

Hydraulic 16MPa

Three piece **Block cylinder** model **KS**



Three piece Block cylinder KSL



B-type switch KSB

Model designation

Model designation **KS B 080 S N 150**

- ① Limit switch
- ② Cylinder inner diameter
- ③ Rod tip section
- ④ Packing seal
- ⑤ Stroke

Specifications	
Maximum allowable working pressure	16 MPa
Proof pressure	24 MPa
Operating temperature range	Standard 0~70℃
	Thermal resistant specification 5~120℃ *1
Cushion	None
Fluid used	General mineral based hydraulic oil (ISO-VG32 equivalent) Water glycol system working oil *2

*1: The heatproof temperature is limited according to the specification of limit switch.

*2: Set the temperature range as 0-70℃ when using water glycol hydraulic oil.

Do not conduct single unit operation.

Operation check must be performed with cylinder bolted.

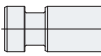
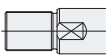
① Limit switch

Symbol	L	B
Limit switch	Without limit switch	B-type switch

② Cylinder inner diameter

Symbol	040	050	063	080
Cylinder inner diameter (mm)	ø40	ø50	ø63	ø80

③ Rod tip section

Symbol	S	M
Rod tip section	Stepped (Standard) 	Male thread 

④ Packing seal

Symbol	N	V
Packing Material	NBR (Standard) Operating temperature: 0~70℃	Fluorocarbon (Thermal resistant specification) Operating temperature: 5~120℃

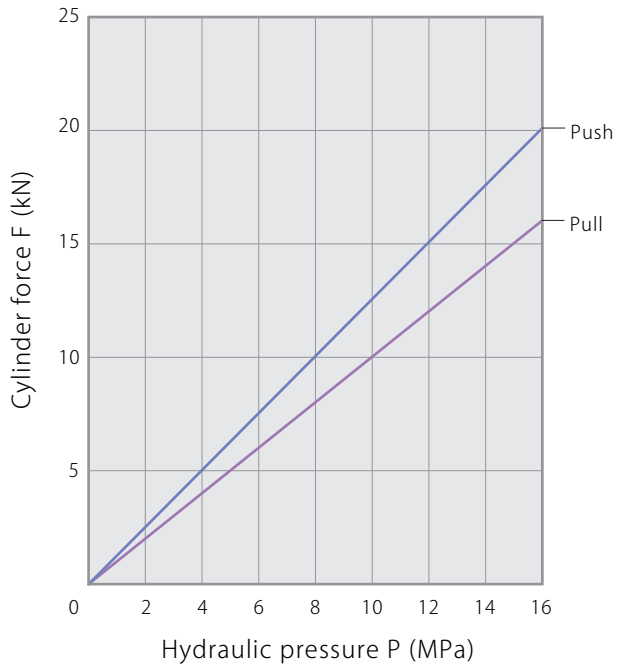
⑤ Stroke (The allowable stroke varies according to the inner diameter of cylinder. Refer to each page of cylinder for details.)

Symbol	010	015	020	025	050	065	080	100	125	150	200
Stroke (mm)	10	15	20	25	50	65	80	100	125	150	200

Performance diagram

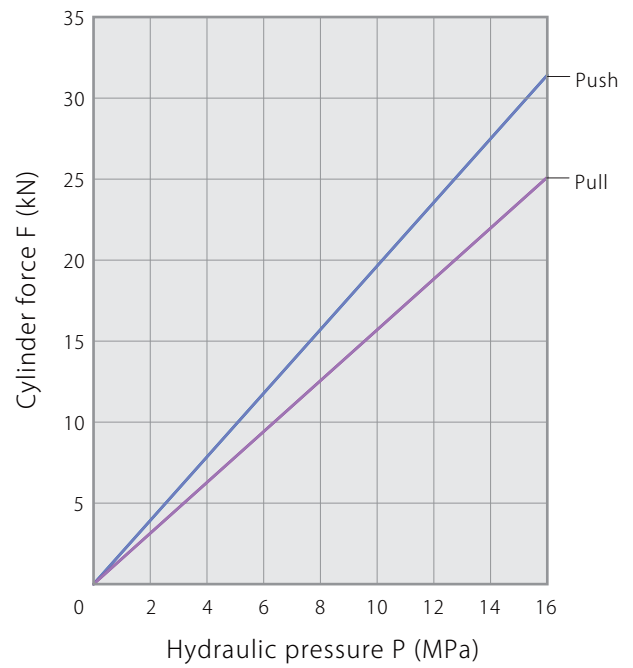
KS 040

$$F (\text{Push}) = 1.257 \times P$$
$$F (\text{Pull}) = 1.002 \times P$$



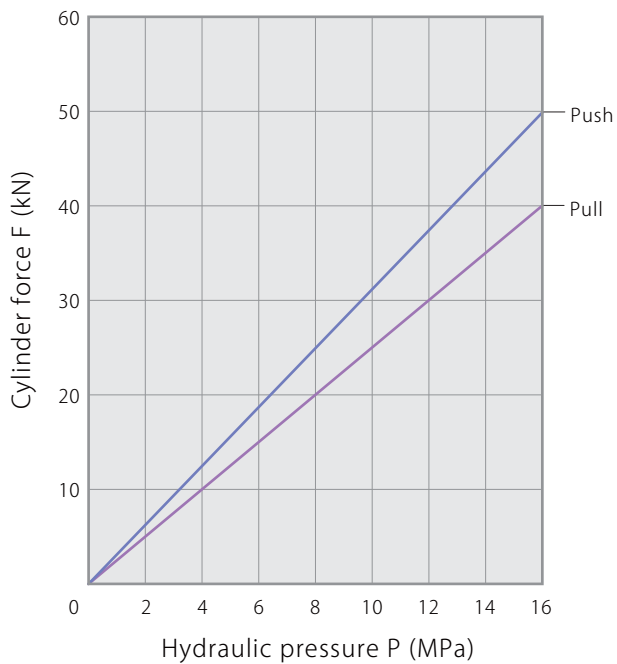
KS 050

$$F (\text{Push}) = 1.963 \times P$$
$$F (\text{Pull}) = 1.569 \times P$$



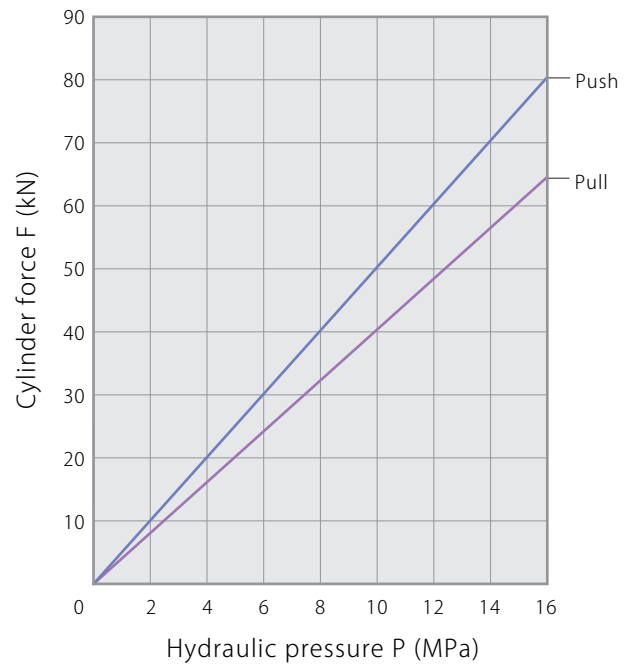
KS 063

$$F (\text{Push}) = 3.117 \times P$$
$$F (\text{Pull}) = 2.501 \times P$$



KS 080

$$F (\text{Push}) = 5.027 \times P$$
$$F (\text{Pull}) = 4.037 \times P$$

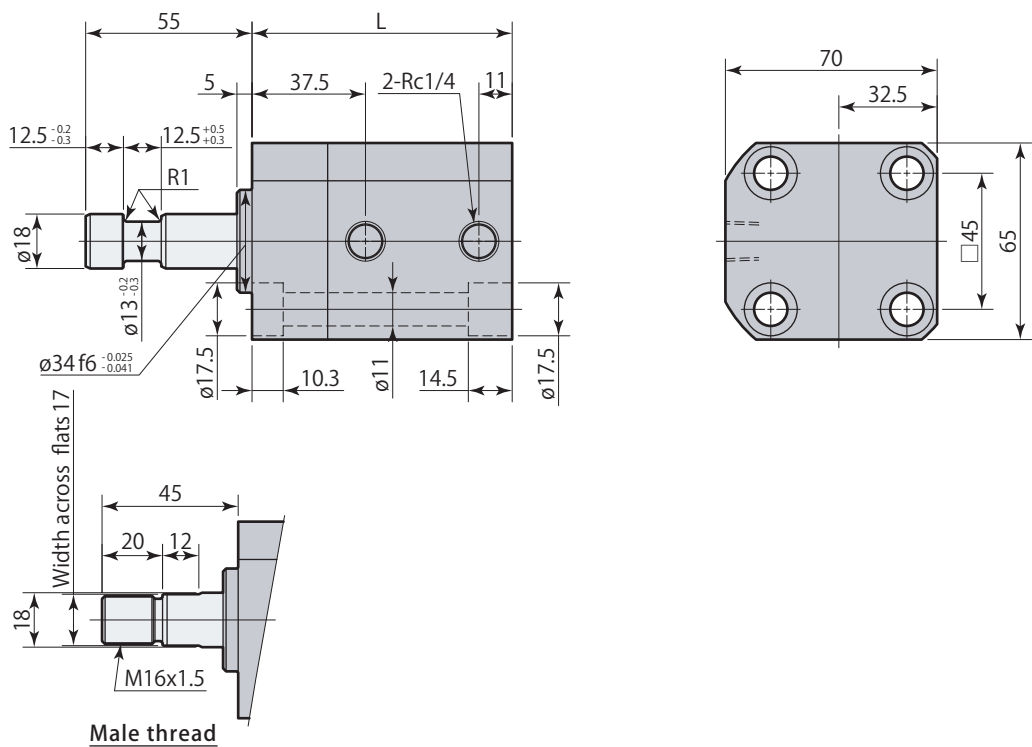


Inner diameter ø40 Three piece Block cylinder

Model designation **KS L 040** Rod tip section specifications Packing specifications Stroke

● Refer to **page → 1** for the details of model.

Stroke	mm	10	15	20	25	50	65	80	100	125	150
L	mm	86	91	96	101	126	141	156	176	201	226
Mass	kg	2.6	2.7	2.8	2.9	3.5	3.9	4.2	4.7	5.3	5.9



Specifications

Model		KSL040	
Cylinder inner diameter	mm	40	
Rod diameter	mm	18	
Maximum allowable working pressure	MPa	16	
Stroke	mm	See the table shown above	
Cylinder force *1	Push	kN	20.1
	Pull	kN	16.0

*1 : Hydraulic pressure at 16MPa. Refer to Performance diagram (**page →2**).

*2: Mounting screws are not included.

Inner diameter $\phi 50$ Three piece Block cylinder

Model designation

KS L 050

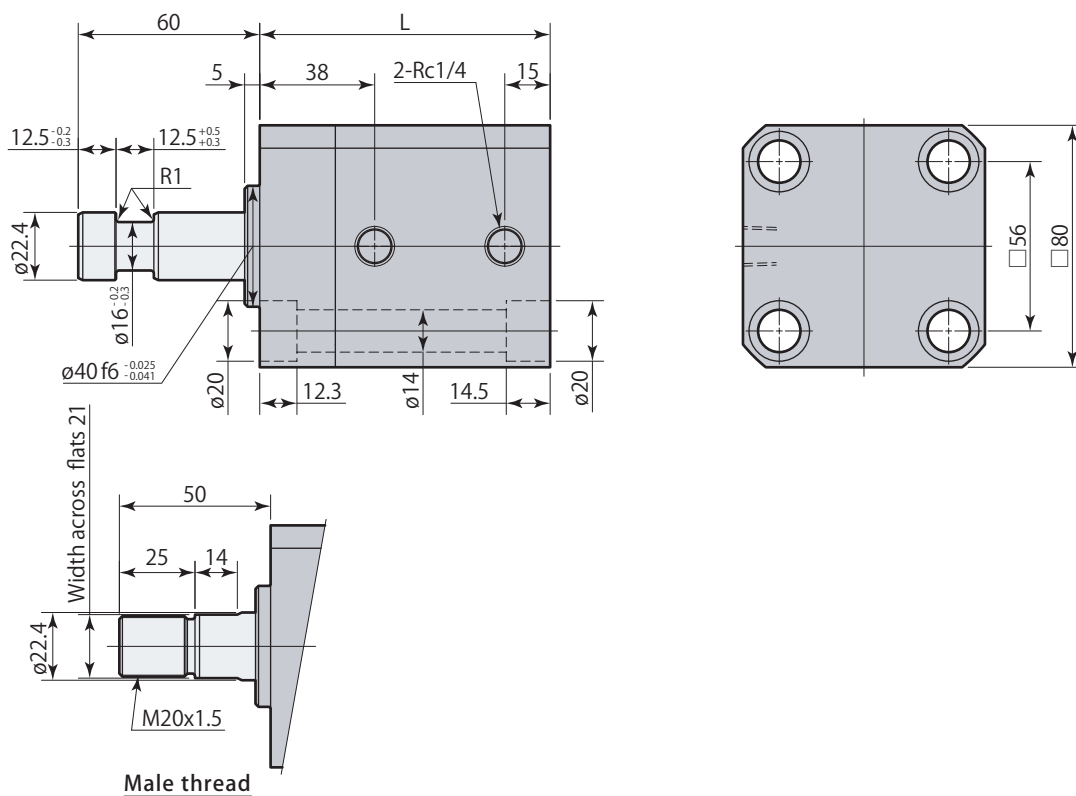
Rod tip section specifications

Packing specifications

Stroke

Refer to page → 1 for the details of model.

Stroke	mm	10	15	20	25	50	65	80	100	125	150
L	mm	96	101	106	111	136	151	166	186	211	236
Mass	kg	4.1	4.2	4.4	4.5	5.3	5.8	6.3	6.9	7.8	8.6



Specifications

Model		KSL050	
Cylinder inner diameter	mm	50	
Rod diameter	mm	22.4	
Maximum allowable working pressure	MPa	16	
Stroke	mm	See the table shown above	
Cylinder force *1	Push	kN	31.4
	Pull	kN	25.1

*1: Hydraulic pressure at 16MPa. Refer to Performance diagram (page → 2).

*2: Mounting screws are not included.

Inner diameter $\phi 63$ Three piece Block cylinder

Model designation

KS L 063

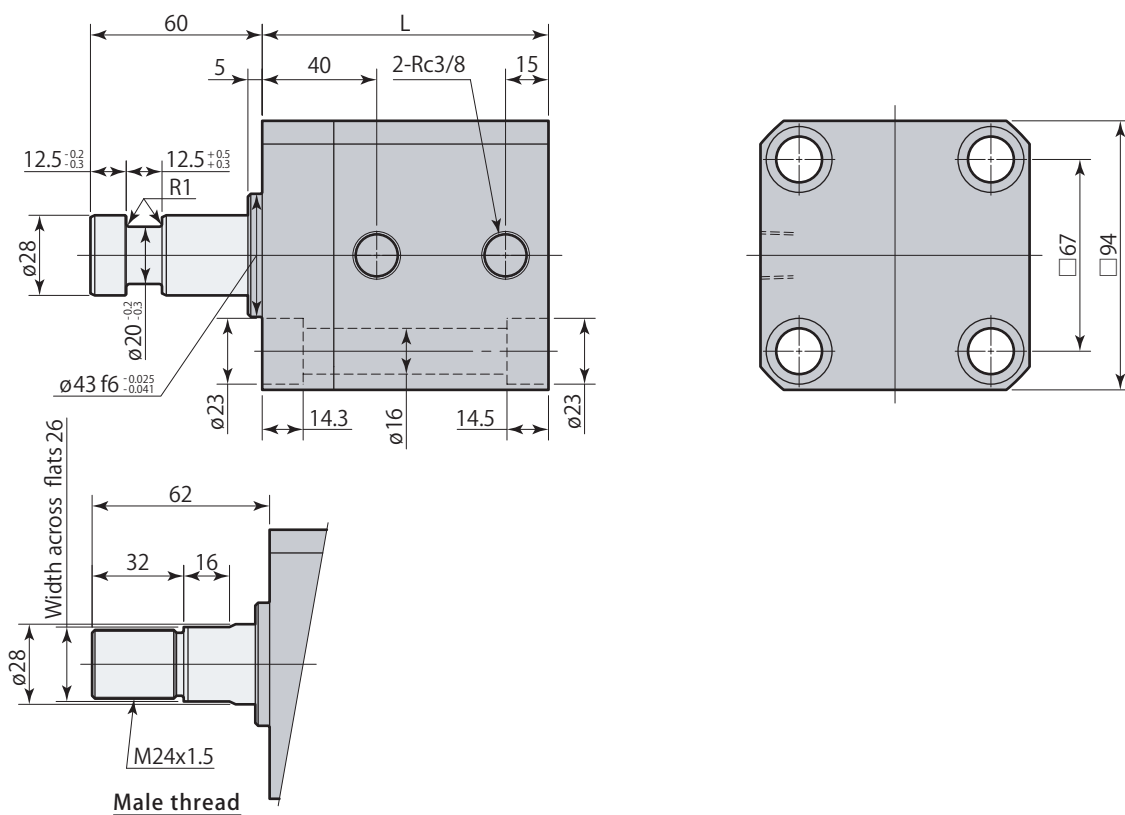
Rod tip section specifications

Packing specifications

Stroke

● Refer to **page → 1** for the details of model.

Stroke	mm	10	15	20	25	50	65	80	100	125	150
L	mm	100	105	110	115	140	155	170	190	215	240
Mass	kg	5.9	6.1	6.3	6.5	7.6	8.2	8.9	9.7	10.7	11.8



Specifications

Model		KSL063	
Cylinder inner diameter	mm	63	
Rod diameter	mm	28	
Maximum allowable working pressure	MPa	16	
Stroke	mm	See the table shown above	
Cylinder force *1	Push	kN	49.9
	Pull	kN	40.0

*1 : Hydraulic pressure at 16MPa. Refer to Performance diagram (**page → 2**).

*2 : Mounting screws are not included.

Inner diameter $\phi 80$ Three piece Block cylinder

Model designation

KS L 080

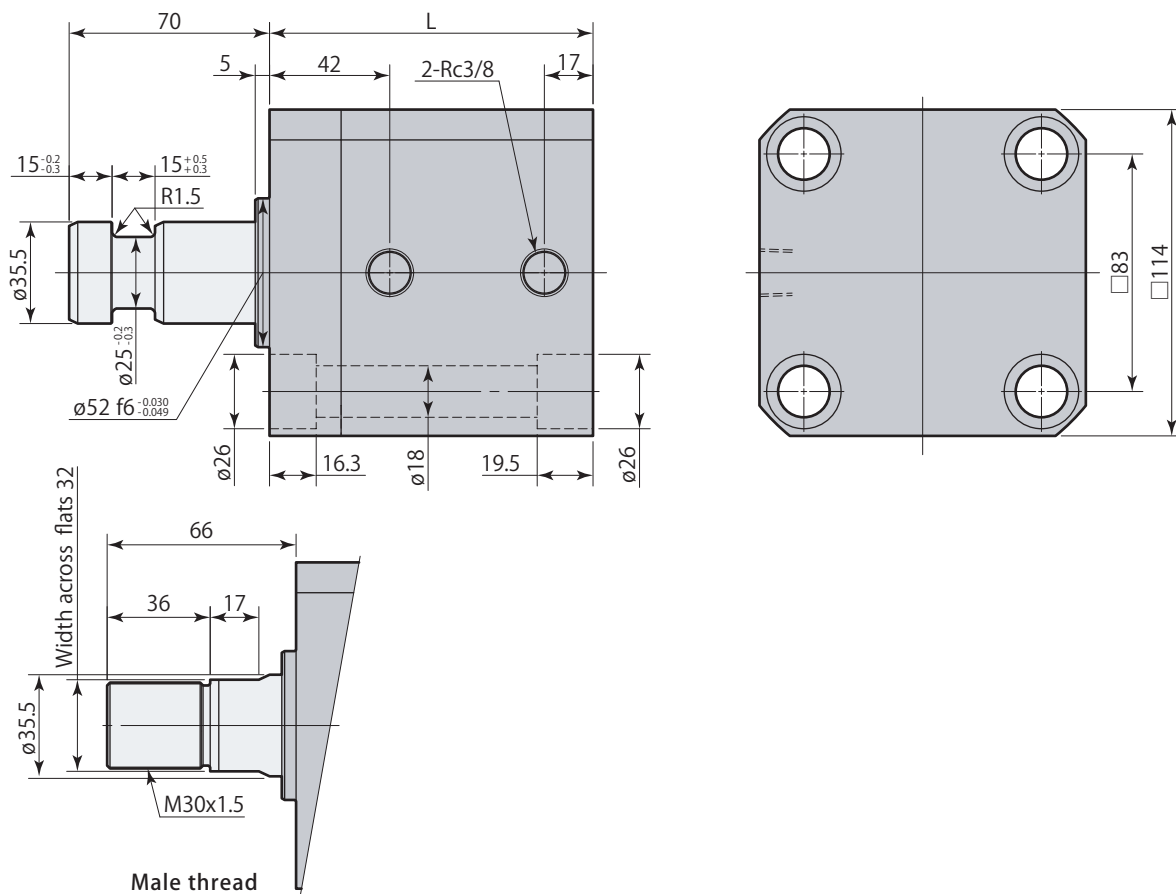
Rod tip section specifications

Packing specifications

Stroke

Refer to **page → 1** for the details of model.

Stroke	mm	10	15	20	25	50	65	80	100	125	150	200
L	mm	113	118	123	128	153	168	183	203	228	253	303
Mass	kg	10.0	10.3	10.6	10.9	12.4	13.3	14.3	15.5	17.0	18.5	21.5



Specifications

Model		KSL080	
Cylinder inner diameter	mm	80	
Rod diameter	mm	35.5	
Maximum allowable working pressure	MPa	16	
Stroke	mm	See the table shown above	
Cylinder force *1	Push	kN	80.4
	Pull	kN	64.6

*1 : Hydraulic pressure at 16MPa. Refer to Performance diagram (**page → 2**).

*2 : Mounting screws are not included.

Inner diameter $\phi 40$ Three piece Block cylinder **B-type** switch

Model designation

KS B 040

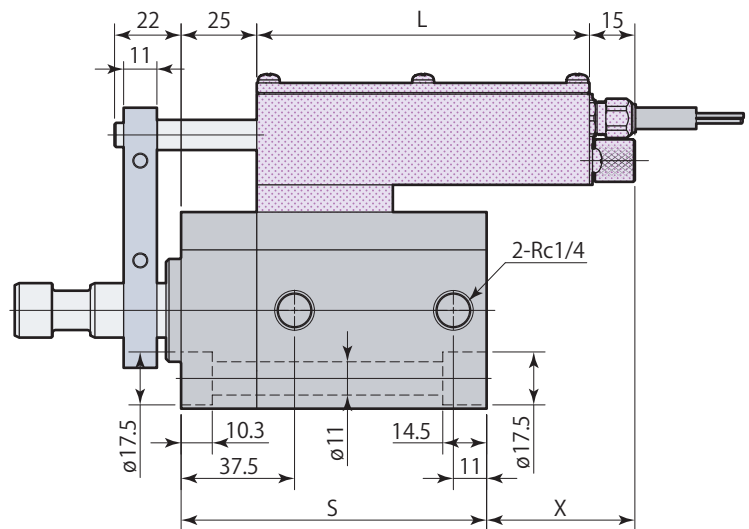
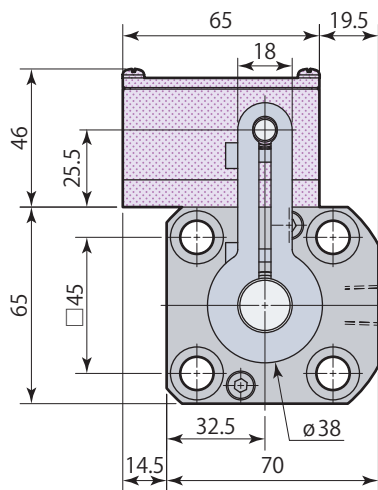
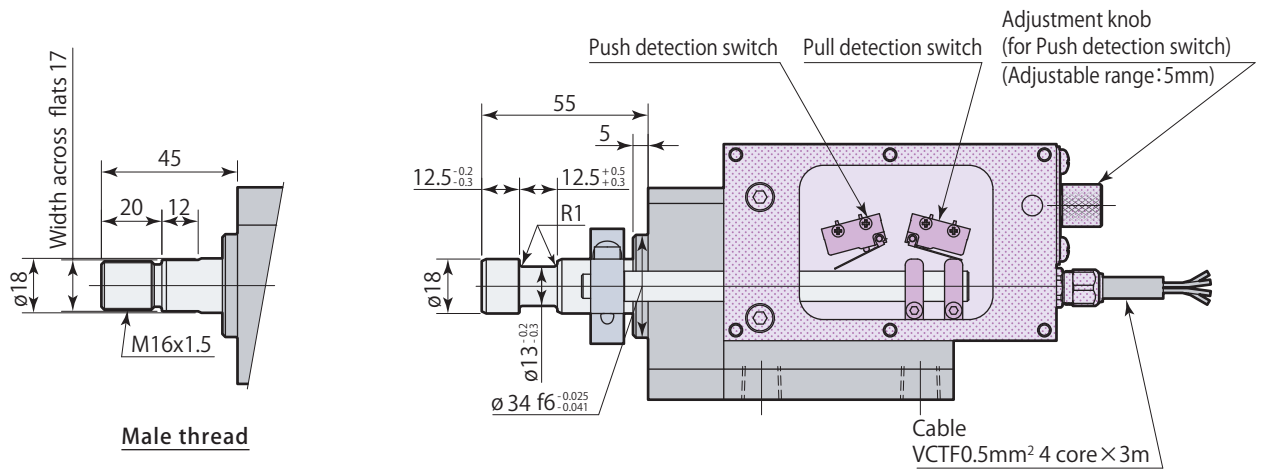
Rod tip section specifications

Packing specifications

Stroke

Refer to **page → 1** for the details of model.

Stroke	mm	10	15	20	25	50	65	80	100	125	150
S	mm	86	91	96	101	126	141	156	176	201	226
L	mm	110	110	110	110	130	145	160	180	205	230
X	mm	64	59	54	49	44	44	44	44	44	44



Limit switch model	Electrical rating		Operating temperature
SSM33A1 (azbil)	AC	5A,250V	-25°C ~ 105°C
	DC	2A,30V	

Inner diameter $\phi 50$ Three piece Block cylinder B-type switch

Model designation

KS B 050

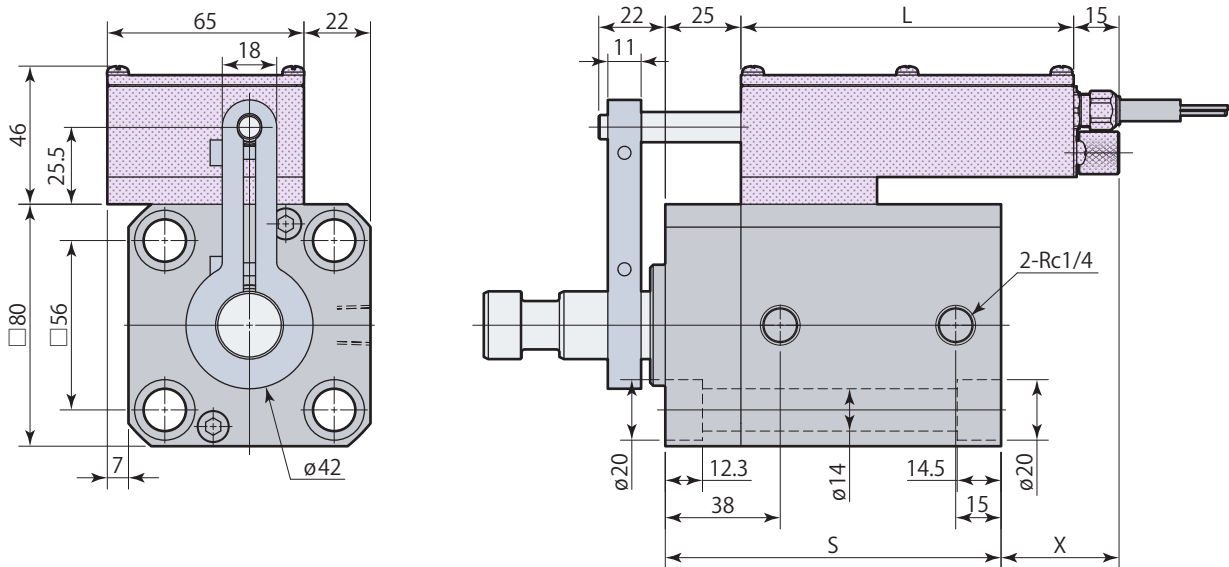
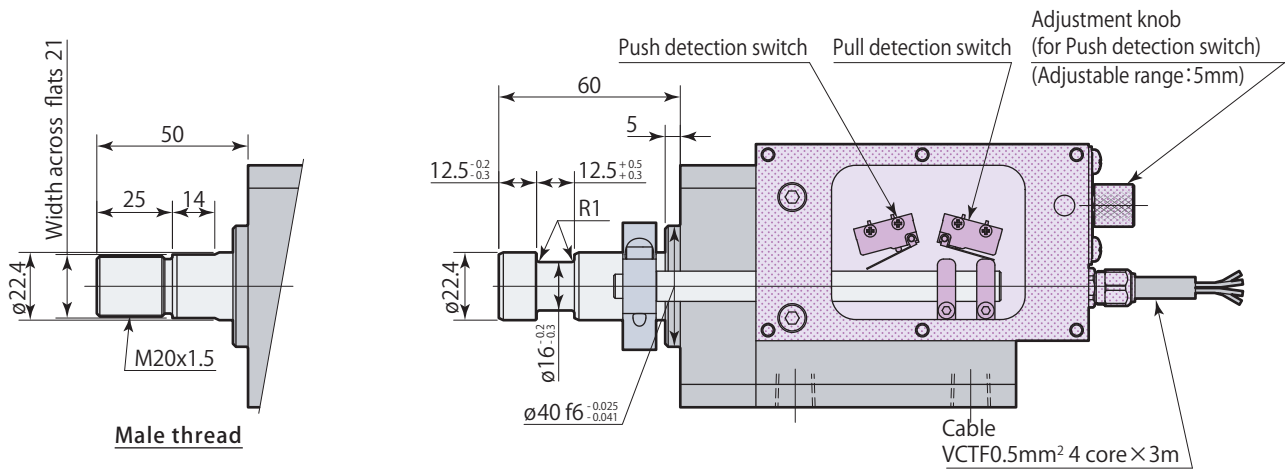
Rod tip section specifications

Packing specifications

Stroke

Refer to page **1** for the details of model.

Stroke	mm	10	15	20	25	50	65	80	100	125	150
S	mm	96	101	106	111	136	151	166	186	211	236
L	mm	110	110	110	110	130	145	160	180	205	230
X	mm	54	49	44	39	34	34	34	34	34	34



Limit switch model	Electrical rating		Operating temperature
SSM33A1 (azbil)	AC	5A,250V	-25°C ~ 105°C
	DC	2A,30V	

Inner diameter $\phi 63$ Three piece Block cylinder B-type switch

Model designation

KS B 063

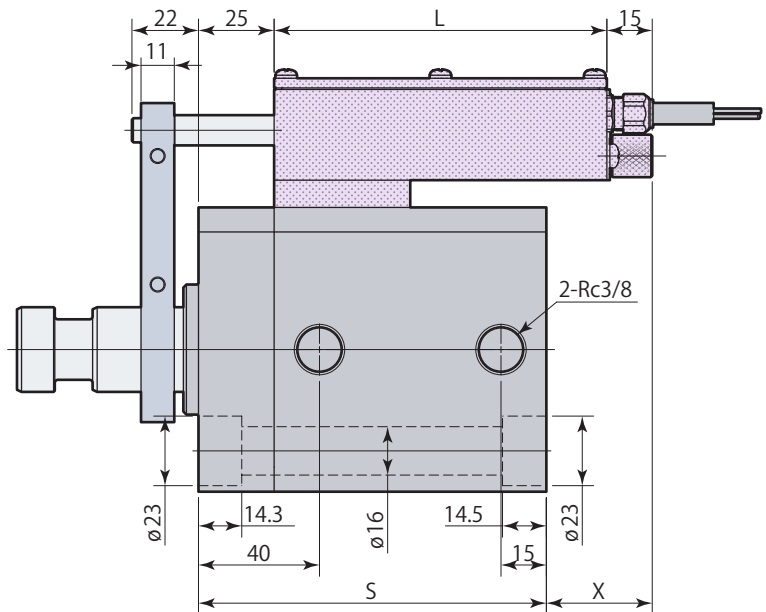
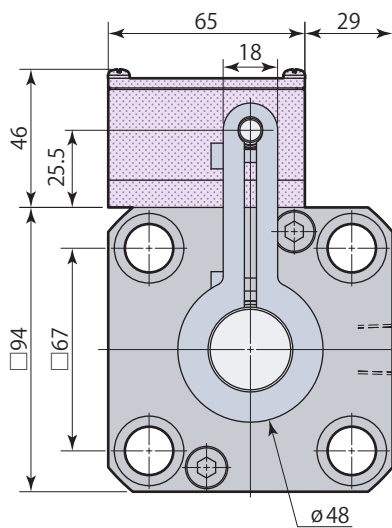
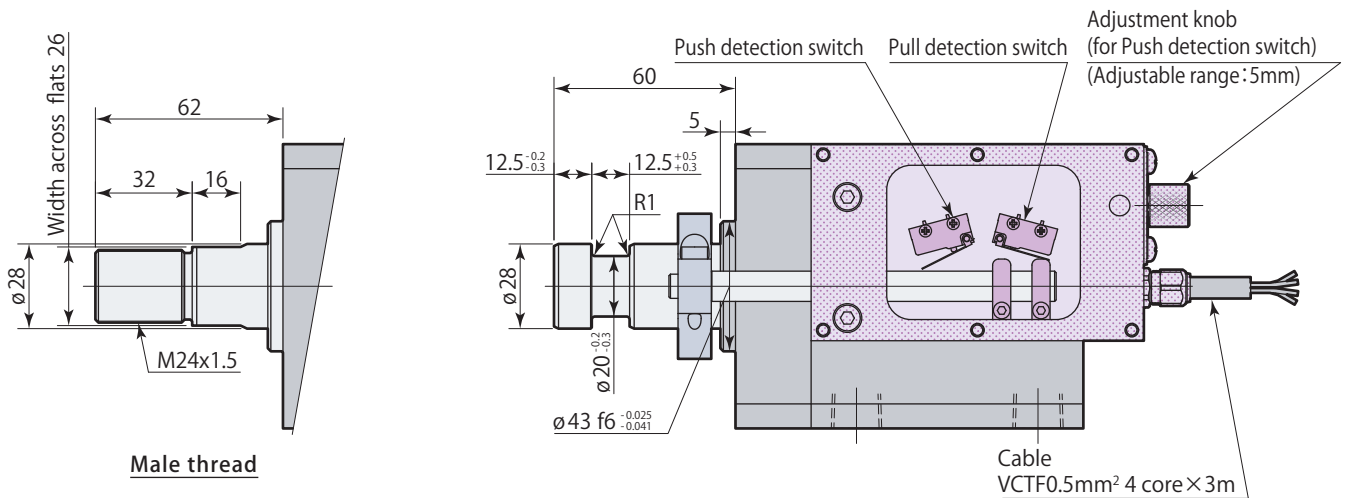
Rod tip section specifications

Packing specifications

Stroke

● Refer to page → 1 for the details of model.

Stroke	mm	10	15	20	25	50	65	80	100	125	150
S	mm	100	105	110	115	140	155	170	190	215	240
L	mm	110	110	110	110	130	145	160	180	205	230
X	mm	50	45	40	35	30	30	30	30	30	30



Limit switch model	Electrical rating		Operating temperature
SSM33A1 (azbil)	AC	5A,250V	-25°C ~ 105°C
	DC	2A,30V	

Inner diameter $\phi 80$ Three piece Block cylinder B-type switch

Model designation

KS B 080

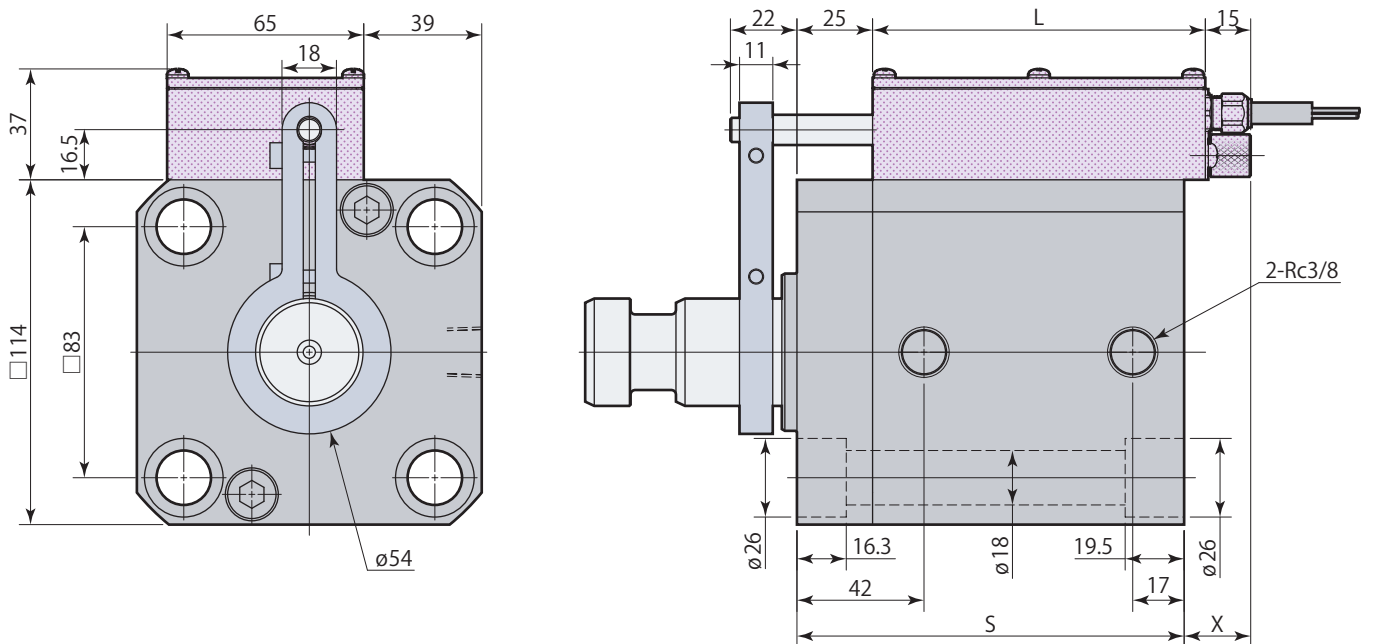
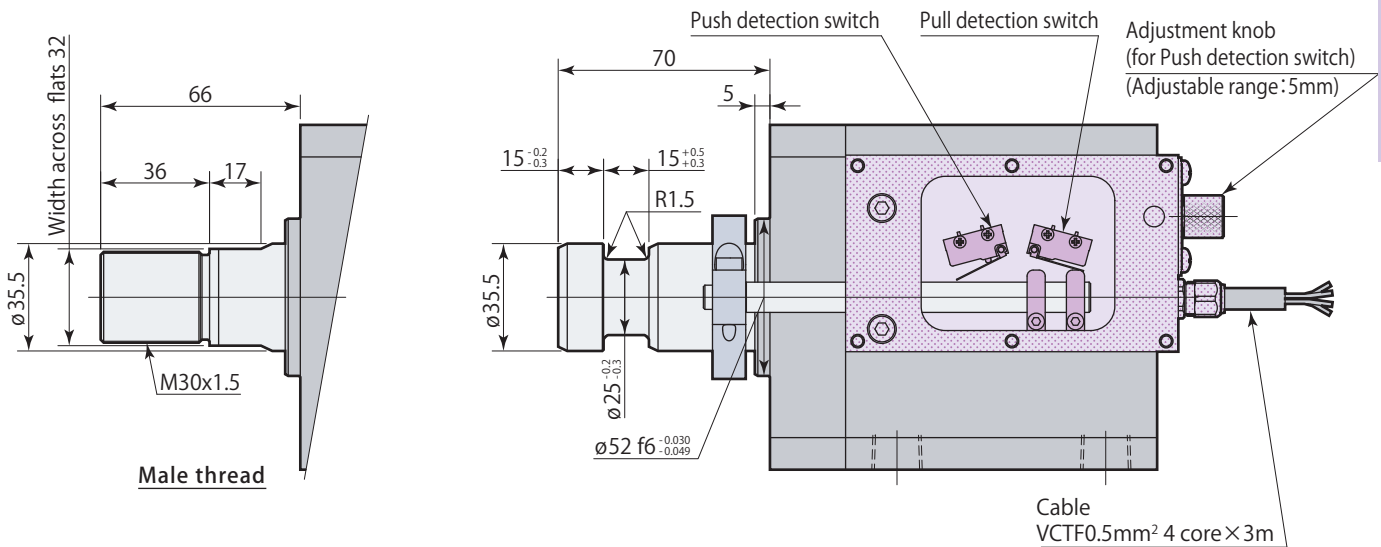
Rod tip section specifications

Packing specifications

Stroke

● Refer to page → 1 for the details of model.

Stroke	mm	10	15	20	25	50	65	80	100	125	150
S	mm	113	118	123	128	153	168	183	203	228	253
L	mm	110	110	110	110	130	145	160	180	205	230
X	mm	37	32	27	22	17	17	17	17	17	17



Limit switch model	Electrical rating		Operating temperature
SSM33A1 (azbil)	AC	5A,250V	-25°C ~ 105°C
	DC	2A,30V	

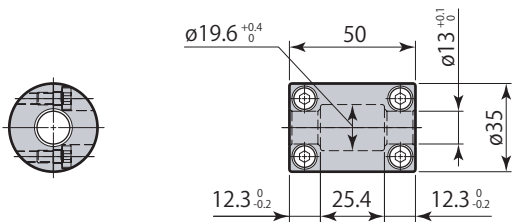
Coupling

Model designation **KCA-C-080**

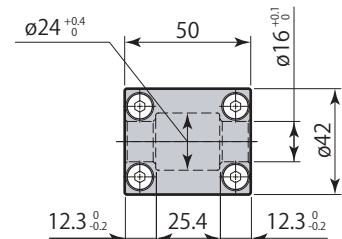
Cylinder inner diameter

Cylinder inner diameter (mm)	ø40	ø50	ø63	ø80
Symbol	040	050	063	080

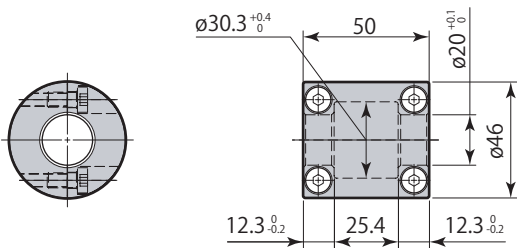
KCA-C-040



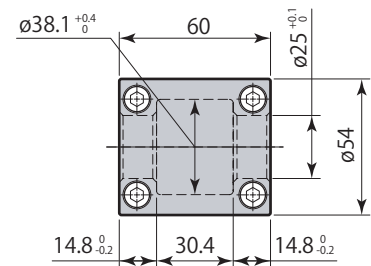
KCA-C-050



KCA-C-063



KCA-C-080



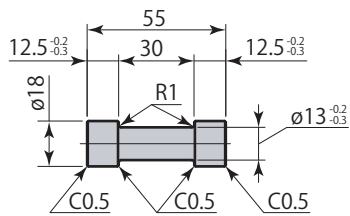
Joint P

Model designation **KCA-J-080 P**

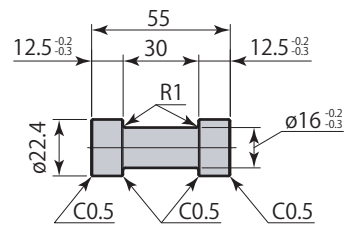
Cylinder inner diameter

Cylinder inner diameter (mm)	ø40	ø50	ø63	ø80
Symbol	040	050	063	080

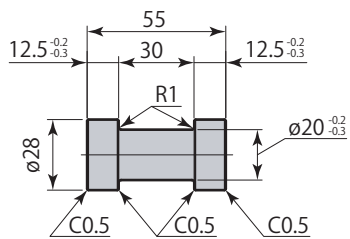
KCA-J-040P



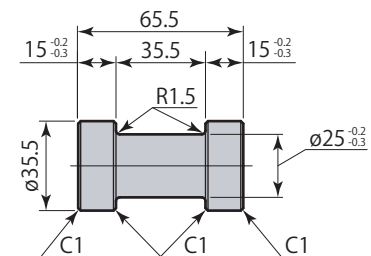
KCA-J-050P



KCA-J-063P



KCA-J-080P



Coupling (Plate welded B type)

Model designation **KSA-C-080 W-B- A**

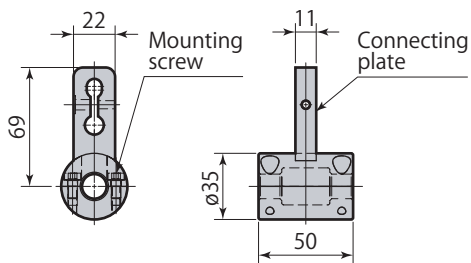
Cylinder inner diameter

Mounting screw direction From top (standard) : A
From bottom : B

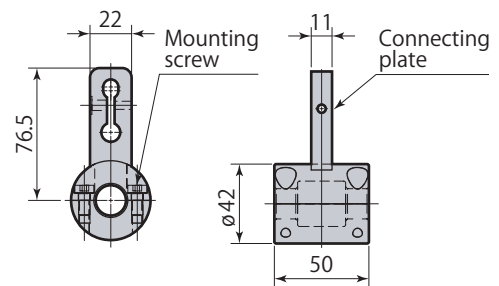
See the diagram shown below for standard direction of the screw. Consult Pascal for other location of connecting plate.

Cylinder inner diameter (mm)	ø40	ø50	ø63	ø80
Symbol	040	050	063	080

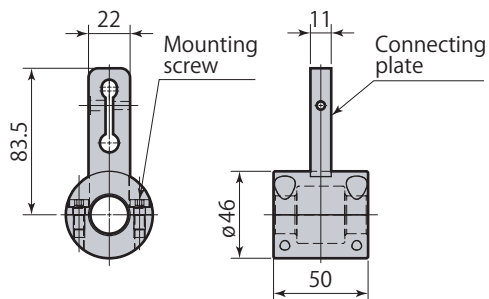
KSA-C-040W-B



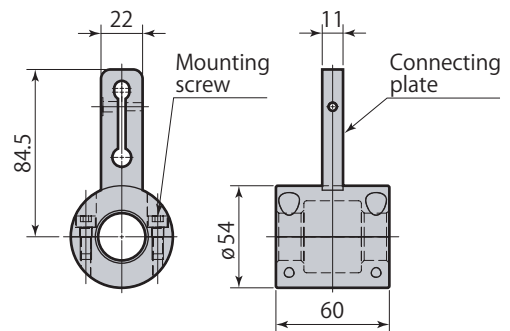
KSA-C-050W-B



KSA-C-063W-B



KSA-C-080W-B



Joint (with coupler plug)

Model designation **KCA-P-03 04-DC**

① Port size




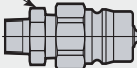
② Coupler model

① Port size

Port size	Rc1/4	Rc3/8
Symbol	02	03

② Coupler model

Coupler model	2HP	2HP-DC	3HP	3HP-DC	4HP	4HP-DC
Symbol	02	02-DC	03	03-DC	04	04-DC

Model	Port size	Coupler model(Nitto Kohki)	Dimensions
KCA-P-0202	Rc1/4	2HP	 Hex. width across flats 17
KCA-P-0202-DC		2HP-DC	
KCA-P-0203	Rc1/4	3HP	 Hex. width across flats 19
KCA-P-0203-DC		3HP-DC	
KCA-P-0303	Rc3/8	3HP	 Hex. width across flats 19
KCA-P-0303-DC		3HP-DC	
KCA-P-0304	Rc3/8	4HP	 Hex. width across flats 24
KCA-P-0304-DC		4HP-DC	

Option

Joint (with coupler socket)

Model designation **KCA-S-03 04-DC**

① Port size

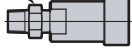


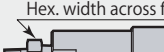
② Coupler model

① Port size

Port size	Rc1/4	Rc3/8
Symbol	02	03

② Coupler model

Coupler model	2HP	2HP-DC	3HP	3HP-DC	4HP	4HP-DC
Symbol	02	02-DC	03	03-DC	04	04-DC

Model	Port size	Coupler model(Nitto Kohki)	Dimensions
KCA-S-0202	Rc1/4	2HP	 Hex. width across flats 17
KCA-S-0202-DC		2HP-DC	
KCA-S-0203	Rc1/4	3HP	 Hex. width across flats 19
KCA-S-0203-DC		3HP-DC	
KCA-S-0303	Rc3/8	3HS	 Hex. width across flats 19
KCA-S-0303-DC		3HS-DC	
KCA-S-0304	Rc3/8	4HS	 Hex. width across flats 24
KCA-S-0304-DC		4HS-DC	

Pascal

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