

POMPE CENTRIFUGHE AD ASSE VERTICALE

VERTICAL AXIS CENTRIFUGAL PUMPS

BOMBAS CENTRÍFUGAS DE EJE VERTICAL

POMPES CENTRIFUGES À AXE VERTICAL

IT Le pompe ad asse verticale serie MEC sono progettate per il sollevamento di acque profonde, applicazioni acquedottistiche ed industriali, alimentazione idrica ad uso civile, irriguo e negli impianti antincendio.

La lunga esperienza e le numerose prove eseguite garantiscono qualità, affidabilità e flessibilità.

La gamma di pompe serie MEC da 6" a 10" con portate fino a 420 m³/ora, permette di raggiungere falde acquifere a profondità superiori ai 200mt.

La pompa ad asse verticale si compone di:

- Corpo pompa ad una o più giranti in serie.
- Linea d'assi formante mandata per il liquido sollevato.
- Gruppo di comando per il sollevamento e l'azionamento della pompa.

La bocca di erogazione, direttamente incorporata alla testata, permette il collegamento con la tubazione di mandata.

È consentito il sollevamento di liquidi non aggressivi ad una temperatura massima = 40°C con un contenuto massimo di sostanze solide in sospensione (con durezza e granulometria del limo) = 50g/m³.

La vasta gamma di comandi consente l'azionamento della pompa con diverse macchine motrici.

EN Vertical axis pumps series MEC are designed for the lifting of deep waters, water and industrial applications, water feeding for civil use, irrigation and in the fittings fireproof.

The long experience and the numerous performed tests guarantee quality, reliability and flexibility.

The range of pumps series MEC from 6" to 10" with flow rates until to 420 m³/hour allows to reach groundwater at depths bigger than 200m.

The vertical axis pump is composed of:

- Pump body with one or more impellers in series.
- Line of axes forming flow rate for the lifted liquid.
- Control group for the lifting and operating of the pump.

The outlet, directly incorporated to the heading, allows connection with the flow pipeline.

It is allowed the lifting of non-aggressive liquids to a maximum temperature = 40°C with a maximum content of solid substances in suspension (with hardness and granulometry of the slime) = 50g/m³.

The large range of controls allows the pump activation with different machines.

ES Las bombas de eje vertical de la serie MEC están diseñadas para el levantamiento de aguas profundas, aplicaciones de agua e industriales, alimentación hídrica a empleo civil, regadío y en los sistemas de protección contra incendios.

La larga experiencia y las numerosas pruebas ejecutadas garantizan calidad, fiabilidad y flexibilidad.

La gama de bombas de la serie MEC da 6" a 10" con caudales de suministro hasta 420 m³/hora, permite de alcanzar capas freáticas a profundidades superiores a 200mt.

La bomba de eje vertical se compone de:

- Cuerpo de la bomba con uno o más impulsores en serie.
- Línea de ejes modelante caudal de suministro para el líquido levantado.
- Grupo de mandos para el levantamiento y el accionamiento de la bomba.

La boca de salida, directamente incorporada en la cabeza, permite el enlace con la tubería de suministro.

Está permitido el levantamiento de líquidos no agresivos a una temperatura máxima = 40°C con un contenido máximo de sustancias sólidas en suspensión (con dureza y granulometría del limo) = 50g/m³.

La amplia gama de mandos permite el accionamiento de la bomba con diferentes máquinas motrices.

FR Les pompes à axe vertical de la série MEC sont projetées pour le soulèvement d'eaux profonde, applications hydrauliques et industrielles, alimentation hydrique à l'usage civil, irrigable et dans les installations contre l'incendie.

La longue expérience et les nombreux essais exécutés garantissent qualité, fiabilité et flexibilité.

La gamme de pompes de la série MEC de 6" à 10" avec débit jusqu'à 420 m³/heure permet de rejoindre eaux souterraines à des profondeurs supérieures à 200 m.

La pompe à axe vertical est composée par :

- Corps pompe avec une ou plusieurs roues en série.
- Ligne d'axes formant débit pour le liquide soulevé.
- Groupe de commande pour le soulèvement et l'actionnement de la pompe.

L'orifice de refoulement, directement incorporé à la tête permet la liaison avec la tuyauterie de débit.

Il est permis de pomper des liquides non agressifs à une température maximale de 40°C avec un contenu maximum de corps solides en suspension (avec dureté et granulométrie du vase) = 50 g/m³.

La vaste gamme de commandes permet l'actionnement de la pompe par différentes machines motrices.

Serie MEC 80R 6"



Dati tecnici / Technical data / Datos técnicos / Données techniques

Portata / Flow rate / Caudal / Débit															
r p m	l/sec.	4.2	4.6	5	6.7	8.3	10	10.8	11.7						
	m³/h	15	16.5	18	24	30	36	39	42						
	l/min.	250	275	300	400	500	600	650	700						
2 9 0 0	H (m)			24	22	20	17	15	13	20/2	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	80 3" 20 A
	HP P ₁			3	3.5	3.5	3.5	3.5	3.5						
	H (m)			47	44	40	35	30	27	20/4					
	HP P ₁			5.5	6.5	7	7	7	7						
	H (m)			72	68	60	52	46	40	20/6					
	HP P ₁			9	10	10	10.5	10.5	10.5						
	H (m)			95	89	79	70	61	53	20/8					
	HP P ₁			11.5	13	14	14	14	14						
	H (m)			118	110	100	87	77	67	20/10					
	HP P ₁			14	16	17	17.5	17.5	17						
	H (m)			143	133	120	103	91	80	20/12					
	HP P ₁			17	18	21	21	21	21						
2 6 0 0	H (m)			167	154	139	122	107	92	24/14	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	80 3" 24 B
	HP P ₁			20	23	24	24	24	24						
	H (m)			190	178	160	140	123	106	24/16					
	HP P ₁			23	26	27	28	28	27						
	H (m)			20	19	16	12	11		20/2	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	
	HP P ₁			2.5	3	3	3	3							
	H (m)			40	39	37	32	25	21	20/4					
	HP P ₁			4.5	4.5	5	5.5	5.5	5.5						
	H (m)			60	58	56	48	38	32	20/6					
	HP P ₁			6.5	7	8	8	8	8						
	H (m)			80	78	73	64	50	44	20/8					
	HP P ₁			9	9	10.5	11	10.5	10.5						
	H (m)			100	98	92	80	62	55	20/10					
	HP P ₁			11	11.5	13	13.5	13	13						
	H (m)			120	119	112	96	76	66	20/12					
	HP P ₁			13	14	15.5	16	16	16						
2 4 0 0	H (m)			140	139	130	110	88	76	20/14	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	
	HP P ₁			15.5	16	18	19	18.5	18						
	H (m)			161	157	149	127	100	87	20/16					
	HP P ₁			17.5	18	21	21	20.5							
	H (m)			182	179	176	142	112	98	24/18	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	
	HP P ₁			20	21	23	24	24	23						
	H (m)			202	199	196	160	126	110	24/20					
	HP P ₁			22	23	25	27	26	26						
	H (m)			16	16	15	14	12	8	20/2	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	
	HP P ₁			2	2	2	2	2	2						
	H (m)			33	31	32	28	23	17	20/4					
	HP P ₁			3.5	3.5	4	4	4	4						
	H (m)			50	48	47	43	35	26	20/6					
	HP P ₁			5	5.5	6	6	6	6						
	H (m)			65	64	63	57	46	34	20/8					
	HP P ₁			6.5	7	8	8	8	8						
	H (m)			82	80	79	72	58	42	20/10					
	HP P ₁			8	8.5	9	10	10	10						
	H (m)			100	95	94	86	70	51	20/12					
	HP P ₁			10	10.5	10.5	11.5	12	11.5						
	H (m)			115	111	110	100	82	60	20/14					
	HP P ₁			11.5	12	12	13.5	14	13.5						
	H (m)			132	127	125	114	93	68	20/16					
	HP P ₁			13	13.5	14	15.5	16	15.5						
	H (m)			148	143	141	128	105	76	24/18	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	
	HP P ₁			14.5	15.5	15.5	17.5	18	17.5						
	H (m)			165	160	158	144	117	85	24/20					
	HP P ₁			16	17	17.5	19.5	20	19						

H (m)

Prevalenza

Head

Altura man.

Hauteur man.

HP P₁

Potenza assorbita in HP

Power input in HP

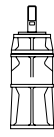
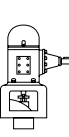
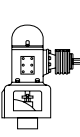
Potencia absorbida en HP

Puissance absorbée en HP

Modifiche tecniche senza obbligo di preavviso / Technical modifications without prior notice / Variaciones técnicas sin obligación de aviso previo / Changements techniques sans obligation de préavis

Serie MEC 80 6"

Dati tecnici / Technical data / Datos técnicos / Données techniques

Portata / Flow rate / Caudal / Débit															
r p m	l/sec.	5.8	6.7	7.5	8.3	10	11.7	13.3	15						
	m³/h	21	24	27	30	36	42	48	54						
	l/min.	350	400	450	500	600	700	800	900						
2 9 0 0	H (m) HP P ₁			26.5 4.4	26 4.6	25 4.9	23.5 5.2	21 5.4	18.5 5.6	20/2	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	80-3" A
	H (m) HP P ₁			53 8.4	52 8.8	49.5 9.6	46.5 10.2	42 10.6	37 10.8	20/4					
	H (m) HP P ₁			79 12.6	77 13.2	74 14.4	70 15.3	63 15.9	55 16.1	20/6					
	H (m) HP P ₁			105 16.8	103 17.6	99 19.2	93 20.5	84 21	74 21.5	20/8					
	H (m) HP P ₁			131 21	129 22	124 24	116 25.5	105 26.5	92 27	20/10	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	80-3" B
	H (m) HP P ₁			157 25	155 26.4	149 29	139 30.5	126 32	110 32.5	24/12					
	H (m) HP P ₁			183 29.5	181 31	174 33.5	162 35.5	147 37	129 38	24/14					
	H (m) HP P ₁				206 35	199 38.5	186 41	168 42.5	147 43.5	24/16					
2 6 0 0	H (m) HP P ₁		22.5 3	22 3.2	21.5 3.3	20 3.6	18.5 4	16 4.1	13.5 4.2	20/2	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	
	H (m) HP P ₁		45 6	44 6.5	43 6.7	40.5 7.3	37 7.7	32 8	27 8.1	20/4					
	H (m) HP P ₁		68 9.1	66 9.8	64 10.1	61 11	55 11.6	48 12	41 12.1	20/6					
	H (m) HP P ₁		90 12.2	88 13.1	86 13.6	81 14.9	74 15.6	64 16	55 16.3	20/8					
	H (m) HP P ₁		112 15.3	110 16.5	107 17	101 18.5	92 19.5	80 20.3	68 20.3	20/10	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	
	H (m) HP P ₁		134 18.5	132 19.8	128 20.3	121 22.3	110 23.3	96 24.3	82 24.8	20/12					
	H (m) HP P ₁		157 21.8	154 23.3	150 23.8	141 25.8	129 27.3	112 28.3	96 28.8	24/12					
	H (m) HP P ₁		179 24.8	176 26.3	172 27.3	162 29.8	147 31.3	128 32.3	109 32.8	24/16					
	H (m) HP P ₁		202 27.8	198 29.8	193 30.8	182 33.3	167 35.3	144 36.3	122 36.8	24/18	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	
	H (m) HP P ₁				204 32.3	192 35.3	177 37.3	152 38.3	129 38.8	24/19					
2 4 0 0	H (m) HP P ₁	18.5 2.3	18 2.5	17.5 2.6	17 2.7	16 3	14 3	11.5 3.1		20/2	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	
	H (m) HP P ₁	37 4.5	36 4.8	35 5.1	34 5.3	31.5 5.8	28 6	23 6.1		20/4					
	H (m) HP P ₁	55 6.8	54 7.2	53 7.6	51 8	47.5 8.7	42 9.1	34 9.1		20/6					
	H (m) HP P ₁	74 9.1	72 9.6	71 10.1	68 10.6	63 11.6	56 12.2	45.5 12.2		20/8					
	H (m) HP P ₁	92 11.3	90 12	88 12.6	85 13.3	79 14.4	70 15.3	57 15.2		20/10	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	
	H (m) HP P ₁	110 13.6	108 14.4	106 15.2	102 16	95 17.3	84 18.4	69 18.1		20/12					
	H (m) HP P ₁	129 15.9	126 16.8	123 17.7	119 18.6	111 20	98 21.5	80 21		20/14					
	H (m) HP P ₁	147 18.2	144 19.2	141 20.5	136 21.5	126 23	112 24.5	91 24.5		20/16					
	H (m) HP P ₁	166 20.5	162 21.5	158 23	153 24	142 26	146 27.5	103 27.5		24/18	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	
	H (m) HP P ₁	184 22.4	180 24	176 25	170 26.4	158 29	140 30.5	114 30.5		24/20					

H (m)
Prevalenza
Head
Altura man.
Hauteur man.

HP P₁
Potenza assorbita in HP
Power input in HP
Potencia absorbida en HP
Puissance absorbée en HP

Modifiche tecniche senza obbligo di preavviso / Technical modifications without prior notice / Variaciones técnicas sin obligación de aviso previo / Changements techniques sans obligation de préavis

Serie MEC 80L 6"



Dati tecnici / Technical data / Datos técnicos / Données techniques

Portata / Flow rate / Caudal / Débit															
r p m	l/sec.	10	12	14	15	17	19	20	22						
	m³/h	36	42	48	54	60	66	72	78						
	l/min.	600	700	800	900	1000	1100	1200	1300						
2 9 0 0	H (m)	25	24	23	22	20	17	15	11	20/2	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	80-3" A
	HP P ₁	5.5	6	6	6.5	6.5	7	6.5	6.5	20/4					
	H (m)	50	48	46	43	40	34	28	21	20/6					
	HP P ₁	11	12	12.5	13	13	13.5	13	13	20/8					
	H (m)	76	71	68	63	58	49	36	30	20/10					
	HP P ₁	16	17	18	18.5	19	19	19	18.5	24/12					
	H (m)	96	93	88	83	75	66	49	39	24/14	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	80-3" B
	HP P ₁	21	22	23.5	24.5	25	25.5	25	24.5	24/16					
	H (m)	125	115	110	103	93	83	59	49						
	HP P ₁	26	28	29	30.5	31	32	31	30.5						
	H (m)	149	137	131	124	113	100	78	60						
	HP P ₁	32	33.5	35	37	38	38	37.5	37						
2 6 0 0	H (m)	172	159	153	145	133	119	91	71	20/2	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	
	HP P ₁	37	39	41	43	44	44	44.5	43	20/4					
	H (m)	195	181	174	166	153	137	100	83	20/6					
	HP P ₁	42.5	45	47	49	51	51	50	49	20/8					
	H (m)	21	19	18	17	14	11			20/10					
	HP P ₁	4.5	4.5	4.5	4.5	5	4.5			20/12					
	H (m)	41	37	35	33	28	22			24/14	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	
	HP P ₁	8.5	8.5	9	9.5	9.5	9			24/16					
	H (m)	59	55	60	47	41	33			24/18					
	HP P ₁	12.5	12.5	13	13.5	14	13.5								
	H (m)	77	72	65	61	52	43								
	HP P ₁	16	16.5	17	18	18	17.5								
2 4 0 0	H (m)	95	89	83	75	65	54			20/2	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	
	HP P ₁	20	20.5	22	22.5	23	22.5			20/4					
	H (m)	114	107	100	90	79	64			20/6					
	HP P ₁	24	25	26	27	27.5	27			20/8					
	H (m)	133	124	117	106	92	74			20/10					
	HP P ₁	27.5	29	30.5	31.5	31.5	31			20/12					
	H (m)	152	142	134	121	107	85			20/14	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	
	HP P ₁	32	33	35	36	36	35.5			20/16					
	H (m)	171	160	151	136	121	95			20/18					
	HP P ₁	35	37	39	40	40.5	40			20/20					
	H (m)	16	15	12	11	9				20/2					
	HP P ₁	3	3	4	4	4				20/4					
	H (m)	32	29	25	22	17				20/6					
	HP P ₁	6	6	7	7	7				20/8					
	H (m)	44	42	37	31	25				20/10					
	HP P ₁	9	9	10	10	10				20/12					
	H (m)	59	54	48	40	32				20/14	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	
	HP P ₁	12	12.5	13	13	13				20/16					
	H (m)	72	68	59	51	40				20/18					
	HP P ₁	15	15.5	16	16	16				20/20					
	H (m)	86	80	72	62	48									
	HP P ₁	17	18	19	19	19									
	H (m)	101	95	85	73	56									
	HP P ₁	20	21	21	21	21									
	H (m)	115	109	99	85	63									
	HP P ₁	23	24	25	25	25									
	H (m)	129	123	112	95	71									
	HP P ₁	26	27	28	28	28									
	H (m)	145	135	125	108	79									
	HP P ₁	28	30	31	31	31									

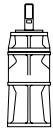
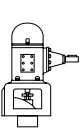
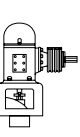
H (m)
Prevalenza
Head
Altura man.
Hauteur man.

HP P₁
Potenza assorbita in HP
Power input in HP
Potencia absorbida en HP
Puissance absorbée en HP

Modifiche tecniche senza obbligo di preavviso / Technical modifications without prior notice / Variaciones técnicas sin obligación de aviso previo / Changements techniques sans obligation de préavis

Serie MEC 80 7"

Dati tecnici / Technical data / Datos técnicos / Données techniques

Portata / Flow rate / Caudal / Débit															
r p m	l/sec.	8.3	10	11.7	13.3	15	16.7	20	23.3						
	m³/h	30	36	42	48	54	60	72	84						
	l/min.	500	600	700	800	900	1000	1200	1400						
2 9 0 0	H (m)	36.5	35	34	31.5	30.5	28	23.5		20/2	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	80-3" A
	HP P ₁	7.2	7.7	8	8.4	8.6	8.6	8.6		20/3					
	H (m)	55	53	51	48	45	42	34.5		20/4					
	HP P ₁	10.7	11.5	11.8	12.5	12.8	12.8	12.8		20/5					
	H (m)	73	70	68	64	61	56	46		20/6					
	HP P ₁	14	15.3	15.5	16	16.5	16.8	16.8		20/7					
	H (m)	92	88	85	80	76	70	58		24/7	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	80-3" B
	HP P ₁	17	19	19.5	20	21	21	21		24/8					
	H (m)	110	105.5	102	95.5	91	84	69		24/9					
	HP P ₁	21	23	23.5	24	25	25	25		27/10					
	H (m)	128	123	119	112	106	98	82		27/11					
	HP P ₁	24	26	27.4	28	29	29	29		27/12					
	H (m)	146	140	136	128	122	112	93			MEC100 4" 27		PR 75 4" 27	PM 75 4" 27	100-4" C
	HP P ₁	28	30	30.8	33	33.5	33.5	33.5							
	H (m)	165	158	153	145	137	126	105							
	HP P ₁	31	34	35	37	38	38	38							
	H (m)		177	171	161	152	142	115	86						
	HP P ₁		36.8	39	41	41.5	42.5	42.5	39						
2 6 0 0	H (m)		195	188	177	167	156	127	95						
	HP P ₁		41	43	44.5	46	47	46.5	43						
	H (m)			205	193	182	171	138	103						
	HP P ₁			47	49	50	51	50	46.5						
	H (m)	30	29	27	26	24	22	17		20/2	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	
	HP P ₁	5.6	6	6	6.5	6.7	6.5	6.5		20/3					
	H (m)	45	43	41	38	36	32.5	25		20/4					
	HP P ₁	8.5	9	9.5	9.5	9.8	10	9.5		20/5					
	H (m)	60	58	55	52	48	43	33		20/6					
	HP P ₁	11.2	11.7	12.2	12.7	13	13	12		20/7					
	H (m)	75	72	69	65	60	55	42		20/8	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	
	HP P ₁	13.9	14.6	15.3	16	16.1	16.4	15.7		20/9					
	H (m)	90	86	83	77	72	65	51		24/9					
	HP P ₁	16.6	17.6	18.4	19.2	19.4	19.7	19		24/10					
	H (m)	105	101	96	90	84	76	60		24/11					
	HP P ₁	19.4	20.5	21.5	22	22.5	23	22.2		27/12	MEC100 4" 27		PR 75 4" 27	PM 75 4" 27	
	H (m)	120	116	111	114	96	88	68		27/13					
	HP P ₁	22.5	24	25	26	26	27	26		27/14					
	H (m)	135	131	124	116	108	99	77							
	HP P ₁	25	27	27.5	29	29	30	29							
	H (m)	150	144	138	129	120	109	85							
2 4 0 0	HP P ₁	28	29.5	31	32	32.5	33	32.5							
	H (m)	165	159	151	142	133	120	92							
	HP P ₁	30.5	33	34	35	36	36.5	35							
	H (m)		173	165	156	144	132	101							
	HP P ₁		35	37	39	39	40	38							
	H (m)		187	179	169	156	142	110							
	HP P ₁		38.5	40.5	42	42	43	41.5							
	H (m)		202	193	181	168	153	118							
	HP P ₁		41	43	45	45	46	44.5							
	H (m)	48.5	46	43	39	35.5	31	22		20/4	MEC80 3" 20	80 S 3" 20	PR 50 3" 20	PM 50 3" 20	
	HP P ₁	8.5	9	9.5	9.5	9.5	9.5	9		20/5					
	H (m)	61	58	54	49.5	44	39	27.5		20/6					
	HP P ₁	10.6	11.4	11.8	12	12	12	11		20/7					
	H (m)	73	69.5	65	60	53	47	33		20/8					
	HP P ₁	13	14	14	15	14.5	14.3	13.5		20/9					
	H (m)	85	81	75	69	62	55	38.5		20/10	MEC80 3" 24	80 S 3" 24	PR 50 3" 24	PM 50 3" 24	
	HP P ₁	15	16	16.6	16.8	16.8	16.7	15.5		24/10					
	H (m)	97	92	85	78	71	62	44		24/11					
	HP P ₁	17	18	19	19.1	19.1	19	18		24/12					
	H (m)	109	104	97	88	80	70	50		27/13					
	HP P ₁	19.4	20.5	22	21.5	21.5	21.5	20		27/14					
	H (m)	121	115	107	99	90	79	55		27/15	MEC100 4" 27		PR 75 4" 27	PM 75 4" 27	
	HP P ₁	21	23	24	24.5	24.5	24.5	22.5		27/16					
	H (m)	133	127	118	108	98	86	62		27/17					
	HP P ₁	23	25	27	26.5	26.5	26.5	24.5		27/18					
	H (m)	145	138	128	118	107	94	66		27/19					
	HP P ₁	26	27.5	28.5	29	29	29	27		27/20					
	H (m)		150	139	127	116	101	70							
	HP P ₁		29	31	31.5	31.5	31	28							
	H (m)		161	150	137	125	110	77							
	HP P ₁		31	33.5	33.5	33.3	33.5	31.5							
	H (m)		173	160	147	134	116	81							
	HP P ₁		34	36	36	36	36.1	33							
	H (m)		184	171	158	143	125	86.5							
	HP P ₁		36	38	38.5	38.5	38.5	35							
	H (m)		196	182	167	151	132	92							
	HP P ₁		38	41	41	41	41	37.3							
	H (m)		207	193	176	160	140	97							
	HP P ₁		40	43	43.4	43.4	43	39.4							
	H (m)		218	204	186	169	148	103							
	HP P ₁		43	45.5	46	46	45.5	42							
	H (m)		229	215	196	178	156	108							
	HP P ₁		45.5	48	48.5	48.5	47.5	44.5							