





industrial sliding gear

Henderson industrial gear is for individual door weights of up to 8 tonnes and encompasses doors up to 20 metres in height.

Over 70 years expertise at the forefront of sliding gear production has resulted in excellent product design, combining trouble-free installation and use with the versatility to meet almost any door and non-door sliding application.

Henderson industrial gear is suitable for interior and exterior applications, in both commercial and heavy industrial applications.

Commercial door applications typically include shops, restaurants, schools, garages, churches, offices and other applications where an aesthetically pleasing installation is required. Gear is also available for shop fronts and patios using aluminium framed glazed panels.

Industrial door applications include factories and warehouses where functionality and ability to withstand wear and tear is of higher priority than aesthetics. A wide range of door weights and heights can be accommodated.

Agricultural applications include farm doors, barns and gates.

Non-door applications include overhead systems transporting objects on overhead track, industrial curtains, theatre scenery and climbing rope gear. Replacement Parts for repair and refurbishment are available through Henderson.



design options Industrial gear gives three main design options for doors with the additional option of doors being top hung or on bottom rollers.

Design options include:

Straight Sliding - requiring wall space where the door can park.

► Round-the-Corner - utilising a second wall area usually at 90° to the opening.

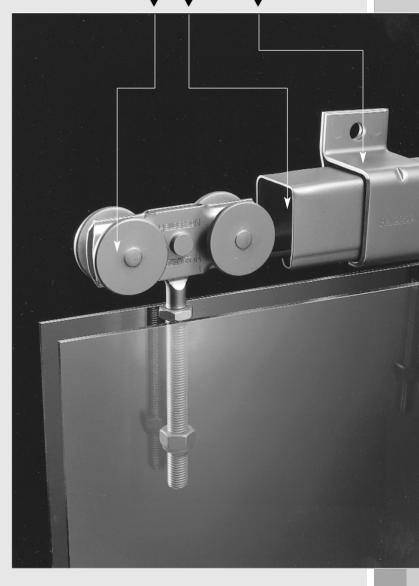
► Internal Folding and External Folding - where wall space is short, stacking can be at the end(s) or in the centre.

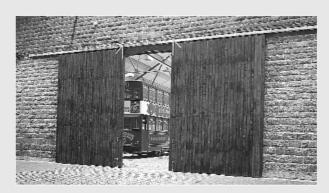


Top hung doors are recommended wherever possible, providing the building structure is capable of carrying the weight of the doors and each door does not weigh more than 2000kg. This gives maximum stability and keeps load bearing components away from possible dirt and damage. Where there are structural limitations or each door weighs more than 2000kg, the bottom roller design is used. Top-Hung design keeps load bearing components away from possible dirt and damage, ensuring smooth operation and long term reliability.

igtriangletic Adjustable hangers permit precise fitting of door.

 Galvanised or zinc plated inverted U section track prevents corrosion and ensures free running of the hanger. Supporting open bracket along with closed end brackets and jointing brackets prevent any movement of the track.









If you have a project where you would like to use sliding or folding door hardware use the FREE Henderson Expert Service to supply your bill of materials, quantities, prices and drawings.

Simply contact the Henderson Technical Sales Department using any of the following:

2	Tel:	+44 (0) 191 377 0701
	Fax:	+44 (0) 191 377 3116
	Website:	www.pchenderson.com
-==9	e-mail:	sales@pchenderson.com
=	Post:	Henderson Technical Sales Dept.,
		Durham Road, Bowburn,
		Co. Durham, DH6 5NG
		England

Based on the answers you give to a series of questions (opening size, door size and weight etc.) we will specify the gear you require and you will receive a **quotation** from Henderson giving you a bill of materials and a list of the correct gear

- ▶ quantity
- price
- ▶ drawing
- ▶ fixing instructions

If you wish to make **changes** to your original specification, just contact us, we will find your original quotation, make the amendments and issue you with a revised quotation.



It couldn't be simpler. Leave it to the experts!

STRAIGHT SLIDING 280-307

FOR SLIDING WOOD DOORS

For top-hung, straight sliding wood doors for commercial and industrial applications; glazed or flush construction or, for industrial use, solidly framed, ledged and braced. Nine systems are available for leaf weights up to 2000kg.

Maximum door width and no. required depends on height, and the weight of door material (eg a softwood door with 50-60mm frame and 20mm boarding weighs c. 22-24 kg/m²). For optimum operation, the width should not exceed ³/₄ the door height.

COMPONENTS

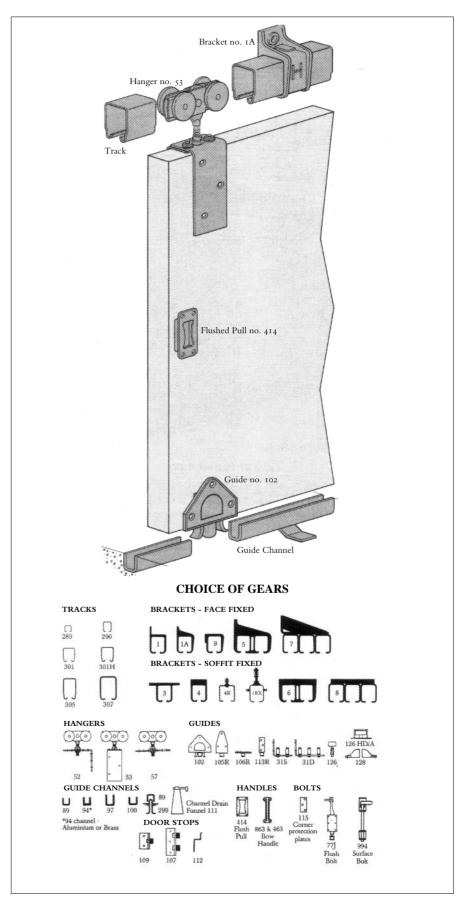
Components supplied include: support and jointing brackets; track; hangers; bottom channel; guides; full range of accessories. Consult PC Henderson Technical Department or 'Expert' Service for guidance on guantities.

INSTALLATION NOTES

(also see drawing)

The gear is suitable for single or multiple lines of track where the supporting structure is sufficient to bear the total door weight. Sterling bottom roller gear (see p30-33) may be specified where support is insufficient. Any number of doors sliding to one or both sides may be specified. A wicket door may be incorporated for individual access requirements. A canopy (not by PC Henderson) is recommended for external fitting of the doors.

Typical installation detail drawings are also available from the Technical Department PC Henderson.

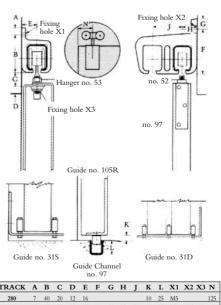


STRAIGHT SLIDING 280-307

280-307 Wood Door System No.	280	280	290	290	301	301	301H	305	307
Maximum Door Height	2400mm	2400mm	3000mm	3000mm	3600mm	3600mm	4200mm	4800mm	6000mn
Maximum Door Width	1250mm	1250mm	**	**	**	**	**	**	**
Maximum Door Weight	50kg	100kg	150kg	200kg	300kg	400kg	450kg	700kg	2000kg
Door Thickness	20-50mm	20-50mm	35-48mm	35-48mm	43-57mm	43-57mm	43-57mm	43-57mm	60-70m
Track Twice the width of doors Available lengths: 1.8, 2, 2.5, 3, 4 & 6m	280	280	290	290	301	301	301H	305	307*
Brackets, single run (face fixing) Brackets, double run, (face-fixing) Brackets, single run (soffit fixing) fix every 900mm max and at track joints	281†	281††	1A/290 5/290 3A/290	1A/290 5/290 3A/290	1A/301 5/301 3A/301	1A/301 5/301 3A/301	1A/301 5/301 3A/301	1A/305 5/305 3A/305	1/307/3 5/307/3 3/307/3
Hangers 2 per door Wood Doors - apron fixing Wood Doors - angle plate fixing Wood Doors - concealed fixing All Hangers with suffix/N have nylon wheels	284N , and /S ha	284 ve steel wh	52K/N 57K/N	53K/S200 52K/S200 57K/S200	52A/S	53A/N 52A/N 57A/N	53A/N 52A/N 57A/N	53C/S 52C/S 57C/S	53FJ/S
Guide Channel same length as track	89	89	89	89	97	97	97	97	97
Guides 2 per door Wood Doors Wood Doors - concealed fixing		105R/89 106R/94				102/97 106R/97	102/97 106R/97	102/97 106R/97	102/9 106R/9
Flush Pull 1 per door Bow Handle 1 per door (use flush pulls only on double runs of track)	414 863	414 863	414 863	414 863	414 463	414 463	414 463	414 463	413 464

EXAMPLE PLAN DETAILS

SINGLE RUN B 40 DOUBLE RUN 1 -1 2 1 8 8 40 TRIPLE RUN 1



SECTION DETAILS

TRACK	Α	В	С	D	Е	F	G	н	J	к	L	X 1	$\mathbf{X2}$	X 3	Ν
280	7	40	20	12	16					10	25	M5			125
290	13	67	25	13	27	80	20	27	54	10	25	M8	M12	11	48
301/301H	20	97	50	25	35	110	33	39	79	10	38	M12	M16	20	75
305	25	140	50	25	38	155	38	48	92	13	38	M16	M20	20	85
307	24	156	67	38	45	192	26	45	91	13	38	M16	M20	25	115

PC Henderson provide a full technical support service.

INDUSTRIAL SLIDING GEAR

STRAIGHT SLIDING 280-307

FOR SLIDING METAL DOORS

For top-hung, straight sliding metal doors for commercial and industrial applications; normally framed and braced with steel angle and then clad with steel sheet or similar. Where steel box section is used, hangers no. 56X and guides no. 104PX should be specified; for fire doors, hangers no. 56AF/S or 56CF/S should be used please consult PC Henderson Technical Department. Nine systems are available for door weights up to 2000kg.

COMPONENTS

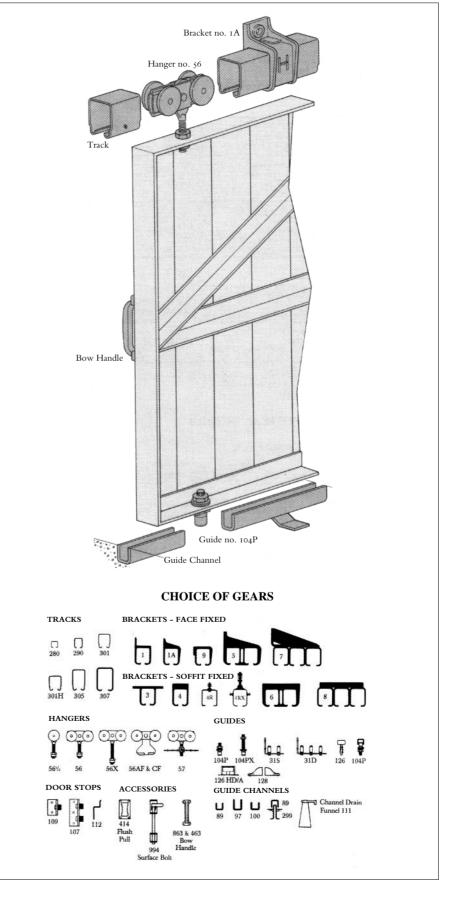
Components supplied include: support and jointing brackets; track; hangers; bottom channel; guides; full range of accessories. Consult PC Henderson Technical Department or 'Expert' Service for guidance on quantities. For optimum operation, the door width should not exceed ³/₄ of the door height.

INSTALLATION NOTES

(also see drawing)

The gear is suitable for single or multiple lines of track where the supporting structure is sufficient to bear the total door weight. Sterling bottom roller gear (see p30-33) may be specified where support is insufficient. Any number of doors sliding to one or both sides may be specified. A wicket door may be incorporated for individual access requirements. A canopy (not by Henderson) is recommended for external fitting of the doors.

Typical installation detail drawings are also available from the Technical Department, PC Henderson.



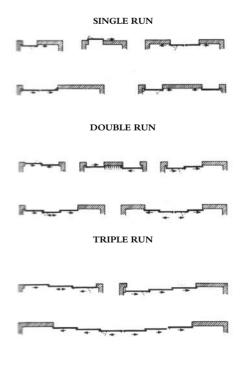
STRAIGHT SLIDING 280-307

Read across to required doorleaf height, then read downwards.

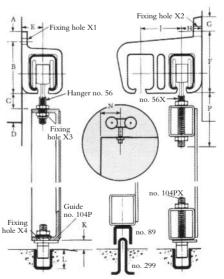
280-307 Metal Door System No.	280	280	290	290	301	301	301H	305	307
Maximum Door Height	2400mm	2400mm	3000mm	3000mm	3600mm	3600mm	4200mm	4800mm	6000mn
Maximum Door Width	1250mm	1250mm	****	****	****	****	****	****	****
Maximum Door Weight	50kg	100kg	150kg	200kg	300kg	400kg	450kg	700kg	2000kg
Door Thickness	20-50mm	20-50mm	35-48mm	35-48mm	43-57mm	43-57mm	43-57mm	43-57mm	60-70m
Track Twice the width of doors (more if the doors slide further) Available lengths: 1.8, 2, 2.5, 3, 4 & 6m	280*	280*	290*	290*	301	301*	301H*	305	307***
Brackets , single run (face fixing) Brackets , double run, (face-fixing) Brackets , single run (soffit fixing) fix every 900mm max and at track joints	281†	281††	1A/290 5/290 3A/290	1A/290 5/290 3A/290	1A/301 5/301 3A/301	1A/301 5/301 3A/301	1A/301 5/301 3A/301	1A/305 5/305 3A/305	1/307/ 5/307/ 3/307/
Hangers 2 per door Metal Doors - angle frame Metal Door - box frame Metal Doors - concealed plate Metal Doors - firedoors All Hangers with suffix/N have nylon wheels, and /S have steel wheels.	285N 284N	285 284	56KX/S	56K/S200 57K/S200	56A/X	56A/N 56AX/N 57A/N	56A/N 56AX/N 57A/N 56AF/S**	57C/S	56FJ/S 56FJ/S
Guide Channel same length as track	89	89	89	89	97	97	97	97	97
Guides 2 per door Metal Doors - angle frame Metal Doors - box frame	104P/89 104PX/89	104P/89 104PX/89		104P/89 104PX/89		104P/97 104PX/97	104P/97 104PX/97		104P/9 104PX/9

*Nylon wheeled hangers (eg 56A/N) - Not to be used for fire resistent door installations involving temperatures exceeding 80°c.
** If used with 301H rack give max. capacity of 360kg. † Fix brackets every 550mm max. †† Fix brackets every 275mm max.
*** Max. length 3m. ** For optimum operation the door width should not exceed 3/4 of the door height.
***** For optimum operation the door width should not exceed 3/4 of the door height.

EXAMPLE PLAN DETAILS



SECTION DETAILS



																_	
TRACK	Α	в	С	D	Е	F	G	н	J	к	L	$\mathbf{X1}$	$\mathbf{X2}$	$\mathbf{X3}$	$\mathbf{X4}$	Ν	Р
280	7	40	20	13	16					10	25	M5		8.4	17	50	
290	13	67	25	13	27	80	20	27	54	10	25	M8	M12	10.5	17	48	110
301/301H	20	97	50	25	35	110	33	39	79	10	38	M12	M16	17	20	75	140
305	25	140	50	25	38	155	38	48	92	13	38	M16	M20	17	20	85	140
307	24	156	67	38	45	192	26	45	91	13	38	M16	M20	21	20	115	140

MANSION/MAJESTIC

FOR SLIDING WOOD DOORS

High quality bottom roller gear and fittings to match the best sliding partitions and glazed, flush or panelled doors. Three systems available for leaf weights up to 270kg. Maximum leaf width and number required depends on height and weight of leaf material.

COMPONENTS

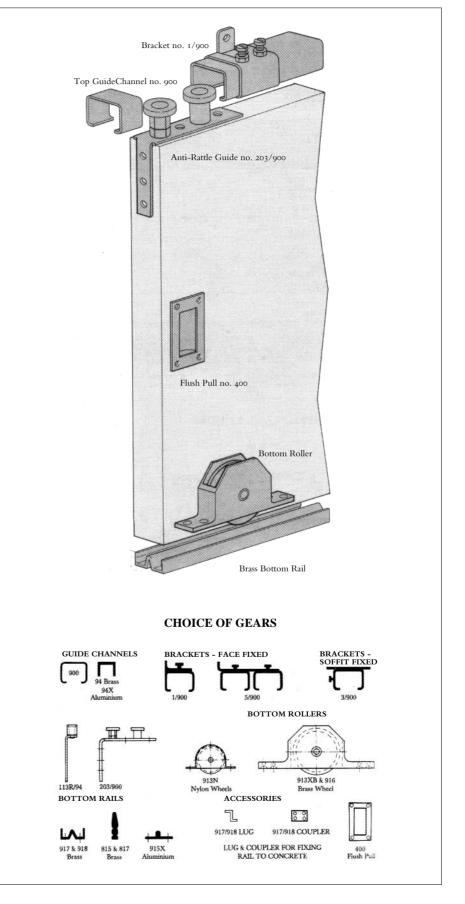
Components supplied include: top guide channel; optional top guide brackets; bottom rollers; bottom rail; full range of accessories. Consult PC Henderson Technical Department or 'Expert' Service for guidance on guantities.

INSTALLATION NOTES

(also see drawing)

Door leaves must be constructed with deep bottom section for the concealed, mortised bottom rollers (minimum depth 150mm for 913N/913XB rollers or 175mm for 916 rollers).

Typical installation detail drawings are also available from the Technical Department, PC Henderson.



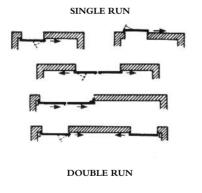
Read across to required doorleaf height, then read downwards.

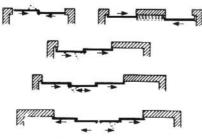
Mansion/Majestic System No.	Mansion 55	Mansion 170	Majestic
Maximum Door Height	2600mm	2600mm	3300mm
Maximum Door Weight	55kg	170kg	270kg
Door Thickness	30-57mm	30-57mm	44-57mm
Top Guide Channel Twice the width of doors Available lengths: 1.8, 2, 2.5 & 3m (More if doors slide further)	94*Brass 94X Aluminium	900	900
Brackets, single run (soffit fixing) Brackets, single run (face fixing) Brackets, double run (face fixing) Fix every 900mm max and at channel joints		3/900 1/900 5/900	3/900 1/900 5/900
Guides - 2 per door	113R/94	203/900	203/900
Bottom Rollers - brass wheel - nylon wheel	913N	913XB	916
Bottom Rail - brass - brass recessed - aluminium same length as guide channel (lengths 1.5 & 3m)	aluminium 915X**	918 815	917 817
Flush Pull 2 per door	400	400	400

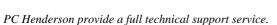
* Available in 1.5 & 3m lengths, drilled for soffit fixing.
** Available in 1.5, 2, 2.5 & 3m lengths.

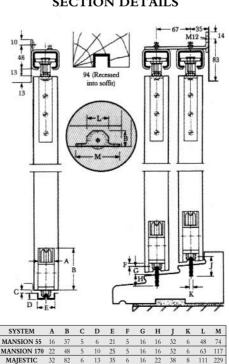
EXAMPLE PLAN DETAILS

SECTION DETAILS









All dimensions in mm

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FOR SLIDING WOOD DOORS

For bottom rolling wood doors in a range of commercial and industrial applications, especially where the supporting structure or lintel is insufficient for the weight of the door or headroom is limited. The doors may be partially or fully glazed, or should be framed, ledged and braced for industrial applications. Four systems are available up to 2000kg per door.

Maximum door width and number of doors required depends on height, and the weight of door material (e.g. a soft-wood door with 50-60mm frame and 20mm boarding weighs c. 22-24 kg/m²). For optimum operation, the door width should not be less than 1/2 the door height.

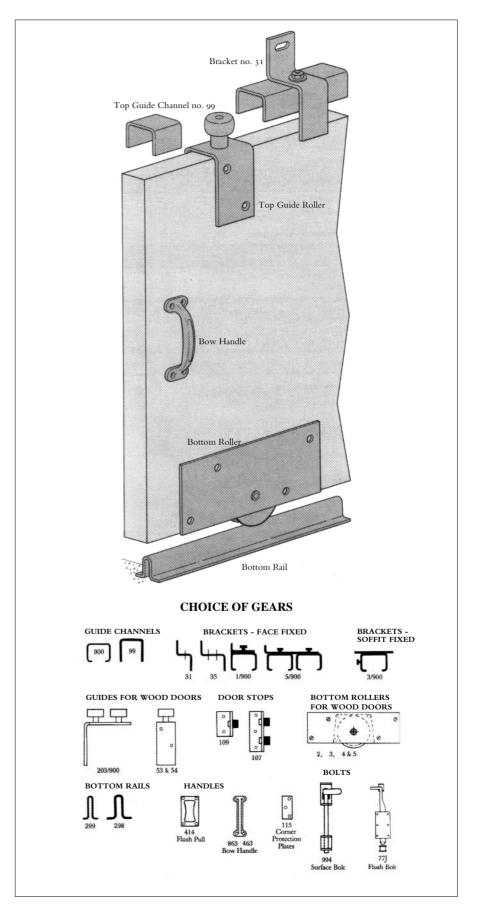
COMPONENTS

Components supplied include: top guide channel; brackets; top guide rollers; bottom rollers; bottom rail; full range of accessories. Consult PC Henderson Technical Department or 'Expert' Service for guidance on guantities.

INSTALLATION NOTES

(also see drawing)

The gear is suitable for single or multiple lines of track. Rollers should be positioned in the bottom door leaf section, clear of the joint with the stile. Suitable depth of bottom leaf sections are: 230mm for bottom rollers no.s 2 & 5; 300mm for no. 3; no. 4 made to order to suit door thickness between 70-100mm as specified. Any number of doors sliding to one or both sides may be specified. A canopy (not by PC Henderson) is recommended for external fitting of the doors.

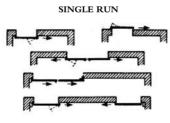


HOW TO CHOOSE YOUR DOOR GEAR

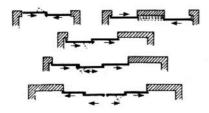
Read across to required doorleaf height, then read downwards.

Sterling Wood Door System No.	225	350	800	2000
Maximum Door Height	3300mm	4000mm	5200mm	7500m
Maximum Door Weight	225kg	350kg	800kg	2000k
Door Thickness	44-50mm	44-54mm	54-63mm	See Te
Top Guide Channel Twice the width of doors (More if doors slide further) Available lengths: 2, 2.5 & 3m	900	99	99	13
Brackets , single run (face fixing) Brackets , double run (face fixing) Fix every 900mm max and at channel joints	1/900 5/900	31 35	31 35	1/13 5/13
Guides - 2 per door	54/900	53/99	53/99	53/13
Bottom Rollers 2 per door	5	2	3	4
Bottom Rail (same length as guide channel)	299	298	298	298
Flush Pull 1 per door (used on double runs of track)	414	414	414	413
Bow Handle 1 per door (used on single doors)	463	463	463	464



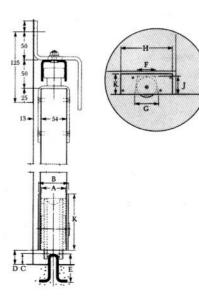


DOUBLE RUN



SECTION DETAILS

(NB: The top section of the door illustrated is only Sterling 350 & 800. For Sterling 225 see MANSION)



TRACK	Α	в	С	D	Е	F	G	н	J	к
225	44	50	16	24	50	65	102	159	67	75
350	44	54	20	25	50	115	135	305	95	102
800	51	63	20	30	50	135	175	381	130	152

PC Henderson provide a full technical support service.

FOR SLIDING METAL DOORS AND GATES

STRAIGHT SLIDING BOTTOM ROLLER

For bottom rolling metal doors and gates in a range of commercial and industrial applications, especially where the supporting structure or lintel is insufficient for the weight of the door or headroom is limited. The doors should be framed and braced using steel angle, then clad with steel sheet; for Sterling 3600 and 8000 gear the door should be constructed from steel channel section. Six systems are available up to 8000kg per door.

Maximum door width and no. required depends on height, and the weight of door material. For optimum operation, the door width should not be less than ¹/₂ the door height. Gear also suitable for power operation (power operation not by PC Henderson - consult Technical Department).

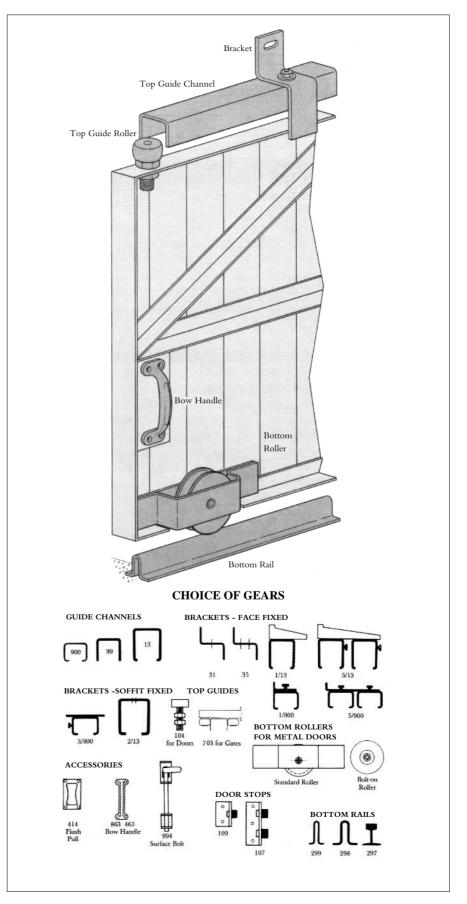
COMPONENTS

Components supplied include: top guide channel; brackets; top guide rollers; bottom rollers; bottom rail; full range of accessories. (All steel parts are galvanised.) Consult PC Henderson Technical Department or 'Expert' Service for guidance on quantities.

INSTALLATION NOTES

(also see drawing)

The gear is suitable for single or multiple lines of track. Rollers should be positioned securely in the bottom door frame section by welding or bolting. Bottom rail must be set level and may be recessed for protection from traffic. Any number of doors sliding to one or both sides may be specified. A wicket door may be incorporated for individual access requirements. A canopy (not by PC Henderson) is recommended for external fitting of the doors.



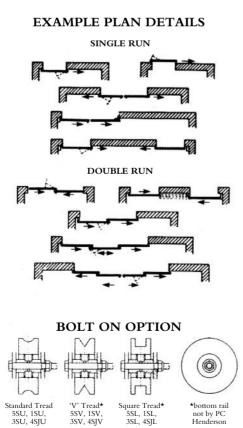
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HOW TO CHOOSE YOUR DOOR GEAR

Read across to required doorleaf height, then read downwards.

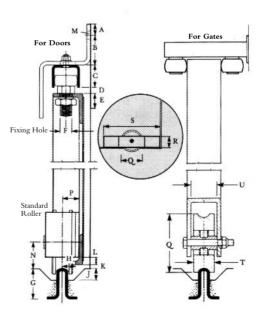
Sterling Metal Door System No.	225	350	800	2000	3600	8000
Maximum Door Height	3300mm	4000mm	5200mm	7500mm	12500mm	20000mm
Maximum Door Weight	225kg	350kg	800kg	2000kg	3600kg	8000kg
Door Thickness	44-50mm	44-54mm	54-63mm	58-70mm	152min	152min
Top Guide Channel Twice the width of doors (More if doors slide further) Available lengths: 2, 2.5 & 3m	900	99	99	13	Not by	y PCH
Brackets, single run (face fixing) Brackets, double run (face fixing) Fix every 900mm max and at channel joints	1/900 5/900	31 35	31 35	1/13 5/13		y PCH y PCH
Guides - 2 per door	104/900	104/99	104/99	104/13	104S*	104S*
Bottom Rollers 2 per door - standard	55	1S	35	4SJ	3600**	8000**
Bottom Rollers 2 per door - Bolt on rollers also available in 'V' square or 'U' tread, see below	5SU	1SU	3SU	4SJU		
Bottom Rail (same length as guide channel)	299	298	298	298	297***	297***
Bow Handle 1 per door (used on single doors)	463	463	463	464	464	464

* Fit 4 per door, available in choice of 125, 175 & 200mm diameters. ** Made to suit door. Chain driven geared rollers available. *** Only Available in 2.7m lengths (plain steel).



PC Henderson provide a full technical support service.

SECTION DETAILS



TRACK	Α	в	С	D	Е	F	G	н	J	K	L	М	N	Р	Q	R	s	Т	U
225	10	10	38	20	25	17	50	14	16	3	11	12	30	19	75	50	229	25	35
350	20	50	38	10	25	21	50	22	20	6	13	12	44	29	110	75	305	40	50
800	20	50	38	10	25	21	50	22	20	6	13	12	62	32	146	75	381	40	50
2000	32	35	85	25	30	26	50	25	20	10	12	16	85	32	197	102	457	45	56
3600				20	127	32	65	44							286			105	128
8000				20	203	32	65	44							436			105	128

TANGENT ROUND THE CORNER

ROUND - THE - CORNER

FOR ROUND-THE-CORNER FOLDING WOOD OR METAL DOORS

Robust top-hung door gear for round-the-corner domestic, commercial or light industrial, wood or metal folding doors; deluxe fittings are also available in polished or satin anodised aluminium finishes. Doors may be panelled, flush or glazed. Four systems are available to suit leaf weights up to 80kg.

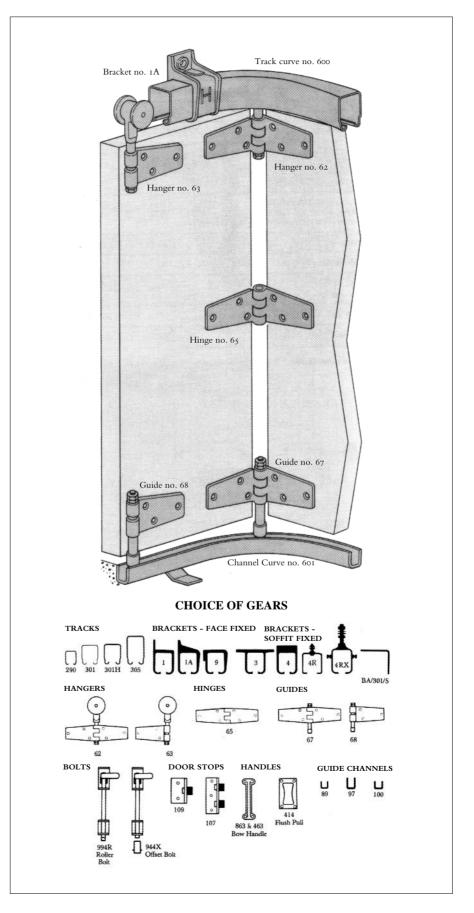
COMPONENTS

Components supplied include: track; track curves; support and jointing brackets; hangers; hinges; guides; bottom channel; channel curves; full range of accessories. (All steel parts are galvanised) Consult PC Henderson Technical Department or 'Expert' Service for guidance on quantities (see table for maximum leaf width and drawing for leaf detail).

INSTALLATION NOTES

(also see drawing)

Hinges should be fixed to framing and joints of the door. For smooth operation, only 3-5 leaves should be hinged in one unit; any number of units may be used, sliding to one or both sides. The end leaf under the curve normally forms a swinging access door (see plan for details). Typical installation detail drawings are also available from the Technical Department, PC Henderson.



TANGENT ROUND THE CORNER

Read across to required doorleaf height, then read downwards.

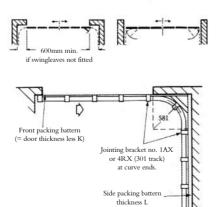
Tangent Round-the-corner System	No.	290	301	301H	305
Maximum Leaf Height		2400mm	3300mm	3600mm	4500mr
Maximum Leaf Weight		35kg	55kg	70kg	80kg
Maximum Leaf Width (minimum 7	/11mm)	900mm	900mm	900mm	900mm
Leaf Thickness		35-50mm	45-55mm	45-55mm	45-55m
Track Front track = opening width + Side track = opening width Available lengths: 1.8, 2, 2.5, 3, 4 & 6m		290	301	301H	305
Track Curves Require 1, or 2 for bipa	urting doors	600K	600B	600BH	600D
Brackets - face fixing Fix every 900mm max and at track join Fix jointing brackets/sleeve at both curv		1A/290 1AX/290	1A/301 4RX/301TS	1A/301 4RX/301TS	1/305 1AX/30
Hangers 1 per leaf joint and end leaf	Intermediate leaves End Leaf	62K 63K	62A 63A	62A 63A	62C 63C
Hinges 3 in height*	65	65	65	65	65C
Guides - 1 per leaf joint and end leaf	Intermediate Leaves End Leaf	67/89 68/89	67/97 68/97	67/97 68/97	67C/97 68C/97
Channel – Same length as track Channel Curve – No. as track curves		89 601/89	97 601/97	97 601/97	97 601/97
Bow Handles 1 every 2 leaves Flush Pull 1 every 2 leaves		863 414	463 414	463 414	463 414

★ Increase to 4 for doors over 3000mm high. Fit offset bolt 994X on doors with trailing swingleaf, on all fixed units, unit of 5 leaves and biparting units.

EXAMPLE PLAN DETAILS



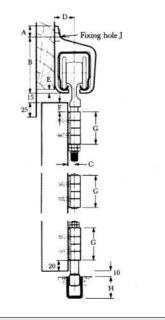
For convenient locking R should not exceed 360mm, but 115mm-230mm is ideal. If the swingleaf under the curve is not required R should be a min. of 690mm to accommodate the corner curve.



End stop no. 107

PC Henderson provide a full technical support service.

SECTION DETAILS



TRACK	Α	В	С	D	Ε	F	G	н	J	K	L
290	13	67	11	27	6	10	57	25	M8	6	65
301/301H	20	97	11	35	6	15	57	25	M12	16	70
305	25	140	14	38	10	15	83	38	M16	16	75

INDUSTRIAL SLIDING GEAR

FOR FOLDING WOOD OR METAL DOORS

EXTERNAL FOLDING

Robust top-hung door gear for commercial or light industrial wood or metal folding doors; deluxe fittings are also available in polished or satin anodised aluminium finishes. Doors may be panelled, flush or glazed. Seven systems are available to suit leaf weights up to 80kg.

COMPONENTS

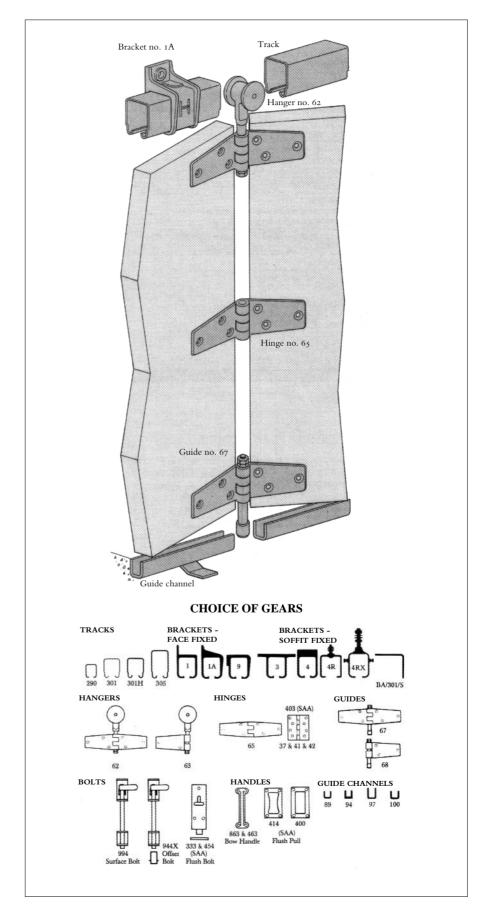
Components supplied include: track; support brackets; hangers; hinges; guides; bottom channel; range of accessories. (All steel parts are galvanised.) Consult PC Henderson Technical Department or 'Expert' Service for guidance on quantities (see table for maximum leaf width and drawing for leaf detail).

INSTALLATION NOTES

(also see drawing)

Hinges should be fixed to framing and joints to door. Up to 8 leaves can be hinged to jamb within the opening or behind a reveal. Freefloating units may also be used, of 4, 6 or 8 leaves for stability. A swinging pass door, only for leaves under 3000mm high, is obtained by using 3 or 5 leaves hinged to jamb or an independently hung leaf (see plan for details). If over 3000mm high, an independently hung leaf only is recommended.

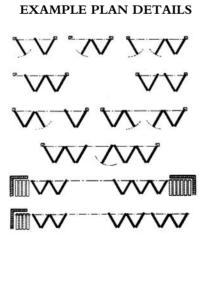
Typical installation detail drawings are also available from the Technical Department, PC Henderson.

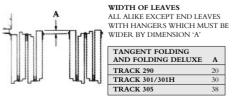


Read across to required doorleaf height, then read downwards.

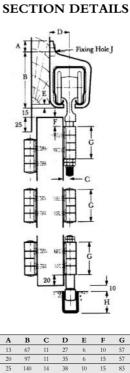
Tangent Folding System No.	290S	290D	301S	301D	301HS	301HD	3055
FINISH**	STANDARD	DELUXE	STANDARD	DELUXE	STANDARD	DELUXE	STANDAR
Maximum Folding Leaf Height	2400mm	2400mm	3300mm	3300mm	3600mm	3600mm	4500m
Maximum Folding Leaf Weight	35kg	35kg	55kg	55kg	70kg	70kg	80kg
Maximum Folding Leaf Width	900mm	900mm	900mm	900mm	900mm	900mm	900m
Leaf Thickness	35-50mm	35-50mm	45-55mm	45-55mm	45-55mm	45-55mm	45-55m
Track							
Equal to width of opening (extra if doors slide further) Available lengths: 1.8, 2, 2.5, 3, 4 & 6m	290	290	301	301	301H	301H	305
Brackets - face fixed	1 A /290	1A/290	1A/301	1A/301	1A/301	1A/301	1/30
Brackets - soffit fixed	3A/290	3A/290	3A/301	3A/301	3A/301	3A/301	3A/30
Fix every 900mm max and at track joints Fix extra bracket where leaves stack							
FIX extra bracket where leaves stack							
Hangers 1 every 2 leaves							
Intermediate leaves	62K	62K/P	62A	62A/P	62A	62A/P	62C
End Leaf	63K	63K/P	63C	63A/P	63A	63A/P	63C
Hinges 3 in height*	65	403/2	65	403/2	65	403/2	65C
		403/3		403/3		403/3	
Guides - 1 every 2 leaves Intermediate Leaves	67/89	67/94P	67/97	67/94P	67/97	67/94P	67C/9
End Leaf	68/89	68/94P	68/97	68/94P	68/97	68/94P	68C/9
Channel - Same length as track							
(Galvanised wire steel)	89	94	97	94	97	94	97
Handles 1 every 2 leaves	863	400	463	400	463	400	463
Bolt 1 every 2 leaves	994	333	994	454	994	454	994

** Standard or deluxe finishes (polished/anodised fittings) are available.
 * Increase to 4 when doors exceed 3000mm high
 No more than 8 leaves should be hinged together, and can be hinged to jamb or floating.
 A swinging pass door is obtained by using 3 or 5 leaves hinged to jamb, or an independently hung leaf. For doors over 3000mm high a wicket door is recommended.





PC Henderson provide a full technical support service.



TRACK	Α	в	С	D	Е	F	G	н	J
290	13	67	11	27	6	10	57	25	M8
301/301H	20	97	11	35	6	15	57	38	M12
305	25	140	14	38	10	15	83	38	M16

ENDFOLD PARTITION (COUNCIL)

FOR END FOLDING WOOD PARTITION DOORS

Quality top-hung gear and fittings for end folding wood partition doors. Four systems are available to a maximum leaf weight of 80kg.

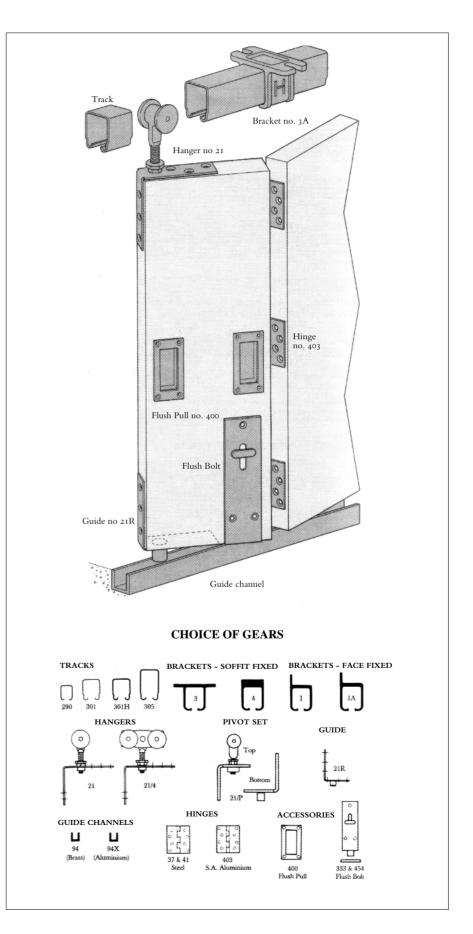
COMPONENTS

Components supplied include: support brackets and track; top hangers; hinges; guides; bottom channel; full range of accessories. Consult your PC Henderson Technical Department or 'Expert' Service for guidance on quantities. (See table for maximum leaf width).

INSTALLATION NOTES

Doors must be constructed with solid top and bottom rails and stiles for secure fixing of components. Leaves may be panelled. flush or glazed. For best operation, not more than 8 leaves to be hinged to one jamb (see inset drawing for fixing detail of flush endfold pivot gear) or anchored by pivots, alternatively leaves may be floating in units of 4, 6 or 8. An access door can be a swing leaf at the end of a 3, 5 or 7 leaf unit or independently hung to the jamb. On door heights over 3000mm consult PC Henderson Technical Department.

Typical installation detail drawings are also available from the Technical Department, PC Henderson.



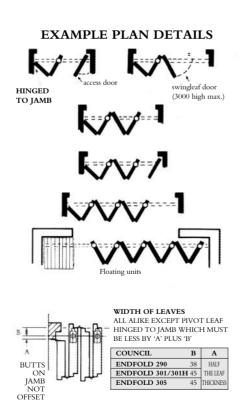
ENDFOLD PARTITION (COUNCIL)

Read across to required doorleaf height, then read downwards.

Council Endfold System No.	290	301	301H	305
Maximum Folding Leaf Height	2700mm	3300mm	3600mm	4500mi
Maximum Folding Leaf Weight	35kg	55kg	70kg	80kg
Maximum Folding Leaf Width	900mm	900mm	900mm	900mm
Leaf Thickness	35-44mm	44-57mm	44-57mm	44-57m
Track equal to width of opening (extra if doors slide further) Available lengths: 1.8, 2, 2.5, 3, 4 & 6m	290	301	301H	305
Brackets - Soffit fixed. Fix every 900mm max and at track joints Fix extra bracket where doors stack	3A/290	3A/301	3A/301	3A/30
Hangers 1 every 2 leaves (+ endleaf of floating unit only) Alternative type if adjacent to swingleaf	21K/S 21K/4N	21A/S 21A/4S	21A/S 21A/4S	21C/5
Hinges 3 in height* Alternative pivot set where equal width leaves are to be Anchored at one end	403/1 21K/P	403/2 21A/P	403/2 21A/P	403/3
Guides - 1 every 2 leaves (+ endleaf of floating unit only)	21KR/94	21R/94	21R/94	21R/9
Guide Channel - Same length as track - brass (available in 1.5 & 3m lengths) aluminium (available in 1.5, 2, 2.5 & 3m lengths)	94 94X	94 94X	94 94X	94 94X
Flush Pull 1 every 2 leaves (2 on end leaves of units) Flush Bolt 1 every 2 leaves	400 333	400 454	400 454	400 454

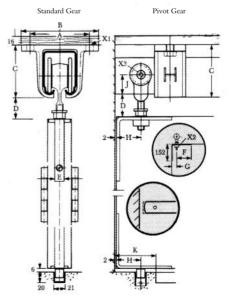
No more than 6 leaves should be hinged together and can be hinged to jamb or floating. A swinging pass door is obtained by using a 3 or 5 leaf unit up to 3000mm high, or an independently hung leaf. * Increase to 4 for doors over 3000mm high.





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SECTION DETAILS



TRACK	Α	В	С	D	Е	F	G	Н	J	К	X1	$\mathbf{X2}$	X 3
290	64	83	56	20	13	114	38	38	20	70	M8	13	M6
301/30H	100	130	86	45	18	133	45	45	35	75	M12	20	M8
305	125	168	121	60	18	133	45				M16	20	

FOR CENTRE FOLDING WOOD PARTITION DOORS

Quality top-hung gear and fittings for centre folding wood partition doors. Four systems are available to a maximum leaf weight of 80kg.

COMPONENTS

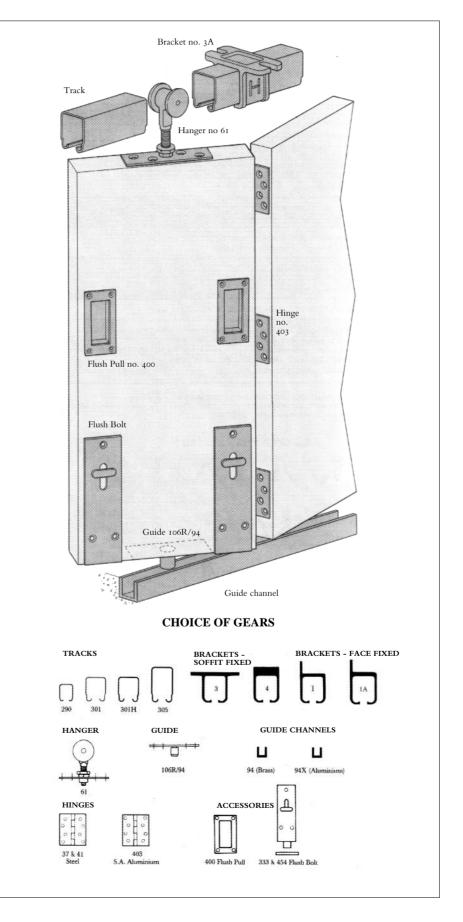
Components supplied include: support brackets and track; top hangers; hinges; guides; bottom channel; full range of accessories. Consult your PC Henderson Technical Department or 'Expert' Service for guidance on quantities. (See table for maximum leaf width).

INSTALLATION NOTES

(also see drawing)

Doors must be constructed with solid top and bottom rails and stiles for secure fixing of components. Leaves may be panelled, flush or glazed. For best operation, not more than 7¹/₂ leaves to be hinged to one jamb (see inset drawing for fixing detail), alternatively leaves may be floating in units of 5, 7 or 9. Any access door should be hung separately to the jamb. Typical installation detail drawings are

also available from the Technical Department, PC Henderson.



CENTREFOLD PARTITION (COUNCIL)

Read across to required doorleaf height, then read downwards.

Council Centrefold System No.	290	301	301H	305
Maximum Folding Leaf Height	2700mm	3300mm	3600mm	4500mm
Maximum Folding Leaf Weight	35kg	55kg	70kg	80kg
Maximum Folding Leaf Width	1000mm	1000mm	1000mm	1000mr
Door Thickness	35-44mm	44-57mm	44-57mm	44-57m
Track Equal to opening width Available lengths: 1.8, 2, 2.5, 3, 4 & 6m	290	301	301H	305
Brackets - Soffit fixed. Fix every 900mm max and at track joints Fix extra bracket where doors stack	3A/290	3A/301	3A/301	3A/305
Hangers 1 every 2 leaves	61K/S	61A/S	61A/S	61C/S
Hinges 3 in height*	403/1	403/2	403/2	403/3
Guides - 1 every 2 leaves	106R/94	106R/94	106R/94	106R/9
Guide Channel - Same length as track - brass (available in 1.5 & 3m lengths) aluminium (available in 1.5, 2, 2.5 & 3m lengths)	94 94X	94 94X	94 94X	94 94X
Flush Pull 1 every 2 leaves (2 on end leaf) Flush Bolt 1 every 2 leaves (2 on end leaf)	400 333	400 454	400 454	400 454

Door should consist of 3, 5 or 7 folding leaves, with extra half leaf hinged to jamb. Alternatively, 5, 7 or 9 leaves may be floating.

* Increase to 4 for doors over 3000mm high.

EXAMPLE PLAN DETAILS

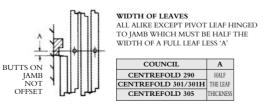


HINGED TO JAMB



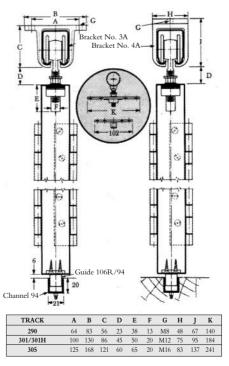






PC Henderson provide a full technical support service.

SECTION DETAILS



COLLEGE ENDFOLD

FOR END FOLDING WOOD PARTITION DOORS

High quality bottom roller gear and fittings for end folding wood partitions doors. Two systems are available to a maximum leaf weight of 140kg.

COMPONENTS

Components supplied include: top guide brackets; top guide channel; top guide rollers; hinges; bottom rollers; bottom rail; full range of accessories. Consult PC Henderson Technical Department or 'Expert' Service for guidance on quantities. (See table for maximum leaf width).

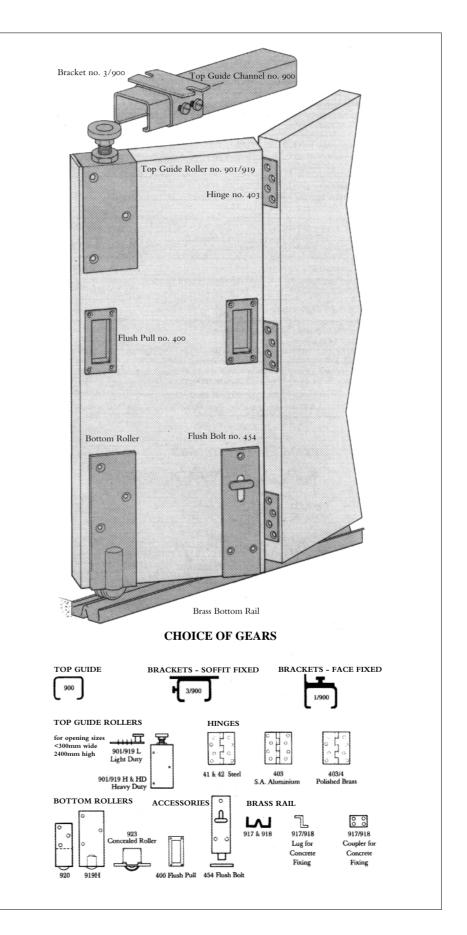
INSTALLATION NOTES

(also see drawing)

Doors must be constructed with solid top and bottom rails and stiles for secure fixing of components. Minimum 50mm wide and 75mm deep stiles for 923 concealed rollers (max. door weight 70kg) 125mm deep stiles for 920 rollers, 150mm deep for 919H rollers and 200mm deep bottom rails.

Leave may be panelled, flush or glazed. For best operation, no more than 8 leaves to be hinged to one jamb (see inset drawing for fixing detail), alternatively leaves may be floating in units of 6 or 8. Any swing door should be hung separately to the jamb.

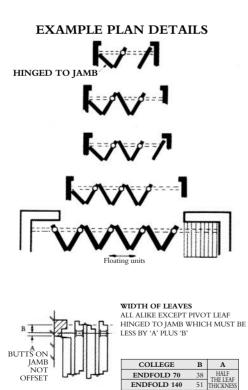
Typical installation drawings are also available from the Technical Department, PC Henderson.



Read across to required doorleaf height, then read downwards.

College Endfold System No.	ENDFOLD 70	ENDFOLD 140
Maximum Folding Leaf Height	3600mm	5500mm
Maximum Folding Leaf Weight	70kg	140kg
Maximum Folding Leaf Width	900mm	900mm
Door Thickness	44mm	54mm
Top Guide Channel Equal to opening width (extra if doors slide further) Available lengths: 2, 2.5 & 3m	900	900
Brackets - Soffit fixed. Fix every 600mm max and at channel joints Fix extra bracket where doors stack	3/900	3/900
Top Guide Rollers 1 every 2 leaves (+ endleaf of floating unit only)	901/919H	901/919HD
Hinges 3 in height*	403/2	403/3
Bottom Rollers 1 every 2 leaves (+ endleaf of floating unit only)	920/923	919H
Bottom Rail - same length as Top Guide Channel Available lengths 1.5m & 3m	918	917
Flush Pull 1 every 2 leaves (2 on end leaf)	400	400
Flush Bolt 1 every 2 leaves	454	454

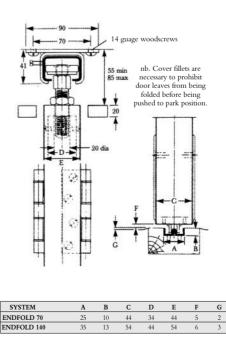
* Increase to 4 when doors exceed 3000mm high. No more than 8 leaves should be hinged to jamb. An access door can be independently hinged to a jamb or a wicket door fitted, but a swing door should not be attached to a folding unit.



ENDFOLD 140

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SECTION DETAILS



C O L L E G E C E N T R E F O L D

FOR CENTRE FOLDING WOOD PARTITION DOORS

High quality bottom roller gear and fittings for centre folding wood partition doors. Two systems are available to a maximum leaf weight of 140kg.

COMPONENTS

Components supplied include: top guide brackets; top guide channel; top guide rollers; hinges; bottom rollers; bottom rail; full range of accessories. Consult PC Henderson Technical Department or 'Expert' Service for guidance on quantities. (See table for maximum leaf width).

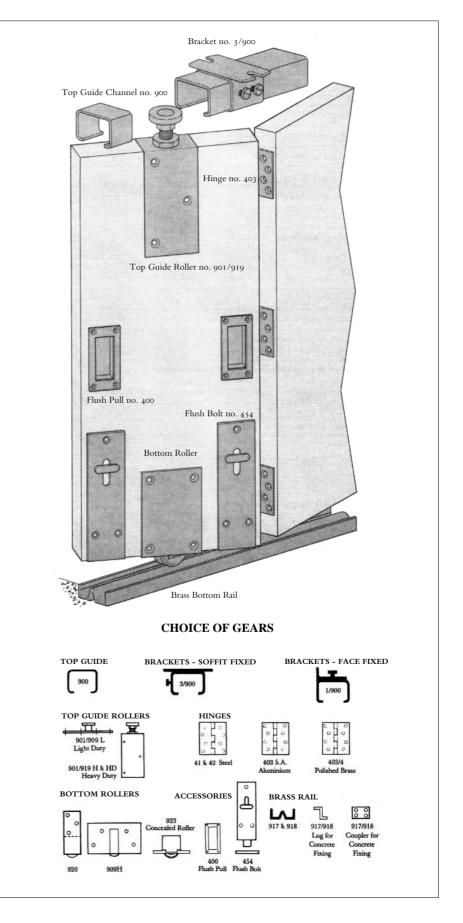
INSTALLATION NOTES

(also see drawing)

Doors must be constructed with solid top and bottom rails and stiles for secure fixing of components. Minimum 50mm wide and 75mm deep stiles for 923 concealed rollers (max. door weight 70kg). Minimum 200mm deep for bottom rails.

Leaves may be panelled, flush or glazed. For best operation, not more than $7^{1}/_{2}$ leaves to be hinged to one jamb (see inset drawing for fixing detail), alternatively leaves may be floating in units of 5 or 7. Any swing door should be hung separately to the jamb.

Typical installation detail drawings are also available from the Technical Department, PC Henderson.



C O L L E G E C E N T R E F O L D

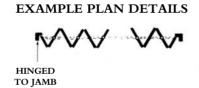
Read across to required doorleaf height, then read downwards.

College Centrefold System No.	CENTREFOLD 70	CENTREFOLD 140
Maximum Folding Leaf Height	3600mm	5500mm
Maximum Folding Leaf Weight	70kg	140kg
Maximum Folding Leaf Width	1000mm	1000mm
Door Thickness	44mm	54mm
Top Guide Channel Equal to opening width Available lengths: 2, 2.5 & 3m	900	900
Brackets - Soffit fixed. Fix every 600mm max and at channel joints Fix extra bracket where doors stack	3/900	3/900
Top Guide Rollers 1 every 2 leaves	901/919H	901/919HD
Hinges 3 in height*	403/2	403/3
Bottom Rollers 1 every 2 leaves	920/923	909H
Bottom Rail - same length as Guide Channel Available lengths 1.5m & 3m	918	917
Flush Pull 1 every 2 leaves**	400	400
Flush Bolt 1 every 2 leaves**	454	454

* Increase to 4 when doors exceed 3000mm high.

No more than 71/2 leaves should be hinged to the jamb, or 7 leaves maximum for a floating unit

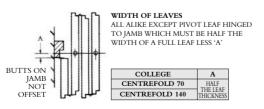
An access door can be independently hinged to a jamb, but a swing door should not be attached to a folding unit. ** Two on endleaves of units.





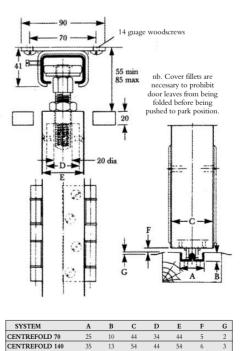






PC Henderson provide a full technical support service.





ARCADE

FOR END & CENTRE FOLDING ALUMINIUM SECTION DOORS

High quality bottom roller gear and fittings for end and centre folding aluminium section glazed for retail and display applications to a maximum leaf weight of 70kg.

COMPONENTS

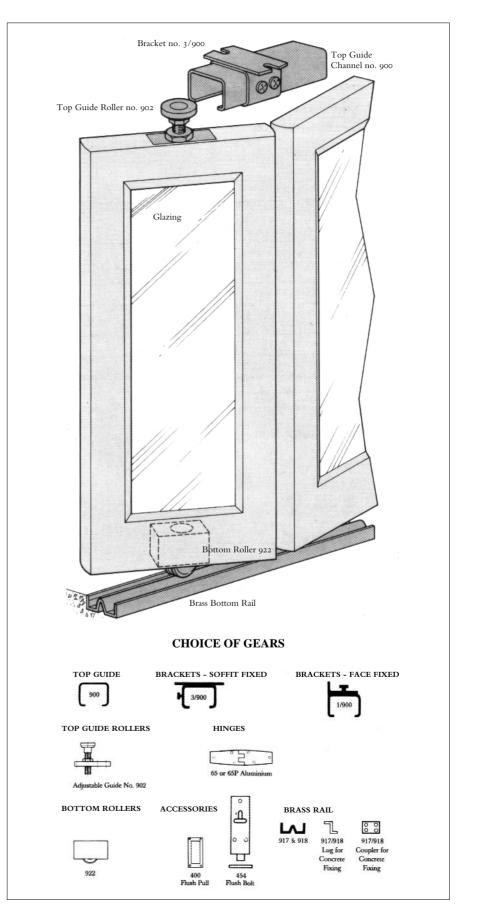
Components supplied include: top guide brackets; top guide channel; top guide rollers; back flap hinges; bottom rollers; bottom rail; full range of accessories. Consult PC Henderson Technical Department or 'Expert' Service for guidance on quantities. (See table for maximum leaf width).

INSTALLATION NOTES

(also see drawing)

For doors constructed with standard aluminium section rails and stiles, with glazed panels.

For best endfold operation, not more than 8 leaves to be hinged to one jamb (see inset drawing for fixing detail), alternatively leaves may be floating in units of 6 or 8. Any access door should be hung separately to the jamb. For best centrefold operation, not more than $7^{1}/_{2}$ leaves to be hinged to one jamb (see inset drawing for fixing detail), alternatively leaves may be floating in units of 5 or 7. Any access door should be hung separately to the jamb. Typical installation detail drawings are also available from the Technical Department, PC Henderson.



Read across to required doorleaf height, then read downwards.

Arcade System No.	ENFOLD A70	CENTREFOLD A70
Maximum Folding Leaf Height	3600mm	3600mm
Maximum Folding Leaf Weight	70kg	70kg
Maximum Folding Leaf Width	900mm	1000mm
Door Thickness	45-47mm	45-47mm
Top Guide Channel Equal to opening width Available lengths: 2, 2.5 & 3m	900	900
Brackets - Soffit fixed. Fix every 600mm max and at channel joints Fix extra bracket where doors stack	3/900	3/900
Top Guide Rollers 1 every 2 leaves	902	902
Hinges 3 in height*	65/65P	65/65P
Bottom Rollers 1 every 2 leaves	922	922
Bottom Rail - same length as Guide Channel Available lengths 1.5m & 3m	918	918
Flush Pull 1 every 2 leaves**	400	400
Flush Bolt 1 every 2 leaves**	454	454

* Increase to 4 when doors exceed 3000mm high.

Endfold: No more than 8 leaves should be hinged to the jamb. Centtrefold: No more than 7^{1/2} leaves should be hinged to the jamb, or 7 leaves maximum for a floating unit An access door can be independently hinged to a jamb, but a swing door should not be attached to a folding unit. ** Two on endleaves of units.

EXAMPLE PLAN DETAILS

ENDFOLD k / 1 k

HINGED TO JAMB

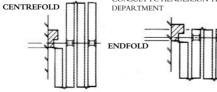
CENTREFOLD

 \mathbb{N}

HINGED TO JAMB

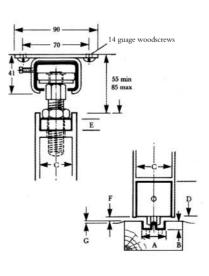
1

WIDTH OF LEAVES DEPENDENT ON DOOR CONSTRUCTION CONSULT PC HENDERSON TECHNICAL



PC Henderson provide a full technical support service.







ΤΙΤΑΝ

FOR SLIDING CANTILEVER METAL GATES

Quality, heavy duty cantilever gear for sliding metal gates suitable for industrial and commercial use - for security, traffic control and where road surface is uneven, eg railway lines. Cantilever gates leave the roadway free of channels, guide rails or other obstructions, using a track which fits to the bottom rail of the gate and runs on internal rollers for security and weather protection. Can also be used for heavy doors where no overhead support exists. Two systems are available to suit openings up to 10m wide and weights up to 550kg (power operated - power operation not by PC Henderson) or 1000kg (manually operated).

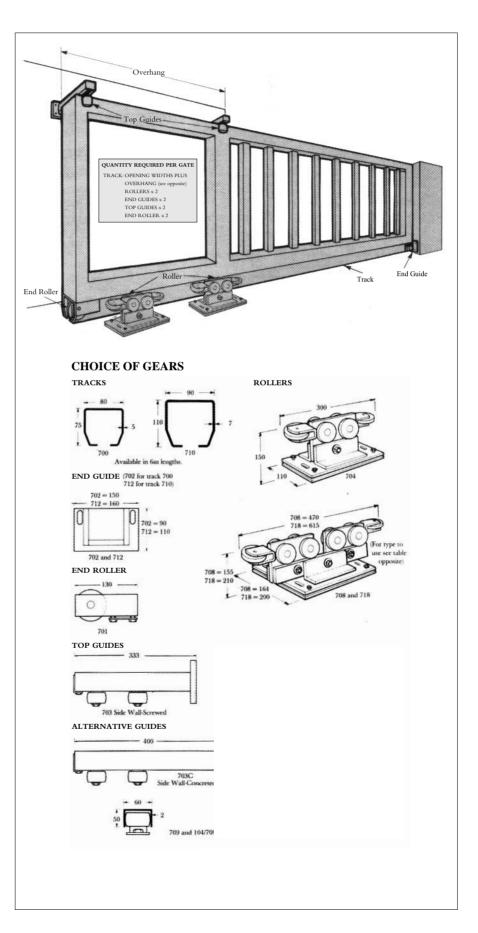
COMPONENTS

Components supplied per gate include: bottom rollers; top guides; end guides; end rollers; track - length determined by opening width plus overhang. (All steel parts are galvanised.) Table opposite indicates choice of gear dependent on gate weight, overhang and opening width. INSTALLATION NOTES

(also see drawing)

Gates should be constructed from welded square steel tubing. Enough space is required to slide gate completely clear of opening. Rollers should be mounted on substantial concrete footings, and spaced as widely as possible.

Typical installation detail drawings are al;so available from the Technical Department, PC Henderson.



HOW TO CHOOSE YOUR GATE GEAR

Read across to required doorleaf height, then read downwards.

Choose gate type, manual or automatic. Read across to required gate opening width, then read downward to estimated gateweight. Shaded area indicates roller type and overhang length required.

Use a pair of rollers No.704 and track No.700

No.700 Use a p

 $\Box Use a pair of rollers No.708 and track No.700$

 \Box Use a pair of rollers No.718 and track No.710

		OPENING WIDTH (m)																
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Gate Weight	200kg	1.7	1.7	1.7	1.8	1.9	2.0	2.1	2.3	2.4	1.7	1.7	1.7	1.8	1.9	1.9	2.0	2.0
	300kg	2.1	2.3	2.6	2.8	3.1	3.3 1.8	3.6	3.8 2.0	4.1 2.1	2.2	2.3	2.5	2.6	2.7	2.8	2.9	3.0
	400kg			1.8	2.0	2.2	2.4 3.3	2.6 3.6	2.8 3.8	2.9 4.1	3.1 4.3	3.3	3.4 2.1	3.6 2.2	3.8 2.2	3.9 2.3	4.1	4.3 2.5
	500kg 600kg					3.1	3.3	2.1	2.1	2.1	2.2	4.6	2.1	2.2	2.2	2.3	2.4	3.0
	700kg		Ove	rhang	length			2.1	2.4	2.5	2.6	2.4	2.9	3.0	3.2	3.3	3.5	3.6
	800kg			etres i				2.6	2.8	2.9	3.1	3.3	3.4	3.6	3.8	3.9	4.1	4.3
	900kg	shown in the boxes						3.0	3.2	3.4	3.7	3.9	4.1	4.3	4.5	4.7		
	1000kg							3.6	3.8	4.0	4.3	4.6						
AUTOMAT	IC							OPI	ININ	G WI	отн	(m)						
AUTOMAT	ic	2	2.5	3	3.5	4	4.5	5	5.5	6 W L	6.5	7	7.5	8	8.5	9	9.5	10
Gate Weight	100kg	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.9	2.0			,	, in the second se		ŕ		
	150kg	1.7	1.9	2.1	2.3	2.5	2.7	2.8	3.0	3.2 2.1								
	200kg	2.5	2.8 1.8	3.2 1.9	3.5 2.1	3.8 2.3	4.2	4.5 2.6	4.8 2.8	5.2 2.9	1.7	1.7	1.7	1.8	1.9	1.9	2.0	2.0
	250kg	2.1	2.4	2.7	3.0	3.2	3.5	3.8	4.1 1.7	4.3 1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.4	2.5
	300kg	2.7	3.1	3.5	3.9	4.2	4.6 1.8	5.0 1.9	5.4 2.0	5.7 2.1	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0
	350kg			0	length		2.1	2.2	2.4	2.5	2.6	2.8	2.9	3.0	3.2	3.3	3.5	3.6
	400kg			etres i			2.4	2.6	2.8	2.9	3.1	3.3	3.4	3.6	3.8	3.9	4.1	4.3
	450kg	shown in the boxes						3.0	3.2 3.8	3.5 4.1	3.7 4.3	3.9	4.1	4.3	4.5	4.7		
	500kg 550kg		3.3 3.9	3.6 4.2	4.5	4.1	4.5	4.6	l									
Adjuster		Expans nor rag l Roller m and Track	sion polts plied) 0.708	Adjuster	Bolt	TON 2	Enc. 702		701 Roller ne Length		рета _ [(Guide R Guide R 03 (Side				

Note: Rollers should be set as far apart as possible but allow space for end roller no.701 (130mm) at both track ends.

PC Henderson provide a full technical support service.

VERSAFRAME

FOR STEEL FRAME SLIDING DOORS

Steel frame sections supplied in kit form for on-site construction of economical, sturdy sliding doors clad with suitable metal or wood sheeting to choice (door cladding not supplied by PC Henderson). Designed for use with 301 track, hangers and brackets. Wall mounted guide system (VG1) ideal for farm doors or dirty industrial applications - no floor channel is needed. Conventional guide system (VG2) for use with bottom channel 97 also available. Suitable for doors up to 5m × 5m.

Versaframe kit supplied per door includes frame lengths and fittings. Order frame section length kits plus fittings kit according to door height and width as per table above, plus: 301 track to twice the width of proposed door; 2 x 56 AX/S or 56AX/N hangers; sufficient 1/301/S brackets for fixing at 900mm centres along track - (600mm centres for doors over 400kg.) (See pages 24 -27.)

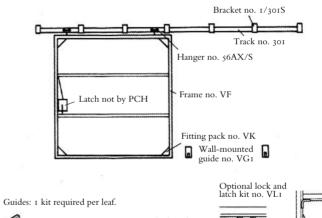
INSTALLATION NOTES

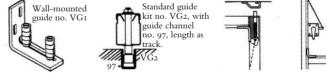
Door width should not exceed height. For smoothest operation, width of door should be 2/3 height. Typical installation detail drawings are available from the Technical Department, PC Henderson.

Door width		Door H	Ieight		Track length of	Min no. of 1/301/S Brackets
	2m	3m	4m	5m	301/301H	required
2m	5xVF2	4xVF2 2xVF3	5xVF2 2xVF4	6xVF2 2xVF5	4m	6
		6xVF3	5xVF3 2xVF4	6xVF3 2xVF5	6m	8
4m			7xVF4	6xVF4 2xVF5	8m	11
5m				8xVF5	10m	13

Versaframe hangers, guides & fittings

2m	3m	4m	5m	
VK2	Vk3	VK4	VK5	Fitting kit per door height
2	2	2	2	no.56 AX hangers per door
VG1	VG1	VG1	VG1	Guide kit - wall mounted
VG2	VG2	VG2	VG2	Guide kit - standard
		(order d	hannel 97	' to same length as 301 track)





301 FARM PACKS SLIDING GEAR PACKS FOR TIMBER OR METAL DOORS

301 farm packs provide all components required for hanging a sliding timber or metal door weighing upto 400kg

Sets contain 2 hangers no. 53A/5 (+ locking nuts for metal doors) track no. 301 (twice door width); face fixing brackets no. 1/301/S (for approx. 900mm centres); 2 bracket end clips no. 1A/301/EC; 2 stay rollers no.126; 1 bow handle no. 863. For Biparting doors, order two sets plus no. 128 shoe guide/centre stop.

 Door widths up to
 Kits

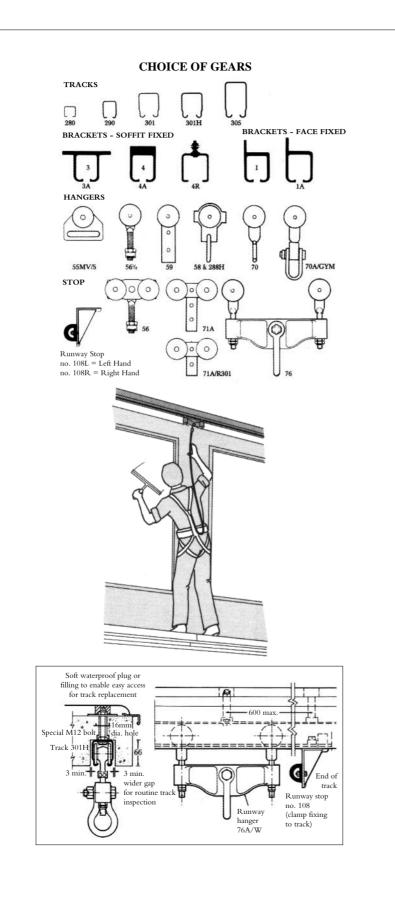
 1800mm
 FP6

 2700mm
 FP9

 3600mm
 FP12

WINDOW CLEANING AND HIGH-RISE SAFETY RESTRAINTS

OVERHEAD SLIDING TRACKED SYSTEMS



The use of highly reliable, tracked sliding gear for personnel safety restraint on high-rise buildings and similar applications offers versatility, ease and speed in cleaning and maintenance.

Henderson sliding gear, tested to 136kg in accordance with BS 1397:1979, is an ideal way to achieve safety with a high degree of functionality. The gear is recommended to be incorporated into the design of the building, or other structure, cf. the typical details for window cleaning, below.

All systems should be discussed with PC Henderson Technical Department.

For window cleaning safety restraints, specially prepunched track is let into a purpose-cast recess in the overhead concrete slab, and secured with purpose-designed bolt assemblies (see drawing). Straight track only may be used.

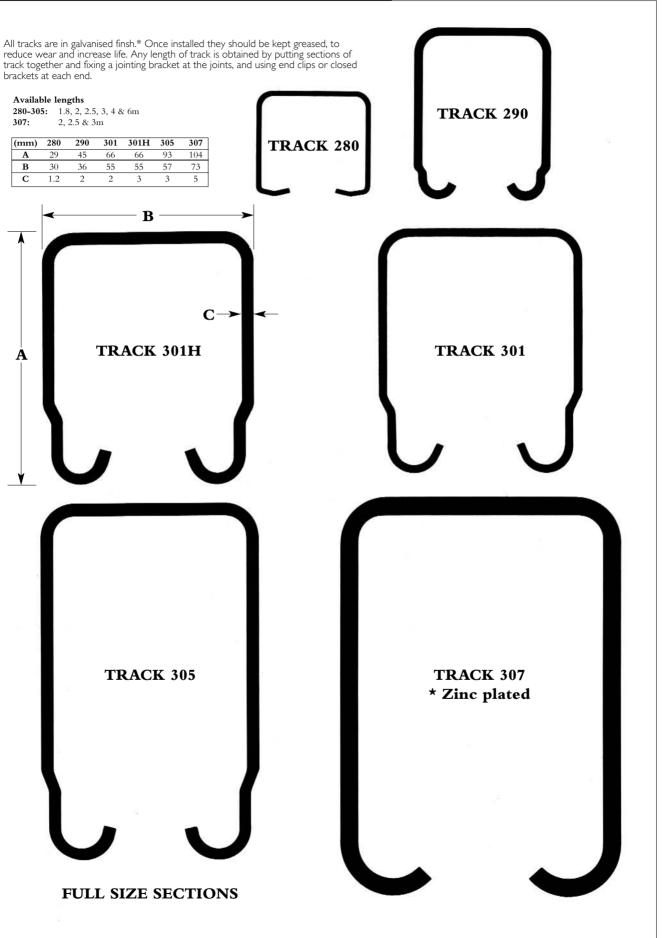
This assembly has been drop tested to 136kg through 1.83m generally in accordance with BS 1397:1979, and with the approved Safety Harness to BS 1397:1979 (not from PCH).

For more information ask for our Window Cleaning Gear data sheet.

For details on loading and other safety-in-use features, please consult PC Henderson Technical Department.

C O M P O N E N T D R A W I N G S

TRACK



All dimensions in mm

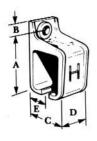
TRACK BRACKETS

COMPONENT DRAWINGS

BRACKETS - SOFFIT FIXED

All brackets are aluminium alloy die castings except where indicated with a suffix/S (eg 1/301/S) which are zinc plated steel. Fit closed brackets with end-clip at track ends. Jointing brackets are required at each track joint. Maximum bracket spacing is every 900mm.

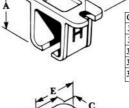
BRACKETS - FACE FIXED



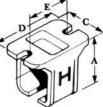
				No.	1 or	r 1A
Cat No.	А	В	С	D	Ε	Bolt
1A/290	67	13	52	32	27	M8
1A/290/S	75	13	55	60	27	M8
1A/301	97	19	73	57	35	M12
1/301/S	95	16	69	60	37	M12
1A/305	140	25	85	76	38	M16
1/307/S	159	24	91	75	45	M16

Bracket End Clips, 1A/290 EC and 1A/301 EC. For converting brackets No.s 1, 1A, 3A, 4A, 5, 5AA & 6/301 to closed brackets in the 290, 301 & 301H formats

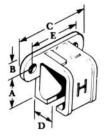
1/301/S steel bracket is fully compatible with previous design and also accepts the 1A/301 EC End Clips.



			No.	3 01	3A
Α	В	С	D	Ε	Bolt
56	-	83	32	64	M8
86	-	130	57	100	M12
88	-	130	57	97	M12
121	-	168	75	125	M16
158	-	184	90	140	M16
	56 86 88	56 - 86 - 88 - 121 -	56 - 83 86 - 130 88 - 130 121 - 168	A B C D 56 - 83 32 86 - 130 57 88 - 130 57 121 - 168 75	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$



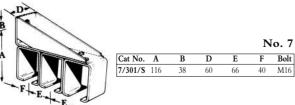
				No.	4 oi	r 4A
Cat No.	Α	В	С	D	Е	Bolt
4A/290	67	-	48	75	60	M8
4A/301	95	-	75	117	95	M12
4A/305	137	-	83	190	130	M16
4/307/S	158	-	91	84	140	M16

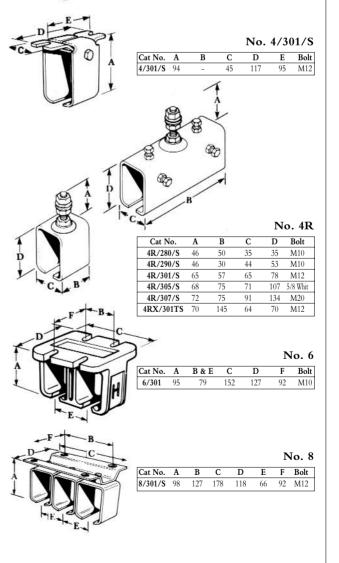


				No.	9 oi	r 9A
Cat No.	Α	В	С	D	Е	Bolt
9A/290	43	16	70	24	51	14G Screw
9A/301	65	12	125	38	89	18G Screw
9A/305	84	38	160	59	130	M12
9/307/S	84	50	184	69	140	M16



Cat No.	Α	В	D	Е	F	Bol
5/290	80	20	38	54	27	M12
5/301	110	33	57	79	39	M16
5/305	155	38	75	92	48	M20
5/307/S	192	26	102	91	45	M20





All dimensions in mm

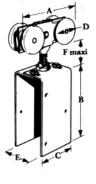
COMPONENT DRAWINGS

HANGERS

/N = Nylon Wheels /S = Steel Wheels

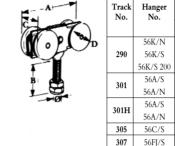
Nylon wheels are quieter and avoid the need to grease track to reduce wear. Hence their carrying capacity is greater. For automatic doors halve the carrying capacity and use nylon wheels if possible.

N.B. Door weight capacities are for a pair of hangers.



No.53 WOOD DOOR	S
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Track	Hanger No.]	Door weight				
		Α	B	С	D	Е	F	Capacity
	53K/N							150Kg
290	53K/S	87	95	57	37	35-48	30	150Kg
	53K/S 200							200Kg
301	53A/S	1.10	170	74	57	43-57	70	300Kg
501	53A/N	142	178	/6	50			400Kg
301H	53A/S	4.40	470	= (= (10.55		360Kg
3011	53A/N	142	178	/6	56	43-57	/1	450Kg
305	53C/S	161	178	76	75	43-57	71	700Kg
307	53FJ/S	215	390	65	88	60	94	2000Kg



No.	No.						weight
		Α	В	С	D	ø	Capacity
	56K/N						150Kg
290	56K/S	87	32	27	37	10	150Kg
	56K/S 200						200Kg
301	56A/S	1.10	70	42	56	17	300Kg
501	56A/N	142		42	50	16	400Kg
0411	56A/S	1.10	70		= (17	360Kg
01H	56A/N	142	70	42	56	16	450Kg
305	56C/S	161	70	42	75	16	700Kg
307	56FJ/S	215	86	55	88	20	2000Kg

No.56 METAL DOORS Dimensions

Door

Door

No.56F FIRE DOORS

Track

No.

290

301 301H

305

Hanger

No.

52K/N

52K/S

52K/S 200 52A/S

52A/N

52C/S

No.57 WOOD DOORS

No.52 WOOD DOORS

Е F Capacity 150Kg

Door

weight

Dimensions

A C D1 D2

	Track No.	Hanger No.		Door weight				
			Α	С	D	Ε	F	Capacity
-	290	57K/N	87	31	140	5	25	150Kg
	_//0	57K/S 200	07	0/ 01		0	20	200Kg
	301	57A/S	142	57	184	6	38	300Kg
	301H	57A/N	142	57	184	6	38	450Kg
	305	57C/S	161	61	184	6	38	700Kg

Track No. 301 301H 305

weight A B C D øD E F Capacity 56AF/S 142 81 45 83 56 17 53 300Kg 56AF/S 142 81 45 83 56 17 53 360Kg

161 89 45 83 75 17 51 700Kg

Dimensions

Hanger

No.

56CF/S

No.56X METAL DOORS

	Tracl No.
	290
Т В	301
	301H
	305
	307

Track No.	Hanger No.		Dir	Door weight			
		A	В	С	D	ø	Capacity
290	56KX/N	87	110	27	37	10	150Kg
290	56KX/S	07	110	27	57	10	200Kg
301	56AX/S	142	4.17	6 42 56	= /	47	300Kg
301	56AX/N		146		56	16	400Kg
301H	56AX/S						360Kg
301H	56AX/N	142	146	42	56	16	450Kg
305	56CX/S	161	146	42	75	16	700Kg
307	56FJX/S	215	140	55	88	20	2000Kg

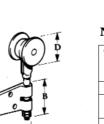
No.63 FOLDING DOORS

Track No.	Hanger No.	Dimensions				
		A	В	С	D	
290	63K	90	77	45	37	
301 301H	63A	90	77	45	56	
305	63C	203	104	51	75	

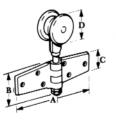
No.61 FOLDING DOORS

Track No.	Hanger No.	Dimensions				
		A	В	С	D	
290	61K/S	140	5	25	37	
301 301H	61A/S	184	6	38	56	
305	61C/S	184	6	38	75	

All dimensions in mm



87	31	77	51	134	25	150Kg	
						200Kg	
142	57	102	127	165	38	300Kg	-+10-
142	57	102	127	165	38	450Kg	
161	61	102	127	165	38	700Kg	



No.62 FOLDING DOORS

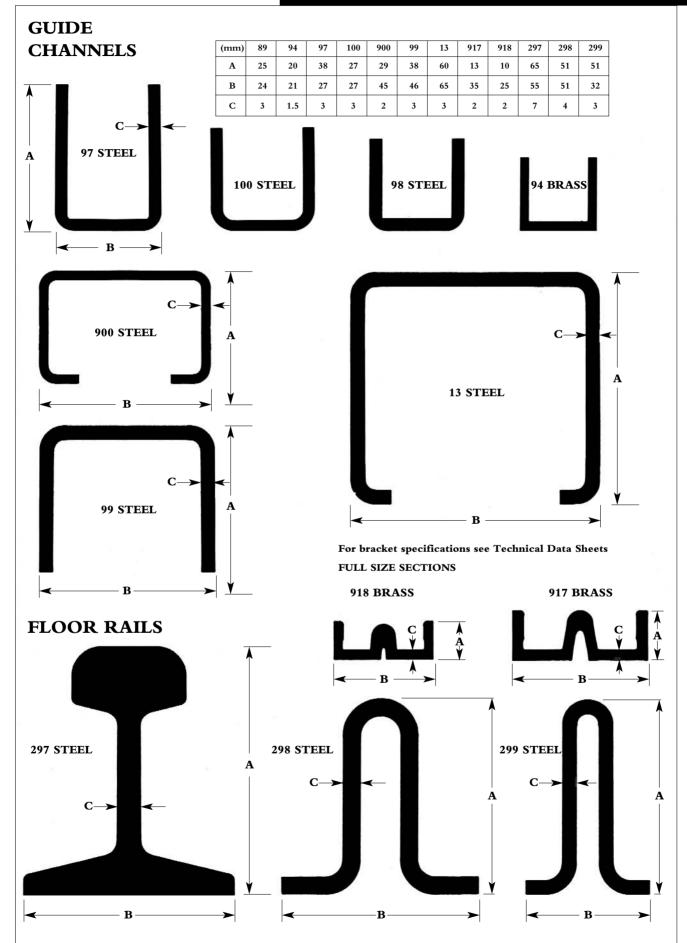
Track No.	Hanger No.	Dimensions				
		Α	В	С	D	
290	62K	180	77	45	37	
301 301H	62A	180	77	45	56	
305	62C	540	104	51	75	

No.21 FOLDING DOORS

Track No.	Hanger No.	Dimensions						
		Α	В	С	D	Ε		
	21K/S							
290	21K/N	153	153	25	37	5		
	21K/4N							
301	21A/S	470	153	38	56	,		
301H	21A/4S	178				6		
305	21C/S	178	153	38	56	6		

CHANNELS & RAILS

C O M P O N E N T D R A W I N G S



All dimensions in mm

ACCESSORIES

GUIDES & DOOR FURNITURE

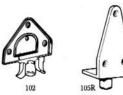
GUIDES

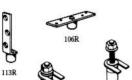
31S Single Wall Mounted Stav Roller 31D Double Wall nted Stay Roller 112 126HD/A Ground Stay Roller



126 Ground Stay Rollers Media 126HL (Heavy Duty

Extended 126H (Heavy Duty)



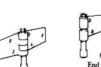


104P

104PX

J.

106R/94



67



End Fold Guide 21R

No. 31S Single Wall Mounted Stay Roller (**Biparting doors**) – Provides clear threshold – fit No. 128 shoe guide with centre stop. Nlyon Rollers, galv. steel angle

No. 31D Double Wall Mounted Stay Roller (Double line) - Provides clear threshold - Nlyon Rollers, galv. steel angle.

No. 126HD/A Ground Stay Roller - Provides clear threshold - Rollers covered by shields to prevent traffic damage. galv. steel angle.

No. 112 Stop Guide Binds door to frame in closed position. Slotted for padlock and hasp

No. 128 Shoe Guide with Centre Stop Zinc plated iron, adjustable, centre stop plate provided, for biparting doors.

No. 299 Curtailed Rail with Inverted No.89 Channel to underside of doors -Provides clear threshold - fit No.128 shoe guide with centre stop on biparting doors.

No. 126 Ground Stay Roller - Provides clear threshold - fit No.128 shoe guide with centre stop on biparting doors. Galv. Steel

Most roller guides are fitted with brass rollers. The assemblies are rustproofed by electrozinc galvanising. Fit two guides per door. Always specify channel type when ordering guides (eg104P/97)

No. 102 Side Guide Roller - Heavy duty plough guide, ideal for most applications. Malleable body with self adjusting roller spindle. Use with channels No.s 97 or 100.

No. 105R Roller Guide - General purpose guide suitable for most applictions. Is economical yet very strong. Use with channels No.s 89, 97 or 100.

No. 106R Roller Guide - Galvanised steel plate with a brass roller. Ideal for small, light doors especially internal applications. Not recommended for dirty conditions. Use with channels No.s 89, 97 or 100

No. 113R Slide Guide Roller - Galvanised steel plate with a brass roller. Not recommended for heavy doors or dirty conditions. Use with channels No.s 89 or 94.

No. 104P Under Guide Roller - Brass roller used for metal doors. Easily removable without dismounting doors. Use with channels No.s 89, 97 or 100.

No. 104PX Long Under Guide Roller - Same a 104P but with extra long bolt.

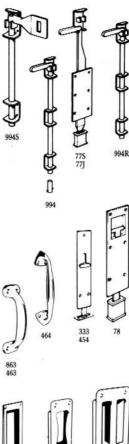
No. 67 Intermediate Guide - Round-the-Corner and Folding Doors. No. 67/89 for track 290 and channel 89. No. 67/97 for track 301 or 301H and channel 97. No. 67C/97 for track 305 and channel 97

No. 68 End Guide - Round-the-Corner and Folding Doors. No. 68/89 for track 290 and channel 89. No. 68/97 for track 301 or 301H and channel 97.

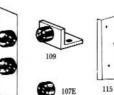
No. 68C/97 for track 305 and channel 97. No. 21R End Fold Guide - Folding Doors.

No. 21KR/94 for track 290 and channel 94. No. 21R/94 for track 301, 301H and 305

No. 106R Centre Fold Guide - Folding Doors No. 106R/94 for all tracks.



DOOR FURNITURE

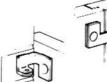


107E

431

·1.

Butt Hinge





107



Back Flap Hinge 65

No. 994 Bolt - Electro galvanised steel shoot and guides with socket for concrete, when required.

No. 994X Offset Bolt - Zinc galvanised steel shoot and guides with socket for concrete.

No. 994R Roller Guide Bolt - Electro galvanised steel shoot and guides with brass roller. Use with channel No.s 89 or 97.

No. 994S locking Bolt - Electro galvanised steel shoot and guides with socket for concrete. Use with Padlock (Not by PCH).

No. 77 Flush Bolt - No.77J suitable for framed doors with bottom rails up to 152x48. Zinc plated steel. No77S suitable for framed doors with bottom rails up to 236x70. Zinc plated steel.

No. 78 Flush Bolt - Designed for fitting to stile of flush doors minimum 127x45. Zinc plated steel.

No. 333 Semi Flush Bolt - 152x35 Aluminium alloy in satin anodised finish

No. 454 Semi Flush Bolt - 190x41 Aluminium alloy in satin anodised finish.

No. 863 Bow Handle - Zinc plated cast iron. 133x43

No. 463 Bow Handle - Zinc plated cast iron.

No. 464 Bow Handle - Zinc plated cast iron. 261x62

No. 400 Flush Pull - Aluminium alloy in satin anodised finish 108x48 with 17 mortise

No. 414 Flush Pull - Aluminium self finish 133x60 with 20 mortise

Flush Pull No.401P - White polypropylene 90x38mm with 13mm mortise

No. 413 Flush Pull - Heavy duty Zinc plated cast iron 152x95 with 26 mortise

Flush Pull No.26P - White polypropylene n.b. Drill 31mm hole

No.115 Corner Protection Plates - Rustproofed by electronzinc plating - Fit a pair on the leading door edge where door meets door stop.

No.109 Single Wall or Ground Stop - Zinc plated steel with rubber buffer. For light doors. Fit on wall , 2/3 up door height.

No.103 Single Floor Stop - Satin anodised aluminium with rubber buffer. For heavier domestic internal doors.

No.110N Door Stop - White nylon complete with rubber buffer. For light interior doors. (Wall or floor fixed.)

No.28P/1 Door Stop - White nylon for light cupboard and wardrobe doors.

No.107E Buffer Stop Rubber - For fitting to slamming post when other stops cannot be used.

No.107 Double Wall Stop - Zinc plated steel with rubber buffers. For medium weight doors, fit one on wall , 2/3 up door height. For heavier door fit 2

No.431 Swivel Locking Bar - Rustproofed by Zinc plating. For meeting doors sliding on outside face of wall or for securing to end post. Use with well we for the PCP. padlock (not by PCH).

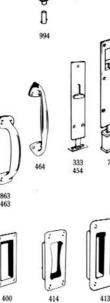
No.430 Detachable Locking Bar - Rustproofed by Zinc plating. For straight run doors sliding inside and locked outside. Use with padlock (not by PCH).

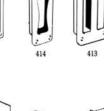
No.65 Back Flap Hinges - No.65 for track 290, 301 or 301H. Aluminium No.65C track 305. Zinc plated.

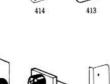
No.403 Butt Hinge -No.403/1 89x50 aluminium alloy.

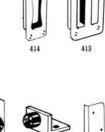
No.403/2 100x55 aluminium alloy No.403/3 100x75 aluminium alloy

Also available in steel to similar sizes and referred to as No.37, No.41, No.42 respectively.







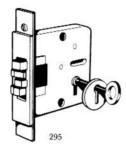


ACCESSORIES



Rim Cylinder Lock No. 444

Five pin tumbler action with long body (keyhole 60mm from jamb) enables door to overlap jamb by 25/38mm. Keyhole plate in B.M.A. finish. Supplied with two keys. To differ only.



Sliding Door Mortise Dead Lock No.295

For light interior sliding doors. Claw action with brass striker plate and claws in unrebated from only – supplied with two keys. suits minimum stile 102x35mm



'Zenith' Cylinder Lock No.507 - C.P.

Fitted to 'zenith' glass rail panels. Shoot enters second bottom rail of double passing doors. 2 keys. handed: state hand. Left-hand illustrated



537

Sponge Neoprene Sealing Strip No.537

22x6mm available in any length - supplied in rolls.