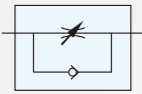


ACCESSORIES



Symbol



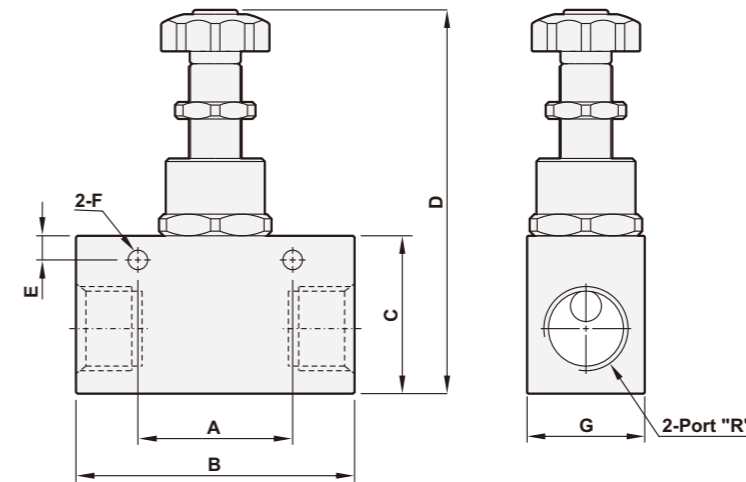
Features

- * The valve provides best way to control piston speed of cylinder.
- * Non-return mechanism which allows full flow in one direction.



Dimensions

S-06, 08



Model	S-06	S-08
R	3/4"	1"
A	50.0	50.0
B	90.0	90.0
C	51.0	51.0
D	124.0	124.0
E	7.8	7.8
F	φ6.3	φ6.3
G	38.0	38.0

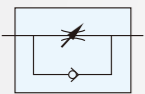
How to order

S	-	06	N
Speed control valve		Port size	Thread
		06 3/4"	Blank G
		08 1"	N NPT

Specifications

Model	S-06	S-08
Port size	3/4"	1"
Body material	Aluminum alloy	
Fluid	Compressed air	
Sectional area	43mm ²	
Operating pressure range	0 ~ 9.9 kgf/cm ²	
Proof pressure	10 kgf/cm ²	
Ambient temperature	-10°C ~ 80°C	

Symbol



Features

* SV series valves provide the finest control of piston speed for cylinders.

How to order

SV - **01** **N**

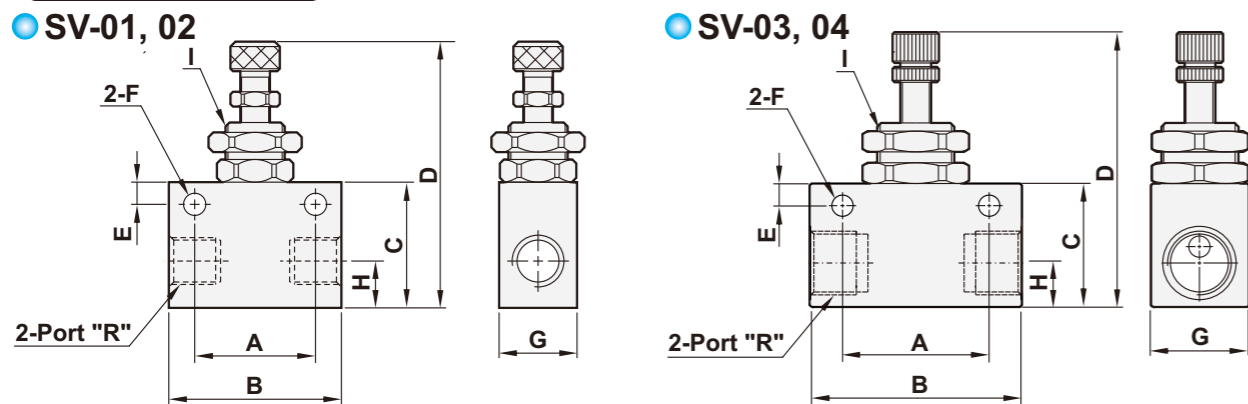
Speed control valve (Precise type)

Port size		Thread	
01	1/8"	Blank	G
02	1/4"	N	NPT
03	3/8"		
04	1/2"		

Specifications

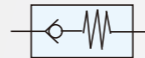
Model	SV-01	SV-02	SV-03	SV-04
Port size	1/8"	1/4"	3/8"	1/2"
Body material	Aluminum alloy			
Fluid	Compressed air			
Sectional area	3.8mm ²	6mm ²	38mm ²	48mm ²
Operating pressure range	0 ~ 9.9 kgf/cm ²			
Proof pressure	10 kgf/cm ²			
Ambient temperature	-10°C ~ 80°C			

Dimensions



Model	R	A	B	C	D	E	F	G	H	I
SV-01	1/8"	24.5	35.0	25.5	54.0	4.5	φ4.5	15.8	9.2	M12xP1.0
SV-02	1/4"	24.5	35.0	25.5	54.0	4.5	φ4.5	19.0	9.2	M12xP1.0
SV-03	3/8"	38.0	52.0	32.0	72.8	4.8	φ5.5	24.0	14.2	M18xP1.25
SV-04	1/2"	38.0	52.0	36.0	80.5	5.5	φ5.5	28.0	15.2	M22xP1.25

Symbol



Features

* Check ball mechanism allows fluid go through in one direction.

Specifications

C - **01** **N**

Check valve

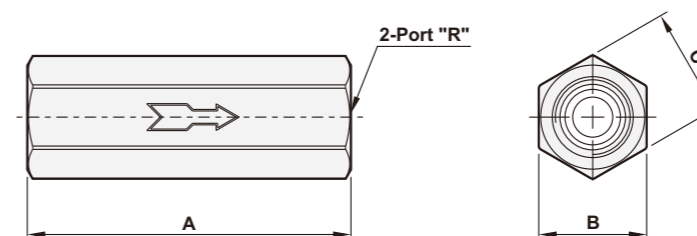
Port size		Thread	
01	1/8"	Blank	G
02	1/4"	N	NPT
03	3/8"		
04	1/2"		

Specifications

Model	C-01	C-02	C-03	C-04
Port size	1/8"	1/4"	3/8"	1/2"
Body material	Aluminum alloy			
Fluid	Compressed air			
Sectional area	10mm ²	23mm ²	38mm ²	56mm ²
Operating pressure range	0.3 ~ 8.0 kgf/cm ²			
Proof pressure	8 kgf/cm ²			
Ambient temperature	-10°C ~ 80°C			
Net weight	17g	27g	46g	82g

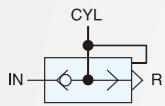
Dimensions

C-01, 02, 03, 04



Model	C-01	C-02	C-03	C-04
R	1/8"	1/4"	3/8"	1/2"
A	40.0	50.0	50.0	63.0
B	14.0	17.0	21.0	25.0
C	14.0	17.0	21.0	25.0

Symbol



Features



How to order

Specifications

Model	Q-01	Q-02	Q-03	Q-04	Q-06
Port size	1/8"	1/4"	3/8"	1/2"	3/4"
Body material	Aluminum alloy				
Fluid	Compressed air				
Sectional area	16mm ²	27mm ²	28mm ²	71mm ²	72.5mm ²
Operating pressure range	0.5 ~ 9.9 kgf/cm ²				
Proof pressure	10 kgf/cm ²				
Max. flow rate l/min	886	1823	2300	3000	3848
Ambient temperature	-10°C ~ 80°C				

Dimensions

Features

How to order

Specifications

Model	ST-01	ST-02	STH-01
Port size	1/8"	1/4"	1/8"
Body material	Aluminum alloy		
Fluid	Compressed air		
Sectional area	7.5mm ²	21mm ²	14mm ²
Operating pressure range	0.8 ~ 9.9 kgf/cm ²		
Proof pressure	10 kgf/cm ²		
Ambient temperature	-10°C ~ 80°C		
Max. flow rate l/min	823	1583	857

Dimensions

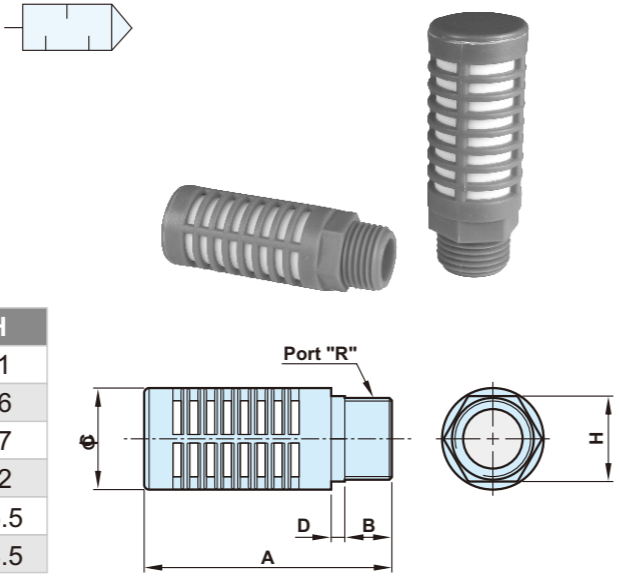
How to order

EN — **01**

Silencer-plastic type

Port size	
01	1/8"
02	1/4"
03	3/8"
04	1/2"
06	3/4"
08	1"

Model	R	A	B	C	D	H
EN-01	PT 1/8"	36	7.5	12	5	11
EN-02	PT 1/4"	46	10	18	5.8	16
EN-03	PT 3/8"	57	11	22	5.5	17
EN-04	PT 1/2"	71.5	12	26	6.5	22
EN-06	PT 3/4"	85	14	34	4.5	26.5
EN-08	PT 1"	100	19	41	5.5	34.5



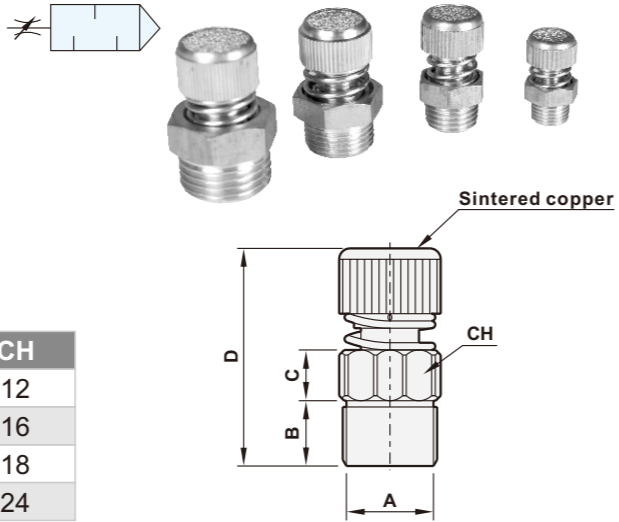
How to order

EV — **01** **N**

Silencer-vibration type

Port size	Thread
01	1/8"
02	1/4"
03	3/8"
04	1/2"
Blank	PT
N	NPT

Model	A	B	C	D	CH
EV-01	PT 1/8"	6	7	33	12
EV-02	PT 1/4"	9	7	35	16
EV-03	PT 3/8"	10	10	40	18
EV-04	PT 1/2"	10	10	42	24



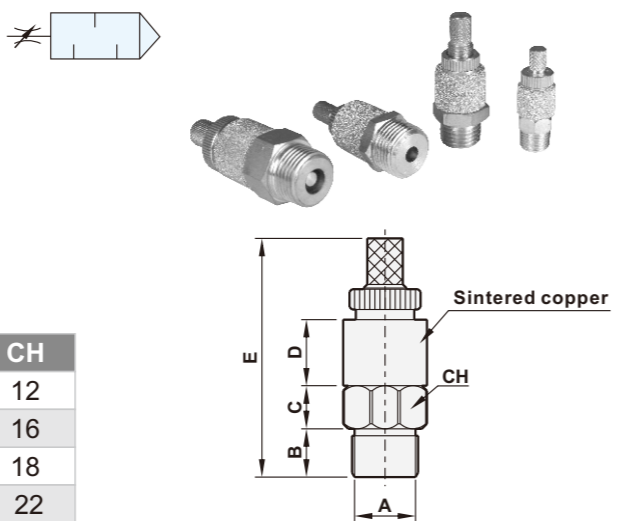
How to order

ES — **01** **N**

Silencer-exhaust speed control type

Port size	Thread
01	1/8"
02	1/4"
03	3/8"
04	1/2"
Blank	PT
N	NPT

Model	A	B	C	D	E	CH
ES-01	PT 1/8"	6	7	23	36	12
ES-02	PT 1/4"	9	7	28	43	16
ES-03	PT 3/8"	10	10	35	46.5	18
ES-04	PT 1/2"	11	5	20	56.5	22



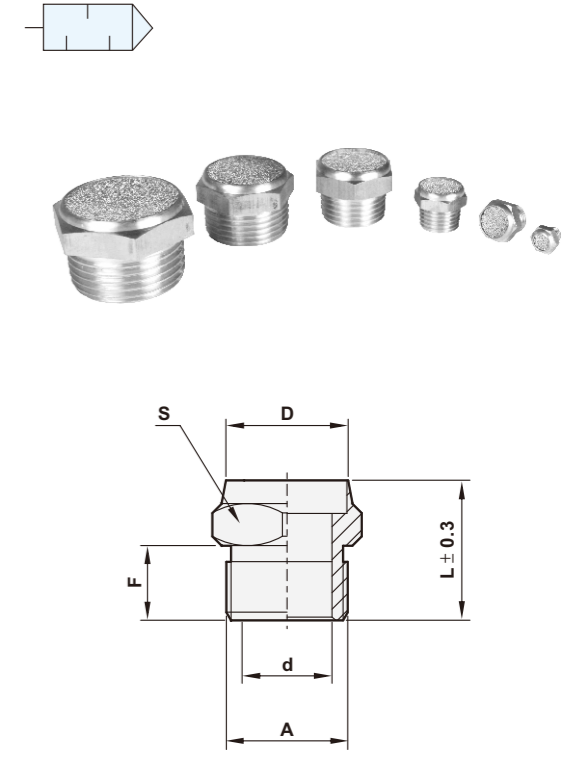
How to order

EP — **01** **N**

Silencer-breather vents type

Port size		Thread
M5	M5	04 1/2"
01	1/8"	06 3/4"
02	1/4"	08 1"
03	3/8"	
Blank		PT
N		NPT

Model	A	D	d	L	F	S
EP-M5	M5	7.5	2.5	10	5	8
EP-01	PT 1/8"	11.4	6.5	11.3	6.4	12
EP-02	PT 1/4"	14.8	9	14.1	8.2	15
EP-03	PT 3/8"	18	12	15.8	9	19
EP-04	PT 1/2"	21	15	18.8	10.5	22
EP-06	PT 3/4"	26	20	20.8	12	27
EP-08	PT 1"	34.2	26	24.8	14.5	36



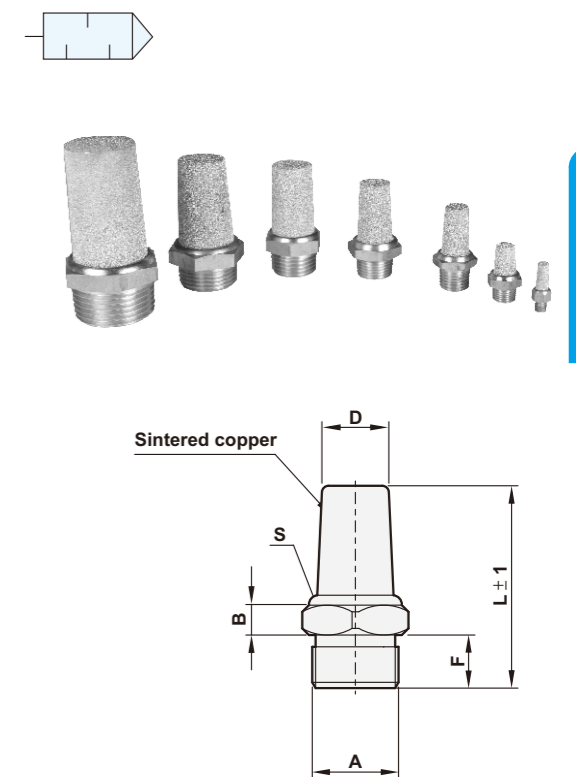
How to order

EC — **01** **N**

Silencer-muffler type

Port size		Thread
M5	M5	04 1/2"
01	1/8"	06 3/4"
02	1/4"	08 1"
03	3/8"	
Blank		PT
N		NPT

Model	A	D	L	F	S	B
EC-M5	M5	5.5	20	5	10	3.5
EC-01	PT 1/8"	8	24	6	13	4
EC-02	PT 1/4"	11	33	8	15	4
EC-03	PT 3/8"	14	44	10	22	5
EC-04	PT 1/2"	18	49	10	24	6.5
EC-06	PT 3/4"	21	57	11	30	7.5
EC-08	PT 1"	27	72	15	36	8




ACCESSORIES


ACCESSORIES

Specifications


Male straight

NPC		NO	4-M5	4-01	4-02	6-M5	6-01	6-02	6-03	8-01	8-02	8-03	8-04	10-02	10-03	10-04	12-02	12-03	12-04
	size	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10	12	12	12
		M5	1/8"	1/4"	M5	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	


Male elbow

NPL		NO	4-M5	4-01	4-02	6-M5	6-01	6-02	6-03	8-01	8-02	8-03	8-04	10-02	10-03	10-04	12-02	12-03	12-04
	size	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10	12	12	12
		M5	1/8"	1/4"	M5	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	


Male branch tee

NPB		NO	4-M5	4-01	4-02	6-M5	6-01	6-02	6-03	8-01	8-02	8-03	8-04	10-02	10-03	10-04	12-02	12-03	12-04
	size	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10	12	12	12
		M5	1/8"	1/4"	M5	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	


Speed controller

NSC		NO	4-M5	4-01	4-02	6-M5	6-01	6-02	6-03	8-01	8-02	8-03	8-04	10-02	10-03	10-04	12-02	12-03	12-04
	size	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10	12	12	12
		M5	1/8"	1/4"	M5	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	


Male run tee

NPD		NO	4-M5	4-01	4-02	6-M5	6-01	6-02	6-03	8-01	8-02	8-03	8-04	10-02	10-03	10-04	12-02	12-03	12-04
	size	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10	12	12	12
		M5	1/8"	1/4"	M5	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	


Female elbow

NPLF		NO	4-M5	4-01	4-02	6-M5	6-01	6-02	6-03	8-01	8-02	8-03	8-04	10-02	10-03	10-04	12-02	12-03	12-04
	size	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10	12	12	12
		M5	1/8"	1/4"	M5	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	


Female straight

NPCF		NO	4-M5	4-01	4-02	6-M5	6-01	6-02	6-03	8-01	8-02	8-03	8-04	10-02	10-03	10-04	12-02	12-03	12-04
	size	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10	12	12	12
		M5	1/8"	1/4"	M5	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	

Single universal elbow


NPH		NO	4-M5	4-01	4-02	6-M5	6-01	6-02	6-03	8-01	8-02	8-03	8-04	10-02	10-03	10-04	12-02	12-03	12-04
	size	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10	12	12	12
		M5	1/8"	1/4"	M5	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	

Extended stud elbow


NPLL		NO	4-M5	4-01	4-02	6-M5	6-01	6-02	6-03	8-01	8-02	8-03	8-04	10-02	10-03	10-04	12-02	12-03	12-04
	size	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10	12	12	12
		M5	1/8"	1/4"	M5	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	

Specifications


S type speed controller

NSS		NO	4-M5	4-01	4-02	6-M5	6-01	6-02	6-03	8-01	8-02	8-03	8-04	10-02	10-03	10-04	12-02	12-03	12-04
	size	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10	12	12	12
		M5	1/8"	1/4"	M5	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	


Bulkhead female union

NCM		NO	4-01	4-02	6-01	6-02	6-03	8-01	8-02	8-03	10-02	10-03	10-04	12-02	12-03	12-04			
	size	4	4	6	6	6	6	8	8	8	10	10	10	12	12	12			
		1/8"	1/4"	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"				


Male equal Y

NPX		NO	4-M5	4-01	4-02	6-M5	6-01	6-02	6-03	8-01	8-02	8-03	8-04	10-02	10-03	10-04	12-02	12-03	12-04
	size	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10	12	12	12
		M5	1/8"	1/4"	M5	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	


Union elbow

NPV		NO	4	6	8	10	12
	size	4	6	8	10	12	


Standpipe

NPGJ		NO	6-4	8-4	8-6	10-6	10-8
	size	6	8	8	10	10	
		4	4	6	6	8	


Union straight

NPU		NO	4	6	8	10	12
	size	4	6	8	10	12	


Unequal tee

NEG		NO	6-4	8-6	10-8	12-10
	size	6	8	10	12	
		4	6	8	10	


Union tee

NPE		NO	4	6	8	10	12
	size	4	6	8	10	12	


Unequal straight

NPG		NO	6-4	8-6	10-8	12-10
	size	6	8	10	12	
		4	6	8	10	


Bulkhead union

NPM		NO	4	6	8	10	12
	size	4	6	8	10	12	

Union Y

NPY		NO	4	6	8	10	12
	size	4	6	8	10	12	

Unequal Y

NPW		NO	6-4	8-6	10-8	12-10
	size	6	8	10	12	
		4	6	8	10	

Specifications

Male straight			Male elbow			Male branch tee		
FPC 4-M5	FPC 8-M5	FPC 12-01	FPL 4-M5	FPL 8-01	FPL 12-03	FPB 4-M5	FPB 8-01	FPB 12-03
FPC 4-M6	FPC 8-M6	FPC 12-02	FPL 4-M6	FPL 8-02	FPL 12-04	FPB 4-M6	FPB 8-02	FPB 12-04
FPC 4-01	FPC 8-01	FPC 12-03	FPL 4-01	FPL 8-03	FPL 16-02	FPB 4-01	FPB 8-03	FPB 16-02
FPC 4-02	FPC 8-02	FPC 12-04	FPL 4-02	FPL 8-04	FPL 16-03	FPB 4-02	FPB 8-04	FPB 16-03
FPC 6-M6	FPC 8-03	FPC 16-02	FPL 6-M6	FPL 10-01	FPL 16-04	FPB 6-M6	FPB 10-01	FPB 16-04
FPC 6-M5	FPC 8-04	FPC 16-03	FPL 6-M5	FPL 10-02		FPB 6-M5	FPB 10-02	
FPC 6-01	FPC 10-01	FPC 16-04	FPL 6-01	FPL 10-03		FPB 6-01	FPB 10-03	
FPC 6-02	FPC 10-02		FPL 6-02	FPL 10-04		FPB 6-02	FPB 10-04	
FPC 6-03	FPC 10-03		FPL 6-03	FPL 12-01		FPB 6-03	FPB 12-01	
FPC 6-04	FPC 10-04		FPL 6-04	FPL 12-02		FPB 6-04	FPB 12-02	

Male run tee			Male equal Y			Extended stud elbow		
FPD 4-M5	FPD 8-01	FPD 12-03	FPX 4-M5	FPX 8-M5	FPX 12-01	FPLL 4-M5	FPLL 8-03	FPLL 16-03
FPD 4-M6	FPD 8-02	FPD 12-04	FPX 4-M6	FPX 8-M6	FPX 12-02	FPLL 4-01	FPLL 8-04	FPLL 16-04
FPD 4-01	FPD 8-03	FPD 16-02	FPX 4-01	FPX 8-01	FPX 12-03	FPLL 4-02	FPLL 10-02	
FPD 4-02	FPD 8-04	FPD 16-03	FPX 4-02	FPX 8-02	FPX 12-04	FPLL 4-03	FPLL 10-03	
FPD 6-M6	FPD 10-01	FPD 16-04	FPX 6-M6	FPX 8-03	FPX 16-03	FPLL 6-01	FPLL 10-04	
FPD 6-M5	FPD 10-02		FPX 6-M5	FPX 8-04	FPX 16-04	FPLL 6-02	FPLL 12-03	
FPD 6-01	FPD 10-03		FPX 6-01	FPX 10-01		FPLL 6-03	FPLL 12-04	
FPD 6-02	FPD 10-04		FPX 6-02	FPX 10-02		FPLL 6-04		
FPD 6-03	FPD 12-01		FPX 6-03	FPX 10-03		FPLL 8-01		
FPD 6-04	FPD 12-02		FPX 6-04	FPX 10-04		FPLL 8-02		

Union tee		Union Y		Union elbow		Union elbow	
FPE 4	FPY 4	FPV 4	FPU 4				
FPE 6	FPY 6	FPV 6	FPU 6				
FPE 8	FPY 8	FPV 8	FPU 8				
FPE 10	FPY 10	FPV 10	FPU 10				
FPE 12	FPY 12	FPV 12	FPU 12				
FPE 16	FPY 16	FPV 16	FPU 16				

Unequal straight		Unequal Y		Union cross		Unequal cross	
FPG 6-4	FPN 6-4-4	FPZ 4	FPHZ 4-6				
FPG 6-5	FPN 8-6-6	FPZ 6	FPHZ 6-5				
FPG 8-6	FPN 10-8-8	FPZ 8	FPHZ 6-8				
FPG 10-8	FPN 12-10-10	FPZ 10	FPHZ 8-10				
FPG 12-10	FPN 16-12-12	FPZ 12	FPHZ 10-6				
FPG 16-12			FPHZ 10-12				

Specifications

Female elbow			Female straight			Male reducer/Triple branch		
FPLF 4-M5	FPLF 8-03	FPLF 16-02	FPCF 4-M5	FPCF 8-01	FPCF 12-03	FPKD 4-M5	FPKD 6-03	FPKD 10-03
FPLF 4-01	FPLF 8-04	FPLF 16-03	FPCF 4-01	FPCF 8-02	FPCF 12-04	FPKD 4-M6	FPKD 6-04	FPKD 10-04
FPLF 6-01	FPLF 10-02	FPLF 16-04	FPCF 4-02	FPCF 8-03	FPCF 16-03	FPKD 4-01	FPKD 8-01	FPKD 12-03
FPLF 6-02	FPLF 10-03		FPCF 4-03	FPCF 8-04	FPCF 16-04	FPKD 4-02	FPKD 8-02	FPKD 12-04
FPLF 6-03	FPLF 10-04		FPCF 6-01	FPCF 10-02		FPKD 6-M6	FPKD 8-03	
FPLF 6-04	FPLF 12-02		FPCF 6-02	FPCF 10-03		FPKD 6-M5	FPKD 8-04	
FPLF 8-01	FPLF 12-03		FPCF 6-03	FPCF 10-04		FPKD 6-01	FPKD 10-01	
FPLF 8-02	FPLF 12-04		FPCF 6-04	FPCF 12-02		FPKD 6-02	FPKD 10-02	

360° Female universal elbow		Single universal elbow		Double universal elbow		Speed controller		S type speed controller	
FBHF 4-01	FBHF 10-01	FPH 4-M5	FPH 10-01	FPHW 6-01	FJSC 4-M5	FJSC 8-03	FJSS 6-01	FJSS 10-04	
FBHF 4-02	FBHF 10-02	FPH 4-01	FPH 10-02	FPHW 6-02	FJSC 4-01	FJSC 8-04	FJSS 6-02	FJSS 12-02	
FBHF 6-01	FBHF 10-03	FPH 4-02	FPH 10-03	FPHW 8-01	FJSC 4-02	FJSC 10-02	FJSS 6-03	FJSC 12-03	
FBHF 6-02	FBHF 10-04	FPH 6-M5	FPH 10-04	FPHW 8-02	FJSC 6-M5	FJSC 10-03	FJSS 6-04	FJSS 12-04	
FBHF 6-03	FBHF 12-01	FPH 6-01	FPH 12-02	FPHW 8-03	FJSC 6-01	FJSC 10-04	FJSS 8-01		
FBHF 6-04	FBHF 12-02	FPH 6-02	FPH 12-03	FPHW 10-01	FJSC 6-02	FJSC 12-02	FJSS 8-02		
FBHF 8-01	FBHF 12-03	FPH 6-03	FPH 12-04	FPHW 10-02	FJSC 6-03	FJSC 12-03	FJSS 8-03		
FBHF 8-02	FBHF 12-04	FPH 8-01		FPHW 10-03	FJSC 6-04	FJSC 12-04	FJSS 8-04		
FBHF 8-03		FPH 8-02		FPHW 12-02	FJSC 8-01		FJSS 10-02		
FBHF 8-04		FPH 8-03		FPHW 12-03	FJSC 8-02		FJSS 10-03		

Triple branch union		Nipple hand valve		Straight fitting-G thread	
FPKG 4	FHVFFS 01-01	FHVFS 6-01	FHVFS 12-02		
FPKG 6	FHVFFS 02-02	FHVFS 6-02	FHVFS 12-03		
FPKG 8	FHVFFS 03-03	FHVFS 6-03	FHVFS 12-04		
FPKG 10	FHVFFS 03-02	FHVFS 8-01			
FPKG 12	FHVFFS 04-03	FHVFS 8-02			
	FHVFFS 04-04	FHVFS 8-03			
		FHVFS 10-02			
		FHVFS 10-03			
		FHVFS 10-04			

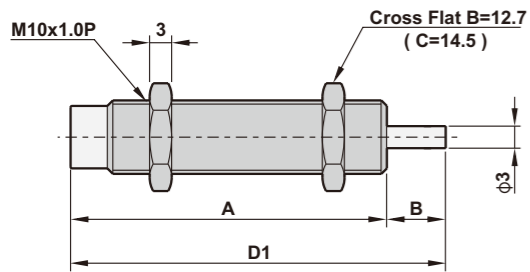
Straight speed controller		Union straight		Mini male straight		Mini male elbow	
FPA 4	FPAC 4	PCX 4-M5	PLX 4-M5				
FPA 6	FPAC 6	PCX 4-01	PLX 4-01				
FPA 8	FPAC 8	PCX 4-02	PLX 6-M5				
FPA 10	FPAC 10	PCX 6-M5	PLX 6-01				
	FPAC 12	PCX 6-01					
		PCX 6-02					
		PCX 8-01					
		PCX 8-02					
		PCX 8-03					

ACCESSORIES

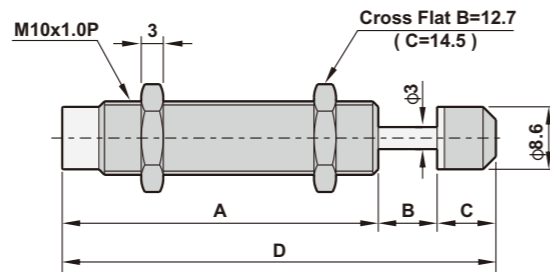
ACCESSORIES

Dimensions

DA1005, 1008-NC



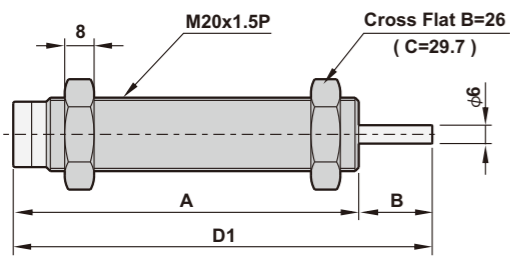
DA1005, 1008



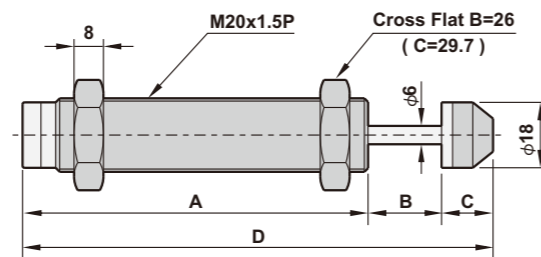
Model	A	B	C	D	D1
DA1005	45.5	5	8.5	59	50.5
DA1008	45.5	8	8.5	62	53.5

Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
DA1005-H	5	3.2	0.9~4.4	2.6	5760	-15~75
DA1005-N	5	3.2	2.8~10	1.5	5760	-15~75
DA1005-L	5	3.2	10~40	0.8	5760	-15~75
DA1008-H	8	3.2	0.9~4.4	2.6	5760	-15~75
DA1008-N	8	3.2	2.8~10	1.5	5760	-15~75
DA1008-L	8	3.2	10~40	0.8	5760	-15~75

DA2020, 2030, 2050-NC



DA2020, 2030, 2050

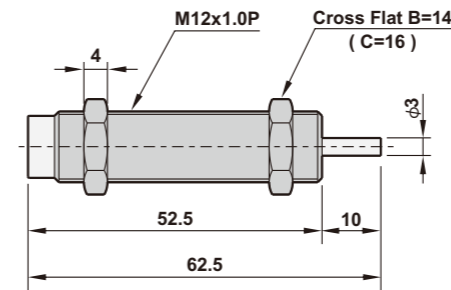


Model	A	B	C	D	D1
DA2020	94	20	14	128	114
DA2030	112	30	14	156	142
DA2050	156.5	50	14	220.5	206.5

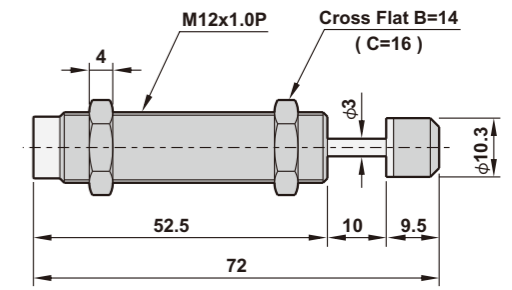
Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
DA2020-H	20	35	6.8~12	3.2	42000	-15~75
DA2020-N	20	35	17.5~70	2	42000	-15~75
DA2020-L	20	35	48.6~777	1.2	42000	-15~75
DA2030-H	30	46	9~36	3.2	55200	-15~75
DA2030-N	30	46	23~92	2	55200	-15~75
DA2030-L	30	46	64~575	1.2	55200	-15~75
DA2050-H	50	62	7~19.8	4.2	70200	-15~75
DA2050-N	50	62	18.3~55.1	2.6	70200	-15~75
DA2050-L	50	62	55~496	1.5	70200	-15~75

Dimensions

DA1210-NC

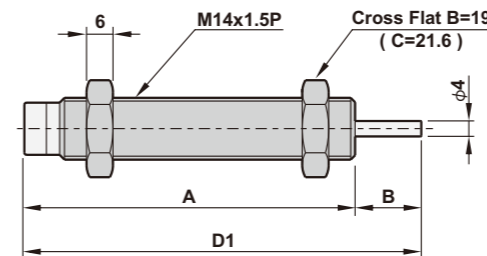


DA1210

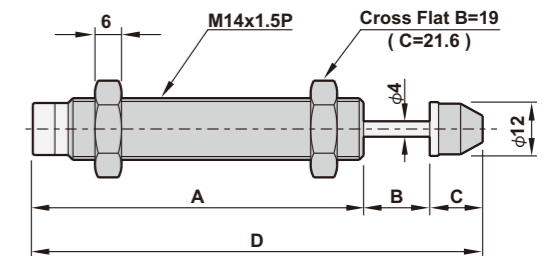


Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
DA1210-H	10	6	1.8~1.2	2.6	10800	-15~75
DA1210-N	10	6	5.3~18.7	1.5	10800	-15~75
DA1210-L	10	6	18.7~75	0.8	10800	-15~75

DA1412, 1415, 1416-NC



DA1412, 1415, 1416

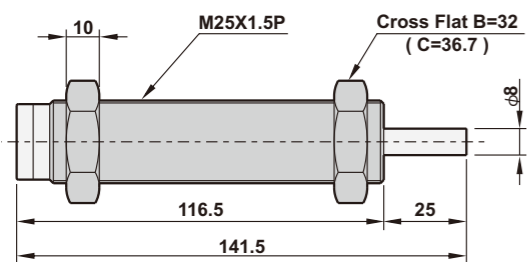


Model	A	B	C	D	D1
DA1412	75	12	12	99	87
DA1415	75	15	12	102	90
DA1416	75	16	12	106	91

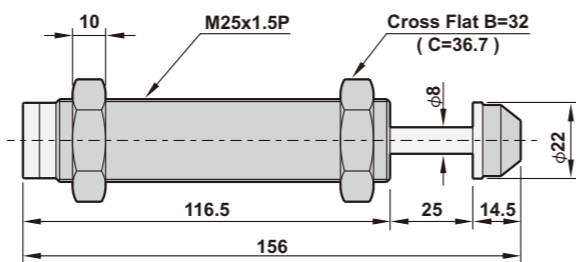
Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
DA1412-H	12	20	5~27	2.6	36000	-15~75
DA1412-N	12	20	17~62	1.5	36000	-15~75
DA1412-L	12	20	40~200	0.8	36000	-15~75
DA1415-H	15	20	5~27	2.6	36000	-15~75
DA1415-N	15	20	17~62	1.5	36000	-15~75
DA1415-L	15	20	40~200	0.8	36000	-15~75
DA1416-H	16	20	5~27	2.6	36000	-15~75
DA1416-N	16	20	17~62	1.5	36000	-15~75
DA1416-L	16	20	40~200	0.8	36000	-15~75

Dimensions

DA2525-NC

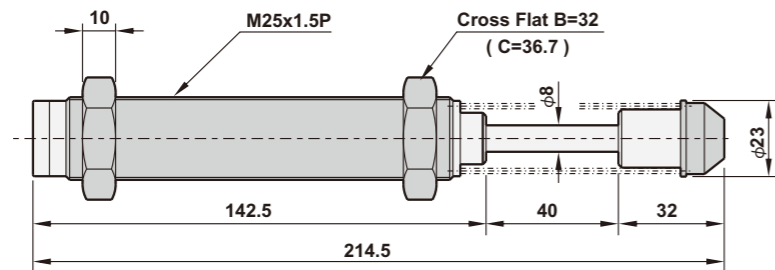


DA2525



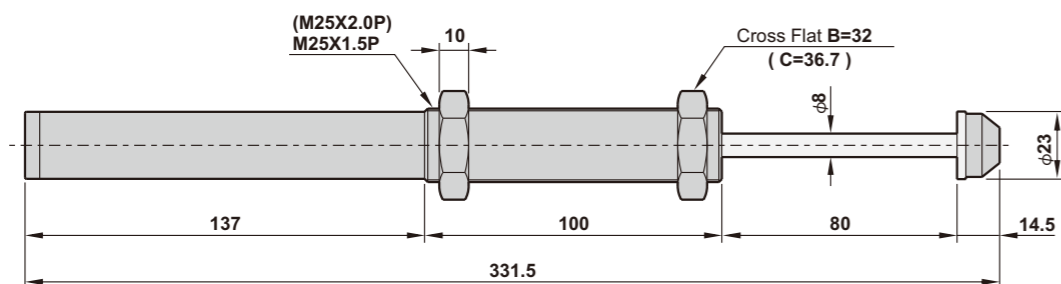
Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
DA2525-H	25	78	15~69	3.2	70200	-15~75
DA2525-N	25	78	39~433	2	70200	-15~75
DA2525-L	25	78	108~1733	1.2	70200	-15~75

DA2540



Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
DA2540-H	40	122	20~108	3.5	87840	-15~75
DA2540-N	40	122	50~381	2.2	87840	-15~75
DA2540-L	40	122	244~1991	1	87840	-15~75

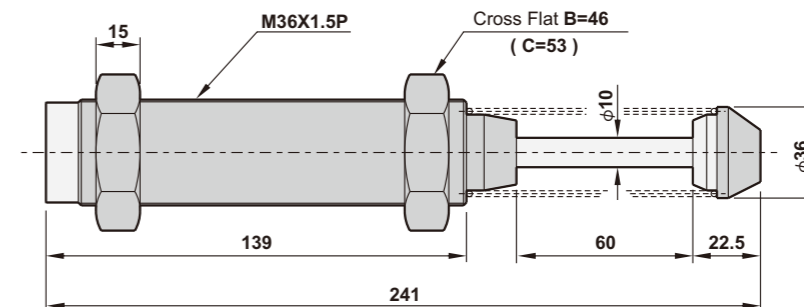
DA2580



Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
DA2580-H	80	198	24.7~99	4	87840	-15~75
DA2580-N	80	198	44~396	3	87840	-15~75
DA2580-L	80	198	176~1584	1.5	87840	-15~75

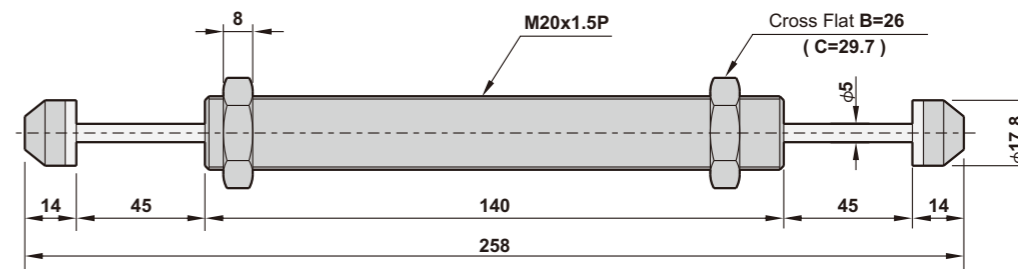
Dimensions

DA3660



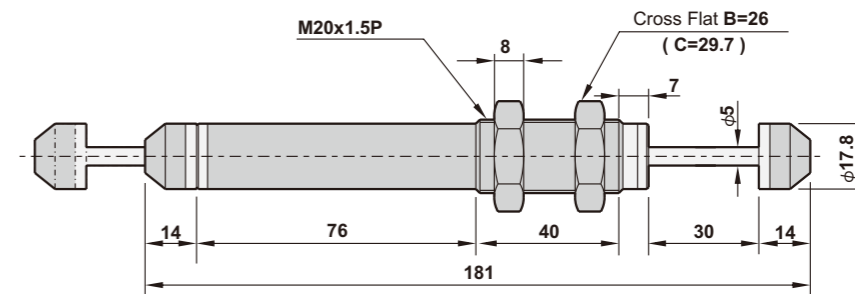
Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
DA3660-H	60	260	57~231	3	124800	-15~75
DA3660-N	60	260	130~813	2	124800	-15~75
DA3660-L	60	260	520~3520	1	124800	-15~75

DAD2030



Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
DAD2030-H	30	46	9~41	3.2	55200	-15~75
DAD2030-N	30	46	23~144	2	55200	-15~75
DAD2030-L	30	46	64~575	1.2	55200	-15~75

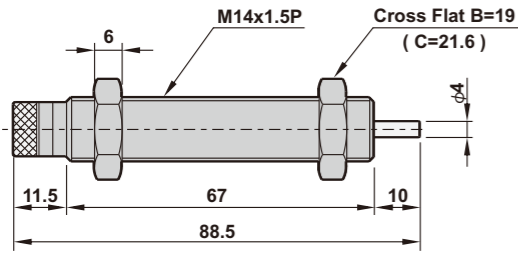
DAD2045



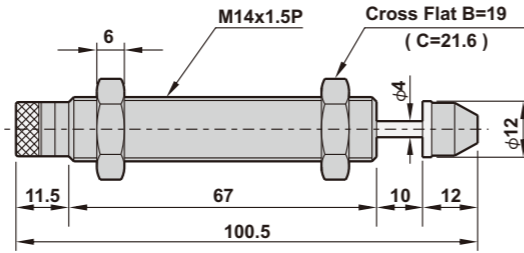
Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
DAD2045-H	45	52	10~46	3.2	64200	-15~75
DAD2045-N	45	52	26~162	2	64200	-15~75
DAD2045-L	45	52	72~650	1.2	64200	-15~75

Dimensions

CA1410-NC

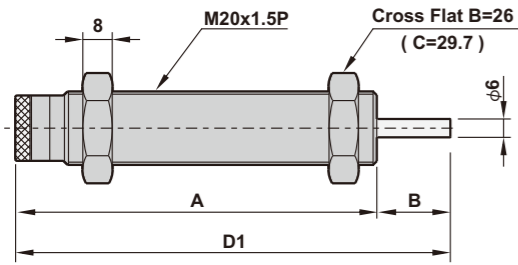


CA1410

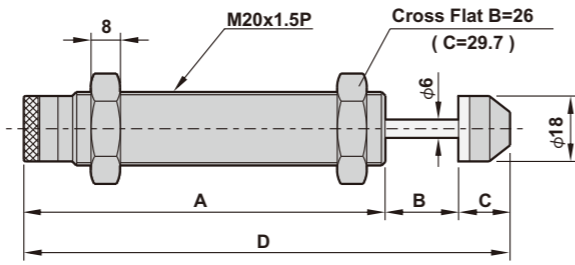


Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
CA1410	10	15	2.9~120	3.2	27000	-15~75

CA2016, 2020-NC



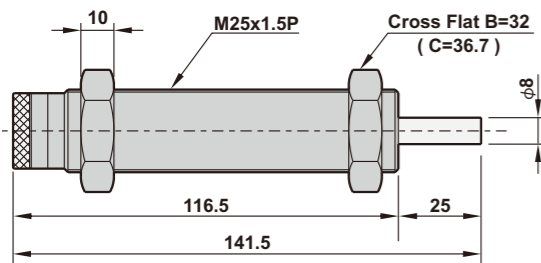
CA2016, 2020



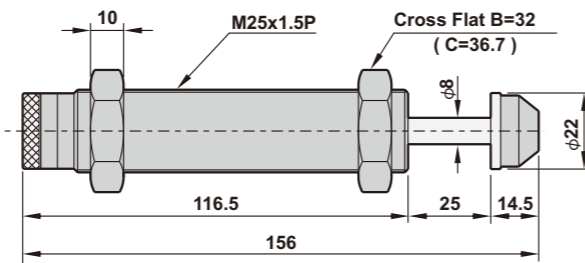
Model	A	B	C	D	D1
CA2016	100	16	14	130	116
CA2020	100	20	14	134	120

Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
CA2016	16	28	5.4~224	3.2	33600	-15~75
CA2020	20	35	6.8~280	3.2	42000	-15~75

CA2525-NC



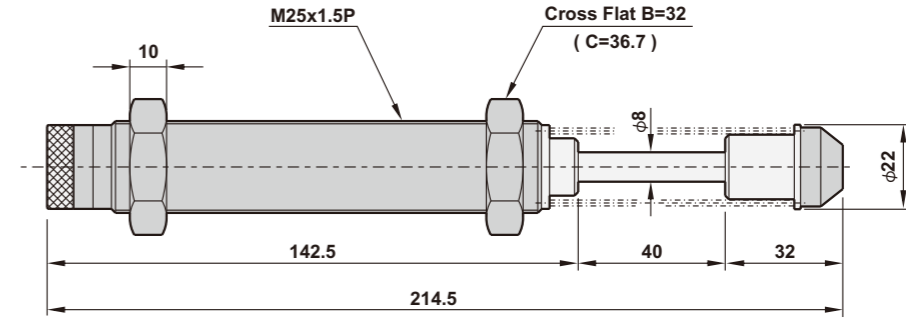
CA2525



Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
CA2525	25	78	15~624	3.2	70200	-15~75

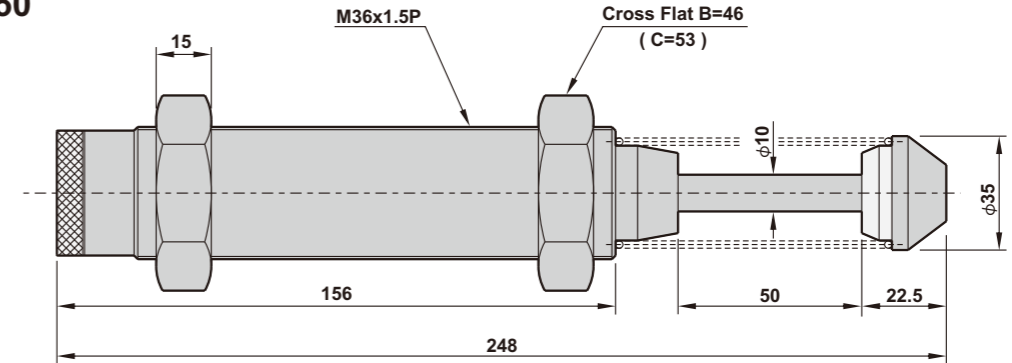
Dimensions

CA2540



Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
CA2540	40	122	23.8~976	3.2	87840	-15~75

CA3650



Model no.	Stroke mm	Max. Nm per cycle Nm	Effective weight We(Kg)	Max impact speed m/s	Max. Nm per hour Nm	Operating temperature °C
CA3650	50	220	43~1760	3.2	105600	-15~75

ACCESSORIES

ACCESSORIES

Applicable cylinder

* Applicable to cylinder IC, PC, GC, RTH series

Reed switch
AL-20R

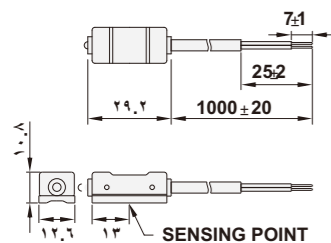


Specifications

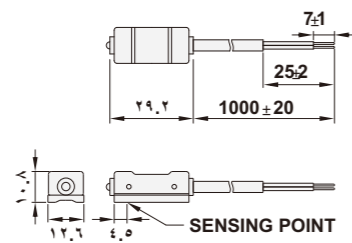
Model	AL-20R	AL-20N	AL-20P
Switching logic	SPST Normally open	Solid state output, Normally open	
Sensor type	Reed switch	NPN current sinking	PNP current sourcing
Operating voltage	5~240 VDC/AC	5~30 VDC	
Switching current	100mA max.	200mA max.	
Contact rating	10W max.	6W max.	
Current consumption	None	20mA max. at 24V	
Voltage drop	3.5V max.	0.5V max.	
Leakage current	None	0.01mA max.	
Indicator	Green LED	Red LED	Green LED
Cable	4φ, 2C, Gray PVC	4φ, 3C, Black PVC	
Sensitivity(note 1)	60 Gauss		
Max. Switching frequency	200Hz	1000Hz	
Temperature range	-10°C ~ 70°C		
Shock (note 2)	30G	50G	
Vibration (note 3)	9G		
Enclosure classification	IEC529 IP67 (NEMA6)		
Protection circuit	None	Reverse Polarity, Short Circuit, Surge Suppression	
Sensor circuit diagram			

Dimensions

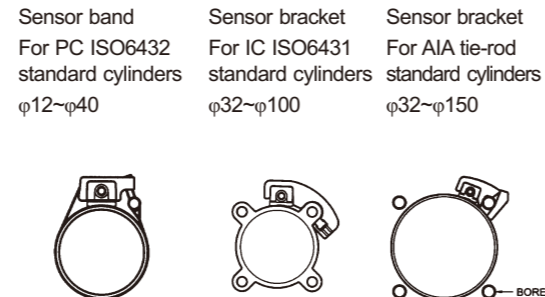
AL-20R



AL-20N, AL-20P



Mounting



Note

1. Measure standard target: $\phi 15.5 \times \phi 8.5 \times t5$ (Anisotropy Rubber Magnet)
2. Sin wave/X.Y.Z 3 Dimensions/3 times each direction/ 11mS Each time.
3. Double amplitude 1.5mm/10 Hz~55Hz~10Hz(Sweep 1min)/X.Y.Z 3 Dimensions/ 1 Hour Each time.

Applicable cylinder

Applicable to cylinder IC, PC, GC, RTH series

Reed switch
AL-21R

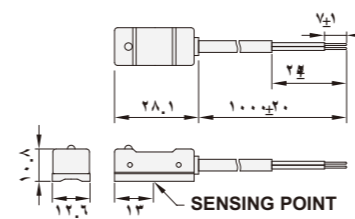


Specifications

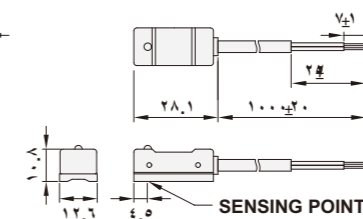
Model	AL-21R	AL-21N	AL-21P
Switching logic	SPST Normally open	Solid state output, Normally open	
Sensor type	Reed switch	NPN current sinking	PNP current sourcing
Operating voltage	5~240 VDC/AC	5~30 VDC	
Switching current	100mA max.	200mA max.	
Contact rating	10W max.	6W max.	
Current consumption	None	20mA max. at 24V	
Voltage drop	3.5V max.	0.5V max.	
Leakage current	None	0.01mA max	
Indicator	Green LED	Red LED	Green LED
Cable	4φ, 2C, Gray PVC	4φ, 3C, Black PVC	
Sensitivity(note 1)	60 Gauss		
Max. Switching frequency	200Hz	1000Hz	
Temperature range	-10°C ~ 70°C		
Shock (note 2)	30G	50G	
Vibration (note 3)	9G		
Enclosure classification	IEC529 IP67 (NEMA6)		
Protection circuit	None	Reverse Polarity, Short Circuit, Surge Suppression	
Sensor circuit diagram			

Dimensions

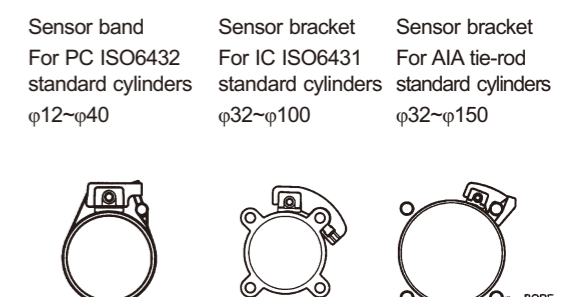
AL-21R



AL-21N, AL-21P



Mounting



Note

1. Measure standard target: $\phi 15.5 \times \phi 8.5 \times t5$ (Anisotropy Rubber Magnet)
2. Sin wave/X.Y.Z 3 Dimensions/3 times each direction/ 11mS Each time.
3. Double amplitude 1.5mm/10 Hz~55Hz~10Hz(Sweep 1min)/X.Y.Z 3 Dimensions/ 1 Hour Each time.

Applicable cylinder

* Applicable to cylinder JC, TR, HYC, HPC, HPS, HYS series

Reed switch
AL-07R

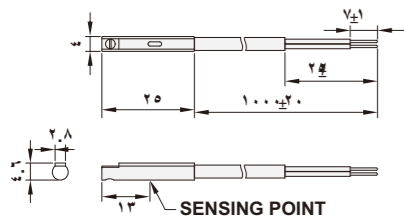


Specifications

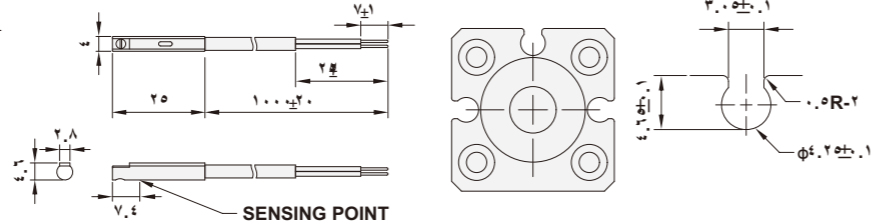
Model	AL-07R	AL-07N	AL-07P
Switching logic	SPST Normally open	Solid state output, Normally open	
Sensor type	Reed switch	NPN current sinking	PNP current sourcing
Operating voltage	5~120 VDC/AC	5~30 VDC	
Switching current	100mA max.	200mA max.	
Contact rating	10W max.	6W max.	
Current consumption	None	20mA max. at 24V	
Voltage drop	2.5V max.	0.5V at 200mA max.	
Leakage current	None	0.01mA max.	
Indicator	Red LED	Red LED	Green LED
Cable	2.8φ, 2C, Gray PVC	2.8φ, 3C, Black PVC	
Sensitivity(note 1)		40 Gauss	
Max. Switching frequency	200HZ	1000Hz	
Temperature range		-10°C ~ 70°C	
Shock (note 2)	30G	50G	
Vibration (note 3)		9G	
Enclosure classification		IEC529 IP67 (NEMA6)	
Protection circuit	None	Reverse Polarity, Short Circuit, Surge Suppression	
Sensor circuit diagram			

Dimensions

AL-07R



AL-07N, AL-07P



Note

1. Measure standard target: $\phi 15.5 \times \phi 8.5 \times t5$ (Anisotropy Rubber Magnet)
2. Sin wave/X.Y.Z 3 Dimensions/3 times each direction/ 11mS Each time.
3. Double amplitude 1.5mm/10 Hz~55Hz~10Hz(Sweep 1min)/X.Y.Z 3 Dimensions/ 1 Hour Each time.

Applicable cylinder

* Applicable to cylinder JC,DR, TR, RCP series

Reed switch
AL-11R

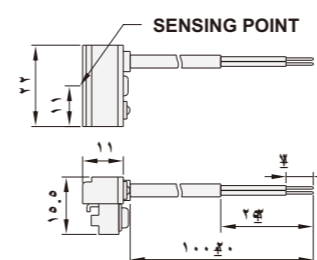


Specifications

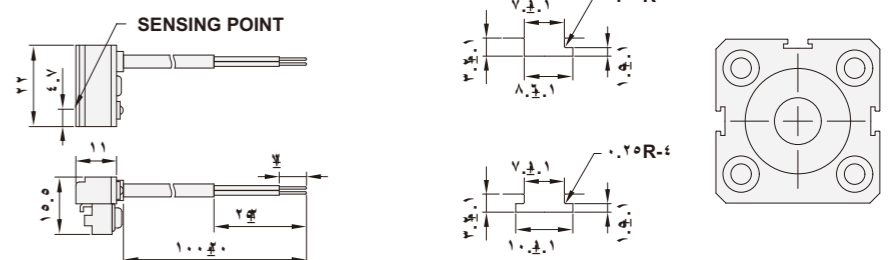
Model	AL-11R	AL-11N	AL-11P
Switching logic	SPST Normally open	Solid state output, Normally open	
Sensor type	Reed switch	NPN current sinking	PNP current sourcing
Operating voltage	5~240 VDC/AC	5~30 VDC	
Switching current	100mA max.	200mA max.	
Contact rating	10Wmax.	6W max.	
Current consumption	None	22mA max. at 24V	20mA max. at 24V
Voltage drop	3.5V max.	0.5V max. at 200mA	
Leakage current	None	0.01mA max.	
Indicator	Green LED	Red LED	Green LED
Cable	3.3φ, 2C, Gray PVC	3.3φ, 3C, Black PVC	
Sensitivity(note 1)		40 Gauss	
Max. Switching frequency	200Hz	1000Hz	
Temperature range		-10°C ~ 70°C	
Shock (note 2)	30G	50G	
Vibration (note 3)		9G	
Enclosure classification		IEC529 IP67 (NEMA6)	
Protection circuit	None	Reverse Polarity, Short Circuit, Surge Suppression	
Sensor circuit diagram			

Dimensions

AL-11R



AL-11N, AL-11P



Note

1. Measure standard target: $\phi 15.5 \times \phi 8.5 \times t5$ (Anisotropy Rubber Magnet)
2. Sin wave/X.Y.Z 3 Dimensions/3 times each direction/ 11mS Each time.
3. Double amplitude 1.5mm/10 Hz~55Hz~10Hz(Sweep 1min)/X.Y.Z 3 Dimensions/ 1 Hour Each time.

Applicable cylinder

* Applicable to cylinder JC, TR, HYC, HPC, HPS series

Reed switch
AL-16R

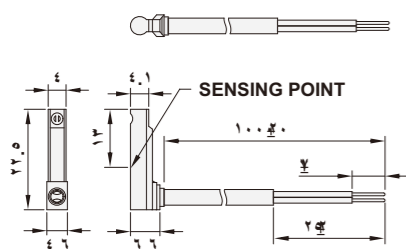


Specifications

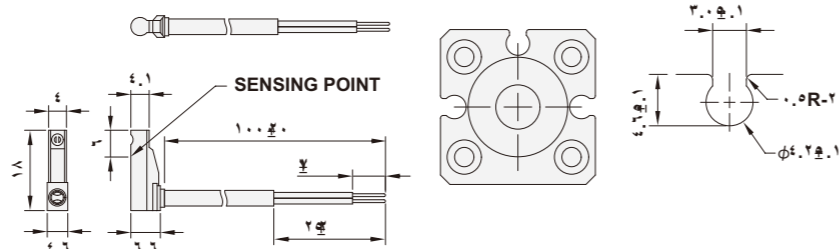
Model	AL-16R	AL-16N	AL-16P
Switching logic	SPST Normally open	Solid state output, Normally open	
Sensor type	Reed switch	NPN current sinking	PNP current sourcing
Operating voltage	5~120 VDC/AC	5~28 VDC	
Switching current	100mA	200mA	
Contact rating	10W(VA)	6W	
Current consumption	None	15mA max. at 24V(switch active) 16mA max. at 24V(switch active)	
Voltage drop	2.5V max. at 40mA DC	0.5V at 200mA 24VDC	
Leakage current	None	0.01mA max.	
Indicator	Red LED	Red LED	Green LED
Cable	2.8φ, 2C, Gray PVC	2.8φ, 3C, Black PVC	
Sensitivity(note 1)		40 Gauss	
Max. Switching frequency		1000Hz	
Temperature range		-10°C ~ 70°C	
Shock (note 2)	30G		50G
Vibration (note 3)		9G	
Enclosure classification		IP67 (NEMA6)	
Protection circuit	None	Reverse Polarity	
Sensor circuit diagram			

Dimensions

AL-16R



AL-16N, AL-16P



Note

1. Measure standard target: $\phi 15.5 \times \phi 8.5 \times t5$ (Anisotropy Rubber Magnet)
2. Sin wave/X.Y.Z 3 Dimensions/3 times each direction/ 11mS Each time.
3. Double amplitude 1.5mm/10 Hz~55Hz~10Hz(Sweep 1min)/X.Y.Z 3 Dimensions/ 1 Hour Each time.

Applicable cylinder

* Applicable to cylinder ZS, ZF, ZK series

Reed switch
AL-30R

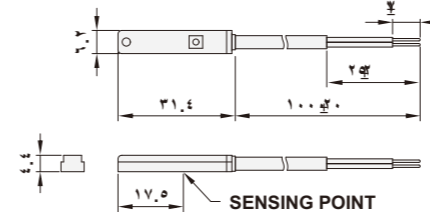


Specifications

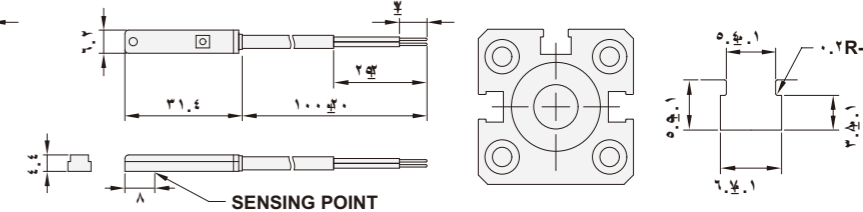
Model	AL-30R	AL-30N	AL-30P
Switching logic	SPST Normally open	Solid state output, Normally open	
Sensor type	Reed switch	NPN current sinking	PNP current sourcing
Operating voltage	5~120 VDC/AC	5~28 VDC	
Switching current	100mA	200mA	
Contact rating	10W(VA)	6W	
Current consumption	None	15mA max. at 24V(switch active) 16mA max. at 24V(switch active)	
Voltage drop	2.5V max. at 40mA DC	1.5V at 200mA 24VDC	
Leakage current	None	0.01mA max.	
Indicator	Red LED	Red LED	Green LED
Cable	2.8φ, 2C, Gray PVC	2.8φ, 3C, Black PVC	
Sensitivity(note 1)		40 Gauss	
Max. Switching frequency	200Hz		1000Hz
Temperature range		-10°C ~ 70°C	
Shock (note 2)	30G		50G
Vibration (note 3)		9G	
Enclosure classification		IP67 (NEMA6)	
Protection circuit	None	Reverse Polarity	
Sensor circuit diagram			

Dimensions

AL-30R



AL-30N, AL-30P



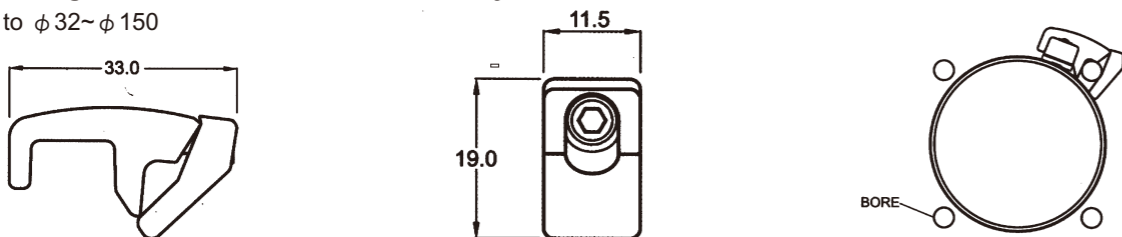
Note

1. Measure standard target: $\phi 15.5 \times \phi 8.5 \times t5$ (Anisotropy Rubber Magnet)
2. Sin wave/X.Y.Z 3 Dimensions/3 times each direction/ 11mS Each time.
3. Double amplitude 1.5mm/10 Hz~55Hz~10Hz(Sweep 1min)/X.Y.Z 3 Dimensions/ 1 Hour Each time.

For sensor switch use

● Mounting bracket for tie-rod standard cylinder

* Apply to $\phi 32 \sim \phi 150$



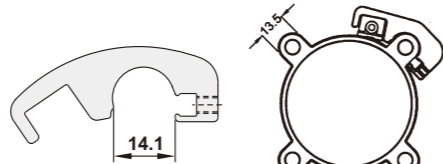
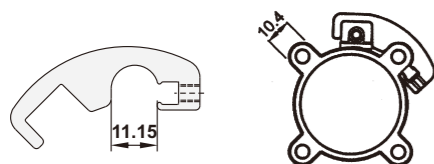
● Mounting bracket for ISO6431 standard cylinder

Apply to $\phi 32 \sim \phi 100$

● How to order

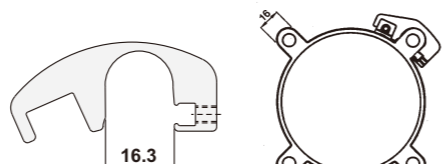
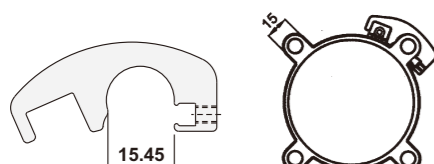
ZFAF32 Apply to $\phi 32, \phi 40$

ZFAF50 Apply to $\phi 50, \phi 63$



ZFAF80 Apply to $\phi 80$

ZFAF100 Apply to $\phi 100$



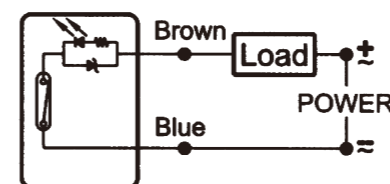
● Sensor band for round cylinder PC, PCL series from $\phi 12 \sim \phi 40$

Step 1	Step 2	Step 3	Step 4
<p>Start by keeping screw 3 to 4 turns into barrel nut on the end of the band assembly.</p>	<p>Place the screw head into clamp and wrap the band around the cylinder. Position the pin with the nearest hole on the band and mark the hole with a permanent mark.</p> <p>Code: ZFCP12</p>	<p>Remove clamp assembly from the cylinder. Locate the marked hole that fits to the cylinder size, cut the band at midway between the next two adjacent hole. (The one that's further away from the screw nut)</p>	<p>Insert cut end of the band into a flat slot opposite from the clamp slot. Place the chosen hole over the pin and bend the band firmly down with thumb pressure. Then wrap the band around cylinder barrel and re-insert screw head into clamp. Position the switch and tighten.</p> <p>Do not over tighten, it could damages the switch or cylinder.</p>

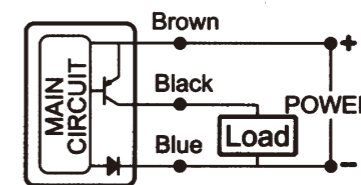
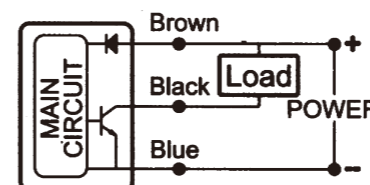
How to use sensors properly

● Applicable cylinder

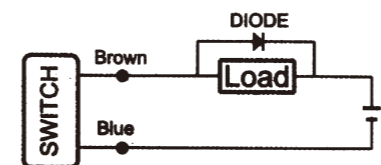
- Particular attention must be paid not to exceed the working limits list.
- Reed switch type connection polarities must be respected, that is the brown wire series load to the positive(+) and the blue to the negative(-) of power source. If these are inverted the sensor remains switched, the load connected and the LED turned off. However, this would not damage the circuit.



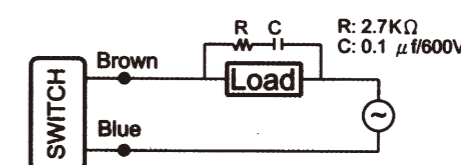
- Solid state type connection polarities must be respected, that is the brown wire to the positive(+) and the blue to the negative(-) from DC power. The black wire have to connect to the load. If black wire was connected to power source, the sensor would be damaged.



- The external protect element is required if sensor is used to switch conductive load. In case of DC conductive load, e.g. relay, solenoid valve. Attach an external diode parallel to the conductive load. And use R-C circuit to replace diode for AC conductive load.



Applicably to DC Conductive Load



Applicably to AC Conductive Load

- Keep out of the strong magnetic field to get rid of interference.