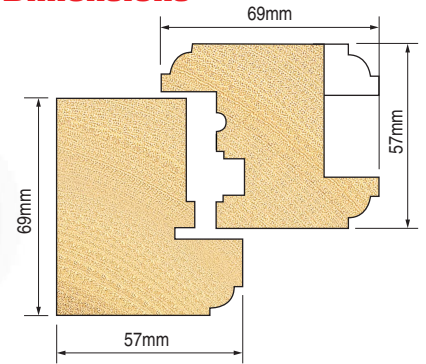


Dimensions



Timber High Performance style windows with the following features:

- Outer frame section 69mm x 57mm. Sash section 69mm x 57mm.
- Standard ovolo profile on outer frame and sash.
- Euro groove for high security espagnolette locking system.
- All outer frame and sash joints are combed.
- Will also produce single tenon for mullion and transom joints (mortise hole required).
- An optional mechanical mullion and transom joint can be produced.
- Locating check for top-hung or side-hung friction stays and locked night vent position.
- Can also accommodate egress friction hinges allowing windows to conform to building regulations.
- 4mm groove width in outer frame to accept standard weather seals.
- Produces 18mm rebate depths in outer frame.
- Produces 18mm x 42mm rebates in the sash.
- Separate routing jigs available for producing a mortise for the espagnolette lock body and the slot in the sash for the trickle vent.



Complete set of 31 tools with 30mm bore (or 1-1/4") including spacers and setting gauge.

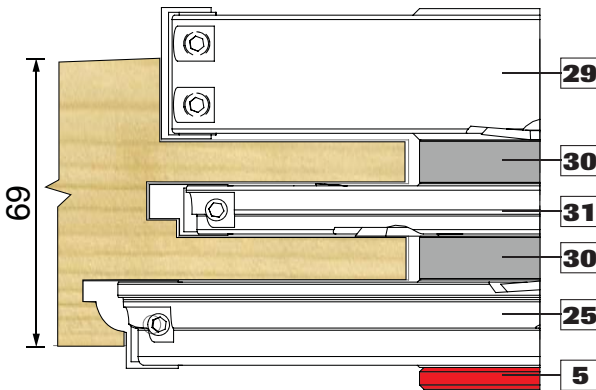
Product Ref	Bore
IT/MWS/SET001	30mm
IT/MWS/SET007	1-1/4"



Shared Common Tools

When purchasing in conjunction with other styles, please see pages 44 & 45.

Step 1 Tenon Tools for Outer Frame Jambs



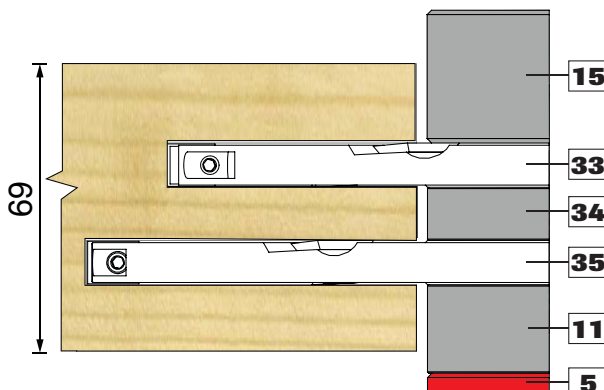
Tools/Spacers			Replacement Knives			
Item No	Product Ref. 30mm (1-1/4")	Description	Size	Product Ref.	Size	Product Ref.
29	IT/71054291(7)	Tenon Head	30x12x1.5	IT/3101230/10	14x14x2.0	IT/3008503/10
30	IT/1920531(7)	Spacer	N/A			
31	IT/71054311(7)	Groover	19x11x6.2	IT/3108577	14x14x2.0	IT/3008503/10
25	IT/71054251(7)	Ovolo Head	20x23x2.0	IT/3108567	14x14x2.0	IT/3008503/10
5	IT/1920061(7)	Spacer	N/A			

Alternative profile styles, see pages 41 - 43.



Recommended Speed
3,500 - 4,500 RPM

Step 2 Slot Tenons for Outer Frame Head & Sill



Tools/Spacers			Replacement Knives			
Item No	Product Ref. 30mm (1-1/4")	Description	Size	Product Ref	Size	Product Ref
15	IT/1920561(7)	Spacer	N/A			
33	IT/71054331(7)	Tenon Head	9.6x12x1.5	IT/3007507/10	14x14x2.0	IT/3008503/10
34	IT/1920471(7)	Spacer	N/A			
35	IT/71054351(7)	Tenon Head	9.6x12x1.5	IT/3007507/10	14x14x2.0	IT/3008503/10
11	IT/1920551(7)	Spacer	N/A			
5	IT/1920061(7)	Spacer	N/A			

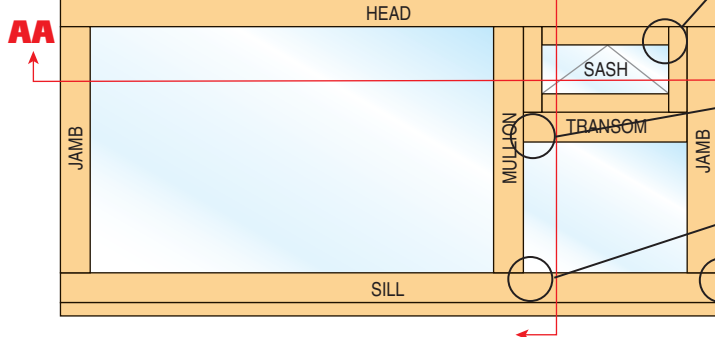
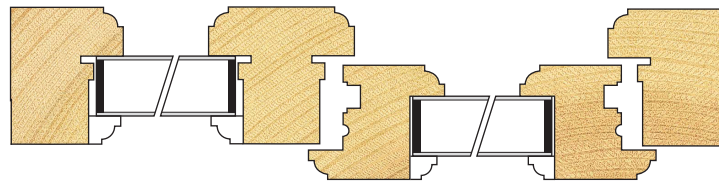
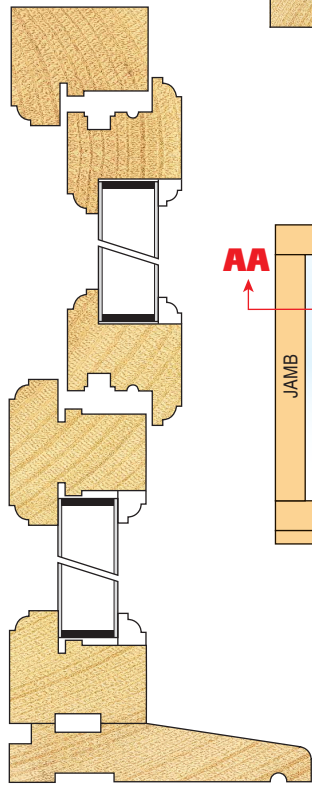
Replacement knives with a /10 are sold in packs of 10.



Recommended Speed
3,500 - 4,500 RPM

Top View AA

Side View BB

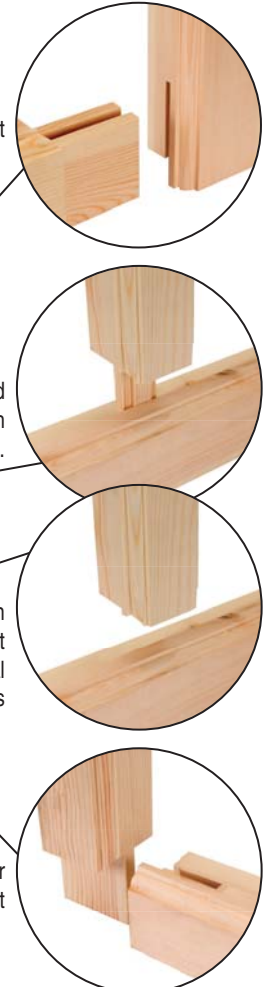


Sash joint

Transom and tenon joint with tenon step 3...

...or the transom and mullion joint with mechanical fixings

Outer frame joint



Plant on sill
(Requires sill block - see page 56)

The profile tools in the system can be used for creating the beads, but require changes to the spindle machine settings. See page 14.

- HP Ovalo
- HP 20° Splay
- HP TE Ovalo
- TF Ovalo
- SP Ovalo
- SB YS Ovalo
- EJ 15° Splay
- FS 9° Splay
- DT Ovalo
- DE Large Ovalo

Tools and Spacers

Tool Set-up

Machined Profile

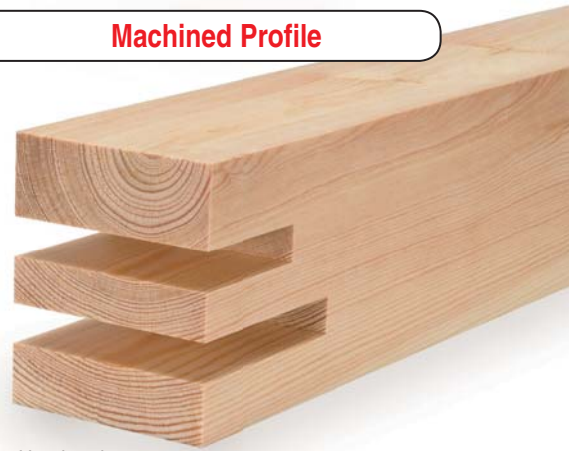


Jamb joint

Tools and Spacers

Tool Set-up

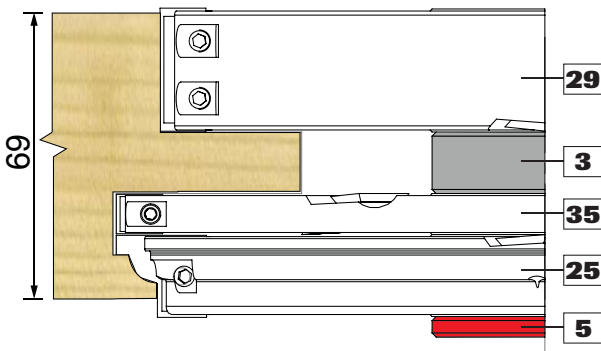
Machined Profile



Head and Sill joint

Step 3 to 8 >

Step 3 Scribe & Tenon for Mullions & Transoms



Tools/Spacers			Replacement Knives			
Item No	Product Ref. 30mm (1-1/4")	Description	Size	Product Ref	Size	Product Ref
29	IT/71054291(7)	Tenon Head	30x12x1.5	IT/3101230/10	14x14x2.0	IT/3008503/10
3	IT/1920541(7)	Spacer	N/A			
35	IT/71054351(7)	Tenon Head	9.6x12x1.5	IT/3007507/10	14x14x2.0	IT/3008503/10
25	IT/71054251(7)	Ovolo Head	20x23x2.0	IT/3108567	14x14x2.0	IT/3008503/10
5	IT/1920061(7)	Spacer	N/A			

Alternative profile styles, see pages 41 - 43.



Recommended Speed
3,500 - 4,500 RPM

ALTERNATIVELY

Step 3a Scribe & Tenon for Mullions & Transoms (for Mechanical Fixings only)

HP *Quale*

HP *20° Splatt*

HP *TE Quale*

TF *Quale*

SP *Quale*

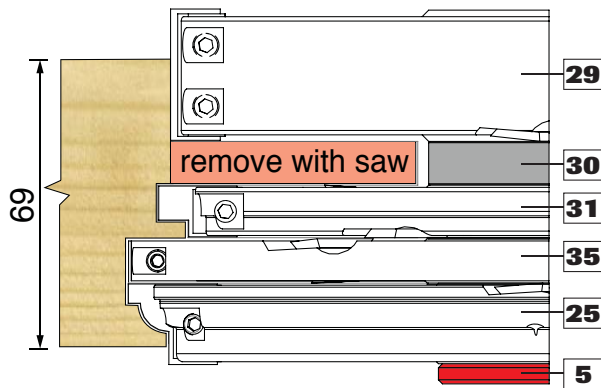
SB *YS Quale*

EJ *q Splatt*

FS *q Splatt*

DT *Quale*

DE *Large Quale*



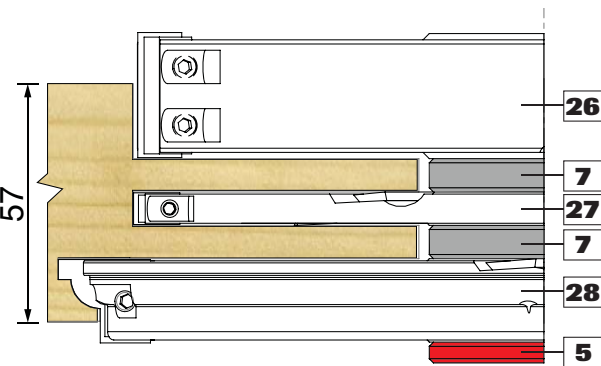
Tools/Spacers			Replacement Knives			
Item No	Product Ref. 30mm (1-1/4")	Description	Size	Product Ref	Size	Product Ref
29	IT/71054291(7)	Tenon Head	30x12x1.5	IT/3101230/10	14x14x2.0	IT/3008503/10
30	IT/1920541(7)	Spacer	N/A			
31	IT/71054311(7)	Groover	19x11x6.2	IT/3108577	14x14x2.0	IT/3008503/10
35	IT/71054351(7)	Tenon Head	9.6x12x1.5	IT/3007507/10	14x14x2.0	IT/3008503/10
25	IT/71054251(7)	Ovolo Head	20x23x2.0	IT/3108567	14x14x2.0	IT/3008503/10
5	IT/1920061(7)	Spacer	N/A			

Alternative profile styles, see pages 41 - 43.



Recommended Speed
3,500 - 4,500 RPM

Step 4 Tenon for Sash Rails



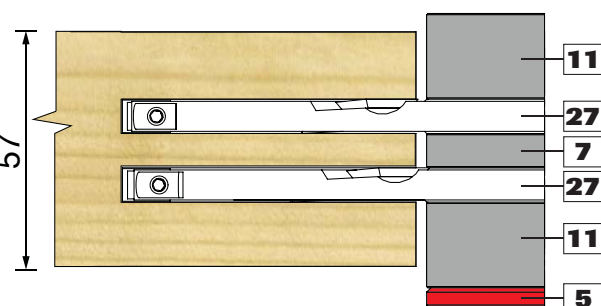
Tools/Spacers			Replacement Knives			
Item No	Product Ref. 30mm (1-1/4")	Description	Size	Product Ref	Size	Product Ref
26	IT/71054261(7)	Tenon Head	30x12x1.5	IT/3101230/10	14x14x2.0	IT/3008503/10
7	IT/1927801(7)	Spacer	N/A			
27	IT/71054271(7)	Tenon Head	7.5x12x1.5	IT/3107512/10	14x14x2.0	IT/3008503/10
28	IT/71054281(7)	Ovolo Head	20x23x2.0	IT/3108567	14x14x2.0	IT/3008503/10
5	IT/1920061(7)	Spacer	N/A			

Alternative profile styles, see pages 41 - 43.



Recommended Speed
3,500 - 4,500 RPM

Step 5 Slot Tenon for Sash Stiles



Tools/Spacers			Replacement Knives			
Item No	Product Ref. 30mm (1-1/4")	Description	Size	Product Ref	Size	Product Ref
11	IT/1920551(7)	Spacer	N/A			
27	IT/71054271(7)	Tenon Head	7.5x12x1.5	IT/3107512/10	14x14x2.0	IT/3008503/10
7	IT/1927801(7)	Spacer	N/A			
5	IT/1920061(7)	Spacer	N/A			

Replacement knives with a /10 are sold in packs of 10.



Recommended Speed
3,500 - 4,500 RPM

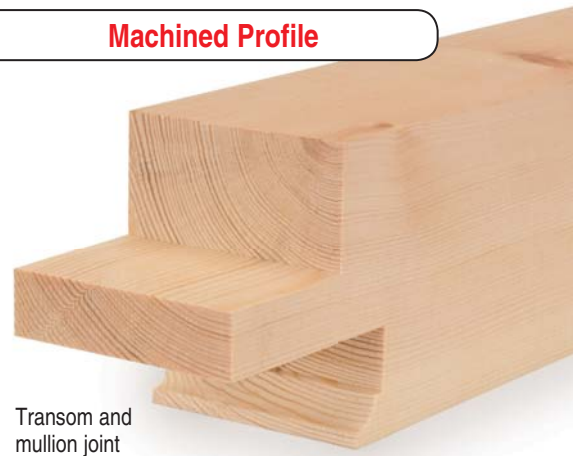
Tools and Spacers



Tool Set-up



Machined Profile



Transom and mullion joint

Tools and Spacers



Tool Set-up



Machined Profile



Transom and mullion mechanical joint before tenon removed with saw.

- HP** *Quale*
- HP** *20° Splay*
- HP** *TE* *Quale*
- TF** *Quale*
- SP** *Quale*
- SB** *YS* *Quale*
- EJ** *YS* *Splay*
- FS** *9° Splay*
- DT** *Quale*
- DE** *Large* *Quale*

Tools and Spacers



Tool Set-up

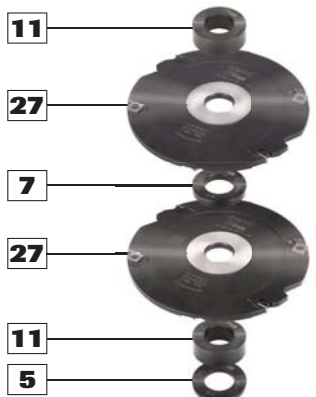


Machined Profile



Top and bottom sash rail joint

Tools and Spacers



Tool Set-up



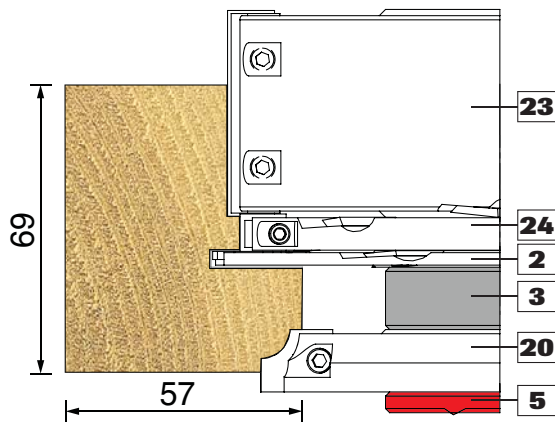
Machined Profile



Sash stiles joint

Step 6 to 8 >

Step 6 Outer Frame Profile



Tools/Spacers			Replacement Knives			
Item No	Product Ref. 30mm (1-1/4")	Description	Size	Product Ref	Size	Product Ref
23	IT/71054231(7)	Rebate Head	50x12x1.5	IT/3101250/10	14x14x2.0	IT/3008503/10
24	IT/71054241(7)	Planer Head	9.0x12.1.5	IT/3108474/10	-	-
2	IT/7105421(7)	Groover	18x18x2.0	IT/3008501/10	14x14x2.0	IT/3008503/10
3	IT/1920541(7)	Spacer	N/A			
20	IT/71054201(7)	Ovolo Head	20x20x2.0	IT/3108627	-	-
5	IT/1920061(7)	Spacer	N/A			

Alternative profile styles, see pages 41 - 43.



Recommended Speed
5,500 - 6,500 RPM

Step 7 Sash Inner Profile

HP
Ovolo

HP
20° Splay

HP
TE
Ovolo

TF
Ovolo

SP
Ovolo

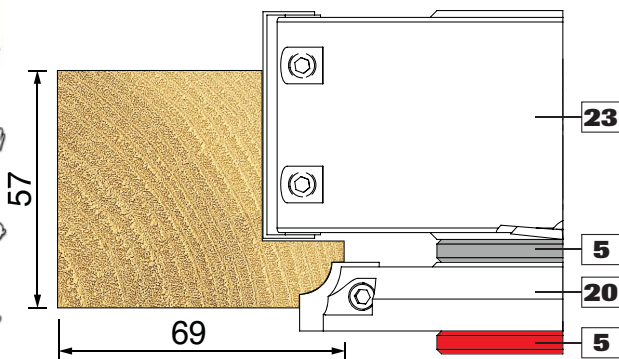
SB
YS
Ovolo

EJ
VA
7° Splay

FS
7° Splay

DT
Ovolo

DE
Large
Ovolo



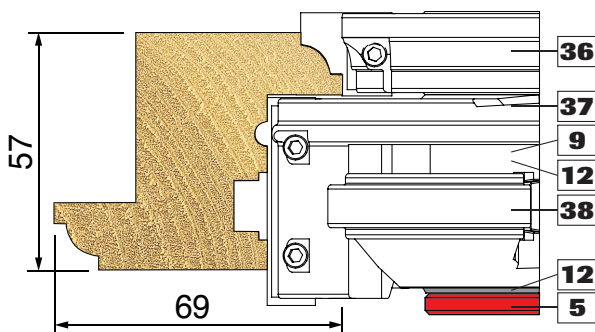
Tools/Spacers			Replacement Knives			
Item No	Product Ref. 30mm (1-1/4")	Description	Size	Product Ref	Size	Product Ref
23	IT/71054231(7)	Rebate Head	50x12x1.5	IT/3101250/10	14x14x2.0	IT/3008503/10
5	IT/1920061(7)	Spacer	N/A			
20	IT/71054201(7)	Ovolo Head	20x20x2.0	IT/3108627	-	-

Alternative profile styles, see pages 41 - 43.



Recommended Speed
5,500 - 6,500 RPM

Step 8 Sash Outer Profile



Tools/Spacers			Replacement Knives			
Item No	Product Ref. 30mm (1-1/4")	Description	Size	Product Ref	Size	Product Ref
36	IT/71054361(7)	Ovolo Head	20x23x2.0	IT/3108599	-	-
37	IT/71054371(7)	Rebate Head	50x12x1.5	IT/3108600	14x14x2.0	IT/3008503/10
9	IT/1927101(7)	Spacer	N/A			
12	IT/1927201(7)	Spacer	N/A			
38	IT/71054381(7)	Euro Groove	19x16.3x2.0	IT/3108601	-	-
5	IT/1920061(7)	Spacer	N/A			

Alternative profile styles, see pages 41 - 43.

Replacement knives with a /10 are sold in packs of 10.



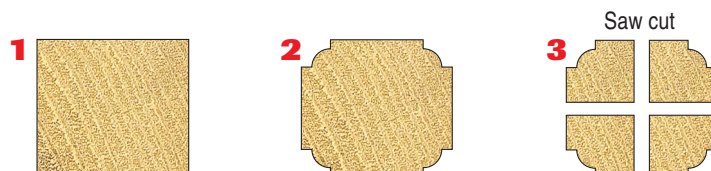
Recommended Speed
5,500 - 6,500 RPM

Machining the Beads

The profile tools No.'s 20 or 36 can be used to create the beads but require changes to the spindle moulder settings.



OR ALTERNATIVELY



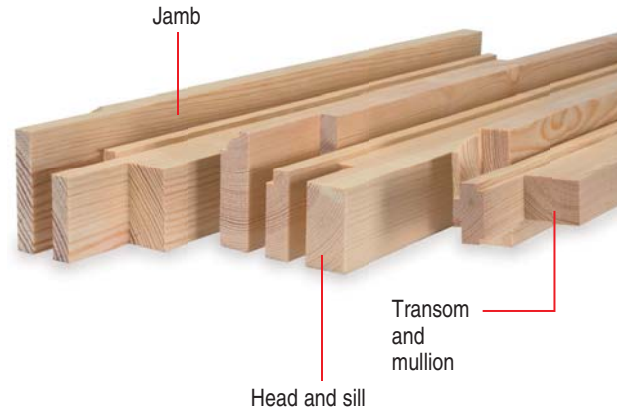
Tools and Spacers



Tool Set-up



Machined Profile



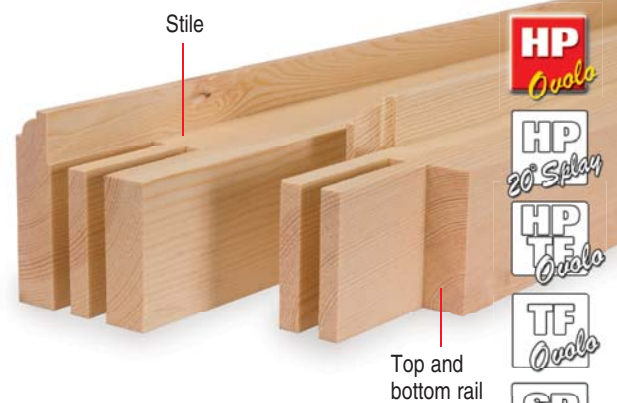
Tools and Spacers



Tool Set-up



Machined Profile



Tools and Spacers



Tool Set-up



Machined Profile

Outer sash profile once glued, assembled and dry.



This system is supplied with a wallchart and individual specification sheets per step. The wallchart can be mounted next to the spindle moulder for quick selection of tools.

Description	Product Ref
Wallchart	WALL/MWS/HP
Specification Manual	MANU/MWS/HP