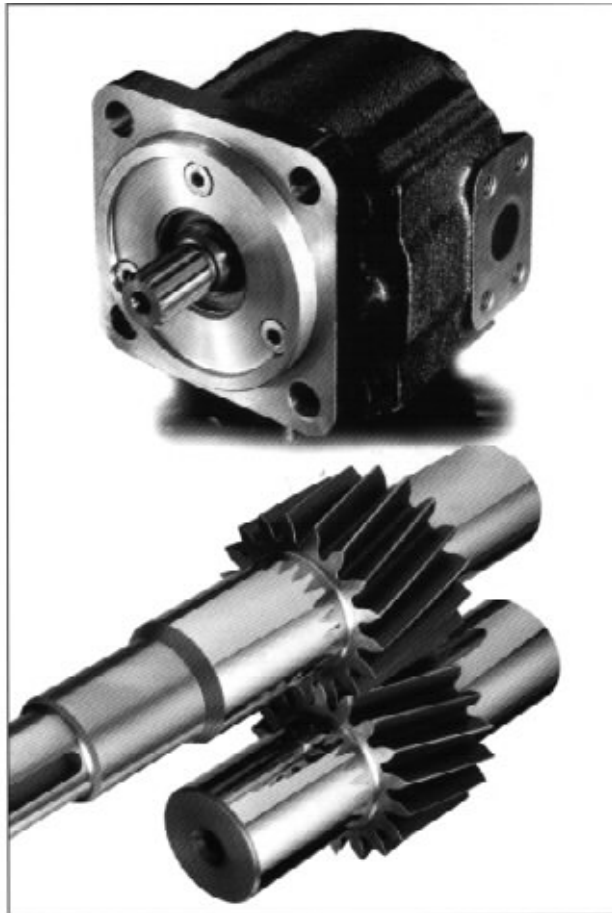


# QR5/QS5

HYDRAULIC GEAR PUMPS



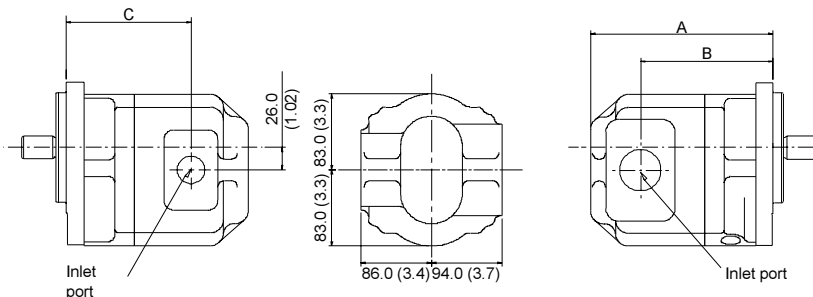
**DB** DAVID BROWN  
HYDRAULICS

# QR5/QS5 DIMENSIONAL DATA

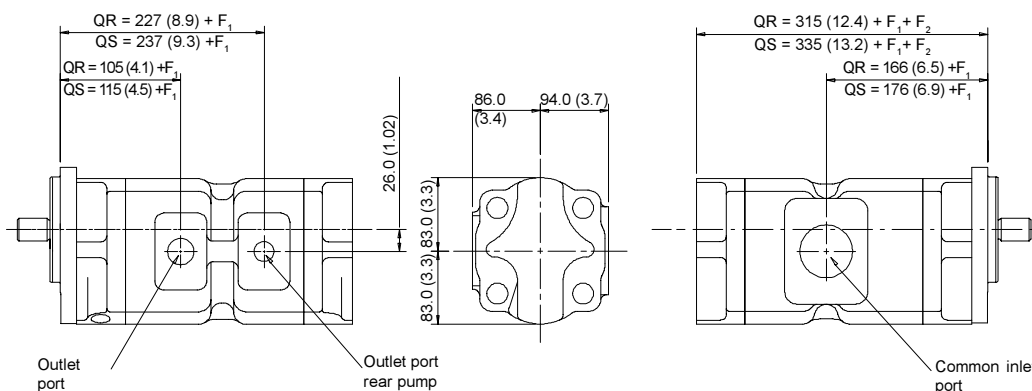
**Note** Drawings show clockwise rotation pumps. For anti-clockwise rotation pumps reverse the inlet and outlet port positions. (Rotation convention - view from pump shaft end).

Full detailed dimensions are shown on the relevant pages covering drive shafts, mounting flanges and ports.

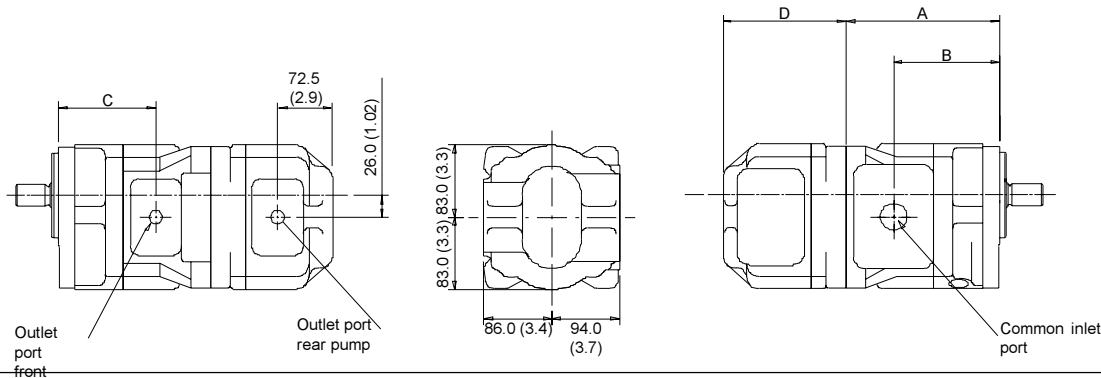
**SINGLE PUMPS** - standard ports Code **A** Example R1A5045B21 **A** 1H1DA



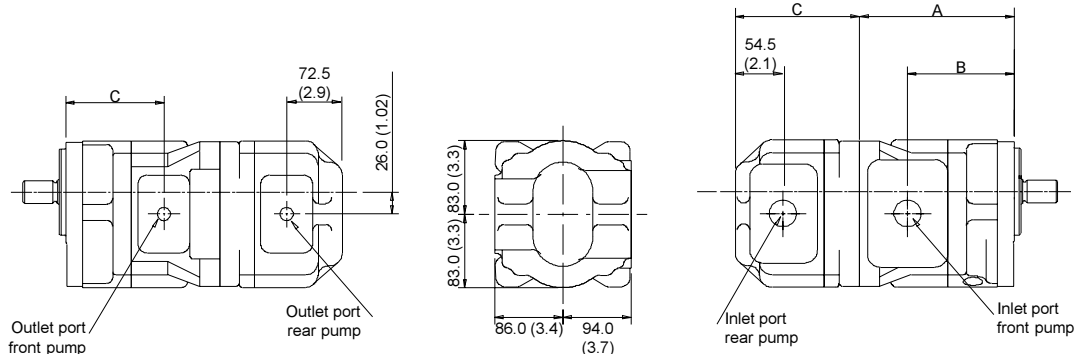
**DUAL PUMPS** - 1 inlet/2 outlets Code **C** Example R1A50455045B22 **C** 1L1D1L1DA



**DOUBLE PUMPS** - 1 inlet/2 outlets Code **A** Example R1A50455045B22 **A** 1L1D1L1DA



**DOUBLE PUMPS** - 2 inlets/2 outlets Code **B** Example R1A50455045B22 **B** 1H1D1H1DA



**TRIPLE AND QUADRUPLE PUMPS** - See Pages 38 and 39.

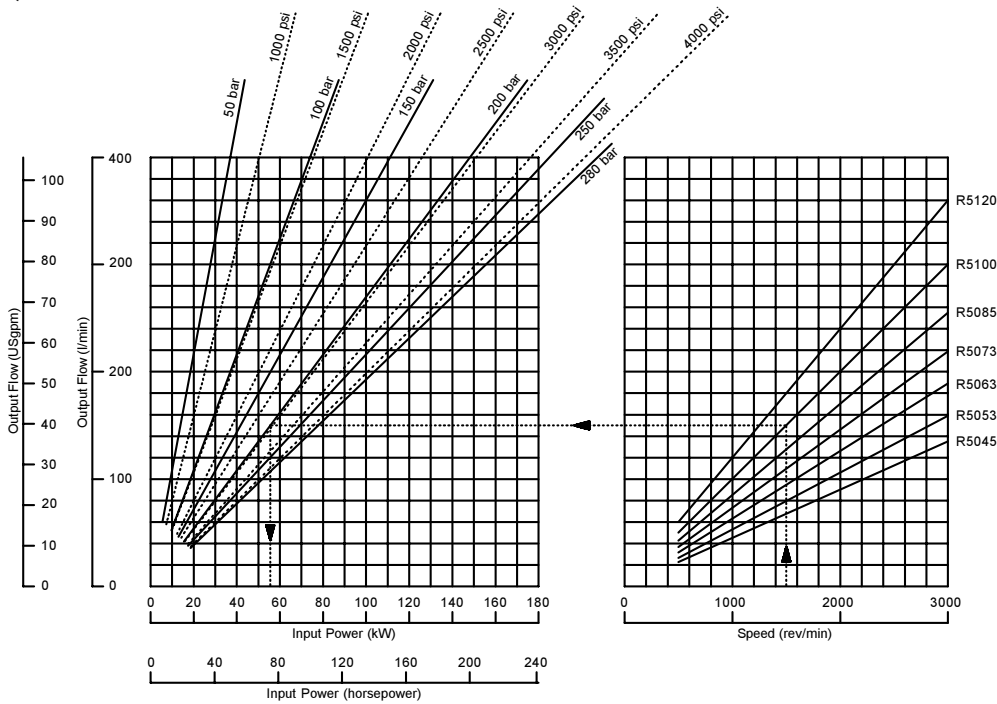
# QR5/QS5 DIMENSIONAL DATA

PUMP	A mm (in)	B mm (in)	C mm (in)	D mm (in)	F1 Front Pump mm (in)	F2 Rear Pump mm (in)	WEIGHT kg (lb)		
							Single*	Front*	Rear*
<b>R5045</b>	178 (7.0)	123 (4.8)	105 (4.1)	144 (5.7)	0	0	19.7 (43.3)	23.2 (51.9)	17.2 (37.8)
<b>R5053</b>	182 (7.2)	127 (5.0)	109 (4.3)	148 (5.8)	4 (0.2)	4 (0.2)	20.8 (45.8)	24.3 (53.5)	18.3 (40.3)
<b>R5063</b>	187 (7.4)	133 (5.2)	115 (4.5)	154 (6.1)	10 (0.4)	10 (0.4)	21.7 (47.7)	25.2 (55.4)	19.2 (42.2)
<b>R5073</b>	193 (7.6)	138 (5.2)	120 (4.7)	159 (6.3)	15 (0.6)	15 (0.6)	22.5 (49.5)	26.0 (57.2)	20.0 (44.0)
<b>R5085</b>	199 (7.8)	145 (5.7)	127 (5.0)	166 (6.5)	22 (0.9)	22 (0.9)	23.5 (51.7)	27.0 (59.4)	21.0 (46.2)
<b>R5100</b>	207 (8.2)	153 (6.0)	135 (5.3)	174 (6.8)	30 (1.2)	30 (1.2)	25.0 (55.0)	28.5 (62.7)	22.5 (49.5)
<b>R5120</b>	218 (8.6)	164 (6.4)	146 (5.7)	185 (7.3)	40 (1.6)	40 (1.6)	26.5 (58.3)	30.0 (66.0)	24.0 (52.8)
<b>S5045</b>	188 (7.4)	133 (5.2)	115 (4.5)	154 (6.0)	0	0	24.0 (53.0)	27.5 (60.5)	21.5 (47.3)
<b>S5051</b>	192 (7.6)	138 (5.4)	120 (4.7)	159 (6.2)	5 (0.2)	5 (0.2)	24.5 (54.0)	28.0 (61.6)	22.0 (48.4)
<b>S5060</b>	199 (7.8)	145 (5.7)	127 (5.0)	166 (6.5)	12 (0.5)	12 (0.5)	25.0 (55.0)	28.5 (62.7)	22.5 (49.5)
<b>S5070</b>	207 (8.1)	152 (6.0)	134 (5.3)	173 (6.8)	20 (0.8)	20 (0.8)	25.5 (26.0)	29.0 (63.8)	23.0 (50.6)
<b>S5085</b>	218 (8.6)	164 (6.4)	146 (5.7)	185 (7.3)	31 (1.2)	31 (1.2)	26.8 (59.0)	30.3 (66.7)	24.3 (50.0)

**\* Note**                      Weights are approximate  
Double pump weight        =                      (front + rear) weights  
Dual pump weight            =                      (front + rear) weights - 6 kg (13 lb)

# QR5/QS5 PERFORMANCE DATA

## QR5 SERIES

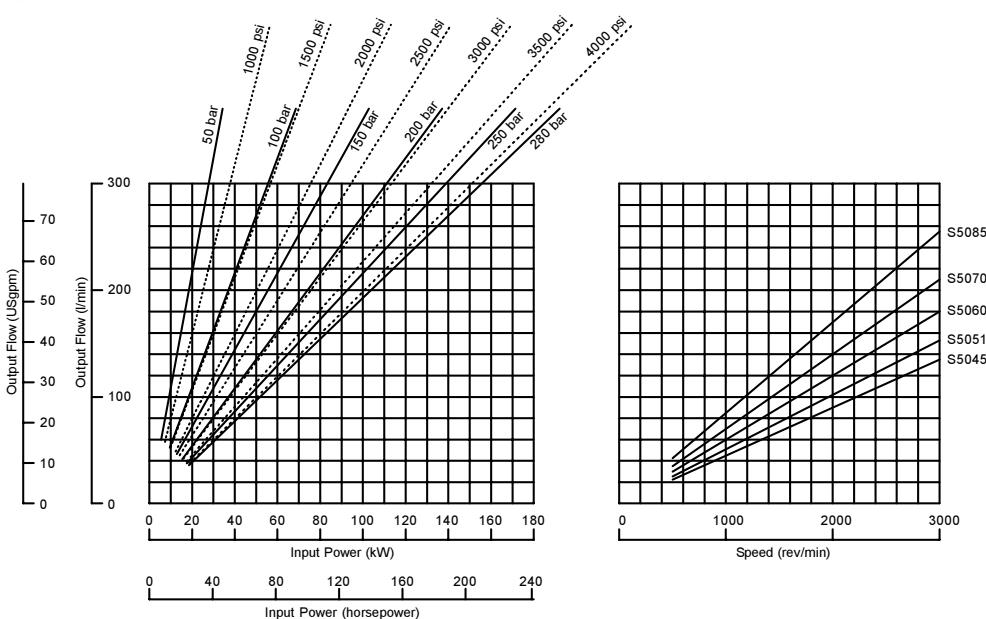


OUTPUT FLOWS are theoretical. Generally volumetric efficiencies are in excess of 95%. Your David Brown Hydraulics representative will advise for specific conditions.

INPUT POWERS are actual, taking into account average efficiencies. Please consult your David Brown Hydraulics representative when output pressure is less than 50 bar.

*Example* R5100 at 1500 rev/min gives output flow of 150 l/min (39.6 US gal/min) and requires 56 kW (75 hp) to drive it at 200 bar (2900 psi).

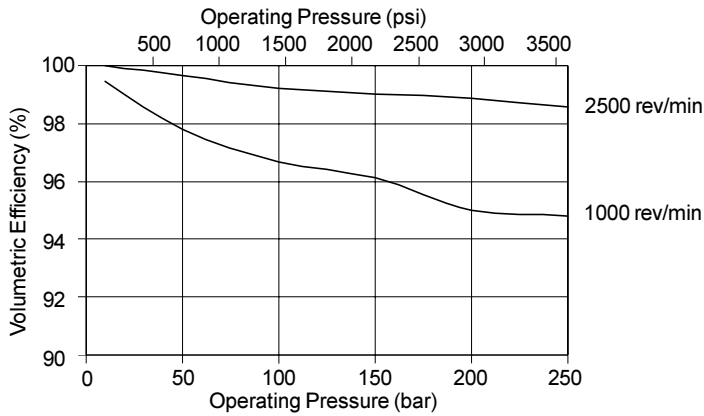
## QS5 SERIES



Curves drawn for average pumps at 50°C (120°F) - fluid viscosity 23 mm<sup>2</sup>/sec (110 SSU).

# QR5/QS5 EFFICIENCIES, NOISE LEVELS, MOMENTS OF INERTIA

## PUMP EFFICIENCIES

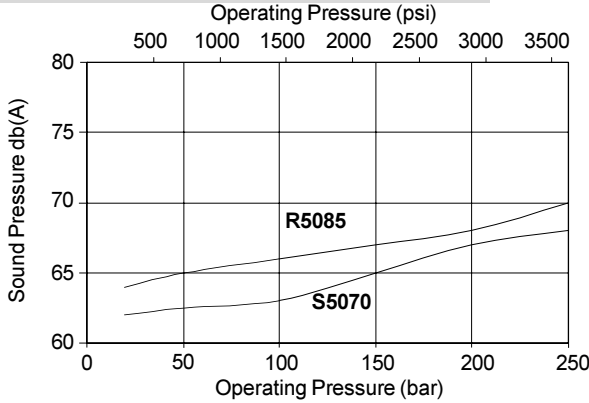


All Q Series pumps share very high efficiencies. The graph shows typical QS5 volumetric efficiency curves at 1000 and 2500 rev/min.

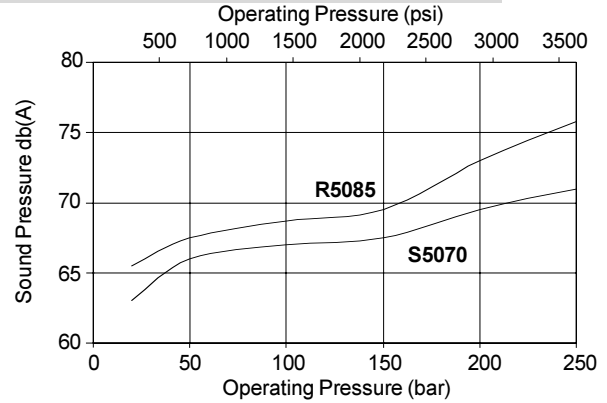
## NOISE LEVELS

As described on Page 6, the reduction of noise levels was a major factor in the development of the Q Series pumps. The following graphs show QR5 and QS5 sound pressure levels at one metre from the pump obtained in accordance with ISO 9614-4.

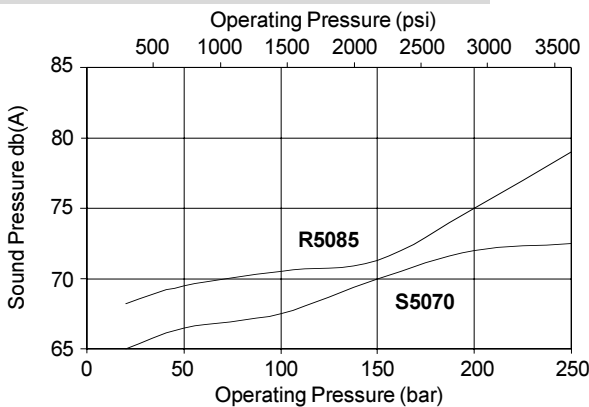
**Q5 Sound Pressure at 1 metre - 1000 rpm**



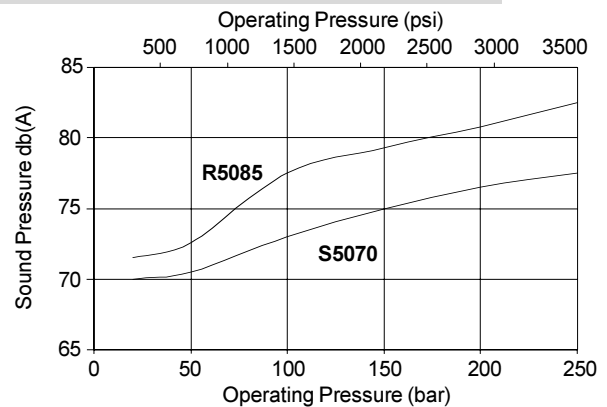
**Q5 Sound Pressure at 1 metre - 1500 rpm**



**Q5 Sound Pressure at 1 metre - 1800 rpm**



**Q5 Sound Pressure at 1 metre - 2500 rpm**



## MOMENTS OF INERTIA

### QR5 SERIES

PUMP SIZE		R5045	R5053	R5063	R5073	R5085	R5100	R5120
Moment of Inertia	kg cm <sup>2</sup> (lb in <sup>2</sup> )	5.18 (1.76)	5.70 (1.94)	6.33 (2.15)	6.95 (2.38)	7.71 (2.62)	8.65 (2.94)	9.91 (3.37)

### QS5 SERIES

PUMP SIZE		S5045	S5051	S5060	S5070	S5085	S5100
Moment of Inertia	kg cm <sup>2</sup> (lb in <sup>2</sup> )	7.18 (2.44)	7.68 (2.61)	8.44 (2.87)	9.28 (3.15)	10.54 (3.58)	12.40 (4.22)

# QR5/QS5 SHAFT SEALS AND DRIVE SHAFTS

## SHAFT SEALS

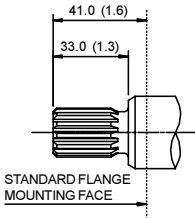
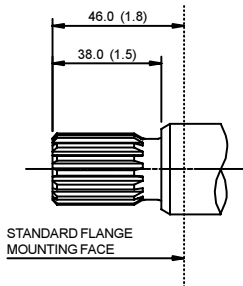
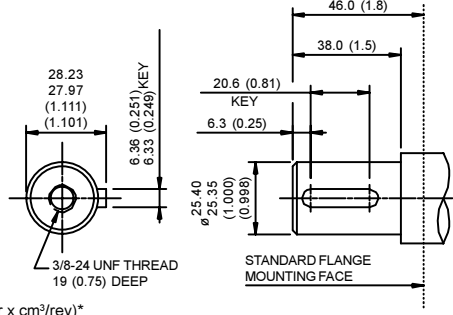
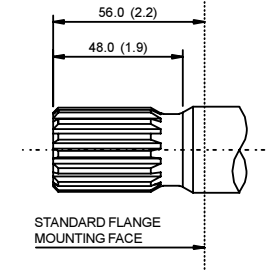
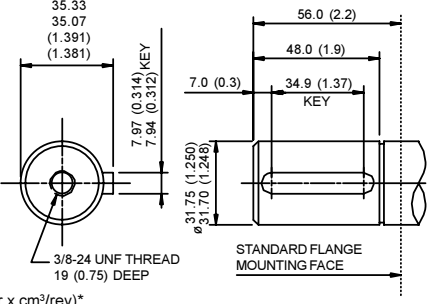
Code **A** Shaft seal and wiper for external drives

*Example* R1 **A**5045AZ1A1H1DA

Code **C** Shaft seal, wiper and seal with tell-tale hole for torque converter and gearbox drives. The tell-tale hole indicates leakage before mixing of fluids can occur.

*Example* R1 **C**5045A2A1H1DA

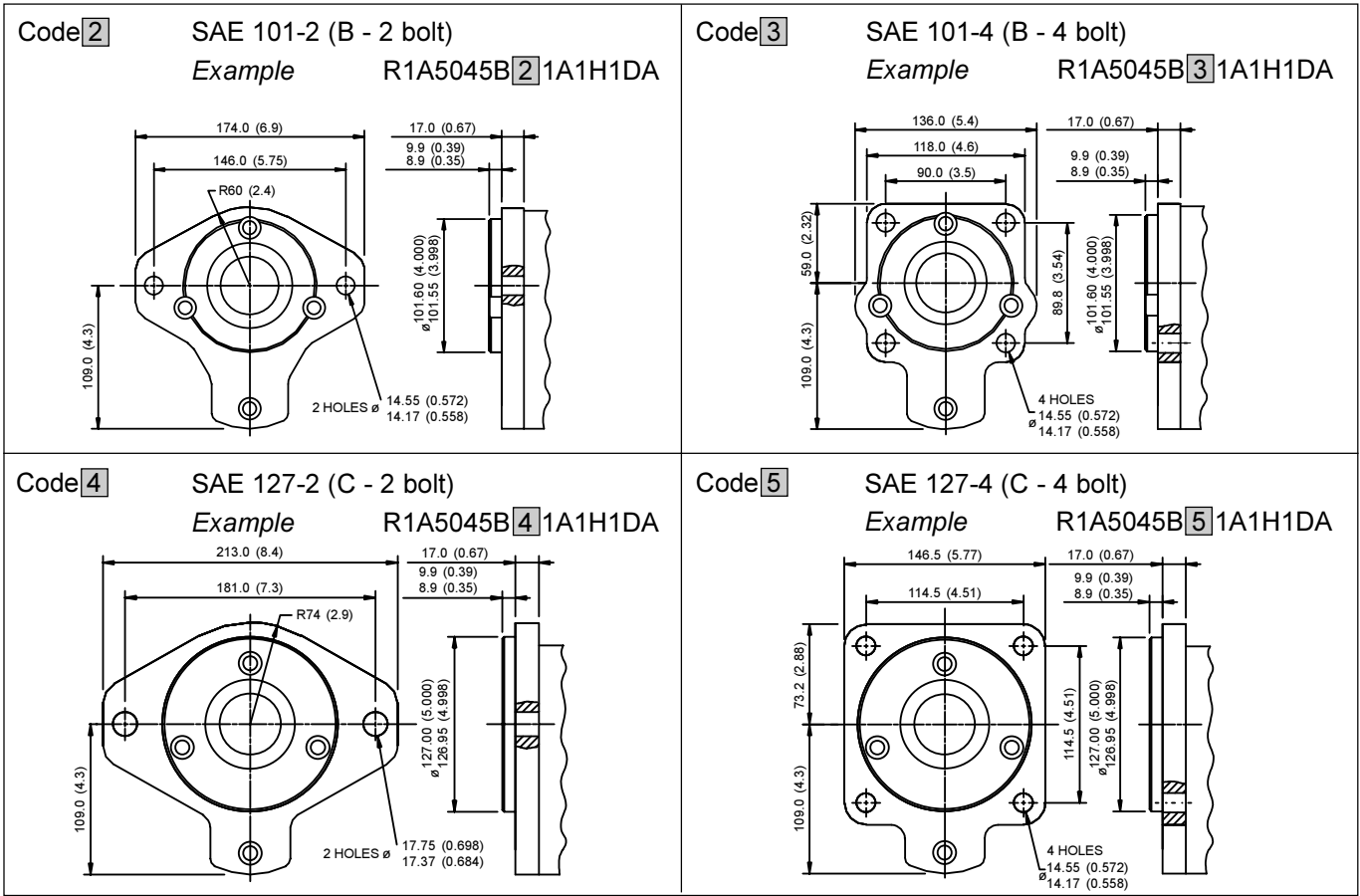
## DRIVE SHAFTS

<p>Code <b>B</b> SAE 22-4 (B) 7/8" spline <i>Example</i> R1A5045 <b>B</b>21A1H1DA</p> <p>INVOLUTE SPLINE 9 TEETH 16/32 DP FLAT ROOT SIDE FIT 30° PRESSURE ANGLE MAJOR DIA: 21.79/21.69 (0.858/0854)</p>  <p><math>p \times D = 14226</math> (bar x cm<sup>3</sup>/rev)* <math>p \times D = 12590</math> (psi x cu.in/rev)*</p>	
<p>Code <b>Q</b> SAE 25-4 (BB) 1" spline <i>Example</i> R1A5045 <b>Q</b>21A1H1DA</p> <p>INVOLUTE SPLINE 15 TEETH 16/32 DP FLAT ROOT SIDE FIT 30° PRESSURE ANGLE MAJOR DIA: 24.97/24.87 (0.983/0.979)</p>  <p><math>p \times D = 22450</math> (bar x cm<sup>3</sup>/rev)* <math>p \times D = 19869</math> (psi x cu.in/rev)*</p>	<p>Code <b>H</b> SAE 25-1 (BB) 1" parallel <i>Example</i> R1A5045 <b>H</b>21A1H1DA</p>  <p><math>p \times D = 22450</math> (bar x cm<sup>3</sup>/rev)* <math>p \times D = 19869</math> (psi x cu.in/rev)*</p>
<p>Code <b>C</b> SAE 32-4 (C) 1.1/4" spline <i>Example</i> R1A5045 <b>C</b>2A1H1DA</p> <p>INVOLUTE SPLINE 14 TEETH 12/24 DP FLAT ROOT SIDE FIT 30° PRESSURE ANGLE MAJOR DIA: 31.22/31.12 (1.229/1.225)</p>  <p><math>p \times D = 45565</math> (bar x cm<sup>3</sup>/rev)* <math>p \times D = 40325</math> (psi x cu.in/rev)*</p>	<p>Code <b>G</b> SAE 32-1 (C) 1.1/4" parallel <i>Example</i> R1A5045 <b>G</b>21A1H1DA</p>  <p><math>p \times D = 45565</math> (bar x cm<sup>3</sup>/rev)* <math>p \times D = 40325</math> (psi x cu.in/rev)*</p>

\* p = pressure, D = displacement. The stated values must not be exceeded.

**Note** For multiple pumps the sum of the p x D values must not exceed the stated value. See Page 38.

# QR5/QS5 MOUNTING FLANGES



## SAE FLANGE PORT DETAILS

SAE code 61.

Standard pressure series.

# QR5/QS5 PORT POSITIONS & TYPES, SAE FLANGE DETAILS

## NUMBER OF PUMP SECTIONS AND INLET PORT POSITIONS

Code **A**

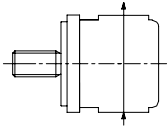


Fig 1

Code **C**

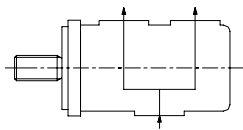


Fig 2

Code **B**

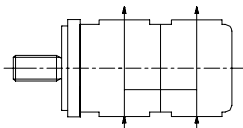


Fig 3

Code **A**

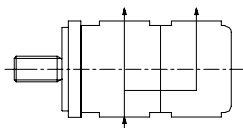
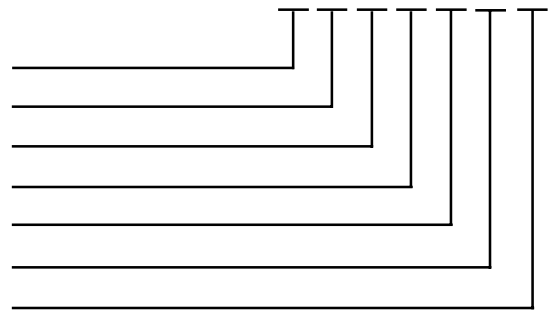


Fig 4

### SINGLE PUMP Example

**R 1 A 5 0 6 3 Q 5 1 A 1 H 1 D C**

Number of pump sections  
 Inlet port position - see fig 1  
 Inlet port type - see table 1  
 Inlet port size - see table 1  
 Outlet port type - see table 2  
 Outlet port size - see table 2  
 Rotation - viewed from shaft

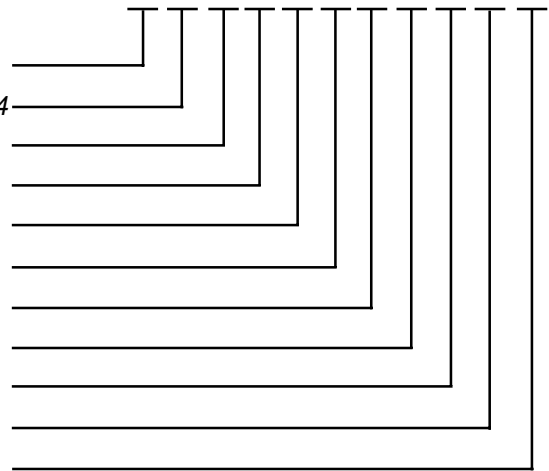


A = anti-clockwise  
 C = clockwise

### MULTI PUMP (with single inlet port) Example

**R 1 A 5 0 8 5 R 5 0 5 3 C 3 2 C 1 0 3 F 0 X 1 D C**

Number of pump sections  
 Inlet port position - see figs 2, 3 or 4  
 1st Inlet port type - see table 1  
 1st Inlet port size - see table 1  
 1st Outlet port type - see table 2  
 1st Outlet port size - see table 2  
 2nd Inlet port type - see table 1  
 2nd Inlet port size - see table 1  
 2nd Outlet port type - see table 2  
 2nd Outlet port size - see table 2  
 Rotation - viewed from shaft



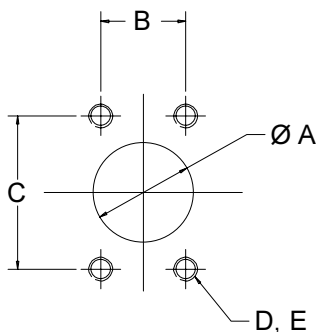
A = anti-clockwise  
 C = clockwise

**MULTIPLE PUMPS** - Please consult your David Brown Hydraulics' representative.

### SAE FLANGE PORT DETAILS

SAE code 61.

Standard pressure series



SAE FLANGE SIZE	A mm (in)	B mm (in)	C mm (in)	D	CODE <sup>1</sup> CODE <sup>2</sup>	E DEPTH mm (in)
1"	25.4 (1.00)	26.0 (1.031)	52.4 (2.062)	M10x1.5		22.4 (.88)
	1.1/4"	31.8 (1.25)	30.0 (1.188)	58.7 (2.312)	M10x1.5	
1.1/2"		38.1 (1.50)	35.7 (1.406)	70.0 (2.750)	M12x1.75	
	2"	50.8 (2.00)	42.9 (1.688)	77.9 (3.062)	M12x1.75	
2.1/2"		63.5 (2.50)	50.8 (2.0)	89 (3.50)	M12x1.75	



# QR5/QS5 PORT OPTIONS

**INLET PORT OPTIONS - Table 1**

Port Type	SINGLE PUMP INLET PORT OPTIONS												COMMON INLET PORT OPTIONS					DUAL INLET PORT OPTION									
Port Type Code	1				2				4				1					2									
Port Type	SAE Flange Metric				SAE Flange UNC				UNF O-ring				SAE Flange Metric					SAE Flange UNC									
Port Size Code	D	F	H	K	D	F	H	K	C	E	G	J	D	F	H	K	L	D	H	K	L	H	K	L	H	K	L
Port Size	1	1.1/4	1.1/2	2	1	1.1/4	1.1/2	2	7/8	1.1/16	1.5/16	1.5/8	1	1.1/4	1.1/2	2	2.1/2	1	1.1/4	2	2.1/2	1.1/2	2	2.1/2	1.1/2	2	2.1/2
R5045	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
R5053	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
R5063	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
R5073	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
R5085	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
R5100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
R5120	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
S5045	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
S5051	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
S5060	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
S5070	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
S5085	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- Preferred port size
- Non-preferred port size

**Note:** When coding, for single inlet multiple pumps, use 'O' in '2nd inlet port position' and 'X' in '2nd inlet port type' in the model number.

**OUTLET PORT OPTIONS - Table 2**

Port Type Code	3				1				2				4			
Port Type	BSPP				SAE Flange Metric				SAE Flange UNC				UNF O-ring			
Port Size Code	A	B	D	F	A	B	D	F	A	B	D	F	C	E	G	J
Port Size	1/2	3/4	1	1.1/4	1/2	3/4	1	1.1/4	1/2	3/4	1	1.1/4	7/8	1.1/16	1.5/16	1.5/8
R5045	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
R5053	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
R5063	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
R5073	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
R5085	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
R5100	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
R5120	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
S5045	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
S5051	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
S5060	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
S5070	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
S5085	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- Preferred port size
- Non-preferred port size



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