

伺服专用叶片泵 SQPR 系列 Vane pump for DDP system

特点 (Features)

- 长寿命 (Long life)
根据平衡压力来减轻轴承负荷
Pressure balanced construction reduces load on bearings
- 抗污染能力强, 可反转 (Strong ability to resist pollution, can be reversed)
特殊的结构延长了油泵寿命, 及使油泵适应反转
Special structure make it long life and adapt to reverse
- 容易维修 (Easy maintenance)
插装式泵芯结构容易维修
Cartridge kit replacement for easy maintenance

技术参数 (Technical deta)

SQPR3 系列

型号 Model code		SQPR3		
排量代号 Size		17	21	24
几何排量 Displacement	cm ³ /rev	53	65	75
流量 Delivery (at:1800min ⁻¹)	L/min	95	117	135
额定转速 Speed	min ⁻¹	2000 (最高转速 2300)		
反转 Reverse direction	min ⁻¹	1000 (During pressure bleed)		
吸油压力 (gauge) Inlet pressure (gauge,)	kPa	-16.7~35		
额定压力 Continuous pressure	MPa	17.5 (最高压力 21)		
液压油 Fluid	—	矿物油 (Mineral oil)		
液压油温度 Fluid temperature	°C	0~+60		
清洁度 Fluid cleanliness level	—	ISO 4406 19/17/14 or better		
质量 Mass	kg	35		

SQPR4 系列

型号 Model code	SQPR4		
排量代号 Size	25	32	40
几何排量 Displacement	cm ³ /rev	80	100
流量 Delivery (at:1800min ⁻¹)	L/min	144	180
额定转速 Speed	min ⁻¹	2000 (最高转速 2300)	
反转 Reverse direction	min ⁻¹	1000 (During pressure bleed)	
吸油压力 (gauge) Inlet pressure (gauge,)	kPa	-16.7~35	
额定压力 Continuous pressure	MPa	17.5 (最高压力 21)	
液压油 Fluid	—	矿物油 (Mineral oil)	
液压油温度 Fluid temperature	°C	0~+60	
清洁度 Fluid cleanliness level	—	ISO 4406 19/17/14 or better	
质量 Mass	kg	60	

使用时的注意事项
• 安装和找正

找正不准确，是导致轴损坏，轴承发热、磨损、密封处漏油、噪音大、振动等的原因，请特别注意。
电机轴和泵轴的连接最好是使用有弹性的联轴器。找正的推荐值是 TIR (Total Indicator Reading) 0.05mm 以下。（但是根据联轴器的种类以及联接方式的不同而有所不同）

• 吸油配管

SQPR3 系列油泵的吸油配管的推荐长度为 3m 以内，油泵吸油口内径为 50A。

SQPR4 系列油泵的吸油配管的推荐长度为 3m 以内，油泵吸油口内径为 75A。

需要安装在油箱油面以下，油管路的末端距油箱底面为 50mm 以上。

考虑到吸油压力有规定值，所以有必要尽可能使吸油阻力变小，请使用大直径配管，尽可能减少弯曲，不容易产生空气的形状。

• 排气

初次启动（或长期停机后）时，会有吸油困难的现象。

所以，在液压泵和管路排气时，需要对液压泵进行无负载运转。

• 液压油的粘度・预热

液压油的粘度使用范围是 13 ~ 54mm²/s。

启动时，如果液压油粘度高于适合粘度（54 mm²/s），请以最大使用压力 1/2 以下的压力进行预热准备，以便将粘度降低到 54 mm²/s 以下。

• 压力控制时间

连续高压低转速的运转状况下，建议运转时间为 30 秒以内。

参考性能 (Reference performance) :SQPR4-40(125cc)

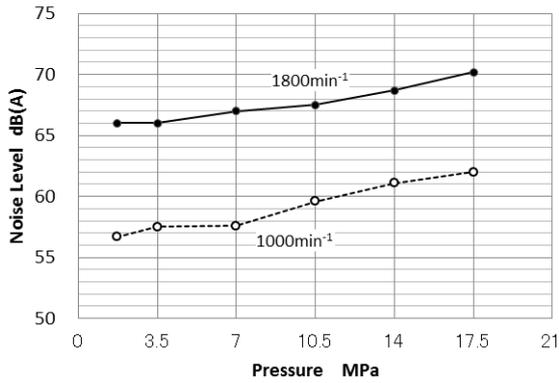


fig1. Noise level

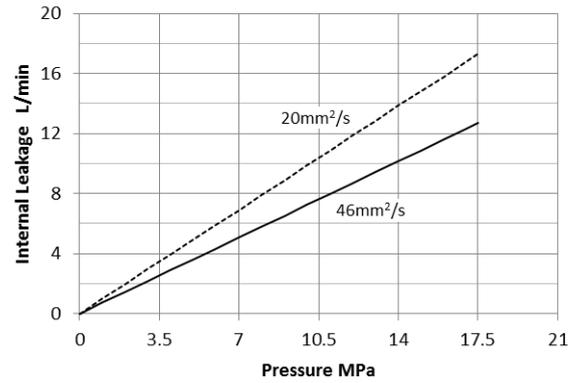


fig2. Internal Leakage

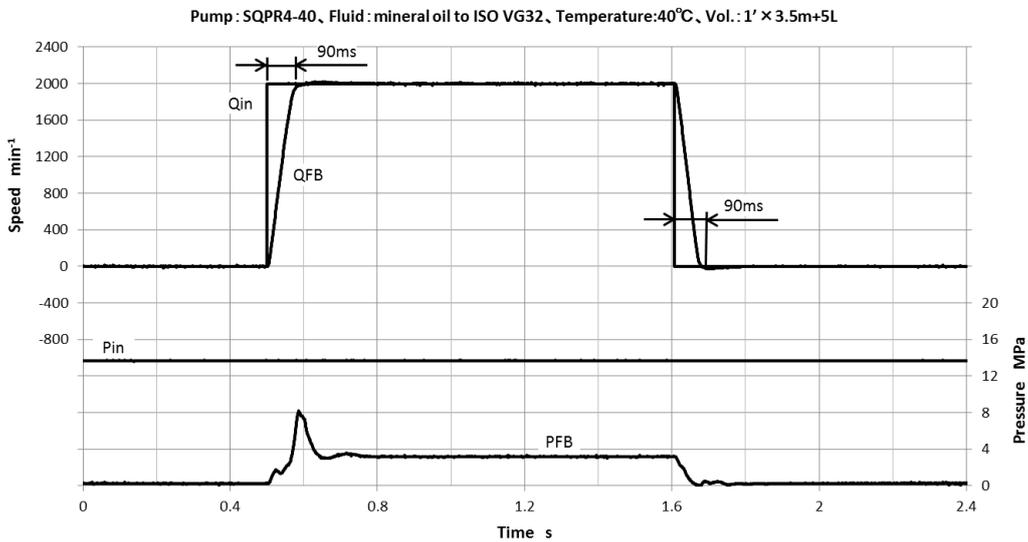


Fig3. Speed(Flow) response

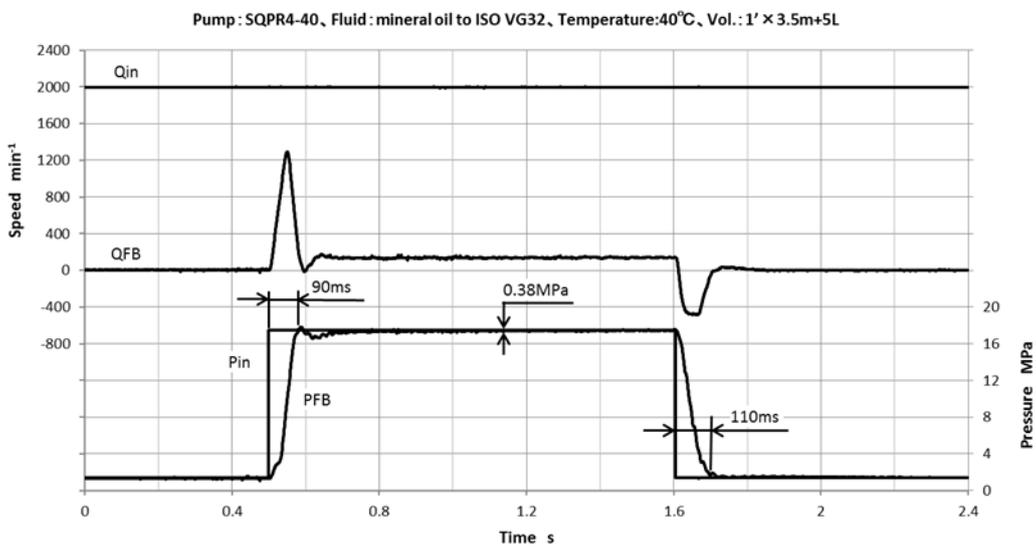


Fig4. Pressure response

SQPR3 SPECIFICATIONS

DESCRIPTION	VANE PUMP FOR DIRECT DRIVE PUMP CONTROL SYSTEM
DISPLACEMENT	53/65/75 cm ³ /rev.
NORMAL DIRECTION	2000r/min
SPEED REVERS DIRECTION	1000r/min (DURING PRESSURE BLEED)
CONTINUOUS PRESSURE	17.5MPa (PEAK PRESSURE: 21MPa)
INLET PRESSURE	+35~-16.7kPa
FILTRATION	25μm ABSOLUTE OR LESS IN PRESSURE OR RETURN LINE AND 100 MESH OR FINER IN INLET ARE RECOMMENDED.
FLUIDS	CLEAN PETROLEUM ANTIWEAR INDUSTRIAL HYDRAULIC OIL - VISCOSITY GRADE ISO VG32~68 - RUNNING VISCOSITY 13~54mm ² /s - OPERATING TEMPERATURE 0~60°C - STARTING VISCOSITY LESS THAN 860mm ² /s *1
FLUID CLEANLINESS LEVEL	ISO 4406 (JIS B 9833) 19/17/14 OR BETTER
DRY WEIGHT	APPROX. 35kg

- * INDICATOR READING FOR PUMP-MOTOR SHAFT ALIGNMENT SHOULD BE LESS THAN 0.05mm.
- * BE SURE TO BLEED AIR FROM PIPING AND PUMP CASE BEFORE STARTUP.
- * AIR BLEED IS MADE EASIER IF YOU INSTALL AN AIR BLEED VALVE.
- * IN CASE OF USING FOR DIRECT DRIVE PUMP CONTROL SYSTEM, USE FRICTION LOCK COUPLING.

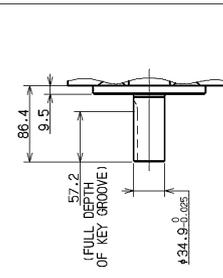
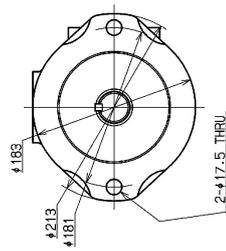
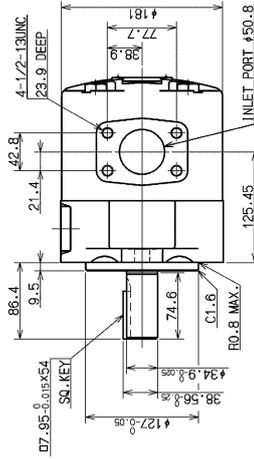
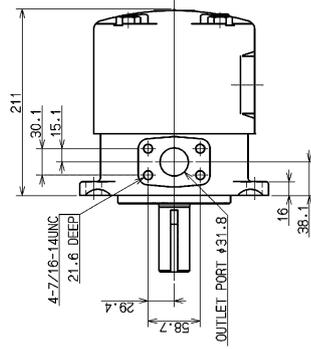
*1 WHEN STARTING UP PUMP WITH OIL VISCOSITY OVER 54mm²/s, WARM UP SYSTEM AT 1/2 MAX. OPERATING PRESSURE OR LESS UNTIL VISCOSITY FALLS BELOW 54mm²/s.

MODEL CODE **SQPR3-24-86(N)D-10(75cc)**

SERIES NO. SQPR SERIES
 DISPLACEMENT 17: 53cm³/rev
 21: 65cm³/rev
 24: 75cm³/rev
 SHAFT 86: PARALLEL SQUARE KEY SHAFT
 86N: PARALLEL SQUARE KEY SHAFT WITHOUT KEY

TABLE 1. OUTLET PORT LOCATION

LOCATION VIEWED FROM COVER END	OUTLET PORT
OPPOSITE SIDE OF INLET PORT	A
90° CW FROM INLET PORT	B
SAME SIDE OF INLET PORT	C
90° CW FROM INLET PORT	D



GRAPHICAL SYMBOL

VANE PUMP FOR DDP SYSTEM
 SQPR3-24-86(N)D-10(75cc)

DATE 2016-04-25
 DRAWING NO. 42982792.00
 SHEET 1/1

KEIKI
 TOKYO KEIKI INC.

DRAWING SHOWS SQPR3-**-86D-10(***cc)

SQPR3-**-86N*-10(***cc)

SQPR4 SPECIFICATIONS

DESCRIPTION	VANE PUMP FOR DIRECT DRIVE PUMP CONTROL SYSTEM
DISPLACEMENT	80/100/125 cm ³ /rev.
NORMAL DIRECTION	2000r/min
SPEED REVERS DIRECTION	1000r/min (DURING PRESSURE BLEED)
CONTINUOUS PRESSURE	17.5MPa (PEAK PRESSURE: 21MPa)
INLET PRESSURE	+35~-16.7kPa
FILTRATION	25μm ABSOLUTE OR LESS IN PRESSURE OR RETURN LINE AND 50μm MESH OR FINER IN INLET ARE RECOMMENDED.
FLUIDS	CLEAN PETROLEUM ANTWEAR INDUSTRIAL HYDRAULIC OIL -VISCOSITY GRADE ISO VG32~68 -RUNNING VISCOSITY 13~54mm ² /s -OPERATING TEMPERATURE 0~60°C -STARTING VISCOSITY LESS THAN 860mm ² /s *1
FLUID CLEANLINESS LEVEL	ISO 4406 (JIS B 9933) 19/17/14 OR BETTER
DRY WEIGHT	APPROX. 60kg

- * INDICATOR READING FOR PUMP-MOTOR SHAFT ALIGNMENT SHOULD BE LESS THAN 0.05mm.
- * BE SURE TO BLEED AIR FROM PIPING AND PUMP CASE BEFORE STARTUP. (AIR BLEED IS MADE EASIER IF YOU INSTALL AN AIR BLEED VALVE.)
- * IN CASE OF USING FOR DIRECT DRIVE PUMP CONTROL SYSTEM, USE FRICTION LOCK COUPLING.

*1 WHEN STARTING UP PUMP WITH OIL VISCOSITY OVER 54mm²/s, WARM UP SYSTEM AT 1/2 MAX. OPERATING PRESSURE OR LESS UNTIL VISCOSITY FALLS BELOW 54mm²/s.

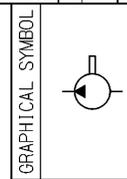
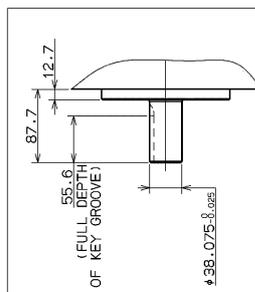
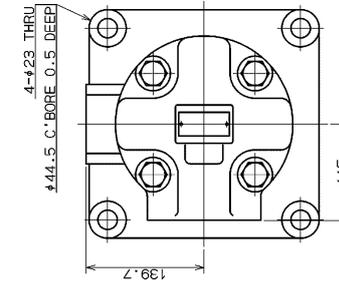
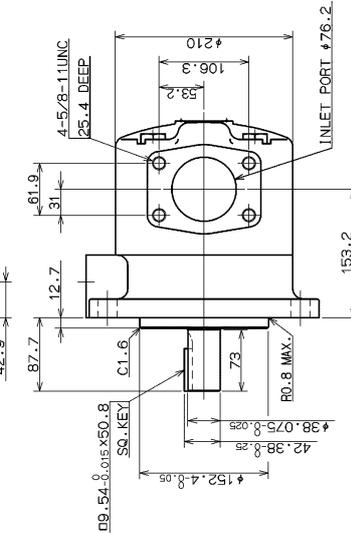
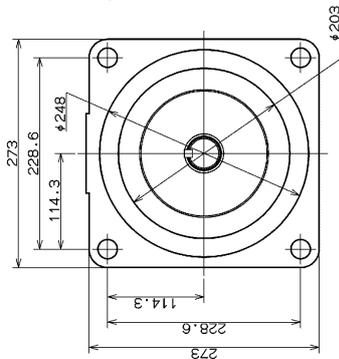
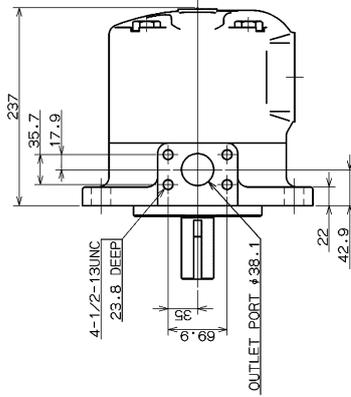
MODEL CODE SQPR4-40-86(N)D-10(125cc)

SERIES NO. SQPR SERIES
 DISPLACEMENT 25: 80cm³/rev
 32: 100cm³/rev
 40: 125cm³/rev

SHAFT
 86: PARALLEL SQUARE KEY SHAFT
 88N: PARALLEL SQUARE KEY SHAFT WITHOUT KEY

TABLE 1. OUTLET PORT LOCATION

LOCATION VIEWED FROM COVER END	OUTLET PORT
OPPOSITE SIDE OF INLET PORT	A
90° CCW FROM INLET PORT	B
SAME SIDE OF INLET PORT	C
90° CW FROM INLET PORT	D



VANE PUMP FOR DDP SYSTEM
 SQPR4-40-86(N)D-10(125cc)

DATE	2016-04-25	SIZE	C
DRAWING NO.	4298279100	REV.	1

KEIKI TOKYO KEIKI INC.

DRAWING SHOWS SQPR4-**-86D-10(***cc)

SQPR4-**-86NK-10(***cc)