

## SPECIFICATIONS

### General

Type	:	Pilot operated pressure relief
Design	:	Poppet type
Mounting	:	Subplate/Cartridge/
Mounting position	:	Optional
Port sizes (nominal)	:	3/8", 3/4", 1 1/4"
Direction of flow	:	P → T
Ambient temperature	:	--20° C...+60° C (--4° F...+140° F)
Special working conditions	:	Consult VELJAN

### Hydraulics

Pressure control range	:	100 - 5000 psi (7 - 350 bar)
Maximum operating pressure	:	
Port A (inlet)		5000 psi (350 bar)
Port B (outlet)		425 psi (30 bar)
Port X (pilot)		5000 psi (350 bar)
Port Y, Y <sub>1</sub> (Pilot drain )		425 psi (30 bar)
	:	VR6V 03 (3/8")      VR6V 06 (3/4")      VR6V 10 (1 1/4")
Nominal flow gpm (lpm)	:	16.0 (60)      53.0 (200)      119.0 (450)
Maximum flow gpm (lpm)	:	24.0 (90)      80.0 (300)      159.0 (600)
Fluid	:	Mineral oil as per DIN 51524/25 or other fluids on request
Fluid Temperature Range	:	--18° C...+80° C (0° F...+176° F)
Viscosity Range	:	10 to 650 cSt (60 to 3900 SSU)
Optimum operating viscosity	:	30 cSt (180 SSU)
Seal compatibility	:	Code 1 (Buna N) or Code 5 (Viton) (contact Veljan with specific oil details)
Cleanliness recommended	:	Better than NAS 1638 Class 8 or ISO 17/14

### Adjustment

Manual	:	Handwheel
Rotation	:	3.75 rev.
Operating torque	:	0.72 Nm
Electricals ( Vent Vavle VVV01)	:	Solenoid
Nominal voltage	:	Refer to Ordering Code
Permissible voltage fluctuation	:	+5%...--10%
Max. coil temperature	:	+155° C (311° F)
Type of current	:	Alternating Current (AC)/Direct Current (DC)
Input power	:	31 W
Holding	:	78 VA
Inrush	:	264 VA
Relative operating period	:	100%
Type of protection	:	I P 65

**PC**

**ORDERING CODE**

PC

**VR6V 06 - 5 3 5 - 1 0 - 09 - W07 - A 1 M**

**Series**

**Size**

- 03 - 3/8"
- 06 - 3/4"
- 10 - 1 1/4"

**Max. Pressure of Valve Body**

- 0 - for cartridges only
- 5 - 5000psi (350 bar)

**Body Mounting**

- 3 - Subplate mounting - VR4V03/06 /10 ISO  
(Y1 port - 1/4" NPTF ; with drain line code 2)
- 7 - Subplate mounting - VR4V03/06 /10 ISO  
(Y1 Port - SAE - 4 (7/16" - 20 UNF)
- 9 - Subplate mounting VR4V03/06 /10 ISO  
(Y1 Port - 1/4" B.S.P.P ; with drain line code 2)

**Pressure setting range**

- 1 - 100 - 1500 psi (7 - 105 bar)
  - 3 - 100 - 3000 psi (7 - 210 bar)
  - 5 - 100 - 5000 psi (7 - 350 bar)
- (\*For pressure range below 7 bar, please contact Veljan Denison)

**Omit for standard**  
M-M20 tapping  
(only for VR6V10)

**Seal Class**

- 1 - Buna N (Standard)
- 5 - Viton

**Design Letter**

**Solenoid Voltage**

- W01 - 115V/60 CY AC GOR - 12V DC
- W02 - 230V/60 CY AC GOQ - 24V DC
- W06 - 115V/50 CY AC GOH - 48V DC
- W07 - 230V/50 CY AC

**3-Way Vent Valve VVV01**

(Omit for non vent version)

- 09 - With manual override  
(Solenoid de-energized : open to tank.)  
(Solenoid energized vent line blocked)
- 10 - Without manual override  
(Solenoid de-energized : open to tank.)  
(Solenoid energized vent line blocked)
- 11 - With manual override  
(Solenoid de-energized : open to tank.)  
(Solenoid energized vent line blocked)
- 12 - Without manual override  
(Solenoid de-energized : open to tank.)  
(Solenoid energized vent line blocked)

**Pilot Connection**

- 0 - Internal
- 1 - External from subplate
- 2 - External from pilot head (Y1)

**Type of Control**

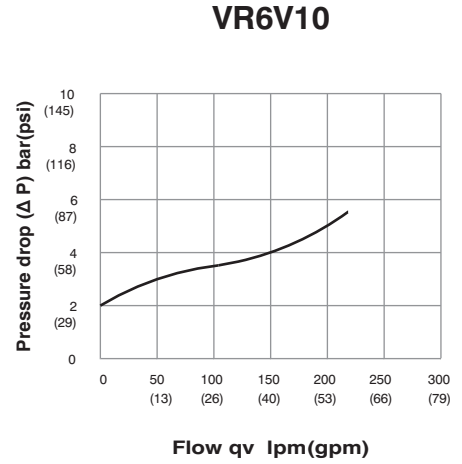
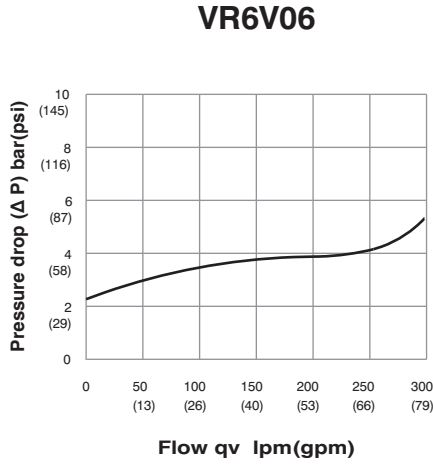
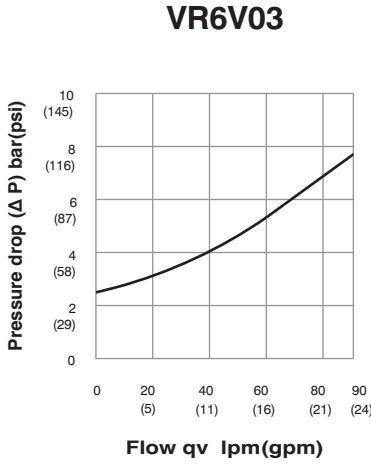
- 1 - Hand knob (32mm dia)
- 2 - Hand knob (50mm dia) (not for version with vent valve VVV01)
- 3 - Acorn nut with lead seal

PERFORMANCE CURVES

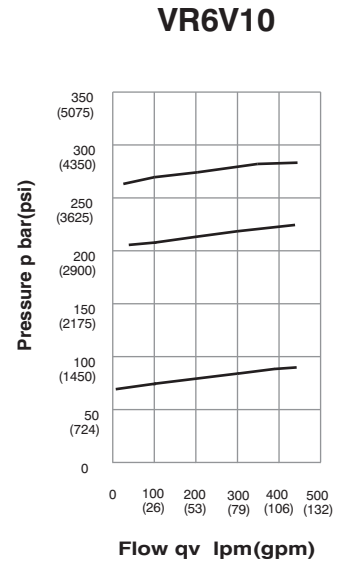
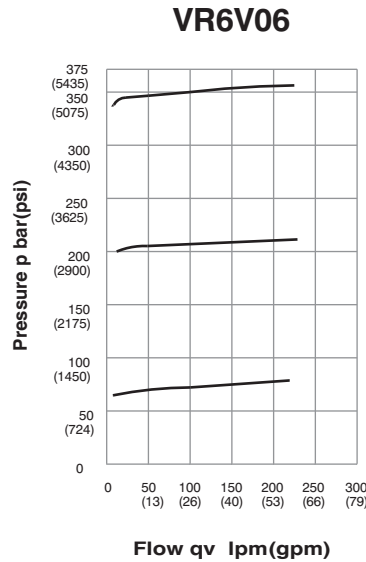
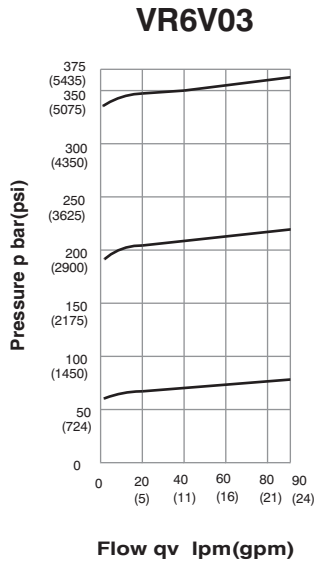
**$\Delta p - q_v$  - Characteristics**

(Fluid 60 cSt at 40°C  
Test temp. 50°C ± 10%)

PC

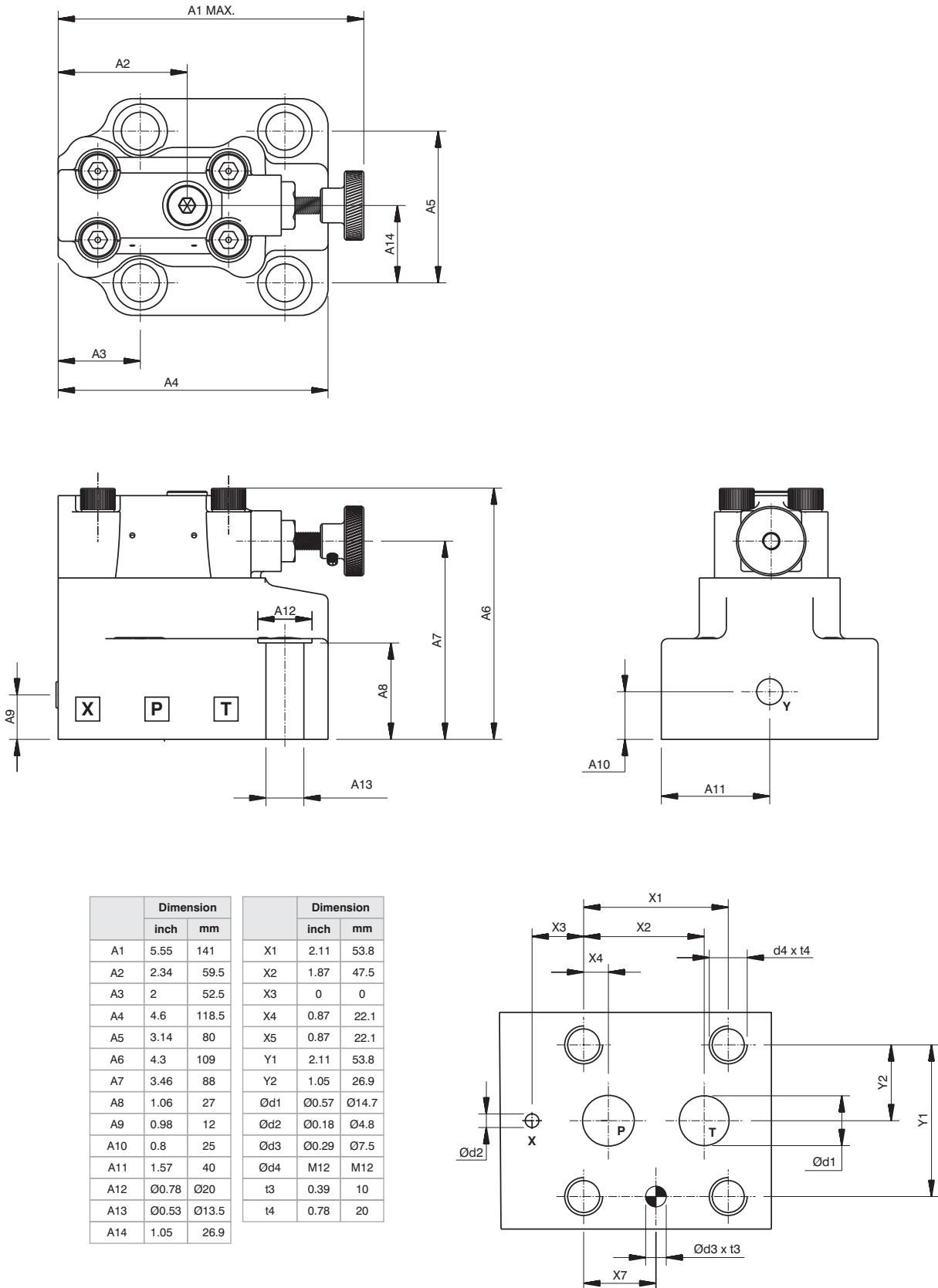


**P- $q_v$  - Characteristics**



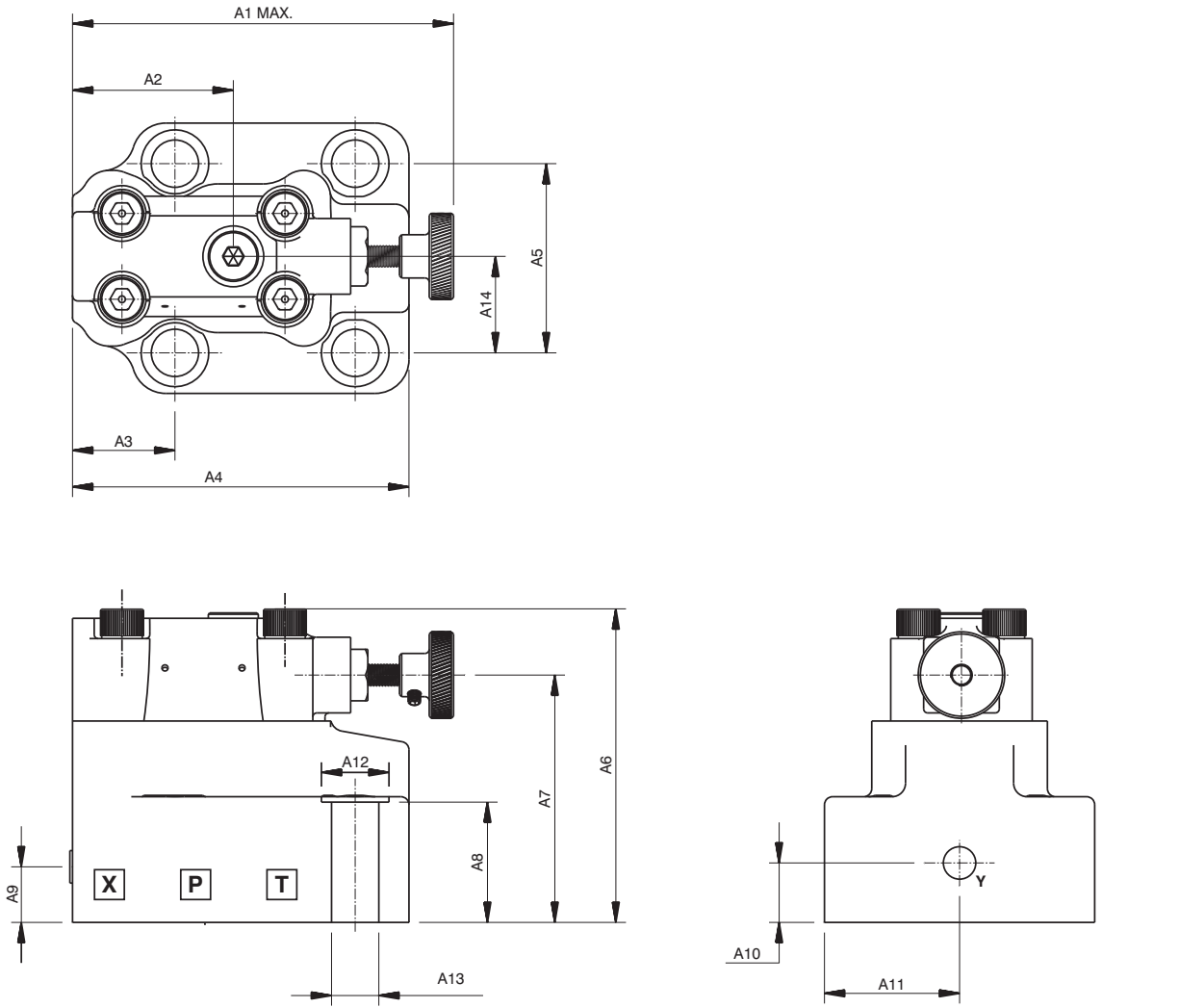
VR6V03 SUBPLATE MOUNTING BODY

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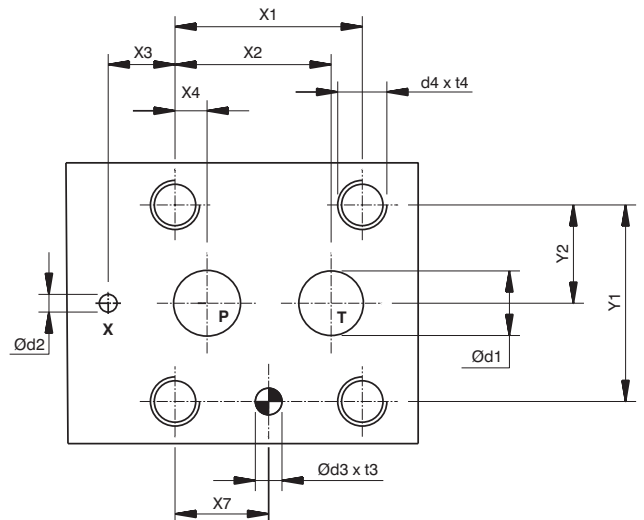


VR6V06 SUBPLATE MOUNTING BODY

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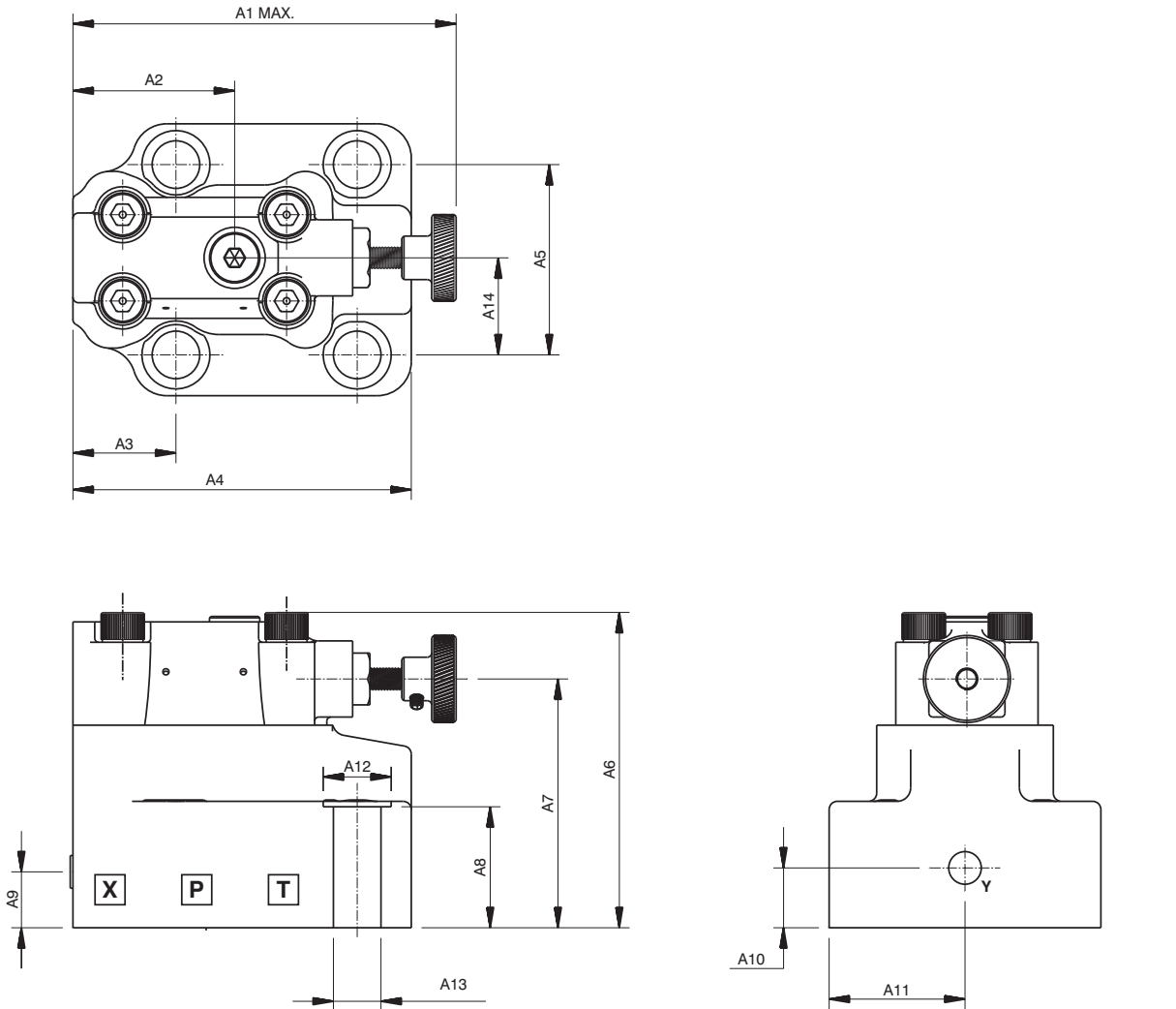


	Dimension			Dimension	
	inch	mm		inch	mm
A1	5.55	141	X1	2.62	66.7
A2	2.34	59.5	X2	2.18	55.6
A3	1.5	37.9	X3	0.93	23.8
A4	4.9	124.5	X4	0.43	11.1
A5	3.96	100	X5	1.31	33.4
A6	4.42	112.5	Y1	2.75	70
A7	3.6	91.5	Y2	1.37	35
A8	1.79	45.5	Ød1	Ø0.92	Ø23.4
A9	0.47	12	Ød2	Ø0.24	Ø6.3
A10	0.98	25	Ød3	Ø0.29	Ø7.5
A11	1.96	50	Ød4	M16	M16
A12	0.98	Ø25	t3	0.39	10
A13	0.688	Ø17.5	t4	1.06	27
A14	1.37	35			



VR6V10 SUBPLATE MOUNTING BODY

PC



	Dimension			Dimension	
	inch	mm		inch	mm
A1	5.55	141	X1	3.4	88.9
A2	2.34	59.5	X2	2.99	76.2
A3	1.77	45	X3	1.25	31.8
A4	6.02	153	X4	0.49	12.7
A5	4.7	120	X5	1.75	44.5
A6	4.62	117.5	Y1	3.25	82.6
A7	3.8	97	Y2	1.62	41.3
A8	2.04	52	Ød1	1.25	Ø32
A9	0.531	13.5	Ød2	0.24	Ø6.3
A10	1.04	26	Ød3	0.29	Ø7.5
A11	2.3	60	Ød4	M18	M18
A12	1.18	Ø30		M20	M20
	1.25	Ø32	t3	0.39	10
A13	0.68	Ø17.5	t4	1.1	28
	0.84	Ø21.5			
A14	1.62	41.3			

