

## Sheet1

FVL	VLISP	File Vlisp
!S	CONSTRAINTBAR	!constraint Settings
!S-	DELCONSTRAINT	!constraint remove
!SA	AUTOCONSTRAIN	!constrain Settings Auto
!SD	CONSTRAINSETTINGS	!constraint Settings Dialogue
?		?query
??L		?query Where
??L		?query Where laYer
?#		?query Number
?%		?query scale
?^		?query ^angle
?^		?query ^angle Line
?^PP		?query ^angle Point to Point
?		?query  line-type
? T		?query Line place Text
?~		?query aVerage
?~T		?query aVerage place Text
?A	AREA	?query Area
?A+T		?query Area +add Text
?AM		?query Area Meters
?B		?query Block name
?B		?query Where Block
?C		?query Colour
?D	DIST	?query Distance
?3D	3DDISTANCE	?query Distance 3D
?DB	DBLIST	?query DataBase
?E		?query Elevation
?ET		?query Elevation place Text
?G	MEASUREGEOM	?query Geometry
?H	TIME	?query Hour
?HG	GRADIENT	?queryHatch Gradient
?I	TREESTAT	?query Index
?K		?query thicKness
?L		?query laYer
?LEN		?query Length
?M	SHOWMAT	?query MaTerials
?O	LIST	?query Object
?P	ID	?query Point
?R		?query Radius
?S	STATUS	?query Status
?T\$		?query Text \$style
?TS		?query Text string
?TT		?query Text Text
?TZ		?query Text Size
?W		?query WorkZones
@	ATTEDIT	@attribute
@<		@attribute < angle
@\$		@attribute \$style
@C		@attribute Colour
@D	ATTDISP	@attribute Display
@D	ATTDEF	@attribute Define
@E	ATTIPEDIT	@attribute Edit Block
@E*		@attribute *everything

## Sheet1

@E#	BATTMAN	@attribute Edit #number
@EE	EATTEDIT	@attribute Extended
@EET	EATTEXT	@attribute Extended Text
@ER	ATTREDEF	@attribute Edit Redefine
@ET	ATTEXT	@attrinute Edit Table
@H		@attribute Height
@L		@attribute Layer
@N		@attribute numbers
@P		@attribute Position
@S	ATTSYNC	@attsync
@S		@attribute Substring
@V		@attribute Value
*	EXPLODE	Tool eXplode
\		\mirror -delete
\\	MIRROR	\\mirror keep
#	CAL	#calculator
#-Q	QCLOSE	#calc -off Quick
#D	DIVIDE	#calc Divide
#M	MASSPROP	#calc Massprop
#Q	QUICKCALC	#calc Quick
#S	SPACETRANS	#calc Spacetrans
%	SCALE	%scale
%3D	3DSCALE	%scale 3D
%LO	OLESCALE	%scale of OLE objects
%M	SCALELISTEDIT	%scale Manage
%O	OBJECTSCALE	%scale manage-by Object
%R	ANNORESET	%scale Reset
%T	SCALETEX	%scale Text
^	SELECT	Select
^		Select Under WP
^*		Select *everything
^B		Select Block
^F	FILTER	Select Filter
^G		Select Group
^J		Select Just before
^L		Select Last
^L		Select Last
^N		Select New
^O		Select Over Cpoly
^P		Select Previous
^Q	QSELECT	Select Quick
^V		Select Visible
^W		Select Window
^X		Select Xing
^X		Select Select
^Y		Select Layer
<T	TABLE	Insert Table
<T\$	TABLESTYLE	Insert Table \$style
<TB	TINSERT	Insert Table Block
<TG	TABLEDIT	Insert Table chanGe
<TO		Insert TO
<U		Insert Update
<UD		Insert Update Door

## Sheet1

>T	TABLEXPORT	eXport Table
~	STRETCH	~stretch
3\	3D\	3D \mirror
3>2	SOLPROF	Displays 3Dsolid as 2D drawing
3EC	XEDGES	3D Edges to Curves
3EM	EDGE	3D Edges Manage
3IQ	INTERFERE	3D Interference Query
3LX	LIVESECTION	3D live seXction
3M	3DMOVE	3D Move
3M	3DMESH	3D Mesh
3M-	MESHUNCREASE	3D Mesh Crease Uncrease
3M+	MESHCREASE	3D Mesh Crease
3MO	MESHOPTIONS	3D Mesh Options
3MOP	MESHPRIMITIVEOPTIONS	Settings Mesh Primitive
3MR	MESHREFINE	chanGe Mesh Refiner
3MS	MESHSMOOTHMORE	3D Mesh Smooth +more
3MS	MESHSLICE	3D Mesh Slice
3MS-	MESHSMOOTHLESS	Settings Mesh Smooth -less
3MS+	MESHSMOOTH	Settings Mesh Smooth +more
3R	REVOLVE	3D Revolve
3R	3DROTATE	Make Rotate 3D
3S-	SUBTRACT	3D Solid -subtract
3U	UNION	3D Union
3VC	3DCLIP	3D Clip
3VF	3DFLY	3D Fly
3VO	3DORBIT	3D Orbit
3VOC	3DORBITCTR	3D Orbit Center
3VOG	3DCORBIT	3D Orbit confiG
3VP	3DPAN	3D Pan
3VR		Viewpoint Right
3VS	3DSWIVEL	3D Swivel
3VT		Viewpoint Top
3VU		Viewpoint Under
3VW	3DWALK	3D Walk
3WF	WALKFLYSETTINGS	3D Walkfly Settings
3Z	3DZOOM	Zoom 3D
A	ALIGN	Align
AR		Align Rotate
B	BLOCK	Block
B@	BATTORDER	Block Attribute Order
B*\		Block *explode & \mirror
B*LO		Block *everything to Layer zero
B*O		Block *everything at Origin
B%		Block %scale
B<S	BEDIT	Block Insert Substitute
BA	BACTION	Block Action
BAB	BACTIONBAR	Block Action Bar
BAP	BASSOCIATE	Block Associate Parameter
BAS	BACTIONSET	Block Action Set
BBP	BCPARAMETER	Block BcParameter
BC	BCONSTRUCTION	Block Construction
BDE	BAUTHORPALETTE	Block Dynamic Editor
BE	BEDIT	Block Edit Block

## Sheet1

BEC	BAUTHORPALETTECLOSE	Block Editor Close
BEC	BCLOSE	Block Editor Close
BEP	BPARAMETER	Block Edit Parameter
BG	BGRIPSET	Block Gripset
BH	BHATCH	Block Hatch
BQ		Block Query
BRC	REFCLOSE	Block Reference Close
BRE	REFEDIT	Block Reference Edit
BRS	REFSET	Block Reference Set
BS	BSETTINGS	Block Settings
BS	BSAVE	Block Save
BSA	BSAVEAS	Block Save As
BT	BTABLE	Block Lookup Table
BT	BTESTBLOCK	Block Test
BTQ	BLOOKUPTABLE	Block Query lookup table
BV	BVSTATE	Block Visibility
BVH	BVHIDE	Block Visibility Hide
BVH	BVHIDE	Block Visibility Hide
BVS	BVSHOW	Block Visibility Show
BVS	BVSHOW	Block Visibility Show
BX	WBLOCK	Block eXport
BXA	BURST	Block eXplode keep Attributes
BXO		Block eXport Origin
C	COPY	Copy
C>L	COPYTOLAYER	Copy to Layer
CR		Copy Rotate
D	DIM & DIM1	Dim
D-	DIMDISASSOCIATE	Dim Associate minus
D+	DIMREASSOCIATE	Dim Associate +plus
D	DIMALIGNED	Dim aligned
D\$	DIMSTYLE	Dim \$tyle
DA	DIMANGULAR	Dim Angular
DB	DIMBASELINE	Dim Baseline
DC	DIMCONTINUE	Dim Continue
DC	DIMARC	Dim arC
DC	DIMCENTER	Dim Center
DC	DIMCONSTRAINT	Dim coNstraint
DD	DIMDIAMETER	Dim Diameter
DE	DIMEDIT	Dim Edit
DE	DIMTEDIT	Dim Edit Text
DI	DIMINSPECT	Dim Inspect
DJ	DIMJOGGED	Dim Jogged
DKL	DIMBREAK	Dim break Line
DL	DIMLINEAR	Dim Linear
DM	MESH	Place Mesh
DO	DIMORDINATE	Dim Ordinate
DO	DIMOVERRIDE	Dim oVeride
DP	DDPTYPE	Dim Point Type
DQ	QDIM	Dim Quick
DR	DIMREGEN	Dim Regen
DR	DIMRADIUS	Dim Radius
DRJ	DIMJOGLINE	Dim Radius Jogglie
DS	DIMSPACE	Dim Space

## Sheet1

DS	SPLINE	Draw Spline
DT	TOLERANCE	Dim Tolerance
DZ		Place Zigzag
E	ERASE	Erase
F		Freeze
F?	ABOUT	Query ACAD
F?	AUDIT	File Audit
F?L	DWFLAYERS	File Query Layers
F?S	STANDARDS	File Query Standards
F?S	CHECKSTANDARDS	File Query Standards
F?W	WHOHAS	File Whohas
F*		Freeze all
F#	STATS	File statistics
F^		Freeze Select ent
F^^		Freeze Select Sub-ent
F<@O	PASTEORIG	File Import @ Origin World
F<3S	3DSIN	File Import 3D Studio data
F<A	APpload	File Appload like LSP & ARX
F<DB	DBCONNECT	File Import Data Base
F<DG	IMPORT	File Imports drawing files
F<DX	DXBIN	File Dxbin
F<G	ACISIN	File Geometry like ACIS
F<I	IMAGEATTACH	Import Image files DXF etc. new version
F<I-		File <in Image Unload
F<IC		File <in Image Detach
F<IP		File <in Image Path
F<IR		File <in Image Reload
F<L	DATALINK	File Attach Link like Exel
F<M	MARKUP	File Markup
F<MC	MARKUPCLOSE	File Markup Close
F<NL	NETLOAD	File interNet Dyn Dialogues
F<OLEL	OLELINKS	File Link Objects External
F<P	PARTIALLOAD	File Load Partial
F<PF	PCINWIZARD	File Import Plot Files (deprecated)
F<RX	ARX	File Runtime eXtension
F<S	SHAPE	File <in Shape
F<U	DWFATTACH	File Underlay files like DWF
F<U	PDFATTACH	File Import Underlay PDF
F<W	WMFIN	File <in WFM
F<WH	SETIDROPHANDLER	File <in Web Handler
F<WO	WMFOPTS	File <in WFM Opts
F<X	ATTACH	File Xref
F<XM-	EXTERNALREFERENCECLOSE	File < eXref Manager -off
F<XM+	EXTERNALREFERENCES	File < eXref Manager +on
F>3D	3DSOUT	File out> 3D
F>A	DDATTEXT	File out> Attributes
F>A	AUTOPUBLISH	File out> Auto
F>AA	EXPORTTOAutoCAD	File out> AEC to AutoCAD
F>AC	ACISOUT	File out> Acis
F>AM	AMECONVERT	File out>Ame
F>BMP	BMPOUT	File out> Bitmap
F>BS	SHAREWITHSEEK	File out> Block to Seek
F>C	COMPILE	File out Compile

## Sheet1

F>CB	COPYBASE	File out> Copy Base
F>CC	COPYCLIP	File out> Copy Clipboard
F>CH	COPYHIST	File out> Copy History to clipboard
F>CL	COPYLINK	File out> Copy as a Linked object
F>D	DATAEXTRACTION	File out> Data extraction
F>D	SHELL	File eXit to DOS prompt
F>DWF	PUBLISH	File out> DWF
F>DXF	DXFOUT	File out> DXF
F>HTML	PUBLISHTOWEB	File out> HTML
F>IMG	SAVEIMAGE	File out> IMG
F>JPG	JPGOUT	File out> JPG
F>L-	LOGFILEOFF	File out> Log OFF
F>L+	LOGFILEON	File out> Log ON
F>LM	EXPORTLAYOUT	File out> Layout to Modelspace
F>M	WMFOUT	File out>M
F>P3	3DPRINT	File out> Print 3D
F>PDF	EXPORTPDF	File out to PDF
F>PNG	PNGOUT	File out> PNG
F>SLD	MSLIDE	File out> Slide
F>STL	STLOUT	File out> STL
F>T	CUTCLIP	File out> cuT to clipboard
F>T	ETRANSMIT	File out> Transmit
F>TIF	TIFOUT	File out> TIF
F>U	GEOTOURL	File goto URL
F>W	EXPORTDWF	File out> DWF
F>WX	EXPORTDWFX	File out> DWF X
F3C	3DCONFIG	File 3D Config
FB	BROWSER	File Browser
FC	CLOSE	File Close
FC*	CLOSEALL	File Close all
FCP	PARTIALCLOSE	File Close Partial
FCU	DWFCLIP	File Clip Underlay
FDGNA	DGNATTACH	File DGN Attach (Microstation)
FDGNC	DGNCLIP	File DGN Clip
FDGNI	DGNIMPORT	File DGN Import
FDGNJ	DGNADJUST	File DGN adJust
FDGNM	DGNMAPPING	File DGN Mapping
FDGNMP	DGNMAPPINGPATH	Tfile DGN Mapping Path
FDGNO	DGNOSNAP	File DGN Osnap
FDGNX	DGNEXPORT	File DGN eXport
FDGNY	DGNLAYERS	File DGN laYers
FG	PURGE	File purGe
FI	REINIT	File reInitialize
FM	MARKUPIIMPORT	File Markup
FM	MENU	File Menu
FM-	MENUUNLOAD	File Menu Unload
FM+	MENULOAD	File Menu Load
FN	NEW	File New
FO	OPENDWFMARKUP	File Open
FOP	PARTIALOPEN	File Open Partial
FP	PLOT	File Plot
FP	DWGPROPS	File Properties
FP\$C	CONVERTCTB	File Plot \$tyle Convert

## Sheet1

FP\$M	PLOTSTYLE	File Plot \$tyle
FP\$M	STYLESMANAGER	File Plot \$tyles Managewr
FPD	PLOTDETAILS	File Plot Details
FPM	PLOTTERMANAGER	File Plotter Manager
FPS	PASTESPEC	File Paste Special
FPS	PAUSE	File Pause Script
FPS	PLOTSTAMP	File Plotstamp
FQ	QUIT	File Quit
FR	RECOVER	File Recover
FRA	PLAY	File Replay Animation
FRM	DRAWINGRECOVERY	File Recovery Manager
FRM-	DRAWINGRECOVERYHIDE	File Recovery Manager hide
FRS	SCRIPT	File Run a Script
FS	CONFIG	File Settings (OPTIONS)
FS	SAVE	File Save
FSO	SECURITYOPTIONS	File Security Options
FSP	PDFLAYERS	File Settings PDF laYers
FSQ	QSAVE	File Save Quick
FSV	SIGVALIDATE	File Signature Validate
FU	UNDEFINE	File Undefine
FUA	DWFADJUST	File Underlay Adjust
FUA	PDFADJUST	File PDF Adjust
FUC	PDFCLIP	File PDF Clip
FUC	CONVERT	File Update Convert
FUF	DWFFORMAT	FileUnderlay Format
FUL	DATALINKUPDATE	File Update Link
FUR	REDEFINE	File Undefine Redefine
FV	PLOTPREVIEW	File preView
FVBA	VBAIDE	File VBA Editor
FVBAL	VBALOAD	File VBA Load
FVBAM	VBAMAN	File VBA Man
FVBAR	VBARUN	File VBA Run
FVBAS	VBASTMT	File VBA Statemet
FVBAU	VBAUNLOAD	File VBA Unload
FX	EXIT	File eXit
G	GROUP	Group
G<>	REVERSE	ChanGe Reverse Complex
G2K	THICKNESS	chanGe 2D hicKness
G3>2	FLATSHOT	ChanGe 3D to 2D
G3>S	CONVTOSOLID	ChanGe 3D to Solid
G3A	3DARRAY	chanGe 3D Array
G3G	3DALIGN	chanGe 3D aliGn
G3K	THICKEN	chanGe 3D thickness
G3X>S	LOFT	ChanGe 3D sXtions to Solid
GA	ALIGN	chanGe Align
GAD	DDATTE	ChanGe Attributes Dynamic
GC*L		chanGe Color * by laYer
GCO		chanGe Colour (by object)
GDS		chanGe Field Status
GF		chanGe Field of layer name
GFC		chanGe Field Color
GFD		chanGe Field Drawing-type
GFD		chanGe Field Object

## Sheet1

GFD-		chanGe Field Drawing-type +
GFD+		chanGe Field Drawing-type -
GFD=		chanGe Field to match
GFD		chanGe Field  inetype
GFDI		chanGe Field Workspace ID
GFWS		chanGe Field Workspace point
GFWZ		chanGe Fields WorkZone
GH	HATCHEDIT	chanGe Hatch
GL	LENGTHEN	chanGe Length (not LG Layer chanGe)
GL		chanGe laYer
GL%		chanGe Length percent
GL0		chanGe to Layer zero
GLD		chanGe Length Dynamic
GLI		chanGe LenGth Increment
GLT		chanGe Length Total
GN	RENAME	chanGe Name
GN		chanGe Name  inetype
GN\$		chanGe Name \$tyle
GNB		chanGe Name Block
GND		chanGe Name Dimstyle
GNLcs		chanGe Name Local coordinate syatem
GNLX		chanGe Name layer Xref
GNV		chanGe Name Workspace
GNW		chanGe Name Workspace port
GNY		chanGe Name laYer
GP	CHANGE	ChanGe Properties
GP	PROPERTIES	ChanGe Properties
GP	CHPROP	ChanGe Properties
GP	PEDIT	chanGe Polyline
GPL	SETBYLAYER	ChanGe Properties Bylayer
GPM	MATCHPROP	ChanGe Properties Match
GPV		chanGe Pline add Vertex
GPW		chanGe Polyline Width
GR		chanGe Radius
GS	SPLINE	change Spline
GS	SOLIDEDIT	ChanGe Solid (Edit)
GT		chanGe Text
GT@		chanGe Text to attribute
GTCM	MATCHCELL	ChanGe Table Cell to Match
GTS		ChanGe Text Swap lines
GTSI		chanGe Text Size Individually
GTT		chanGe Text to Text
GTU		ChanGe Text to Upper case
IS	ISOPLANE	Isoplane Set
J	FILLET	Join Fillet
J		Join
J*		Join sall uitable objects into polyline
J3W		Join 3D object Wall
JA		Join Arc
JC	CHAMFER	Join Chamfer
JF*		Join Fillet all
JH		Join Heal
JM#	MLEDIT	Join Multiline

## Sheet1

JR		Join Radius
JS	JOIN	Join Select
JT	TRIM	Join Trim
JX	EXTEND	Join Extend
K	BREAK	breakK
K@		breakK @ same point
K#		breakK #multiple
KI		BreaK Inters.
L	LAYER	Layer
L-	LAYOFF	Layer – off
L-*		Layer – off *everything
L-F		Layer – off by Field
L-P		Layer – off Previous
L-T		Layer – off Text
L-V		Layer – off Visible
L-X		Layer – off eXcluding
L+	LAYON	Layer +on
L+*		Layer + on all
L+>		Layer + on sub-entity
L+C		Layer + on by Color
L+F		Layer + on by Field
L+M		Layer + on .....
L+P		Layer + on Previous
L+T		Layer + on Text
L+X		Layer +on eXcluding
L+X		Layer + on eXcluding
L<		Layer Back saved by ZP
L		Layer Line-type
L *N		Layer  inetype * byName
L N		Layer  inetype byName
LC		Layer Colour
LC. <<		Layer Colour select ent
LC. >>		Layer Colour select sub-ent
LC*N		Layer Color * byName
LC^	LAYMCR	Layer Current ^select
LCP200		Layer Color for 1:200 Plot
LD^	LAYDEL	Layer Delete Select
LDF		Layer DeFault
LDO	DRAWORDER	Layer Draw Order
LE		Layer deEfpoints
LF	LAYERFRZ	Layer Freeze ^select
LF		Layer Field
LF*		Layer Freeze everything
LFD		Layer Field Drawing tLpe
LFF		Layer Freeze by Field
LFI		Layer Field Workspace ID
LFL		Layer Field Linetype
LFO		Layer Field Object
LFP		Layer Freeze Previous
LFS		Layer Field Status
LFS		Layer Field Color
LFV		Layer Field Workspace point
LH		Layer Isolate (Highlite_

## Sheet1

LI-	LAYUNISO	Layer Isolate -off
LI^	LAYISO	Layer Isolate Select
LIL	LAYWALK	Layer Isolate List
LIV	LAYVPI	Layer Isolate Workspace port (VPLayer)
LL	LAYLCK	Layer Lock
LL		Lock
LL-		Layer Unlock
LL-*		Layer Unlock everything
LL-F		Layer Unlock by Field
LL-P		Layer Unlock Previous
LL-X		Layer Unlock eXcluding
LLA		Layer List Altmenu
LLA		Layer List Alpha
LLF		Layer Lock by Field
LLP		Layer Lock Previous
LLX		Layer Lock eXcluding
LM	LAYMGR	Layer Manager (old version)
LM	LAYERPALETTE	Layer Manager
LM-	LAYERCLOSE	Layer Manager -off
LN		Layer New
LNT	LAYTRANS	Layernames Translate
LP		Layer Plot
LP-		Layer Plot OFF
LP+		Layer Plot ON
LPM	LAYERPMODE	Layerstate Previous +/-
LPR	LAYERP	Layerstate Previous Restore
LR		Layer Resolve
LR-		Layer Resolve minus
LR+		Layer Resolve plus
LRP		Layer Resolve Previous
LS		Layer Set
LS-		Layer State Delete
LS^	LAYMCH	Layer Set Select
LS<		Layer State Import
LS>		Layer State eXport
LSC	LAYCUR	Layer Set Currrent
LSG		Layer State Edit
LSL		Layer State list
LSN	LAYERSTATE	Layer Settings SaveName
LSN		Layer State Name
LSP		Layer Set Previous
LSR		Layer State Restore
LSS		Layer State Save
LT*	LAYTHW	Layer thaW
LT*		Layer Thaw everything
LT+*		Layer Thaw & ON all
LTF		Layer Thaw by Field
LTP		Layer Thaw Previous
LTX		Layer Thaw eXcluding
LV	VPLAYER	Layers in Vports
LW		Layer Workspace
LW-		Layer Workspace minus
LW+		Layer Workspace plus

## Sheet1

LZX		Layer freeZe eXcluding
M	MOVE	Move
M3S	3DSLICE	Make 3D Slice
M3SW	SWEEP	Sweep
M3X	SECTION	Make 3D seXtion
MA	ARRAY	Make Array
MAM	MEASURE	Make Array Measure
MAP		MakeArray Polar
MAR		Make Array Rectangular
MBT	BTRIM	Make Boundary Trim
MIC	IMAGECLIP	Make Image Clip
MK	BREAK	Make Break
MKP	BREAKATPOINT	Make break Point
MO	OFFSET	Place Offset
MR	REGION	Make Region
MR		Tool Move Rotate
MRLS	RULESURF	Make Rule Surf
MRVS	REVSURF	Make Revsurf
MTBS	TABSURF	Make Tab Surf
MV	MVIEW	Make Vports (Pspace)
O	OSNAP	Osnap
O-		Osnap Non
O?		Osnap list
OA		Osnap along
OC		Osnap Cen
OD		Osnap noD
OE		Osnap End
OG		Osnap Gen-mid
OI		Osnap Int
OJ		Osnap mid-ends
OK		Osnap quick
OM		Osnap Mid
ON		Osnap Nea
OOPS	OOPS	restore last erasure
OQ		Osnap Qua
OS	SNAP	Osnap to Grid
OS		Osnap inSertion pont
OT		Osnap Tan
OV		Osnap Vertex/inters
OX		Osnap X value
OY		Osnap Y value
OZ		Osnap Z value
P or PQ		Place or Place Selected Object
P\$G	CONVERTPSTYLES	Plot \$tyles chanGe
P3B	BOX	Place 3D Box
P3B	BOX	Place 3D Box
P3C	CONE	Place 3D Cone
P3C	CYLINDER	Place 3D Cylinder
P3D	DISH	Place 3D Dish
P3D	DOME	Place 3D Dome
P3H	HELIX	Place 3D Helix
P3O	PRESSPULL	Place 3D Offset
P3P	3DPOLY	Place 3D PolySolid

## Sheet1

P3S	SPHERE	Place 3D Sphere
P3SI	INTERSECT	Place 3D Solid Intersect
P3T	TORUS	Place 3D Torus
P3W	WEDGE	Place D Wedge
P3Y	3DPYRAMID	Place 3D pYramid
PA	ARC	Place Arc
PB	INSERT	Insert Block
PB	BOUNDARY	Place Boundary
PB#	MINSERT	Insert Block #multiple
PBB		Place Boundary
PBR		Place Boundary Region
PC	CIRCLE	Place Circle
PC	CAMERA	Place Camera
PE	ELLIPSE	Place Ellipse
PF	PFACE	Place Face
PF1		Place Face by single pick
PF2		Place Face from two points
PF3	3DFACE	Place Face 3D
PF3P		Place Face from three points
PF4P		Place Face from four points
PFO		Place Face by Offsetting a line
PG		Place polyGon
PH	BHATCH	Place Hatch
PH	HATCH	Place Hatch
PH		Hideplot
PH-		Hideplot OFF
PH+		Hideplot ON
PHGA		Place Hatch chanGe Associative
PK	SKETCH	Place sKetch
PL^D		Place Line ^angle Distance
PL^I		Place Line ^angle to Intersect
PL>	HYPERLINK	Place hyperLink >
PL>	LINE	Place Line
PLK	BREAKLINE	Place Line breakLine (Zigzag)
PLM	MLINE	Place Line Multi
PLR	RAY	Place Line Ray
PLX	XLINE	Place Line Xline
PN	POINT	Place Node
POC		Place Offset to Current layer
POE		Place Offset then erases original
POK		Place Offset and Keeps original
POL		Place Offset Last object
POO		Place Offset o an Objects layer
POP		Place Offset to a Preset layer
POS		Place Offset to a selected layer
PD	DONUT	Place Donut
PP	PLINE	PlacePline
P3P	3DPOLY	Place Pline 3D
PP3		Place Wiggle
PPB	BOUNDARY	Place Polyline Boundary
PR	RECTANG	Place Rectangle
PR	XLINE	Place Line Reference Xline
PRA		Place Rectangle of given Area

## Sheet1

PRC	REVCLOUD	Place Revision cloud
PRC		Place Rectangle around Centroid
PRM		Place Rectangle around Midpoint
PRO		Place Rectangle around Origin
PRS		Place Rectangle Start point
PRX		Place Rectangle with cross lines
PS3	SOLID	Place Solid 3D
PT	TRACE	Place Trace
PY		Place sYmbol
R	RENDER	Render
R*O		Rotate all around origin
R+-	RENDEREXPOSURE	Render eXposure +-
R180		Rotate 180deg
R270		Rotate 270deg
R90		Rotate 90deg
RA		Rotate Axis
RB	BACKGROUND	Render Background
RCW	RENDERCROP	Render Crop Window
RE	RENDERENVIRONMENT	Render Environment
RF	FOG	Renderr Fog
RL	LIGHT	Render Light
RMA	MATERIALS	Render Materials Assign
RMC	MATERIALSCLOSE	Render Materials Close
RMR	RMAT	Render Materials Replace
RP	RPREF	Render Preferences
RPM	RENDERPRESETS	Render Presets Manage
RS	SCENE	Render Scene
RS	SHADE	Render Shade
RSS	SUNPROPERTIES	Render Sun Properties
RSSC	SUNPROPERTIESCLOSE	Render Sun Properties Close
RT	TRANSPARENCY	Render Transparency
RUT	ADJUST	Render Underlay Transparency
RUV	SETUV	Render U & V
RW	RENDERSCR	Render Window
RWS	RENDERWIN	Render Window Show
RX		Rotate X axis
RY		Rotate Y axis
RZ		Rotate Z axis
S T	MIRRTEXT	Settings \mirror Text
S %	LTSCALE	Settings  linetype %scale
S %	LINETYPE	Settings  linetype
S W	LINEWEIGHT	Settings  line Weight
SA	APPERTURE	Settings Aperture
SB	BASE	Settings Basepoint
SBR	BREP – command group	Settings Boundary Representation
SC	COLOR	Settings Color
SD	DSETTINGS	Settings Drawing
SDM	DRAGMODE	Settings DragMode
SE	ELEV	Settings Elevation
SFD	FILL	Settings Fill Display +on -off
SG	GRID	Settings Grid
SGC	GEOMCONSTRAINT	Settings Geometry Constraints
SIQ	IMAGEQUALITY	Setting Image Quality

## Sheet1

SIV	IMAGEFRAME	Setting Image Visibility
SIVA	IMAGEADJUST	Setting Image Visibility Adjust
SL>	HYPERLINKOPTIONS	Settings hyperLink>
SLM	MLSTYLE	Settings Line Multi
SMG	GRIPMODES	Settings Grips
SO	OPTIONS	Settings Options
SP	PROPERTIES	Settings Properties
SP	PREFERENCES	Settings
SPC	PROPERTIESCLOSE	Settings Properties Close
SRP	RPREF	Settings Raster Preferences
SRPC	RPREFCLOSE	Settings Render Palette Close
SSD	SOLDRAW	Settings Solid Draw
SSM	SHADEMODE	Settings ShadeMode
SSV	SETVAR	Settings System Variables
ST		Settings Text
ST*		Settings Text all
ST^C		Settings Text select to copy
ST\$		Settings Text \$tyle
STB	TRAYSETTINGS	Settings TaskBar
STJ		Settings Text Justification
STL		Settings Text Leader
STL		Settings Text laYer
STP		Settings Text Plotheight
STP%		Settings Text plot scale
STR		Settings Text Rotation
STS		Settings Text show
STS		Settings Text Size
SU	UNITS	Settings Units
SUID	CUI	Settings User Interface Dialogue
SWR	Workspace RES	Settiings Workspace Res
T	TEXT	Text
T <<		Text start leader
T >>		Text no leader
T:>		Text altmenu
T%	SCALETEXT	Annotation Text %scale
T>@		Annotation Text @
T\$	STYLE	Text \$tyle
TA	TEXTALIGN	Text Align
TBS		Text Block Size
TBM		Text B'dary measure add Text
TGC	TCASE	Text chanGe Case
TD	DDEDIT	Text Dynamic Dialogue
TE	TEXTEDIT	Text Edit
TF	FIND	Text Find & Replace
TF	FIELD	Text Field
TFR	FIND	Text Find & Replace
TFU	UPDATEFIELD	Text Field Update
TG	TEXTEDIT	Text chanGe
TGC		Text chanGe selected characters
TJN		Text Join
TJY		Text Justify
TK2		Text breakK into two
TK		Text breakK

## Sheet1

TL	LEADER	Text Leader
TLD		Text Leader Dot
TLM	MLEADER	Text Leader Multiple
TLM	MLEADERALIGN	Text Leader Multiple Align
TLMC	MLEADERCOLLECT	Text Leader Multiple Collect
TLMG	MLEADEREDIT	Text Leader chanGe
TLN		Text Leader Nil
TLQ	QLEADER	Text Leadr Quick
TM	MTEXT	Text Multi
TML\$	MLEADERSTYLE	Text Leader Multiple \$style
TP%		Text plot %scale
TPS		Text Plot size
TR		Text Rotate
TS		Text setup
TS	TEXTSCR	Text Screen
TS?	SPELL	Text Spell
TU	ANNOUPDATE	Text Update
TX3	EXTRUDE	Tool eXtrude 3D
TZ		Text Size
U	UCS	UCS
U-		UCS Delete
U-1	U1	Undo one
U?		UCS list
U^		UCS <select
U00	UCSORG	UCS Origin
U3		UCS 3-point
UA^	UCSAXISANG	UCS ^angle
UB	UCSBASE	UCS Base
UD	DDUCS	UCS Dialogue
UF	UCSFOLLOW	UCS Follow
UG	GEOGRAPHICLOCATION	UCS Geographic
UG	UCSORTHO	UCS orthoGraphic
UI	UCSICON	UCS Icon
UI-	UI-	UCS Icon -off
UI*	UI*	UCS Icon *All
UI+	UI+	UCS Icon +on
UIF	UIF	UCS Icon Follow
UIN	UIN	UCS Icon Noorigin
UM	UCSMAN	UCS Man
UN	UCSNAME	UCS Name
UO		UCS Entity/Object
UP		UCS Previous
UR		UCS Restore
US		UCS Save
UT		UCS Twist Z
UW		UCS *world
UW		UCS World
UX		UCS Xaxis
UY		UCS Yaxis
UZ		UCS Zaxis
V		Mview first corner
V-	VPMIN	VP – min
V?		Vports Query

## Sheet1

V#	VPORTS	Vports
V+	VPMAX	VP + max
V\$	VISUALSTYLES	Viewport Visual \$tyles
V\$-	VISUALSTYLESCLOSE	Viewport Visual \$tyles -close
V\$C	VSCURRENT	Viewport \$tyle Current
V\$C	VSCURRENT	Visual \$tyle Current
V31		Viewpoint Iso - front left
V32		Viewpoint Iso - front right
V33		Viewpoint Iso - rear right
V34		Viewpoint Iso - rear left
V3B		Viewpoint 3DL,R,F,B,T,U
V3B		Viewpoint Back
V3F		Viewpoint Front
V3I		Viewpoint Iso
V3L		Viewpoint Left
VC	VPCLIP	Vport Clip
VD	DDVPOINT	View Point Dynamic
VDQ	QVDRAWING	View Drawing Quick
VDQC	QVDRAWINGCLOSE	View Drawing Quick Close
VH+		Workspace Hidden line ON
VHO	HIDE	View Hide Objects
VHOS	HLSETTINGS	View Hide Objects Settings
VIL		Isoplane Left
VIR		Isoplane Right
VIT		Isoplane Top
VLCQ	QVLAYOUTCLOSE	View Layout Quick Close
VLQ	QVLAYOUT	View Layout Quick
VN	NEWSHOT	Vport New
VNC	VCUBE	View Navigation Cube
VNF	NEWVPFREEZE	VP New Freeze
VNM	NAVSMOTION	View Navs Motion
VNM-	NAVSMOTIONCLOSE	View Navs Motion -close
VNW	NAVSWHEEL	Navigation Wheel
VO		Mview Object
VOA		View Order Above
VOB		View Order Back
VOF		View Order Front
VOTF		View Order Text to Front
VOU		View Order Under
VP	PLAN	View Plan
VP		Mview Polygonal
VR		View Restore
VR1-10		Restore 1-10
VS		Save
VS	NEWVIEW	View Save
VS-		Turns Shademode OFF
VSA		Save as "A"
VSM+		Shademode ON
VSOL		Solid
VT		Vplayer Thaw
VTO	VTOPTIONS	View Transition Options
VW		Window
VX	SECTIONPLANE	View Xection Plane

## Sheet1

VX	SECTIONPLANESETTINGS	View Xection Plane settings
VXP>B	SECTIONPLANETOBLOCK	View Xection Plane to Block
VXPJ	SECTIONPLANEJOG	View Xection Plane Jog
W-		View Window Delete
WC	CUSTOMIZE	Workspace Customize
WC-	COMMANDLINEHIDE	Workspace Commandline -
WC-	CLEENSCREENOFF	Workspace Cleanscreen -off
WC+	CLEENSCREENON	Workspace Cleanscreen +on
WCL	COMMANDLINE	Workspace Commandline
WD	WORKSPACE	Workspace Dynamic switch
WG+	GRAPHSCR	Workspace Graphscr +on
WL	LAYOUT	Workspace Layout
WL	LIMITS	Workspace Limits
WLU	CONVERTOLDLIGHTS	Workspace Lights Update
WM	WORKSPACE	Workspace Manage
WMU	CONVERTOLDMATERIALS	Materials Update
WP	PARAMETERS	Workspace Parameters
WP-	HIDEPALETTES	Workspace Palettes -off
WP-	MakePALETTECLOSE	Workspace Makebar -off
WP-	PARAMETERSCLOSE	Workspace Parameters Close
WP+	SHOWPALETTES	Workspace Palettes +on
WPN	TPNAVIGATE	Workspace Palettes Navigate
WR	REDRAW – current vport	Workspace Redraw
WR-	RIBBONCLOSE	Workspace Ribbon -off
WR*	REDRAWALL – All Vports	Workspace RedrawAll
WR+	RIBBON	Workspace Ribbon +on
WRA	REGENAUTO	ReGen Auto
WRG	REGEN	ReGen
WS	SHEETSET	Workspace Sheetset
WS	WSSETTINGS	Workspace settings
WS+	OPENSHEETSET	Workspace Sheetset +on
WSN	NEWSHEETSET	Workspace Sheetset New
WSU+	UPDATETHUMBSHOW	Workspace Sheetset Thumbs +on
WSV	WSSAVE	Workspace saVe
WSW	LAYOUTWIZARD	Workspace Sheetset Wizard
WT+	MakeBAR	Workspace Makebar +on
WTM	TABLET	Workspace Tablet Manage
WU-	CUIUNLOAD	Workspace User-interface Unload
WU+	CUILOAD	Workspace User-interface Load
WU<	CUIIMPORT	Workspace User-interface Import
WU>	CUIEXPORT	Workspace User-interface eXport
WUQ	QUICKCUI	Workspace User-interface Quick
WVT	TRANSPARENCY	Workspace View Transparency
*	XPLODE	Xplode
X	XREF	Xref
XA	XATTACH	Xref Attach
XB	XBIND	Xref Bind
XC	XCLIP	Xref Clip
XO	XOPEN	Xref Open
XR*		Xref Reload *all
XT	XFER	Xref Transfer
Z-		workZone -deduct
Z+		workZone +add

## Sheet1

ZR  
ZS  
ZU

workZone Resolve  
workZone Save  
workZone Update

(defun C:?A () (command "AREA"))

(defun C:?D () (command "DIST"))  
(defun C:?3D () (command "3DDISTANCE"))  
(defun C:?DB () (command "DBLIST"))

(defun C:?G () (command "MEASUREGEOM"))  
(defun C:?H () (command "TIME"))  
(defun C:?HG () (command "GRADIENT"))  
(defun C:?I () (command "TREESTAT"))

(defun C:?M () (command "SHOWMAT"))  
(defun C:?O () (command "LIST"))

(defun C:?S () (command "STATUS"))

(defun C:@ () (command "ATTEDIT"))

(defun C:@D () (command "ATTDISP"))

(defun C:B () (command "BLOCK"))  
(defun C:B@ () (command "BATTORDER"))

(defun C:BA () (command "BACTION"))  
(defun C:BAB () (command "BACTIONBAR"))  
(defun C:BAP () (command "BASSOCIATE"))

(defun C:BDE () (command "BAUTHORPALETTE"))  
(defun C:BE () (command "BEDIT"))

(defun C:BS () (command "BSETTINGS"))

(defun C:BX () (command "WBLOCK"))



