



# Fixed Displacement Tokimec SQP Vane Pump

Tokimec SQP single vane pump: SQP1 SQP2 SQP3 SQP4

Tokimec SQP double vane pump: SQP21 SQP31 SQP32 SQP41 SQP42 SQP43

Tokimec SQP triple vane pump: SQP211 SQP311 SQP321 SQP421 SQP431 SQP432

The Tokimec SQP(S) series vane pumps feature low noise and are offered in 4 frame sizes, 16 series, 32 models of different displacements and as triple pump which allow user to select the combination which best matches their circuit for optimum energy efficiency.

1. Offers very quiet and "soft" operational noise levels.
2. Multiple pump combinations of differing displacements permits simpler circuit design compared to system using one large displacement pump and provide greater flexibility in circuit design with benefit of low noise levels.
3. Rotation element is in cartridge kit from which allows simple maintenance.

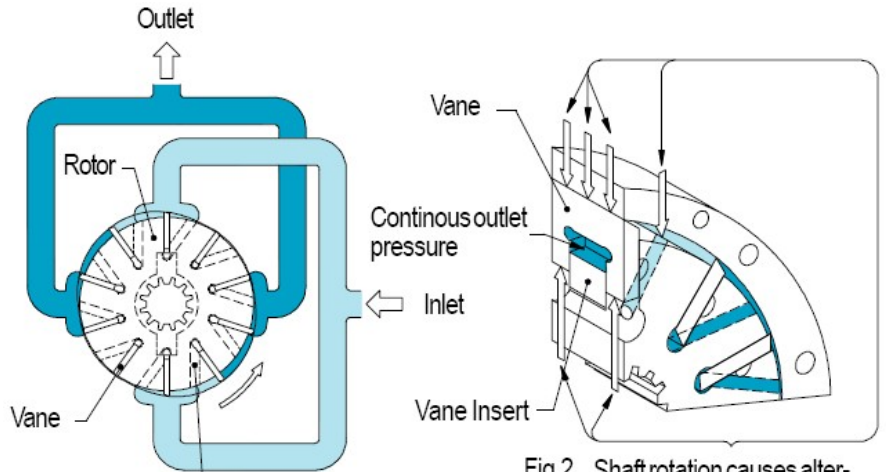


Fig.1 Pressure acts below vanes to push vane tips against the cam ring and provides optimum sealing of vane chambers.

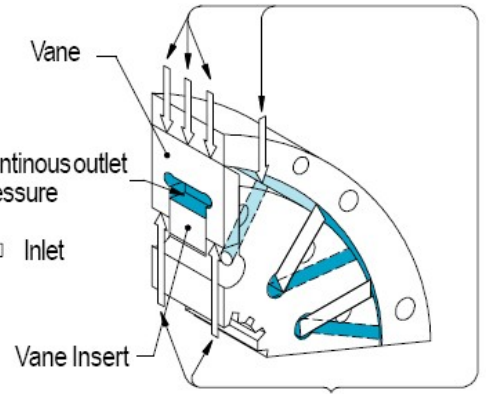
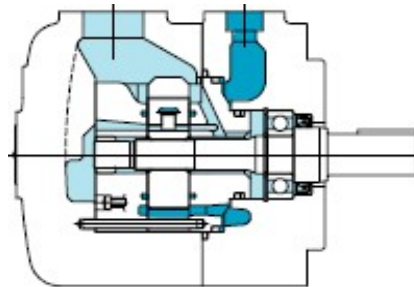
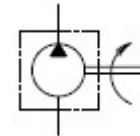


Fig.2 Shaft rotation causes alternate quadrant shifts in delivery load pressure and inlet suction pressures.

## Single vane pumps model code:

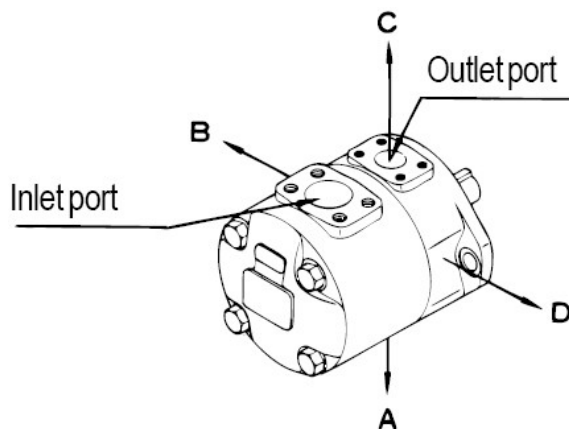


Symbol



(F3) -	SQP(S) 3	- 35	- 86	- C	- (LH)	- 18
Blank=mineral oil F3=phosphate ester F11=water glycol	SQP(S)1 SQP(S)2 SQP(S)3 SQP(S)4	Displacement code	Shaft type 1=Standard keyed 86=heavy duty keyed	Outlet port position: A=opposite inlet port B= -90° CCW from inlet C=inline with inlet D= -90° CW from inlet	Rotation: Viewed from shaft end Blank=CW LH=CCW	Design no.

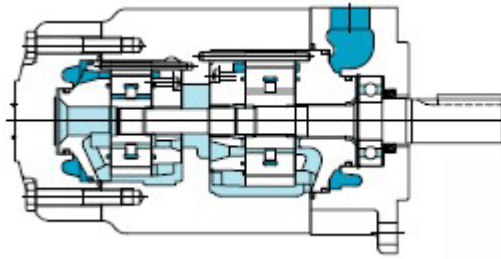
Outlet port position:



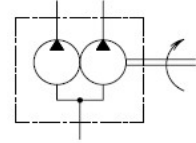
### SQP Single Vane Pump

Model	Displacement code US GPM	Geometric displacement cc/r	Mineral oil SQP		Water-Glycol F11-SQP		Phosphate ester F3-SQP		Min. speed r/min
			Max. pressure MPa	Max. speed r/min	Max. pressure MPa	Max. speed r/min	Max. pressure MPa	Max. speed r/min	
SQP(S)1	2	7.5	14	1800	14	1200	14	1200	600
	3	10							
	4	13							
	5	17	17.5		17.5				
	6	19							
	7	23							
	8	27							
	9	30	16		16				
	10	32.5							
	11	36							
	12	40	14		14				
	14	45							
SQP(S)2	10	32.5	17.5	1800	17.5	1200	14	1200	600
	12	40							
	14	45							
	15	50							
	17	55							
	19	60							
	21	67							
SQP(S)3	21	67	17.5	1800	17.5	1200	14	1200	600
	25	81							
	30	97							
	32	100							
	35	112							
	38	121							
	45	142							
SQP(S)4	42	138	17.5	1800	17.5	1200	14	1200	600
	45	147							
	50	162							
	57	180							
	60	193							
	66	212	14		14				
	75	237							

**Double vane pump model code:**



Symbol

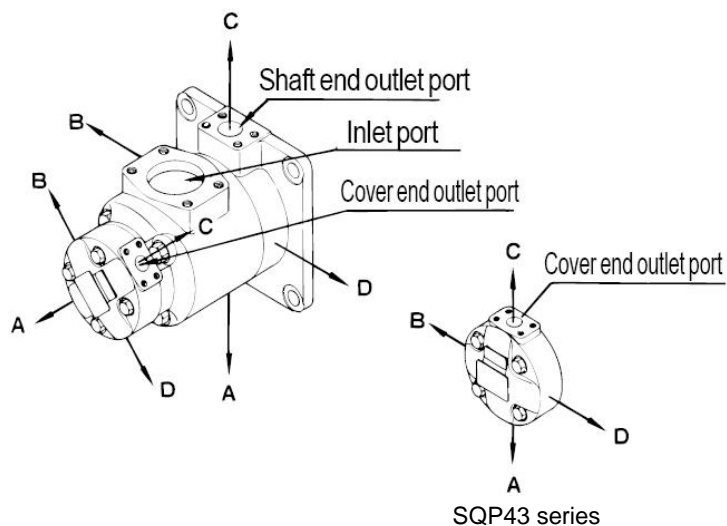


(F3) -	SQP 32	- 35	- 17	- 86	- A A	- LH	- 18
Blank=mineral oil F3=phosphate ester F11=water glycol	SQP 21 SQP 31 SQP 41 SQP 32 SQP 42 SQP 43	Displacement code of shaft end pump	Displacement code of cover end pump	Shaft type: 1=standard keyed 86=heavy duty keyed	Outlet port position* see below marked	Rotation: Viewed from shaft end Blank=CW LH=CCW	Design no.

\*Outlet port position:

<i>Viewed from cover end</i>	<i>All series except SQP43</i>		<i>SQP43</i>
No.1 outlet opposite inlet	<b>AA</b>	No.2 outlet 135° CCW from inlet	No.2 outlet opposite inlet
	<b>AB</b>	No.2 outlet 45° CCW from inlet	No.2 outlet 90° CCW from inlet
	<b>AC</b>	No.2 outlet 45° CW from inlet	No.2 outlet inline with inlet
	<b>AD</b>	No.2 outlet 135° CW from inlet	No.2 outlet 90° CW from inlet
No.1 outlet 90° CCW from inlet	<b>BA</b>	No.2 outlet 135° CCW from inlet	No.2 outlet opposite inlet
	<b>BB</b>	No.2 outlet 45° CCW from inlet	No.2 outlet 90° CCW from inlet
	<b>BC</b>	No.2 outlet 45° CW from inlet	No.2 outlet inline with inlet
	<b>BD</b>	No.2 outlet 135° CW from inlet	No.2 outlet 90° CW from inlet
No.1 outlet inline with inlet	<b>CA</b>	No.2 outlet 135° CCW from inlet	No.2 outlet opposite inlet
	<b>CB</b>	No.2 outlet 45° CCW from inlet	No.2 outlet 90° CCW from inlet
	<b>CC</b>	No.2 outlet 45° CW from inlet	No.2 outlet inline with inlet
	<b>CD</b>	No.2 outlet 135° CW from inlet	No.2 outlet 90° CW from inlet
No.1 outlet 90° CW from inlet	<b>DA</b>	No.2 outlet 135° CCW from inlet	No.2 outlet opposite inlet
	<b>DB</b>	No.2 outlet 45° CCW from inlet	No.2 outlet 90° CCW from inlet
	<b>DC</b>	No.2 outlet 45° CW from inlet	No.2 outlet inline with inlet
	<b>DD</b>	No.2 outlet 135° CW from inlet	No.2 outlet 90° CW from inlet

Outlet port position:

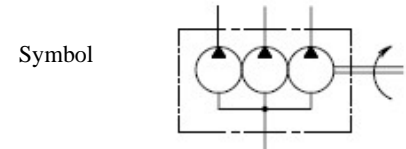
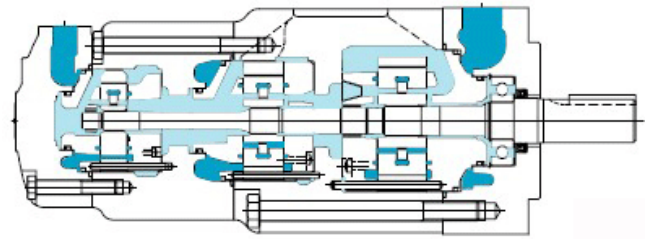


### SQP Double vane pump

Model	Shaft end pump			Cover end pump			Max. speed r/min	Min. speed r/min	
	Displacement code US GPM	Geometric displacement cc/r	Max. pressure MPa	Displacement code US GPM	Geometric displacement cc/r	Max. pressure MPa			
SQP21	10	32.5	17.5	2	7.5	14	1800	600	
	12	38.3		3	10.2				
	14	46.7		4	12.8	17.5			
	17	52.5		5	16.7				
	19	59.2							
	21	65							
SQP31	17	53.3	17.5						6
	21	66.7		7	22.9				
	25	79.2		8	26.2				
	30	95							
	32	100							
	35	109		9	28.3				
	38	118							
SQP41	30	96	17.5	11	35	17.5			
	35	109							
	38	128		12	37.9		16		
	42	134							
	50	156		14	44.2		14		
	60	189							
SQP32	17	53.5	17.5	10	32.5	17.5			
	21	66.7		12	38.3				
	25	79.2		14	43.3				
	30	95							
	35	109		15	46.7				
	38	118							
SQP42	30	96	17.5	17	52.5	17.5			
	35	109							
	38	128		19	59.2				
	42	134							
	50	156		21	65				
	60	189							
SQP43	30	96	17.5	17	53.5	17.5			
	35	109		21	66.7				
	38	128		25	79.2				
	42	134		32	100				
	50	156		35	109				
	60	189		38	118				

Note: (F3)-SQP max. working pressure and speed with phosphate ester fluid

**Triple vane pumps model code:**



<b>(F3) -</b>	<b>SQP432</b>	<b>- 60</b>	<b>- 38</b>	<b>- 15</b>	<b>- 86</b>	<b>- C</b>	<b>- C</b>	<b>- C</b>	<b>-(LH)</b>	<b>- 18</b>
1	2	3	4	5	6	7	8	9	10	11

1 Fluid

Blank= mineral oil  
 F3=phosphate ester  
 F11=water glycol

2 SQP series:

SQP211 series  
 SQP 311, SQP321 series  
 SQP 421, SQP 431, SQP 432 series

3 Shaft end pump displacement:

Series	Displacement
SQP 2 **	10, 12, 14, 15, 17, 19, 21
SQP3 **	17, 21, 25, 30, 32, 35, 38
SQP4 **	30, 35, 38, 42, 50, 60

4 Middle pump displacement

Series	Displacement
SQP * 1 *	2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 14
SQP * 2 *	10, 12, 14, 15, 17, 19, 21
SQP* 3 *	21, 25, 30, 32, 35, 38, 45

5 Cover end pump displacement

Series	Displacement
SQP ** 1	2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 14
SQP ** 2	10, 12, 14, 15, 17, 19, 21

6 Shaft type:

86=heavy duty keyed  
 1= keyed shaft

7 Shaft end pump outlet port position

A= opposite inlet  
 B= 90° CCW from inlet  
 C= inline with inlet  
 D=90° CW from inlet

8 Middle pump outlet port position

SQP211, 311, 321, 421 series  
 A=135° CCW from inlet  
 B= 45° CCW from inlet  
 C=45° CW from inlet  
 D=135° CW from inlet  
 SQP 431, 432 series  
 A= opposite inlet  
 B=90° CCW from inlet  
 C= inline with inlet  
 D=90° CW from inlet

9 Cover end pump outlet port position

SQP211, 311, 431, 432  
 A=135° CCW from inlet  
 B=45° CCW from inlet  
 C=45° CW from inlet  
 D=135° CW from inlet  
 SQP321, 421  
 A= opposite inlet  
 B=90° CCW from inlet  
 C= inline with inlet  
 D= 90° CW from inlet

10 Rotation

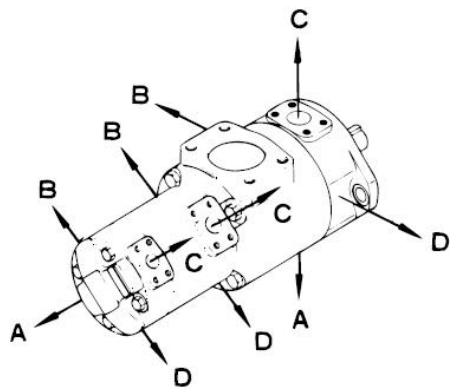
Blank=CW  
 HL=CCW

11 Design No.

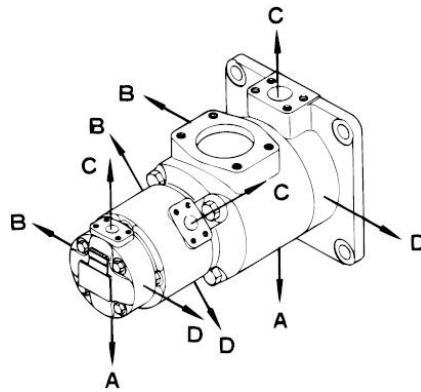
### SQP triple vane pump

Model	Shaft end pump			Middle pump			Cover end pump						Min. speed min
	Displ. code GPM	Displ. cc/r	Max. pres. Mpa	Displ. code GPM	Displ. cc/r	Max. pres. Mpa	Displ. code GPM	Displ. cc/r	Max. pres. Mpa	Max. speed min			
										Mineral oil	Water glycol	Phosphate ester	
SQP211	10	32.5	17.5	3	10.2	14	3	10.2	14	1800	1200	1200	600
	12	38.3		4	12.8								
	14	43.4		5	16.7								
	15	46.7		6	19.2								
	17	52.5		6	19.2								
	19	59.2		6	19.2								
	21	65		6	19.2								
SQP311	17	53.3	17.5	7	22.9	16	7	22.9	17.5	1500	1000	1000	600
	21	66.7		8	26.2								
	25	79.2		9	28.3								
	30	95		11	35								
	32	100		12	37.9								
	35	109		14	44.2								
	38	118		14	44.2								
SQP321	17	53.3	17.5	10	32.5	17.5	3	10.2	14	1800	1200	1200	600
	21	66.7		12	38.3								
	25	79.2		14	43.3								
	30	95		15	46.7								
	32	100		17	52.5								
	35	109		19	59.2								
	38	118		21	65								
SQP421	30	96	17.5	17	53.3	17.5	3	10.2	14	1500	1000	1000	600
	35	109		21	66.7								
	38	128		25	79.2								
	42	134		30	95								
	50	156		32	100								
	60	189		35	109								
SQP431	30	96	17.5	17	53.3	17.5	3	10.2	14	1800	1200	1200	600
	35	109		21	66.7								
	38	128		25	79.2								
	42	134		30	95								
	50	156		32	100								
	60	189		35	109								
	30	96		38	118								
	35	109		38	118								
SQP431	30	96	17.5	17	53.3	17.5	10	32.5	17.5	1800	1200	1200	600
	35	109		21	66.7								
	38	128		25	79.2								
	42	134		30	95								
	50	156		32	100								
	60	189		35	109								
	30	96		38	118								

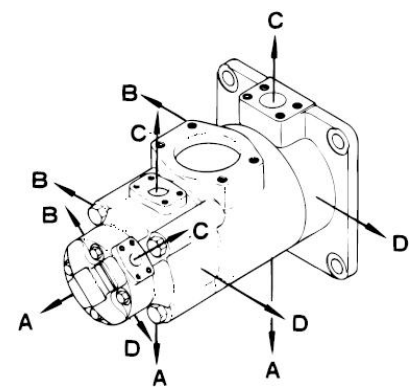
**Dimensions: for triple pump**



● SQP 211 series  
● SQP 311 series



● SQP 321 series  
● SQP421 series



● SQP 431 series  
● SQP 432 series

SQP single vane pump			SQP double vane pump	SQP triple vane pump
SQP1-2-1A-15	SQP3-17-1A-18	SQP4-30-86A-18	SQP21-10-4-1BC	SQP421-60-21-14-86BBB-18
SQP1-2-1B-15	SQP3-17-1B-18	SQP4-30-86B-18	SQP21-10-6-1DC	SQP421-60-21-11-86BBB-18
SQP1-2-1C-15	SQP3-17-1C-18	SQP4-30-86C-18	SQP21-12-3-1DC	SQP421-50-21-11-86BBB-18
SQP1-2-1D-15	SQP3-17-1D-18	SQP4-30-86D-18	SQP21-12-7-1DC	SQP421-60-21-8-86BBB-18
SQP1-3-1A-15	SQP3-21-1A-18	SQP4-35-86A-18	SQP21-14-7-1DC-18	SQP421-60-17-8-86BBB-18
SQP1-3-1B-15	SQP3-21-1B-18	SQP4-35-1A-L-18	SQP21-14-7-1DC-18	SQP421-50-21-8-86BBB-18
SQP1-3-1C-15	SQP3-21-1C-18	SQP4-35-86C-18	SQP21-17-4-1DC-18	SQP421-42-21-8-86BBB-18
SQP1-3-1D-15	SQP3-21-1C-L-18	SQP4-35-86B-18	SQP21-17-8-1CB-18	SQP421-60-14-8-86BBB-18
SQP1-5-1A-15	SQP3-21-86C-L-18	SQP4-35-86C-18	SQP21-17-11-1BA-18	SQP321-35-21-8-86DDD-18
SQP1-5-1B-15	SQP3-21-86D-L-18	SQP4-35-86D-18	SQP21-19-6-1CB-18	SQP321-38-21-8-86DDD-18
SQP1-5-1C-15	SQP3-21-1D-18	SQP4-42-86A-18	SQP21-19-3-1BB-18	SQP321-38-17-8-86DDD-18
SQP1-5-1D-15	SQP3-25-1A-18	SQP4-42-86A-L-18	SQP21-21-11-1CB-18	SQP321-35-17-7-86DDD-18
SQP1-6-1D-15	SQP3-25-1B-18	SQP4-42-86B-18	SQP21-21-11-1DC-18	SQP321-30-21-5-86DDD-18
SQP1-6-1C-15	SQP3-25-1B-L-18	SQP4-42-86C-18	SQP21-21-5-1BB-18	SQP321-35-14-3-86DDD-18
SQP1-8-1A-15	SQP3-25-1C-18	SQP4-42-86D-18	SQP21-21-7-1BB-18	SQP321-38-17-5-86DDD-18
SQP1-8-1B-15	SQP3-25-1C-L-18	SQP4-50-86A-18	SQP21-21-8-1BA-18	SQP321-38-21-11-86DDD-18
SQP1-8-1C-15	SQP3-25-1D-18	SQP4-50-86A-L-18	SQP21-21-14-1DC-18	SQP311-38-11-5-86CDD-18
SQP1-8-1D-15	SQP3-25-86A-18	SQP4-50-86B-18	SQP31-21-12-86AA	SQP311-25-11-5-86CDD-18
SQP1-8-1A-L-15	SQP3-25-86C2-L-18	SQP4-50-86C-18	SQP31-25-6-86CB	SQP311-30-11-5-86CDD-18
SQP1-8-1C-L-15	SQP3-25-86D-18	SQP4-50-86C-L-18	SQP31-32-5-86DC	SQP311-35-11-5-86CDD-18
SQP1-11-1A-15	SQP3-25-1B-L-18	SQP4-50-86D-18	SQP31-30-8-86CB	SQP311-25-11-5-86CDD-18
SQP1-11-1B-15	SQP3-30-1A-18	SQP4-60-86A-18	SQP31-35-4-86DC	SQP311-38-8-5-86CDD-18
SQP1-11-1C-15	SQP3-30-1B-18	SQP4-60-86A-L-18	SQP31-35-14-86CB	SQP311-25-8-5-86CDD-18
SQP1-11-1D-15	SQP3-30-1C-18	SQP4-60-86B-18	SQP31-38-12-86BB	SQP311-30-8-5-86CDD-18
SQP1-14-1A-15	SQP3-30-1D-18	SQP4-60-86B-L-18	SQP32-25-14-86DC	SQP211-21-11-8-86CCC-18
SQP1-14-1B-15	SQP3-30-86C-L-18	SQP4-60-86C-18	SQP32-30-17-86BA-18	SQP211-17-11-8-86CCC-18
SQP1-14-1C-15	SQP3-30-1C-18	SQP4-60-86C-L-18	SQP32-30-21-86BB-18	SQP211-14-11-8-86CCC-18
SQP1-14-1D-15	SQP3-30-86D-18	SQP4-60-86D-L-18	SQP32-32-21-86BB-18	SQP211-21-11-3-86CCC-18
SQP2-10-1A-18	SQP3-32-1A-18	SQP4-60-86D-18	SQP32-35-14-86DC-18	SQP211-17-11-3-86CCC-18
SQP2-10-1B-18	SQP3-32-1B-18	SQP4-42-86C-L-18	SQP32-38-19-86BA-18	SQP211-21-8-5-86CCC-18
SQP2-10-1C-18	SQP3-32-1C-18	SQP4-42-86D-18	SQP32-38-21-86AA-18	SQP211-17-8-5-86CCC-18
SQP2-10-1D-18	SQP3-32-1D-18	SQP4-45-86A-18	SQP41-50-11-86BB-18	SQP211-17-8-3-86CCC-18

SQP2-12-1A-18	SQP3-32-1B-18	SQP4-45-86A-L-18	SQP41-50-12-86BB-18	SQP432-50-21-14-86DDD-18
SQP2-12-1A2-18	SQP3-32-86B-18	SQP4-57-86B-18	SQP41-60-12-86CB-18	SQP432-66-21-14-86DDD-18
SQP2-12-1A-L-18	SQP3-35-1A-18	SQP4-57-86B-L-18	SQP42-38-10-86CB-18	SQP432-57-21-14-86DDD-18
SQP2-12-1B-18	SQP3-35-1A-L-18	SQP4-75-86C-18	SQP42-42-17-86CB-18	SQP432-50-35-14-86ADA-18
SQP2-12-1C-18	SQP3-35-1B-18	SQP4-75-86C-L-18	SQP42-42-21-86DC-18	SQP432-75-32-14-86AAA-18
SQP2-12-1C-L-18	SQP3-35-1C-18	SQP4-66-86D-L-18	SQP42-42-21-86DD-18	SQP432-42-21-14-86DDD-18
SQP2-12-1D-18	SQP3-35-1D-18	SQP4-66-86D-18	SQP42-50-15-86DC-18	SQP432-50-30-14-86DDD-18
SQP2-14-1A-18	SQP3-35-86A-18	SQP4-45-1A-18	SQP42-50-17-86CB-18	SQP432-50-21-15-86DDD-18
SQP2-14-1B-18	SQP3-35-86B-18	SQP4-45-1B-18	SQP42-50-21-86DC-18	SQP432-50-21-17-86DDD-18
SQP2-14-1C-18	SQP3-35-86C-18	SQP4-60-1C-18	SQP42-60-15-86CC-18	SQP432-50-21-12-86DDD-18
SQP2-14-1D-18	SQP3-35-86C2-18	SQP4-60-1C-L-18	SQP42-60-17-86AD-18	SQP432-50-21-15-86DDD-18
SQP2-15-1A-18	SQP3-35-86D-18	SQP4-60-1D-L-18	SQP42-60-21-86DC-18	SQP432-50-21-14-86AAA-18
SQP2-15-1B-18	SQP3-35-1D-18	SQP4-60-1D-18	SQP43-30-25-86BB-18	SQP432-55-35-14-86DDD-18
SQP2-15-1C-18	SQP3-38-1A-18	SQP4-42-1C-L-18	SQP43-30-30-86CC-18	SQP432-50-21-14-86BBB-18
SQP2-15-1D-18	SQP3-38-1A-L-18	SQP4-42-1D-18	SQP43-38-25-86DC-18	SQP432-50-21-14-86DBD-18
SQP2-17-1A-18	SQP3-38-1B-18	SQP4-45-1A-18	SQP43-42-30-86AA-18	SQP421-42-10-8-86BBB-18
SQP2-17-1B-18	SQP3-38-1C-18	SQP4-45-1A-L-18	SQP43-42-38-86AA-18	SQP421-60-14-11-86BBB-18
SQP2-17-1C-18	SQP3-38-1D-18	SQP4-57-1B-18	SQP43-50-25-86AD-18	SQP321-35-21-14-86DDD-18
SQP2-17-1C-L-18	SQP3-38-86C-18	SQP4-57-1B-L-18	SQP43-50-30-86AC-18	SQP321-38-17-8-86DDD-18
SQP2-17-1D-18	SQP3-38-86D-18	SQP4-75-1C-18	SQP43-50-32-86DD-L-18	SQP211-21-11-8-86BBB-18
SQP2-19-1A-18	SQP3-38-86D-L-18	SQP4-75-1-L-18	SQP43-50-38-86CC-18	SQP321-30-21-5-86DBD-18
SQP2-19-1B-18	SQP3-38-1D-18	SQP4-66-1D-L-18	SQP43-60-25-86AB-18	SQP321-35-14-3-86ADD-18
SQP2-19-1D-18	SQP3-38-86A-L-18	SQP4-66-1D-18	SQP43-60-30-86CC-18	SQP321-38-17-5-86ADD-18
SQP2-21-1D-18	SQP3-38-86B-18	SQP4-45-1A-18	SQP43-60-35-86DC-18	SQP321-38-21-11-86CDD-18
SQP2-21-1C-18	SQP2-21-1B-18	SQP4-60-1B-L-18	SQP43-60-38-86CC-18	SQP311-38-11-5-86AAA-18
SQP2-21-1C2-L-18	SQP2-21-1C-18	SQP4-60-1B-18	SQP43-60-38-86DD-18	SQP311-25-11-5-86BBB-18