

DOUBLE PUMP SYSTEM SAVER MODEL CODE

VT6 ** -* -*** -* -*** -** - NU - D - NV - C - GOQ - 1**

Pump Model Code

VT6CC,VT7QCC,VT7BB-VT7BBS,
VT6DC,VT7DB-VT7DBS, VT6EC,VT7EBS-VT7EB,
VT6ED,VT7ED-VT7EDS, VT6DDS,VT7DD-VT7DDS
VT6EE-VT6EES,VT7EE-VT7EES

(For Model code & Installation dimensions
please refer pages 19-21)

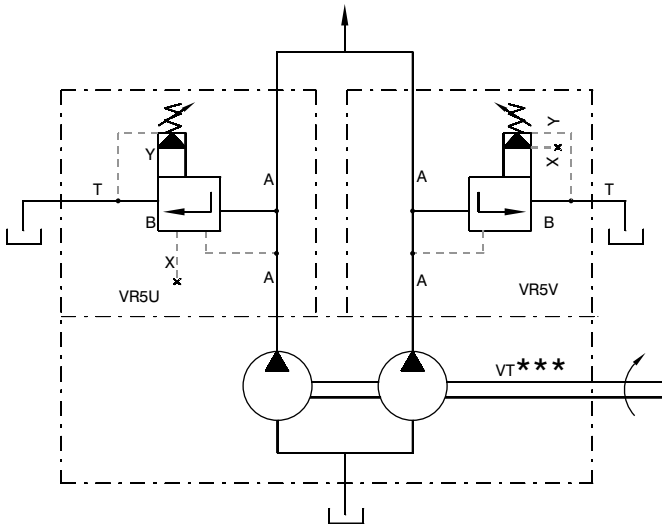
NU, UO, UB, NV, VO, VB

NU - Unloader
UO - Unloader with Vent valve (normally open)
UB - Unloader with Vent valve (normally closed)
NV - Relief valve
VO - Relief valve with Vent valve (normally open)
VB - Relief valve with Vent valve (normally closed)

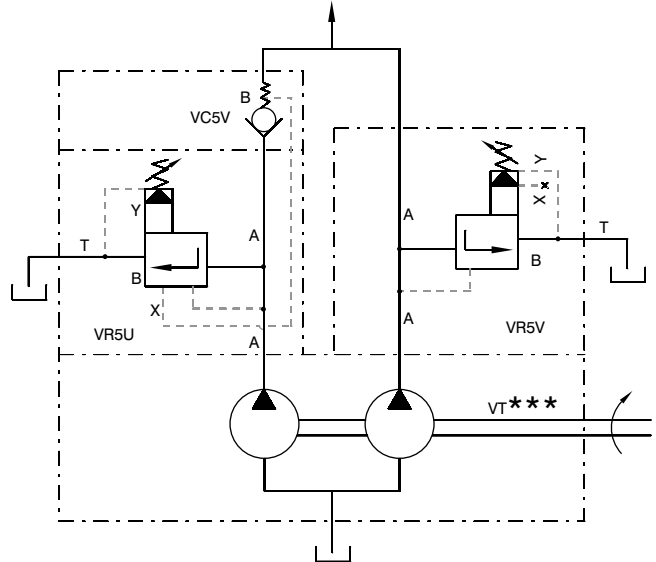
Check valve

D - Unloading check valve (For Model code & Installation dimensions
please refer pages 31-37)
C - Check valve
N - None

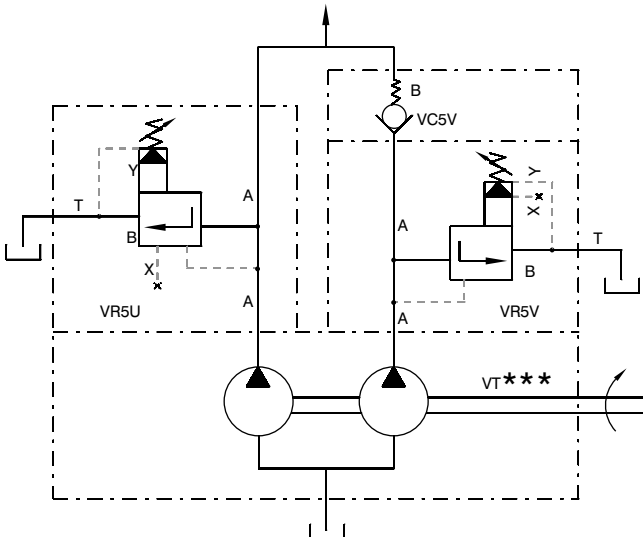
Relief/Unloader valve (NV/NU) - P1
Unloader/Relief valve (NU/NV) - P2



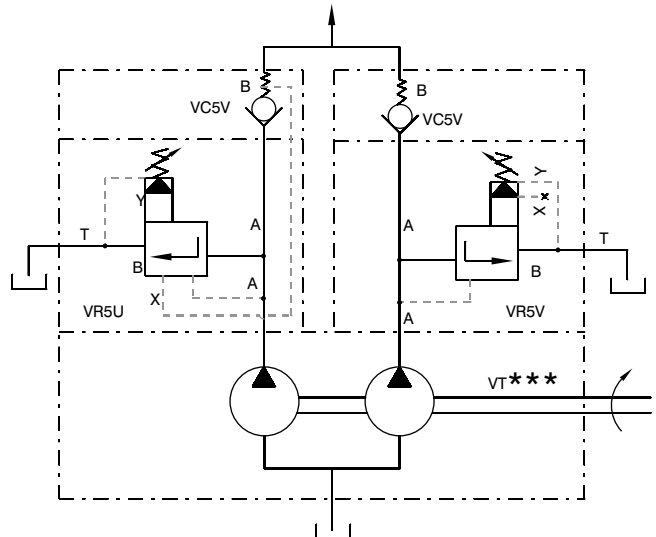
Relief/Unloader valve (NV/NU) - P1
Unloader/Relief with Check valve (NUD/NVC) - P2



Unloader/Relief with Check valve (NUD/NVC) - P1
Unloader/Relief valve (NU/NV) - P2



Unloader/Relief with Check valve (NUD/NVC) - P1
Unloader/Relief with Check valve (NUD/NVC) - P2



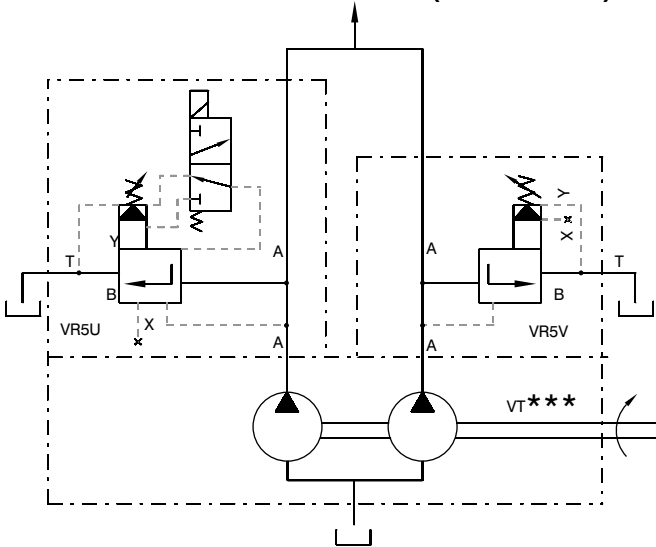
Termination/Connection

- 1 - BSP threaded port
- 2 - NPTF threaded port
- 3 - Socket weld flange

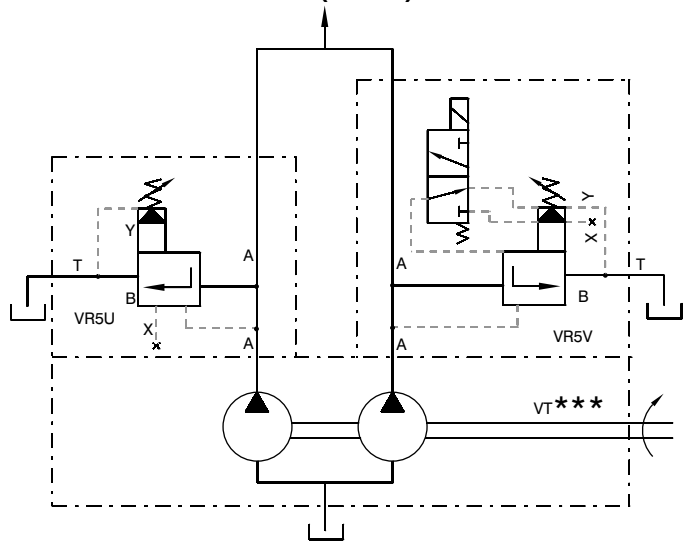
Voltage/Frequency

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

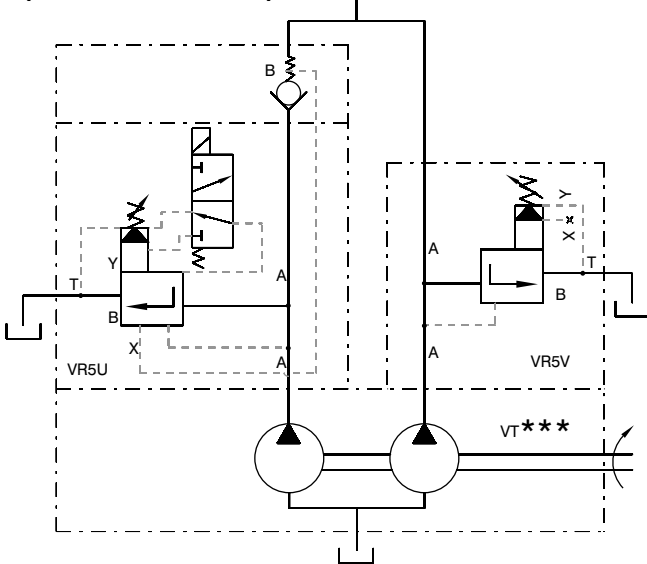
Relief/Unloader valve (NV/NU) - P1
Unloader/Relief with vent valve (UO-UB/VO-VB) - P2



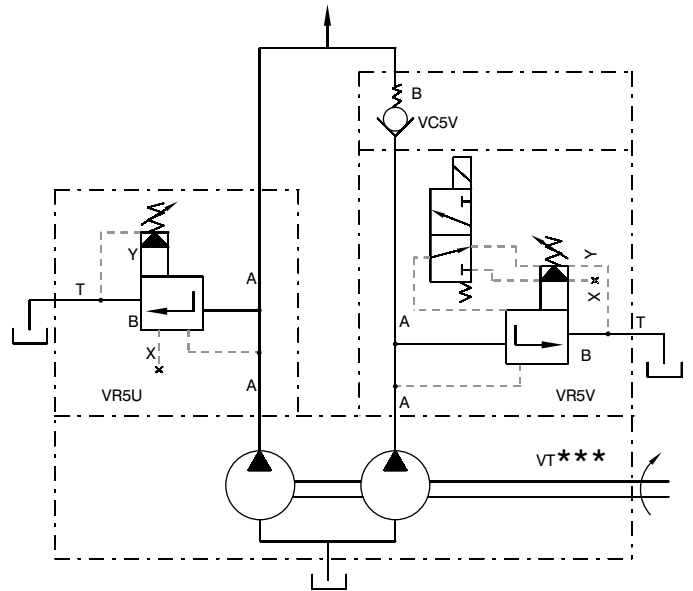
Unloader/Relief with vent valve (UO-UB/VO-VB) - P1
Relief/Unloader valve (NV/NU) - P2



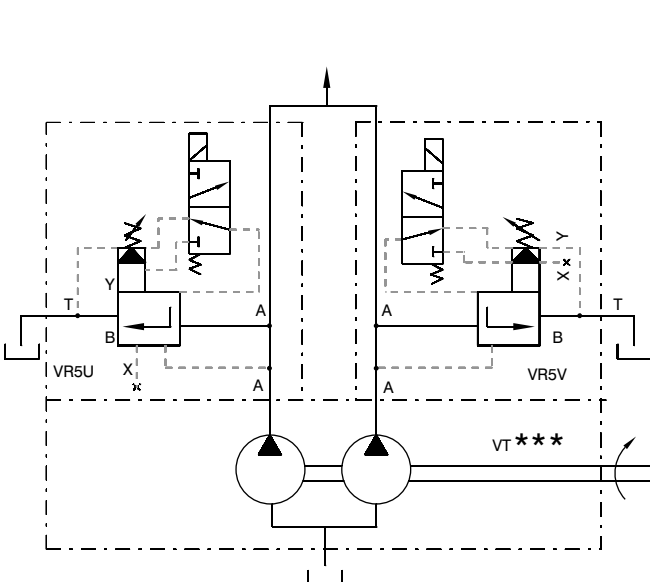
Relief/Unloader valve (NV/NU) - P1
Unloader/Relief with vent + Check valve (UOD-UBD/VOC-VBC) - P2



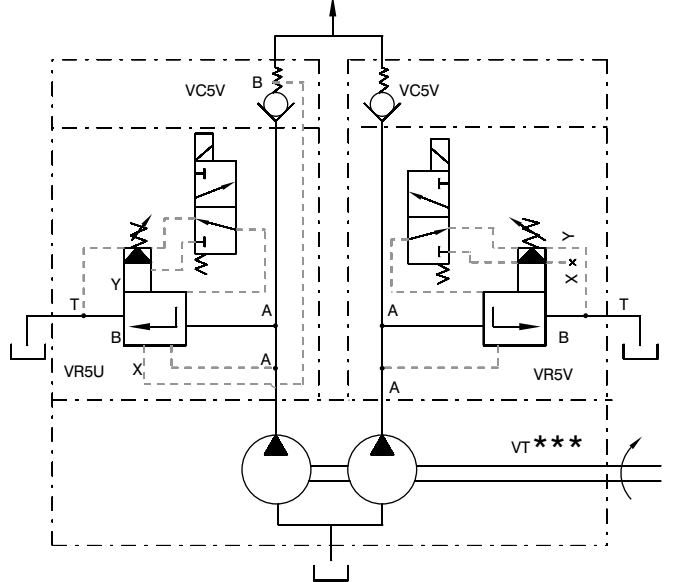
Unloader/Relief with vent + Check valve (UOD-UBD/VOC-VBC) - P1
Relief/Unloader valve (NV/NU) - P2



Unloader/Relief with vent valve (UO-UB/VO-VB) - P1
Unloader/Relief with vent valve (UO-UB/VO-VB) - P2

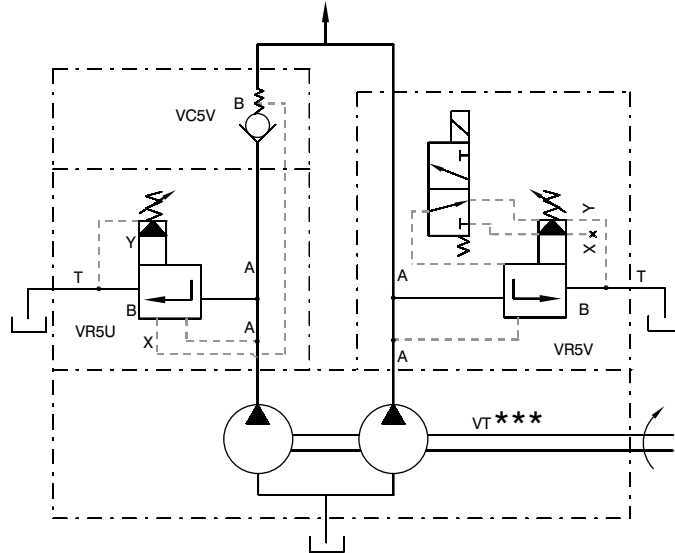


Unloader/Relief with vent + Check valve (UOD-UBD/VOC-VBC) - P1
Unloader/Relief with vent + Check valve (UOD-UBD/VOC-VBC) - P2



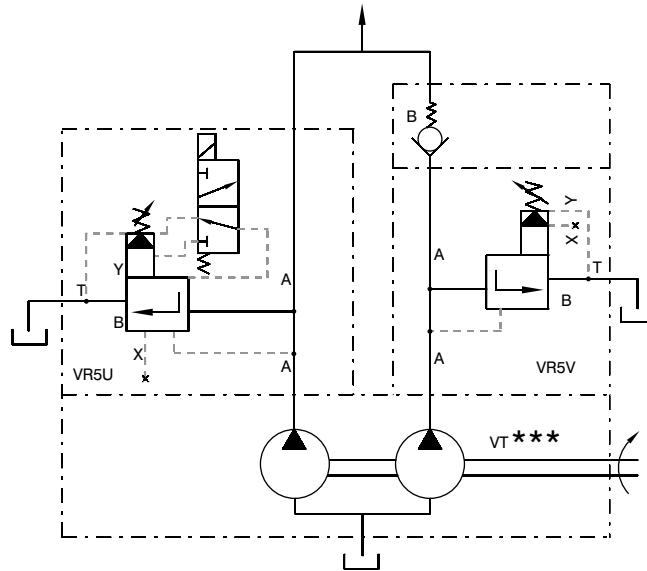
Relief/Unloader with vent valve (VO-VB/UO-UB) - P1

Unloader/Relief with Check vale (NUD/NVC) - P2



Relief/Unloader with Check valve (NVC/NUD) - P1

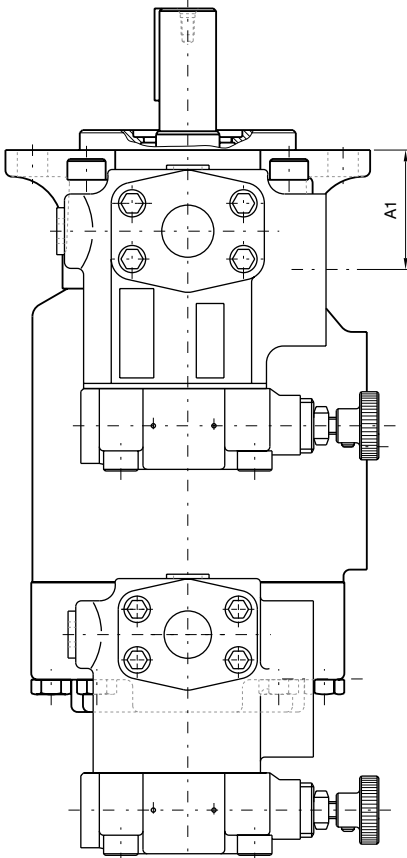
Relief/Unloader with vent valve (VO-VB/UO-UB) - P2



DOUBLE PUMP WITH RELIEF/ UNLOADER VALVE (NV - NU)

VT6EES,VT7EE-VT7EES

	Dimensions		Dimensions	
	in	mm	in	mm
A1	3.22	81.9	A6	7.75
A2	5.05	128.3	A7	5.46
A3	7.09	180.0	A8	BSP/NPTF
A4			Socket weld	8.56
BSP/NPTF	10.2	258.9	Socket weld	8.05
Socket weld	9.68	245.9	A9	3.64
A5	3.64	92.5		

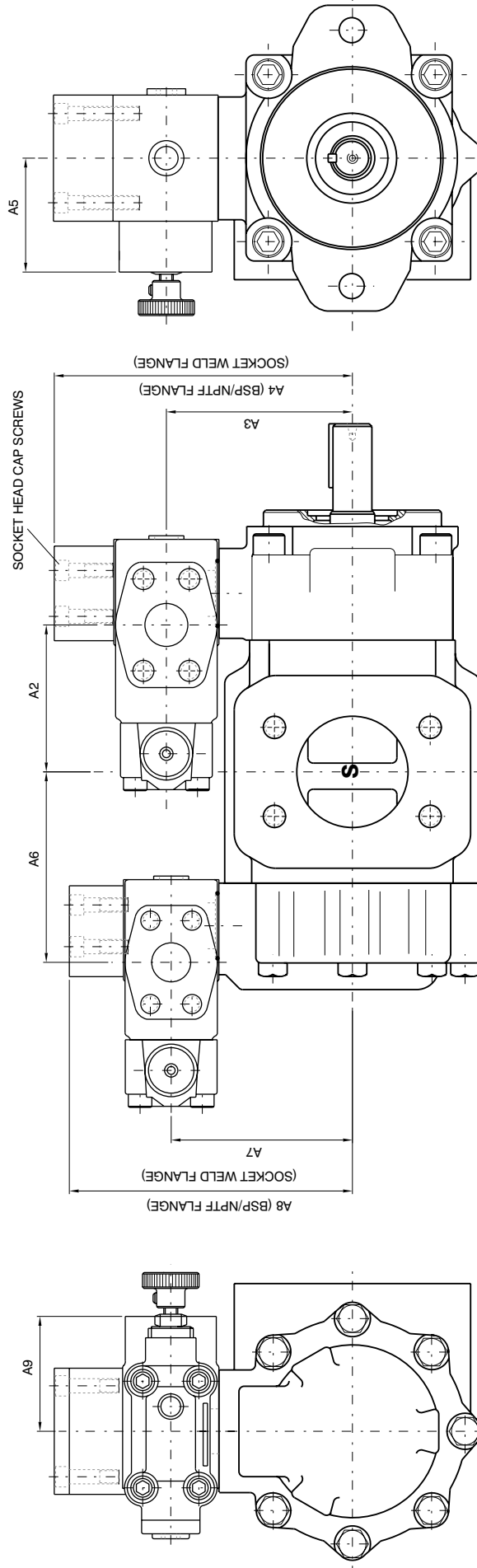


VT6CC/VT7BB/VT7GCC

	Dimensions		P2 (1")		P2 (3/4")	
	in	mm	in	mm	in	mm
A1	2.21	56.1	4.18	106.2	4.00	101.8
A2 *	3.29	83.6	A6 *	4.12	104.7	4.18
A3	4.18	106.2	A7	6.64	168.7	6.70
A4			A8	6.25	158.7	6.30
BSP/NPTF	6.70	170.2	Socket weld	6.25	158.7	6.30
Socket weld	6.30	160.2	A9	2.56	65.0	2.48
A5	2.56	65.0				

* VT7BBS/VT7QCC

A2 - 3.34 (85.0) A6 - 4.39 (111.6) (3/4") - 4.56 (116.0) (1")



VT6DDS,VT7DD-VT7DDS

	Dimensions		Dimensions	
	in	mm	in	mm
A1	2.66	67.6	A6	6.44
A2	4.68	119.0	A7	5.48
A3	4.73	120.1	A8	BSP/NPTF
A4 *			Socket weld	8.48
BSP/NPTF	7.74	196.6	Socket weld	7.89
Socket weld	7.15	181.6	A9	2.40
A5	2.40	61.0		

* VT7DD/VT7DDS
BSP/NPTF - 8.48 (215.6)
Socket weld - 7.89 (200.6)

VT6ED,VT7ED-VT7EDS

	Dimensions		Dimensions	
	in	mm	in	mm
A1	3.59	91.3	A6	6.99
A2	3.72	94.5	A7	5.48
A3	5.46	138.6	A8	BSP/NPTF
A4			Socket weld	8.48
BSP/NPTF	8.56	217.6	Socket weld	7.89
Socket weld	8.05	204.6	A9	2.40
A5	3.64	92.5		

VT6EC,VT7EB-VT7EBS

	Dimensions		Dimensions	
	in	mm	in	mm
A1	3.59	91.3	A6	6.09
A2	3.14	80.0	A7	4.12
A3	5.46	138.6	A8	6.64
A4			BSP/NPTF	168.7
BSP/NPTF	8.56	217.6	Socket weld	6.25
Socket weld	8.05	204.6	A9	2.56
A5	3.64	92.5		

VT6DC,VT7DB-VT7DBS

	Dimensions		Dimensions	
	in	mm	in	mm
A1	2.66	67.6	A6	5.02
A2	3.34	84.8	A7	4.12
A3	4.73	120.1	A8	6.64
A4			BSP/NPTF	168.7
BSP/NPTF	7.74	196.6	Socket weld	6.25
Socket weld	7.15	181.6	A9	2.56
A5	2.40	61.0		

DOUBLE PUMP WITH VO-VB/UO-UB (P1) AND NV/NU (P2)

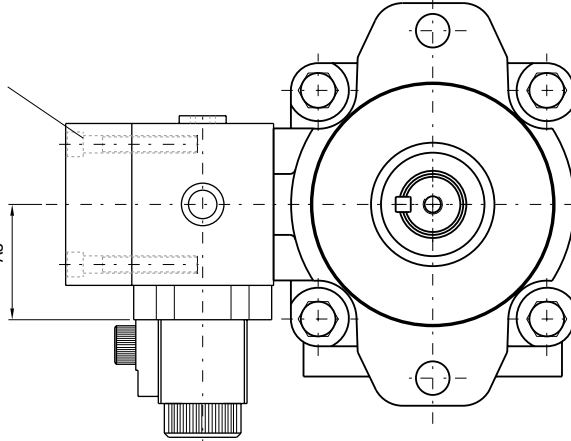
VT6CC,VT7BB,VT7QCC

Dimensions		P2 (1")		P2 (3/4")	
	in	mm	in	mm	mm
A1	2.21	56.1			
A2 *	3.29	83.6	A6 *	4.24	107.6
A3	4.18	106.2	A7	4.12	104.7
A4			A8		106.2
BSP/NPTF	6.70	170.2	BSP/NPTF	6.64	168.7
Socket weld	6.30	160.2	Socket weld	6.25	158.7
A5	2.56	65.0	A9	2.56	65.0

* VT7BBS,VT7QCC

A2 - 3.34 (85.0) A6 - 4.39 (111.6) (3/4") - 4.56 (116.0) (1")

SOCKET HEAD CAP SCREWS



VT6DDS,VT7DD-VT7DDS

Dimensions		P2 (1")		P2 (3/4")	
	in	mm	in	mm	mm
A1	2.66	67.6	A6	6.44	163.7
A2	4.68	119.0	A7	5.48	139.1
A3	4.73	120.1	A8		
A4 *			BSP/NPTF	8.48	215.6
BSP/NPTF	7.74	196.6	Socket weld	7.89	200.6
Socket weld	7.15	181.6	A9	2.40	61.0
A5	2.40	61.0			

* VT7DD-VT7DDS
BSP/NPTF - 8.48 (215.6)
Socket weld - 7.89 (200.6)

VT6ED,VT7ED-VT7EDS

Dimensions		P2 (1")		P2 (3/4")	
	in	mm	in	mm	mm
A1	3.59	91.3	A6	6.99	177.7
A2	3.72	94.5	A7	5.48	139.1
A3	5.46	138.6	A8		
A4 *			BSP/NPTF	8.48	215.6
BSP/NPTF	8.56	217.6	Socket weld	7.89	200.6
Socket weld	8.05	204.6	A9	2.40	61.0
A5	3.64	92.5			

VT6EC,VT7EB-VT7EBS

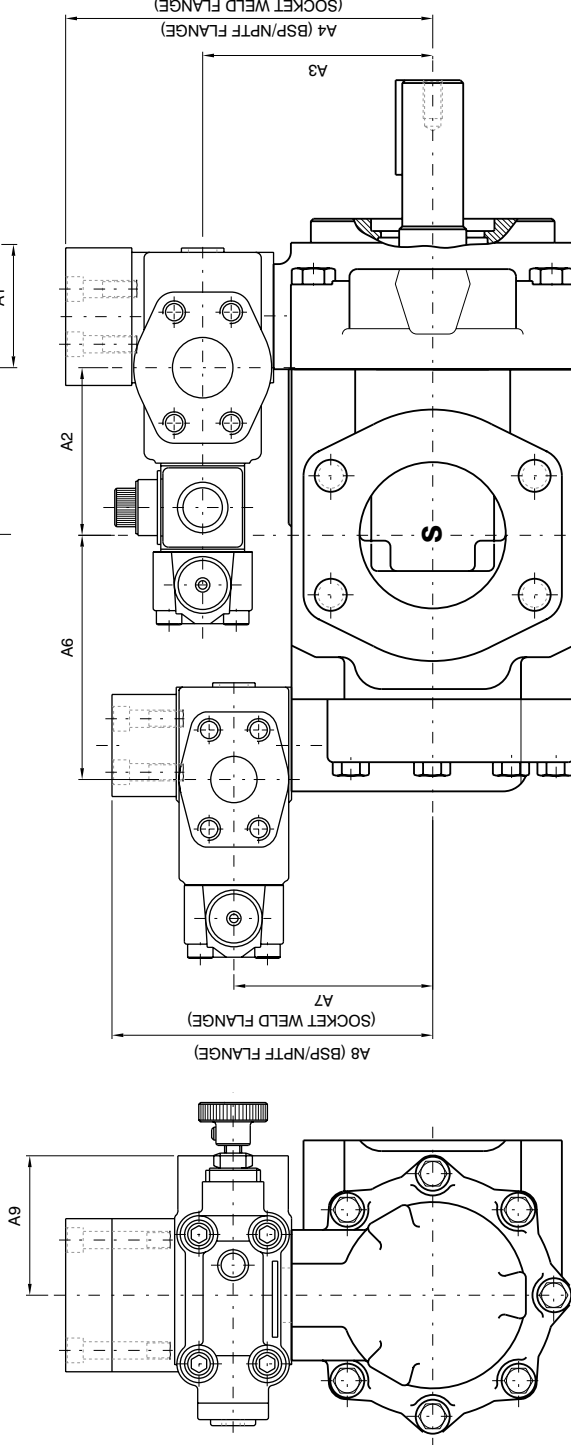
Dimensions		P2 (1")		P2 (3/4")	
	in	mm	in	mm	mm
A1	3.59	91.3	A6	6.09	154.7
A2	3.14	80.0	A7	4.12	104.7
A3	5.46	138.6	A8		
A4 *			BSP/NPTF	6.64	168.7
BSP/NPTF	8.56	217.6	Socket weld	6.25	158.7
Socket weld	8.05	204.6	A9	2.56	65.0
A5	3.64	92.5			

VT6DC,VT7DB-VT7DBS

Dimensions		P2 (1")		P2 (3/4")	
	in	mm	in	mm	mm
A1	2.66	67.6	A6	5.02	127.5
A2	3.34	84.8	A7	4.12	104.7
A3	4.73	120.1	A8		
A4 *			BSP/NPTF	6.64	168.7
BSP/NPTF	7.74	196.6	Socket weld	6.25	158.7
Socket weld	7.15	181.6	A9	2.56	65.0
A5	2.40	61.0			

VT6EES,VT7EE-VT7EES

Dimensions		P2 (1")		P2 (3/4")	
	in	mm	in	mm	mm
A1	3.22	81.9	A6	7.75	196.9
A2	5.05	128.3	A7	5.46	138.6
A3	7.09	180.0	A8		
A4 *			BSP/NPTF	8.56	217.6
BSP/NPTF	10.2	258.9	Socket weld	8.05	204.6
Socket weld	9.68	245.9	A9	3.64	92.5
A5	3.64	92.5			



(SOCKET WELD FLANGE)

A4 (BSP/NPTF FLANGE)

A8 (BSP/NPTF FLANGE)

(SOCKET WELD FLANGE)

A7 (SOCKET WELD FLANGE)

A9 (SOCKET WELD FLANGE)

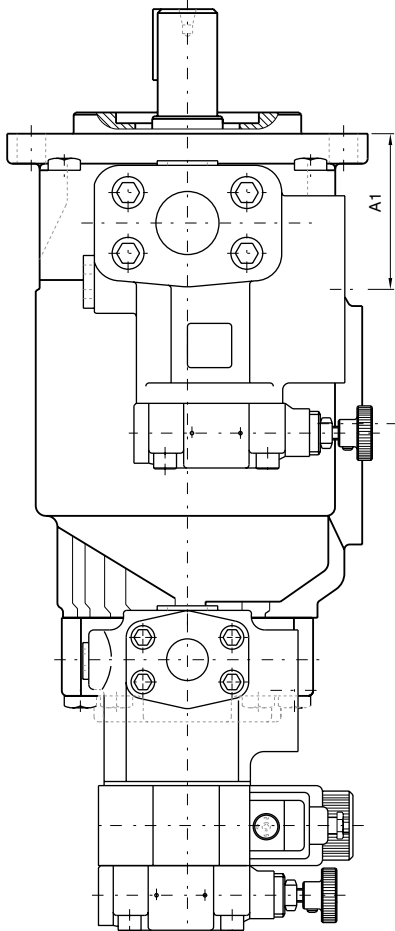
DOUBLE PUMP WITH NV / NU (P1) AND VO-VB / UO-UB (P2)

VT6CC,VT7BB,VT7QCC

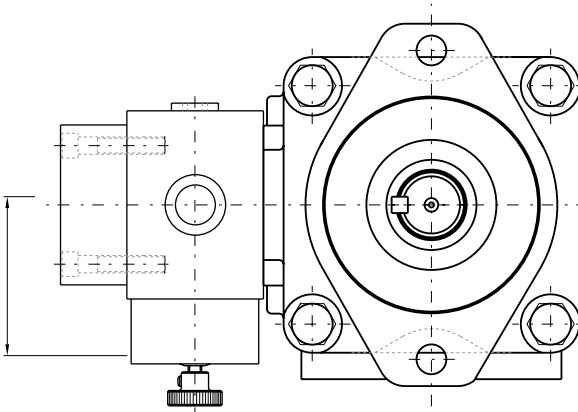
Dimensions			Dimensions		
	in	mm	P2 (1")	P2 (3/4")	
A1	2.21	56.1	in	in	mm
A2 *	3.29	83.6	A6 *	4.18	106.2
A3	4.18	106.2	A7	4.12	104.7
A4			A8		
BSP/NPTF	6.70	170.2	BSP/NPTF	6.64	168.7
Socket weld	6.30	160.2	Socket weld	6.25	158.7
A5	2.40	61.0	A9	2.56	65.0

* VT7BBS/VT7QCC

A2 - 3.34 (85.0) A6 - 4.39 (111.6) (3/4") - 4.56 (116.0) (1")



SOCKET HEAD CAP SCREWS

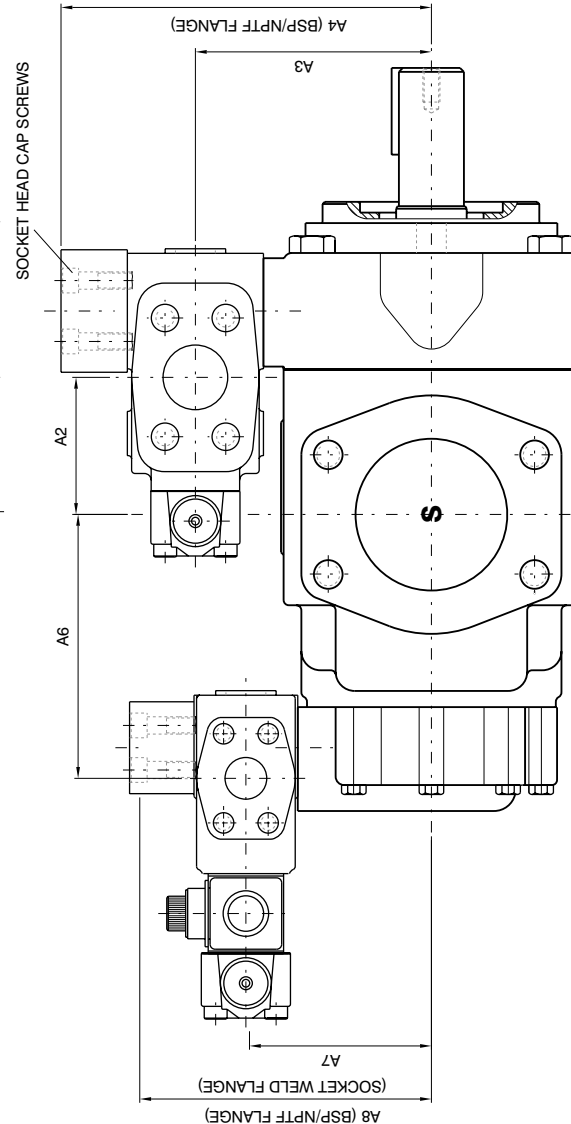


(SOCKET WELD FLANGE)

A4 (BSP/NPTF FLANGE)

Dimensions			Dimensions		
	in	mm	in	mm	
A1	3.22	81.9	A6	7.75	196.9
A2	5.05	128.3	A7	5.46	138.6
A3	7.09	180.0	A8		
A4			BSP/NPTF	8.56	217.6
BSP/NPTF	10.2	258.9	Socket weld	8.05	204.6
Socket weld	9.68	245.9	A9	3.64	92.5
A5	3.64	92.5			

VT6EES,VT7EE,VT7EES



(SOCKET WELD FLANGE)

A8 (BSP/NPTF FLANGE)

VT6DD,VT7DD,VT7DDDS

Dimensions			Dimensions		
	in	mm	in	mm	
A1	2.66	67.6	A6	6.44	163.7
A2	4.68	119.0	A7	5.48	139.1
A3	4.73	120.1	A8		
A4 *			BSP/NPTF	8.48	215.6
BSP/NPTF	7.74	196.6	Socket weld	7.89	200.6
Socket weld	7.15	181.6	A9	2.40	61.0
A5	2.40	61.0			

* VT7DD-VT7DDDS
BSP/NPTF - 8.48 (215.6)
Socket weld - 7.89 (200.6)

VT6ED,VT7ED,VT7EDS

Dimensions			Dimensions		
	in	mm	in	mm	
A1	3.59	91.3	A6	6.99	177.7
A2	3.72	94.5	A7	5.48	139.1
A3	5.46	138.6	A8		
A4			BSP/NPTF	8.48	215.6
BSP/NPTF	8.56	217.6	Socket weld	7.89	200.6
Socket weld	8.05	204.6	A9	2.40	61.0
A5	3.64	92.5			

VT6EC,VT7EB,VT7EBS

Dimensions			Dimensions		
	in	mm	in	mm	
A1	3.59	91.3	A6	6.09	154.7
A2	3.14	80.0	A7	4.12	104.7
A3	5.46	138.6	A8		
A4			BSP/NPTF	6.64	168.7
BSP/NPTF	8.56	217.6	Socket weld	6.25	158.7
Socket weld	8.05	204.6	A9	2.56	65.0
A5	3.64	92.5			

VT6DC,VT7DB,VT7DBS

Dimensions			Dimensions		
	in	mm	in	mm	
A1	2.66	67.6	A6	5.02	127.5
A2	3.34	84.8	A7	4.12	104.7
A3	4.73	120.1	A8		
A4			BSP/NPTF	6.64	168.7
BSP/NPTF	7.74	196.6	Socket weld	6.25	158.7
Socket weld	7.15	181.6	A9	2.56	65.0
A5	2.40	61.0			

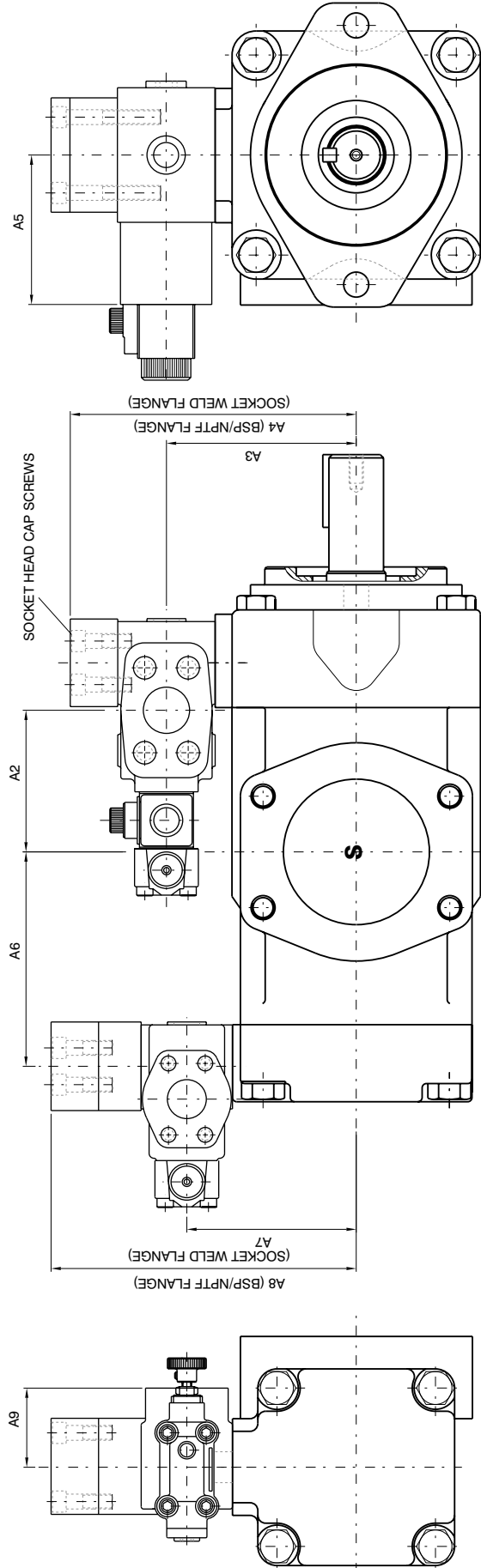
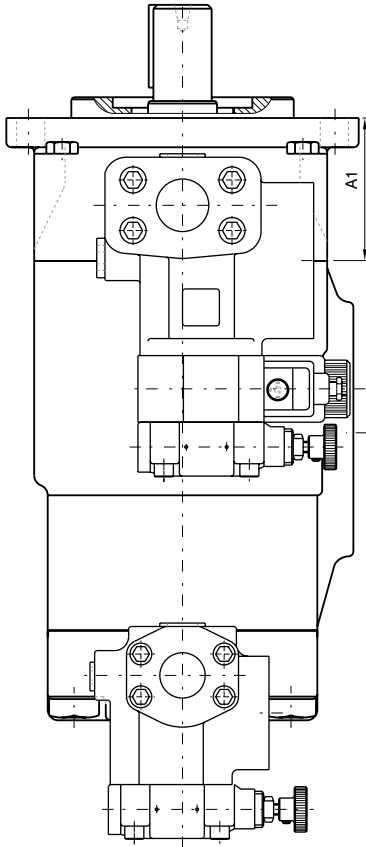
DOUBLE PUMP WITH VO-VB / UO-UB (P1) AND NVC / NUD (P2)

VT6CC/VT7BB/VT7QC

Dimensions		Dimensions	
in	mm	P2 (1")	P2 (3/4")
A1	2.21	in	mm
	56.1		
A2 *	3.29	A6 *	4.24
	83.6		107.6
A3	4.18	A7	4.12
	106.2		104.7
A4		A8	
			4.18
BSP/NPTF	6.70	BSP/NPTF	7.85
	170.2		199.4
Socket weld	6.30	Socket weld	7.45
	160.2		189.4
A5	2.56	A9	2.56
	65.0		65.0
			2.48
			63.0

* VT7BBS/VT7QCC

A2 - 3.34 (85.0) A6 - 4.39 (111.6) (3/4") - 4.56 (116.0) (1")



VT6DD,VT7DD-VT7DDS

Dimensions		Dimensions	
in	mm	in	mm
A1	2.66	A6	6.44
	67.6		163.7
A2	4.68	A7	5.48
	119.0		139.1
A3	4.73	A8	
	120.1		9.86
A4 *		BSP/NPTF	9.86
		Socket weld	9.27
BSP/NPTF	7.74	Socket weld	9.27
	196.6		235.6
Socket weld	7.15	A9	2.40
	181.6		61.0
A5	2.40		
	61.0		

* VT7DD-VT7DDS
BSP/NPTF - 8.48 (215.6)
Socket weld - 7.89 (200.6)

VT6EE,VT7EE-VT7EE

Dimensions		Dimensions	
in	mm	in	mm
A1	3.22	A6	7.75
	81.9		196.9
A2	5.05	A7	5.46
	128.3		138.6
A3	7.09	A8	
	180.0		253.1
A4		BSP/NPTF	9.96
		Socket weld	9.45
BSP/NPTF	10.2	A9	3.64
	258.9		92.5
Socket weld	9.68		
	245.9		
A5	3.64		
	92.5		

VT6ED,VT7ED-VT7EDS

Dimensions		Dimensions	
in	mm	in	mm
A1	3.59	A6	6.99
	91.3		177.7
A2	3.72	A7	5.48
	94.5		139.1
A3	5.46	A8	
	138.6		9.86
A4		BSP/NPTF	9.86
		Socket weld	9.27
BSP/NPTF	8.56	Socket weld	9.27
	217.6		235.6
Socket weld	8.05	A9	2.40
	204.6		61.0
A5	3.64		
	92.5		

VT6EC,VT7EB-VT7EBS

Dimensions		Dimensions	
in	mm	in	mm
A1	3.59	A6	6.09
	91.3		154.7
A2	3.14	A7	4.12
	80.0		104.7
A3	5.46	A8	
	138.6		199.4
A4		BSP/NPTF	7.85
		Socket weld	7.45
BSP/NPTF	8.56	Socket weld	7.45
	217.6		189.4
Socket weld	8.05	A9	2.56
	204.6		65.0
A5	3.64		
	92.5		

VT6DC,VT7DB-VT7DBS

Dimensions		Dimensions	
in	mm	in	mm
A1	2.66	A6	5.02
	67.6		127.5
A2	3.34	A7	4.12
	84.8		104.7
A3	4.73	A8	
	120.1		199.4
A4		BSP/NPTF	7.85
		Socket weld	7.45
BSP/NPTF	7.74	Socket weld	7.45
	196.6		189.4
Socket weld	7.15	A9	2.56
	181.6		65.0
A5	2.40		
	61.0		

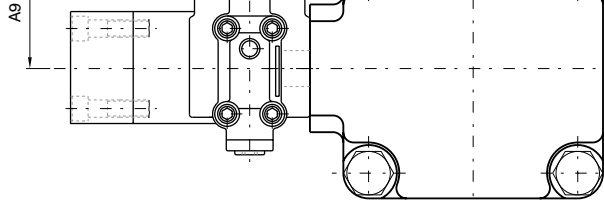
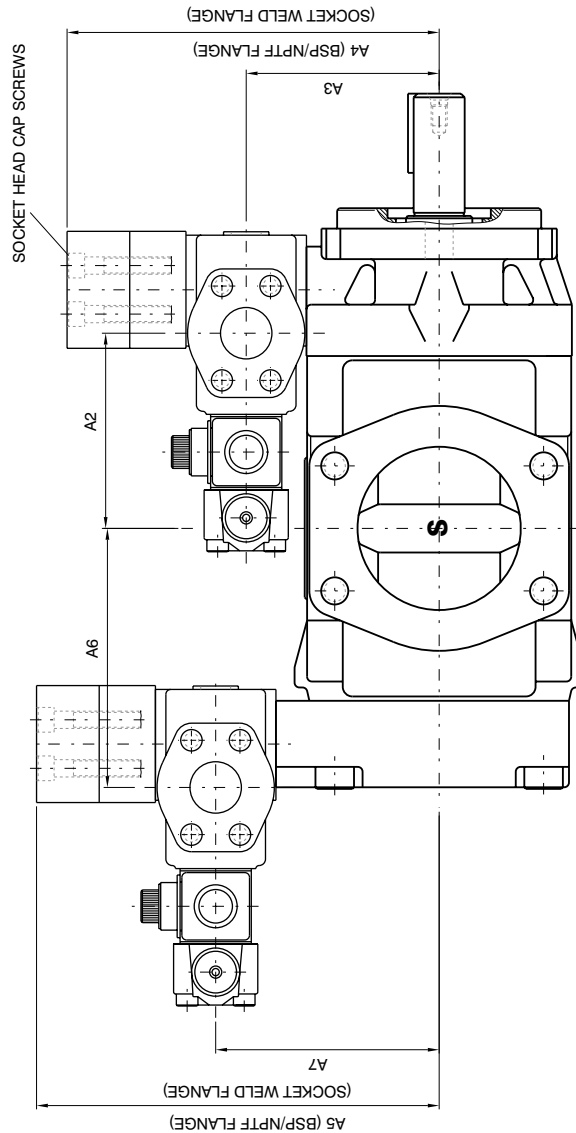
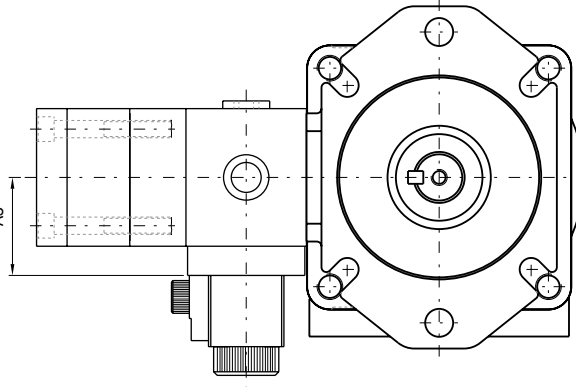
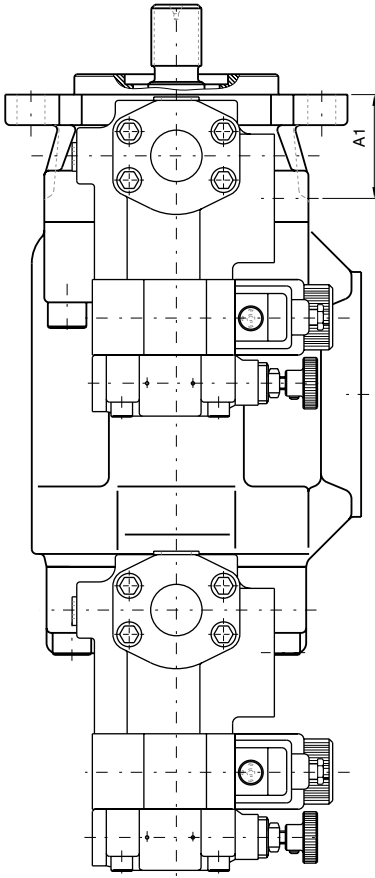
DOUBLE PUMP WITH VOC-VBC / UOD-UBD (P1&P2)

VT6CC,VT7BB,VT7QCC

Dimensions			Dimensions		
	in	mm	P2 (1")	P2 (3/4")	
A1	2.21	56.1	in	mm	mm
A2 *	3.29	83.6	A6 *	4.24	107.6
A3	4.18	106.2	A7	4.12	104.7
A4			A8		106.2
BSP/NPTF	7.91	200.9	BSP/NPTF	7.85	199.4
Socket weld	7.52	190.9	Socket weld	7.45	189.4
A5	2.56	65.0	A9	2.56	65.0

* VT7BBS,VT7QCC

A2 - 3.34 (85.0) A6 - 4.39 (111.6) (3/4") - 4.56 (116.0) (1")



VT6EE,VT7EE-VT7EES

Dimensions			Dimensions		
	in	mm	in	mm	
A1	3.22	81.9	A6	7.75	196.9
A2	5.05	128.3	A7	5.46	138.6
A3	7.09	180.0	A8		253.1
A4			BSP/NPTF	9.96	253.1
BSP/NPTF	11.6	294.2	Socket weld	9.45	240.1
Socket weld	11.1	281.2	A9	3.64	92.5
A5	3.64	92.5			

VT6DDS,VT7DD-VT7DDS

Dimensions			Dimensions		
	in	mm	in	mm	
A1	2.66	67.6	A6	6.44	163.7
A2	4.68	119.0	A7	5.48	139.1
A3	4.73	120.1	A8		250.6
A4 *			BSP/NPTF	9.86	250.6
BSP/NPTF	9.12	231.6	Socket weld	9.27	235.6
Socket weld	8.53	216.6	A9	2.40	61.0
A5	2.40	61.0			

* VT7DD,VT7DDS
BSP/NPTF - 9.86 (250.6)
Socket weld - 9.27 (235.6)

VT6ED,VT7ED-VT7EDS

Dimensions			Dimensions		
	in	mm	in	mm	
A1	3.59	91.3	A6	6.99	177.7
A2	3.72	94.5	A7	5.48	139.1
A3	5.46	138.6	A8		250.6
A4			BSP/NPTF	9.86	250.6
BSP/NPTF	9.96	253.1	Socket weld	9.27	235.6
Socket weld	9.45	240.1	A9	2.40	61.0
A5	3.64	92.5			

VT6EC,VT7EB-VT7EBS

Dimensions			Dimensions		
	in	mm	in	mm	
A1	3.59	91.3	A6	6.09	154.7
A2	3.14	80.0	A7	4.12	104.7
A3	5.46	138.6	A8		199.4
A4			BSP/NPTF	7.85	199.4
BSP/NPTF	9.96	253.1	Socket weld	7.45	189.4
Socket weld	9.45	240.1	A9	2.56	65.0
A5	3.64	92.5			

VT6D,VT7DB-VT7DBS

Dimensions			Dimensions		
	in	mm	in	mm	
A1	2.66	67.6	A6	5.02	127.5
A2	3.34	84.8	A7	4.12	104.7
A3	4.73	120.1	A8		199.4
A4			BSP/NPTF	7.85	199.4
BSP/NPTF	9.12	231.6	Socket weld	7.45	189.4
Socket weld	8.53	216.6	A9	2.56	65.0
A5	2.40	61.0			

VT6CC W * - 022 008 - 1 R 00 - C 1 * * *

Series

VT6CC, VT6DC, VT6EC, VT6ED,
VT6EES, VT6DDS, VT7BB-VT7BBS,
VT7QCC, VT7DB-VT7DBS,
VT7EB-VT7EBS, VT7ED-VT7EDS,
VT7DD-VT7DDS, VT7EE-VT7EES

Use for severe duty shaft only

(VT6CC, VT6DC, VT7QCC)

Y- Metric port connection, Omit for UNC

(VT6DC, VT6EC, VT6ED)

Cam ring

(Vol. displacement)

Refer general & operating characteristics table of vane pumps for options of cam rings of each series

Type of shaft

VT6CC/VT7QCC

- 1 - Keyed (no SAE)
 - 3 - Splined (SAE BB)
 - 5 - Splined (SAE B)
- W version**
- 2 - Keyed (SAE BB)
 - S - Splined (DIN 5462)

VT6DC/VT7DBS

- 1 - Keyed (SAE C)
 - 2 - Keyed (no SAE)
 - 3 - Splined (SAE C)
 - 4 - Splined (no SAE)
 - 5 - Keyed (no SAE)
- W version**
- 5 - Keyed (no SAE)

VT6EC/VT7EBS

- 1 - Keyed (SAE CC)
- 2 - Keyed (no SAE)
- 3 - Splined (SAE C)
- 4 - Splined (SAE CC)

VT6DDS/VT7DDS

- 1 - Keyed (SAE C)
- 2 - Keyed (SAE CC)
- 3 - Splined (SAE C)
- 4 - Splined (SAE BB)
- 5 - Keyed (no SAE) (Not for VT7DDS)

VT6ED/VT7EDS

- 1 - Keyed (SAE CC)
- 2 - Keyed (no SAE)
- 3 - Splined (SAE C)
- 4 - Splined (SAE CC)

VT6EE/VT7EES

- 1 - Keyed (SAE CC)
- 3 - Splined (SAE C)
- 4 - Splined (SAE D&E)
- 5 - Keyed (SAE D&E)

VT7BBS

- 1 - Keyed (no SAE)
- 2 - Keyed (SAE BB)
- 3 - Splined (SAE B)
- 4 - Splined (SAE BB)

VT7DB-VT7DBS, VT7DD-VT7DDS

- 5 - Keyed (ISO 3019-2-G32M)
- VT7EE-VT7EES**
- 2 - Keyed G45N(ISO/R775 -G38M)

VT7EB-VT7EBS, VT7ED-VT7EDS

- 5 - Keyed (ISO/R775 -G38M)

Modifications

Mounting connection

for VT6CC, VT7* W/variables

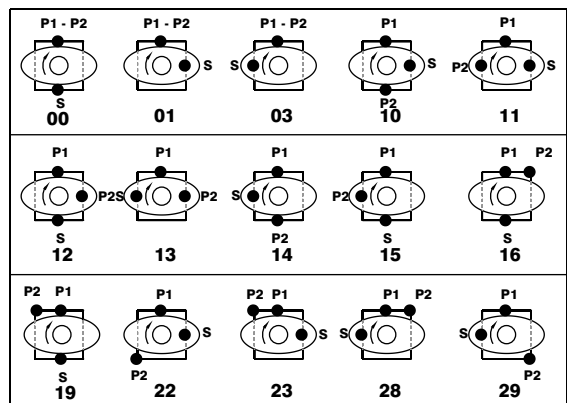
Seal class

- 1 - S1 (for mineral oil)
- 4 - S4 (for fire resistant fluids)
- 5 - S5 (for mineral oil and fire resistant fluids)

Design letter

- A-VT7*, VT6DDS
- B-VT6DC, VT6EC, VT6ED, VT6EES
- C-VT6CC

Porting combination



Direction of rotation

(view on shaft end)

- R - clockwise
- L - counter-clockwise

Mounting connection W/variables

VT6CC/VT7QCC

code	P1=1" S=3"		P1=1" S=2 1/2"	
	Unc	Metric	Unc	Metric
P2	00	OM	01	W0
	10	1M	11	W1

VT7BB-VT7BBS

code	UNC		METRIC	
	VT7BBS	VT7BB-VT7BBS	VT7BBS	VT7BB-VT7BBS
P1	1"	3/4"	1"	3/4"

VT7DB-VT7DBS

code	UNC		METRIC	
	VT7DBS	VT7DB-VT7DBS	VT7DBS	VT7DB-VT7DBS
P2	1"	3/4"	1"	3/4"

VT7EB-VT7EBS

code	P1= 1 1/2" P2= 3/4" S=3 1/2"	
	VT7EBS	VT7EB-VT7EBS
Type	UNC	METRIC
code	01	M1

VT7ED-VT7EDS

code	P1= 1 1/2" P2= 1 1/4" S=4"	
	VT7EDS	VT7ED-VT7EDS
Type	UNC	METRIC
code	01	M1

VT7DD-VT7DDS

code	P1 & P2= 1 1/4" S = 4"	
	UNC	METRIC
VT7DD		M0
VT7DDS	00	M0

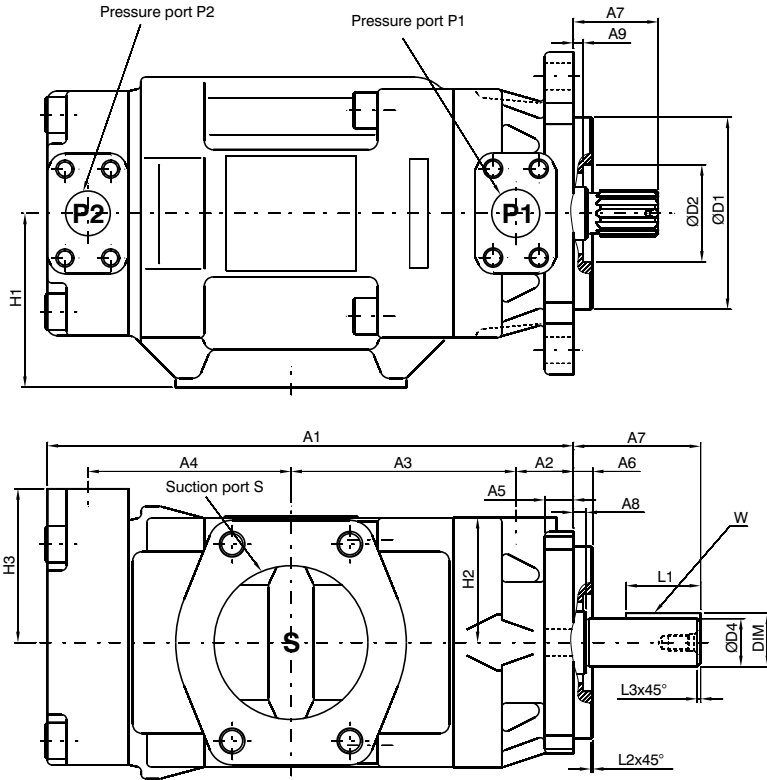
VT7EE-VT7EES

code	P1 & P2= 1 1/2" S=4"	
	VT7EES	VT7EE-VT7EES
Type	UNC	METRIC
code	00	M0

Shaft torque limits in³/rev x psi (ml/rev x bar) Vp x p max.

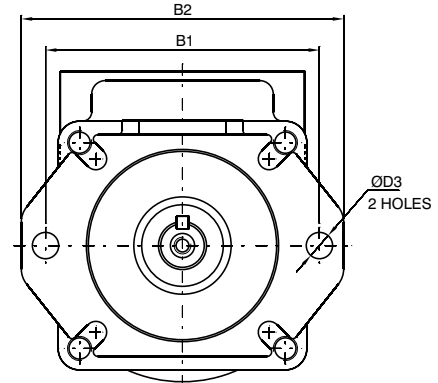
Shaft	SERIES						
	VT6CC,VT7QCC	VT7BB-VT7BBS	VT6DC/VT7DB-VT7DBS	VT6DDS/VT7DD-VT7DDS	VT6EC/VT7EB-VT7EBS	VT6ED,VT7EDS-VT7ED	VT6EE,VT7EES-VT7EE
1	12666 (14300)	12666 (14300)	38299 (43240)	38299 (43240)	64044 (72306)	64044 (72306)	80053 (90380)
2	18972 (21420)	18972 (21420)	30638 (34590)	63552 (71822)	30638 (34590)	30638 (34590)	101506 (114600)
3	28937 (32670)	18246 (20620)	54207 (61200)	54207 (61200)	54207 (61200)	54207 (61200)	112312 (126800)
4		28937 (32702)	54207 (61200)	31780 (28120)	67582 (76376)	67582 (76376)	112312 (126800)
5	18246 (20600)	22409 (25325)	37644 (42542)	40035 (35424)	60673 (68560)	60673 (68560)	104818 (110840)

DOUBLE VANE PUMP – INSTALLATION DIMENSIONS



* Dimensions for below models

		B1	D1	D3	A6
VT7BB	In	5.51	3.937/3.936	0.55	0.35
	mm	140.0	99.99/99.97	14.0	9.0
VT7QCC2	In	7.125	5.000/4.998	0.69	0.50
	mm	181.0	127.00/126.95	17.5	12.7
VT7DB	In	7.09	4.921/4.919	0.71	0.35
VT7EB	In	180.0	124.99/124.94	18.0	9.0
VT7ED					
VT7DD					
VT7EE	In	—	9.843/9.840	—	—
VT6EE	mm	—	250.00/249.94	—	—



Installation Dimensions

		A1	A2	A3	A4	A5	A6*	A7	A8	A9	B1*	B2	D1*	D2	D3*	L2	H1	H2	H3
VT6CC	In	10.46	1.50	4.00	3.47	0.50	0.38	See shaft	0.31	0.25	6.87	5.75	4.000/3.998	2.02	0.56	0.05	3.31	3.00	3.00(76.2)-3/4"
	mm	265.6	38.1	101.6	88.2	12.7	9.7	See shaft	7.9	6.35	174.5	146.0	101.60/101.55	51.3	14.3	1.30	84.1	76.2	2.94(74.7)-1"
VT7QCC VT7BBS	In	10.59	1.50	4.05	3.85	0.50	0.38	See shaft	0.31	0.25	6.87	5.75	4.000/3.998	2.02	0.56	0.05	3.31	3.00	3.00(76.2)-3/4"
	mm	269.0	38.1	103.0	98.0	12.7	9.7	See shaft	7.9	6.35	174.5	146.0	101.60/101.55	51.3	14.3	1.30	84.1	76.2	2.94(74.7)-1"
VT6DC VT7DBS	In	11.26	1.50	4.50	4.31	0.62	0.50	See shaft	0.31	0.25	7.125	8.38	5.000/4.998	2.53	0.69	0.05	3.25	3.25	2.94
	mm	286.0	38.1	114.3	109.5	15.7	12.7	See shaft	7.9	6.35	181.0	212.9	127.00/126.95	64.3	17.5	1.30	88.9	82.6	74.7
VT6EC VT7EBS	In	13.06	2.06	4.665	5.38	0.69	0.50	See shaft	0.31	0.25	7.125	8.38	5.000/4.998	3.00	0.69	0.05	4.03	3.88	2.94
	mm	331.6	52.3	118.5	136.7	17.5	12.7	See shaft	7.9	6.35	181.0	212.9	127.00/126.95	76.2	17.5	1.30	102.4	98.6	74.7
VT6ED VT7EDS	In	14.21	2.06	5.26	5.84	0.69	0.50	See shaft	0.31	0.25	7.125	8.38	5.000/4.998	3.00	0.69	0.05	4.03	3.88	4.00
	mm	361.0	52.3	133.5	148.2	17.5	12.7	See shaft	7.9	6.35	181.0	212.9	127.00/126.95	76.2	17.5	1.30	102.4	98.6	101.6
VT6DDS VT7DDS	In	13.69	1.50	5.84	5.28	0.75	0.50	See shaft	0.31	0.25	7.125	8.38	5.000/4.998	3.00	0.69	0.05	4.52	3.25	4.00
	mm	348.0	38.1	148.5	134.2	19.0	12.7	See shaft	7.9	6.35	181.0	212.9	127.00/126.95	76.2	17.5	1.30	115.0	82.6	101.6
VT6EES VT7EES	In	16.84	1.69	6.59	6.22	0.87	0.35	See shaft	0.31	0.25	8.84	10.75	6.500/4.998	3.00	0.81	0.05	4.53	5.50	3.87
	mm	427.8	42.9	167.3	157.9	22.0	9.0	See shaft	7.9	6.35	224.5	273.0	165.10/165.05	76.2	20.6	1.30	115.0	139.7	98.4

Keyed shafts							
Series	Code	A7	L1	W	D4	Dim	
VT6CC	1	In	2.29	1.25	0.187/0.185	0.875/0.874	0.966
		mm	58.2	31.7	4.76/4.71	22.225/22.200	24.53
VT7QCC	2	In	2.81	1.50	0.250/0.248	1.000/0.999	1.111
		mm	71.4	38.1	6.35/6.30	25.40/25.37	28.22
VT6DC	1	In	3.29	1.94	0.312/0.310	1.250/1.248	1.389
		mm	83.6	49.3	7.94/7.89	31.75/31.70	35.27
VT7DBS	2	In	2.88	1.50	0.312/0.310	1.250/1.248	1.389
		mm	73.2	38.1	7.94/7.89	31.75/31.70	35.27
VT6EC	1	In	3.58	2.00	0.375/0.373	1.500/1.498	1.668
		mm	90.9	50.8	9.52/9.47	38.10/38.05	42.36
VT7EBS	2	In	2.44	1.50	0.313/0.311	1.250/1.248	1.389
		mm	61.9	38.1	7.94/7.89	31.75/31.70	35.27

Keyed shafts							
Series	Code	A7	L1	W	D4	Dim	
VT6ED	1	In	3.58	2.00	0.375/0.373	1.500/1.498	1.668
		mm	90.9	50.8	9.52/9.47	38.10/38.05	42.36
VT7EDS	2	In	2.44	1.50	0.312/0.310	1.250/1.248	1.389
		mm	61.9	38.1	7.94/7.89	31.75/31.70	35.27
VT6DDS	1	In	3.31	1.94	0.312/0.310	1.250/1.248	1.389
		mm	84.0	49.3	7.94/7.89	31.75/31.70	35.27
VT7DDS	2	In	3.58	2.00	0.375/0.373	1.500/1.498	1.668
		mm	91.0	50.8	9.52/9.47	38.10/38.05	42.36
VT6EE	1	In	3.58	2.50	0.375/0.373	1.500/1.498	1.668
		mm	90.9	63.5	9.52/9.47	38.10/38.05	42.36
VT7EES	2	In	3.62	2.48	0.551/0.354	1.771/1.7707	1.909
		mm	92.0	63.0	14.0/9.0	45.000/44.975	48.50

Spine Details				
Series	Code	DP	Teeth	Pressure angle
VT6CC	3	16/32	15	30°
VT7QCC	5	16/32	13	30°
VT6DC	3,4	12/24	14	30°
VT7DBS		12/24	14	30°
VT6DDS	3	12/24	14	30°
VT7DDS	4	16/32	15	30°
VT6EC	3	12/24	14	30°
VT7EBS	4	12/24	17	30°
VT7EDS		12/24	17	30°
VT6EE	3	12/24	17	30°
VT6EES		8/16	13	30°
VT7EES	4	8/16	13	30°

Keyed shafts							
Series	Code	A7	L1	W	D4	Dim	
VT7BBS	1	In	2.29	1.25	0.187/0.185	0.875/0.874	0.966
		mm	58.2	31.7	4.76/4.71	22.225/22.200	24.53
VT7BBS	2	In	2.81	1.50	0.250/0.248	1.000/0.999	1.111
		mm	71.4	38.1	6.35/6.30	25.40/25.37	28.22
VT7BB VT7BBS	5	In	2.76	1.57	0.315/0.276	0.986/0.984	1.111
		mm	70.1	39.8	8.00/7.01	25.00/24.99	28.22

Keyed shafts							
Series	Code	A7	L1	W	D4	Dim	
VT7DB VT7DBS	5	In	3.46	1.97	0.394/0.315	1.260/1.259	1.378
		mm	87.8	50.0	10.00/8.00	32.00/31.97	35.00
VT7DD VT7DDS	5	In	2.68	1.97	0.394/0.315	1.260/1.259	1.378
		mm	68.0	50.0	10.00/8.00	32.00/31.97	35.00
VT7EB/VT7EBS VT7ED/VT7EDS	5	In	3.54	1.97	0.394/0.315	1.497/1.496	1.626
		mm	89.9	50.0	10.00/8.00	38.02/37.99	41.3

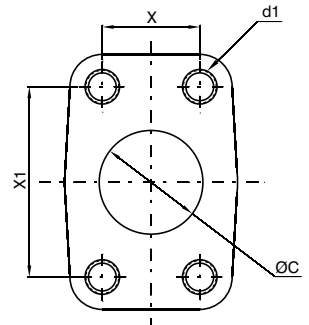
Spine shafts					
Series	Code	A7	L1	L3	
VT6CC	3	In	1.60	0.965	0.06
		mm	40.7	24.5	1.50
VT7QCC	4	In	1.79	0.965	0.06
		mm	45.5	24.5	1.50
VT6DC	3	In	2.17	1.50	0.09
		mm	55.2	38.1	2.30
VT7DBS	4	In	3.06	1.89	0.09
		mm	77.7	48.0	2.30

DOUBLE VANE PUMP – INSTALLATION DIMENSIONS



4-bolt pade per SAE-J518B

Connections		ØC		X		X1		d1
		In	mm	In	mm	In	mm	
Pressure port P1	VT6CC/VT7QCC VT7BB-VT7BBS	1.00	25.4	1.031	26.2	2.06	52.4	3/8"-16 UNC x 0.75 DEEP (M10x19.0 DEEP)
	VT7BB-VT7BBS	0.75	19.0	0.874	22.2	1.87	47.6	3/8"-16 UNC x 0.75 DEEP (M10x19.0 DEEP)
	VT6DC/VT7DB/VT7DBS VT6DDS/VT7DD/VT7DDS	1.25	31.8	1.188	30.2	2.312	58.7	7/8"-14 UNC x 0.88 DEEP (M12x22.3 DEEP)
	VT6EC/VT7EB/VT7EBS VT6ED/VT7ED/VT7EDS VT6EE/VT7EE/VT7EES	1.46	37.1	1.406	35.7	2.75	69.85	1/2"-13 UNC x 0.92 DEEP (M12x23.4 DEEP)
Pressure port P2	VT6CC/VT7QCC VT7BB-VT7BBS	0.75	19.0	0.874	22.2	1.87	47.6	3/8"-16 UNC x 0.75 DEEP (M10x19.0 DEEP)
	VT6DC/VT7DB/VT7DBS VT6EC/VT7EB/VT7EBS	1.00	25.4	1.031	26.2	2.06	52.4	3/8"-16 UNC x 0.75 DEEP (M10x19.0 DEEP)
	VT6DDS/VT7DD/VT7DDS	1.25	31.8	1.188	30.2	2.312	58.7	7/8"-14 UNC x 0.88 DEEP (M12x22.3 DEEP)
	VT6EE/VT7EE/VT7EES	1.46	37.1	1.406	35.7	2.75	69.85	1/2"-13 UNC x 0.92 DEEP (M12x23.4 DEEP)
Suction port S	VT6CC/VT7QCC/VT7BBS	2.50	63.5	2.00	50.8	3.50	88.9	1/2"-13 UNC x 0.94 DEEP (M12x24.0 DEEP)
	VT6CC/VT7QCC VT6DC/VT7DB/VT7DBS	3.00	76.2	2.44	61.9	4.19	106.4	5/8"-11 UNC x 1.12 DEEP (M16x28.4 DEEP)
	VT6DDS/VT7DD/VT7DDS							
	VT6ED/VT7ED/VT7EDS VT6EE/VT7EE/VT7EES	4.00	101.6	3.06	77.8	5.13	130.2	5/8"-11 UNC x 1.18 DEEP (M16x30.0 DEEP)
	VT6EC/VT7EB/VT7EBS	3.50	88.9	2.75	69.8	4.75	120.6	5/8"-11 UNC x 1.16 DEEP (M16x29.5 DEEP)



Spline shafts				
Series	Code	A7 In mm	L1 In mm	L3 In mm
VT6DDS VT7DDS	3	2.20 56.0	1.50 38.1	0.09 2.30
	4	1.81 46.0	0.97 24.5	0.09 2.30
VT6EC VT7EBS VT6ED VT7EDS	3	2.20 55.9	1.50 38.1	0.09 2.30
	4	2.45 62.2	1.24 31.5	0.09 2.30
VT6EES VT7EES	3	2.45 62.2	1.50 38.1	0.09 2.30
	4	2.95 75.0	1.92 48.8	0.09 2.30

Note: All spline shafts are Flat root side fit

Series	Mounting Standard (SAE J744c ISO/3019-1)	Displacement (cm ³ /rev)	Speed		Max. Pressure		Weight (without connectors and bracket)		SAE 4-bolt J518-ISO/DIS 6162-1		
			max	min	psi	bar	lbs	kg	Suction	Pressure	
VT6CC	SAE - B	P1 = 10.8 - 100.0 P2 = 10.8 - 100.0	2800	600	4000	275	55.0	25.0	2½" or 3"	P1	P2
VT6DC	SAE - C	P1 = 47.6 - 190.5 P2 = 10.8 - 100.0	2500	600	3500 4000	240 275	80.7	36.7	3"	1¼"	1" or ¾"
VT6DDS	SAE - C	P1 = 47.6 - 190.5 P2 = 47.6 - 190.5	2500	600	3500	240	123.2	56.0	4"	1¼"	1¼"
VT6EC	SAE - C	P1 = 132.3 - 269.8 P2 = 10.8 - 100.0	2200	600	3500 4000	240 275	121.0	55.0	3½"	1½"	1"
VT6ED	SAE - C	P1 = 132.3 - 269.8 P2 = 47.6 - 190.5	2200	600	3500 3500	240 240	145.5	66.1	4"	1½"	1¼"
VT6EE	ISO-3019-2 250 B4 HW	P1 = 132.3 - 269.8 P2 = 132.3 - 269.8	2200	600	3500	240	209.4	95.0	4"	1½"	1¼"
VT6EES	SAE - E										
VT7BB	ISO 3019-2 100 A2 HW	P1 = 5.7 - 50 P2 = 5.7 - 50	2200	600	4640	320	75.5	34.0	2½"	P1	P2
VT7BBS	SAE J744 SAE B										
VT7QCC1	SAE B	P1 = 10.8-100.0 P2 = 10.8-100.0	3000	600	4350	300	75.5	34.0	2½"	1"	1" or ¾"
VT7QCC2	SAE C										
VT7DB	ISO 3019-2 125 A2 HW	P1 = 43.9 - 158.0 P2 = 5.7 - 50	2500	600	3630 4350	250 300	85.1	38.0	3"	1¼"	1" or ¾"
VT7DBS	SAE J744 SAE C										
VT7DD	ISO 3019-2 125 B4 HW	P1 = 43.9 - 158.0 P2 = 43.9 - 158.0	2500	600	3500	250	123.4	56.0	4"	1¼"	1¼"
VT7DDS	SAE J744 SAE C										
VT7EB	ISO 3019-2 125 A2 HW	P1 = 132.2 - 268.7 P2 = 5.7 - 50.0	2200	600	3500 4350	240 300	121.2	55.0	4"	1½"	1¼"
VT7EBS	SAE J744 SAE E										
VT7ED	ISO 3019-2 125 A2 HW	P1 = 132.2 - 268.7 P2 = 43.9 - 158.0	2200	600	3500 3630	240 250	145.5	66.0	4"	1½"	1¼"
VT7EDS	SAE J744 SAE C										
VT7EE	ISO 3019-2 250 B4 HW	P1 = 132.2 - 268.7 P2 = 132.2 - 268.7	2200	600	3500	240	209.4	95.2	4"	1½"	1¼"
VT7EES	SAE J744 SAE E										

SPECIFICATIONS

General

Type	:	Pilot operated Relief /Unloading/Sequence Valve
Design	:	Poppet type
Mounting	:	Flanged According to SAE - 3000 psi (210 bar) e.g. Directly on a pump VR5V12 also 6000 psi (420 bar)
Mounting position	:	Optional
Port sizes (nominal)	:	3/4", 1", 1¼", 1½" (only for VR5V and VR5U)
Direction of flow	:	A— B
Ambient temperature	:	-20°C...+60°C (-4°F...+140°F)
Special working conditions	:	Consult VELJAN

Hydraulics

Pressure control range	:	Minimum - depends on flow Maximum - 5000 psi (350 bar) For VR5V12 - 6000 psi (420 bar)
Maximum operating pressure	:	
Port A (inlet)		5000 psi (350 bar), For VR5V12 - 6000 psi (420 bar)
Port B (outlet)		For VR5V and VR5U - 450 psi (30 bar)
Port X (pilot)		5000 psi (350 bar), For VR5V12 - 6000 psi (420 bar)
Port Y, Y1 (pilot drain)		450 psi (30 bar)
Maximum flow gpm (lpm)	:	VR5 *(3/4") VR5 *(1") VR5 *(1¼") VR5 *(1½") 24 (90) 80 (300) 159 (600) 159 (600)
Nominal flow gpm (lpm)	:	depends on pump delivery
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 SUS)
Optimum operating viscosity	:	30 cST (180 SUS)
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	:	Hand wheel
Rotation	:	3.75 rev.
Operating torque	:	0.72 Nm.

Electricals (Vent valve VVV01)

Electricals (Vent valve 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	:	1 P 65

ORDERING CODE

VR5* 08 - 5 3 5 - 1 4 - 09 - W07 - A 1 ***

Series

- VR5V** - Pressure Relief Valve
- VR5U** - Pressure Unloading Valve

Size

- 06 - 3/4"
- 08 - 1"
- 10 - 1 1/4"
- 12 - 1 1/2"

Max. pressure of Valve Body

- 3 - 3000 psi (210 bar) - SAE 61 flange
(VR5V12/VR5U12)
- 4 - 4000 psi (280 bar) - SAE 61 flange
(VR5 *10)
- 5 - 5000 psi (350 bar) - SAE 61 flange
(VR5 *06/08)
- 6 - 6000 psi (420 bar) - SAE 62 flange
(VR5V12 only)

Body

- Ports X1, Y1, ¹⁾M
- 1 - 1/4" NPTF
 - 3 - SAE - 4 (7/16"-20 UNF)
 - 9 - G 1/4"

¹⁾ Port Y1 is only available at external drain from the pilot head

Pressure setting range

- 1 - 100 - 1500 psi (7 - 105 bar)
 - 3 - 100 - 3000 psi (7 - 210 bar)
 - 5 - 100 - 5000 psi (7 - 350 bar)
 - 6 - 100 - 6000 psi (7 - 420 bar) (VR5V12 only)
- } VR5U:Pressure Differential 20
} VR5U:Pressure Differential 15

Type of Control

- 1 - Hand knob (32 mm dia)
- 2 - Hand knob (50 mm dia) (not for version with vent valve VV01)
- 3 - Acron nut with lead seal

Modifications

Seal Class

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

Design letter

Solenoid Voltage

- (Omit for vent version)
- W01 - 115 V/ 60 Hz AC GOR - 12V DC
 - W02 - 230 V/ 60 Hz AC GOQ - 24V DC
 - W06 - 115 V/ 50 Hz AC GOH - 48V DC
 - W07 - 230 V/ 50 Hz AC

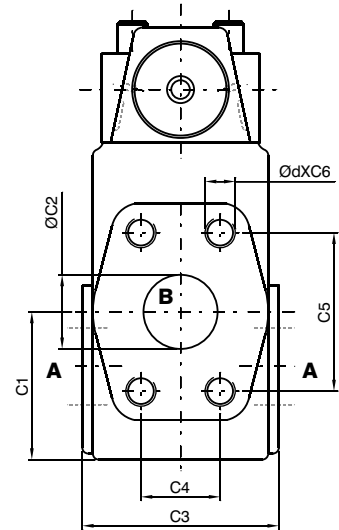
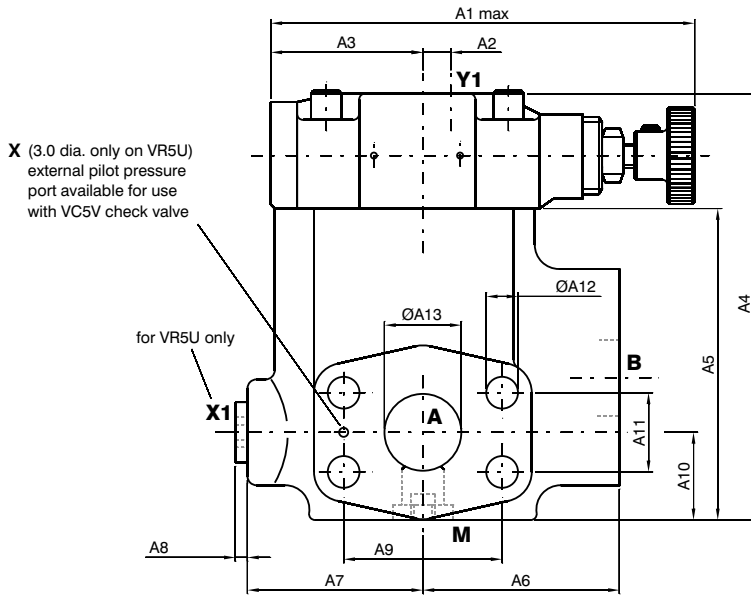
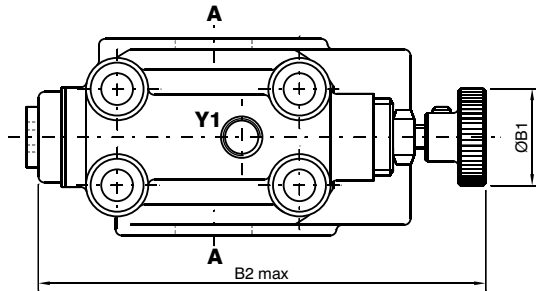
Electrical Vent

- (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 : vent line blocked, Solenoid Energized : open to tank)
 - 12 - Without manual override (Solenoid de-energized : vent line blocked, Solenoid Energized : open to tank)

Pilot connection

- 2 - Internal PD - Internal PP (VR5V)
- 4 - External PD - External PP² (VR5U)
- 5 - Internal PD - External PP² (VR5U)
- 6 - External PD - Internal PP (VR5V)

²⁾ External pilot pressure connection on flange face



Installation Dimensions

	R5V*(3/4")		R5V*(1")		R5V*(1 1/4")		R5V*(1 1/2")	
	in	mm	in	mm	in	mm	in	mm
A1	5.55	141.0	5.55	141.0	5.55	141.0	5.55	141.0
A2	0.41	10.5	0.2	5.0	0.12	3.0	0.917	23.3
A3	1.93	49.0	2.146	54.5	2.224	56.5	1.417	36.0
A4	4.69	119.2	5.53	140.5	5.87	149.1	6.99	177.6
A5	3.213	81.6	4.055	103.0	4.39	111.5	5.512	140.0
A6	2.48	63.0	2.56	65.0	2.402	61.0	3.642	92.5
A7	2.205	56.0	2.283	58.0	2.441	62.0	2.173	55.2
A8	0.16	4.0	0.16	4.0	0.16	4.0	0.164	4.2
A9	1.874	47.6	2.063	52.4	2.311	58.7	2.75	69.8
A10	1.102	28.0	1.14	29.0	1.35	34.3	1.34	34.0
A11	0.874	22.2	1.032	26.2	1.19	30.2	1.41	35.7
A12	0.41	10.5	0.41	10.5	0.472	12.0	0.531	13.5
A13	0.75	19.0	0.984	25.0	1.26	32.0	1.496	38.0

	R5V*(3/4")		R5V*(1")		R5V*(1 1/4")		R5V*(1 1/2")	
	in	mm	in	mm	in	mm	in	mm
B1	Ø1.26	Ø32.0	Ø1.26	Ø32.0	Ø1.26	Ø32.0	Ø1.26	Ø32.0
B2	5.827	148.0	5.7	145.0	5.77	146.6	6.58	167.2

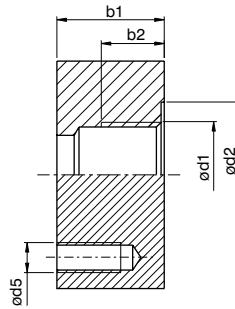
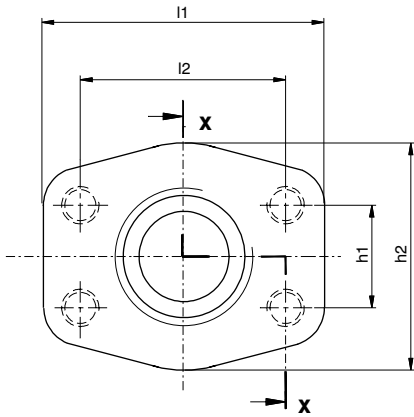
	R5V*(3/4")		R5V*(1")		R5V*(1 1/4")		R5V*(1 1/2")	
	in	mm	in	mm	in	mm	in	mm
C1	1.64	41.6	1.85	47.0	2.51	64.0	2.874	73.0
C2	0.75	19.0	0.98	25.0	1.26	32.0	1.496	38.0
C3	2.362	60.0	2.362	60.0	2.953	75.0	3.15	80.0
C4	0.874	22.2	1.032	26.2	1.19	30.2	1.41	35.7
C5	1.874	47.6	2.063	52.4	2.31	58.4	2.75	69.8
Ød	3/8"UNCx0.79		3/8"UNCx0.91		7/16"UNCx0.86		1/12-13"UNCx1.06	
x C6	(M10x20 DP)		(M10x23 DP)		(M12x23 DP)		(M12x27 DP)	

Ports	Function	Port Sizes			
		VR5*06	VR5*08	VR5*10	VR5*12
A (2x)	Pressure	3/4" (SAE -61)	1" (SAE -61)	1 1/4" (SAE -61)	1 1/2" (SAE -61)
B	Tank	3/4" (SAE -61)	1" (SAE -61)	1 1/4" (SAE -61)	1 1/2" (SAE -61)
X1	Ext. Pilot port ¹⁾	1/4" NPTF OR G1/4" OR SAE-4			
Y1	Ext. Drain				
M	Pressure gauge				

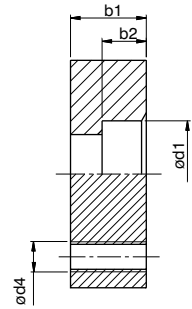
* 1). CLOSED WHEN SUPPLIED

SAE - Flanges

Inlet flange (only for pipe mounting)

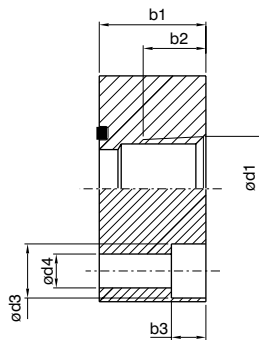
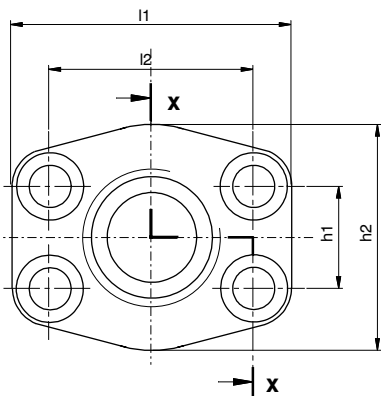


B.S.P.P Flange

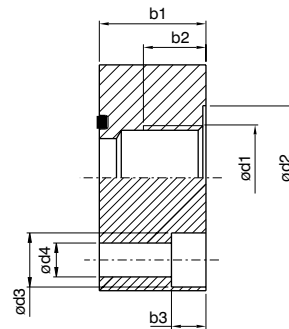


Socket weld

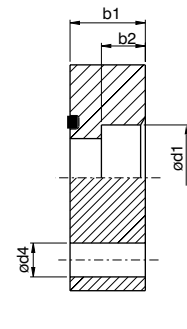
Outlet and tank port flange



N.P.T.F flange



B.S.P.P flange



Socket weld

Port sizes d1	Inlet flange (without screws) only for pipe mounting	Outlet flange (without screws)	Tank port flange (with screws)												
	Order no.	Order no.	Order no.	l1	l2	b1	b2	b3	h1	h2	od2	od3	od4	od5	
3/4" B.S.P.P	VS16-86520	VS16-86529	VS14-66933	67.0	47.6	34.0	15.9	12.0	22.0	52.0	40.0	16.5	10.5	3/8" UNC	
3/4" N.P.T.F.	-	VS16-86530	VS14-66925			19.0	12.0	-			-				
3/4" Socket weld	VS16-86519	VS16-86528	VS14-66941			34.0	20.0	-			-				
1" B.S.P.P	VS16-86523	VS16-86532	VS14-66934	72.0	52.4	34.0	20.0	12.0	26.2	58.0	46.0	16.5	10.5	3/8" UNC	
1" N.P.T.F.	-	VS16-86533	VS14-66926			19.0	14.0				-				-
1" Socket weld	VS16-86522	VS16-86531	VS14-66942			24.0	14.0				-				-
1 1/4" B.S.P.P	VS16-86526	VS16-86535	VS14-66935	80.0	58.7	39.0	22.0	15.0	30.2	73.0	54.0	17.5	12.5	7/16" UNC	
1 1/4" N.P.T.F.	-	VS16-86536	VS14-66927			20.6	14.0				-				-
1 1/4" Socket weld	VS16-86525	VS16-86534	VS14-66943			24.0	14.0				-				-
1 1/2" B.S.P.P	VS26-52364	VS26-52215	VS14-66936	94.0	69.8	39.0	24.0	15.0	35.7	82.0	60.0	20.0	14.5	1/2" UNC	
1 1/2" Socket weld	VS26-52366	VS26-52217	VS14-66944			26.0	16.0				-				-
1 1/2" B.S.P.P ¹⁾	V464-01147	V464-01141	V464-01004			50.0	28.0				20.0				36.5
1 1/2" Socket weld ¹⁾	V464-01149	V464-01143	V464-01146	112.0	79.4	50.0	28.0	20.0	36.5	94.0	60.0	25.0	17.5	5/8" UNC	

1) SAE 62

ORDERING CODE

VC5V 08 - 3 1 1 - A 1

Series

Size

06 - 3/4" 08 - 1" 10 - 1 1/4" 12 - 1 1/2"

Maximum pressure

3 - 3000 psi (210 bar) (VC5V06/08/10/12 - S.A.E. 61)

6 - 3000 psi (210 bar) (VC5V12 - S.A.E. 62)

Body

- 1 - with face seal,
- 2 - with face seal (for unloader application),
- 3 - without face seal

Seal class

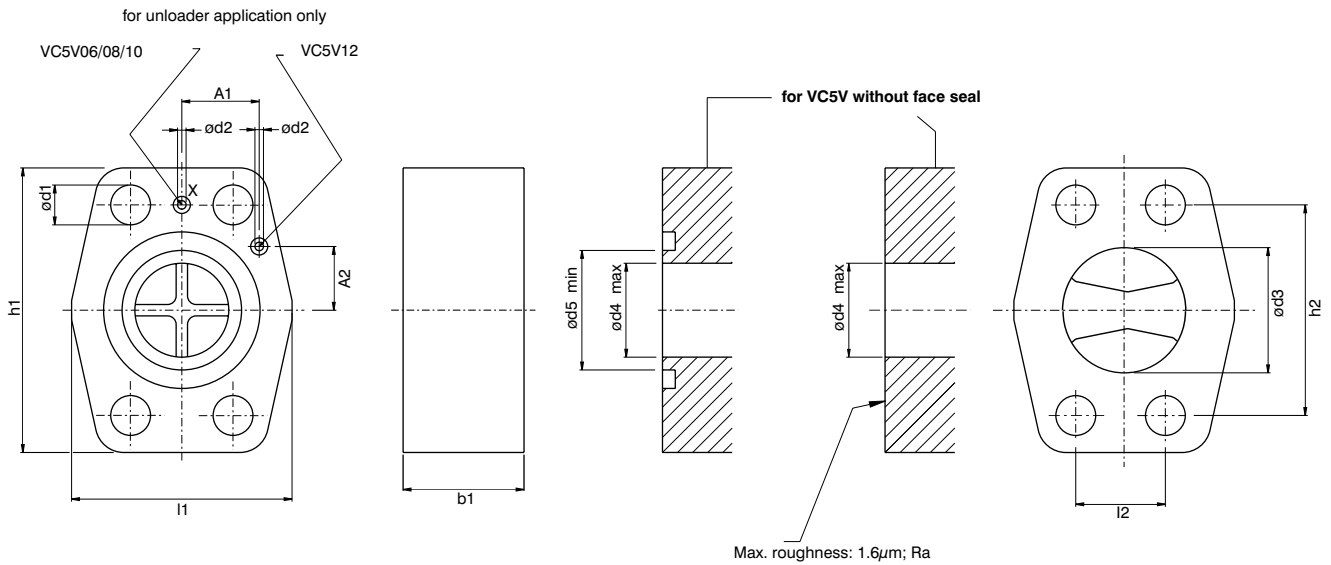
- 1 - Standard
 - 5 - Viton
- (for special fluids consult VELJAN)

Design letter

Spring

- 1 - Standard

Installation



Dimensions		
	in	mm
A1	1.071	27.2
A2	0.88	22.4

Dimensions

	Size		l1	l2	h1	h2	b1	ød1	ød2	ød3	ød4 max	ød5 min	Weight		
VC5V06	3/4"	in	2.047	0.874	2.638	1.874	1.0	0.413	0.12	0.906	0.748	0.906	1.1 lbs		
		mm	52.0	22.2	67.0	47.6	25.4	10.5	3.0	23.0	19.0	23.0	0.5 kg		
VC5V08	1"	in	2.283	1.032	2.834	2.063	1.209	0.413	0.12	1.26	0.984	1.181	1.34 lbs		
		mm	58.0	26.2	72.0	52.4	30.7	10.5	3.0	32.0	25.0	30.0	0.6 kg		
VC5V10	1 1/4"	in	2.866	1.189	3.142	2.311	1.378	0.472	0.12	1.378	1.26	1.378	2.2 lbs		
		mm	72.8	30.2	79.8	58.7	35.0	12.0	3.0	35.0	32.0	35.0	1.0 kg		
VC5V12	1 1/2"	S.A.E.61	in		1.401		2.748		0.531						
			mm	2.953		35.7		69.8	1.398	0.12	1.772	1.693	1.713	3.37 lbs	
		S.A.E.62	in	75.0		1.437		3.126		0.669		3.0	45.0	43.0	1.5 kg
			mm			36.5		79.4		17.0					

SPECIFICATIONS

General

Type	:	3/2 - Vent Valve
Mounting position	:	Optional but horizontal recommended
Port sizes (nominal)	:	Identical with VELJAN Pilot Valve series VR4, VR5, VD4S and VCAR
Ambient temperature	:	-20°C... + 60°C (-4°F... + 140°F)
Special working conditions	:	Consult VELJAN

Hydraulics

Pressure control range		
-Port X (pilot)	:	5000 psi (350 bar)
-Port Y (drain)	:	2030 psi (140 bar)
Nominal flow gpm (lpm)	:	1.0 (3.8)
Fluid Temperature Range	:	- 18°C...+ 80°C (0°F... + 176°F)
Optimum operating viscosity	:	30 cSt (180 SSU)
Overlap	:	Positive

Actuation

Electric	:	By Solenoid
Type of current	:	AC or DC
Nominal voltage	:	Refer to Ordering Code
Permissible voltage fluctuation	:	+5%...-10%
Max. coil temperature	:	+155°C (311°F)
Input power	:	31 W
Holding	:	78 VA
Inrush	:	264 VA
Relative operating period	:	100%
Type of protection	:	I P 65

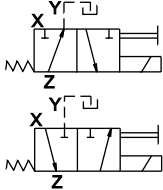
Response time	:	AC	DC
Solenoid energized	:	20 ms	46 ms
Solenoid de-energized	:	18 ms	27 ms
Cycle	:	...7200 /h	...16000 /h

ORDERING CODE

VVV01 - 3 1 1 - W07 - D - 1

Series _____

Type
3 - 3- way model

Spool position
1-Normal position: free flow from Z to Y
switch position: X to Z

2-Normal position: X to Z
Switch position: free flow from Z to Y

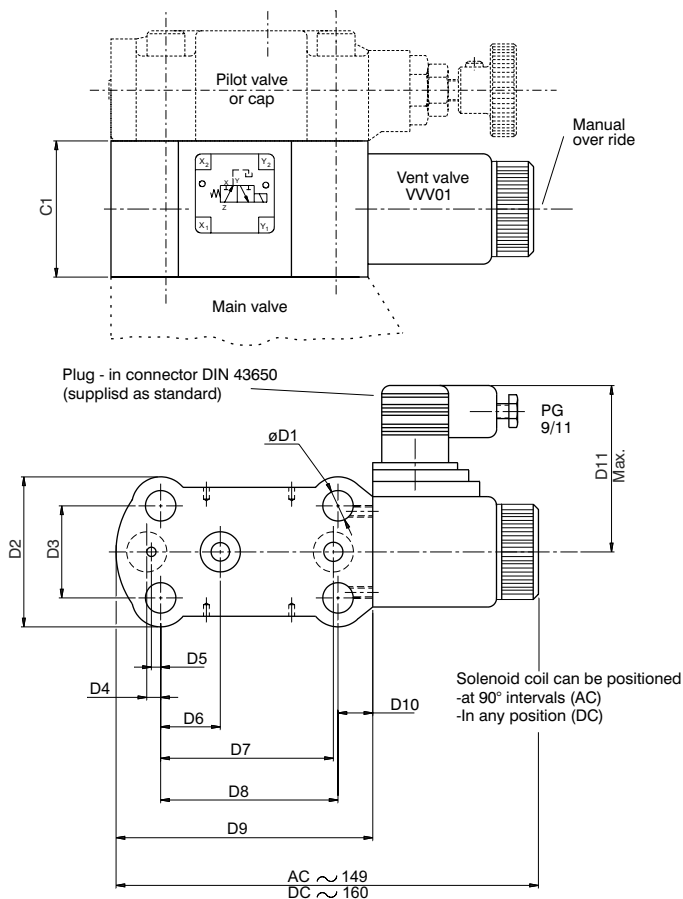
Control
1 - plug - in - type solenoid with manual over-ride
2 - plug - in - type solenoid without manual over-ride
D-Pneumatic } On request
Q -Hydraulic }

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

Design letter
D - AC Solenoid
E - DC Solenoid

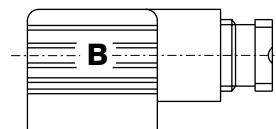
Solenoid Voltage
W01 - 115V/60 Hz AC GOR - 12V DC
W02 - 230V/60 Hz AC GOQ - 24V DC
W06 - 115V/50 Hz AC GOH - 48V DC
W07 - 230V/50 Hz AC

Installation



Weight (VVV01) : 3.73 lbs (1.7 kg)

Note :
For VVV01 with DC solenoid,
plug-in connectors must be
ordered separately.



Versions	
Standard < 250 VPG 11	V167-01008-8
With LED (red) 15 .. 30 V	V167-01101-8
With bridge rectifier 12 .. 250 V	V167-01014-8

Dimensions		
	in	mm
C1	1.85	47.0

Dimensions		
	in	mm
D1	ϕ 0.41	ϕ 10.5
D2	2.03	51.8
D3	1.25	31.8
D4	0.18	4.8
D5	0.12	3.2
D6	0.81	20.6
D7	2.31	58.7
D8	2.37	60.3
D9	3.49	88.7
D10	0.51	13.0
D11	2.75	70.0