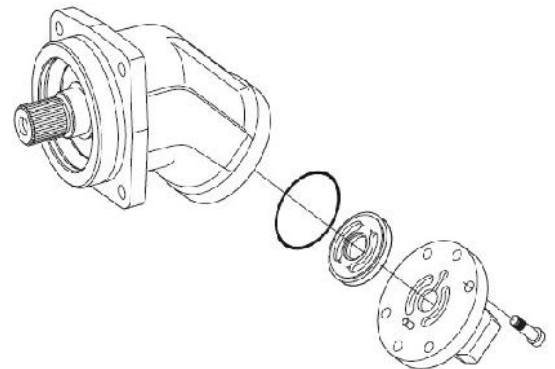
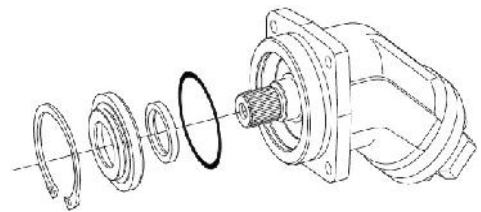
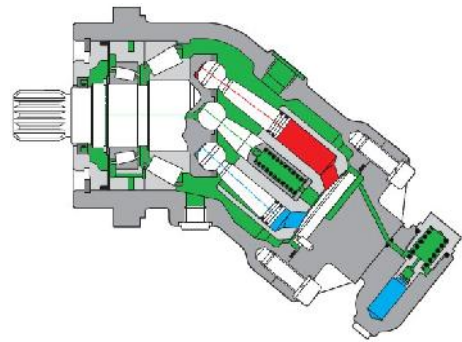


## Axial Piston A2FO Hydraulic Pump & A2FM Motor



Open and closed circuits

Sizes 10...180

Series 6

Nom. Pressure up to 400 bar

Peak Pressure up to 450 bar

### Features

- Fixed displacement hydraulic motor A2FM of axial piston and A2FO pump, bent axis design, suitable for hydrostatic drives in open and closed circuits.
- Use in mobile and industrial applications.
- The output speed is dependent on the flow of the pump and the displacement of the motor.
- The output torque increases with the pressure differential between the high and low pressure sides and with increasing displacement.
- Drive torque increases with the pressure drop across the unit.
- Careful selection of the displacements offered, permit sizes to be matched to practically every application
- Favorable power / weight ratio.
- Compact design.
- Optimum efficiency.
- Economical conception.
- One piece pistons with piston rings.



## Ordering Code / Standard Program

	<b>A2F</b>		<b>M</b>		<b>/</b>	<b>6</b>		<b>W</b>	<b>-</b>	<b>V</b>					
01	02	03	04	05		06	07	08		09	10	11	12	13	14

		<b>Service line ports <sup>1)</sup></b>																								
			<b>10</b>	<b>12</b>	<b>16</b>	<b>23</b>	<b>28</b>	<b>32</b>	<b>45</b>	<b>56</b>	<b>63</b>	<b>80</b>	<b>90</b>	<b>107</b>	<b>125</b>	<b>160</b>	<b>180</b>	<b>200</b>	<b>250</b>	<b>355</b>	<b>500</b>	<b>710</b>	<b>1000</b>			
12	SAE flange ports A and B, rear	<b>01</b>	0	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	<b>010</b>	
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	m	m	<b>017</b>
	SAE flange ports A and B, at side, opposite	<b>02</b>	0	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●	-	-	-	-	-	-	<b>020</b>
		7	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●	●	●	-	●	-	-	-	-	<b>027</b>
	Threaded ports A and B, at side, opposite	<b>03</b>	0	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>030</b>
		<b>04</b>	0	●	●	●	●	●	●	●	●	-	-	-	-	-	-	-	-	-	●	-	-	-	-	<b>040</b>
	SAE flange ports A and B, bottom (same side)	<b>10</b>	0	-	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●	-	-	●	-	-	-	<b>100</b>
		<b>18</b>	1	-	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●	-	-	-	-	-	-	<b>181</b>
Port plate with pressure relief valves	<b>19</b>	1	-	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●	-	-	-	-	-	-	<b>191</b>	
	2	-	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●	-	-	-	-	-	-	<b>192</b>	

### Valves

Without valve	<b>0</b>
With pressure relief valves (without pressure sequence range)	<b>1</b>
With pressure relief valves (with pressure sequence range)	<b>2</b>
With flush and boost pressure valve	<b>7</b>

		<b>Speed measurement</b>						
			<b>10 to 16</b>	<b>23 to 180</b>	<b>200</b>	<b>250</b>	<b>355 to 1000</b>	
13	Without speed measurement (no code)		●	●	●	●	●	
	Prepared for speed measurement (ID) <sup>3)</sup>		-	●	-	-	-	<b>D</b>
	Prepared for speed measurement (HDD) <sup>3)</sup>		-	●	●	●	m	<b>F</b>

		<b>Special design</b>		
14	Standard version (no code)			
	Specific version for slew drive applications (standard for port plate 19)			<b>J</b>

<sup>1)</sup> Fastening threads resp. threaded ports are metric

<sup>2)</sup> At side (sizes 10 to 63) or rear (size 250) threaded ports plugged with locking screw

<sup>3)</sup> Complete order recommended

## Technical Data

### Hydraulic fluid

Before starting project planning, please refer to our data sheets RE 90220 (mineral oil), RE 90221 (environmentally acceptable hydraulic fluids) and RE 90223 (HF hydraulic fluids) for detailed information regarding the choice of hydraulic fluid and Application conditions.

The fixed motor A2FM is unsuitable for operation with HFA. If HFB, HFC and HFD or environmentally acceptable hydraulic fluids are being used, the limitations regarding technical data and seals mentioned in RE 90221 and RE 90223 must be observed.

When ordering, please indicate the used hydraulic fluid.

### Operating viscosity range

For optimum efficiency and service life, select viscosity (at operating temperature) within the optimum range of

$$v_{opt} = \text{optimum operating viscosity } 16 \text{ to } 36 \text{ mm}^2/\text{s}$$

Depending on the circuit temperature (closed circuit) and tank Temperature (open circuit).

### Limits of viscosity range

The limiting values for viscosity are as follows:

Sizes 5 to 200:

$v_{min} = 5 \text{ mm}^2/\text{s}$ ,  
short-term ( $t < 3 \text{ min}$ )  
at max. Perm. Temperature of  $t_{max} = +115^\circ\text{C}$ .

$v_{max} = 1600 \text{ mm}^2/\text{s}$ ,  
Short-term ( $t < 3 \text{ min}$ )  
at cold start ( $p \leq 30 \text{ bar}$ ,  $n \leq 1000 \text{ rpm}$ ,  $t_{min} = -40^\circ\text{C}$ )  
Only for starting up without load. Optimum operating viscosity must be reached within approx. 15 minutes.

Sizes 250 to 1000:

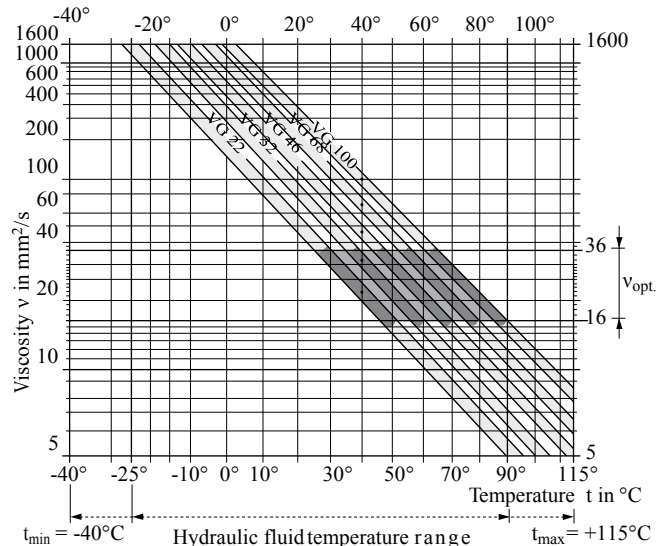
$v_{min} = 10 \text{ mm}^2/\text{s}$ ,  
Short-term ( $t < 3 \text{ min}$ )  
At max. Perm. Temperature of  $t_{max} = +90^\circ\text{C}$ .

$v_{max} = 1000 \text{ mm}^2/\text{s}$ ,  
Short-term ( $t < 3 \text{ min}$ )  
at cold start ( $p \leq 30 \text{ bar}$ ,  $n \leq 1000 \text{ rpm}$ ,  $t_{min} = -25^\circ\text{C}$ )  
Only for starting up without load. Optimum operating viscosity must be reached within approx. 15 minutes.

Note that the maximum hydraulic fluid temperature of  $115^\circ\text{C}$  ( $90^\circ\text{C}$  at size 250 to 1000) must not be exceeded locally either (e.g. in the bearing area). The temperature in the bearing area is - depending on pressure and speed - up to 12 K higher than the average case drain temperature.

Special measures are necessary in the temperature range from  $-40^\circ\text{C}$  and  $-25^\circ\text{C}$  (cold start phase).  
For detailed information about use at low temperatures, see RE90300-03-B.

### Selection diagram



### Details regarding the choice of hydraulic fluid

The correct choice of hydraulic fluid requires knowledge of the operating temperature in relation to the ambient temperature: in a closed circuit the circuit temperature, in an open circuit the tank temperature.

The hydraulic fluid should be chosen so that the operating Viscosity in the operating temperature range is within the optimum range ( $v_{opt}$ ) - The shaded area of the selection diagram. We recommended that the higher viscosity class be selected in each case.

Example: At an ambient temperature of  $X^\circ\text{C}$  an operating temperature of  $60^\circ\text{C}$  is set. In the optimum operating viscosity range ( $v_{opt}$ ; shaded area) this corresponds to the viscosity classes VG 46 or VG 68; to be selected: VG 68.

### Please note:

The case drain temperature, which is affected by pressure and speed, is always higher than the control temperature or tank temperature. At no point in the system may the temperature be higher than  $115^\circ\text{C}$  for sizes 5 to 200 or  $90^\circ\text{C}$  for sizes 250 to 1000.

If the above conditions cannot be maintained due to extreme operating parameters, we recommend flushing the case at port U (size 250 to 1000) or using a flush and boost pressure valve.

### Filtration

The finer the filtration, the higher the cleanliness level of the hydraulic fluid and the longer the service life of the axial piston unit.

To ensure functional reliability of the axial piston unit, the Hydraulic fluid must have a cleanliness level of at least

20/18/15 according to ISO4406.

At very high hydraulic fluid temperatures ( $90^\circ\text{C}$  to max.  $115^\circ\text{C}$ , not permitted for sizes 250 to 1000) at least cleanliness level

19/17/14 according to ISO4406 is required.

If the above classes cannot be observed, please contact us.

## Technical Data

### Operational pressure range

Maximum pressure on port A or B  
(pressure data in accordance with DIN 24312)

Size 5	Shaft end B	Shaft end C
Nominal pressure $p_N$	210 bar	315 bar
Peak pressure $p_{max}$	250 bar	350 bar
Total pressure (A + B)	630 bar	630 bar

Sizes 10 to 00	Shaft end A, Z	Shaft end B, P
Nominal pressure $p_N$	400 bar	350 bar
Peak pressure $p_{max}$	450 bar	400 bar
specified (A + B)	700 bar	700 bar

### Sizes 50 to 1000

Nominal pressure $p_N$	350 bar
Peak pressure $p_{max}$	400 bar
Total pressure (A + B)	700 bar

#### Please note:

Sizes 10 to 200: With shaft end Z and P, a nominal pressure of  $p_N = 315$  bar ( $p_{max} = 350$  bar) is permissible for drives with radial loading of the drive shaft (pinions, V-belts)!

Sizes 250 to 1000: Please contact us.

Size 56 with shaft end Z:  $p_N = 350$  bar,  $p_{max} = 400$  bar

In cases of pulsating loading above 315 bars, we recommend The version with splined shaft A (sizes 10 to 200) or with splined shaft Z (sizes 45, 250 to 1000).

Minimum inlet pressure.

### Direction of flow

Direction of rotation, viewed on shaft end	
clockwise	counter-clockwise
<b>A to B</b>	<b>B to A</b>

### Speed range

No limit to minimum speed  $n_{min}$ . If uniformity of motion is Required, speed  $n_{min}$  must not be less than 50 rpm. See table of values on for maximum speed.

### Long-life bearing (sizes 50 to 1000)

For long service life and use with HF hydraulic fluids. Same external dimensions as motor with standard bearing. A long-life bearing can be specified. Flushing of bearing and case via port U recommended.

### Flushing volumes (recommended)

Size	50	355	500	710	1000
$q_v$ flush (L/min)	10	16	16	16	16

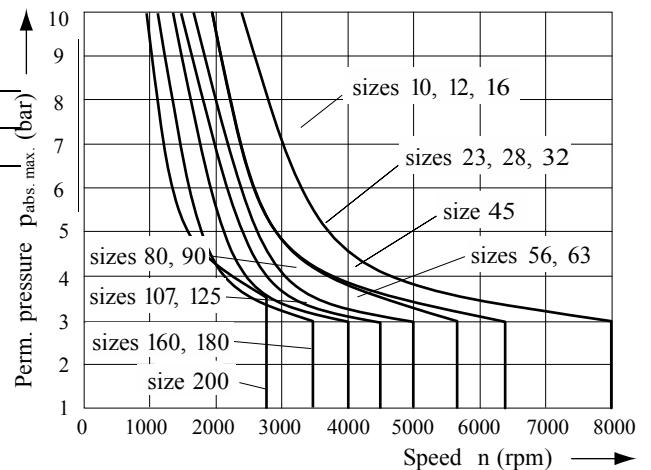
### Shaft seal ring

#### Permissible pressure loading

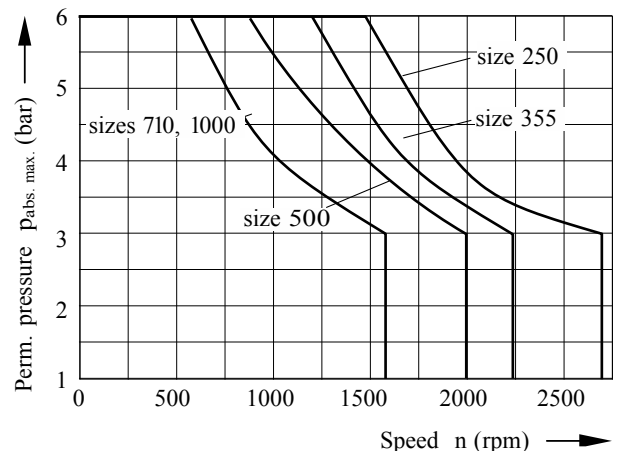
The service life of the shaft seal ring is affected by the speed of the motor and the case drain pressure. It is recommended that the average, continuous case drain pressure at operating temperature 3 bar absolute not be exceeded (max. permissible case drain pressure 6 bar absolute at reduced speed, see diagram). Short term ( $t < 0.1$  s) pressure spikes of up to 10 bar absolute are permitted. The service life of the shaft seal ring decreases with an increase in the frequency of pressure spikes.

The case pressure must be equal to or greater than the external pressure on the shaft seal ring.

#### Sizes 10 to 200



#### Sizes 250 to 1000



### Temperature range

The FKM shaft seal ring is permissible for case temperatures of -25°C to +115°C at sizes 5 to 200 and -25°C to +90°C at sizes 250 to 1000

#### Note:

For application cases below -25°C, an NBR shaft seal ring is necessary (permissible temperature range: -40°C to +90°C.) Please contact us.

## Technical Data

**Table of values** (theoretical values, without efficiency and tolerances; values rounded)

Size		5	10	12	16	23	28	32	45	56	63	80
Displacement	$V_g$ cm <sup>3</sup>	4,93	10,3	12	16	22,9	28,1	32	45,6	56,1	63	80,4
Max. speed	$n_{max}$ rpm	10000	8000	8000	8000	6300	6300	6300	5600	5000	5000	4500
	$n_{max\ limit^1)}$ rpm	11000	8800	8800	8800	6900	6900	6900	6200	5500	5500	5000
Max. flow	$q_{V\ max}$ L/min	49	82	96	128	144	176	201	255	280	315	360
Torque at	$\Delta p = 350\ bar\ T$ Nm	24,7 <sup>2)</sup>	57	67	88	126	156	178	254	312	350	445
	$\Delta p = 400\ bar\ T$ Nm	–	65	76	100	144	178	204	290	356	400	508
Rotary stiffness	$c$ Nm/rad	625	922	1250	1590	2560	2930	3120	4180	5940	6250	8730
Moment of inertia for rotary group	$J_{TW}$ kgm <sup>2</sup>	0,00006	0,0004	0,0004	0,0004	0,0012	0,0012	0,0012	0,0024	0,0042	0,0042	0,0072
Angular acceleration maximum	$a$ rad/s <sup>2</sup>	5000	5000	5000	5000	6500	6500	6500	14600	7500	7500	6000
Fillingcapacity	$V$ L		0,17	0,17	0,17	0,20	0,20	0,20	0,33	0,45	0,45	0,55
Mass (approx.)	$m$ kg	2,5	5,4	5,4	5,4	9,5	9,5	9,5	13,5	18	18	23

Size		90	107	125	160	180	200	250	355	500	710	1000
Displacement	$V_g$ cm <sup>3</sup>	90	106,7	125	160,4	180	200	250	355	500	710	1000
Max. speed	$n_{max}$ rpm	4500	4000	4000	3600	3600	2750	2700	2240	2000	1600	1600
	$n_{max\ limit^1)}$ rpm	5000	4400	4400	4000	4000	3000	–	–	–	–	–
Max. flow	$q_{V\ max}$ L/min	405	427	500	577	648	550	675	795	1000	1136	1600
Torque at	$\Delta p = 350\ bar\ T$ Nm	501	595	697	889	1001	1114	1393	1978	2785	3955	5570
	$\Delta p = 400\ bar\ T$ Nm	572	680	796	1016	1144	1272	–	–	–	–	–
Rotary stiffness	$c$ Nm/rad	9140	11200	11900	17400	18200	57300	73100	96100	144000	270000	324000
Moment of inertia for rotary group	$J_{TW}$ kgm <sup>2</sup>	0,0072	0,0116	0,0116	0,0220	0,0220	0,0353	0,061	0,102	0,178	0,55	0,55
Angular acceleration maximum	$a$ rad/s <sup>2</sup>	6000	4500	4500	3500	3500	11000	10000	8300	5500	4300	4000
Fillingcapacity	$V$ L	0,55	0,8	0,8	1,1	1,1	2,7	2,5	3,5	4,2	8	8
Mass (approx.)	$m$ kg	23	32	32	45	45	66	73	110	155	325	336

1) Intermittent maximum speed: over speed at discharge and over-running travel operations,  $t < 5\ s$  and  $\Delta p < 150\ bar$

2) Torque at  $\Delta p = 315\ bar$

**Caution:** Exceeding the permissible limitvalues may result in a loss of function, a reduction in service life or in the destruction of the axial piston unit.

Other permissible limitvalues with respect to speed variation, reduced angular acceleration as a function of the frequency and the permissible startup angular acceleration (lower than the maximum angular acceleration) can be found in data sheet RE 90261.

### Determining the size

Flow	$q_v = \frac{V_g \cdot n}{1000 \cdot \eta_v}$	L/min	$V_g =$ Displacement per revolution in cm <sup>3</sup>
			$\Delta p =$ Differential pressure in bar
			$n =$ Speed in rpm
Speed	$n = \frac{q_v \cdot 1000 \cdot \eta_v}{V_g}$	rpm	$\eta_v =$ Volumetric efficiency
			$\eta_{mh} =$ Mechanical-hydraulic efficiency
Torque	$T = \frac{V_g \cdot \Delta p \cdot \eta_{mh}}{20 \cdot \pi}$	Nm	$\eta_t =$ Overall efficiency
Power	$P = \frac{2 \pi \cdot T \cdot n}{60000} = \frac{q_v \cdot \Delta p \cdot \eta_t}{600}$	kW	



## Installation Notes

### General

The motor case must be completely filled up with hydraulic fluid during startup and during operation (filling the case chamber). The motor must be started up at low speed and no load until the system has been bled completely.

If stopped for an extended period, fluid may drain out of the case through the service lines. When restarting, make sure that the case contains sufficient fluid.

The leakage fluid inside the case chamber must be drained off to the tank through the highest case drain port.

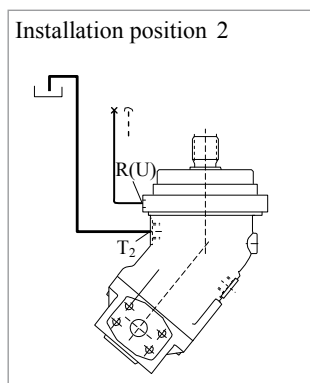
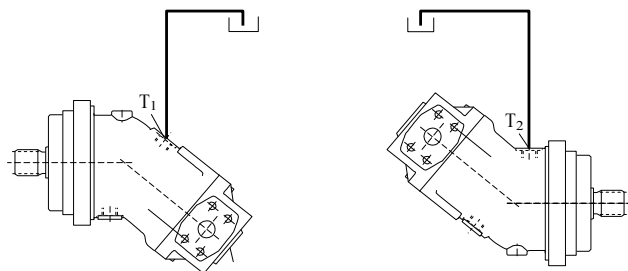
### Installation position

Optional. At size 10 to 200 with installation position "shaft to the top" use motor with bleeding port R (indicate in clear when Ordering; the port U in the bearing section for bleeding is included in production with sizes 250 to 1000).

#### Installation below the tank

Motor below min. fluid level in the tank (standard)

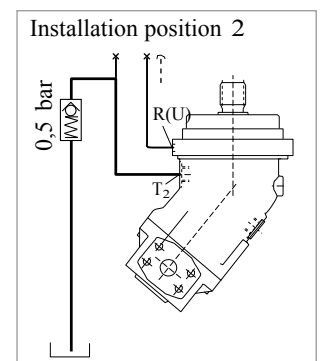
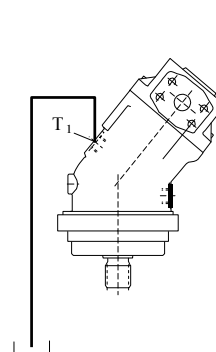
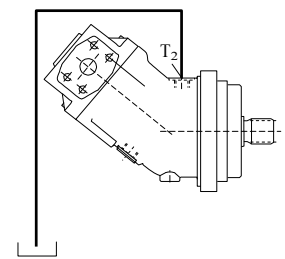
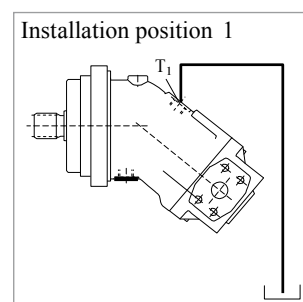
- Fill axial piston motor before startup via the highest case drain port
- Run the motor at low speed until the system is bled completely (bleed through service line port A, B if tubing is long)
- Minimum immersion depth of leakage line in tank: 200 mm (Relative to the min. fluid level in the tank).
- Additional measures required for installation position 2 (shaft facing up): with installation position 2, make sure that the motor case is completely full before starting up. Bleed at port R (sizes 10 to 200) resp. U (sizes 250 to 1000). Order port R in clear text. An air pocket in the bearing area is leading to damage of the axial piston motor.



#### Installation above the tank

Motor above min. fluid level in tank

- Proceed in same way as below the tank installation
- Additional measures for installation positions 1 and 2:  
If stopped for an extended period, fluid may drain out of the case chamber through the service lines (air enters through the shaft seal). The bearings will therefore not be properly lubricated when the motor is started up again. Fill the axial piston motor before restarting via the highest case drain port. Installation position 2: bleed at port R (sizes 10 to 200) resp. U (sizes 250 to 1000). Order port R in clear text.
- Additional measures required for installation position 2 (shaft facing up):  
In this installation position the bearings will not be properly lubricated, even if there is still some fluid in the case chamber. Putting a non-return valve (opening pressure 0,5 bar) in the leakage line can prevent the system emptying through the line.



**Brueninghaus Hydromatik Rexroth A2FO pump**

R902137509 A2FO80/61R-VBB05 S	R902138075 A2FO80/61R-PBB05	R902137699 A2FO125/61R-PBB05
R902137515 A2FO107/61R-PBB05	R902138139 AA2FO80/61R-VQDN55	R902137712 A2FO90/61L-PBB05
R902137516 A2FO80/61L-PBB05	R902138142 A2FO125/61R-PPB05	R902137715 A2FO125/61R-PAB05
R902137518 A2FO107/61R-VBB05 S	R902138165 A2FO90/61R-VBB05 S	R902137723 A2FO125/61R-PBB05
R902137522 A2FO80/61L-PPB05	R902138189 A2FO80/61R-VPB05	R902137761 A2FO107/61R-PZB05
9404452 A2F5/60R-B7	A2F5/60R-C7 A2F5/60R-B7	A2F5/60L-C7 A2F5/60L-B7
R902137524 A2FO80/61L-VPB05	R902138453 A2FO107/61R-VBB05	R902137769 A2FO107/61R-PPB05
R902137525 A2FO80/61L-PPB05	R902138461 A2FO80/61R-VPB05	R902137802 A2FO125/61R-PBB05
R902137526 A2FO80/61L-VAB05	R902138463 A2FO90/61R-VBB05	R902137814 A2FO80/61R-PPB05
R902137527 A2FO90/61L-PBB05	R902138472 A2FO125/61R-PPB05	R902137815 A2FO80/61R-PPB05
R902137528 A2FO80/61L-PZB05	R902138474 A2FO80/61R-VPB05 S	R902137821 A2FO80/61R-PPB05
R902137529 A2FO107/61L-VPB05	R902138476 A2FO107/61R-VPB05 S	R902137822 A2FO80/61R-PPB05
R902137530 A2FO125/61L-PBB05	R902153694 AA2FO32/61R-VSD55	R902137849 A2FO90/61R-VBB05 S
R902137531 A2FO125/61L-PBB05	R902153825 AA2FO32/61R-VBD55	R902137910 A2FO125/61L-VBB05
R902137532 A2FO125/61L-PAB05	R902155691 A2FO32/61L-VAB05	R902137935 A2FO107/61R-PAB05
R902137537 A2FO107/61L-PPB05	R902155713 A2FO23/61L-PAB05	R902137957 A2FO80/61R-PAB05
R902137538 A2FO107/61L-PPB05	R902155804 A2FO16/61L-PAB06	R902137978 A2FO107/61R-VPB05
R902137553 A2FO107/61L-VBB05 S	R902155847 A2FO200/63R-VAB05	R902137979 A2FO107/61R-VPB05
R902137554 A2FO107/61L-VAB05	R902155899 A2FO56/61R-PBB05	R902137986 A2FO125/61R-VBB05
R902137555 A2FO80/61L-PAB05	R902155917 A2FO200/63R-VBB05	R902138022 A2FO80/61R-PBB05
R902137556 A2FO80/61L-PAB05	R902155937 A2FO200/63L-PBB05	R902011993 A2FO200/63R-NAB05
R902137557 AA2FO107/61L-VBD55	R902155958 A2FO23/61R-PPB05	R902160064 A2FO56/61L-PPB05
R902137558 A2FO80/61R-VBB05 S	R902155962 A2FO10/61R-VBB06	R902160066 AA2FO16/61R-VSC06 S
R902137563 AA2FO107/61L-VSD55	R902155965 A2FO160/61L-VAB05	R902160508 A2FO23/61L-PSB05 S
R902137564 A2FO125/61R-VBB05 S	R902156034 A2FO45/61L-VPB05	R902160521 A2FO56/61R-VPB05 S
R902137565 A2FO125/61R-VBB05 S	R902156091 AA2FO23/61R-VBD55	R902160529 A2FO56/61L-PBB05
R902137635 A2FO90/61R-PAB05	R902158777 AA2FO16/61L-VSC56	R902160534 A2FO63/61R-VBB05 S
R902137646 A2FO80/61R-VPB05	R902158785 AA2FO45/61R-VSD55	R902160535 A2FO56/61R-VBB05 S
R902137647 A2FO90/61R-PBB05	R902160010 A2FO10/61R-PPB06	R902160557 A2FO56/61R-VBB05
R902137648 A2FO80/61L-PZB05	R902160014 AA2FO56/61L-VSD55	R902160581 A2FO56/61L-VBB05 S
R902137651 A2FO90/61R-PBB05	R902160042 A2FO56/61L-PZB05	R902160652 A2FO63/61R-PBB05
R902137654 A2FO90/61R-PBB05	R902160050 A2FO63/61L-PAB05	R902160691 A2FO56/61R-PPB05
R902137659 A2FO90/61L-PAB05	R902160054 A2FO63/61R-PAB05	R902160692 A2FO56/61R-PPB05
R902137698 A2FO80/61R-PZB05	R902160062 A2FO63/61L-VBB05	R902160752 A2FO63/61R-VBB05
R902160957 A2FO125/61R-PPB05	R902160902 A2FO56/61L-PBB05	R902160801 A2FO56/61R-PBB05
R902160958 A2FO80/61R-PBB05	R902160947 A2FO125/61R-VBB05 S	R902160881 A2FO107/61R-PPB105
R902160981 A2FO80/61R-VBB05 S	R909408552 A2FO63/61R-PBB05	R909438282 A2FO107/61R-PBB05
R909610685 A2FO28/61R-PBB05	R909409358 A2FO180/61R-PBB05	R909424894 A2FO10/61R-PAB06
R909610686 A2FO56/61R-PBB05	R909409371 A2FO180/61R-PAB05	R909425164 A2FO28/61R-PAB05
R909610687 A2FO80/61R-PBB05	R909409641 A2FO125/61R-PAB05	R909425190 A2FO56/61R-PAB05
R909610688 A2FO160/61R-PBB05	R909409642 A2FO125/61R-PBB05	R909427223 A2FO23/61R-PAB05
R909424687 A2FO80/61R-PAB05	R909410193 A2FO32/61R-PAB05	R909610682 A2FO10/61R-PBB06
R909408467 A2FO90/61R-PAB05	R909410198 A2FO32/61R-PBB05	R909610683 A2FO12/61R-PBB06
R909408472 A2FO90/61R-PBB05	R909411113 A2FO16/61R-PAB06	R909610684 A2FO23/61R-PBB05
R909408527 A2FO63/61R-PAB05	R909411121 A2FO16/61R-PBB06	R909420472 A2FO12/61R-PAB06
R909423259 A2FO107/61R-PAB05	R909411585 A2FO45/61R-PZB05	R909422192 A2FO160/61R-PAB05

**Details model of Rexroth A2FM motor**

R902092919 AA2FM160/61W-VSD527	R902160617 A2FM63/61W-VAB020	R902138019 A2FM125/61W-VBB027
R902137502 A2FM90/61W-VAB100	R902160619 A2FM63/61W-VAB040	R902138023 A2FM107/61W-VBB010 S
R902137506 A2FM90/61W-VBB020F S	R902160622 A2FM63/61W-VAB040	R902138033 A2FM90/61W-VBB027
R902137507 AA2FM80/61W-VQDN520 S	R902160625 A2FM63/61W-VBB020	R902138034 A2FM80/61W-VBB100F
R902137510 AA2FM90/61W-VQDN520	R902160630 A2FM63/61W-VBB020	R902138038 A2FM80/61W-VXB010 S
R902137511 AA2FM90/61W-VQDN520	R902160636 A2FM63/61W-VBB040	R902138039 AA2FM125/61W-VSD510
R902137512 AA2FM80/61W-VQDN520	R902160638 A2FM125/61W-VAB027	R902138042 A2FM107/61W-VAB027
R902137517 A2FM107/61W-VZB020	R902160646 A2FM56/61W-VZB020	R902138044 A2FM107/61W-VAB027
R902137523 A2FM90/61W-VAB100	R902160651 A2FM107/61W-VZB010	R902138045 A2FM107/61W-VAB027
R902137534 A2FM107/61W-VAB010 S	R902160654 AA2FM63/61W-VSD520	R902138046 A2FM107/61W-VAB027
R902137535 A2FM90/61W-VAB027	R902160661 A2FM56/61W-VPB010	R902138054 A2FM80/61W-VZB027
R902137539 A2FM80/61W-VZB106	R902160665 A2FM56/61W-VZB020	R902138064 A2FM80/61W-VBB010
R902137546 AA2FM80/61W-VUDN100 S	R902160674 A2FM56/61W-VPB020	R902138067 AA2FM90/61W-VBDN520 S
R902137551 AA2FM45/61W-VSD510	R902160675 A2FM56/61W-VPB020	R902138070 A2FM107/61W-VBB020
R902137559 A2FM107/61W-VZB020	R902160680 A2FM56/61W-VZB040	R902138082 AA2FM90/61W-VQDN510 S
R902137561 AA2FM90/61W-VQDN510	R902160686 A2FM107/61W-VZB020	R902138083 A2FM90/61W-VBBXXX S
R902137562 A2FM90/61W-VAB020	R902160702 A2FM63/61W-VAB027	R902138089 AA2FM90/61W-VUDN520
R902137566 A2FM80/61W-VAB020D S	R902160708 A2FM56/61W-VAB020	R902138091 AA2FM80/61W-VUDN510
R902137570 A2FM125/61W-VAB100	R902160710 A2FM56/61W-VAB020	R902138093 AA2FM125/61W-VSD527
R902137571 AA2FM80/61W-VQDN510	R902160712 A2FM56/61W-VAB020	R902138096 A2FM125/61W-VAB010F S
R902137573 A2FM80/61W-VZB100	R902160714 A2FM56/61W-VAB100	R902138097 A2FM125/61W-VAB010F S
R902137574 A2FM80/61W-VZB020	R902160715 A2FM56/61W-VAB100	R902138098 A2FM80/61W-VUB010 S
R902137575 AA2FM90/61W-VUDN027 S	R902160716 A2FM56/61W-VAB010	R902138110 A2FM90/61W-VAB027
R902137576 A2FM80/61W-VPB010	R902160718 A2FM56/61W-VAB010	R902138111 AA2FM125/61W-VSD527
R902137578 AA2FM80/61W-VUDN520	R902160720 A2FM56/61W-VAB010	R902138113 AA2FM125/61W-VBD527



R902137579 AA2FM80/61W-VUDN520	R902160721 A2FM56/61W-VAB010	R902138114 AA2FM90/61W-VUDN527
R902137585 A2FM80/61W-VBB027	R902160729 A2FM63/61W-VZB010	R902138117 AA2FM107/61W-VSD510
R902137591 A2FM80/61W-VUB020 S	R902160734 AA2FM56/61W-VSD510	R902138130 A2FM80/61W-VAB020F S
R902137597 A2FM125/61W-VBB020F S	R902160735 A2FM56/61W-VAB027	R902138135 A2FM80/61W-VAB010F S
R902137602 A2FM90/61W-VAB010	R902160737 A2FM125/61W-VAB020	R902138141 A2FM90/61W-VUB010 S
R902137604 A2FM90/61W-VAB010	R902160738 A2FM56/61W-VAB027	R902138144 A2FM125/61W-VAB191J
R902137607 A2FM90/61W-VAB010	R909424853 A2FM28/61W-VAB010	R902138152 A2FM80/61W-VAB020D S
R902137608 A2FM90/61W-VAB010	R902160743 AA2FM63/61W-VBD510	R902138153 A2FM107/61W-VZB100
R902137612 A2FM90/61W-VAB010	R902160748 A2FM56/61W-VAB040	R902138154 A2FM125/61W-VAB020D S
R902137613 A2FM90/61W-VAB010	R902160749 AA2FM56/61W-VSD520	R902138159 A2FM90/61W-VAB010F S
R902137615 A2FM90/61W-VAB010	R902160778 A2FM63/61W-VBB100	R902138160 A2FM107/61W-VAB100 S
R902137618 A2FM90/61W-VAB010	R902160779 A2FM63/61W-VBB100	R902138161 A2FM80/61W-VZB010
R902137619 A2FM90/61W-VAB010	R902160791 A2FM56/61W-VBB010	R902138162 A2FM125/61W-VBB100
R902137621 A2FM90/61W-VAB010	R902160792 A2FM80/61W-VAB020	R902138163 A2FM107/61W-VAB020
R902137624 A2FM90/61W-VAB020	R902160794 A2FM80/61W-VPB030	R902138168 A2FM107/61W-VZB100D S
R902137626 A2FM90/61W-VAB020	R902160796 A2FM107/61W-VZB100	R902138170 A2FM80/61W-VAB010
R902137628 A2FM90/61W-VAB020	R902160840 A2FM63/61W-VAB040	R902138171 A2FM125/61W-VBB100F
R902137629 A2FM90/61W-VAB020	R902160842 A2FM56/61W-VBB040	R902138172 A2FM90/61W-VBB100F
R902137630 A2FM90/61W-VAB020	R902160852 A2FM107/61W-VAB100	R902138173 A2FM80/61W-VAB027F
R902137631 A2FM90/61W-VAB020	R902160862 A2FM63/61W-VAB020	R902138176 A2FM107/61W-VZB010
R902137633 A2FM90/61W-VAB020	R902160878 AA2FM80/61W-VQDN510	R902138177 AA2FM125/61W-VSD510
R902137636 A2FM107/61W-VZB020	R902160879 AA2FM90/61W-VSD510	R902138179 AA2FM125/61W-VSDXXX S
R902137637 A2FM90/61W-VBB010	R902160880 A2FM107/61W-VAB020	R902138180 AA2FM107/61W-VSDXXX S
R902137638 A2FM90/61W-VBB010	R902160885 A2FM56/61W-VPB040	R902138181 A2FM125/61W-VAB010
R902137639 A2FM90/61W-VBB010	R902160886 A2FM56/61W-VZB020	R902138182 AA2FM125/61W-VSD510
R902137640 AA2FM107/61W-VSD510	R902160887 A2FM90/61W-VAB010	R902138185 A2FM125/61W-VSB027 S
R902137641 A2FM90/61W-VBB020	R902160888 A2FM23/61W-VAB020D S	R902138188 A2FM90/61W-VBB010
R902137642 A2FM90/61W-VBB020	R902160889 A2FM107/61W-VAB191DJ	R902138197 A2FM90/61W-VBB020
R902137643 A2FM90/61W-VBB020	R902160890 A2FM63/61W-VBB027	R902138199 A2FM80/61W-VPB020
R902137644 A2FM107/61W-VZB020	R902160891 A2FM28/61W-VPB040	R902138433 A2FM32/61W-VBB010F
R902137652 A2FM107/61W-VZB020	R902160892 A2FM107/61W-VAB020	R902138435 A2FM28/61W-VAB100F
R902137653 A2FM90/61W-VAB191J	R902160898 A2FM90/61W-VAB010	R902138450 A2FM125/61W-VAB010
R902137656 A2FM125/61W-VAB010	R902160901 A2FM125/61W-VAB010	R902138451 A2FM107/61W-VPB010
R902137657 A2FM90/61W-VBB040	R902160903 A2FM125/61W-VAB020F	R902138452 A2FM80/61W-VAB010
R902137658 A2FM90/61W-VAB010	R902160904 A2FM125/61W-VAB027F	R902138455 A2FM80/61W-VBB020
R902137660 A2FM125/61W-VAB010	R902160905 A2FM23/61W-VAB026	R902138457 A2FM80/61W-VBB010
R902137661 A2FM125/61W-VAB100	R902160906 A2FM45/61W-VAB181	R902138458 A2FM107/61W-VBB010
R902137666 A2FM125/61W-VAB010	R902160908 A2FM80/61W-VAB010	R902138459 A2FM80/61W-VZB100
R902137668 A2FM90/61W-VAB027	R902160909 A2FM90/61W-VAB026	R902138460 A2FM80/61W-VAB020
R902137669 A2FM125/61W-VAB010	R902160910 A2FM56/61W-VBB040	R902138464 AA2FM125/61W-VSD600
R902137671 A2FM125/61W-VAB010	R902160913 A2FM56/61W-VZB010	R902138465 AA2FM107/61W-VSD510
R902137674 A2FM125/61W-VAB010	R902160915 A2FM90/61W-VBB020	R902138466 AA2FM90/61W-VSD520
R902137675 A2FM125/61W-VAB010	R902160916 A2FM80/61W-VAB100	R902138467 AA2FM125/61W-VSD520
R902137679 A2FM125/61W-VAB020	R902160917 A2FM56/61W-VAB027F S	R902138469 A2FM107/61W-VAB027
R902137680 A2FM125/61W-VAB020	R902160918 A2FM63/61W-VAB010	R902138470 A2FM90/61W-VBB027
R902137683 A2FM125/61W-VAB020	R902160919 A2FM90/61W-VAB100	R902138477 A2FM90/61W-VAB027D S
R902137687 A2FM125/61W-VAB020	R902160921 A2FM45/61W-VAB100 S	R902138478 AA2FM90/61W-VQDN510
R902137688 A2FM125/61W-VAB020	R902160924 AA2FM63/61W-VSD520F S	R902138479 AA2FM125/61W-VBD527D S
R902137689 A2FM125/61W-VAB020	R902160925 A2FM90/61W-VAB010	R902138480 A2FM63/61W-VBB100D S
R902137690 A2FM125/61W-VAB020	R902160927 A2FM125/61W-VBB027F S	R902138481 A2FM63/61W-VBB020D S
R902137693 A2FM125/61W-VAB020	R902160928 A2FM63/61W-VBB010F S	R902138485 A2FM90/61W-VAB100
R902137694 A2FM125/61W-VAB020	R902160930 A2FM80/61W-VAB010	R902139827 A2FM200 63W VAB010 S
R902137696 AA2FM125/61W-VSD510	R902160931 A2FM90/61W-VAB010D S	R902139848 A2FM16/61W-VBB030
R902137697 A2FM125/61W-VBB010	R902160932 A2FM80/61W-VBB010	R902149085 A2FM16/61W-VSB030 S
R902137702 AA2FM90/61W-VQDN520	R902160933 A2FM107/61W-VBB020	R902149207 A2FM107/61W-VZB010
R902137704 A2FM80/61W-VPB020	R902160934 A2FM107/61W-VAB010F S	R902151521 A2FM90/61W-VAB020
R902137705 A2FM90/61W-VBB100	R902160935 A2FM63/61W-VAB027D S	R902151576 A2FM90/61W-VBB010D S
R902137706 A2FM125/61W-VBB020	R902160936 A2FM90/61W-VBB020	R902151731 AA2FM80/61W-VQDN510
R902137707 A2FM125/61W-VBB020	R902160937 A2FM45/61W-VPB027	R902153520 AA2FM56/61W-VSD527
R902137709 A2FM107/61W-VBB010F	R902160941 A2FM32/61W-VAB181	R902153548 A2FM125/61W-VAB181
R902137725 A2FM23/61W-VPB040	R902160942 A2FM56/61W-VAB020	R902153554 A2FM107/61W-VAB181
R902137732 AA2FM125/61W-VSD520	R902160945 A2FM125/61W-VAB027	R902153740 A2FM16/61W-VBB040 S
R902137733 AA2FM125/61W-VSD520	R902160946 AA2FM80/61W-VQDN520	R902153755 A2FM23/61W-VBB540 S
R902137734 A2FM107/61W-VZB010	R902160949 A2FM63/61W-VZB100	R902153779 AA2FM107/61W-VSDXXXF S
R902137736 A2FM107/61W-VZB010	R902160951 AA2FM45/61W-VPD527	R902153804 A2FM80/61W-VAB020
R902137737 AA2FM45/61W-VPD510	R902160952 A2FM90/61W-VBB100	R902153805 AA2FM56/61W-VSD520
R902137739 A2FM107/61W-VPB010	R902160953 A2FM80/61W-VZB100	R902153810 A2FM90/61W-VAB020
R902137744 AA2FM125/61W-VSD510	R902160960 A2FM107/61W-VPB010	R902153811 A2FM125/61W-VAB020

R902137745 A2FM107/61W-VZB020	R902160962 AA2FM80/61W-VQDN510	R902153922 AA2FM125/61W-VSD510
R902137748 A2FM107/61W-VZB020	R902160963 A2FM107/61W-VZB020	R902155526 A2FM90/61W-VAB027
R902137752 A2FM107/61W-VZB020	R902160965 A2FM107/61W-VAB010	R902155529 A2FM90/61W-VAB027
R902137753 A2FM90/61W-VAB027	R902160967 A2FM90/61W-VAB100	R902155548 AA2FM90/61W-VUDN027 S
R902137754 A2FM107/61W-VPB020	R902160968 A2FM90/61W-VAB191J	R902155549 AA2FM80/61W-VUDN027 S
R902137773 AA2FM90/61W-VSD510	R902160969 A2FM80/61W-VAB191J	R902155554 A2FM90/61W-VBB027F
R902137774 AA2FM90/61W-VSD510	R902160972 A2FM28/61W-VSB020 S	R902155577 A2FM32/61W-VAB020
R902137776 AA2FM90/61W-VSD520	R902160975 A2FM90/61W-VAB027	R902155587 A2FM63/61W-VAB191J
R902137778 A2FM80/61W-VZB010	R902160976 A2FM80/61W-VAB020 S	R902155595 A2FM80/61W-VZB020
R902137779 A2FM80/61W-VZB010	R902160979 A2FM45/61W-VZB100	R902155634 A2FM63/61W-VAB027 S
R902137782 A2FM80/61W-VZB010	R902160980 A2FM56/61W-VAB010	R902155642 A2FM80/61W-VZB100F S
R902137785 A2FM80/61W-VZB010	R909424905 A2FM56/61W-VAB010	R902155645 A2FM63/61W-VAB100 S
R902137789 A2FM80/61W-VZB020	R909425163 A2FM160/61W-VAB010	R902155650 A2FM180/61W-VAB181
R902137793 A2FM80/61W-VZB020	R909427351 A2FM23/61W-VAB010	R902155657 A2FM125/61W-VAB181 S
R902137794 A2FM80/61W-VZB020	R909428415 A2FM23/61W-VAB040	R902155668 A2FM45/61W-VZB020F
R902137795 A2FM80/61W-VZB020	R909429251 A2FM56/61W-VAB040	R902155694 A2FM90/61W-VAB027F
R902137801 A2FM80/61W-VPB020	R909605544 A2FM56/61W-VBB040	R902155715 A2FM107/61W-VZB171 S
R902137806 A2FM80/61W-VPB020	R909610656 A2FM10/61W-VBB030	R902155716 A2FM56/61W-VZB181
R902137810 A2FM80/61W-VPB020	R909610657 A2FM12/61W-VBB030	R902155737 A2FM45/61W-VZB027F
R902137816 AA2FM90/61W-VUDN027F S	R909610658 A2FM23/61W-VBB010	R902155744 A2FM32/61W-VBB026
R902137823 AA2FM107/61W-VSD510	R909610659 A2FM23/61W-VBB020	R902155755 A2FM180/61W-VAB027
R902137826 AA2FM80/61W-VSD510	R909610660 A2FM23/61W-VBB040	R902155785 A2FM56/61W-VAB027
R902137827 AA2FM80/61W-VSD510	R909610661 A2FM28/61W-VBB010	R902155809 AA2FM80/61W-VUDN027 S
R902137843 AA2FM107/61W-VSD510	R909610662 A2FM28/61W-VBB020	R902155868 A2FM200 63W VAB027F S
R902137882 AA2FM80/61W-VSD520	R909610663 A2FM28/61W-VBB040	R902155873 A2FM45/61W-VAB020F S
R902137884 A2FM80/61W-VZB100	R909610664 A2FM56/61W-VBB010	R902155877 A2FM160/61W-VAB100
R902137885 A2FM80/61W-VZB100	R909610665 A2FM56/61W-VBB020	R902155896 AA2FM32/61W-VSD510
R902137888 A2FM80/61W-VZB100	R909610666 A2FM80/61W-VBB010	R902155903 A2FM107/61W-VZB192J
R902137892 A2FM80/61W-VAB020	R909610667 A2FM80/61W-VBB020	R902155913 A2FM80/61W-VAB027F
R902137894 A2FM80/61W-VAB020	R909610668 A2FM107/61W-VBB010	R902155924 A2FM180/61W-VAB027F
R902137897 A2FM80/61W-VAB020	R909610669 A2FM107/61W-VBB020	R902155934 A2FM107/61W-VZB171 S
R902137899 A2FM80/61W-VAB020	R909610670 A2FM160/61W-VBB010	R902155940 A2FM32/61W-VAB020
R902137904 A2FM80/61W-VAB020	R909610671 A2FM160/61W-VBB020	R902155944 A2FM63/61W-VBB100
R902137905 A2FM80/61W-VAB020	R910910653 A2FM250/60W-VZB02	R902155960 AA2FM63/61W-VTD027 S
R902137906 A2FM80/61W-VAB010	R910915383 A2FM250/60W-VZB01	R902155961 AA2FM56/61W-VTD027 S
R902137907 A2FM80/61W-VAB010	R910920780 A2FM355/60W-VZH01	R902155974 A2FM45/61W-VPB027
R902137911 A2FM80/61W-VAB010	R910943251 A2FM500/60W-VPH01	R902155977 AA2FM56/61W-VTD027 S
R902137916 A2FM107/61W-VAB100	R910968982 A2FM500/60W-VZH01	R902155996 A2FM32/61W-VAB010F
R902137917 A2FM80/61W-VAB010	R902011528 A2FM200/63W-VAB010	R902156139 A2FM63/61W-VAB100
R902137918 A2FM80/61W-VAB010	R909408463 A2FM90/61W-VAB010	R902156311 A2FM80/61W-VZB020
R902137920 A2FM80/61W-VAB010	R909408464 A2FM90/61W-VAB020	R902156323 A2FM16/61W-VAB530 S
R902137922 A2FM80/61W-VAB010	R909408468 A2FM90/61W-VBB010	R902156359 A2FM107/61W-VZB027
R902137923 A2FM107/61W-VAB100	R909408469 A2FM90/61W-VBB020	R902156360 A2FM160/61W-VBX010 S
R902137926 A2FM107/61W-VAB100	R909408514 A2FM63/61W-VBB010	R902160005 A2FM56/61W-VZB10X S
R902137928 A2FM80/61W-VAB100	R909408523 A2FM63/61W-VAB010	R902160008 A2FM90/61W-VAB100
R902137930 AA2FM80/61W-VUDN510	R909408524 A2FM63/61W-VAB020	R902160015 A2FM63/61W-VBB100 S
R902137931 A2FM125/61W-VAB100	R909408526 A2FM63/61W-VAB040	R902160016 AA2FM80/61W-VUDN027 S
R902137933 A2FM125/61W-VAB100	R909408549 A2FM63/61W-VBB020	R902160037 A2FM56/61W-VBB010
R902137943 AA2FM107/61W-VSD520	R909408551 A2FM63/61W-VBB040	R902160038 A2FM63/61W-VBB010F S
R902137949 A2FM107/61W-VAB010	R909409189 A2FM180/61W-VAB010	R902160039 AA2FM125/61W-VBD527F
R902137950 A2FM107/61W-VAB010	R909409190 A2FM180/61W-VAB020	R902160040 AA2FM80/61W-VUDN527D S
R902137951 A2FM107/61W-VAB010	R909409372 A2FM180/61W-VBB010	R902160045 A2FM56/61W-VBB010F S
R902137953 A2FM107/61W-VAB010	R909409373 A2FM180/61W-VBB020	R902160046 AA2FM63/61W-VTD510
R902137956 A2FM107/61W-VAB010	R909409630 A2FM125/61W-VAB010	R902160047 AA2FM125/61W-VSD520
R902137958 A2FM80/61W-VBB020	R909409634 A2FM125/61W-VAB020	R902160048 AA2FM63/61W-VSD527
R902137959 A2FM125/61W-VAB027	R909409637 A2FM125/61W-VBB010	R902160049 AA2FM56/61W-VBD527
R902137962 A2FM125/61W-VAB027	R909409638 A2FM125/61W-VBB020	R902160053 A2FM56/61W-VZB020
R902137963 A2FM80/61W-VBB020	R909410189 A2FM32/61W-VAB010	R902160055 AA2FM63/61W-VSD520
R902137965 A2FM125/61W-VAB027	R909410190 A2FM32/61W-VAB020	R902160056 AA2FM63/61W-VSD527
R902137966 A2FM125/61W-VAB027	R909410192 A2FM32/61W-VAB040	R902160057 AA2FM56/61W-VSD520
R902137968 A2FM125/61W-VAB027	R909410194 A2FM32/61W-VBB010	R902160059 A2FM56/61W-VZB027
R902137969 A2FM90/61W-VAB027	R909410195 A2FM32/61W-VBB020	R902160060 A2FM107/61W-VZB027
R902137970 A2FM90/61W-VAB027	R909410197 A2FM32/61W-VBB040	R902160061 A2FM56/61W-VBB020
R902137971 A2FM90/61W-VAB027	R909411111 A2FM16/61W-VAB030	R902160501 A2FM32/61W-VBB100 S
R902137973 A2FM90/61W-VAB027	R909411119 A2FM16/61W-VBB030	R902160504 AA2FM56/61W-VBD520
R902137976 AA2FM125/61W-VSD527	R909411581 A2FM45/61W-VZB010	R902160506 A2FM80/61W-VZB010
R902137980 AA2FM107/61W-VSD520	R909411582 A2FM45/61W-VZB020	R902160507 A2FM80/61W-VZB027
R902137981 AA2FM107/61W-VSD100 S	R909411584 A2FM45/61W-VZB040	R902160510 A2FM125/61W-VAB191J

R902137983 A2FM107/61W-VAB020	R909421629 A2FM28/61W-VAB040	R902160520 A2FM56/61W-VZB100
R902137984 AA2FM107/61W-VSD520	R909422089 A2FM80/61W-VAB020	R902160564 A2FM63/61W-VAB010F S
R902137985 AA2FM107/61W-VSD520	R909422092 A2FM23/61W-VAB020	R902160585 A2FM63/61W-XBX020 S
R902137991 A2FM107/61W-VZB027	R909422129 A2FM56/61W-VAB020	R902160588 A2FM56/61W-VPB100D S
R902137992 A2FM107/61W-VZB027	R909422548 A2FM28/61W-VAB020	R902160592 A2FM63/61W-VBB010
R902137995 AA2FM90/61W-VUX027	R909422638 A2FM80/61W-VAB010	R902160595 A2FM63/61W-VBB010
R902137996 A2FM80/61W-VAB027	R909423386 A2FM10/61W-VAB030	R902160597 A2FM63/61W-VAB010
R902137997 A2FM90/61W-VAB027	R909424093 A2FM107/61W-VAB020	R902160604 A2FM63/61W-VAB010
R902138000 A2FM80/61W-VAB027	R909424094 A2FM160/61W-VAB020	R902160613 A2FM63/61W-VAB020
R902138001 A2FM80/61W-VAB027	R909424240 A2FM12/61W-VAB030	R902160615 A2FM63/61W-VAB020
R902138004 A2FM107/61W-VAB027	R909424300 A2FM107/61W-VAB010	R902138005 AA2FM80/61W-VUDN027 S