



Oscillating Handler/Indexing Handler 7FN

Discontinued

SANDEX

7FN Dimensions

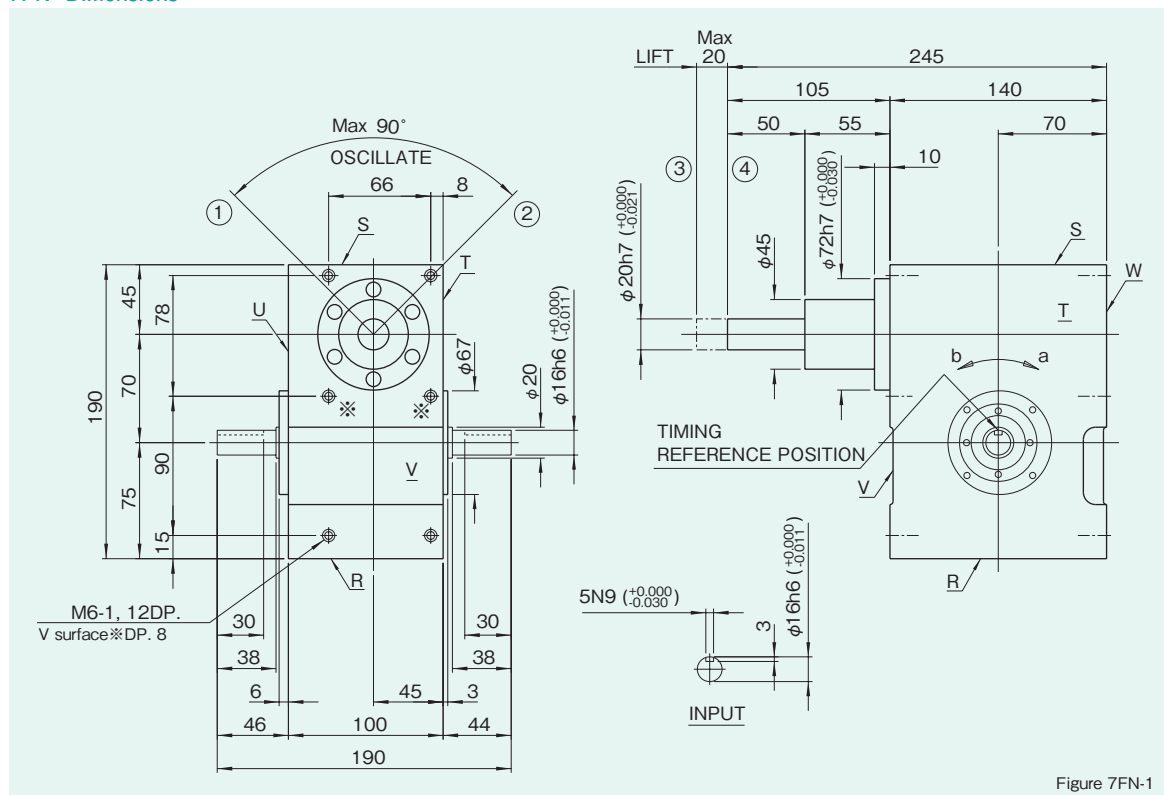


Figure 7FN-1

Locations of oil plug, etc., and oil capacity

Mounting position	1
Location	
Oil capacity (ℓ)	0.5

Figure 7FN-2

Precautions

- Each point indicated in the mounting positions shown in Figure 7FN-2 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 7FN-2 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

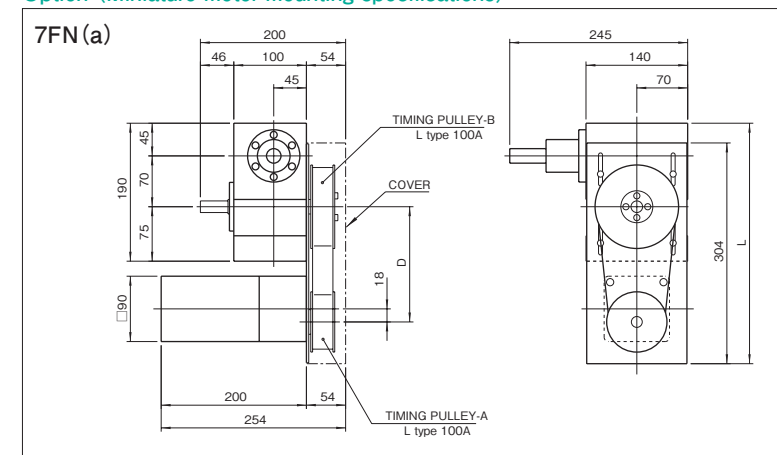
Specifications

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	980	Output inertia (oscillate)	J_0	$\text{kg}\cdot\text{m}^2$	2.8×10^{-4}
Output allowable axial load	P_1	N	85	Input allowable radial load	P_4	N	930	Output internal load (lift)	W_{a1}	N	6.9
Output allowable radial load	P_2	N	80	Input maximum repetitious allowable torque	P_5	$\text{N}\cdot\text{m}$	59	Housing color			Silver
Output static torque	T_s	$\text{N}\cdot\text{m}$	Refer to Torque Capacity Table	Input torsional rigidity	K_2	$\text{N}\cdot\text{m}/\text{rad}$	4100	Product weight		kg	25
Output torsional rigidity	K_1	$\text{N}\cdot\text{m}/\text{rad}$	4700	Input inertia	J_1	$\text{kg}\cdot\text{m}^2$	4.13×10^{-3}	Contact us.			

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

Option (Miniature motor mounting specifications)



Induction motor specifications

Maker	Type	Motor model	Output power (W)	Frequency (Hz)	Voltage (V)	Current (A)	Starting torque (N·m)	Rated torque (N·m)	Rotating speed (rpm)	Capacitor (μF)	Gear head model
Oriental motor	No clutch and brake	5IK90GU-AF	90	50	100	2.0	0.45	0.68	1300	25.0	5GU□KB
	With clutch and brake	CBI590-801		60				0.57	1550		5GCH□KB
Panasonic	No clutch and brake	M9IC90G4L	90	50	100	1.6	0.470	0.637	1325	25.0	M9GD□B
	With clutch and brake	M9CBIC90G4L		60		1.7		0.519	1625		M9GE□B-CB

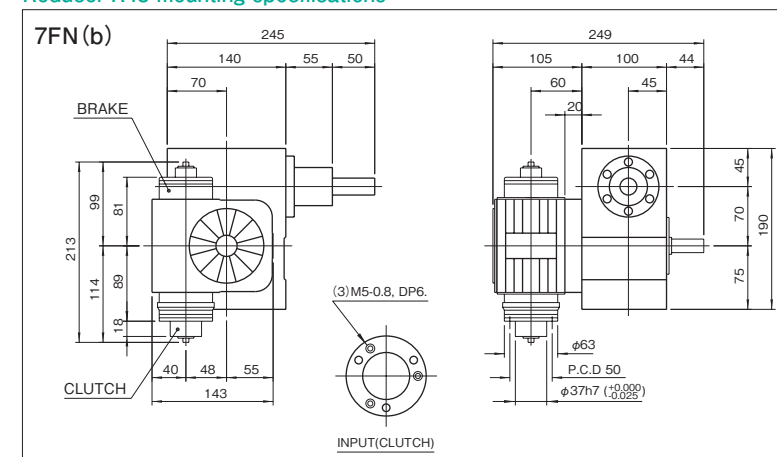
●The figures in the □ indicate gear ratio.

Allowable torque with gear head (N·m)

Rotating speed	200	120	100	60	50	30	20	15	10
50Hz Gear ratio	7.5	12.5	15	25	30	50	75	100	150
60Hz Gear ratio	9	15	18	30	36	60	90	120	180
Atatic torque	5IK90GU-AF	4.1	6.2	7.4	11.2	13.5	20	20	20
	M9IA90G4L	3.43	5.68	6.76	10.88	13.03	19.6	19.6	19.6

(1N·m=0.102kgf·m)

Reducer R48 mounting specifications



Timing transmission specifications

Table 7FN-4

Timing pulley reduction ratio	Pulley A Number of teeth	Pulley B Number of teeth	D (mm)	Belt model
1.38	26	36	156	240L 64 teeth
1.5	24	36	161	240L 64 teeth
1.64	22	36	165	240L 64 teeth

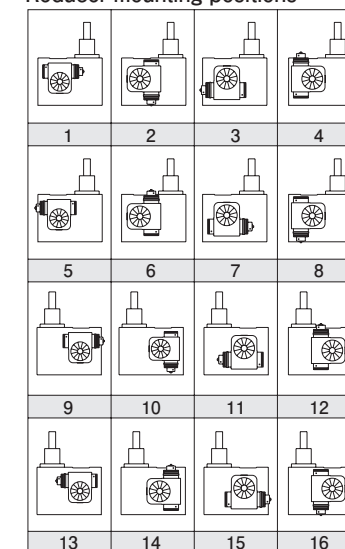
Clutch and brake specifications

Table 7FN-5

Item	Motor	
	Clutch	Brake
Static frictional torque	1.5N·m	
Dynamic frictional torque	1.0N·m	
Rated voltage	DC24V	
Power consumption (at 75°C)	7W	5W
Armature pull - in time	15msec	
Armature release time	25msec	
Actual torque build - up time	20msec	
Repetition rate	Max. 100 times/min	
Total energy	$1.5\times 10^2\text{J}$	
Allowable energy at one time	1.47J	

Figure 7FN-5

Reducer mounting positions





Oscillating Handler/Indexing Handler 10FN

SANDEX

10FN Dimensions

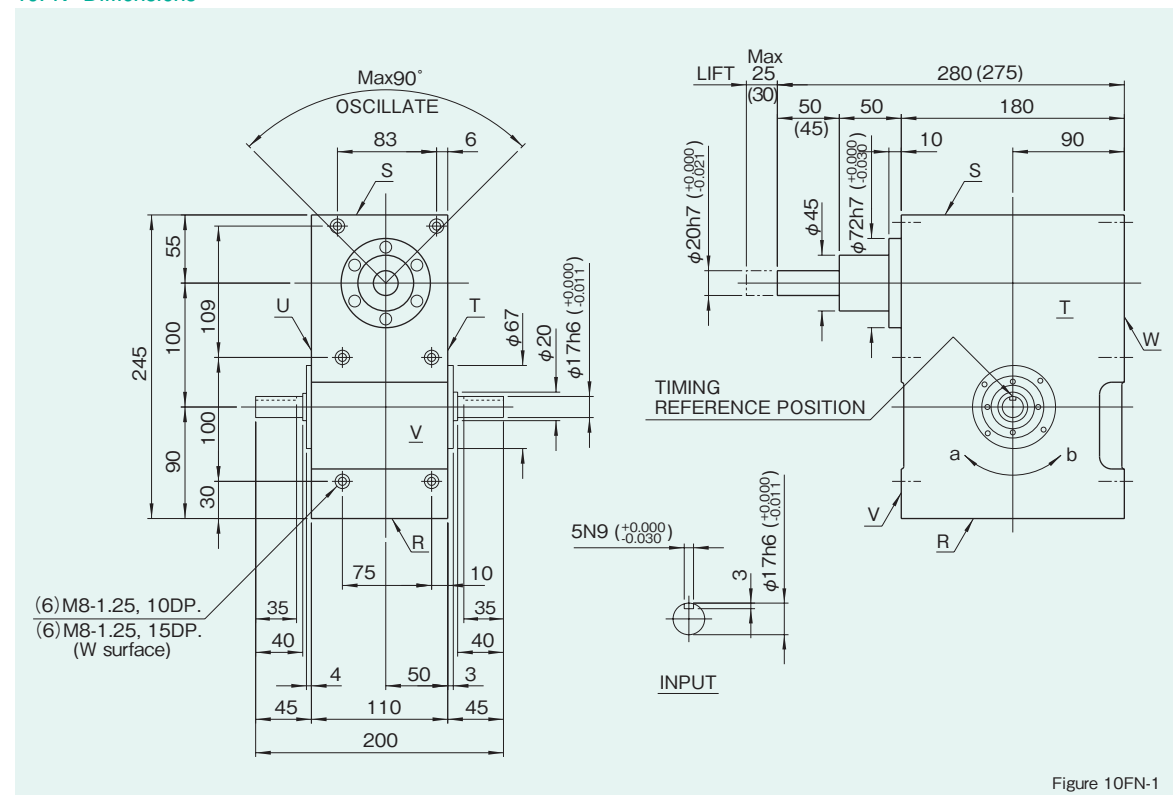


Figure 10FN-1

●Dimensions in () apply when lift is over 25 mm.

Locations of oil plug, etc., and oil capacity

Mounting position	1
Location	
Oil capacity (ℓ)	0.8

Figure 10FN-2

Precautions

- Each point indicated in the mounting positions shown in Figure 10FN-2 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 10FN-2 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

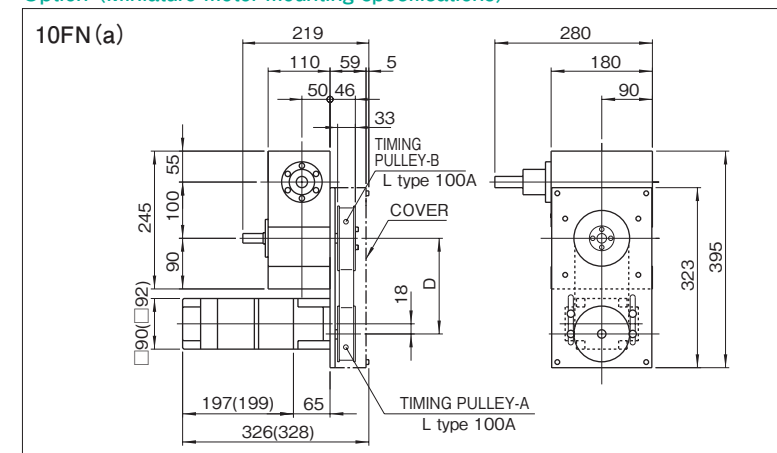
Specifications

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	980	Output inertia (oscillate)	J_0	$\text{kg}\cdot\text{m}^2$	1.2×10^{-3}
Output allowable axial load	P_1	N	245	Input allowable radial load	P_4	N	1078	Output internal load (lift)	W_{a1}	N	19.6
Output allowable radial load	P_2	N	98	Input maximum repetitive allowable torque	P_5	$\text{N}\cdot\text{m}$	68.6	Housing color			Silver
Output static torque	T_s	$\text{N}\cdot\text{m}$	Refer to Torque Capacity Table	Input torsional rigidity	K_2	$\text{N}\cdot\text{m}/\text{rad}$	6664	Product weight		kg	27
Output torsional rigidity	K_1	$\text{N}\cdot\text{m}/\text{rad}$	5096	Input inertia	J_1	$\text{kg}\cdot\text{m}^2$	1.5×10^{-2}	Contact us.			

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

Option (Miniature motor mounting specifications)



Induction motor specifications

Maker	Type	Motor model	Output power (W)	Frequency (Hz)	Voltage (V)	Current (A)	Starting torque (N·m)	Rated torque (N·m)	Rotating speed (rpm)	Capacitor (μF)	Gear head model
Oriental motor	No clutch and brake	5IK90GU-AF	90	50	100	2.0	0.45	0.68	1300	25.0	5GU□KB
	With clutch and brake	CB1590-801	90	60	100	2.0	0.45	0.57	1550	25.0	5GCH□KB
Panasonic	No clutch and brake	M9IC90G4L	90	50	100	1.6	0.470	0.637	1325	25.0	M9GD□B
	With clutch and brake	M9CBIC90G4L	90	60	100	1.7	0.470	0.519	1625	25.0	M9GE□B-CB

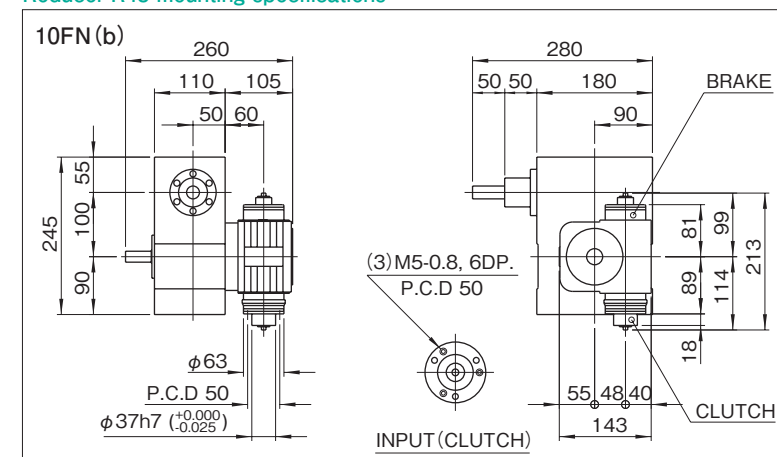
●The figures in the □ indicate gear ratio.

Allowable torque with gear head (N·m)

Rotating speed	200	120	100	60	50	30	20	15	10
50Hz Gear ratio	7.5	12.5	15	25	30	50	75	100	150
60Hz Gear ratio	9	15	18	30	36	60	90	120	180
Atatic torque	5IK90GU-AF	4.1	6.2	7.4	11.2	13.5	20	20	20
	M9IA90G4L	3.43	5.68	6.76	10.88	13.03	19.6	19.6	19.6

(1N·m=0.102kgf·m)

Reducer R48 mounting specifications



Timing transmission specifications

Timing pulley reduction ratio	Pulley A Number of teeth	Pulley B Number of teeth	D (mm)	Belt model
1.4	30	42	170	270L 72 teeth
1.5	28	42	175	270L 72 teeth
1.62	26	42	179	270L 72 teeth

Table 10FN-4

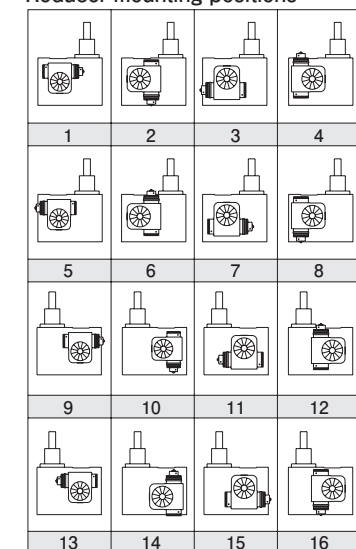
Clutch and brake specifications

Item	Motor	
	Clutch	Brake
Static frictional torque	1.5N·m	
Dynamic frictional torque	1.0N·m	
Rated voltage	DC24V	
Power consumption (at 75°C)	7W	5W
Armature pull - in time	15msec	
Armature release time	25msec	
Actual torque build - up time	20msec	
Repetition rate	Max. 100 times/min	
Total energy	$1.5\times 10^2\text{J}$	
Allowable energy at one time	1.47J	

Table 10FN-5

Figure 10FN-5

Reducer mounting positions



10FN



12FN Dimensions

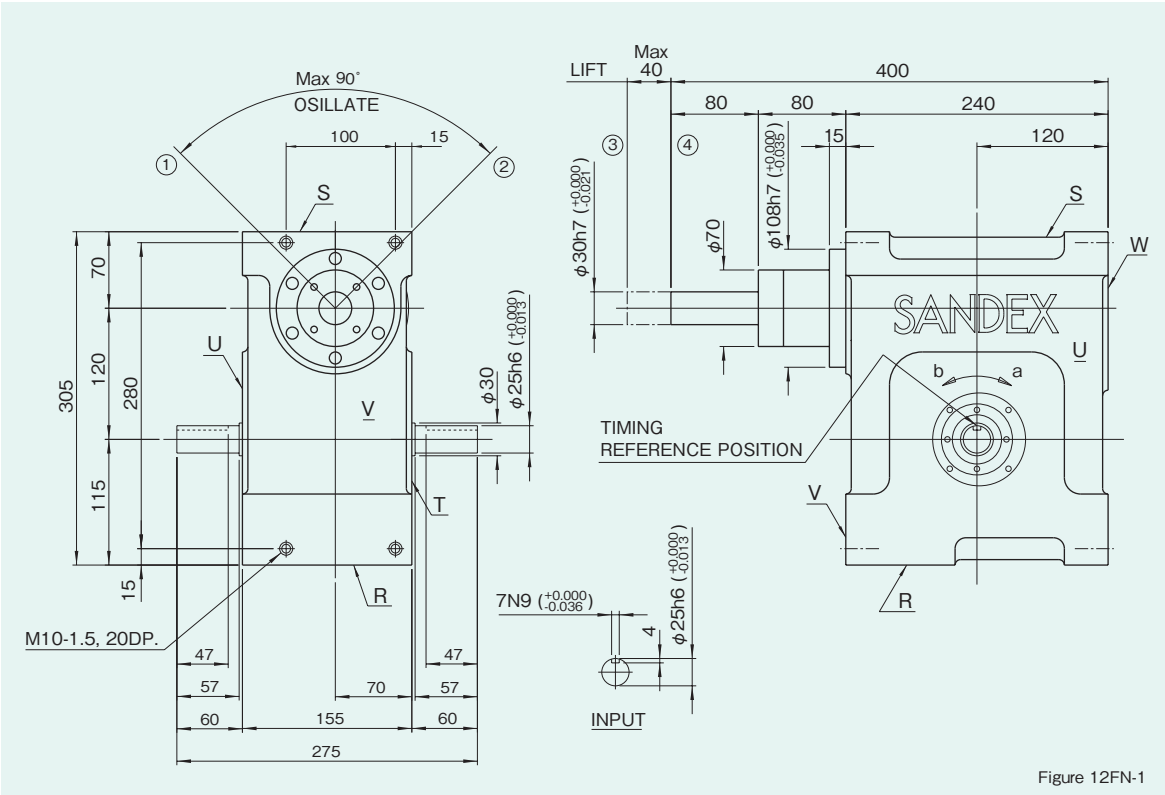


Figure 12FN-1

Locations of oil plug, etc., and oil capacity

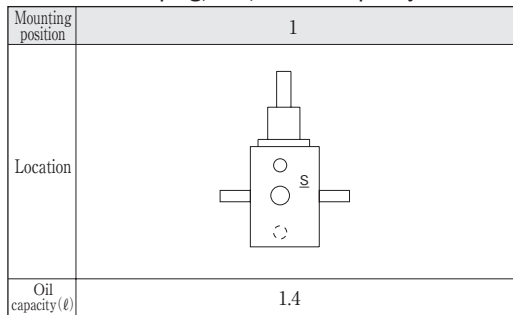


Figure 12FN-2

Precautions

- Each point indicated in the mounting positions shown in Figure 12FN-2 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 12FN-2 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Table 12FN-1

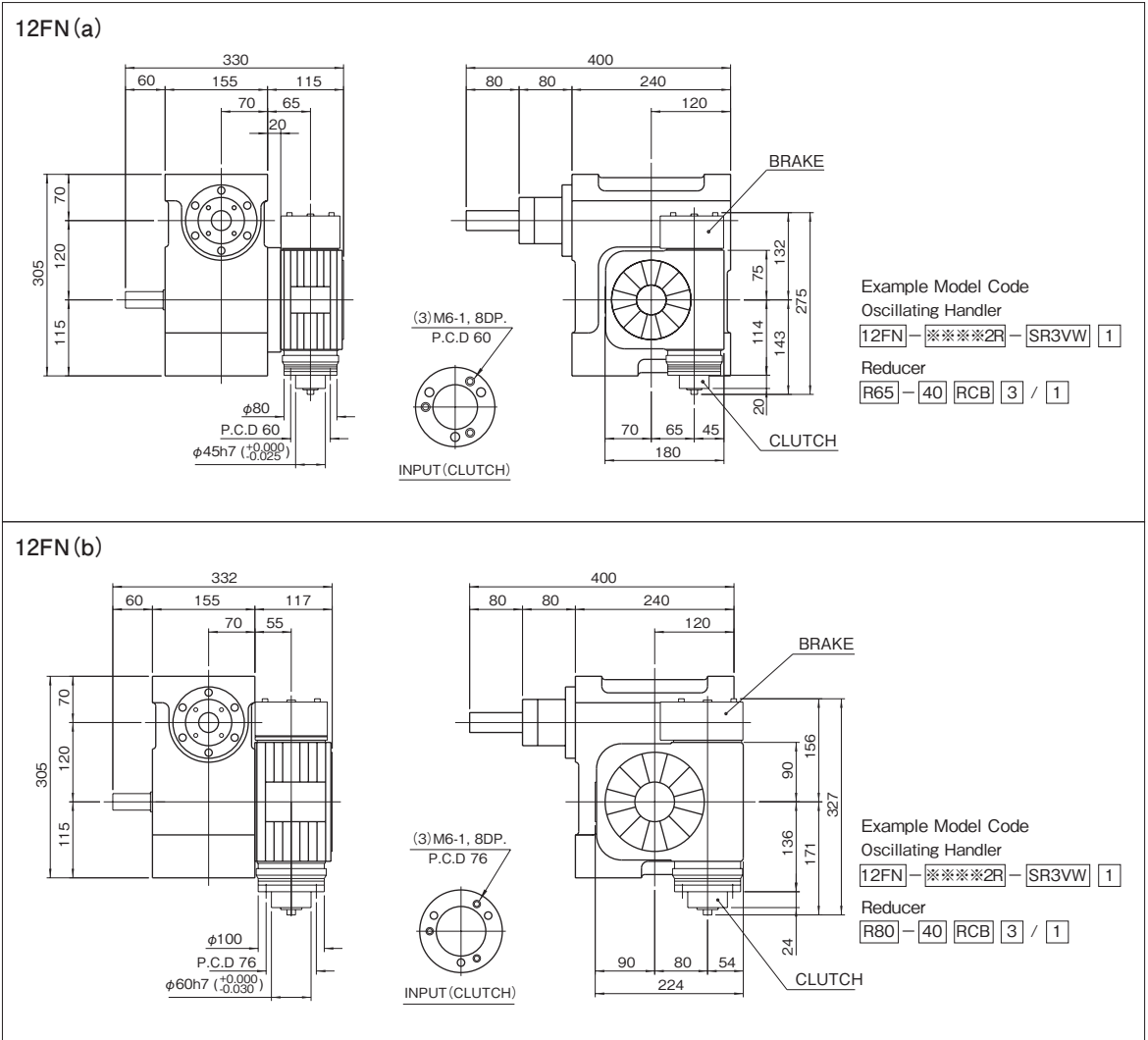
Specifications

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	1470	Output inertia (oscillate)	J_0	kg·m ²	0.0033
Output allowable axial load	P_1	N	280	Input allowable radial load	P_4	N	2300	Output internal load (lift)	W_{a1}	N	25.5
Output allowable radial load	P_2	N	200	Input maximum repetitive allowable torque	P_5	N·m	220	Housing color			Silver
Output static torque	T_s	N·m	Refer to Torque Capacity Table	Input torsional rigidity	K_2	N·m/rad	1.66×10^4	Product weight		kg	70
Output torsional rigidity	K_1	N·m/rad	1.65×10^4	Input inertia	J_1	kg·m ²	6.3×10^{-2}	Contact us.			

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

Mounted accessories



Reducer mounting positions

Figure 12FN-4

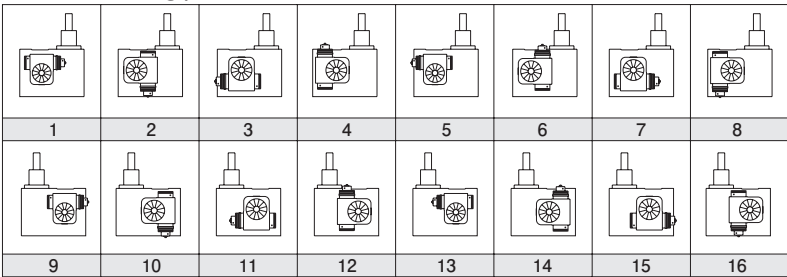
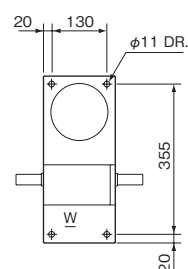




Figure 16FN-1

Figure 16FN-2



Locations of oil plug, etc., and oil capacity

Mounting position	1
Location	
Oil capacity (ℓ)	2.5

Figure 16FN-3

Precautions

- Each point indicated in the mounting positions shown in Figure 16FN-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 16FN-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Table 16FN-1

Specifications

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	1470	Output inertia (oscillate)	J_0	$\text{kg}\cdot\text{m}^2$	6.35×10^{-3}
Output allowable axial load	P_1	N	490	Input allowable radial load	P_4	N	2352	Output internal load (lift)	W_{a1}	N	56.8
Output allowable radial load	P_2	N	274.4	Input maximum repetitious allowable torque	P_5	$\text{N}\cdot\text{m}$	225.4	Housing color			Silver
Output static torque	T_s	$\text{N}\cdot\text{m}$	264.6	Input torsional rigidity	K_2	$\frac{\text{N}\cdot\text{m}}{\text{rad}}$	2.058×10^4	Product weight		kg	110
Output torsional rigidity	K_1	$\frac{\text{N}\cdot\text{m}}{\text{rad}}$	2.058×10^4	Input inertia	J_1	$\text{kg}\cdot\text{m}^2$	0.1875	Contact us.			

Note : Input inertia : J is calculated in dwell.

 $(1\text{ N} \doteq 0.102\text{ kgf})$

16FN (a)

Dimensions (mm):

- Front View: 350 (Total Width), 65, 170, 115 (Width Segments), 85, 65 (Height Segments), 20 (Clutch Offset), 395 (Total Height), 160, 150 (Height Segments), $\phi 80$ (Clutch Hole), P.C.D. 60 (Clutch Hole Circle), $\phi 45h7 \begin{smallmatrix} +0.000 \\ -0.025 \end{smallmatrix}$ (Shaft Diameter).
- Side View: 525 (Total Length), 100, 115, 310 (Length Segments), 150 (Clutch Offset), 132, 143, 275 (Height Segments), 70, 65, 45 (Width Segments), 180 (Clutch Offset).
- Input (Clutch): (3) M6-1, 8DP, P.C.D. 60.

Labels: BRAKE, CLUTCH, INPUT (CLUTCH).

Example Model Code: 16FN-***2R-SR3VW 1

Reducer: R65-40 RCB 3 / 1

16FN (b)

Dimensions (mm):

- Front View: 382 (Total Width), 65, 170, 147 (Width Segments), 85, 85 (Height Segments), 30 (Clutch Offset), 395 (Total Height), 160, 150 (Height Segments), $\phi 100$ (Clutch Hole), P.C.D. 76 (Clutch Hole Circle), $\phi 60h7 \begin{smallmatrix} +0.000 \\ -0.030 \end{smallmatrix}$ (Shaft Diameter).
- Side View: 525 (Total Length), 100, 115, 310 (Length Segments), 150 (Clutch Offset), 156, 171, 327 (Height Segments), 90, 80, 54 (Width Segments), 224 (Clutch Offset).
- Input (Clutch): (3) M6-1, 8DP, P.C.D. 76.

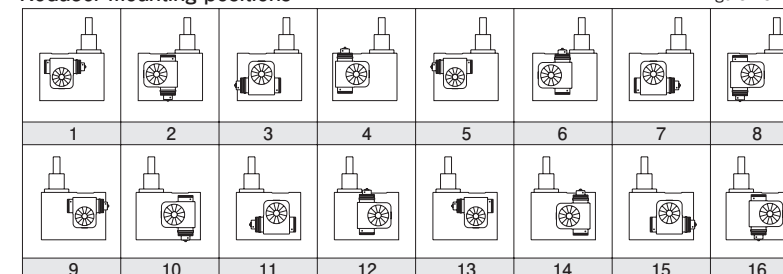
Labels: BRAKE, CLUTCH, INPUT (CLUTCH).

Example Model Code: 16FN-***2R-SR3VW 1

Reducer: R80-40 RCB 3 / 1

Reducer mounting positions

Figure 16FN-5





22FN Dimensions

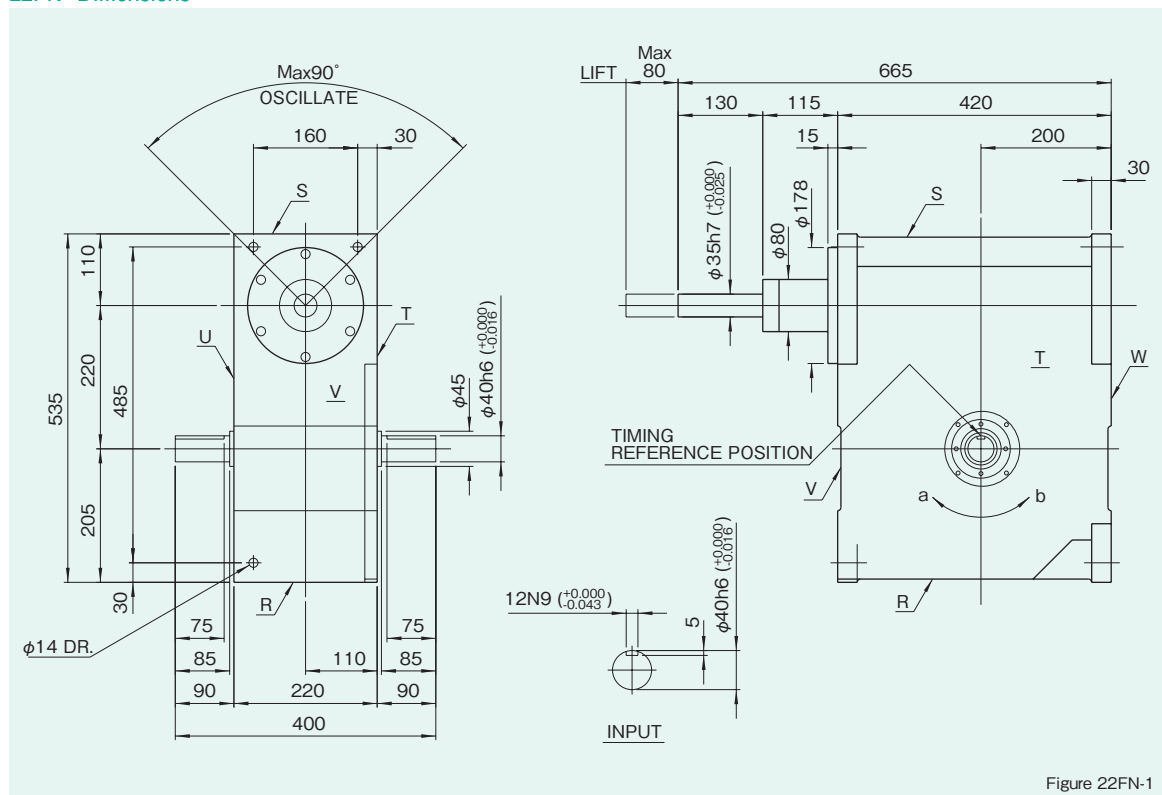
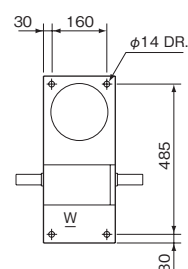


Figure 22FN-1

Mounting hole locations

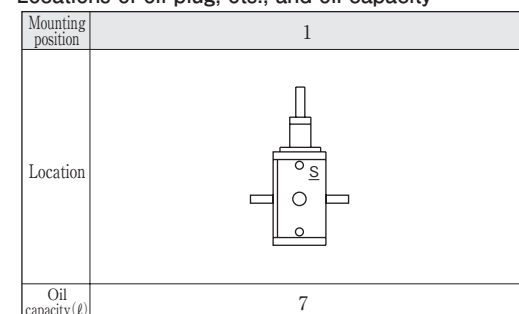
Figure 22FN-2



Dimension of W surface

Locations of oil plug, etc., and oil capacity

Figure 22FN-3



Precautions

- Each point indicated in the mounting positions shown in Figure 22FN-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 22FN-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Specifications

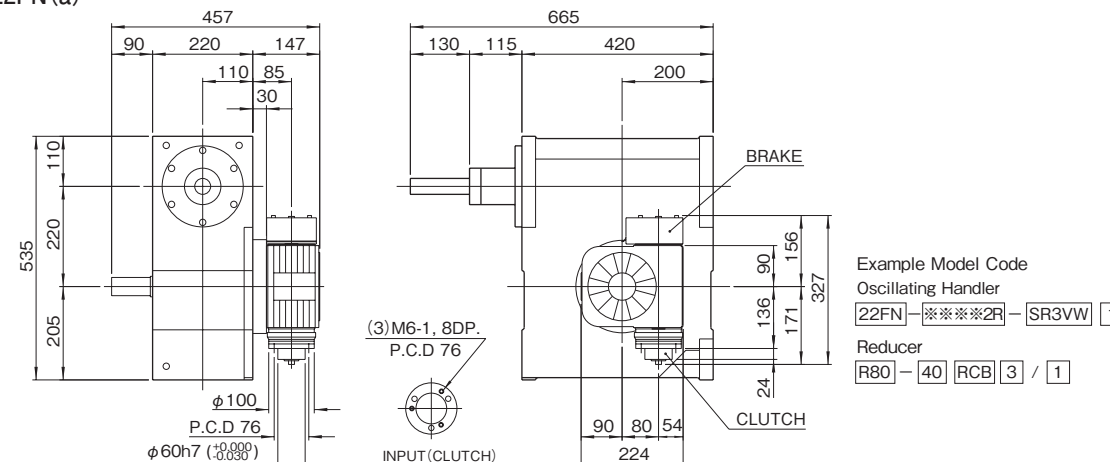
Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	2940	Output inertia (oscillate)	J_0	$\text{kg}\cdot\text{m}^2$	2.875×10^{-2}
Output allowable axial load	P_1	N	705.6	Input allowable radial load	P_4	N	6860	Output internal load (lift)	W_{a1}	N	151.9
Output allowable radial load	P_2	N	392	Input maximum repetitious allowable torque	P_5	$\text{N}\cdot\text{m}$	921.2	Housing color			
Output static torque	T_s	$\text{N}\cdot\text{m}$	656.6	Input torsional rigidity	K_2	$\frac{\text{N}\cdot\text{m}}{\text{rad}}$	9.8×10^4	Product weight		kg	240
Output torsional rigidity	K_1	$\frac{\text{N}\cdot\text{m}}{\text{rad}}$	3.332×10^4	Input inertia	J_1	$\text{kg}\cdot\text{m}^2$	0.975	Contact us.			

Note : Input inertia : J is calculated in dwell.

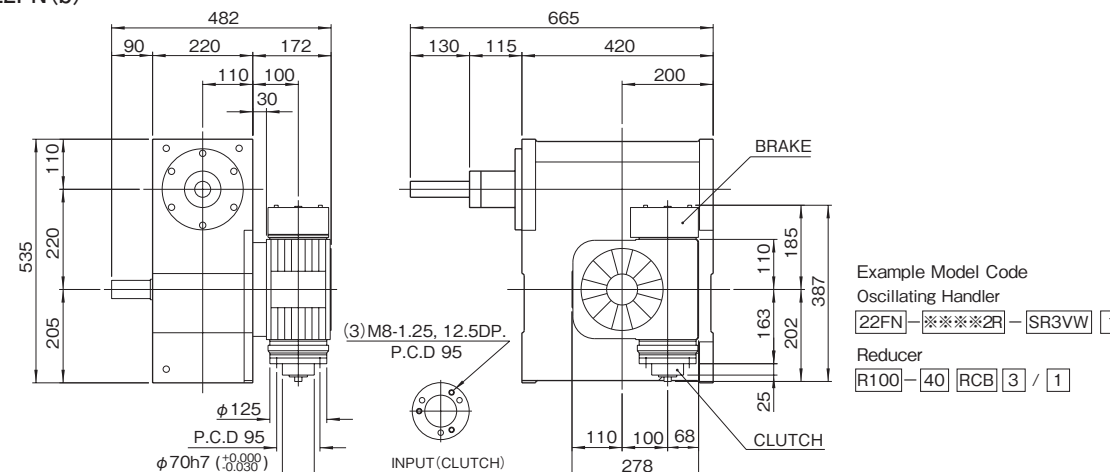
(1N=0.102kgf)

Mounted accessories

22FN (a)

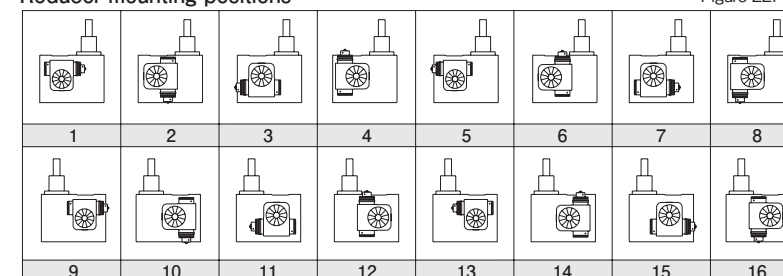


22FN (b)



Reducer mounting positions

Figure 22FN-5





Mounting hole locations

Figure 7FU-2



Locations of oil plug, etc., and oil capacity

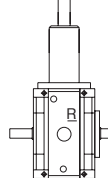
Mounting position	1
Location	
Oil capacity (ℓ)	0.5

Figure 7FU-3

Precautions

- Each point indicated in the mounting positions shown in Figure 7FU-3 represents (starting at top) the oil plug (PT3/8), oil level (VA-01), and drain (PT3/8).
- The mounting positions correspond to code i for the indexing, oscillating, and roller drives.
- The oil levels indicated in Figure 7FU-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

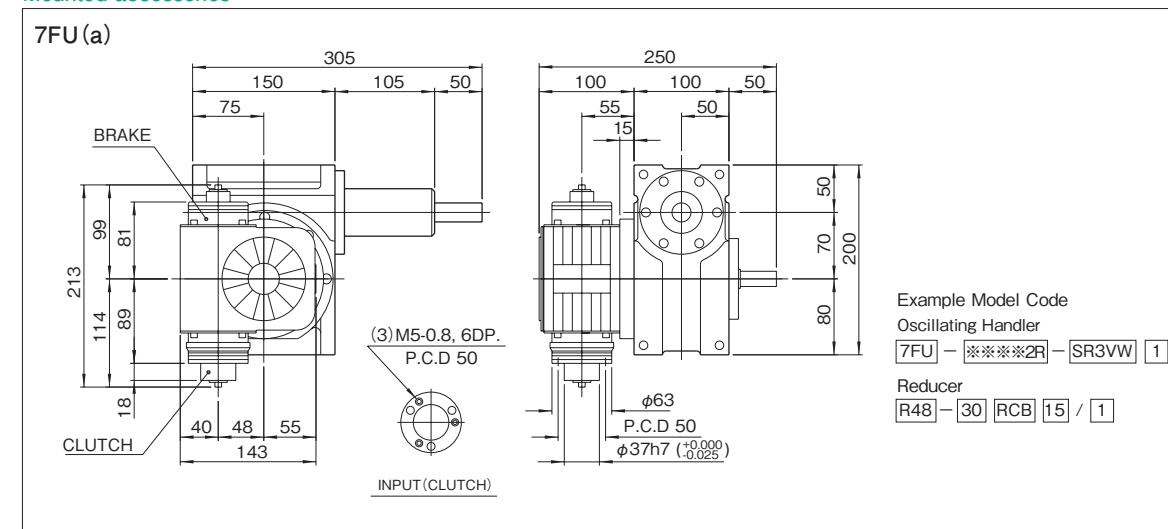
Specifications

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carring load	W_0	N	Refer to Carring Capacity Table	Input allowable axial load	P_3	N	980	Output inertia (oscillate)	J_0	$\text{kg}\cdot\text{m}^2$	1.9×10^{-4}
Output allowable axial load	P_1	N	68.6	Input allowable radial load	P_4	N	931	Output internal load (lift)	W_{a1}	N	10.8
Output allowable radial load	P_2	N	137.2	Input maximum repetitious allowable torque	P_5	$\text{N}\cdot\text{m}$	58.8	Housing color			
Output static torque	T_s	$\text{N}\cdot\text{m}$	Refer to Torque Capacity Table	Input torsional rigidity	K_2	$\text{N}\cdot\text{m}/\text{rad}$	4.116×10^3	Product weight		kg	22
Output torsional rigidity	K_1	$\text{N}\cdot\text{m}/\text{rad}$	4704	Input inertia	J_1	$\text{kg}\cdot\text{m}^2$	3.0×10^{-3}	Contact us.			

Note : Input inertia : J is calculated in dwell.

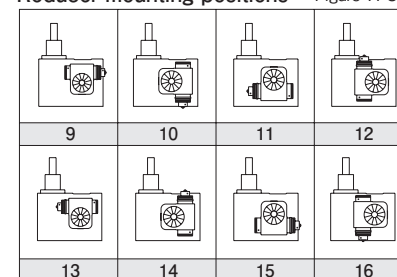
 $(1\text{ N} \doteq 0.102\text{ kgf})$

Mounted accessories



Reducer mounting positions

Figure 7FU-5



8FU Dimensions

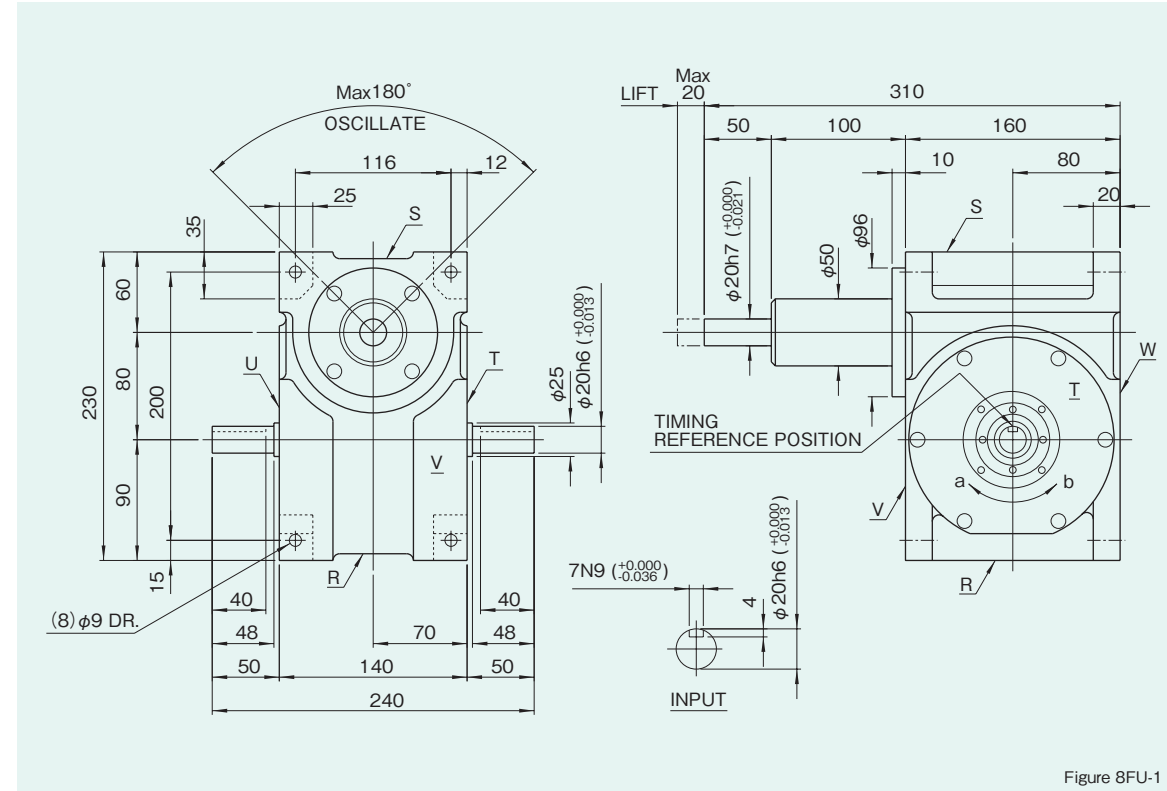
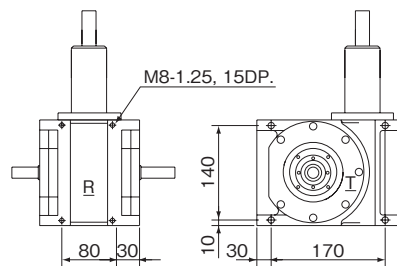


Figure 8FU-1

Mounting hole locations

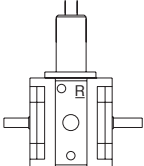
Figure 8FU-2



Dimension of R,S,T, and U surface

Locations of oil plug, etc., and oil capacity

Figure 8FU-3

Mounting position	1
Location	
Oil capacity (ℓ)	0.8

Precautions

- Each point indicated in the mounting positions shown in Figure 8FU-3 represents (starting at top) the oil plug (PT3/8), oil level (VA-01), and drain (PT3/8).
- The mounting positions correspond to code i for the indexing, oscillating, and roller drives.
- The oil levels indicated in Figure 8FU-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

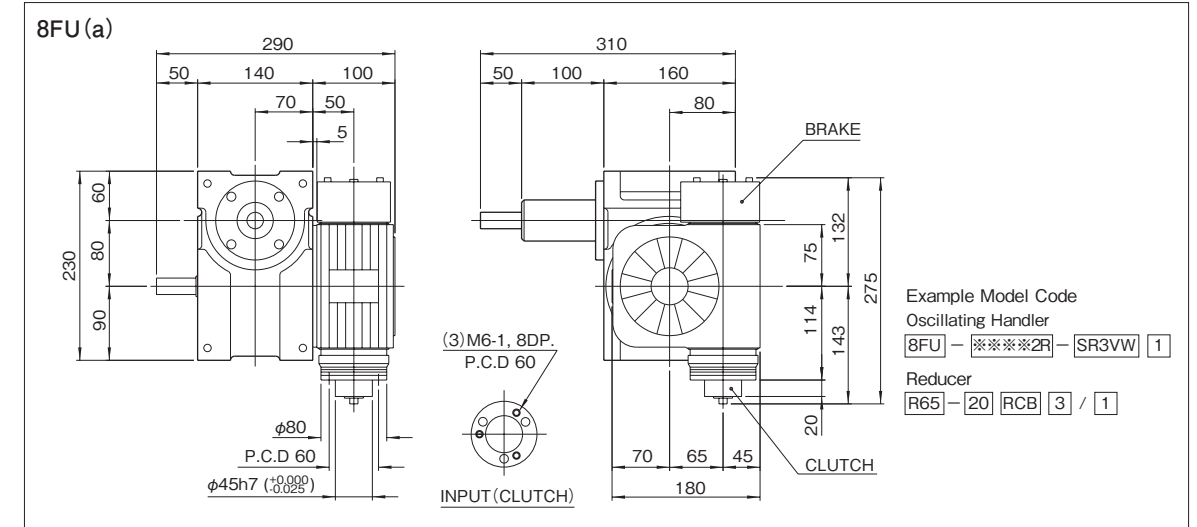
Specifications

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	1372	Output inertia (oscillate)	J_0	$\text{kg}\cdot\text{m}^2$	4.65×10^{-4}
Output allowable axial load	P_1	N	88.2	Input allowable radial load	P_4	N	1862	Output internal load (lift)	W_{a1}	N	13.7
Output allowable radial load	P_2	N	137.2	Input maximum repetitious allowable torque	P_5	$\text{N}\cdot\text{m}$	93.1	Housing color			
Output static torque	T_s	$\text{N}\cdot\text{m}$	Refer to Torque Capacity Table	Input torsional rigidity	K_2	$\text{N}\cdot\text{m}/\text{rad}$	8.82×10^3	Product weight		kg	33
Output torsional rigidity	K_1	$\text{N}\cdot\text{m}/\text{rad}$	5292	Input inertia	J_1	$\text{kg}\cdot\text{m}^2$	4.25×10^{-3}	Contact us.			

Note : Input inertia : J is calculated in dwell.

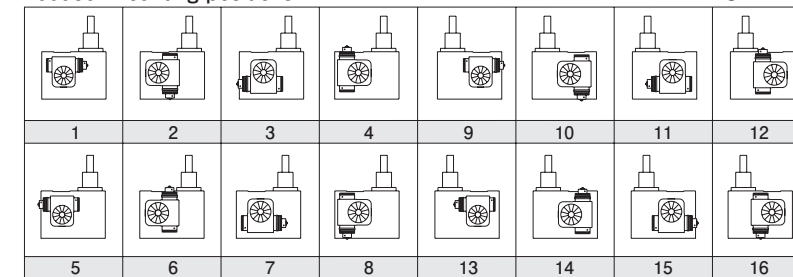
(1 N $\doteq$ 0.102kgf)

Mounted accessories



Reducer mounting positions

Figure 8FU-5





Oscillating Handler/Indexing Handler 11FU

SANDIX

11FU Dimensions

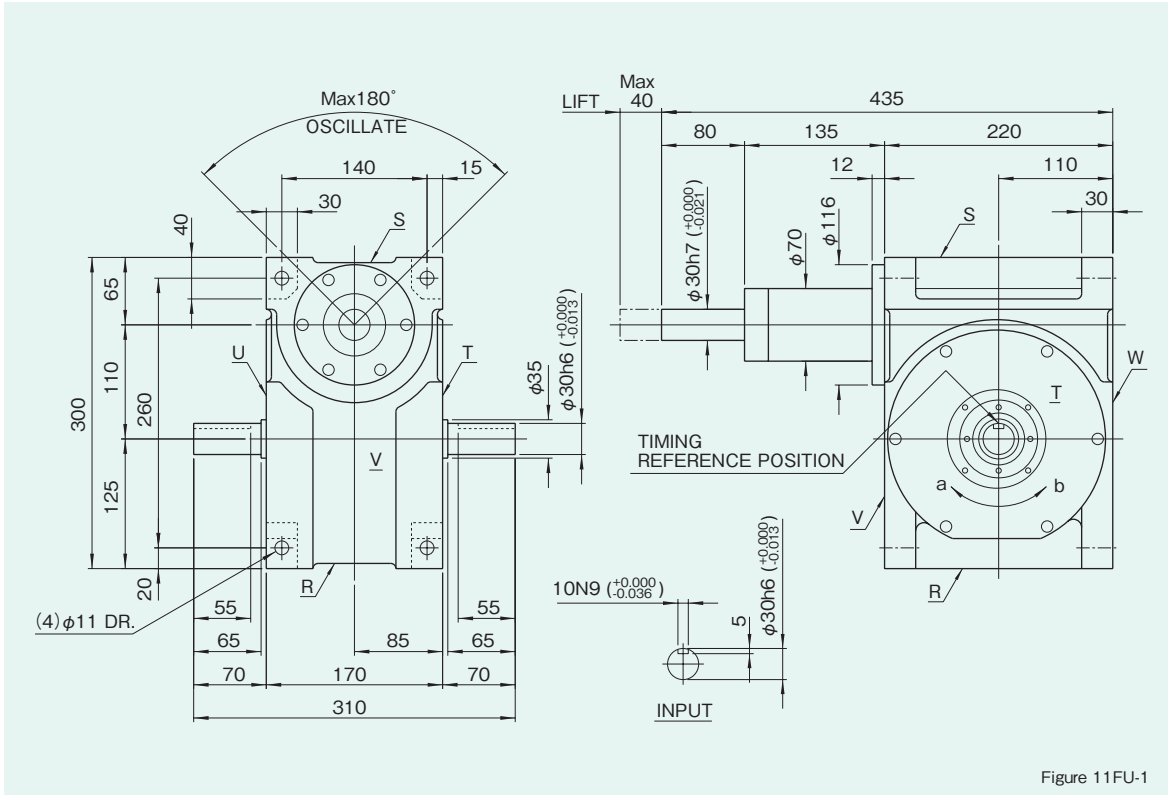
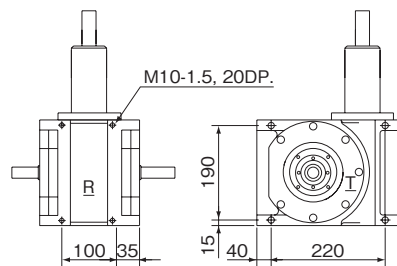


Figure 11FU-1

Mounting hole locations

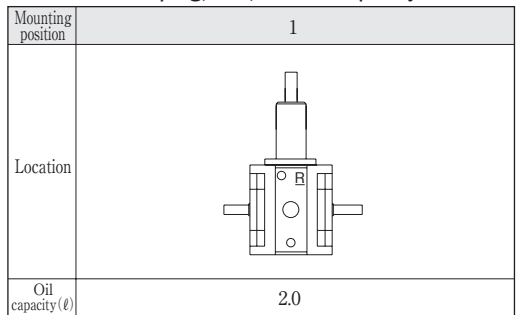
Figure 11FU-2



Dimension of R,S,T, and U surface

Locations of oil plug, etc., and oil capacity

Figure 11FU-3



Precautions

- Each point indicated in the mounting positions shown in Figure 11FU-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 11FU-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Table 11FU-1

Specifications

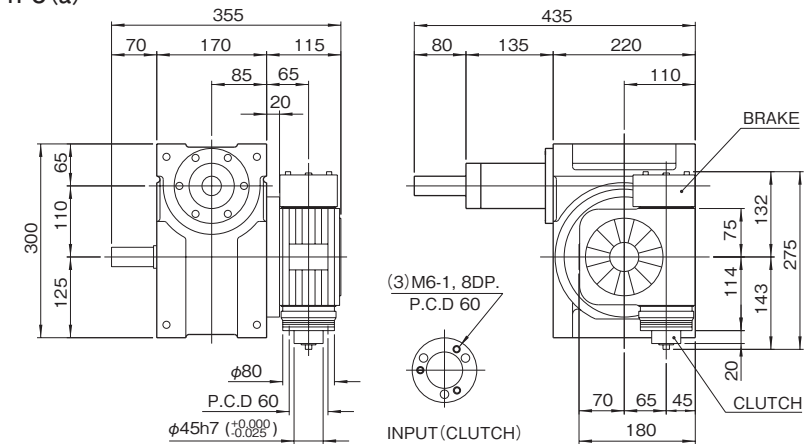
Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	2940	Output inertia (oscillate)	J_0	$\text{kg}\cdot\text{m}^2$	1.6×10^{-3}
Output allowable axial load	P_1	N	245	Input allowable radial load	P_4	N	2548	Output internal load (lift)	W_{a1}	N	34.3
Output allowable radial load	P_2	N	176.4	Input maximum repetitive allowable torque	P_5	$\text{N}\cdot\text{m}$	392	Housing color			
Output static torque	T_s	$\text{N}\cdot\text{m}$	Refer to Torque Capacity Table	Input torsional rigidity	K_2	$\text{N}\cdot\text{m}/\text{rad}$	2.548×10^4	Product weight		kg	75
Output torsional rigidity	K_1	$\text{N}\cdot\text{m}/\text{rad}$	1.764×10^4	Input inertia	J_1	$\text{kg}\cdot\text{m}^2$	3.0×10^{-2}	Contact us.			

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

Mounted accessories

11FU(a)



Example Model Code

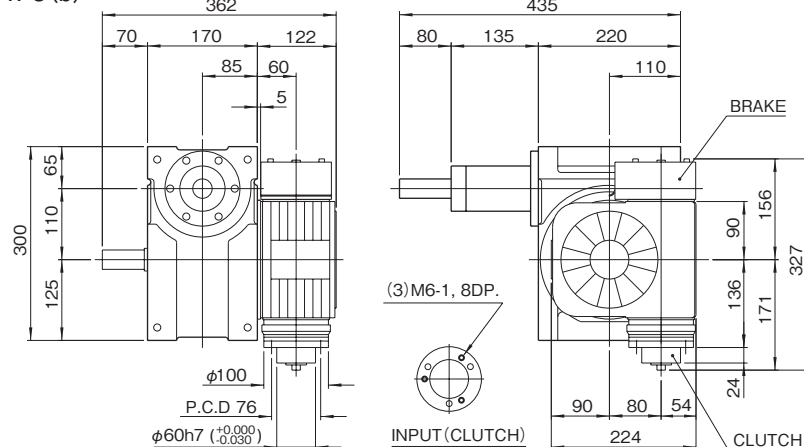
Oscillating Handler

11FU-***2R-SR3VW 1

Reducer

R65-20 RCB 3 / 1

11FU(b)



Example Model Code

Oscillating Handler

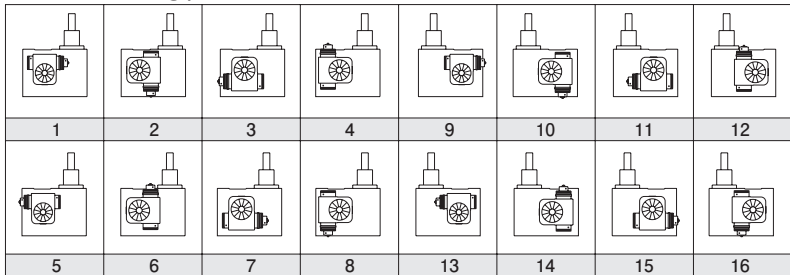
11FU-***2R-SR3VW 1

Reducer

R80-20 RCB 3 / 1

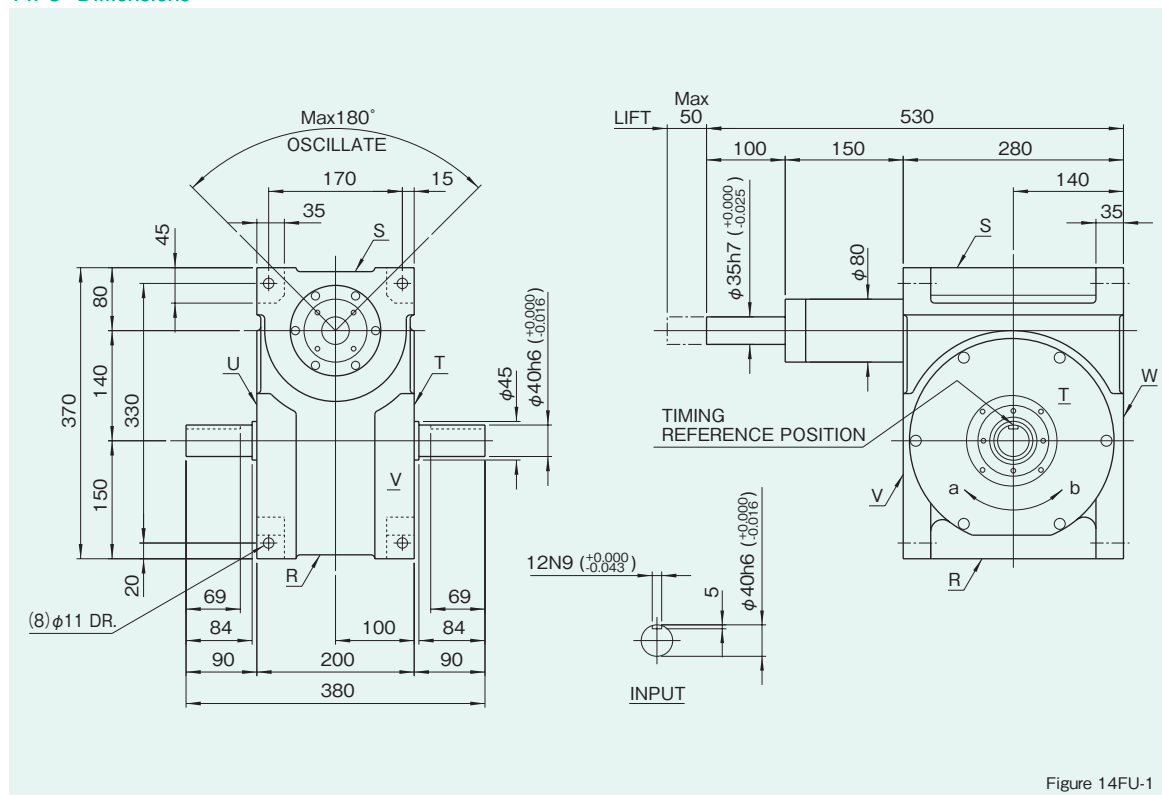
Reducer mounting positions

Figure 11FU-5



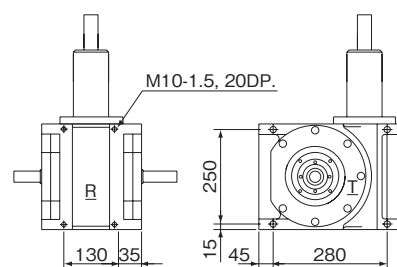


14FU Dimensions



Mounting hole locations

Figure 14FU-2



Locations of oil plug, etc., and oil capacity

Mounting position	1
Location	
Oil capacity (ℓ)	3.5

Figure 14FU-3

Precautions

- Each point indicated in the mounting positions shown in Figure 14FU-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 14FU-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Specifications

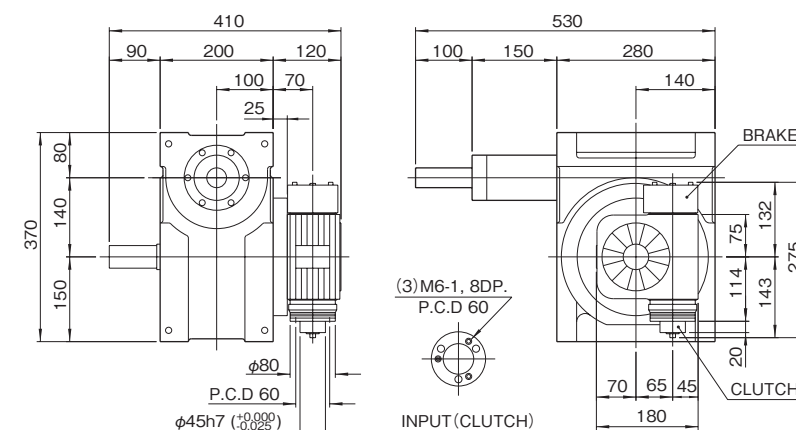
Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	3136	Output inertia (oscillate)	J_0	$\text{kg}\cdot\text{m}^2$	5.0×10^{-3}
Output allowable axial load	P_1	N	372.4	Input allowable radial load	P_4	N	3822	Output internal load (lift)	W_{a1}	N	58.8
Output allowable radial load	P_2	N	294	Input maximum repetitive allowable torque	P_5	$\text{N}\cdot\text{m}$	735	Housing color			
Output static torque	T_s	$\text{N}\cdot\text{m}$	Refer to Torque Capacity Table	Input torsional rigidity	K_2	$\text{N}\cdot\text{m}/\text{rad}$	1.078×10^5	Product weight		kg	
Output torsional rigidity	K_1	$\text{N}\cdot\text{m}/\text{rad}$	2.646×10^4	Input inertia	J_1	$\text{kg}\cdot\text{m}^2$	0.1075	Contact us.			

Note : Input inertia : J is calculated in dwell.

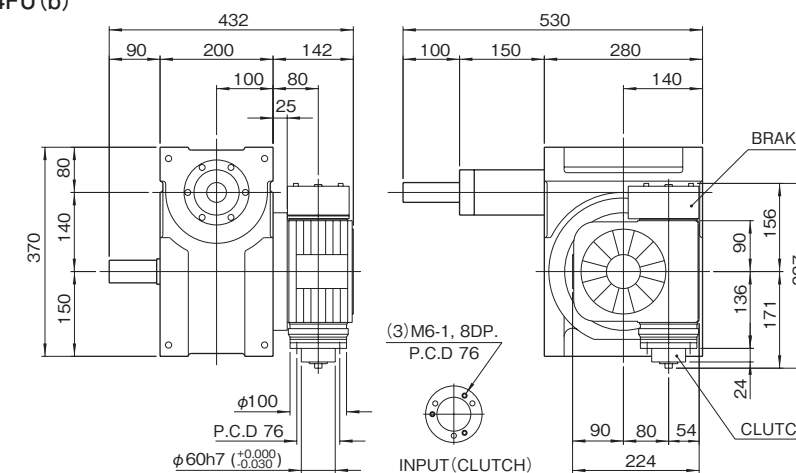
(1N=0.102kgf)

Mounted accessories

14FU(a)



14FU(b)



Reducer mounting positions

Figure 14FU-5

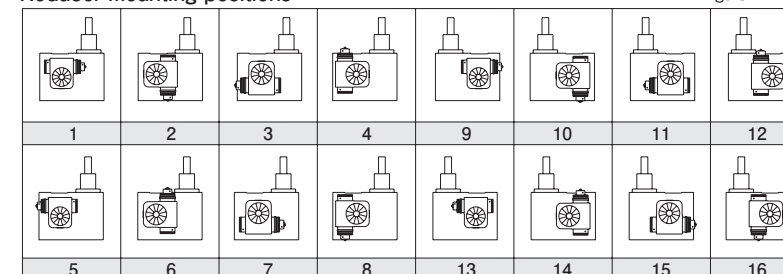
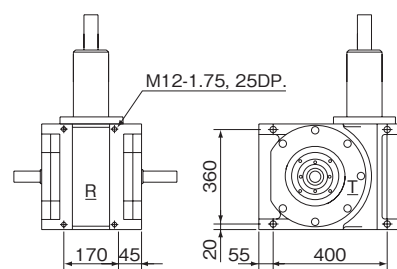




Figure 20FU-1

Figure 20FU-2



Dimension of R,S,T, and U surface

Mounting position	1
Location	
Oil capacity (ℓ)	9

Figure 20FU-3

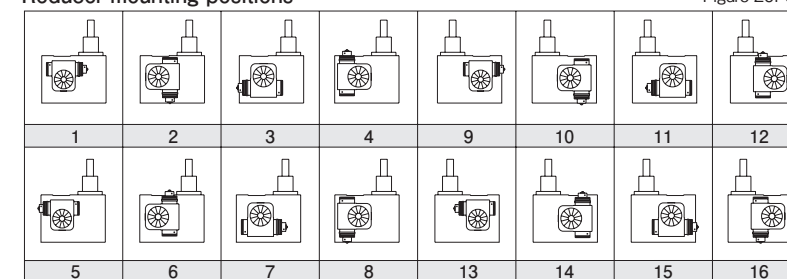
- Each point indicated in the mounting positions shown in Figure 20FU-3 represents (starting at top) the oil plug (PT3/4), oil level (VB), and drain (PT3/4).
- The mounting positions correspond to code i for the indexing, oscillating, and roller drives.
- The oil levels indicated in Figure 14FU-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	4900	Output inertia (oscillate)	J_0	$\text{kg}\cdot\text{m}^2$	3.5×10^{-2}
Output allowable axial load	P_1	N	735	Input allowable radial load	P_4	N	6860	Output internal load (lift)	W_{a1}	N	157.8
Output allowable radial load	P_2	N	352.8	Input maximum repetitious allowable torque	P_5	$\text{N}\cdot\text{m}$	1372	Housing color			
Output static torque	T_s	$\text{N}\cdot\text{m}$	Refer to Torque Capacity Table	Input torsional rigidity	K_2	$\frac{\text{N}\cdot\text{m}}{\text{rad}}$	2.646×10^5	Product weight		kg	330
Output torsional rigidity	K_1	$\frac{\text{N}\cdot\text{m}}{\text{rad}}$	7.644×10^4	Input inertia	J_1	$\text{kg}\cdot\text{m}^2$	0.365	Contact us.			

Note : Input inertia : J is calculated in dwell.

 $(1\text{ N} \doteq 0.102\text{ kgf})$ [illegible]

Figure 20FU-5





Oscillating Handler 8F

SANDEX

8F Dimensions

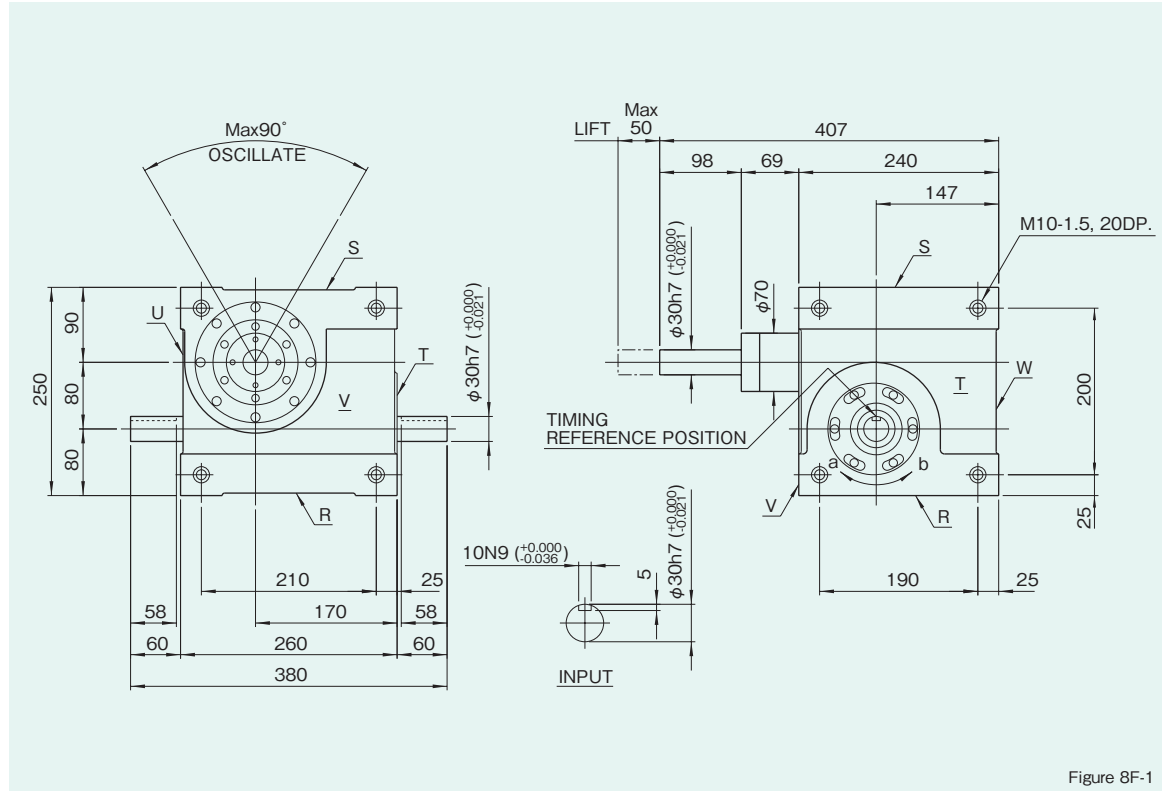
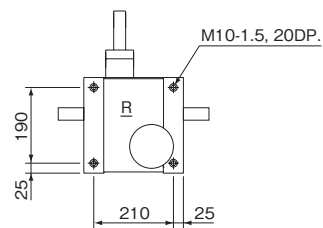


Figure 8F-1

Mounting hole locations

Figure 8F-2



Dimension of R and S surface

Locations of oil plug, etc., and oil capacity

Figure 8F-3

Mounting position	1	5
Location		
Oil capacity (ℓ)	3	3

Precautions

- Each point indicated in the mounting positions shown in Figure 8F-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 8F-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Specifications

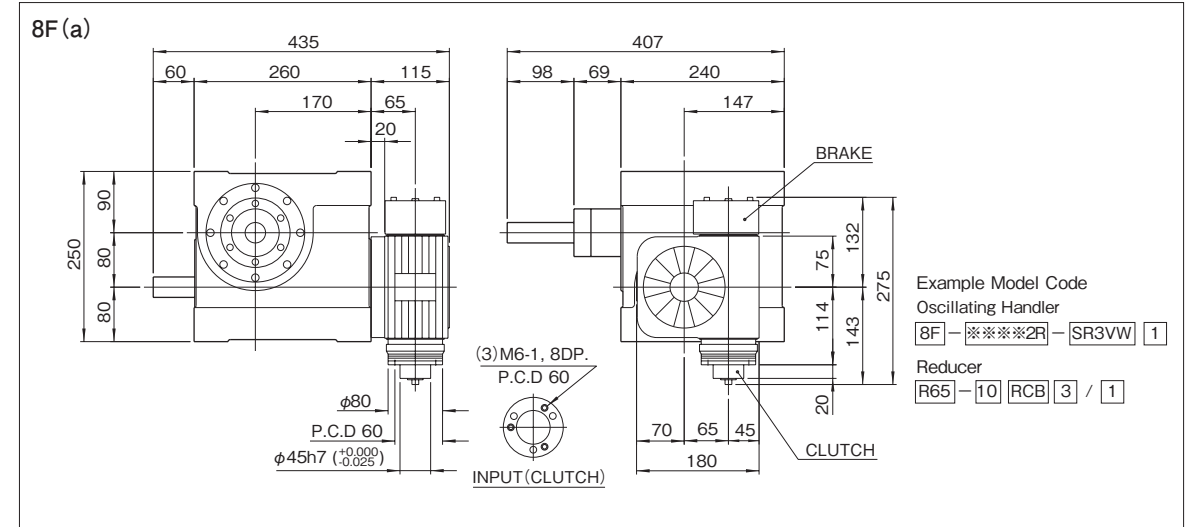
Table 8F-1

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	1862	Output inertia (oscillate)	J_0	kg·m ²	5.0×10^{-3}
Output allowable axial load	P_1	N	294	Input allowable radial load	P_4	N	3920	Output internal load (lift)	W_{a1}	N	34.3
Output allowable radial load	P_2	N	147	Input maximum repetitive allowable torque	P_5	N·m	392	Housing color			
Output static torque	T_s	N·m	Refer to Torque Capacity Table	Input torsional rigidity	K_2	N·m/rad	2.842×10^4	Product weight		kg	70
Output torsional rigidity	K_1	N·m/rad	1.715×10^4	Input inertia	J_1	kg·m ²	4.25×10^{-2}	Contact us.			

Note : Input inertia : J is calculated in dwell.

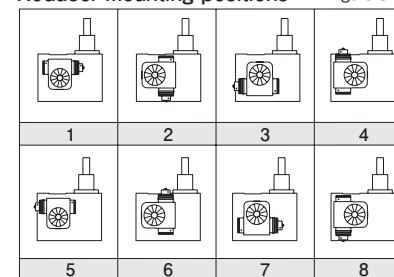
(1N=0.102kgf)

Mounted accessories



Reducer mounting positions

Figure 8F-5



8F

8F



Oscillating Handler 11F

SANDEX

11F Dimensions

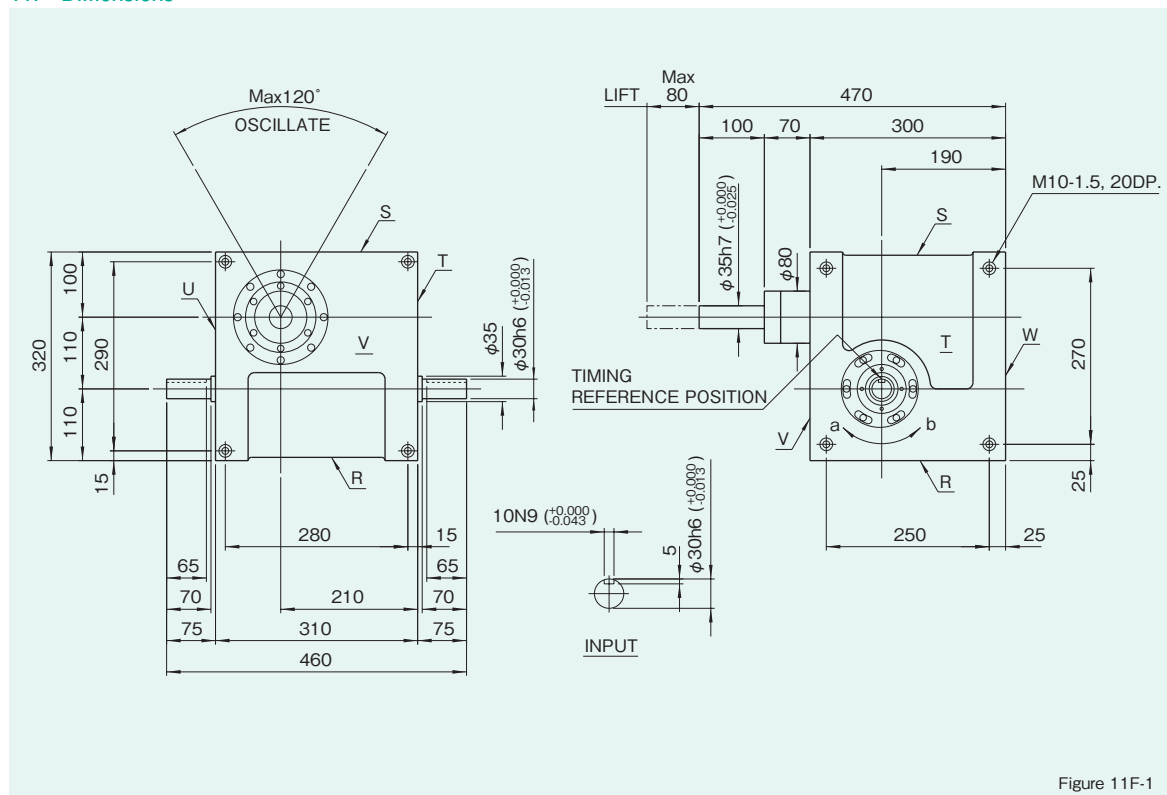
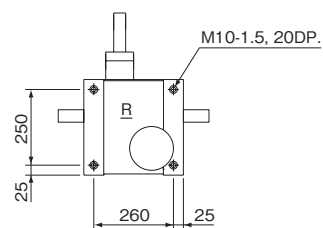


Figure 11F-1

Mounting hole locations

Figure 11F-2



Dimension of R and S surface

Locations of oil plug, etc., and oil capacity

Figure 11F-3

Mounting position	1	5
Location		
Oil capacity (ℓ)	7	7

Precautions

- Each point indicated in the mounting positions shown in Figure 11F-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 11F-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Specifications

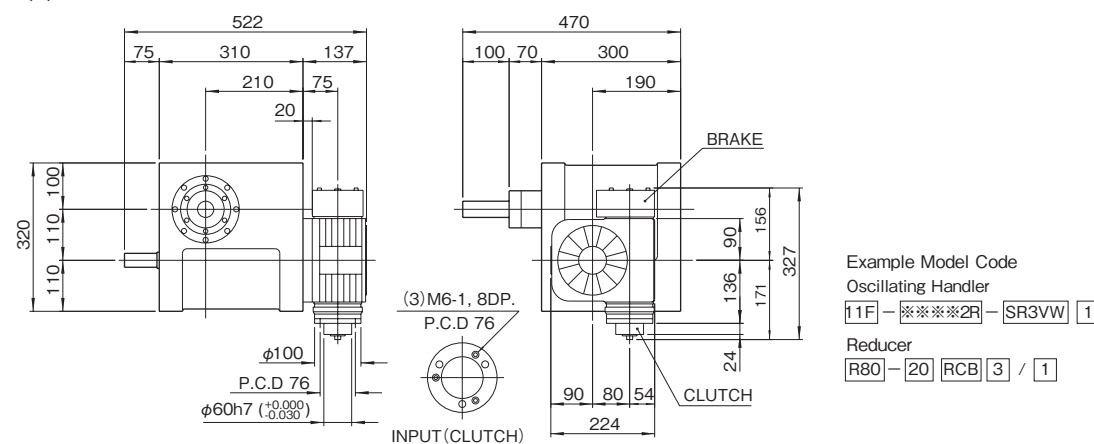
Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	2450	Output inertia (oscillate)	J_0	$\text{kg}\cdot\text{m}^2$	7.5×10^{-3}
Output allowable axial load	P_1	N	392	Input allowable radial load	P_4	N	3234	Output internal load (lift)	W_{a1}	N	58.8
Output allowable radial load	P_2	N	156.8	Input maximum repetitive allowable torque	P_5	$\text{N}\cdot\text{m}$	392	Housing color			
Output static torque	T_s	$\text{N}\cdot\text{m}$	Refer to Torque Capacity Table	Input torsional rigidity	K_2	$\text{N}\cdot\text{m}/\text{rad}$	4.214×10^4	Product weight		kg	140
Output torsional rigidity	K_1	$\text{N}\cdot\text{m}/\text{rad}$	2.646×10^4	Input inertia	J_1	$\text{kg}\cdot\text{m}^2$	7.0×10^{-2}	Contact us.			

Note : Input inertia : J is calculated in dwell.

(1N=0.102kgf)

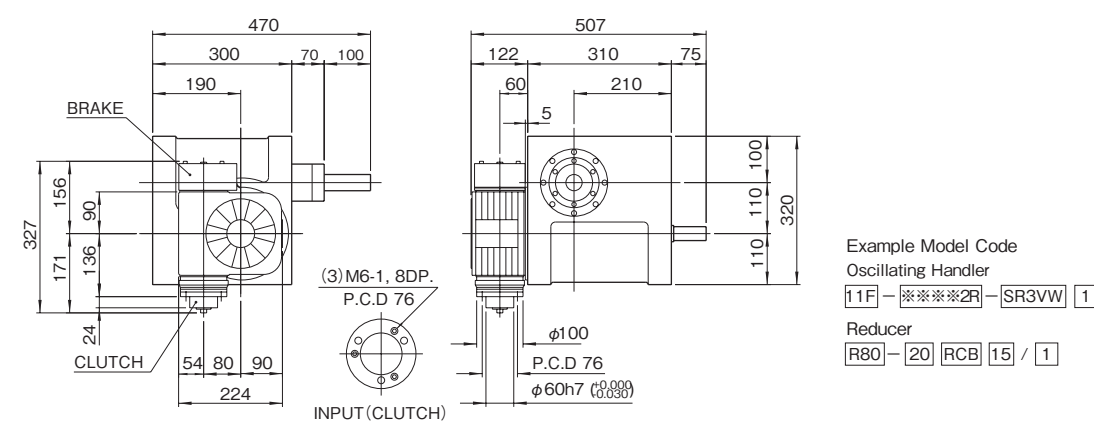
Mounted accessories

11F(a)



Example Model Code
Oscillating Handler
11F - ****2R - SR3VW 1
Reducer
R80 - 20 RCB 3 / 1

11F(b)



Example Model Code
Oscillating Handler
11F - ****2R - SR3VW 1
Reducer
R80 - 20 RCB 15 / 1

Reducer mounting positions

Figure 8F-5

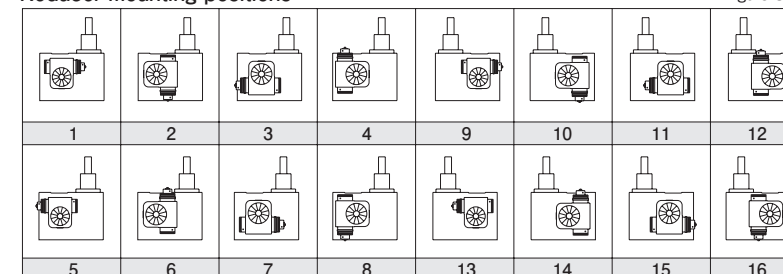
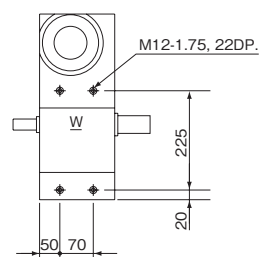




Figure 18FN-1

Figure 18FN-2



Dimension of W surface

Figure 18FN-3

Mounting position	1	2
Location		
Oil capacity (ℓ)	3	3

- Each point indicated in the mounting positions shown in Figure 18FN-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 18FN-3 are given in general figures and will differ according to the profile of the cam and the number of cam followers.

Table 18FN-1

Item	Symbol	Unit	Value	Item	Symbol	Unit	Value	Item	Symbol	Unit	Value
Output allowable carrying load	W_0	N	Refer to Carrying Capacity Table	Input allowable axial load	P_3	N	3234	Output inertia (oscillate)	J_0	$\text{kg}\cdot\text{m}^2$	7.5×10^{-3}
Output allowable axial load	P_1	N	980	Input allowable radial load	P_4	N	7448	Output internal load (lift)	W_{a1}	N	98.0
Output allowable radial load	P_2	N	980	Input maximum repetitious allowable torque	P_5	$\text{N}\cdot\text{m}$	921.2	Housing color			
Output static torque	T_s	$\text{N}\cdot\text{m}$	362.6	Input torsional rigidity	K_2	$\frac{\text{N}\cdot\text{m}}{\text{rad}}$	1.862×10^5	Product weight		kg	180
Output torsional rigidity	K_1	$\frac{\text{N}\cdot\text{m}}{\text{rad}}$	2.156×10^4	Input inertia	J_1	$\text{kg}\cdot\text{m}^2$	0.375	Contact us.			

Note : Input inertia : J is calculated in dwell.

 $(1\text{ N} \doteq 0.102\text{ kgf})$

18FN(a)

695
100 510
175
327
171 156 90
136
24
142 170
80 100
25
65
185
170
420
φ100
P.C.D 76
φ60h7 (+0.030/-0.030)

(3)M6-1, 8DP.
P.C.D 76

INPUT(CLUTCH)

54 80 90
224

Example Model Code
Oscillating Handler
18FN-*****2R-SR3VW 1
Reducer
R80-40 RCB 15 / 1

18FN(b)

695
100 510
175
387
185 110
202 163
25
402
172 170
100 100
30
65
185
170
420
φ125
P.C.D 95
φ70h7 (+0.030/-0.030)

(3)M8-1.25, 12.5DP.
P.C.D 95

INPUT(CLUTCH)

68 100 110
278

Example Model Code
Oscillating Handler
18FN-*****2R-SR3VW 1
Reducer
R100-40 RCB 15 / 1

6 Figure 18FN-5

