

# TANAIR

## ROTARY UNITS ORDERING GUIDE



### ● AVAILABLE STYLE

PTH Male pivot gear (Standard type)  
PTH-D Male pivot gear (Double end rod type)  
RTF Female pivot gear



### ● FEATURES

- Easy operation.
- Anodized aluminum all body.
- Pinion and rack made of carbon steel offer a strong mechanism.

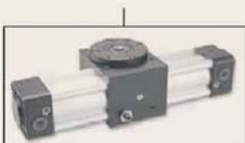
### ● SPECIFICATION

Model	RTH. RTHD RTF		
Bore size	Φ40	Φ63	Φ80
Shaft diameter	φ16	φ24	φ28
Port size	1/4"	3/8"	3/8"
Max. Axial thrust	10kg	12kg	20kg
Rotation angle	90 5, 180 5		
Fluid	Filtered compressed air, not lubricated		
Operation	Double acting		
Operation pressure	1.5~7kg/cm <sup>2</sup>		
Max. Pressure	7kg/cm <sup>2</sup>		
Main body material	Aluminum alloy		
Working temperature	-10℃~60℃		

### ● HOW TO ORDER

RTH	40	B	90	D	SF1
RTH: Male pivot gear (standard) RTF: Female Pivot gear	Bore size 25: Φ25 40: Φ40 63: Φ63 80: Φ80		Rotating angle 90: 90 180: 180	Blank: single rod D: double rod	Blank No sensor SF1: 1Sensor LED in front SF2: 2Sensor LED in front ST1: 1Sensor LED on top ST2: 2Sensor LED on top

RTF: Rotary cylinder  
(Female pivot gear)



PTH: Rotary cylinder  
(Male pivot gear-standard type)



Sensor bracket code	Sensor code
FXX0500321: for40	AL-20R: LED in the front
FXX0500631: for63	AL-21R: LED on the top.
FXX0500801: for80	

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## ROTARY UNITS SPECIFICATIONS



### ● COMPRESSED AIR CONSUMPTION FOR A COMPLETE CYCLE

Unit: l/cycle

Type	Rotation	Operating pressure (MPa)									
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
RTH40 RTF40	90	0.1571	0.2352	0.3133	0.3915	0.4696	0.5477	0.6259	0.7040	0.7832	0.8603
	180	0.3141	0.4704	0.6267	0.7829	0.9392	1.0955	1.2517	1.4080	1.5643	1.7205
RTH63 RTF63	90	0.4383	0.6584	0.8744	1.0925	1.3105	1.5286	1.7466	1.9647	2.1828	2.4088
	180	0.8766	1.3127	1.7488	2.1850	2.6211	3.0572	3.4933	3.9294	4.3655	4.8016
RTH80 RTF80	90	0.8480	1.2698	1.6917	2.1135	2.5354	2.9572	3.3791	3.8009	4.2228	4.6447
	180	1.6959	2.5396	3.3834	4.2271	5.0708	5.9145	6.7582	7.6019	8.4456	9.2893

Type	RTH RTF		
Bore (mm)	40	63	80
Constant K	0.3491	0.3927	0.4712

### ● THE METHOD OF CALCULATION (COMPRESSED AIR CONSUMPTION)

$$Q = 2 \times K \times A \times n \times D_g \times \frac{P + 0.101}{0.101} \times 10^{-6}$$

Q: Compressed air consumption (l/cycle)

A: Plston (mm<sup>2</sup>)

D<sub>g</sub>: Rotation

P: ALR pressure

K: Constant

n: Cycle of operation (cycle/min)

### ● OUTPUT TORQUE TABLE

