

# VALVES IN THE SERVICES

## Type Designations and Their Commercial Equivalents

(Information supplied by The Inter-Service Technical Valve Committee)

Many readers, both inside and outside the Services, who are concerned with the use of valves marked with Service names, would like to know the commercial types on which the Service types were based. The following tables give this information. The first column shows the Service names, A . . . being an Army type, N . . . a Naval type, V . . . an Air Force type, and CV . . . a common Service type. Since 1941 all valves adopted by the Services have been given "CV" titles, and later all the old A . . ., N . . ., and V . . . valves were brought into this system to eliminate overlapping. However, as large stocks of valves marked with the old Service type designations still exist and numerous equipments are marked with those names, they are made the basis of the arrangement in the first column.

A warning should be given that strict equivalence between the Service type and the given commercial type must not be assumed, as the specification for the Service valve may require selection either for electrical or mechanical requirements or both.

Original Service Name	Current Title	Other Service Names	Commercial Type	Original Service Name	Current Title	Other Service Names	Commercial Type
AD1	CV1314		DLS10	ARTP1	CV1344		TP22
ARDD1	CV1300		10D1	ARTP2	CV1345		TP25
ARDD3	CV1301		D63, 6H6G	AR4	CV1303		HL210A
ARDD5	CV1054	VR54	EB34	AR5	CV1166	NR42	LP2
ARD2	CV1078	VR78	D1	AR6	CV1304		LP2
ARD4	CV1302		D42	AR7	CV1109	NR55, VR109 and A	4D1
ARH1	CV1280	NR67	X64				
ARP1	CV1118	NR39, VR118	PT2, KT2	AR8	CV1306		HL23DD
ARP2	CV1320		SP2	AR9	CV1307		210LF
ARP3	CV1321		9D2	AR10	CV1308		L21DD
ARP4	CV1322		SP210	AR11	CV1309		4019B
ARP5	CV1323		VP2	AR12	CV1310		4020A
ARP6	CV1324		SP4	AR13	CV1311		4022AR
ARP7	CV1325		42MPT	AR14	CV1312		220RC
ARP8	CV1326		AC4/Pen	AR15	CV1313		220LF
ARP9	CV1327		Pen1340	AR16	CV1032	VR32	220B
ARF9A	CV1328		7D8S	AR17	CV1037	NR31, VR37	MH4
ARP10	CV1329		APP4G*	AR20	CV1316		4021B
ARP11	CV1330		TSP4	AR21	CV1055	NR48, VR55	EBC33
ARP12	CV1331		VP23	ATP4	CV1366		V248A
ARP13	CV1332		210VPT, VP21	ATP5	CV1367		V245
ARP14	CV1333		220IPT	ATP7	CV1368		V226
ARP15	CV1195	NR86	KTW63	ATP10	CV1369		4061A
ARP16	CV1074	NR83, VT74	KTZ63	ATP35	CV1370		PV1-35
ARP17	CV1186	NR85	KT63, 6F6G	ATP75	CV1371		PZ1-75, SW75Pen
ARP18	CV1334		KT24				4069A
ARP19	CV1335		SP41	ATP100	CV1372		PY3-600
ARP20	CV1336		SP42	ATS25	CV1374		807
ARP21	CV1192	NR79	Z62	ATS70	CV1365		4282BZ
ARP22	CV1337		116Pen	ATS250	CV1357		SG250
ARP23	CV1124	NR70, VR124	MS/Pen	AT15	CV2845		LS5
ARP24	CV1338		220VPT	AT16	CV2846		LS5B
ARP25	CV1181	NR59	KT41	AT20	CV1361		MZ05-20
ARP26	CV1340		KT44 (mod)	AT35	CV1025	VT25	DET25
ARP33	CV1341		MSP4	AT75	CV1222	NT39	ACT6
ARP34	CV1053	VR53	EF39	AT200B	CV1363		DET16
ARP35	CV1091	VR91	EF50	AU1	CV1264	NU12	FW4-500
ARP36	CV1065	VR65	SP41 (mod)	AU2	CV1349		RG5-500, 4064A
ARP37	CV1342		QP25	AU3A	CV1039	NU17, VU39	MU12/14, UU5, IW4, 44IU
ARP38	CV1343		KTZ73 (mod)				U17
ARS6	CV1317		S625	AU4	CV1113	NU18, VU113	V1907
ARS7	CV1318		VS24, PM12M, S215VM	AU5	CV1111	VU111	GU50, MU4250,
			VS2	AU6	CV1072	VU72	RG1/240
ARS8	CV1319		ECH35				
ARTH2	CV1347						

Original Service Name	Current Title	Other Service Names	Commercial Type	Original Service Name	Current Title	Other Service Names	Commercial Type
AU7	CV1355		ESU300	NR41	CV1083	VR83	210VPT, VP21
AU8	CV1356		U22	NR42	CV1166	AR5	LP2
AU12	CV2853		U15, RZ1-250	NR43	CV1167		PM24A
AW2	CV1070	VS70	7475	NR44	CV1168		ACO44, PX4
AW3	CV1110	VS110	S130	NR45	CV1169		VMP4G
AW4	CV1068	VS68	STV280/40	NR46	CV1170		D41
AW5	CV1359		ME41	NR47	CV1040	VR40	PX25, DO24,
AW6	CV1077	VI77	EM31				PP5/400
CV5	CV5		GU21 (special)	NR48	CV1055	AR21, VR55	EBC33
CV9	CV9		AL60	NR49	CV1056	VR56	EF36
CV18	CV18		RK34	NR50	CV1171		HA1, AT4, A40
CV19	CV19		EHT1	NR51	CV1172		VP4A
CV24	CV24		HL41	NR52	CV1173		354V
CV25	CV25		4242A	NR53	CV1174		KT42, MP/Pen,
CV26	CV26		813				Pen4VA,
CV27	CV27		4357A	NR54	CV1175		AC/Pen
CV28	CV28		ACT9	NR55	CV1109	AR7, VR109 and A	ZA1, AP4
CV30	CV30		4270A				4D1
CV31	CV31		U20	NR56	CV1178		DA30, DO30
CV33	CV33		4077A	NR57	CV1179		TT4
CV34	CV34		MR10	NR58	CV1180		V312
CV45	CV45		S130 (mod)	NR59	CV1181		KT41
CV49	CV49		3B/501A	NR60	CV1182		H42
CV65	CV65		Pen25	NR61	CV1183		W42
CV66	CV66		RL37	NR62	CV1184		A373
CV71	CV71		"Osglim"	NR64	CV1281		KTW61
CV75	CV75		4313C	NR65	CV1282		AC/S2Pen,
CV84	CV84		3B/102B				MSP4
CV93	CV93		V625	NR66	CV1187		D41
CV152	CV152		GU21	NR67	CV1280	ARH1	X64
CV173	CV173		DDR2	NR68	CV587		DH63, 6Q7G
CV181	CV181		ECC32	NR69	CV1103	VI103	Y63
CV185	CV185		PM202	NR70	CV1124	ARP23, VR124	MS/Pen
CV187	CV187		U19	NR71	CV1129	VR129	MS/PenT
CV190	CV190		DLS10	NR72	CV1188		N43
CV207	CV207		AC/P4	NR73	CV1285		ECC31
CV216	CV216		VR150/30	NR74	CV1189		AC6Pen
CV225	CV225		ACT17	NR75	CV1190		AC/P4
CV235	CV235		U23	NR76	CV1191		KTZ41
CV242	CV242		GS18, CMG25	NR77	CV1286		EL35
CV243	CV243		4045A	NR78	CV581	6C5G	6C5G
CV244	CV244		4046A	NR79	CV1192	ARP21	Z62
CV245	CV245		4328D	NR81	CV1941	6K7G	6K7G
CV285	CV285		VA35	NR82	CV1193		X65
NGT1	CV1141		GDT4C	NR83	CV1074	ARP16, VT74	KTZ63
NGT2	CV1128	VGT128	GT1C	NR84	CV1194		X41
NGT3	CV1142		MR75	NR85	CV1186	ARP17	KT63, 6F6G
NGT4	CV1143		GT1A	NR86	CV1195	ARP15	KTW63
NGT5	CV1144		BT19	NR87	CV1196		AC5PenDD
NGT6	CV1145		BT9A	NR88	CV1197		RL18
NGT7	CV1147		BT35	NR89	CV1198		AC/P4
NGT9	CV1149		BT41	NR95	CV1502	VR502	KT32
NR15	CV1151		I410, PM4DX	NS1	CV1069	VS69	STV280/80
NR16	CV1153		PM254	NS3	CV1200		202
NR16A	CV1154		PM254	NS4	CV1201		4317
NR18	CV1156		DEQ	NS5	CV1202		304
NR22	CV1158		S410, PM14	NT13	CV2788		P610
NR23	CV1159		S410, PM14	NT18	CV1206		DO60, DA60
NR26	CV1038	VR38	MHL4	NT20	CV1208		P625, PM256
NR27	CV1160		104V	NT36	CV1219		DA100, MZ1-100
NR28	CV1019	VR19	215P	NT37	CV1220		4033A
NR31	CV1037	AR17, VR37	MH4	NT38	CV1293		SW75Pen,
NR35	CV1163		PM2BA				PZ1-75, P'T6
NR37	CV1164		MS4, MSPen (mod)	NT39	CV1222	AT75	ACT6
NR38	CV1165		VMS4, MVSPen (mod)	NT40	CV1223		DET5
NR39	CV1118	ARPI, VR118	PT2, KT2	NT58	CV1288		DET12, TY1-50
				NT62	CV1237		PM24D
				NT65A	CV1240		PZ1-35

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NT82	CV1246		P2	VR137	CV1137		RL16
NT87	CV1250		4279A	VR502	CV1502	NR95	KT32
NT92	CV1252		4212E	VR503	CV1503		KT33C
NU5	CV1261		RX3-120	VR505	CV1505		MH41
NU12	CV1264	AU1	FW4-500	VS68	CV1068	AW4	STV280/40
NU13	CV1265		U15, RZ1-250	VS69	CV1069	NS1	STV280/80
NU15	CV1267		U4020	VS70	CV1070	AW2	7475
NU17	CV1039	AU3A, VU39	MU12/14, UU5, IW4, 44IU	VS110	CV1110	AW3	S130
			U17	VT20	CV1020		220P
NU18	CV1113	AU4, VU113	U50	VT23	CV1023		230XP
NU20	CV1268		MU2	VT25	CV1025	AT35	DET25
NU31	CV1279		SU2150A	VT31	CV1031		SG250
NU33	CV1290		HVR2	VT34	CV1034		DET3
NU34	CV1134		T41	VT45	CV1045		X56
VGT121	CV1121		GT1C	VT46	CV1046		PT25H
VGT128	CV1128	NGT2	EM31	VT47	CV1047		TZ05-20,
VI77	CV1077	AW6	Y63				VLS417
VI103	CV1103	NR69	215SG	VT50	CV1050		HL2K
VR18	CV1018		215P	VT51	CV1051		Pen220A
VR19	CV1019	NR28	220PA	VT52	CV1052		EL32
VR22	CV1022		220VSG	VT58	CV1058		E960
VR28	CV1028		220B	VT60	CV1060		807
VR32	CV1032	AR16	QP21	VT61	CV1061		4074A, DET19,
VR35	CV1035		MH4				RK34
VR37	CV1037	NP31, AR17	MHL4	VT61A	CV1573		TVO3-10 (mod)
VR38	CV1038	NR26	PX25, DO24,	VT62	CV1062		DET12, TY1-50
VR40	CV1040	NR47	PP5/400	VT73	CV1073		H63
			PM12M	VT74	CV1074	NR83, ARP16	KTZ63
VR41	CV1041		210PG	VT75	CV1075		KT66
VR43	CV1043		210DDT	VT75A	CV1576		KT44T
VR44	CV1044		210SPT	VT75B	CV1577		KT44
VR49	CV1049		EF39	VT76	CV1076		DA41, TZ40
VR53	CV1053	ARP34	EB34	VT79	CV1079		KT8
VR54	CV1054	ARDD5	EBC33	VT80	CV1080		4307A
VR55	CV1055	NR48, AR21	EF36	VT81	CV1081		4052A
VR56	CV1056	NR49	EK32	VT88	CV1088		832
VR57	CV1057		HA2, 955, 4671	VT96	CV1096		5B/502A
VR59	CV1059		SP41 (mod)	VT104	CV1104		PT15
VR65	CV1065	ARP36	SP41	VT105	CV1105		ML6
VR65A	CV1574		P41 (mod)	VT114	CV1114		E1024
VR66	CV1066		L63	VT127	CV1127		Pen46
VR67	CV1067		D1	VT506	CV1506		5C/450A
VR78	CV1078	ARD2	220TH	VU39	CV1039	NU17, AU3A	MU12/14, UU5,
VR82	CV1082		220VPT, VP21				IW4, 44IU
VR83	CV1083	NR41	EF50	VU71	CV1071		U52
VR91	CV1091	ARP35	EA50	VU72	CV1072	AU6	GU50, RG1-240, MU4250
VR92	CV1092		ZA2, 954, 4672				V1907
VR95	CV1095		X66	VU111	CV1111	AU5	U17
VR99	CV1099		ECH35, E1341	VU113	CV1113	NU18, AU4	HVR2
VR99A	CV1581		KTW62	VU134	CV1134	NU34	V1901
VR100	CV1100		MHLD6	VU504	CV1504		V1913
VR101	CV1101		BL63	VU508	CV1508		
VR102	CV1102		9D2				
VR106	CV1106		15D2				
VR107	CV1107		8D2				
VR108	CV1108		4D1				
VR109	CV1109	NR55, AR7	V872				
VR116	CV1116		41MTL				
VR117	CV1117		PT2, KT2				
VR118	CV1118	NR39, ARP1	DDL4				
VR119	CV1119		41MXP				
VR122	CV1122		MS/Pen				
VR124	CV1124	NR70, ARP23	MS/PenB				
VR125	CV1125		4SH				
VR126	CV1126		MS/PenT				
VR129	CV1129	NR71	HL23				
VR130	CV1130		E1148				
VR135	CV1135		RL7				
VR136	CV1136						

## CULTIVATED CRYSTALS

**D**UE to the present difficulty in obtaining natural quartz in Switzerland, the firm of Brown-Boveri, of Baden, are "growing" artificial piezo-electric crystals. The manufacturing process used was developed by Prof. Scherrer, of the Swiss Federal Institute of Technology. It is stated that the artificial crystals differ only slightly in their properties from those of natural quartz.

Another development of the Swiss firm, described in the *Brown-Boveri Review*, relates to the "Turbator" valve, designed for the generation of centimetre wavelengths. Formerly, the output frequency was fixed solely by the internal valve characteristics, but means have now been devised for introducing variable external tuning by a Lecher wire system.