	FL02	FI03	FI04

check valve

use

1.To prevent a stroke dropping due to a load overweight or internal leakage
2.Working pressure：210kgf/cm^2

spec.

bore(RC)	3/8	3/4	1 1/2
flow(ℓ/min)	50	125	320
order form	PCV03	PCV06	PCV15

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