



25Do Dimensions

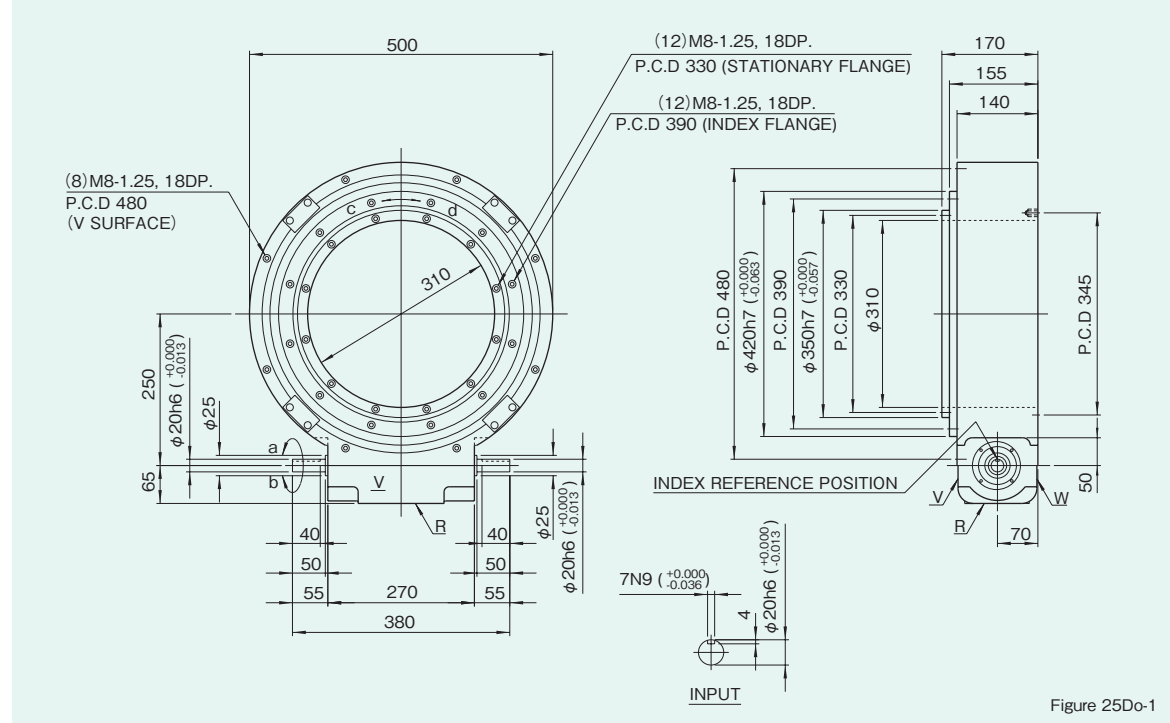
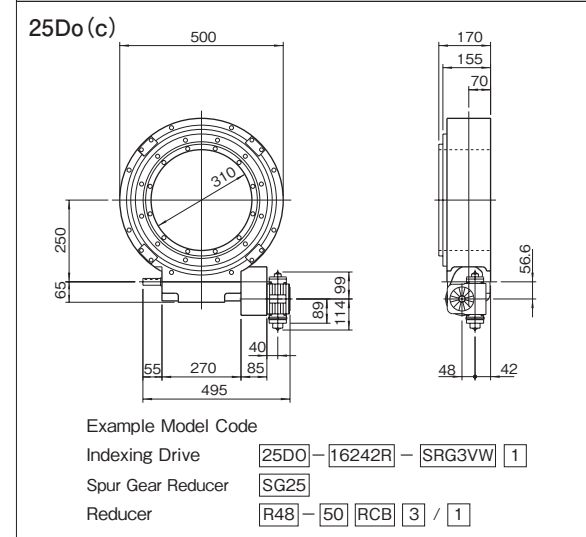
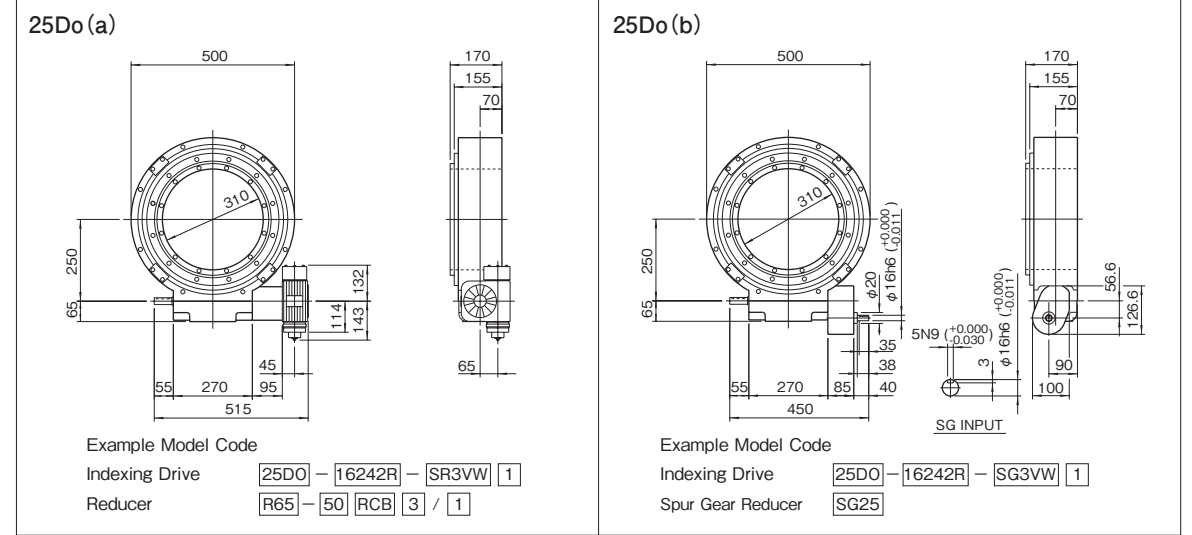
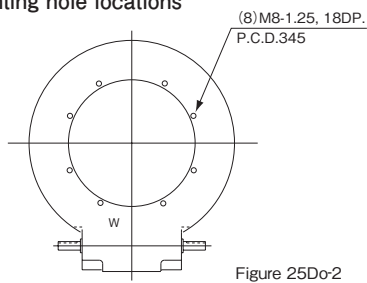


Figure 25Do-1

Mounted accessories



25Do Mounting hole locations



Dimension of W surface

Locations of oil plug, etc., and oil capacity

Mounting position	1
Location	
Oil capacity (ℓ)	1.7

Figure 25Do-3

Precautions

- Each point indicated in the mounting positions shown in Figure 25Do-3 represents (starting at top) the oil plug (PT1/2), oil level (VA-01), and drain (PT1/2).
- The mounting positions correspond to code i for the indexing, oscillating, and roller drives.
- The oil levels indicated in Figure 25Do-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Specifications

Table 25Do-1

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable axial load	P <sub>1</sub>	N	15680	Input allowable axial load	P <sub>4</sub>	N	2646	Indexing accuracy (1 DWELL)		sec	±30
Output allowable radial load	P <sub>2</sub>	N	7840	Input maximum repetitious bending force	P <sub>5</sub>	N	1176	Indexing accuracy (2 DWELL)		sec	±60
Output static torque	T <sub>s</sub>	N·m	Refer to Torque Capacity Table	Input maximum repetitious allowable torque	P <sub>6</sub>	N·m	117.6	Indexing accuracy (3 DWELL)		sec	±90
Output torsional rigidity	K <sub>1</sub>	N·m/rad	2.35×10 <sup>6</sup>	Input torsional rigidity	K <sub>2</sub>	N·m/rad	8.33×10 <sup>3</sup>	Indexing accuracy (4 DWELL)		sec	±120
Output inertia	J <sub>0</sub>	kg·m <sup>2</sup>	1.15	Input inertia	J <sub>1</sub>	kg·m <sup>2</sup>	1.4×10 <sup>-3</sup>	Repetitive accuracy		sec	30
Output allowable bending moment	P <sub>3</sub>	N·m	343					Product weight		kg	120
								Housing color		Gray	

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

Spur gear specifications

Table 25Do-2

ITEM	Symbol	Unit	Model	
			SG25	
Allowable (Pinion shaft speed is less than 30 rpm.)	T <sub>G</sub>	N·m	169.5	
Gear ratio	i		1/2	
Large gear Inertia	C <sub>2</sub>	kg·m <sup>2</sup>	7.5×10 <sup>-4</sup>	
Pinion gear Inertia	C <sub>3</sub>	kg·m <sup>2</sup>	1.75×10 <sup>-4</sup>	
Pinion shaft allowable axial load	P <sub>7</sub>	N	1000	
Pinion shaft maximum repetitious bending force	P <sub>8</sub>	N	980	
Spur gear finishing accuracy			2 Grade	
Oil level		ℓ	0.1	
Weight		kg	8.5	

Precaution

- Models 25Do can be equipped with reducers R48 and R65.
- The reducer can be mounted in 16 different positions as shown on page of Reducer.
- The thickness of the spacer for the reducer can be determined from the drawing above and the dimension diagrams.
- Standard models ordered with spur gear reducer are considered a special specification.



30Do Dimensions

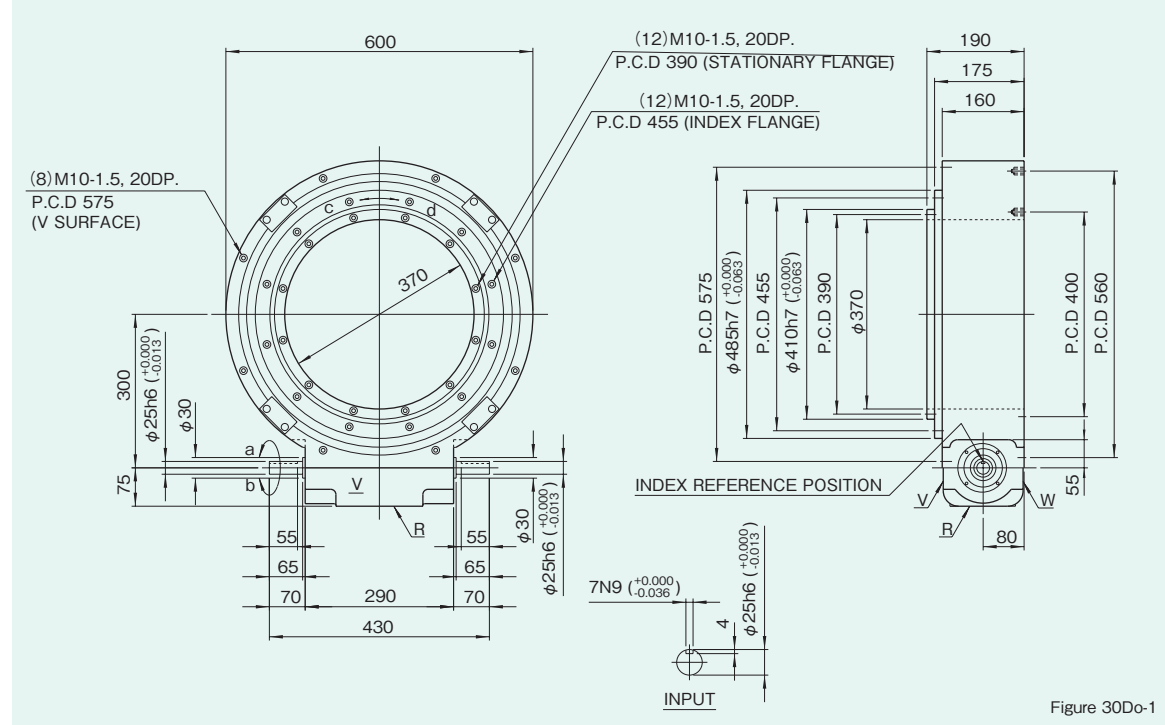
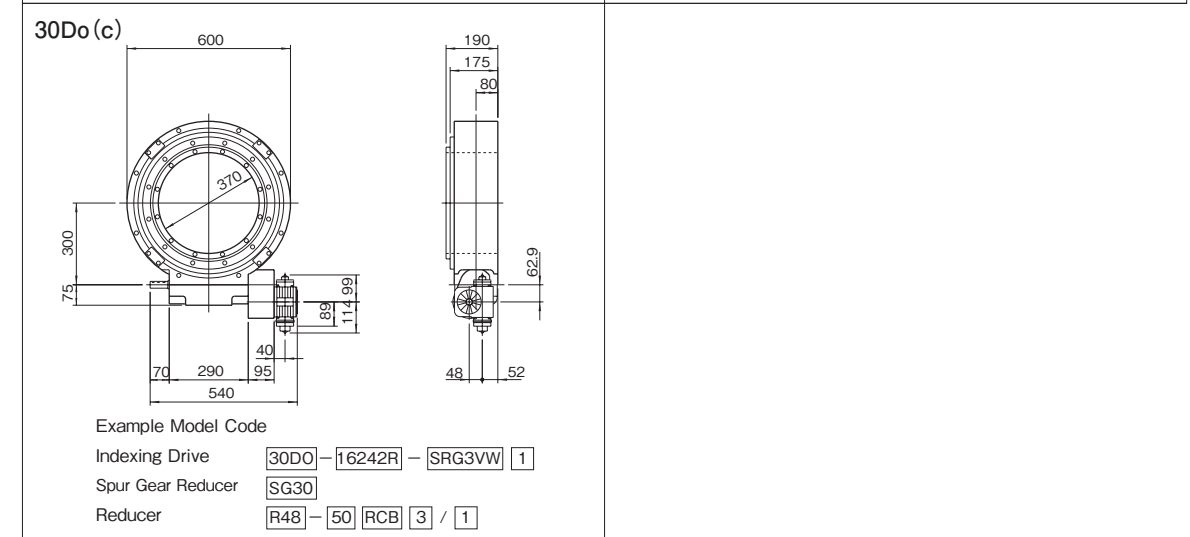
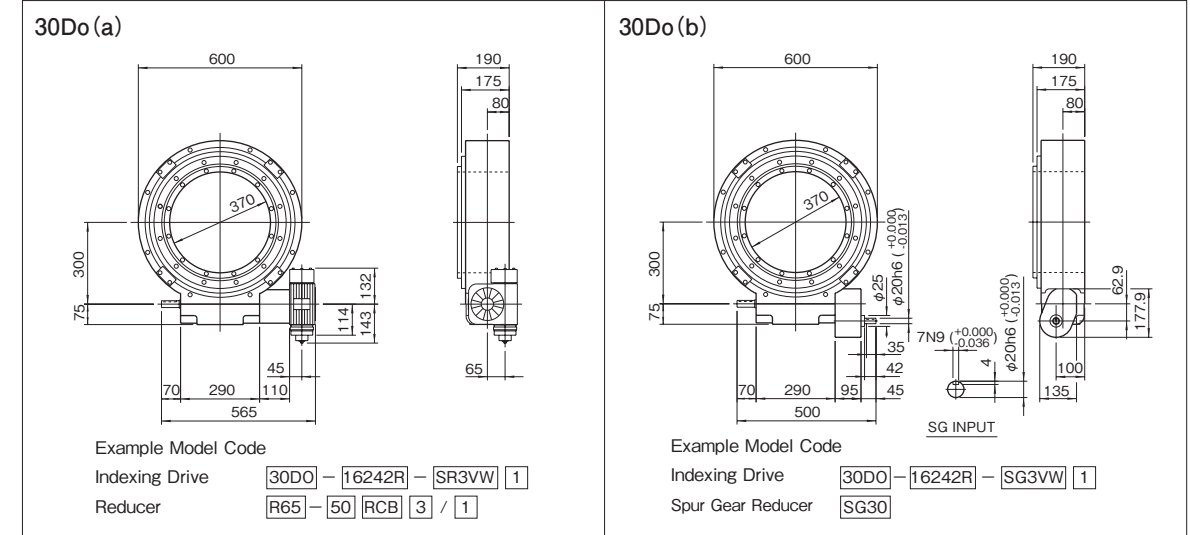


Figure 30Do-1

Mounted accessories



30Do Mounting hole locations

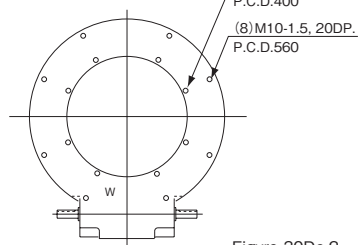


Figure 30Do-2

Dimension of W surface

Locations of oil plug, etc., and oil capacity

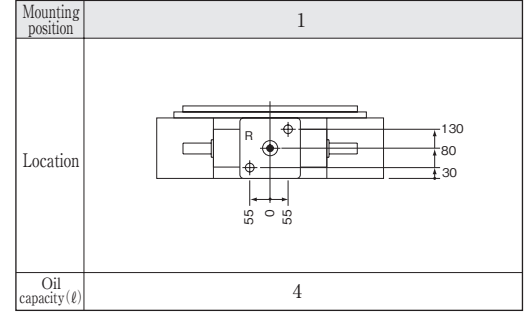


Figure 30Do-3

Precautions

- Each point indicated in the mounting positions shown in Figure 30Do-3 represents (starting at top) the oil plug (PT1/2), oil level (VA), and drain (PT1/2).
- The mounting positions correspond to code i for the indexing, oscillating, and roller drives.
- The oil levels indicated in Figure 30Do-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Specifications

Table 30Do-1

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable axial load	P <sub>1</sub>	N	19600	Input allowable axial load	P <sub>4</sub>	N	3822	Indexing accuracy (1 DWELL)		sec	±30
Output allowable radial load	P <sub>2</sub>	N	10780	Input maximum repetitious bending force	P <sub>5</sub>	N	1470	Indexing accuracy (2 DWELL)		sec	±60
Output static torque	T <sub>s</sub>	N·m	Refer to Torque Capacity Table	Input maximum repetitious allowable torque	P <sub>6</sub>	N·m	186.2	Indexing accuracy (3 DWELL)		sec	±90
Output torsional rigidity	K <sub>1</sub>	N·m/rad	3.82×10 <sup>6</sup>	Input torsional rigidity	K <sub>2</sub>	N·m/rad	1.47×10 <sup>4</sup>	Indexing accuracy (4 DWELL)		sec	±120
Output inertia	J <sub>o</sub>	kg·m <sup>2</sup>	2.6	Input inertia	J <sub>1</sub>	kg·m <sup>2</sup>	3.0×10 <sup>-3</sup>	Repetitive accuracy		sec	30
Output allowable bending moment	P <sub>3</sub>	N·m	441					Product weight		kg	200
								Housing color		Gray	

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

Spur gear specifications

Table 30Do-2

ITEM	Symbol	Unit	Model	
			SG30	
Allowable (Pinion shaft speed is less than 30 rpm.)	T <sub>6</sub>	N·m	201.8	
Gear ratio	i		1/2	
Large gear Inertia	C <sub>2</sub>	kg·m <sup>2</sup>	1×10 <sup>-3</sup>	
Pinion gear Inertia	C <sub>3</sub>	kg·m <sup>2</sup>	2.5×10 <sup>-4</sup>	
Pinion shaft allowable axial load	P <sub>7</sub>	N	1352	
Pinion shaft maximum repetitious bending force	P <sub>8</sub>	N	1235	
Spur gear finishing accuracy			2 Grade	
Oil level		ℓ	0.15	
Weight		kg	12	

Precaution

- Models 30Do can be equipped with reducers R48 and R65.
- The reducer can be mounted in 16 different positions as shown on page of Reducer.
- The thickness of the spacer for the reducer can be determined from the drawing above and the dimension diagrams.
- Standard models ordered with spur gear reducer are considered a special specification.



35Do Dimensions

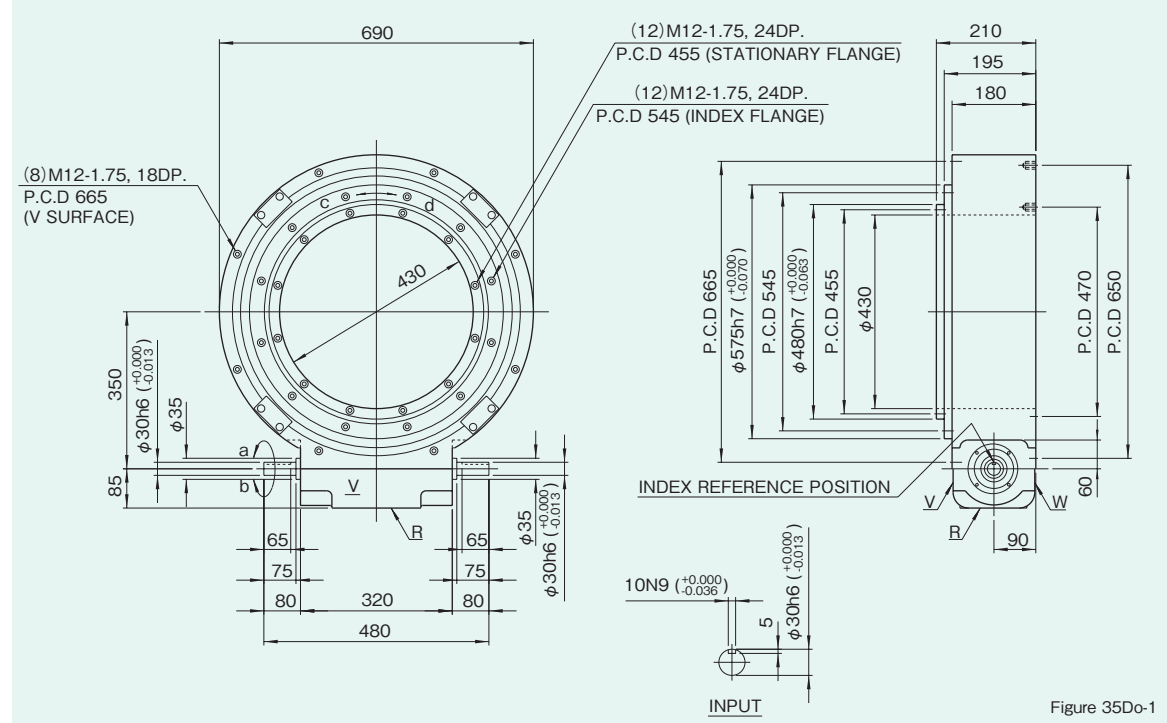
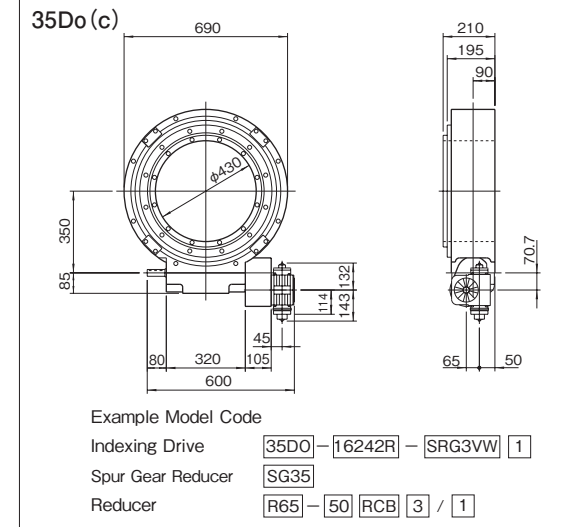
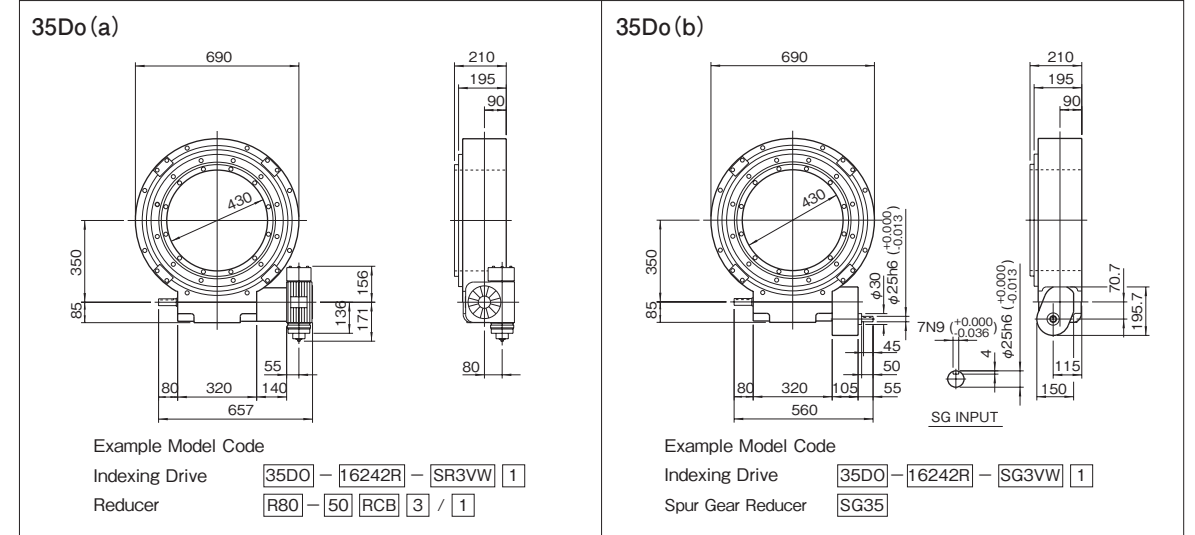


Figure 35Do-1

Mounted accessories



35Do Mounting hole locations

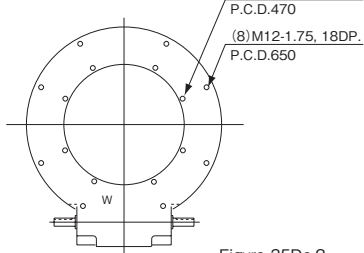


Figure 35Do-2

Dimension of W surface

Locations of oil plug, etc., and oil capacity

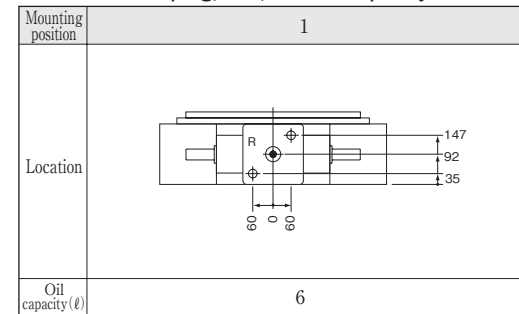


Figure 35Do-3

Precautions

- Each point indicated in the mounting positions shown in Figure 35Do-3 represents (starting at top) the oil plug (PT1/2), oil level (VA), and drain (PT1/2).
- The mounting positions correspond to code i for the indexing, oscillating, and roller drives.
- The oil levels indicated in Figure 35Do-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Specifications

Table 35Do-1

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable axial load	P <sub>1</sub>	N	24500	Input allowable axial load	P <sub>4</sub>	N	4802	Indexing accuracy (1 DWELL)		sec	±30
Output allowable radial load	P <sub>2</sub>	N	12740	Input maximum repetitive bending force	P <sub>5</sub>	N	2548	Indexing accuracy (2 DWELL)		sec	±60
Output static torque	T <sub>s</sub>	N·m	Refer to Torque Capacity Table	Input maximum repetitive allowable torque	P <sub>6</sub>	N·m	372.4	Indexing accuracy (3 DWELL)		sec	±90
Output torsional rigidity	K <sub>1</sub>	N·m/rad	5.78×10 <sup>6</sup>	Input torsional rigidity	K <sub>2</sub>	N·m/rad	2.45×10 <sup>4</sup>	Indexing accuracy (4 DWELL)		sec	±120
Output inertia	J <sub>o</sub>	kg·m <sup>2</sup>	5.55	Input inertia	J <sub>1</sub>	kg·m <sup>2</sup>	7.75×10 <sup>-3</sup>	Repetitive accuracy		sec	30
Output allowable bending moment	P <sub>3</sub>	N·m	686					Product weight		kg	370
								Housing color		Gray	

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

Spur gear specifications

Table 35Do-2

ITEM	Symbol	Unit	Model	
			SG35	
Allowable (Pinion shaft speed is less than 30 rpm.)	T <sub>6</sub>	N·m	397.9	
Gear ratio	i		1/2	
Large gear Inertia	C <sub>2</sub>	kg·m <sup>2</sup>	2.5×10 <sup>-3</sup>	
Pinion gear Inertia	C <sub>3</sub>	kg·m <sup>2</sup>	0.5×10 <sup>-3</sup>	
Pinion shaft allowable axial load	P <sub>7</sub>	N	1813	
Pinion shaft maximum repetitive bending force	P <sub>8</sub>	N	1813	
Spur gear finishing accuracy			2 Grade	
Oil level		ℓ	0.2	
Weight		kg	16.5	

Precaution

- Models 35Do can be equipped with reducers R65 and R80.
- The reducer can be mounted in 16 different positions as shown on page of Reducer.
- The thickness of the spacer for the reducer can be determined from the drawing above and the dimension diagrams.
- Standard models ordered with spur gear reducer are considered a special specification.



45Do Dimensions

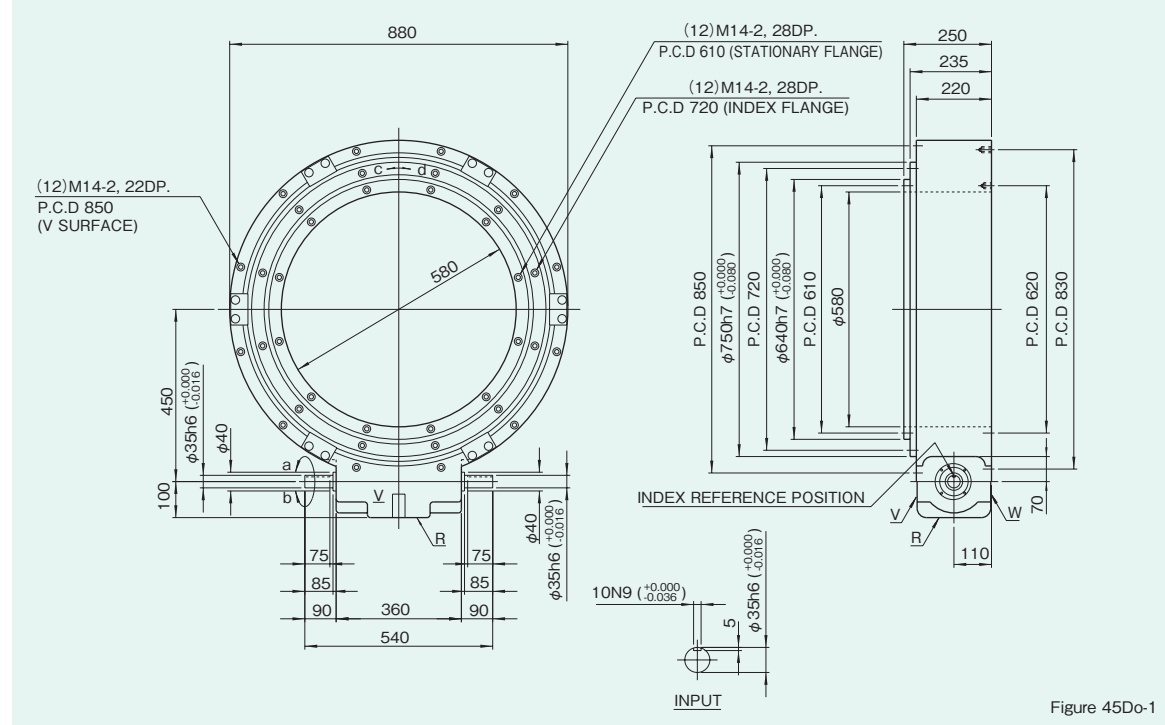
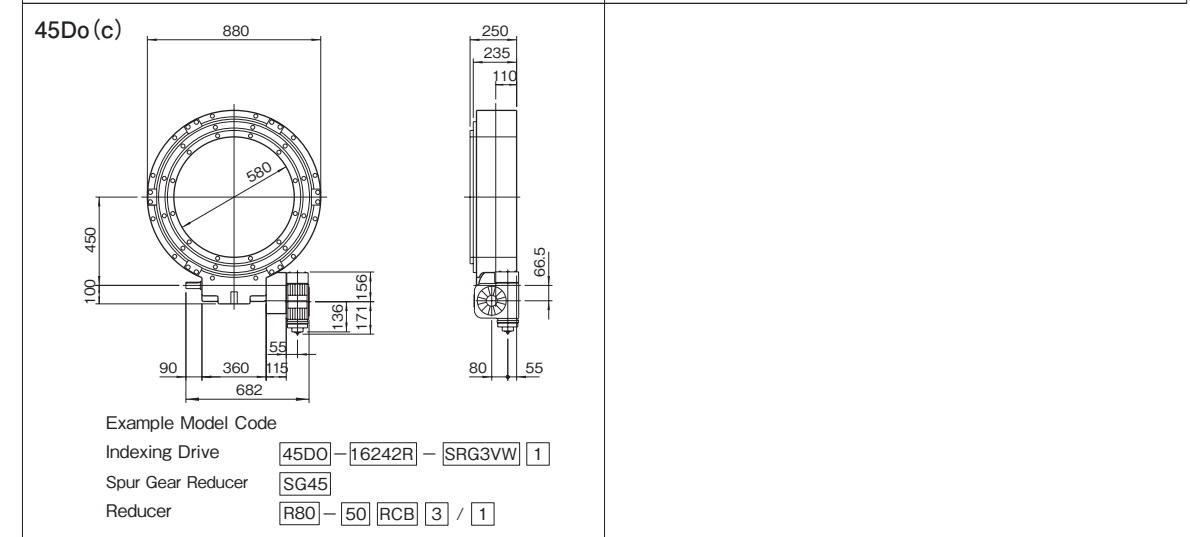
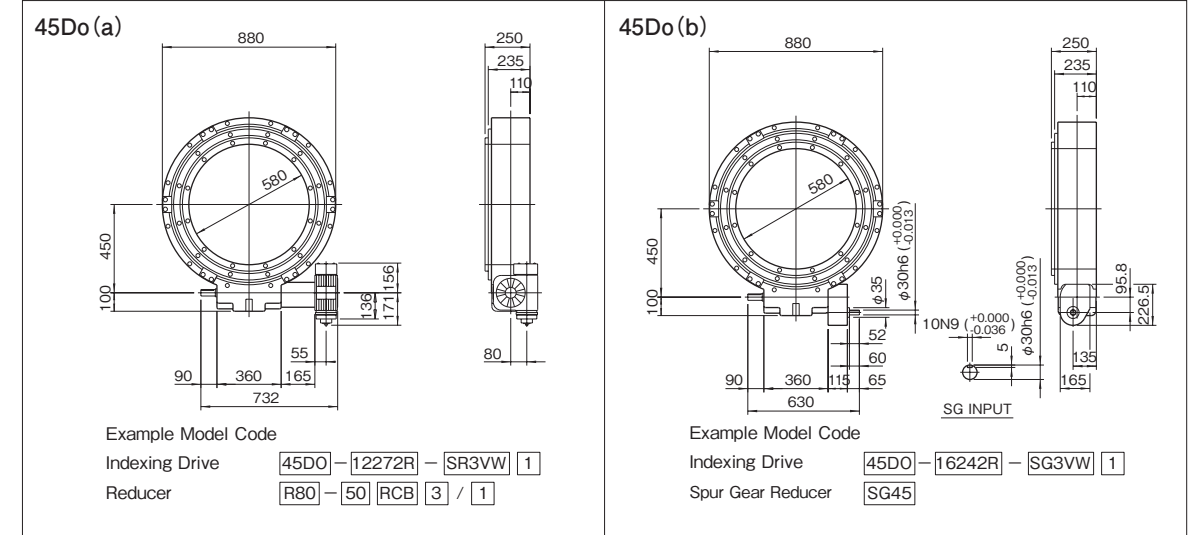


Figure 45Do-1

Mounted accessories



Mounting hole locations

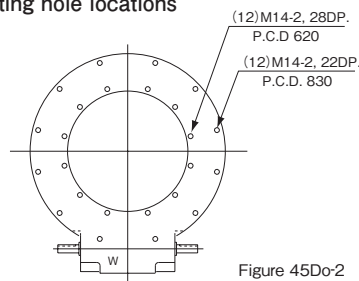


Figure 45Do-2

Dimension of W surface

Locations of oil plug, etc., and oil capacity

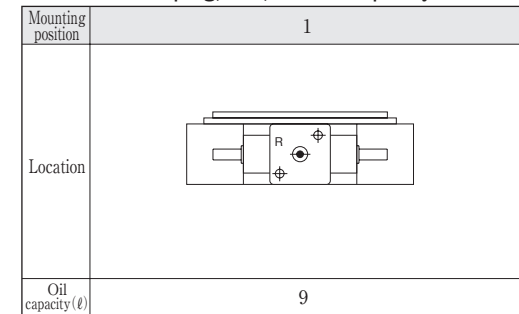


Figure 45Do-3

Precautions

- Each point indicated in the mounting positions shown in Figure 45Do-3 represents (starting at top) the oil plug (PT3/4), oil level (VA), and drain (PT3/4).
- The mounting positions correspond to code i for the indexing, oscillating, and roller drives.
- The oil levels indicated in Figure 45Do-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Specifications

Table 45Do-1

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable axial load	P <sub>1</sub>	N	34300	Input allowable axial load	P <sub>4</sub>	N	5586	Indexing accuracy (1 DWELL)		sec	±20
Output allowable radial load	P <sub>2</sub>	N	16660	Input maximum repetitious bending force	P <sub>5</sub>	N	3528	Indexing accuracy (2 DWELL)		sec	±40
Output static torque	T <sub>s</sub>	N·m	Refer to Torque Capacity Table	Input maximum repetitious allowable torque	P <sub>6</sub>	N·m	588	Indexing accuracy (3 DWELL)		sec	±60
Output torsional rigidity	K <sub>1</sub>	N·m/rad	1.18×10 <sup>7</sup>	Input torsional rigidity	K <sub>2</sub>	N·m/rad	3.82×10 <sup>4</sup>	Indexing accuracy (4 DWELL)		sec	±80
Output inertia	J <sub>0</sub>	kg·m <sup>2</sup>	17.15	Input inertia	J <sub>1</sub>	kg·m <sup>2</sup>	2.58×10 <sup>-2</sup>	Repetitive accuracy		sec	20
Output allowable bending moment	P <sub>3</sub>	N·m	1078					Product weight		kg	500
								Housing color		Gray	

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

Spur gear specifications

Table 45Do-2

ITEM	Symbol	Unit	Model	
			SG45	
Allowable (Pinion shaft speed is less than 30 rpm.)	T <sub>6</sub>	N·m	661.5	
Gear ratio	i		1/2	
Large gear Inertia	C <sub>2</sub>	kg·m <sup>2</sup>	5×10 <sup>-3</sup>	
Pinion gear Inertia	C <sub>3</sub>	kg·m <sup>2</sup>	1×10 <sup>-3</sup>	
Pinion shaft allowable axial load	P <sub>7</sub>	N	2264	
Pinion shaft maximum repetitious bending force	P <sub>8</sub>	N	2185	
Spur gear finishing accuracy			2 Grade	
Oil level		ℓ	0.35	
Weight		kg	24	

Precaution

- Models 45Do can be equipped with reducers R80.
- The reducer can be mounted in 16 different positions as shown on page of Reducer.
- The thickness of the spacer for the reducer can be determined from the drawing above and the dimension diagrams.
- Standard models ordered with spur gear reducer are considered a special specification.





55Do Dimensions

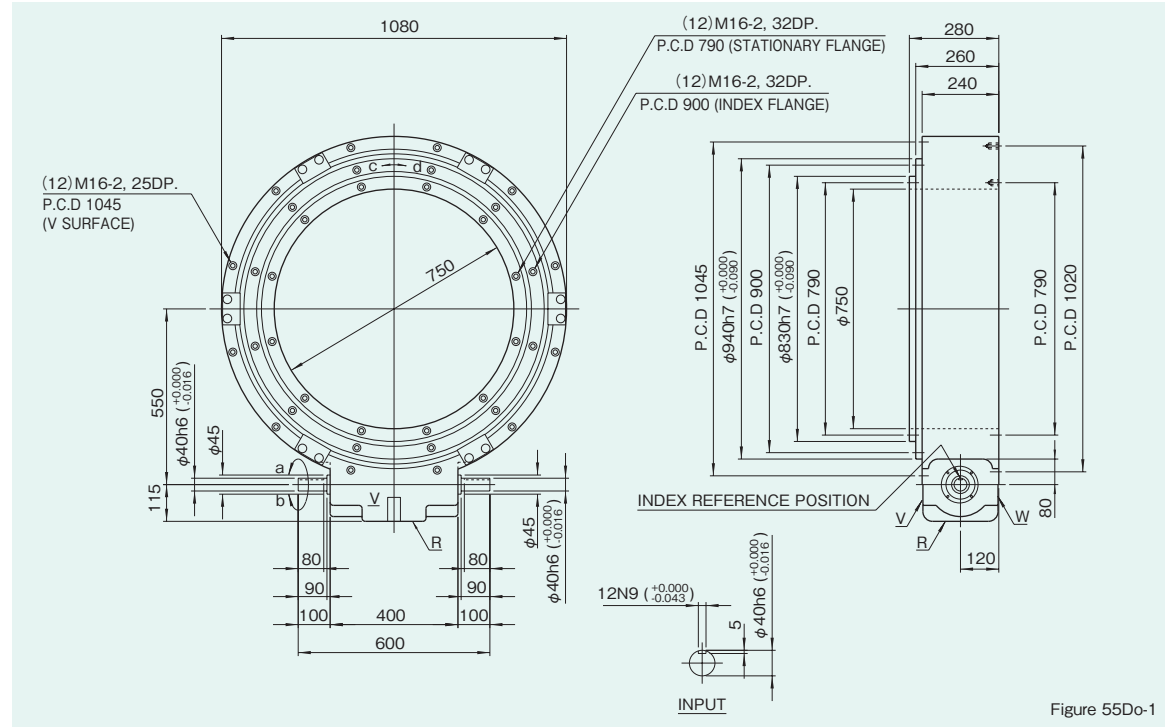


Figure 55Do-1

55Do Mounting hole locations

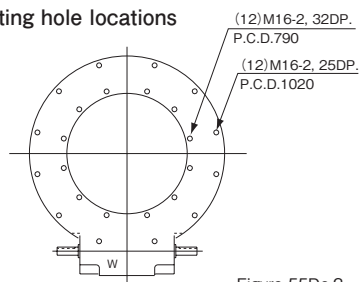


Figure 55Do-2

Dimension of W surface

Locations of oil plug, etc., and oil capacity

Mounting position	1
Location	
Oil capacity (ℓ)	12

Figure 55Do-3

Precautions

- Each point indicated in the mounting positions shown in Figure 55Do-3 represents (starting at top) the oil plug (PT3/4), oil level (VA), and drain (PT3/4).
- The mounting positions correspond to code i for the indexing, oscillating, and roller drives.
- The oil levels indicated in Figure 55Do-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Specifications

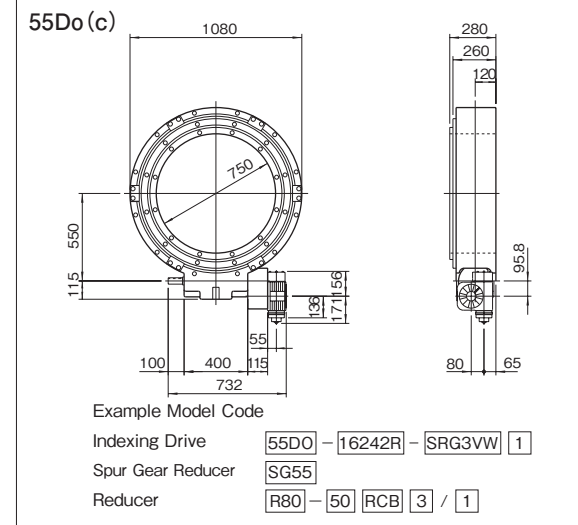
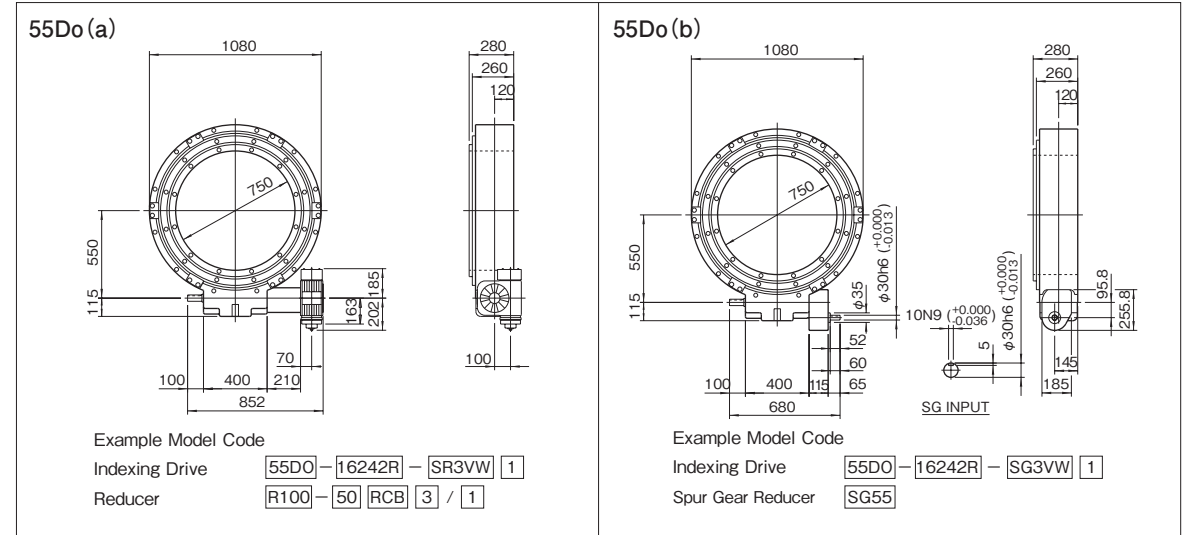
Table 55Do-1

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable axial load	P <sub>1</sub>	N	44100	Input allowable axial load	P <sub>4</sub>	N	7252	Indexing accuracy (1 DWELL)		sec	±20
Output allowable radial load	P <sub>2</sub>	N	21560	Input maximum repetitious bending force	P <sub>5</sub>	N	4802	Indexing accuracy (2 DWELL)		sec	±40
Output static torque	T <sub>s</sub>	N·m	Refer to Torque Capacity Table	Input maximum repetitious allowable torque	P <sub>6</sub>	N·m	833	Indexing accuracy (3 DWELL)		sec	±60
Output torsional rigidity	K <sub>1</sub>	N·m/rad	1.96×10 <sup>7</sup>	Input torsional rigidity	K <sub>2</sub>	N·m/rad	5.49×10 <sup>4</sup>	Indexing accuracy (4 DWELL)		sec	±80
Output inertia	J <sub>o</sub>	kg·m <sup>2</sup>	34.5	Input inertia	J <sub>1</sub>	kg·m <sup>2</sup>	5.2×10 <sup>-2</sup>	Repetitive accuracy		sec	20
Output allowable bending moment	P <sub>3</sub>	N·m	1470					Product weight		kg	780
								Housing color		Gray	

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

Mounted accessories



Precaution

- Models 55Do can be equipped with reducers R80 and R100.
- The reducer can be mounted in 16 different positions as shown on page of Reducer.
- The thickness of the spacer for the reducer can be determined from the drawing above and the dimension diagrams.
- Standard models ordered with spur gear reducer are considered a special specification.

Spur gear specifications

Table 55Do-2

ITEM	Symbol	Unit	Model	
			SG55	
Allowable (Pinion shaft speed is less than 30 rpm.)	T <sub>G</sub>	N·m	721.3	
Gear ratio	i		1/2	
Large gear Inertia	C <sub>2</sub>	kg·m <sup>2</sup>	7.5×10 <sup>-3</sup>	
Pinion gear Inertia	C <sub>3</sub>	kg·m <sup>2</sup>	1.5×10 <sup>-3</sup>	
Pinion shaft allowable axial load	P <sub>7</sub>	N	2264	
Pinion shaft maximum repetitious bending force	P <sub>8</sub>	N	2185	
Spur gear finishing accuracy			2 Grade	
Oil level		ℓ	0.45	
Weight		kg	30	



65Do Dimensions

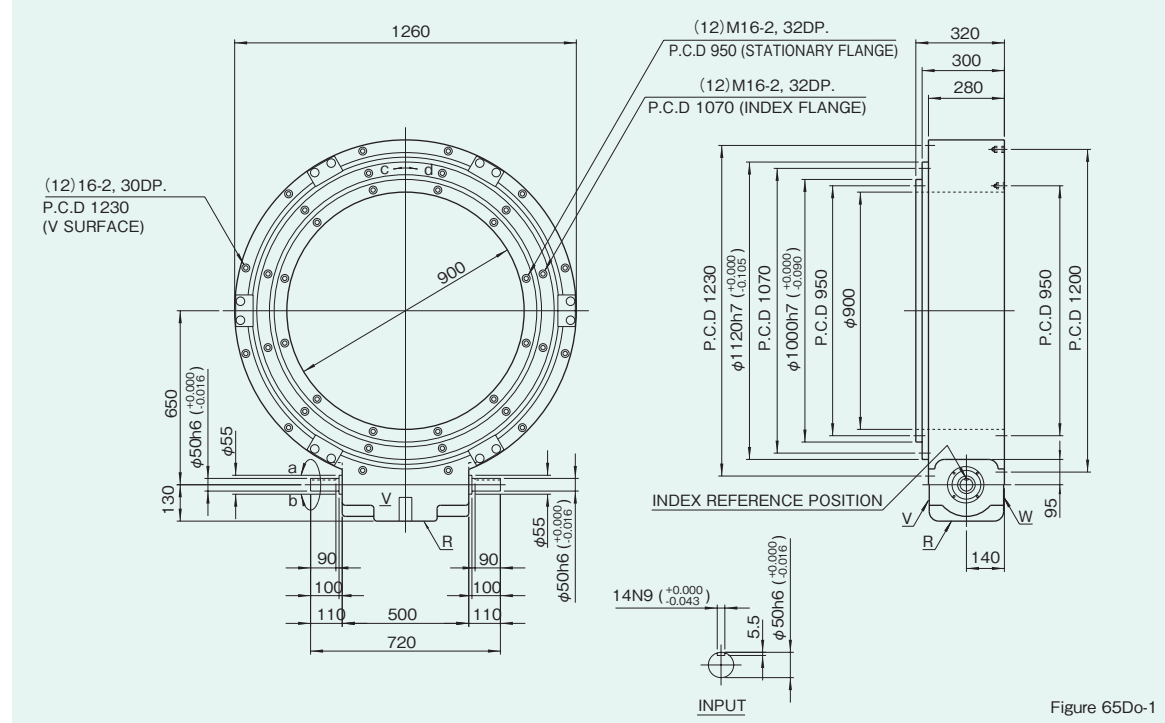


Figure 65Do-1

Locations of oil plug, etc., and oil capacity

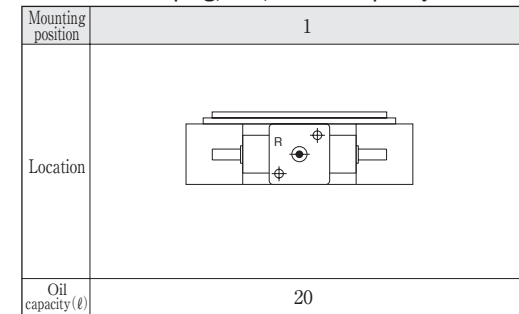


Figure 65Do-3

Mounting hole locations

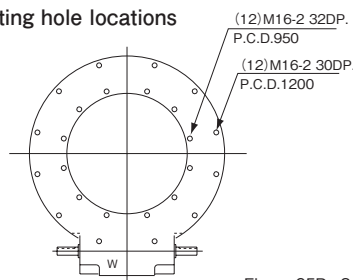


Figure 65Do-2

Dimension of W surface

Precautions

- Each point indicated in the mounting positions shown in Figure 65Do-3 represents (starting at top) the oil plug (PT1), oil level (VB), and drain (PT1).
- The mounting positions correspond to code i for the indexing, oscillating, and roller drives.
- The oil levels indicated in Figure 65Do-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Specifications

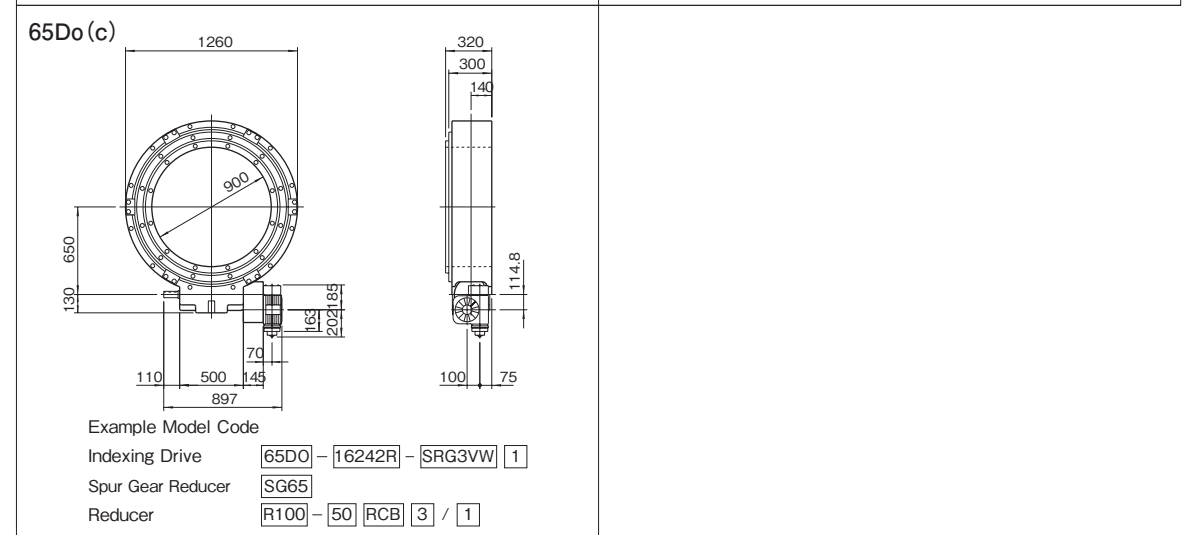
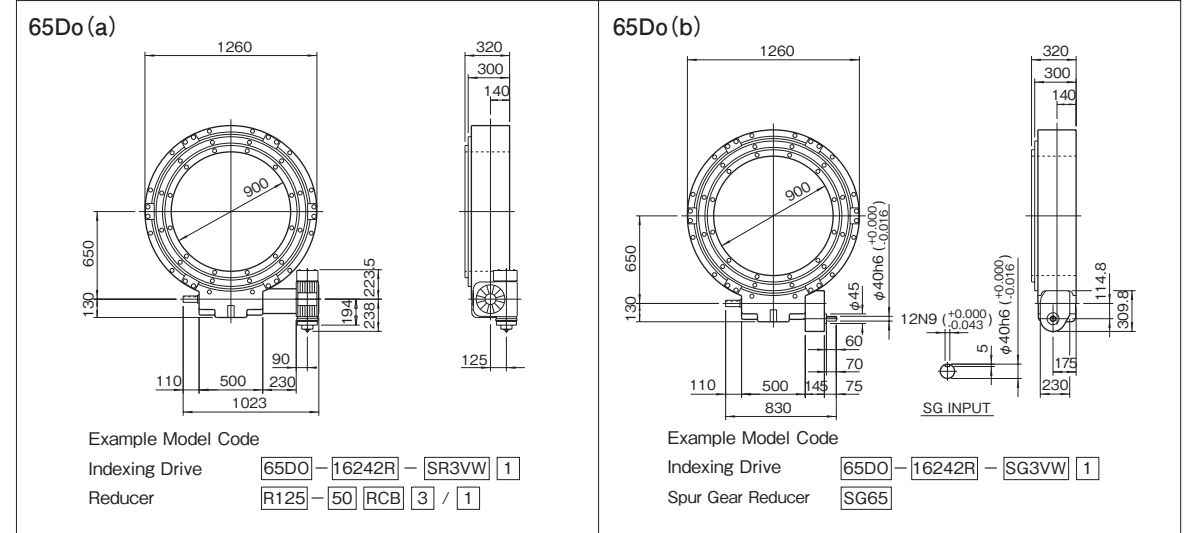
Table 65Do-1

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable axial load	P <sub>1</sub>	N	53900	Input allowable axial load	P <sub>4</sub>	N	9800	Indexing accuracy (1 DWELL)		sec	±20
Output allowable radial load	P <sub>2</sub>	N	26460	Input maximum repetitious bending force	P <sub>5</sub>	N	8330	Indexing accuracy (2 DWELL)		sec	±40
Output static torque	T <sub>s</sub>	N·m	Refer to Torque Capacity Table	Input maximum repetitious allowable torque	P <sub>6</sub>	N·m	1666	Indexing accuracy (3 DWELL)		sec	±60
Output torsional rigidity	K <sub>1</sub>	N·m/rad	3.33×10 <sup>7</sup>	Input torsional rigidity	K <sub>2</sub>	N·m/rad	1.08×10 <sup>5</sup>	Indexing accuracy (4 DWELL)		sec	±80
Output inertia	J <sub>o</sub>	kg·m <sup>2</sup>	81.5	Input inertia	J <sub>1</sub>	kg·m <sup>2</sup>	0.111	Repetitive accuracy		sec	20
Output allowable bending moment	P <sub>3</sub>	N·m	1960					Product weight		kg	1100
								Housing color			Gray

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

Mounted accessories



Precaution

- Models 65Do can be equipped with reducers R100 and R125.
- The reducer can be mounted in 16 different positions as shown on page of Reducer.
- The thickness of the spacer for the reducer can be determined from the drawing above and the dimension diagrams.
- Standard models ordered with spur gear reducer are considered a special specification.

Spur gear specifications

Table 65Do-2

ITEM	Symbol	Unit	Model	
				SG65
Allowable (Pinion shaft speed is less than 30 rpm.)	T <sub>6</sub>	N·m		1452.4
Gear ratio	i			1/2
Large gear inertia	C <sub>2</sub>	kg·m <sup>2</sup>		2.5×10 <sup>-2</sup>
Pinion gear inertia	C <sub>3</sub>	kg·m <sup>2</sup>		4.25×10 <sup>-3</sup>
Pinion shaft allowable axial load	P <sub>7</sub>	N		2842
Pinion shaft maximum repetitious bending force	P <sub>8</sub>	N		2744
Spur gear finishing accuracy				2 Grade
Oil level		ℓ		0.85
Weight		kg		55



## 80Do Dimensions

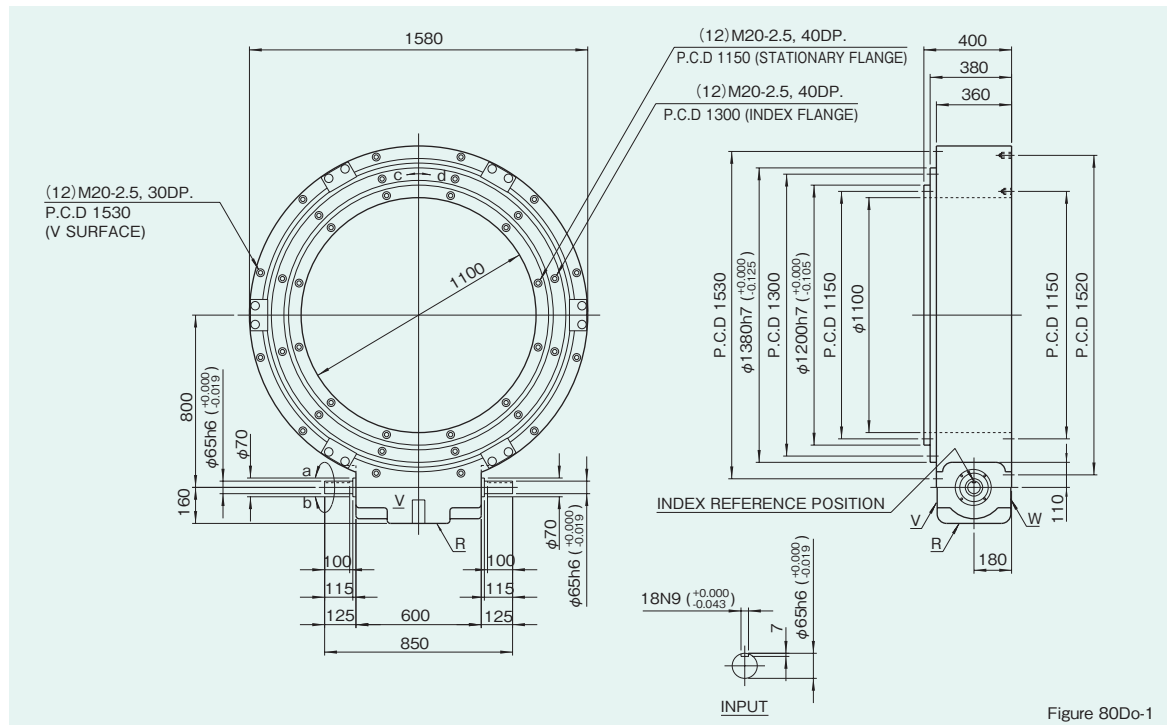


Figure 80Do-1

## Mounting hole locations

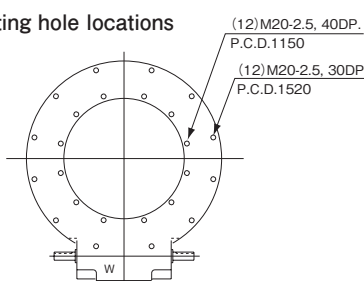


Figure 80Do-2

## Dimension of W surface

## Locations of oil plug, etc., and oil capacity

Mounting position	1
Location	
Oil capacity (ℓ)	45

Figure 80Do-3

## Precautions

- Each point indicated in the mounting positions shown in Figure 80Do-3 represents (starting at top) the oil plug (PT1), oil level (VB), and drain (PT1).
- The mounting positions correspond to code i for the indexing, oscillating, and roller drives.
- The oil levels indicated in Figure 80Do-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

## Specifications

Table 80Do-1

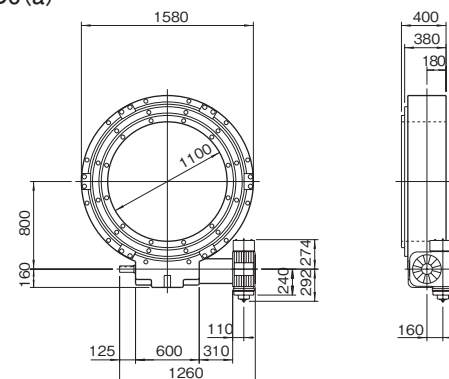
Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable axial load	P <sub>1</sub>	N	73500	Input allowable axial load	P <sub>4</sub>	N	11760	Indexing accuracy (1 DWELL)		sec	±20
Output allowable radial load	P <sub>2</sub>	N	34300	Input maximum repetitious bending force	P <sub>5</sub>	N	11760	Indexing accuracy (2 DWELL)		sec	±40
Output static torque	T <sub>s</sub>	N·m	Refer to Torque Capacity Table	Input maximum repetitious allowable torque	P <sub>6</sub>	N·m	2842	Indexing accuracy (3 DWELL)		sec	±60
Output torsional rigidity	K <sub>1</sub>	N·m/rad	6.27×10 <sup>7</sup>	Input torsional rigidity	K <sub>2</sub>	N·m/rad	2.25×10 <sup>5</sup>	Indexing accuracy (4 DWELL)		sec	±80
Output inertia	J <sub>o</sub>	kg·m <sup>2</sup>	266.3	Input inertia	J <sub>1</sub>	kg·m <sup>2</sup>	0.36	Repetitive accuracy		sec	20
Output allowable bending moment	P <sub>3</sub>	N·m	2940					Product weight		kg	2300
								Housing color		Gray	

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

## Mounted accessories

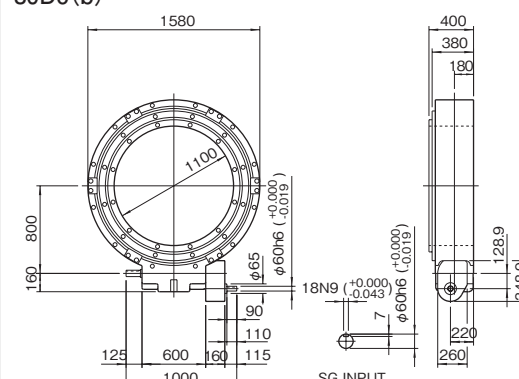
## 80Do (a)



Example Model Code

Indexing Drive **80DO-16242R-SR3VV 1**Reducer **R160-50 RCB 3 / 1**

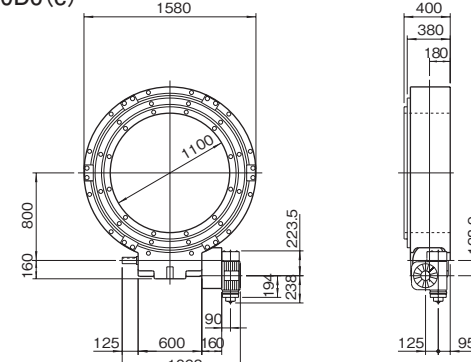
## 80Do (b)



Example Model Code

Indexing Drive **80DO-16242R-SG3VV 1**Spur Gear Reducer **SG80**

## 80Do (c)



Example Model Code

Indexing Drive **80DO-16242R-SRG3VV 1**Spur Gear Reducer **SG80**Reducer **R125-50 RCB 3 / 1**

## Precaution

- Models 80Do can be equipped with reducers R125 and R160.
- The reducer can be mounted in 16 different positions as shown on page of Reducer.
- The thickness of the spacer for the reducer can be determined from the drawing above and the dimension diagrams.
- Standard models ordered with spur gear reducer are considered a special specification.

## Spur gear specifications

Table 80Do-2

ITEM	Symbol	Unit	Model	
			SG80	
Allowable (Pinion shaft speed is less than 30 rpm.)	T <sub>G</sub>	N·m	1906.1	
Gear ratio	i		1/2	
Large gear inertia	C <sub>2</sub>	kg·m <sup>2</sup>	4×10 <sup>-2</sup>	
Pinion gear inertia	C <sub>3</sub>	kg·m <sup>2</sup>	7.5×10 <sup>-2</sup>	
Pinion shaft allowable axial load	P <sub>7</sub>	N	4312	
Pinion shaft maximum repetitious bending force	P <sub>8</sub>	N	3430	
Spur gear finishing accuracy			2 Grade	
Oil level		ℓ	1.5	
Weight		kg	78	