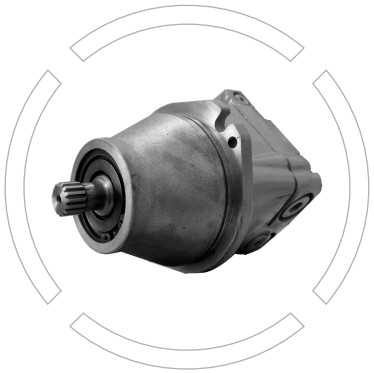
THM HYDRAULICS

TKC Series

Axial Piston Variable Displacement Motor
Apply to open or close circuit

Size:	25	38	45
Nominal pressure (bar):	320	320	300
Max pressure (bar):	415	415	350



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Introduction

- TKC series swash plate axial piston motor adopts disassembling type design, small volume, light weight, Compact installation space, applied to the open or closed hydraulic transmission circuits.

Features

- Swash plate axial piston motor for open or close circuit.
- Cartridge design, compact installation space, convenient and wheel installed applications.
- Integration of two variable motor, servo variable piston, can set the minimum displacement of the motor.
- Motor oil mouth concentrate in a side,easy to install and oil circuit layout.
- High cliometric efficiency

Technical data

SIze		25	38	45
Max displacement (cc/rev)		25	38	45
Min displacement (cc/rev)		Can be adjusted according to the requirements		
Direction of rotation		Clockwise, Counter clockwise		
Rotation speed (at max displacement)	Rated (rpm)	3400	3600	3500
	Max (rpm)	3950	4000	3900
Rotation speed (at min displacement)	Rated (rpm)	4400	4650	4500
	Max (rpm)	5000	5200	5050
Pressure	Rated (bar)	210	210	175
	Max (bar)	415	415	350
Control Pressure	Min (bar)	14		
	Max (bar)	69		
Casting pressure	Rated (bar)	2		
	Max (bar)	6		
Weight (Kg)		15.4		
Oil viscosity (mm^2/s)		7~1600, Best range: 12~80		
Oil Temperature (°C)		-40~100, Best range: 60~85		
Oil Cleanliness		ISO 4406 20/18/15		

Ordering Code

TKC							

Swash plate axial piston motor = TKC

Displacement (cc/rev)
25 = 25
38 = 38
45 = 45

Speed Sensor
Without = N
With 41 pulse/ring = S

The input shaf
13T 16/32 pitch ANSI B92.1-1970 = S1
15T 16/32 pitch ANSI B92.1-1970 = S2

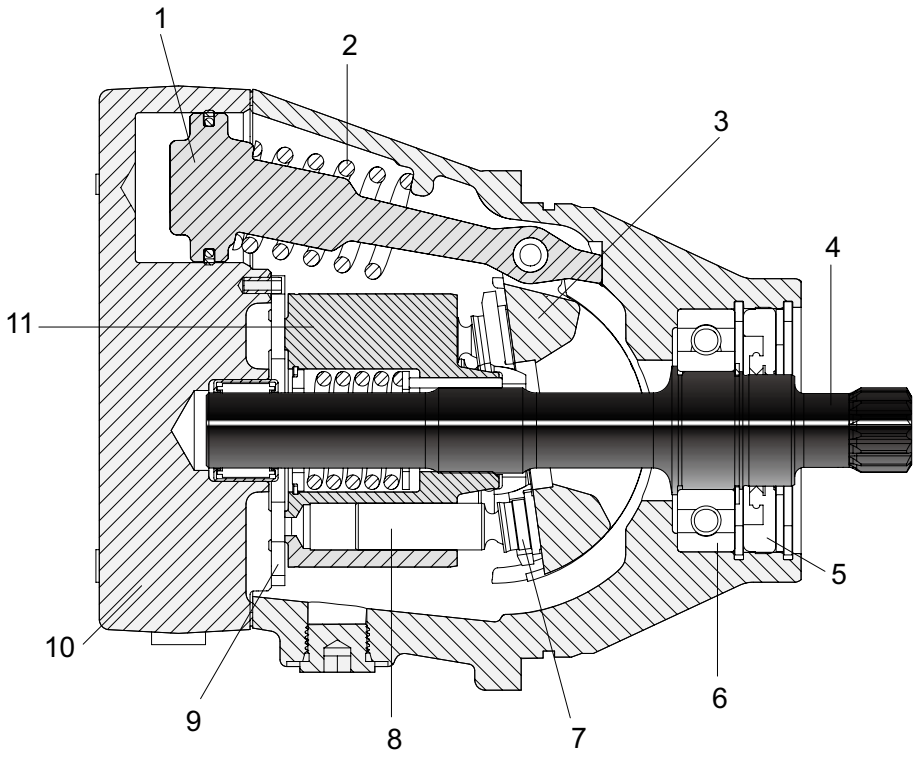
Back cover port type
Lateral port, 1-1/16-12UN-2B = R

Flush valve
None (standard, If you want to flush valve please contact with us) = N
Flow=option 1, open pressure 10.3bar = 1

Adjustable min displacement limiter
None = N

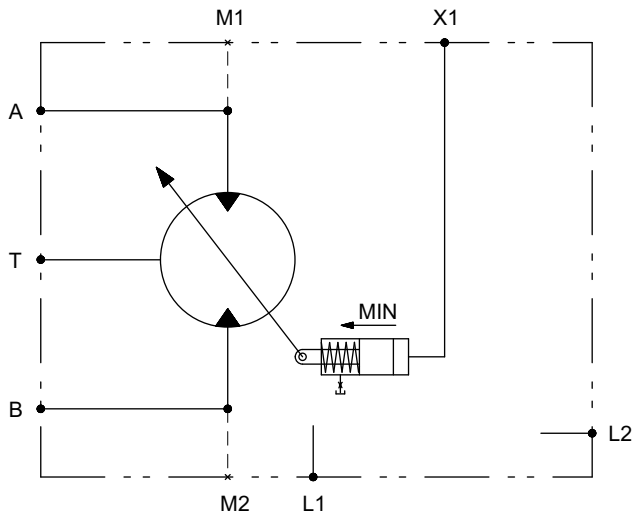
Minimum displacement set
9.5 cc/rev = F0950
14.3 cc/rev = F1430
15.13 cc/rev = F1513

Section View



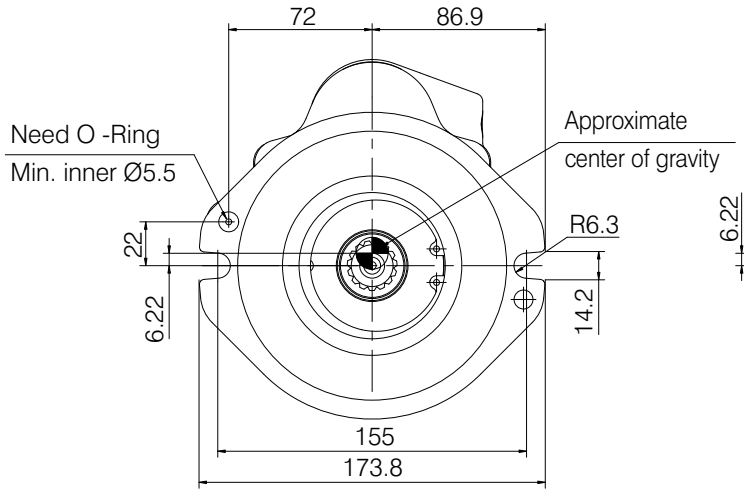
1. Servo piston
2. Bias spring
3. Swash plate
4. Output shaft
5. Shaft seal
6. Bearing
7. Slipper
8. Piston
9. Valve plate
10. End cap
11. Cylinder block

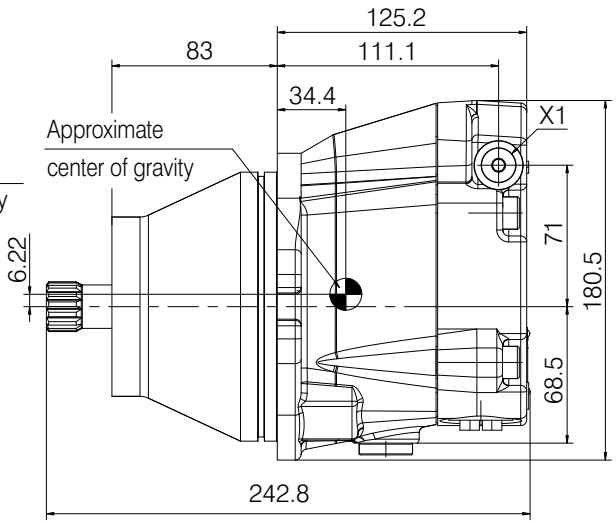
Principle

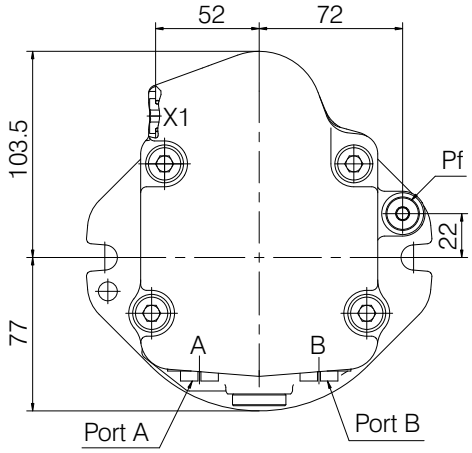


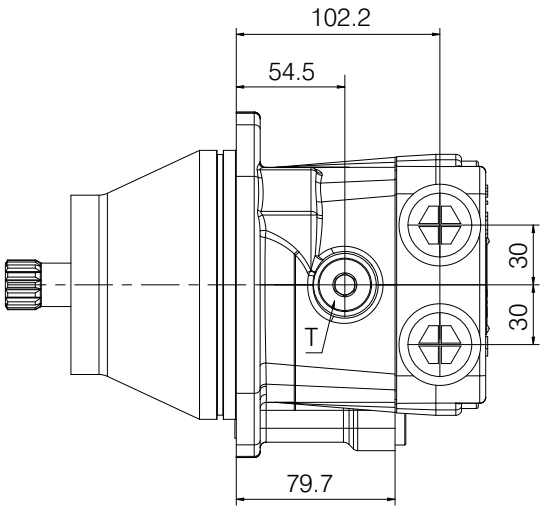
1) Two position variable motor, motor initial work location is maximum displacement location maintained by the bias spring and pressure oil to the motor control can switch the motor to minimum displacement.
2) On the housing there is an oil channel, which is independent with pressure relief oil line of the brake, this kind of design enables external brake control oil line through the oil duct connection to the brake relief port of the gear reducer brake.
3) In open loop, the motor output port maintains a back pressure to ensure lubrication and normal work of the motor internal components. System low side pressure should be 3 bar higher than the housing pressure.

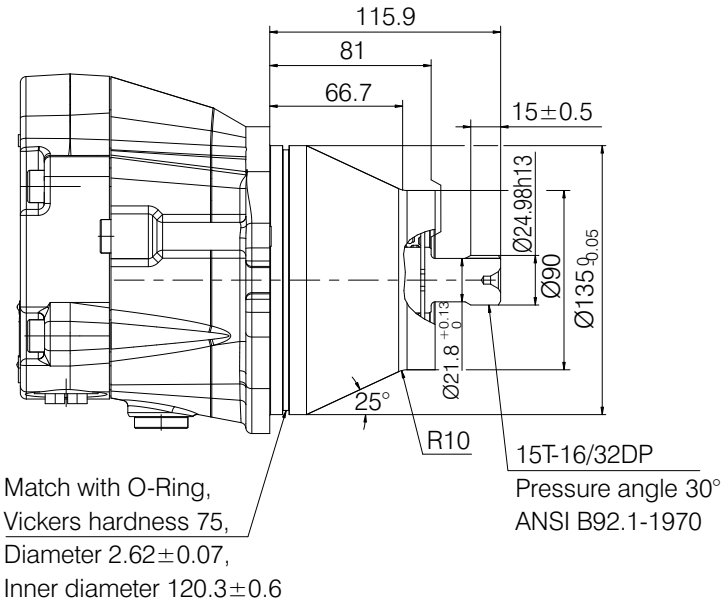
Unit Dimensions (Dimensions in mm)











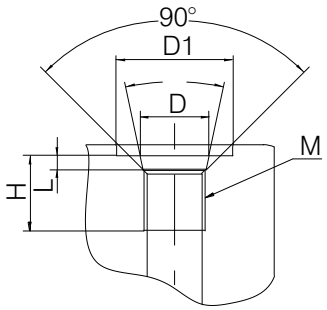
Unit Dimensions (Dimensions in mm)

Direction of rotation and oil flow direction

Installation	Rotation
Flow A → B	Clockwise
Flow B → A	Counter-clockwise

Port Details

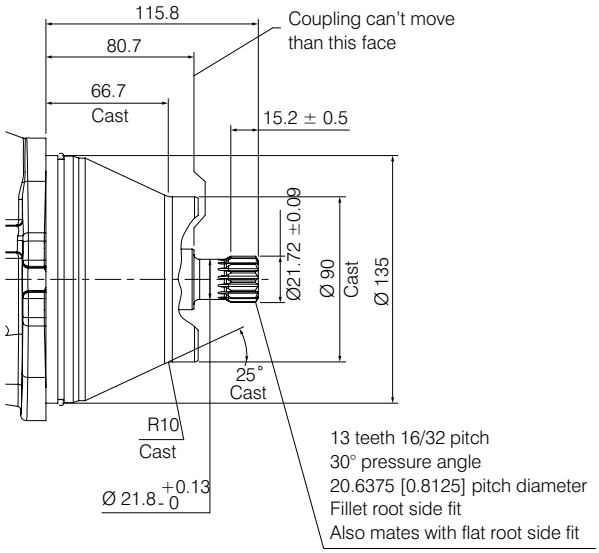
	Port Name	Port Size and Description	Tightening Torque (N-m)
A	Inlet port and Delivery port	1-1/16-12UN-2B (depth 22mm)	147
B		1-1/16-12UN-2B (depth 22mm)	147
X1	Control port	9/16-18UNF-2B (depth 16 mm)	25
T	Case drain port	3/4-16UNF-2B (depth 17 mm)	62
Pf	Brake release port	7/16-20UNF-2B (depth 13.5 mm)	15



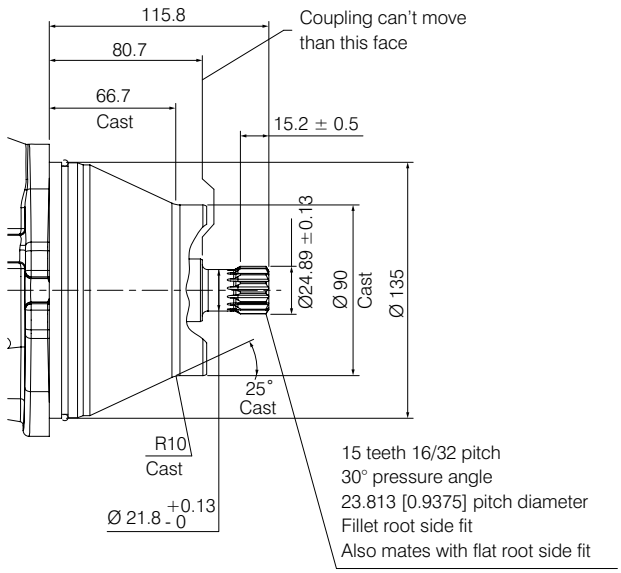
Port	H	L	M	D	D1	Ø
A	22	3.3	1-1/16-12UN-2B	Ø29.2	Ø41	30°
B	22	3.3	1-1/16-12UN-2B	Ø29.2	Ø41	30°
X1	16	2.5	9/16-18UNF-2B	Ø15.7	Ø24.7	24°
T	17	2.5	3/4-16UNF-2B	Ø20.65	—	30°
Pf	13.5	2.4	7/16-20UNF-2B	Ø12.45	Ø21	24°

TKC 38/45 Input Shaft type

"S1"type shaft
13 teeth spline



"S2"type shaft
15 teeth spline



The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.

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