

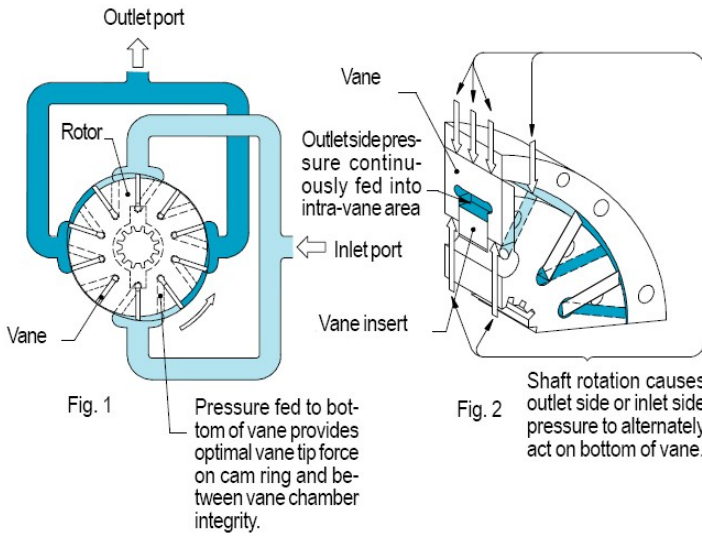


# Hydraulic Eaton Vickers VQ Vane Pump

V and VQ series of single and double vane pump

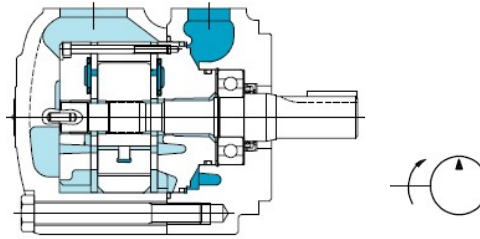
www.hydpump.com

## Intra-vane Mechanism



## Features

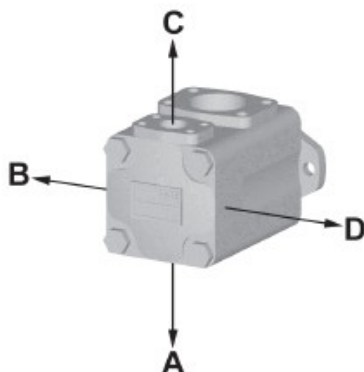
- Eaton Vickers V and VQ series are fixed displacement and balanced type hydraulic vane pumps. Available in both 12 vanes design for industrial application with quiet operating and 10 vanes design for mobile application with higher pressure and wider range of speed. They are widely used in hydraulic systems for machine-tools, presses, die casting machine, engineering, plastic injection molding and other machineries.
- Its interchangeable with original Vickers hydraulic pump of the same model.
- The inlet or outlet ports can be rotated through increments of 90° in relation to each other, providing application flexibility and easy installation.
- With the cartridge independent of the shaft, allowing for easy change of flow capacity and field servicing without removing the pump from its mounting.
- For the vane pump cartridge kit of VQ Series, the flexible plates are inserted between the support plates and the rotor. The flexible plates are assembled with the bronze facing towards the rotor to improve cold start capability and compensate thermal expansion in the rotor. This makes VQ Series particularly suited for mobile application.



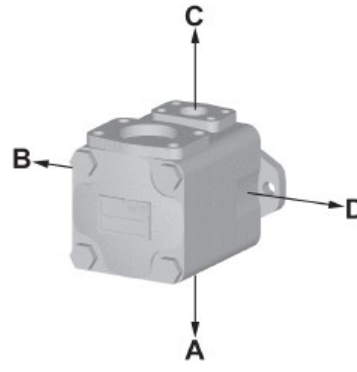
## Single vane pump ordering code:

25	VQ	21	A	- 1	A	22	L	V
Model: 20,25, 35, 45	Series: V=industrial VQ=mobile	Displacement code	Port connections: A=SAE 4-bolt flange	Shaft type: 1=straight keyed 86=heavy duty keyed 11, 151=splined	Outlet port position: A=opposite inlet port B= -90° CCW from inlet C=inline with inlet D= -90° CW from inlet	Design number	Rotation: Viewed from shaft end R=clockwise (blank) L=anti-clockwise	Seal: Blank=buna V=viton

Port Positions for 20V/VQ:



Port Positions for 25V/VQ, 35 V/VQ, 45 V/VQ:

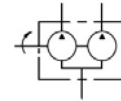
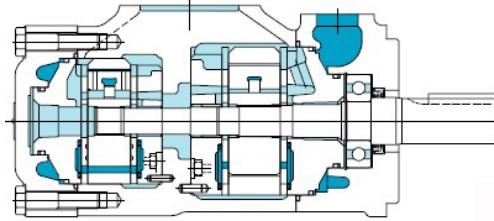



**Specifications**
**Single Pump V Series**

Series	Displacement code	Geometric displacement (ml/r)	Anti-Wear Mineral Oil		Weight (KG)
			Max. speed (rpm)	Max. pressure (MPa)	
20V vane pump	5	17	1800	21	12
	8	27			
	9	30			
	10	33		16	
	11	36			
	12	40			
	14	45			
25V vane pump	10	33	1800	17.5	14.8
	12	40			
	14	45			
	17	55			
	19	60			
	21	67			
35V vane pump	21	67	1800	17.5	22.7
	25	81			
	30	97			
	35	112			
	38	121			
45V vane pump	42	138	1800	17.5	34.1
	45	147			
	50	162			
	57	180			
	60	193			

**Specifications**
**Single Pump VQ Series**

Series	Displacement code	Geometric displacement (ml/r)	Anti-Wear Mineral Oil		Weight (KG)
			Max. speed (rpm)	Max. pressure (MPa)	
20VQ vane pump	5	18	2700	21	12
	8	27			
	9	30			
	11	36		16	
	12	40			
	14	45			
25VQ vane pump	10	33	2700	21	14.8
	12	40			
	14	45			
	17	55	2500		
	19	60			
	21	67			
35VQ vane pump	21	67	2500	21	22.7
	25	81			
	30	97	2400		
	35	112			
	38	121			
45VQ vane pump	42	138	2200	17.5	34.1
	45	147			
	50	162			
	57	180			
	60	193			



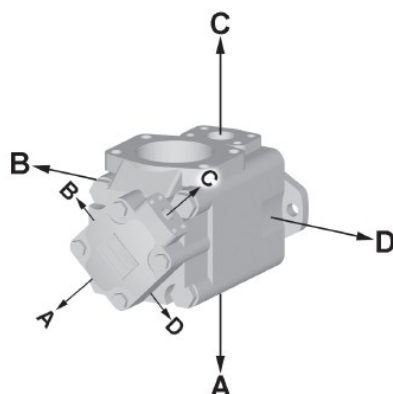
**Double vane pump ordering code:**

3525	VQ	38	A	21	- 1	AA	22	L	V
Model: 2520, 3520, 4520, 3525, 4525, 4535	Series: <b>V=industrial</b> <b>VQ=mobile</b>	Displacement code of shaft end pump	Port connections: A=SAE 4-bolt flange	Displacement code of cover end pump	Shaft type: 1=standard keyed 86=heavy duty keyed 11=splined	Outlet position* see below marked	Design number	Rotation: Viewed from shaft end R=clockwise (blank) L=anti-clockwise	Seal: Blank=buna V=viton

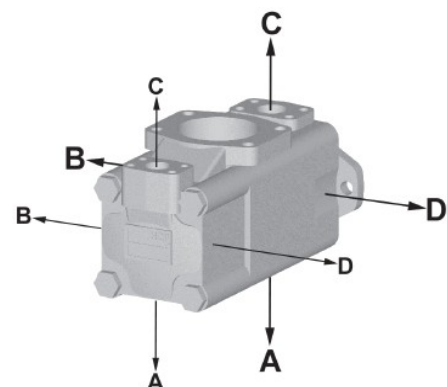
\*Outlet position:

Viewed from cover end		All series except 4535VQ	4535VQ
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

**Port Positions for 2520V/VQ, 3520 V/VQ, 4520 V/VQ,  
3525 V/VQ, 4525 V/VQ**



**Port Positions for 4535 V/VQ**





## Specifications

## Double Pump V Series

Series	Displacement code of shaft end pump	Displacement code of cover end pump
2520V vane pump	10, 12, 14, 17, 19, 21	5, 8, 9, 10, 11, 12, 14
2525V vane pump	10, 12, 14, 17, 19, 21	10, 12, 14, 17, 19, 21
3520V vane pump	21, 25, 30, 35, 38	5, 8, 9, 10, 11, 12, 14
3525V vane pump	21, 25, 30, 35, 38	10, 12, 14, 17, 19, 21
4520V vane pump	42, 45, 50, 57, 60, 66, 75	5, 8, 9, 10, 11, 12, 14
4525V vane pump	42, 45, 50, 57, 60, 66, 75	10, 12, 14, 17, 19, 21
4535V vane pump	42, 45, 50, 57, 60, 66, 75	21, 25, 30, 35, 38

## Specifications

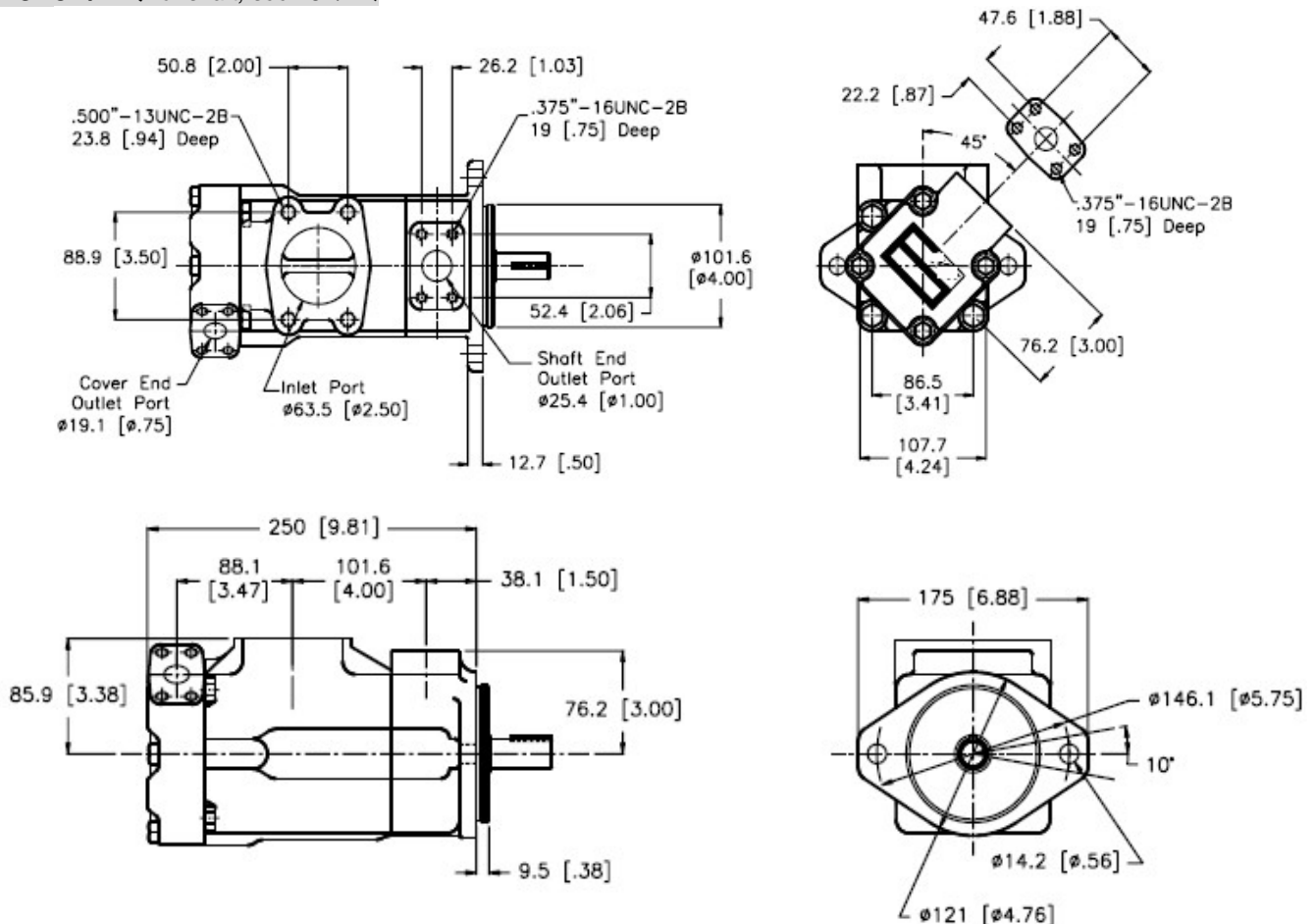
## Double Pump VQ Series

Series	Displacement code of shaft end pump	Displacement code of cover end pump
2520VQ vane pump	10, 12, 14, 17, 19, 21	5, 8, 9, 11, 12, 14
2525VQ vane pump	10, 12, 14, 17, 19, 21	10, 12, 14, 17, 19, 21
3520VQ vane pump	21, 25, 30, 35, 38	5, 8, 9, 11, 12, 14
3525VQ vane pump	21, 25, 30, 35, 38	10, 12, 14, 17, 19, 21
4520VQ vane pump	42, 45, 50, 57, 60	5, 8, 9, 11, 12, 14
4525VQ vane pump	42, 45, 50, 57, 60	10, 12, 14, 17, 19, 21
4535VQ vane pump	42, 45, 50, 57, 60	21, 25, 30, 35, 38

## Installation Dimensions mm (inch)

## Double Pump

**2520V/VQ** for shaft, see 25V/VQ



<b>Vickers Vane pump</b>	<b>Displacement</b>	<b>A=opposite inlet port</b>	<b>B=- 90° CCW from inlet</b>	<b>C=inline with inlet</b>	<b>D=- 90° CW from inlet</b>	
<b>Vickers 20VQ pump</b>	5 GPM	20VQ5A1A22R	20VQ5A1B22R	20VQ5A1C22R	20VQ5A1D22R	
	8 GPM	20VQ8A1A22R	20VQ8A1B22R	20VQ8A1C22R	20VQ8A1D22R	
	9 GPM	20VQ9A1A22R	20VQ9A1B22R	20VQ9A1C22R	20VQ9A1D22R	
	11 GPM	20VQ11A1A22R	20VQ11A1B22R	20VQ11A1C22R	20VQ11A1D22R	
	12 GPM	20VQ12A1A22R	20VQ12A1B22R	20VQ12A1C22R	20VQ12A1D22R	
	14 GPM	20VQ14A1A22R	20VQ14A1B22R	20VQ14A1C22R	20VQ14A1D22R	
<b>Vickers 25VQ pump</b>	10 GPM	25VQ10A1A22R	25VQ10A1B22R	25VQ10A1C22R	25VQ10A1D22R	
	12 GPM	25VQ12A1A22R	25VQ12A1B22R	25VQ12A1C22R	25VQ12A1D22R	
	14 GPM	25VQ14A1A22R	25VQ14A1B22R	25VQ14A1C22R	25VQ14A1D22R	
	17 GPM	25VQ17A1A22R	25VQ17A1B22R	25VQ17A1C22R	25VQ17A1D22R	
	19 GPM	25VQ19A1A22R	25VQ19A1B22R	25VQ19A1C22R	25VQ19A1D22R	
	21 GPM	25VQ21A1A22R	25VQ21A1B22R	25VQ21A1C22R	25VQ21A1D22R	
<b>Vickers 35VQ pump</b>	21 GPM	35VQ21A1A22R	35VQ21A1B22R	35VQ21A1C22R	35VQ21A1D22R	
	25 GPM	35VQ25A1A22R	35VQ25A1B22R	35VQ25A1C22R	35VQ25A1D22R	
	30 GPM	35VQ30A1A22R	35VQ30A1B22R	35VQ30A1C22R	35VQ30A1D22R	
	35 GPM	35VQ35A1A22R	35VQ35A1B22R	35VQ35A1C22R	35VQ35A1D22R	
	38 GPM	35VQ38A1A22R	35VQ38A1B22R	35VQ38A1C22R	35VQ38A1D22R	
	42 GPM	45VQ42A1A22R	45VQ42A1B22R	45VQ42A1A22R	45VQ42A1D22R	
<b>Vickers 45VQ pump</b>	45 GPM	45VQ45A1A22R	45VQ45A1B22R	45VQ45A1A22R	45VQ45A1D22R	
	50 GPM	45VQ50A1A22R	45VQ50A1B22R	45VQ50A1A22R	45VQ50A1D22R	
	57 GPM	45VQ57A1A22R	45VQ57A1B22R	45VQ57A1A22R	45VQ57A1D22R	
	60 GPM	45VQ60A1A22R	45VQ60A1B22R	45VQ60A1A22R	45VQ60A1D22R	
	<b>Vickers Vane pump</b>	<b>Displacement</b>	<b>A=opposite inlet port</b>	<b>B=- 90° CCW from inlet</b>	<b>C=inline with inlet</b>	<b>D=- 90° CW from inlet</b>
	<b>Vickers 2520VQ pump</b>	Front and rear 5, 8, 9, 11, 12, 14, 17, 19, 21	2520VQ10A51CC22R	2520VQ12A51CC22R	2520VQ14A51CC22R	2520VQ17A51CC22R
2520VQ10A81CC22R			2520VQ12A81CC22R	2520VQ14A81CC22R	2520VQ17A81CC22R	
2520VQ10A91CC22R			2520VQ12A91CC22R	2520VQ14A91CC22R	2520VQ17A91CC22R	
2520VQ10A111CC22R			2520VQ12A111CC22R	2520VQ14A111CC22R	2520VQ17A111CC22R	
2520VQ10A121CC22R			2520VQ12A121CC22R	2520VQ14A121CC22R	2520VQ17A121CC22R	
2520VQ10A141CC22R			2520VQ12A141CC22R	2520VQ14A141CC22R	2520VQ17A141CC22R	
<b>Vickers 3520VQ pump</b>	Front and rear 5, 8, 9, 11, 12, 14, 21, 25, 30, 35, 38	3520VQ25A51CC22R	3520VQ30A51CC22R	3520VQ35A51CC22R	3520VQ38A51CC22R	
		3520VQ25A81CC22R	3520VQ30A81CC22R	3520VQ35A81CC22R	3520VQ38A81CC22R	
		3520VQ25A91CC22R	3520VQ30A91CC22R	3520VQ35A91CC22R	3520VQ38A91CC22R	
		3520VQ25A111CC22R	3520VQ30A111CC22R	3520VQ35A111CC22R	3520VQ38A111CC22R	
		3520VQ25A121CC22R	3520VQ30A121CC22R	3520VQ35A121CC22R	3520VQ38A121CC22R	
		3520VQ25A141CC22R	3520VQ30A141CC22R	3520VQ35A141CC22R	3520VQ38A141CC22R	
<b>Vickers 3525VQ pump</b>	Front and rear 10, 12, 14, 17, 19, 21, 25, 30, 35, 38	3525VQ25A101CC22R	3525VQ25A121CC22R	3525VQ25A141CC22R	3525VQ25A171CC22R	
		3525VQ30A101CC22R	3525VQ30A121CC22R	3525VQ30A141CC22R	3525VQ30A171CC22R	
		3525VQ35A101CC22R	3525VQ35A121CC22R	3525VQ35A141CC22R	3525VQ35A171CC22R	
		3525VQ38A101CC22R	3525VQ38A121CC22R	3525VQ38A141CC22R	3525VQ38A171CC22R	
<b>Vickers 4520VQ pump</b>	Front and rear 5, 8, 9, 11, 12, 14, 42, 45, 50, 57, 60	4520VQ42A51AA22R	4520VQ45A51AA22R	4520VQ50A51AA22R	4520VQ60A51AA22R	
		4520VQ42A81AA22R	4520VQ45A81AA22R	4520VQ50A81AA22R	4520VQ60A81AA22R	
		4520VQ42A91AA22R	4520VQ45A91AA22R	4520VQ50A91AA22R	4520VQ60A91AA22R	
		4520VQ42A111AA22R	4520VQ45A111AA22R	4520VQ50A111AA22R	4520VQ60A111AA22R	
		4520VQ42A121AA22R	4520VQ45A121AA22R	4520VQ50A121AA22R	4520VQ60A121AA22R	
		4520VQ42A141AA22R	4520VQ45A141AA22R	4520VQ50A141AA22R	4520VQ60A141AA22R	
<b>Vickers 4535VQ pump</b>	Front and rear 21, 25, 30, 35, 38, 42, 45, 50, 57, 60	4535VQ42A251AA22R	4535VQ45A251AA22R	4535VQ50A251AA22R	4535VQ60A251AA22R	
		4535VQ42A301AA22R	4535VQ45A301AA22R	4535VQ50A301AA22R	4535VQ60A301AA22R	
		4535VQ42A351AA22R	4535VQ45A351AA22R	4535VQ50A351AA22R	4535VQ60A351AA22R	
		4535VQ42A381AA22R	4535VQ45A381AA22R	4535VQ50A381AA22R	4535VQ60A381AA22R	

<b>Details of Vickers vane pump</b>					
2520VQ17A11182AA20	3520VQ38A811AB20	2520VQ21A51AA20L	4525VQ60A171CB20	2520VQ12A51CC20	
3520VQ35A1486CC20L	3525VQ35A171AA20	2520VQ21A51AB20	26VQ14A1C20	2520VQ14A1411AA20L	
2520VQ17A886AA20	3525VQ35A171AA20L	2520VQ21A51AB20	4520VQ50A1111CC20	2520VQ17A81AA20	
2520VQ19A811CC20	3525VQ35A171CC20	2520VQ21A51CB20L	4525VQ42A211CC20	2520VQ17A81AA20L	
4525VQ42A1286AA20	25VQ12A11A20	2520VQ21A51CC20	4520VQ60A886AA20	2520VQ17A81BD20	
2520VQ21A14182BB20	25VQ12A11A20L	2520VQ21A51DD20L	4520VQ60A886DD20	2520VQ17A81CB20	
2520VQ21A14182BB20L	25VQ12A11B20L	2520VQ21A81AA20	4535VQ42A351CC20	2520VQ17A81CB20L	
2520VQ12A1186AA20	25VQ12A11C20	2520VQ21A81AA20L	4520VQ50A511CC20	2520VQ17A81CC20	
3525VQ38A1911CC20L	25VQ12A11C20L	2520VQ21A81AB20L	3525VQ38A141CC20L	2520VQ17A81AA20	
2520VQ14A21BA20	4525VQ60A2111CC20	2520VQ21A81CB20	3520VQ25A141AA20L	2520VQ17A811AA20L	
2520VQ14A21CC20	4525VQ50A121CC20	2520VQ21A81CB20L	3520VQ35A81AA20	2520VQ17A811BB20	
2520VQ14A21DD20	3520VQ38A511AB20	2520VQ21A81CC20	3520VQ38A121CC20	2520VQ17A811BD20	
2520VQ12A211CB20	4520VQ42A811CC20	2520VQ21A81CC20L	4520VQ60A121CC20	2520VQ17A811CC20	
2520VQ14A1186AA20	2520VQ12A121CB20L	2520VQ21A81DC20	31VQ24A1C20	2520VQ17A811CC20L	
2520VQ14A1186CC20	2520VQ14A1211BA20	2520VQ21A81DC20L	4525VQ42A171CC20	2520VQ17A811CD20	
4535VQ60A3086CC20334	2520VQ14A1211CC20	2520VQ21A111AA20	20VQ11A151A30	2520VQ17A811CD20L	
4535VQ60A3086CC20334L	2520VQ17A121CC20	2520VQ21A111BC20	2520VQ21A11182AA20	2520VQ17A1125AA20L	
2520VQ21A586AA20	2520VQ17A121CC20L	2520VQ21A111CB20L	2520VQ21A11182BB20	2520VQ17A141AA20	
2520VQ21A586AC20	2520VQ21A121AA20	2520VQ21A111CC20	2520VQ21A11182BB20L	2520VQ17A141AA20L	
2520VQ12A21BA20	2520VQ21A121CC20	2520VQ21A111CC20L	2520VQ21A11182CB20	2520VQ17A141CC20	
2520VQ14A886CC20	2520VQ17A111AA20L	2520VQ21A111CD20	4535VQ50A3086CC20	2520VQ17A141CC20L	
25VQ21A1A20	2520VQ17A111BD20L	2520VQ21A1211AA20	4535VQ50A3086DD20	2520VQ17A141DB20L	
25VQ21A1A20L	2520VQ17A111CC20	2520VQ21A1211DC20R	4535VQ60A3586AA20	2520VQ17A141DC20L	
25VQ21A1B20	2520VQ17A111CC20L	2520VQ21A1211DC20L	4535VQ60A3586CC20	2520VQ17A1411AA20	
25VQ21A1C20	2520VQ17A111DC20	2520VQ21A141AA20	3525VQ35A1286AA20	2520VQ17A1411AA20L	

25VQ21A1C20L	2520VQ17A111DD20	2520VQ21A141AA20L	3525VQ35A1286CC20	2520VQ17A1411BA20
25VQ21A1D20L	2520VQ17A1211CC20	2520VQ21A141CC20	4535VQ42A2586AA20	2520VQ17A1411CC20
45VQ60A86A20	2520VQ12A1111AA20	2520VQ21A141CC20L	3520VQ25A1486AA20L	2520VQ17A1411CC20L
45VQ60A86C20	2520VQ12A1111AA20L	3525VQ25A211AA20	3520VQ25A1486CC20	2520VQ21A1A51AA20
45VQ60A86C20L	2520VQ12A1111CC20	3525VQ25A211AA20L	3520VQ30A1286AD20	4525VQ50A2111AA20
35VQ38A86A20	2520VQ12A811AA20	3525VQ25A211AB20L	3520VQ30A1286CC20	4525VQ50A2111CC20
35VQ30A86A20	2520VQ12A811CB20	3525VQ25A211CC20	3520VQ30A1186AD20	4535VQ60A381AA20
35VQ30A86C20	2520VQ12A811CC20	3525VQ25A2119AA20L	3525VQ30A1719BA20	4535VQ60A381AA20L
35VQ25A86A20	30VQ24A11C20	3525VQ30A2111AA20	20VQ8A1A30	4535VQ60A381CC20
3520VQ38A1486CC20L	2520VQ12A1111CC20	3525VQ30A2111AD20	20VQ8A1A30L	4535VQ60A2511CC20
25VQ17A1A20	2520VQ17A511AA20	3525VQ30A2111CC20	20VQ8A1C30	4525VQ60A211AA20
25VQ17A1A20L	2520VQ17A511BB20	3525VQ30A2111CC20L	20VQ8A1C30L	4525VQ60A211AA20L
25VQ17A1A20L	25VQ14C11B12L	3525VQ35A2111AA20	3525VQ30A1711BB30L	4525VQ60A211CC20
25VQ17A1B20	3525VQ38A2111AA20	3525VQ35A2111AA20L	3520VQ25A1286AA20	4535VQ50A3811CC20L
25VQ17A1C20	3525VQ38A2111BB20	3525VQ35A2111AD20	3520VQ25A1286CC20	4520VQ42A51AA20
25VQ17A1C20L	3525VQ38A2111CC20	3525VQ35A2111CB20	3520VQ25A1286CC20	4525VQ50A2186CC20
25VQ17A1D20L	3520VQ38A1411CB20L	3525VQ35A2111CC20	4535VQ50A2586CC20	3525VQ38A171AA20
25VQ14A1A20	3520VQ30A141AD20L	3525VQ38A1211AA20	3520VQ38A1186CC20	3525VQ38A171AA20L
25VQ14A1A20L	3520VQ30A141BB20L	3525VQ38A1211CC20L	3520VQ38A1186CC20L	3525VQ38A171CC20
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