

CP(Q)(Y)(D) /CPC(D) 20/25/30/35/38



HELI



2-3.8 t

H3 series Internal Combustion
Counterbalanced Forklift Truck



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2-3.8 t

H3 series Internal Combustion Counterbalanced Forklift Truck

Vibration reduced Noise reduced

- Cushion connection and wholly suspension driver's cab absorb whole truck's vibration effectively.
- Noise around ear is reduced through down the tilting cylinder under the floor board and using fully closed patch type driver's cab.
- Lower damping device inside the lifting system reduces mast shock and vibration, avoiding crash noise caused by goods falling to the ground.



Workspace increased

- Space around foot is effectively increased through up steering unit and using suspension type inching.
- The operation space is enlarged by heightened overhead guard and using large arc shape of the overhead guard's front leg
- Semi-suspension seat, steering wheel with small diameter, electro-hydraulic direction changing and automobile type double joystick combined switch effectively improve driving comfort.

Loading capacity increased Stability improved/Reliability improved

- The hot air reflow isolating device, optimal thermal dissipation duct and aluminum plate-fin type radiator improve cooling ability and ensure engine work reliability.
- Automobile type oil filling cap and optimal oil filling channel structure and process ensure whole truck's safety.
- The constant displacement pump load sensing steering system increases the lifting speed and reduces the hydraulic oil temperature.
- The optimal design of key parts like frame, mast, overhead guard and steering axle improve the whole truck's safety and reliability.
- The repositioning of whole truck's gravity center improve loading capacity, stability and safety.

Operator's view improved

- Operator's front view is improved through the assembling of stand wide view mast and lowering the dashboard.
- Operator's rear view improved through the CAE optimal designed counterweight.



Increased hood opening angle

- Enlarged internal space is convenient for engine and transmission box maintenance.
- Increased hood open angle contributes to quick and convenient maintenance.

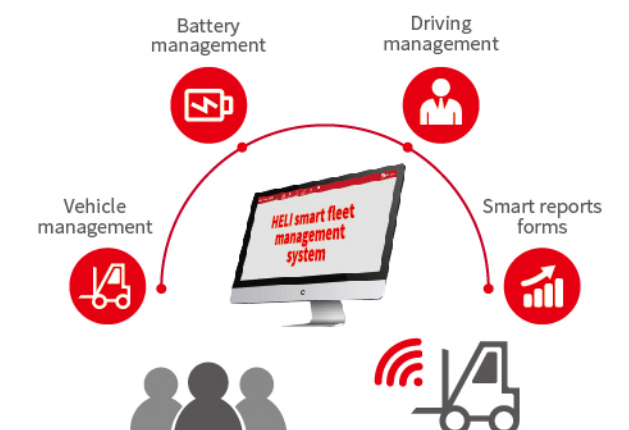


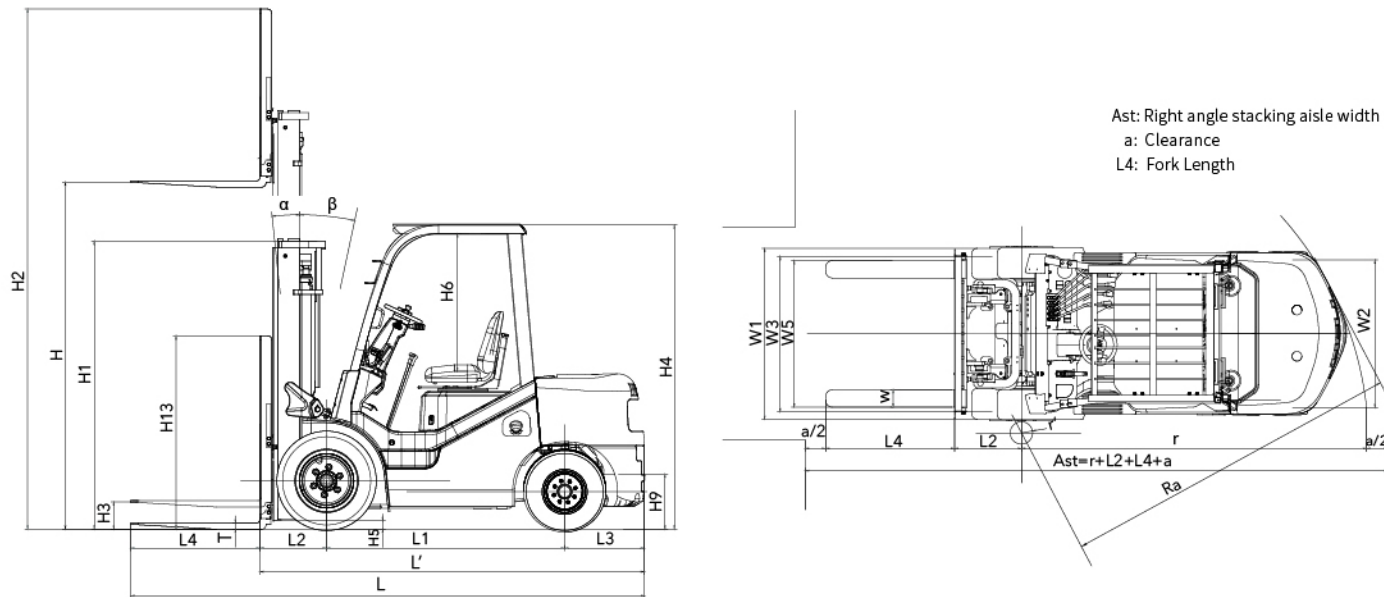
Working efficiency improved

- Small turning radius makes steering flexible and easy.
- The truck has fast lifting speed, good gradeability and high efficiency.
- High working efficiency guarantees the truck could meet the requirements for various kinds of complicated work condition perfectly wherever at port, dock and railway station.

HELI smart fleet management system (optional)

Vehicle positioning	Statistical form
Remote diagnosis	Vehicle management
Remote monitoring	Identification recognition (optional)
Maintenance reminder	Weight management (optional)
Battery management	Collision management (optional)





Manufacturer and technical parameters

Character		HELI				
1.01	Manufacturer					
1.02	Model	CPC20 / CPCD20 / CP(Q)M20 / CP(Q)MD20	CPC25 / CPCD25 / CP(Q)M25 / CP(Q)MD25	CPC30 / CPCD30 / CP(Q)M30 / CP(Q)MD30	CPC35 / CPCD35 / CP(Q)M35 / CP(Q)MD35	CPC(D)38
1.03	Rated capacity	kg	2000	2500	3000	3500
1.04	Load center	mm	500			
1.05	Operation mode		Seat-type			
Size						
2.01	Max.lifting height	H	mm	3000	3000	3000
2.02	Mast overall height (Fork to the ground and mast be vertical)	H1	mm	2000	2065	2180
2.03	Max.fork lifting height (With backrest)	H2	mm	4030	4245	4235
2.04	Free lift height	H3	mm	165	165	170
2.05	Overall height (Overhead guard)	H4	mm	2150	2170	2170
2.06	Min.ground clearance (At the mast)	H5	mm	115	135	135
2.07	Distance from the surface of the seat to the overhead guard	H6	mm	1030	1030	1030
2.08	Traction pin height	H9	mm	275	275	280
2.09	Backrest height (Calculated from the surface of the fork)	H13	mm	1000	1000	1222
2.10	Overall length (With fork/Without fork)	(L/L')	mm	3500/2580	3708/2638	3818/2748
2.11	Wheel base	L1	mm	1650	1650	1700
2.12	Front overhang	L2	mm	478	478	496
2.13	Rear overhang	L3	mm	457	515	570
2.14	Overall width	W1	mm	1150	1150	1225
2.15	Tread (Front tread/Rear tread)	(W3/W2)	mm	970/970	970/970	1000/970
2.16	Fork adjustable range (the external of the fork)(Max./Min.)	W5	mm	1030/244	1030/244	1060/250
2.17	Min.turning radius (Exterior)	r	mm	2170	2240	2400
2.18	Min.turning radius (Interior)	r'	mm	180	180	200
2.19	Min.right angle stacking aisle width	Ra	mm	2200	2280	2380
2.20	Mast tilting angle	α/β	deg	6°/12°	6°/12°	6°/12°
2.21	Fork size	L4×W×T	mm	920×122×40	1070×122×40	1070×125×45
Weight						
3.01	Total weight	kg	3370	3740	4340	4700
3.02	Weight distribution loaded (Front/Rear)	kg	4740/630	5440/800	6440/900	7380/820
3.03	Weight distribution unloaded (Front/Rear)	kg	1570/1800	1520/2220	1700/2640	1850/2850
Wheel and tyre						
4.01	Wheel number x = drive wheel (Front/Rear)		2X/2			
4.02	Tyre type (Front/Rear)		Pneumatic tyre			
4.03	Tyre size (Front/Rear)		7.00-12-12PR/ 6.00-9-10PR	7.00-12-12PR/ 6.00-9-10PR	28×9-15-12PR/ 6.50-10-10PR	28×9-15-14PR/ 6.50-10-10PR
4.04	Service brake		Hydraulic-Foot Pedal			
4.05	Parking brake		Mechanical-Hand Lever			

Truck main specifications and drive and transmission control device 1

Performance											
Model		CPC20	CPCD20	CPC25	CPCD25	CPC30	CPCD30	CPC35	CPCD35	CPC38	CPCD38
Max.drawbar pull (Loaded/Unloaded)	kN	17.5/12.3	19/12.8	18/12.4	18.7/13.8	18.7/14.5	19/14.5	18/14.5	21/14.5	23/15	23/15
Max.Gradeability (Loaded/Unloaded)	%	30/25	39/28	27/23	35/23	21/23	29/22	15/22	23/22	27/32	27/32
Max.traveling speed (Loaded/Unloaded)	km/h	17/19		17/19		19/20		19/19		20/19	
Lifting Speed (Loaded/Unloaded)	mm/s	560/600		560/600		500/550		400/420		450/480	
Lowing Speed (Loaded/Unloaded)	mm/s	450/500		450/500		450/550		350/400		460/540	
Drive and transmission control device											
Engine mode		ISUZU C240						ISUZU 4JG2			
Engine rated power	kW/rpm	35.4/2500						46/2450			
Engine rated torque	Nm/rpm	139.9/1800						184.7/1600-1800			
Engine cylinder number-borexstroke		4-86×102						4-95.4x107			
Engine displacement	L	2.369						3.059			
Engine type		Diesel									
Emission		Euro Stage IIIA / China Stage III							-		
Battery(Voltage/Capacity)	V/Ah	12/80									
Engine fuel tank capacity	L	60									
Transmission box shifting gears (Front/Rear type)		1-1Power Shift T/M / 2-2 Manual Shift T/M									

Note: * indicates the theoretical calculation value.

Truck main specifications and drive and transmission control device 2

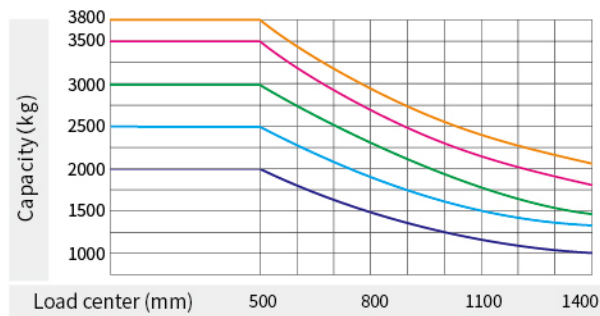
Performance		CP(Q)M20	CP(Q)MD20	CP(Q)M25	CP(Q)MD25	CP(Q)M30	CP(Q)MD30	CP(Q)M35	CP(Q)MD35	CP(Q)YD20	CP(Q)YD25	CP(Q)YD30	CP(Q)YD35
Model													
Max.drawbar pull (Loaded/Unloaded)	kN	15/12.5	16/12.8	15/12.3	16.5/12.4	17/13.5	18/13.5	18/13.5	20/13.5	20/10	20/10	21/13	21/14
Max.Gradeability (Loaded/Unloaded)	%	30/25	39/28	27/23	35/23	21/23	29/22	15/22	23/22	30/26	30/22	28/22	22/16
Max.travelingspeed (Loaded/Unloaded)	km/h	17/19		17/19		19/20		19/20		18/18	18/18	18/18	18/18
Lifting Speed (Loaded/Unloaded)	mm/s	520/570		520/570		420/480		370/410		530/570	530/570	450/490	400/420
Lowing Speed (Loaded/Unloaded)	mm/s	450/500		450/500		450/550		350/400		450/500	450/500	450/500	450/500
Drive and transmission control device													
Engine mode		GCT K25											
Engine rated power	kW/rpm	37.4/2400											
Engine rated torque	Nm/rpm	176.5/1600											
Engine cylinder number-borexstroke		4-89×100											
Engine displacement	L	2.488											
Engine type		Gasoline or LPG											
Emission		-											
Battery(Voltage/Capacity)	V/Ah	12/60											
Engine fuel tank capacity	L	60											
Transmission box shifting gears (Front/Rear type)		1-1Power Shift T/M / 2-2 Manual Shift T/M											

Note: * indicates the theoretical calculation value.

Engine Model and Main Specification for Option

Engine model	Rated power /rotating speed (Kw/rpm)	Rated power /rotating speed (Nm/rpm)	Engine displacement (L)	Engine cylinder number	Cylinder number - BorexStroke	Engine type	Emission
GCT K21	31.2/2200	143.7/1600	2.065	4	4-89x83	Gasoline or LPG	-
Cummins F2.8CS449	36/2500	186/1100~1500	2.8	4	4-94x100	Diesel	China Stage IV
QUANCHAI 4C3-60C31	42/2500	190/1800	2.97	4	4—95×105	Diesel	China StageIII
XINCHAI 4D32X41	36.8/2500	200/1500~1800	3.17	4	4-98×105	Diesel	China Stage IV
Mitsubishi 4G64 (PSI)	GAS:48/2700 LPG:46/2700	GAS:170/2400 LPG:168/1600	2.351	4	4—86.5×100	Gasoline or LPG	CARB4
Mitsubishi S4S	35.3/2250	177/1700	3.331	4	4-94×120	Diesel	A Euro Stage IIIA / China StageIII
QUANCHAI V32-50C42	36.8/2500	210/1400~1600	3.17	4	4-98x105	Diesel	China Stage IV
ISUZU GK-4JG2NKFC01	35/2450	175/1700	3.059	4	4-95.4×107	Diesel	Euro Stage IIIA/China III
Kubota V2403	43.2 / 2400	198.5 / 1500	2.434	4	4-87×102.4	Diesel	Euro Stage IIIB/T4F

Load curve



CP(Q)(Y)20
CP(Q)(Y)D20
CPC20
CPCD20

CP(Q)(Y)25
CP(Q)(Y)D25
CPC25
CPCD25

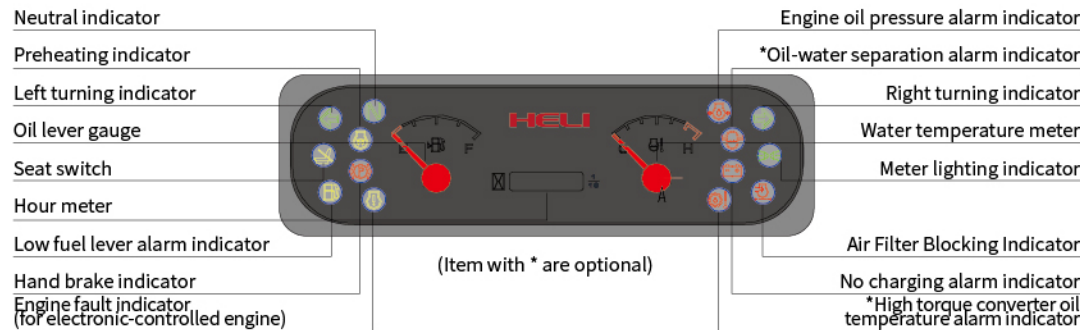
CP(Q)(Y)30
CP(Q)(Y)D30
CPC30
CPCD30

CP(Q)(Y)35
CP(Q)(Y)D35
CPC35
CPCD35

CPC(D)38

Note: The vertical axis stands for load capacity and the horizontal axis stands for load center which is calculated from the front of the fork. The base point of the standard load refers to the center position of the cube with 1000mm length of side. When mast is tilted forward, nonstandard fork usage or load with over wide goods, load capacity will be reduced. Different load capacity in different load center can be known in time through load chart.

Reliable special designed instrument



■ Reliable special meter display the whole truck's working condition, fault detect and other important information completely which make the operator master the whole truck condition directly and conveniently.

2t/2.5t/3t H3 series internal combustion forklift mast configuration table

Mast type	Mast model	Max. lifting height (mm)	Load capacity (load center 500mm)(kg)			Free lifting height (mm)				Mast overall height (mm)						Mast tilt angle α/β (°)	Service weight (kg)		
						Without Backrest		With Backrest		Height (mast lowered)	Height (mast Lifted)								
			2t	2.5t	3t	2-2.5t	3t	2-2.5t	3t		2-2.5t	3t	WithoutBackrest	With Backrest	2t	2.5t	3t		
Wide View Standard Mast	M200	2000	2000	2500	3000	165	165	165	165	1500	1565	2571	2667	3039	3218	6-12	3280	3650	4250
	M250	2500	2000	2500	3000	165	165	165	165	1800	1815	3071	3167	3539	3718	6-12	3330	3700	4300
	M300	3000	2000	2500	3000	165	165	165	165	2000	2065	3571	3667	4039	4218	6-12	3370	3740	4340
	M330	3300	2000	2500	3000	165	165	165	165	2150	2215	3871	3967	4339	4518	6-12	3400	3770	4360
	M350	3500	2000	2500	3000	165	165	165	165	2250	2315	4071	4167	4539	4718	6-12	3420	3790	4380
	M370	3700	2000	2500	3000	165	165	165	165	2350	2415	4271	4367	4739	4918	6-12	3430	3800	4400
	M400	4000	2000	2400	3000	165	165	165	165	2550	2615	4571	4667	5039	5218	6-12	3510	3880	4490
	M425	4250	2000	2300	2950	165	165	165	165	2675	2740	4821	4917	5289	5468	6-6	3530	3900	4510
	M450	4500	1900	2300	2850	165	165	165	165	2800	2865	5071	5167	5539	5718	6-6	3560	3930	4540
	M500	5000	1800	2300	2750	165	165	165	165	3050	3115	5571	5667	6039	6218	6-6	3600	3970	4580
Wide View Full Free 2-Stage Mast	M550	5500	1750	2150	2700	165	165	165	165	3350	3415	6071	6167	6539	6718	6-6	3700	4070	4690
	M600	6000	950	1000	1500	165	165	165	165	3600	3665	6571	6667	7039	7218	6-6	3740	4110	4730
	ZM200	2000	2000	2500	3000	957	884	495	340	1500	1570	2577	2668	3039	3212	6-12	3300	3670	4270
	ZM250	2500	2000	2500	3000	1207	1134	745	590	1800	1820	3077	3168	3539	3712	6-12	3360	3730	4310
	ZM300	3000	2000	2500	3000	1457	1384	995	840	2000	2070	3577	3668	4039	4212	6-12	3430	3800	4360
	ZM330	3300	2000	2500	3000	1607	1534	1145	990	2150	2220	3877	3968	4339	4512	6-12	3470	3840	4390
	ZM350	3500	2000	2500	3000	1707	1634	1245	1090	2250	2320	4077	4168	4539	4712	6-12	3500	3870	4410
	ZM370	3700	2000	2500	3000	1807	1734	1345	1190	2350	2420	4277	4368	4739	4912	6-12	3520	3890	4430
	ZM400	4000	2000	2400	3000	2007	1934	1545	1390	2550	2620	4577	4668	5039	5212	6-12	3610	3980	4500
	ZM425	4250	2000	2300	2950	2132	2059	1670	1515	2675	2745	4828	4919	5290	5463	6-6	3650	4020	4530
Wide View Full Free 3-Stage Mast	ZM450	4500	1900	2300	2850	2257	2184	1795	1640	2800	2870	5077	5168	5539	5712	6-6	3680	4050	4550
	ZM500	5000	1750	2150	2650	2507	2434	2045	1890	3050	3120	5577	5668	6039	6212	6-6	3750	4120	4600
	ZM550	5500	1800	2300	2750	2807	2734	2345	2190	3350	3420	6077	6168	6539	6712	6-6	3860	4230	4690
	ZM600	6000	950	1000	1500	3057	2984	2595	2440	3600	3670	6577	6668	7039	7212	6-6	3930	4300	4740
	ZSM360	3600	2000	2500	3000	1258	1230	795	705	1795	1946	4176	4291	4639	4816	6-6	3520	3890	4510
	ZSM400	4000	2000	2400	2950	1383	1355	920	830	1920	2065	4576	4693	5039	5218	6-6	3550	3920	4540
	ZSM435	4350	1950	2300	2900	1508	1480	1045	955	2045	2190	4926	5041	5389	5566	6-6	3580	3950	4580
	ZSM450	4500	1900	2300	2850	1558	1530	1095	1005	2095	2240	5076	5191	5539	5716	6-6	3600	3970	4590
	ZSM470	4700	1850	2150	2800	1623	1530	1160	1005	2160	2240	5276	5341	5739	5866	6-6	3610	3980	4590
	ZSM480	4800	1800	2100	2750	1658	1630	1195	1105	2195	2340	5376	5491	5839	6016	6-6	3620	3990	4620

Note: (1) *stands for the rated capacity when the front tyre is double-tyre.
(2) When the front tyre of the 2-3.5t truck is double tyre, the service weight of the truck is the weight in the table plus 110kg.
(3) The free lifting height (without backrest) of the 2-2.5t truck is the height (with backrest) in the table plus 432mm. The free lifting height (without backrest) of the 3t truck is the height (with backrest) in the table plus 568mm. The free lifting height (without backrest) of the 3.5t truck is the height (with backrest) in the table plus 505mm.

3.5t/3.8t H3 series internal combustion forklift mast configuration table

Mast type	Mast model	Max. lifting height (mm)	Load capacity (load center 500mm)(kg)		Free lifting height (mm)				Mast overall height (mm)						Mast tilt angle α/β (°)	Service weight (kg)	
					Without Backrest		With Backrest		Height (mast lowered)		Height (mast Lifted)						
			3.5t	3.8t	3.5t	3.8t	3.5t	3.8t	3.5t	3.8t	WithoutBackrest	With Backrest		3.5t		3.8t	
Wide View Standard Mast	M200	2000	3500	3800	170	160	170	160	1680	1680	2757	2811	3218	3218	6-12	4610	4840
	M250	2500	3500	3800	170	160	170	160	1930	1930	3257	3311	3718	3718	6-12	4650	4880
	M300	3000	3500	3800	170	160	170	160	2180	2180	3757	3811	4218	4218	6-12	4700	4930
	M330	3300	3500	3800	170	160	170	160	2330	2330	4057	4111	4518	4518	6-12	4730	4960
	M350	3500	3500	3800	170	160	170	160	2430	2430	4257	4311	4718	4718	6-12	4750	4980
	M370	3700	3500	3800	170	160	170	160	2530	2530	4457	4511	4918	4918	6-12	4760	4990
	M400	4000	3450	3800	170	160	170	160	2730	2730	4757	4811	5218	5218	6-12	4840	5070
	M425	4250	3350 +3400	3600 +3700	170	160	170	160	2855	2855	5007	5061	5468	5468	6-6 +6-12	4870	5100
	M450	4500	3200 +3300	3500 +3600	170	160	170	160	2980	2980	5257	5311	5718	5718	6-6 +6-12	4900	5130
	M500	5000	3000 +3150	3200 +3200	170	160	170	160	3230	3230	5757	5811	6218	6218	6-6 +6-12	4950	5190
Wide View Full Free 2-Stage Mast	M550	5500	2300 +2800	2650 +3000	170	160	170	160	3530	3530	6257	6311	6718	6718	6-6 +6-12	4990	5220
	M600	6000	1850 +2400	1900 +2650	170	160	170	160	3780	3780	6757	6811	7218	7218	6-6 +6-12	5040	5270
	ZM200	2000	3500	3800	921	910	460	503	1680	1680	2758	2805	3219	3212	6-12	4660	4890
	ZM250	2500	3500	3800	1171	1160	710	753	1930	1930	3258	3305	3719	3712	6-12	4700	4930
	ZM300	3000	3500	3800	1421	1410	960	1003	2180	2180	3758	3805	4219	4212	6-12	4750	4980
	ZM330	3300	3500	3800	1571	1560	1110	1153	2330	2330	4058	4105	4519	4512	6-12	4780	5010
	ZM350	3500	3500	3800	1671	1660	1210	1253	2430	2430	4258	4305	4719	4712	6-12	4800	5030
	ZM370	3700	3500	3800	1771	1760	1310	1353	2530	2530	4458	4505	4919	4912	6-12	4810	5040
	ZM400	4000	3450	3800	1971	1960	1510	1553	2730	2730	4752	4805	5213	5212	6-12	4890	5120
	ZM425	4250	3350 +3400	3600 +3700	2096	2085	1635	1678	2855	2855	5007	5056	5468	5463	6-6 +6-12	4920	5150
Wide View Full Free 3-Stage Mast	ZM450	4500	3300 +3300	3500 +3600	2221	2210	1760	1803	2980	2980	5258	5305	5719	5712	6-6 +6-12	4960	5190
	ZM500	5000	3000 +3150	3100 +3200	2471	2460	2010	2053	3230	3230	5758	5805	6219	6212	6-6 +6-12	5000	5230
	ZM550	5500	2300 +2800	2650 +3000	2771	2760	2310	2353	3530	3530	6258	6305	6719	6712	6-6 +6-12	5040	5270
	ZM600	6000	1850 +2400	1900 +2650	3021	3010	2560	2603	3780	3780	6758	6805	7219	7212	6-6 +6-12	5090	5320
	ZSM360	3600	3400	3800	1215	1107	710	700	1946	1930	4311	4415	4816	4822	6-6	4770	5000
	ZSM400	4000	3350	3800	1340	1232	835	825	2065	2055	4713	4815	5218	5222	6-6	4800	5030
	ZSM435	4350	3300 +3300	3400 +3700	1465	1357	960	950	2190	2180	5061	5165	5566	5572	6-6 +6-12	4840	5070
	ZSM450	4500	3200 +3200	3350 +3600	1515	1407	1010	1000	2240	2230	5211	5315	5716	5722	6-6 +6-12	4850	5080
	ZSM470	4700	3150 +3150	3250 +3250	1515	1472	1010	1065	2240	2295	5361	5515	5866	5922	6-6 +6-12	4850	5090
	ZSM480	4800	3050 +3200	3150 +3300	1615	1507	1110	1100	2340	2330	5511	5615	6016	6022	6-6 +6-12	4880	5110