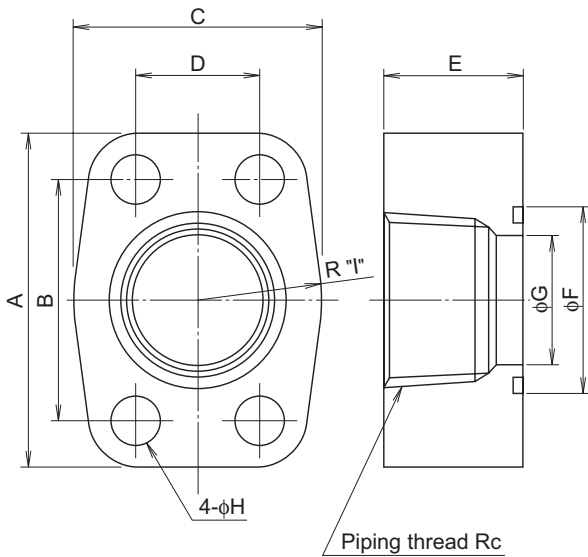


## Flange Piping

### ● Piping flange

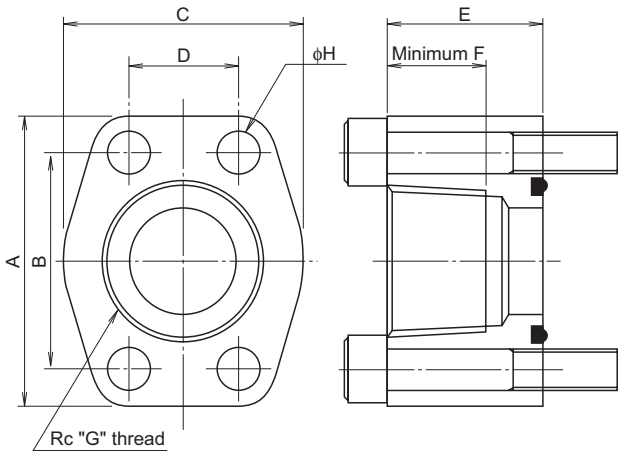


Applications	Model code	Applicable model	Piping thread size (Rc)	O-ring (accessory)
For suction side	NF-VR03	V50, V70, VZ50, VZ63	1½	JIS B 2401 1A G50
	NF-VR01	VZ80, VZ100	2	JIS B 2401 1A G60
	NF-VR06	VZ130	2½	JIS B 2401 1A G70
	NF-VR08	RP23, 38	1¼	JIS B 2401 1B G40
For delivery side	NF-VR05	VZ50, VZ63	1	JIS B 2401 1B G35
	NF-VR08	VZ80	1¼	JIS B 2401 1B G40
	NF-VR02	VZ100	1¼	JIS B 2401 1B G40
	NF-VR07	V50, V70, VZ130	1½	JIS B 2401 1B G50

Applications	Model code	Dimensions								
		A	B	C	D	E	F	G	H	I
For suction side	NF-VR03	94	70	70	35.7	35	58	40	13	30
	NF-VR01	102	77.8	80	42.9	40	68	47.5	13	40
	NF-VR06	120	88.9	109	50.8	45	78	60	18	54.5
For delivery side	NF-VR05	70	52.4	54	26.2	28	40	25	11	29.5
	NF-VR08	80	58.7	60	30.2	34	45	31.5	11	30
	NF-VR02	80	58.7	60	30.2	34	45	31.5	13	30
	NF-VR07	94	70	70	35.7	35	55	40	13	-

## Piping Flange Kits

The piping flange kit comprises the piping flange, hexagon socket head cap bolts and O-ring for each type of DEV series vane pump.



Pump model	Applications	Model code	Piping thread size (Rc)	Hexagon socket head cap bolt (accessory, 4 pcs. each)	O-ring (accessory, Hs90)
DEV20	Suction side	FLST-40U-009	1½	1/2-13UNC-2"	AS568-225
	Delivery side	FLST-20U-009	¾	3/8-16UNC-1.75"	AS568-214
DEV25	Suction side	FLST-40U-009	1½	1/2-13UNC-2"	AS568-225
	Delivery side	FLST-25U-009	1	3/8-16UNC-1.75"	AS568-219
DEV35	Suction side	FLST-50U-009	2	1/2-13UNC-2.25"	AS568-228
	Delivery side	FLST-32U-009	1¼	7/16-14UNC-2"	AS568-222
DEV45	Suction side	FLST-80U-009	3	5/8-11UNC-2.75"	AS568-237
	Delivery side	FLST-40U-009	1½	1/2-13UNC-2"	AS568-225

Model code	Nominal diameter	Dimensions								
		A	B	C	D	E	F	G	H	
FLST-20U-009	¾	65	47.6	52	22.2	29	17	¾	11	
FLST-25U-009	1	70	52.4	58	26.2	30	19	1	11	
FLST-32U-009	1¼	79	58.7	73	30.2	35	22	1¼	13	
FLST-40U-009	1½	94	69.8	82	35.7	35	22	1½	13	
FLST-50U-009	2	102	77.8	96	42.9	40	26	2	13	
FLST-80U-009	3	135	106.3	130	61.9	48	34	3	17	

## Flare Joints

### ● 7/16-20UNF flare joint

Flare joints to connect the vent piping with remote control for VZ50, VZ63, VZ80 and VZ100.

Elbow	45° elbow	Straight connector
Model code: HN-VR01	Model code: HN-VR02	Model code: HN-VR03

## Pump Coupling Hole Machining Dimensions

- The following table shows the recommended dimensions for machining coupling holes for each pump model.

Hole dimension Pump model		Recommended dimensions for machining a coupling hole (mm)					
		φA		B		C	
Piston pump	V8 series	16	+0.018 +0	5	+0.03 +0	18	+0.2 +0
	V15 series	19.05	+0.021 +0	4.78	+0.03 +0	21.15	+0.2 +0
	V23, V38 series	22.2	+0.053 +0.02	6.32	+0.036 +0	25.08	+0.3 +0
	V50, V70 series	31.75	+0.025 +0	7.94	+0.036 +0	35.35	+0.3 +0
	VZ50 series	25.4	+0.021 +0	6.35	+0.036 +0	28.19	+0.3 +0
	VZ63, VZ80 series	31.75	+0.021 +0	7.94	+0.036 +0	35.35	+0.3 +0
	VZ100, VZ130 series	44.5	+0.025 +0	11.11	+0.068 +0.025	49.43	+0.3 +0
Vane pump	DS10P series	16	+0.018 +0	5	+0.03 +0	18.2	+0.2 +0
	DE10, DE20 series	19.05	+0.028 +0.007	4.81	+0.028 -0.002	21.33	+0.2 +0
	DEV20, DEV25 series	22.2	+0.053 +0.032	4.81	+0.028 -0.002	24.74	+0.2 +0
	DEV35, DEV45 series	31.75	+0.034 +0.01	8	+0.024 -0.012	35.56	+0.2 +0

