

# ASP Submersible Bore Hole Stainless Steel Pumps



## PT. Archimedes Global Pump

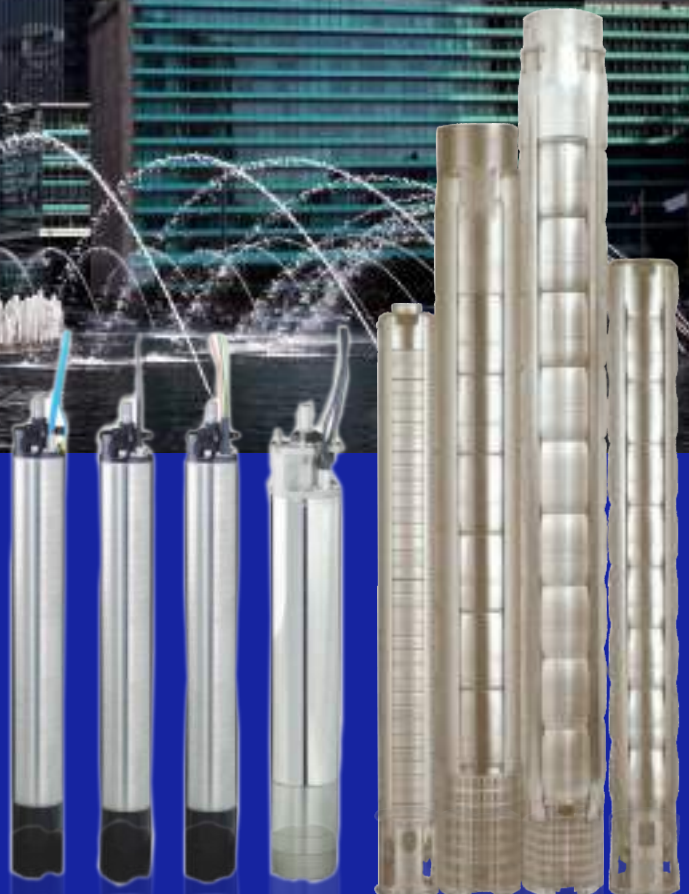
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**Archimedes**  
Pump

## Product range finder

Description	Model	ASP-02 series	ASP-03 series	ASP-05 series	ASP-08 series	ASP014 series	ASP-17 series	ASP-30 series	ASP-46 series	ASP-60 series	ASP-77 series	ASP-95 series
Nominal flow (m3/h)		2	3	5	8	14	17	30	46	60	77	95
Flow range (m3/h)		1 - 2.4	1 - 4.5	1.2 - 6	2 - 10.8	2.5 - 18	3 to 23	6 to 42	9 to 60	10 to 80	13 to 102	15 to 120
Max Head ( m)		280	330	349	285	170	430	400	330	288	410	431
Motor Power range (kW)		0.37 to 2.2	0.37 to 4.0	0.37 to 5.5	0.75 to 7.5	1.5 to 7.5	1.1 to 22	2.2 to 30	3.7 to 37	2.2 to 37	5.5 to 75	5.5 to 93
Liquid temperature (deg C)												
suspended solid (ppm)		50	50	50	50	50	50	50	50	50	50	50
Pump Highest Eff. (%)		52	58	61	60	61	72	75	77	77	78	77
Pump outside diameter ( mm)		98	98	98	98	98	135	135	152	152	205	205
Motor out side diameter ( mm)		98	98	98	98	98	135	135	152	152	205	205
pipe connction ( BSP)		1 1/4 "	1 1/4 "	1 1/2"	2"	2"	2 1/2"	3"	4"	4"	5"	5"

## Submersible bore hole stainless steel Pump

### ■ Applications

- For water supply , Ground water lifting from well, open pit.
- For boosting, transfer
- For irrigation, water spray
- Dewatering for high rise building, mining etc.
- Horizontal application is possible

### ■ Performance & Feature

- Capacity up to 1 ~ 95 m<sup>3</sup>/h
- Head Up to 490 m
- 100% SUS 304 Stainless steel
- Superior hydraulic efficiency
- Sand resistance
- 12 months warranty period

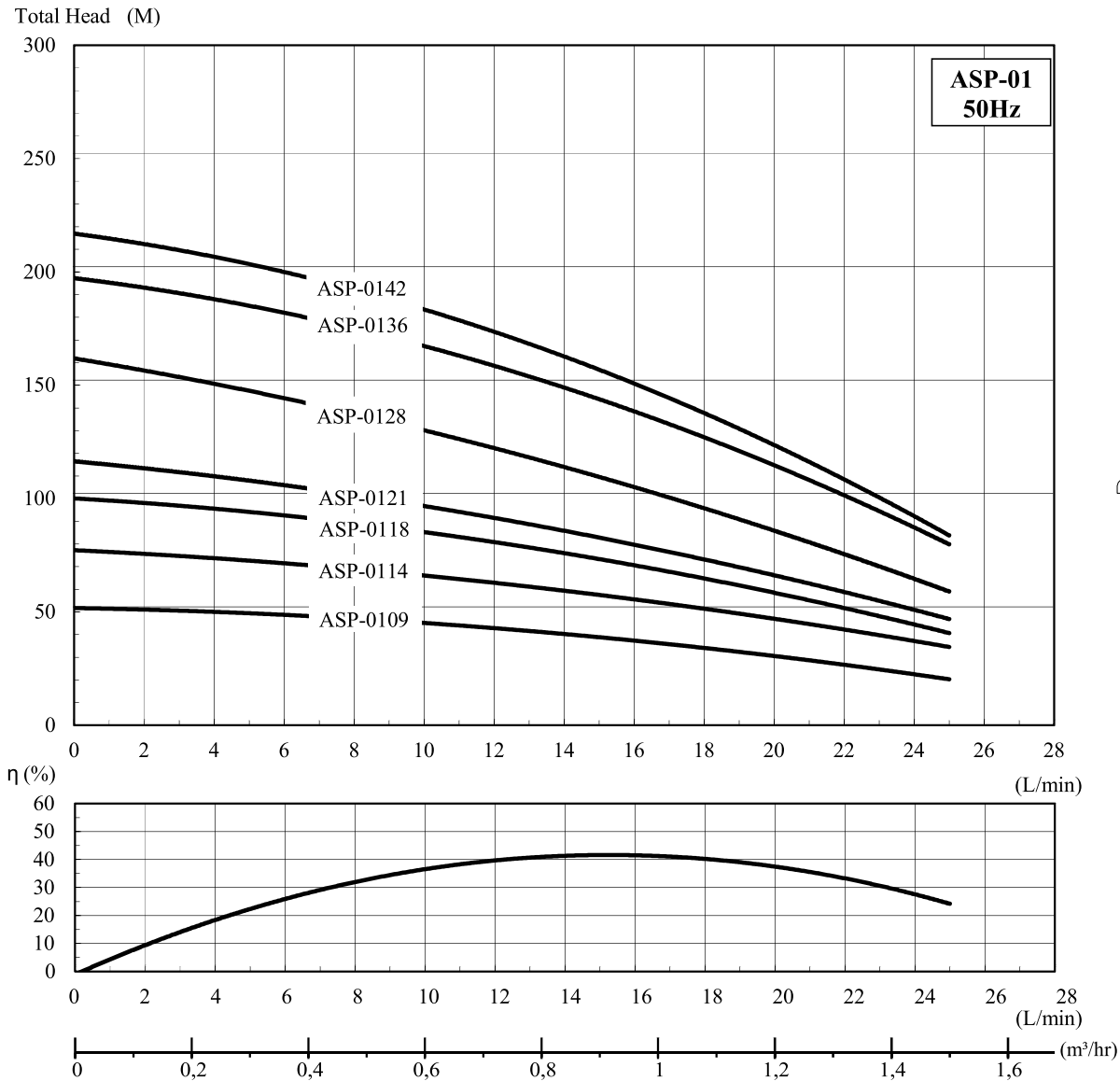
## High Quality Submersible Motor

### ■ Performance & Feature

- From 4 " to 8 "
- From 0.37 kW to 55 kW
- 100 % individual test
- 6 months warranty period (with Archimedes Control Panel)
- NEMA standard

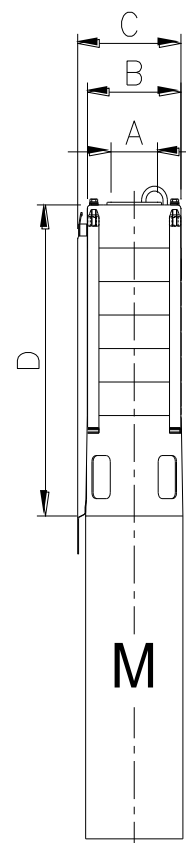
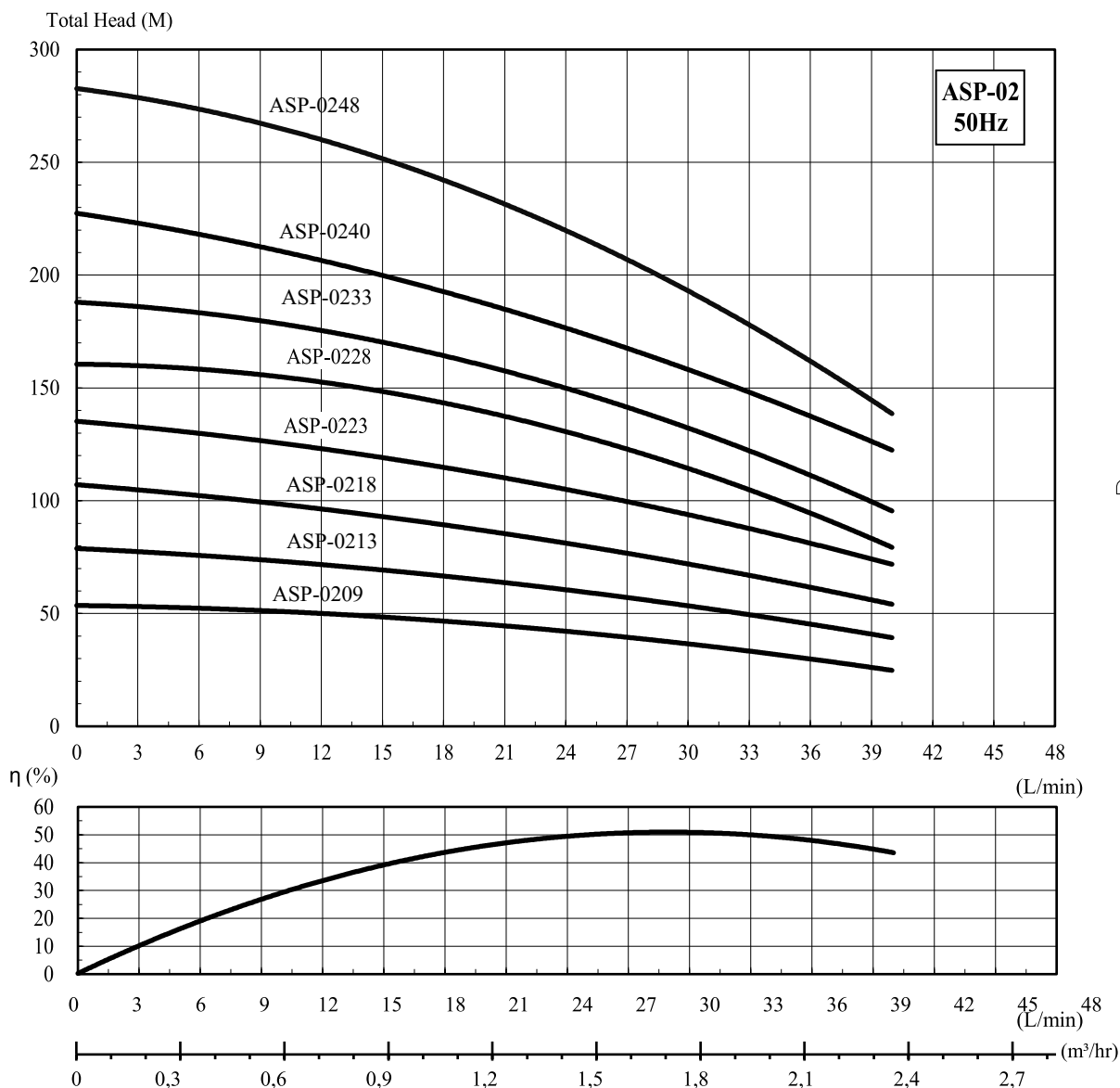


# Performance Curve

**ASP-01**


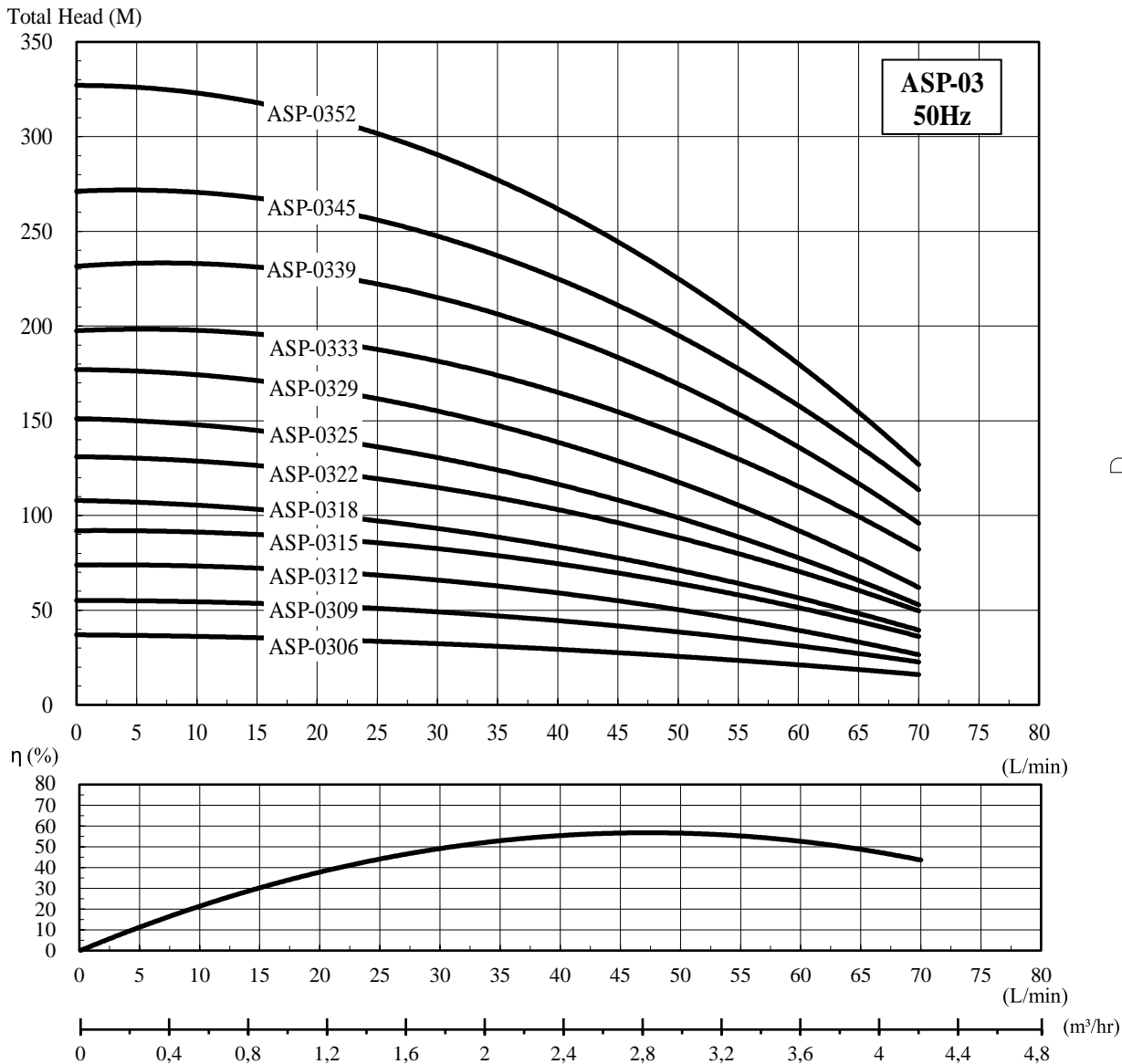
TYPE	Motor		TOTAL HEAD	HEAD	CAPACITY						Dimensions(mm)				Weight
					M³/hr										
	HP	Kw	M	M	0	0,3	0,6	0,9	1,2	1,5	A	B	C	D	KG
					L/min										
HEAD IN METERS															
ASP-0109	0,5	0,37	52	34	52	49	45	39	31	20	1 1/4"	86,7	98	356	3,1
ASP-0114	0,5	0,37	77	50	77	73	66	58	46	35				461	4
ASP-0118	0,75	0,55	100	67	100	94	86	73	58	41				545	4,7
ASP-0121	0,75	0,55	116	76	116	108	98	83	64	48				608	5,2
ASP-0128	1,0	0,75	160	102	160	150	132	108	83	61				755	6,6
ASP-0136	1,5	1,1	197	117	197	185	168	145	112	81				946	8,6
ASP-0142	1,5	1,1	216	134	216	205	183	158	121	85				1072	9,8

# Performance Curve

**ASP-02**


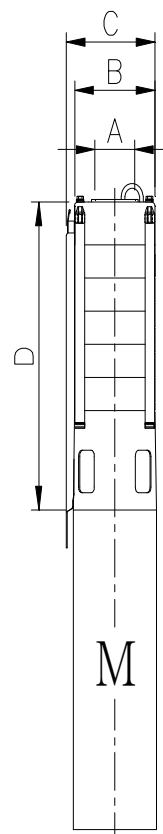
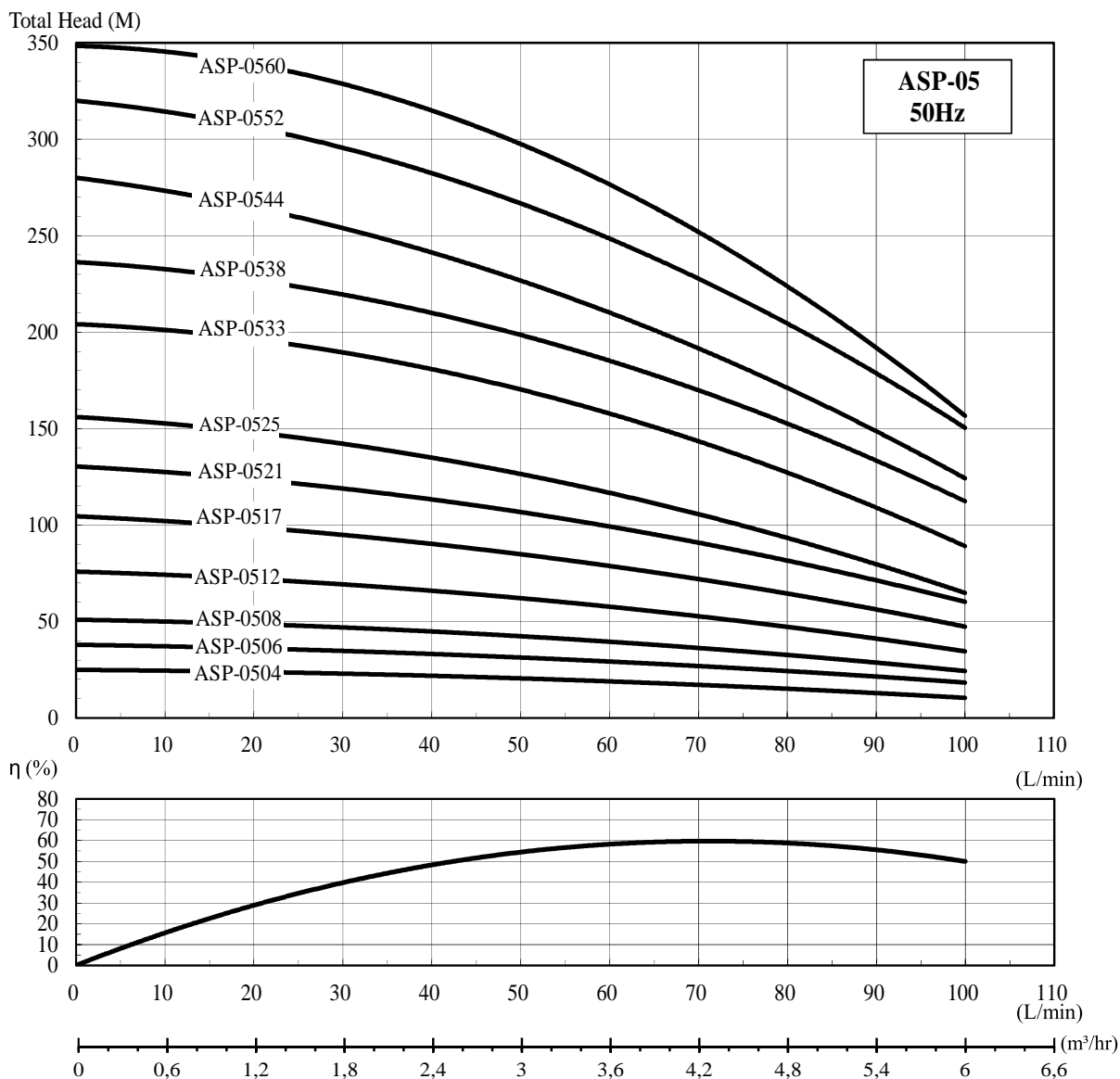
TYPE	Motor		TOTAL HEAD	HEAD	CAPACITY						Dimensions(mm)				Weight
					M³/hr										
	HP	Kw	M	M	0	0,9	1,2	1,5	1,8	2,4	A	B	C	D	KG
					L/min										
					0	15	20	25	30	40					
HEAD IN METERS															
ASP-0209	0,5	0,37	54	32	54	48	44	41	37	23	1 1/4"	86,7	98	356	3,2
ASP-0213	0,75	0,55	79	48	79	69	64	60	54	39				440	4
ASP-0218	1,0	0,75	107	67	107	93	87	80	73	55				545	5,3
ASP-0223	1,5	1,1	135	86	135	120	111	103	97	73				650	6,6
ASP-0228	2,0	1,5	160	106	160	150	139	129	114	81				755	7
ASP-0233	2,0	1,5	188	122	188	169	161	149	133	97				883	8,6
ASP-0240	3,0	2,2	227	150	227	202	187	172	156	122				1030	11,4
ASP-0248	3,0	2,2	282	176	282	254	235	215	192	140				1198	12,7

# Performance Curve

**ASP-03**


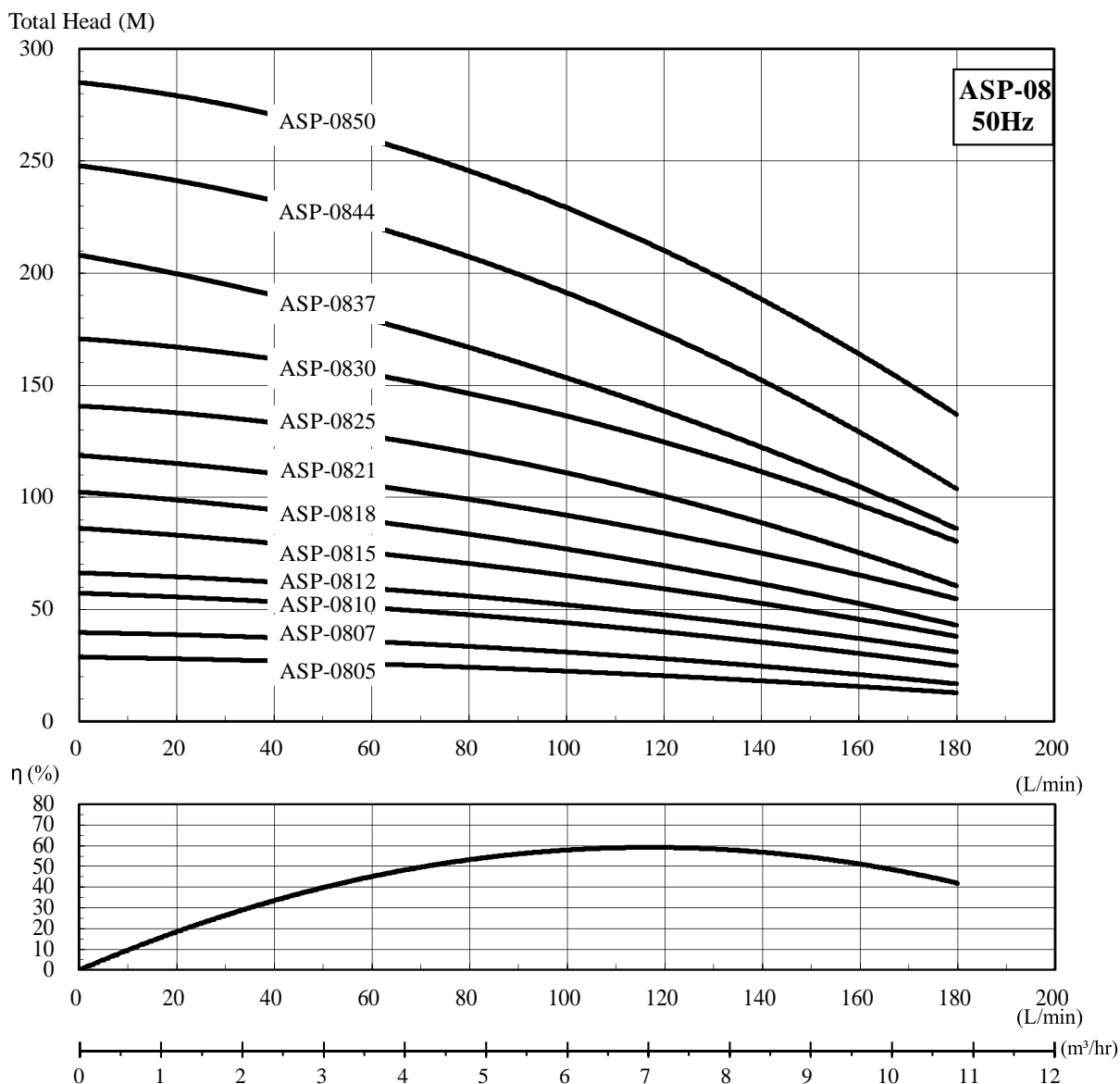
TYPE	Motor		TOTAL HEAD M	HEAD M	CAPACITY						Dimensions(mm)				Weight KG
					M³/hr										
	HP	Kw			L/min						A	B	C	D	
					0	2,1	2,4	3,0	3,6	4,2					
HEAD IN METERS															
ASP-0306	0,5	0,37	37	25	37	31	29	26	21	16	1 1/4"	86,7	98	293	2,6
ASP-0309	0,75	0,55	55	37	55	48	44	38	31	23				356	3,1
ASP-0312	1,0	0,75	74	49	74	63	58	51	40	26				419	3,7
ASP-0315	1,5	1,1	92	61	92	80	77	69	57	40				482	4,2
ASP-0318	1,5	1,1	108	74	108	89	82	72	57	39				545	4,9
ASP-0322	2,0	1,5	131	91	131	111	101	88	72	49				629	5,4
ASP-0325	2,0	1,5	151	102	151	126	115	98	78	53				692	6,0
ASP-0329	3,0	2,2	177	119	177	148	138	118	92	62				776	6,9
ASP-0333	3,0	2,2	198	137	198	172	164	145	118	80				883	7,9
ASP-0339	5,0	3,7	232	165	232	204	195	172	138	94				1109	9,2
ASP-0345	5,0	3,7	272	194	272	233	224	199	162	110	1135	10,4			
ASP-0352	5,0	3,7	328	229	328	272	261	230	184	123	1282	11,8			

# Performance Curve

**ASP-05**


TYPE	Motor		TOTAL HEAD	HEAD	CAPACITY						Dimensions(mm)				Weight
					M³/hr						A	B	C	D	KG
	HP	Kw	M	M	0	3	3,6	4,2	4,8	6,0					
					L/min										
					HEAD IN METERS										
					0	50	60	70	80	100					
ASP-0504	0,5	0,37	25	15	25	20	19	17	16	10	1 1/2"	86,7	98	251	2,2
ASP-0506	0,75	0,55	38	23	38	31	29	27	25	18				293	2,3
ASP-0508	1,0	0,75	51	30	51	42	39	37	33	24				335	2,9
ASP-0512	1,5	1,1	76	46	76	61	58	53	48	34				419	3,7
ASP-0517	2,0	1,5	105	63	105	82	79	74	66	46				524	4,7
ASP-0521	3,0	2,2	131	81	131	103	99	93	85	58				608	5,3
ASP-0525	3,0	2,2	156	94	156	125	118	110	88	66				692	6,4
ASP-0533	5,0	3,7	205	124	205	166	156	147	132	86				868	7,8
ASP-0538	5,0	3,7	237	150	237	195	184	173	156	110				973	9,7
ASP-0544	5,0	3,7	281	166	281	221	210	195	176	121				1099	11
ASP-0552	7,5	5,5	321	190	321	261	247	233	209	147				1267	13,2
ASP-0560	7,5	5,5	349	216	349	294	276	256	225	155				1435	15,4

# Performance Curve

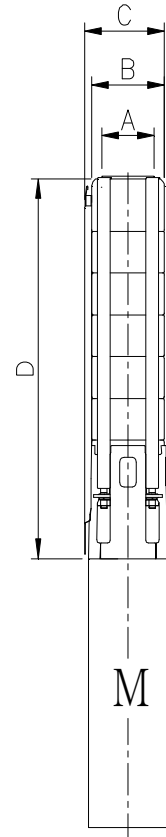
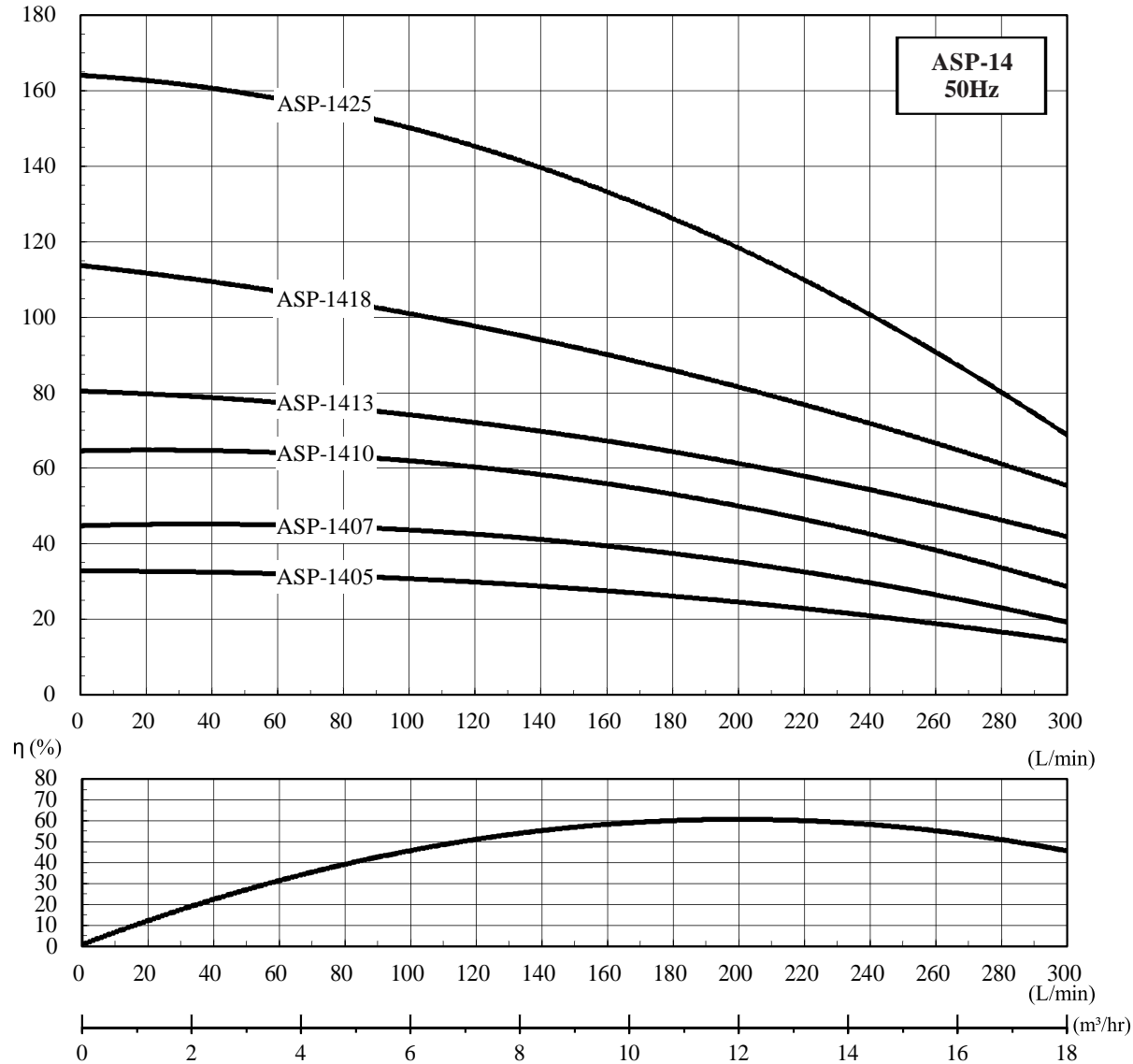
**ASP-08**


TYPE	Motor		TOTAL HEAD	HEAD	CAPACITY						Dimensions(mm)				Weight
					M <sup>3</sup> /hr										
	HP	Kw	M	M	0	3,6	4,8	8,4	9,6	10,8	A	B	C	D	KG
					L/min										
HEAD IN METERS															
SP-0805	1,0	0,75	29	19	29	25	24	19	16	12	2"	87,3	98	412	4,1
SP-0807	1,5	1,1	40	27	40	35	33	26	21	16				496	5,1
SP-0810	2,0	1,5	58	38	58	49	47	38	31	23				622	6,6
SP-0812	3,0	2,2	67	48	67	58	55	45	38	29				706	7,6
SP-0815	3,0	2,2	87	59	87	74	69	56	46	36				832	9,1
SP-0818	5,0	3,7	103	71	103	88	83	63	54	41				958	10,6
SP-0821	7,5	5,5	120	85	120	103	97	80	67	51				1084	12,1
SP-0825	7,5	5,5	142	99	142	125	118	93	77	57				1252	14,1
SP-0830	7,5	5,5	172	117	172	153	144	115	100	76				1462	16,6
SP-0837	7,5	5,5	210	141	210	175	165	130	105	82				1753	20,1
SP-0844	10	7,5	251	168	251	215	204	161	135	95	2056	23,6			
SP-0850	10	7,5	288	187	288	254	242	198	168	129	2315	26,6			

# Performance Curve

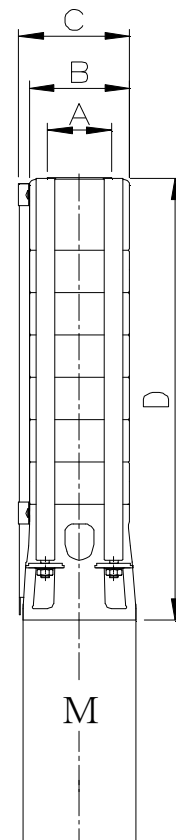
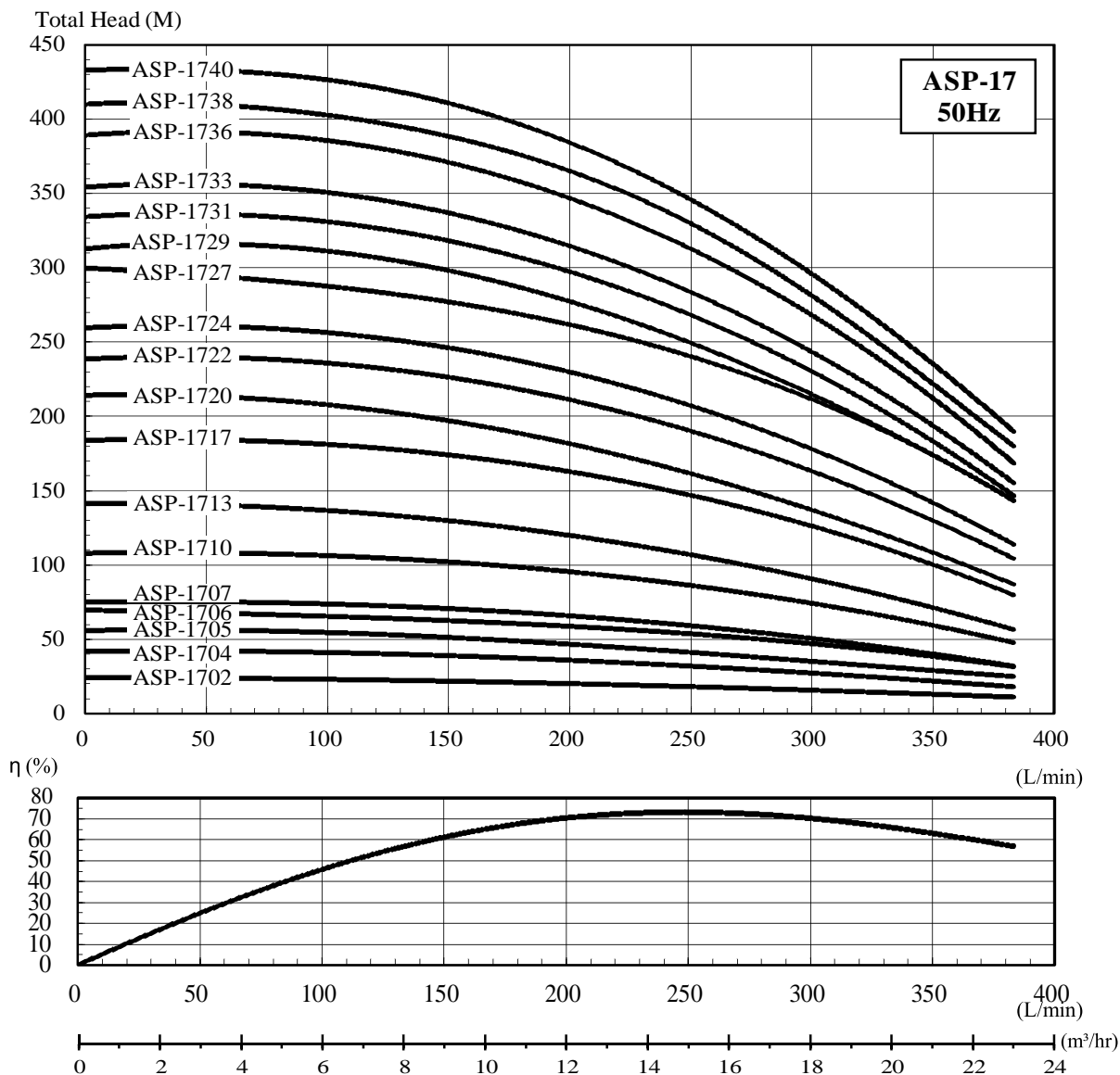
**ASP-14**

Total Head (M)



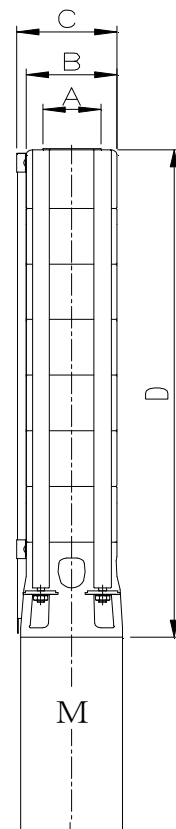
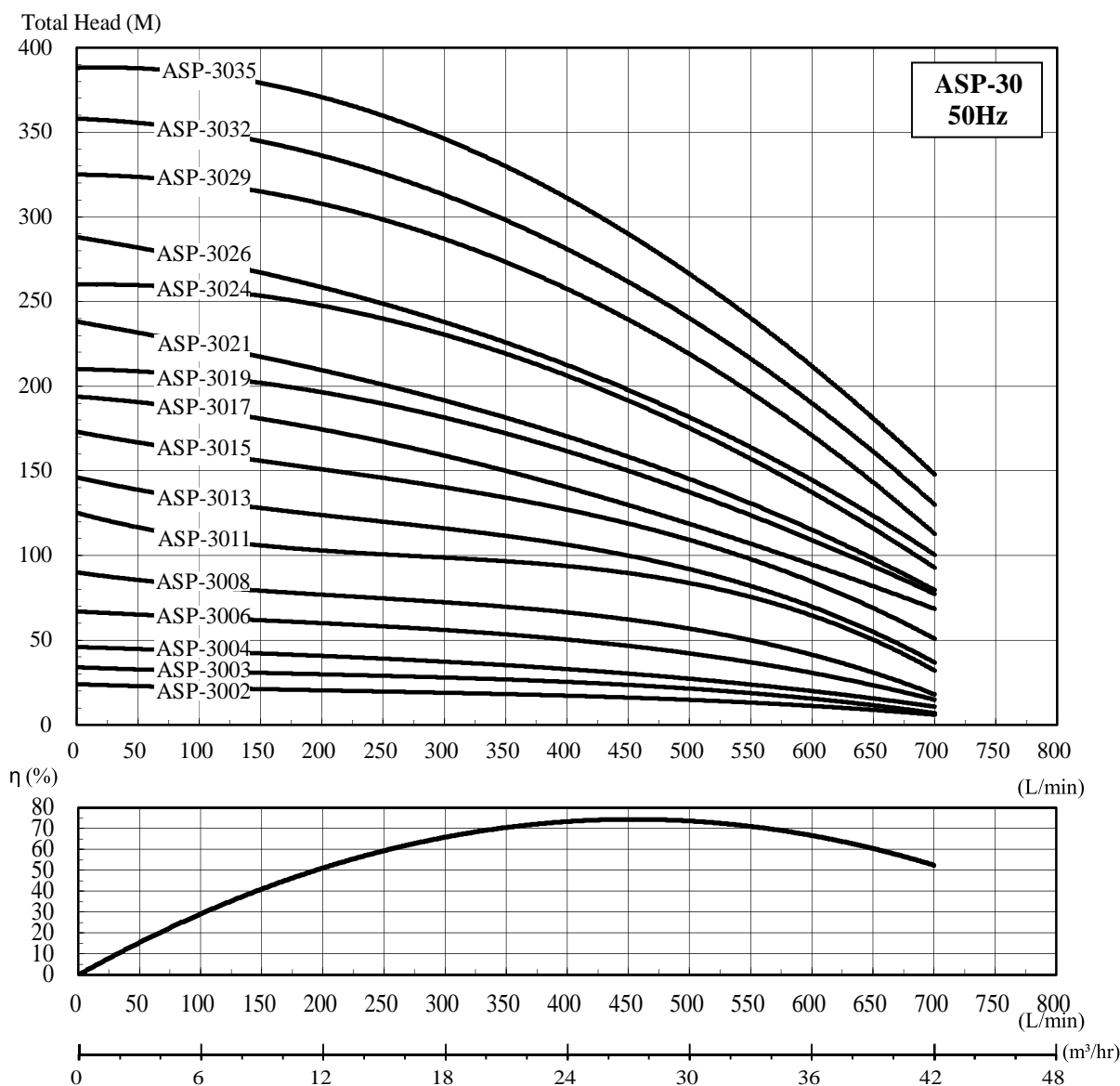
TYPE	Motor		TOTAL HEAD	HEAD	CAPACITY						Dimensions(mm)				Weight
					M³/hr										
	HP	Kw	M	M	0	6,0	8,4	12	15	18	A	B	C	D	KG
					L/min										
HEAD IN METERS															
ASP-1405	2,0	1,5	33	21	33	30	29	25	20	14	2"	87,3	98	505	5,4
ASP-1407	3,0	2,2	45	31	45	43	41	36	28	19				635	6,8
ASP-1410	5,0	3,7	65	44	65	61	58	51	41	28				830	7,4
ASP-1413	5,0	3,7	81	57	81	73	69	63	53	41				1025	8,9
ASP-1418	7,5	5,5	115	80	112	98	93	84	72	53				1350	13,7
ASP-1425	10	7,5	164	109	164	150	140	120	93	70				1805	17,9

# Performance Curve

**ASP-17**


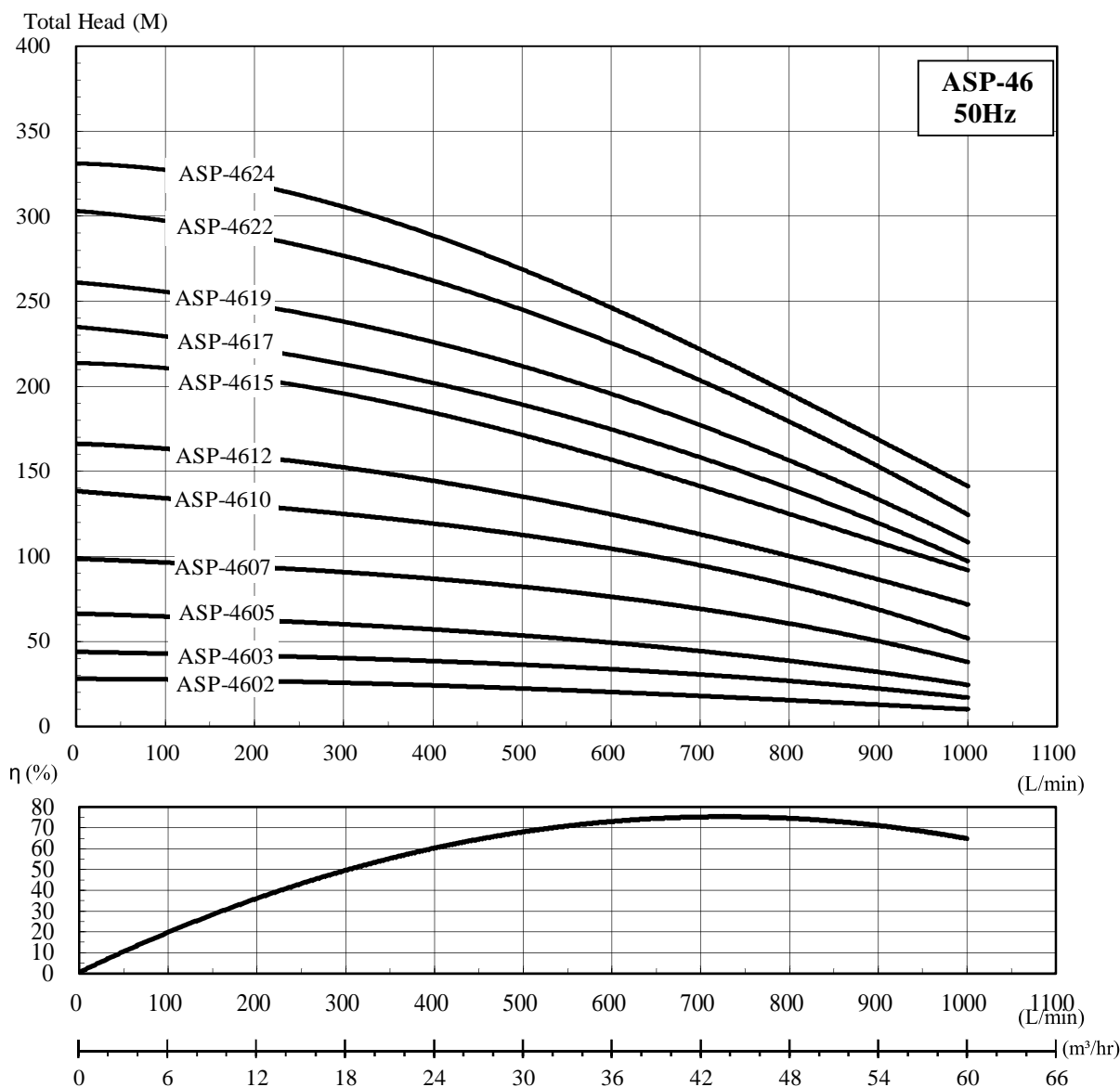
TYPE	Motor		TOTAL HEAD	HEAD	CAPACITY						Dimensions(mm)				Weight
					M³/hr										
	HP	Kw	M	M	0	12	15	18	21	23	A	B	C	D	KG
					L/min										
HEAD IN METERS						0	200	250	300	350	383				
ASP-1702	1,5	1,1	24	17	24	20	18	16	13	11	2 1/2"	125	135	387	5,9
ASP-1704	3	2,2	42	29	42	36	32	27	22	18				514	8,5
ASP-1705	5	3,7	56	37	56	47	41	35	29	25				557	9,8
ASP-1706	7,5	5,5	69	48	69	58	53	47	41	35				637	11,1
ASP-1707	7,5	5,5	75	52	75	66	59	51	40	32				677	12,4
ASP-1710	7,5	5,5	108	75	108	96	86	73	61	47				857	16,1
ASP-1713	10	7,5	141	98	141	137	109	92	70	57				1052	20,3
ASP-1717	15	11	184	128	184	163	147	126	100	80				1292	25,4
ASP-1720	15	11	214	150	214	180	163	138	106	88				1472	29,2
ASP-1722	15	11	239	168	239	212	190	163	129	105				1592	31,8
ASP-1724	20	15	260	181	260	230	208	178	140	115				1712	34,3
ASP-1727	20	15	298	207	298	258	242	210	179	140				1892	38,2
ASP-1729	25	18,5	314	228	314	279	250	215	170	146				2012	40,8
ASP-1731	25	18,5	335	243	335	298	269	230	181	148				2132	43,4
ASP-1733	25	18,5	355	255	355	315	285	243	191	157				2252	46
ASP-1736	30	22	390	281	390	348	313	268	210	170				2450	49,9
ASP-1738	30	22	410	293	410	365	330	281	222	180	2571	52,5			
ASP-1740	30	22	433	322	433	384	346	296	235	190	2692	55,1			

# Performance Curve

**ASP-30**


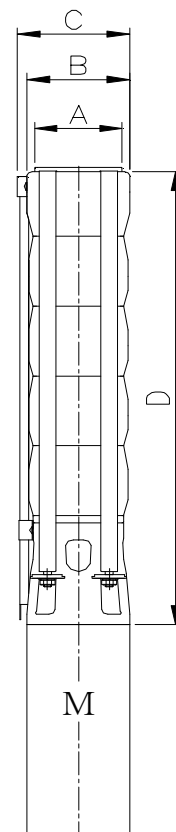
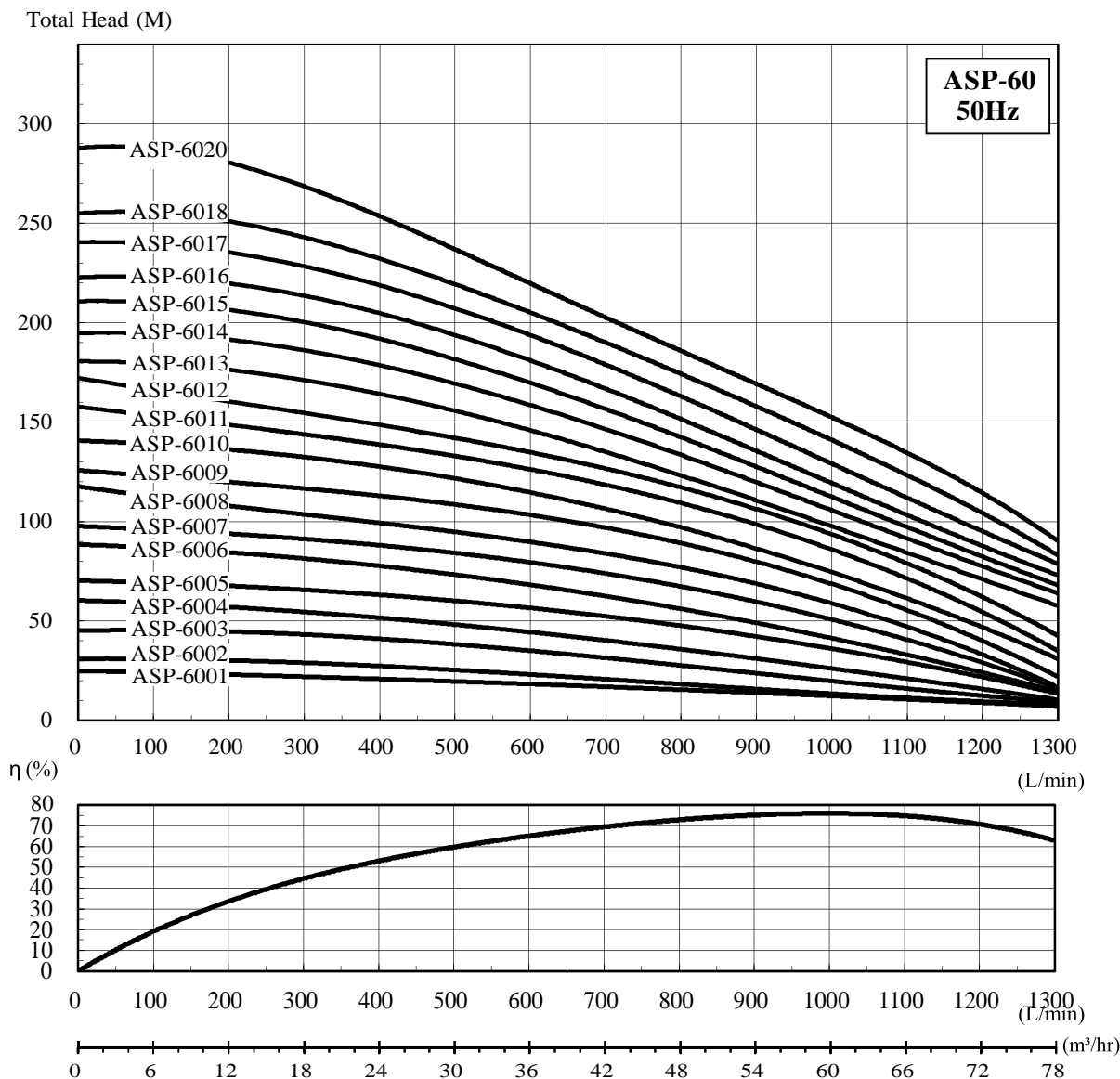
TYPE	Motor		TOTAL HEAD	HEAD	CAPACITY						Dimensions(mm)				Weight		
					M³/hr												
	HP	Kw			M	M	0	18	24	30	36	42	A	B	C	D	KG
							L/min										
HEAD IN METERS																	
ASP-3002	3	2,2	24	15	24	19	17	15	11	6	3"	121	135	449	6,5		
ASP-3003	5	3,7	34	21	34	28	25	22	15	7				545	8,2		
ASP-3004	7,5	5,5	46	30	46	37	33	28	19	11				641	9,9		
ASP-3006	7,5	5,5	67	42	67	56	50	43	30	17				833	13,8		
ASP-3008	10	7,5	90	57	90	73	65	58	41	18				1025	17,3		
ASP-3011	15	11	125	78	125	102	90	81	70	30				1326	22,7		
ASP-3013	15	11	146	91	146	118	105	88	70	35				1505	26,1		
ASP-3015	20	15	173	106	173	141	127	107	87	70				1697	29,6		
ASP-3017	20	15	194	122	194	158	140	116	87	70				1889	33,2		
ASP-3019	25	18,5	210	137	210	182	161	137	110	77				2081	36,7		
ASP-3021	25	18,5	238	152	238	193	170	143	101	78				2273	40,2		
ASP-3024	30	22	260	179	260	230	207	175	137	93				2561	45,3		
ASP-3026	30	22	288	184	288	238	213	180	136	90				2753	48,7		
ASP-3029	40	30	325	218	325	287	257	220	170	113				3041	53,8		
ASP-3032	40	30	358	243	358	313	281	240	190	130	3329	58,9					
ASP-3035	40	30	388	262	388	346	311	267	211	148	3617	64					

# Performance Curve

**ASP-46**


TYPE	Motor		TOTAL HEAD M	HEAD M	CAPACITY						Dimensions(mm)				Weight KG			
					M <sup>3</sup> /hr													
	HP	Kw			L/min						A	B	C	D				
					0	15	24	30	48	60								
HEAD IN METERS															4"	132	152	KG
ASP-4602	5	3,7	28	15	28	27,0	24	22	16	10								
ASP-4603	7,5	5,5	44	24	44	41	39	36	27	17	617	10,7						
ASP-4605	10	7,5	66	40	66	64	55	53	40	24	858	15,2						
ASP-4607	15	11	98	56	98	86	85	80	63	37	1084	19,7						
ASP-4610	20	15	137	81	137	134	117	107	88	50	1423	26,5						
ASP-4612	25	18,5	165	99	165	162	142	130	105	85	1649	31						
ASP-4615	30	22	212	125	212	208	180	167	130	115	1988	37,8						
ASP-4617	40	30	234	147	234	222	200	186	143	96	2214	42,3						
ASP-4619	40	30	260	155	260	248	224	208	160	107	2440	46,7						
ASP-4622	50	37	302	184	302	288	260	241	183	123	2779	53,3						
ASP-4624	50	37	330	204	330	317	287	265	199	140	2892	57,8						

# Performance Curve

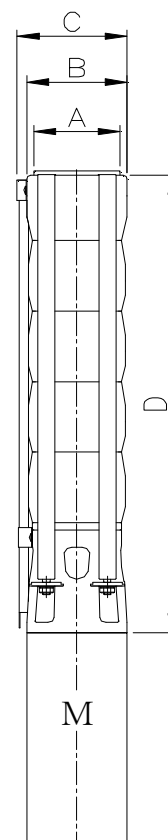
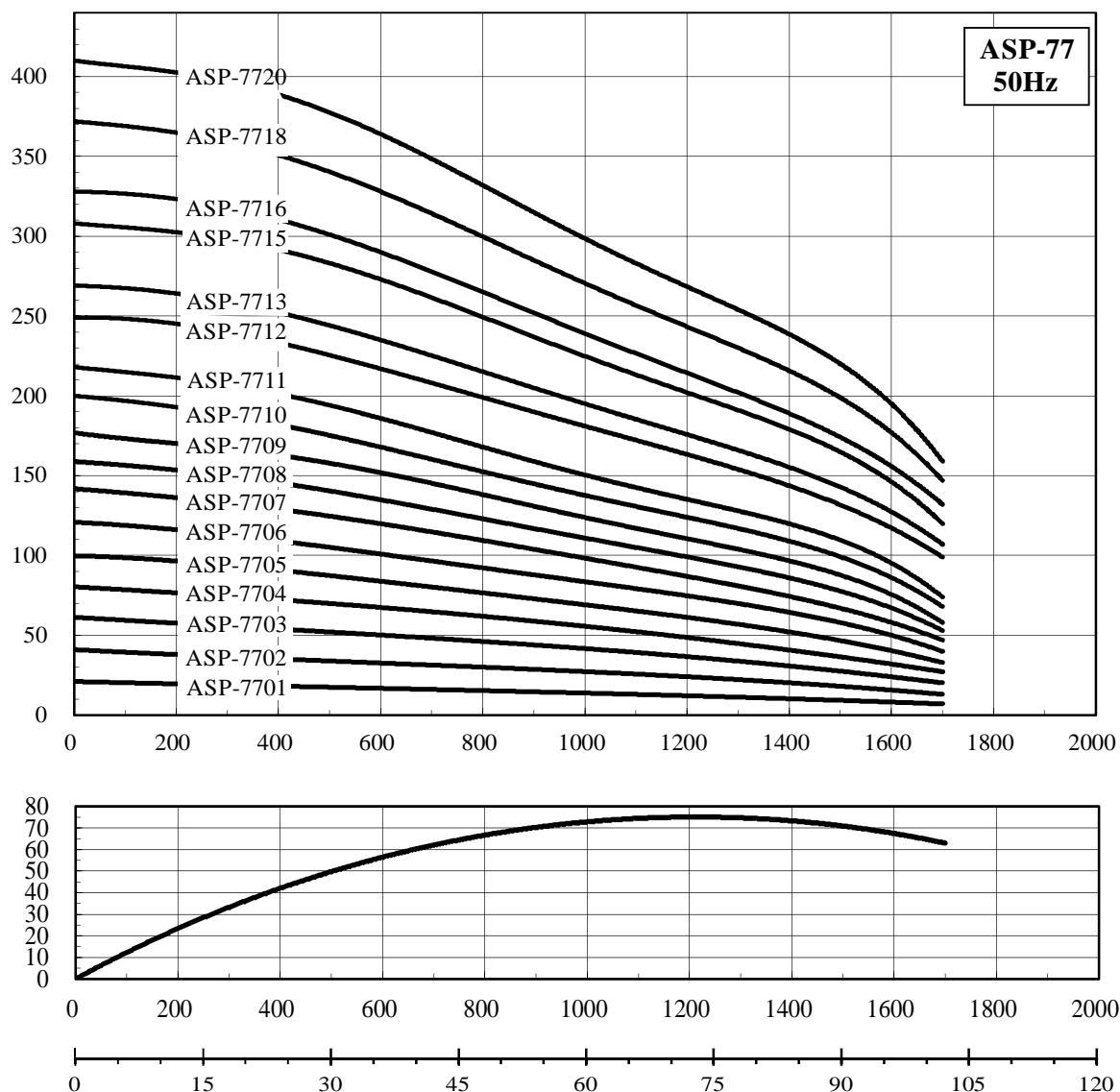
**ASP-60**


TYPE	Motor		TOTAL HEAD M	HEAD M	CAPACITY						Dimensions(mm)				Weight KG	
					M³/hr											
	HP	Kw			L/min						4"	132	152			
					0	18	27	42	60	78						
HEAD IN METERS																
ASP-6001	3	2.2	25	10	25	22	21	16	13	7						
ASP-6002	5	3.7	31	13	31	29	27	20	14	8				504	8,7	
ASP-6003	7.5	5.5	45	20	45	44	40	30	21	8				617	11	
ASP-6004	10	7.5	60	29	60	56	50	38	28	9				745	13,2	
ASP-6005	15	11	70	38	70	67	62	50	38	13				873	15,4	
ASP-6006	15	11	88	45	88	84	74	61	43	14				971	17,8	
ASP-6007	15	11	97	52	97	94	86	70	54	15				1084	20,1	
ASP-6008	20	15	117	58	117	107	95	81	62	16				1197	22,3	
ASP-6009	25	18,5	125	66	125	120	110	93	72	21				1314	24,6	
ASP-6010	25	18,5	140	74	140	135	125	102	78	30				1423	26,9	
ASP-6011	30	22	156	81	156	150	135	110	93	33				1536	29,2	
ASP-6012	30	22	174	88	174	162	145	115	103	40				1762	31,4	
ASP-6013	30	22	180	95	180	173	160	132	100	57				1649	33,7	
ASP-6014	30	22	194	102	194	188	175	142	109	63				1878	36	
ASP-6015	40	30	210	110	210	203	187	152	116	67				1988	38,2	
ASP-6016	40	30	222	118	222	216	200	162	123	72				2098	40,4	
ASP-6017	50	37	240	126	240	230	214	175	132	78				2208	42,6	
ASP-6018	50	37	255	134	255	243	226	190	141	83				2318	44,8	
ASP-6020	50	37	288	150	288	267	248	201	153	90				2538	49,2	

# Performance Curve

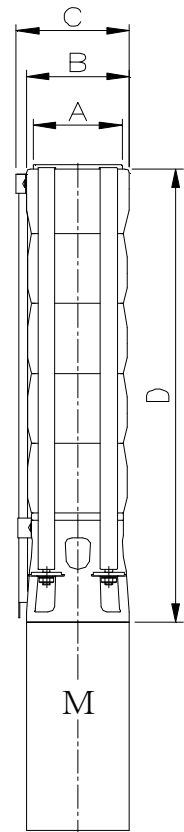
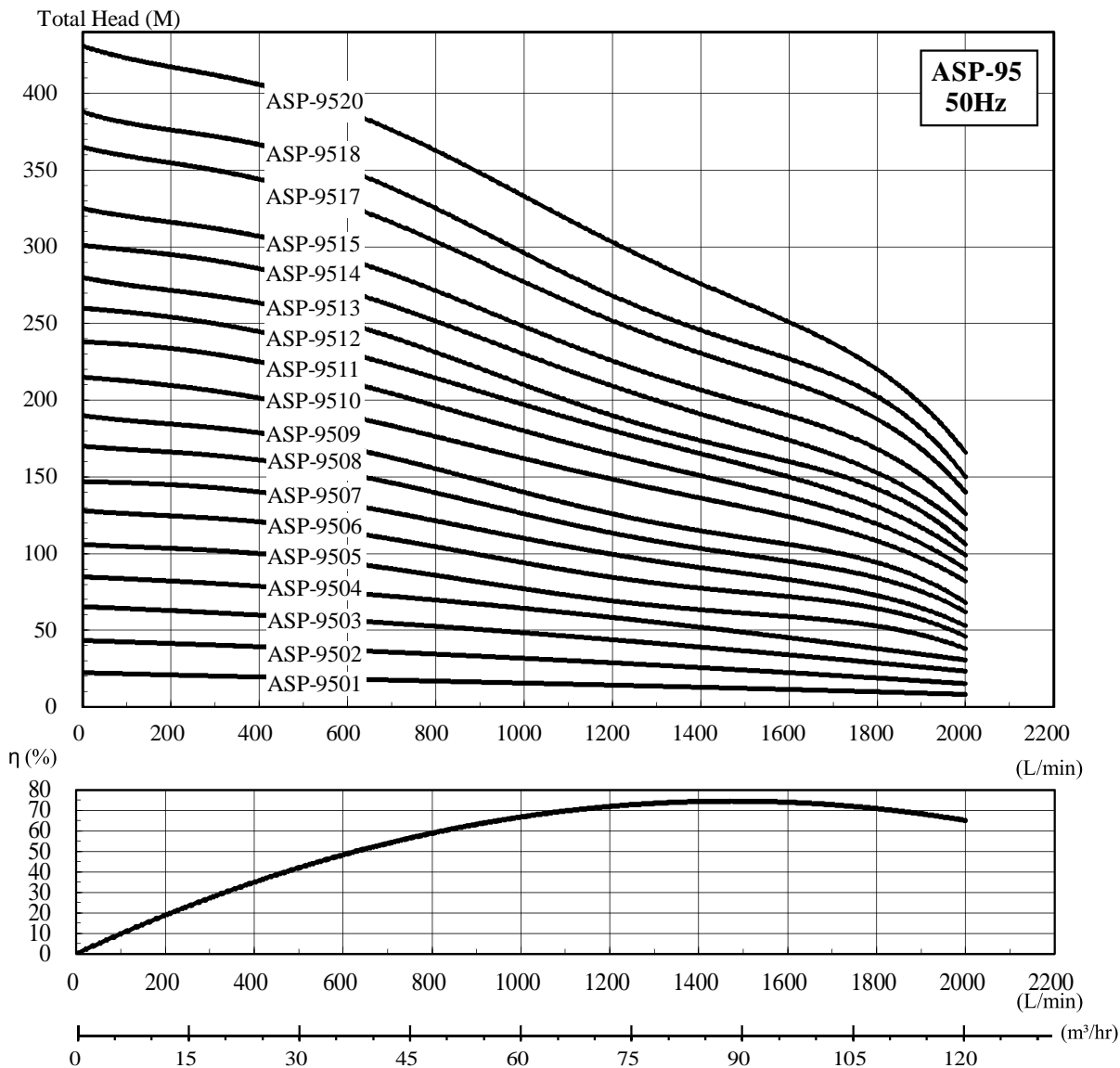
**ASP-77**

Total Head (M)



TYPE	Motor		TOTAL HEAD	HEAD	CAPACITY						Dimensions(mm)				Weight		
					M³/hr												
	HP	Kw			M	M	0	18	36	54	78	102	A	B	C	D	KG
							L/min										
HEAD IN METERS						0	300	600	900	1300	1700						
ASP-7701	7,5	5,5	21	12	21	19,5	17	14	12	7	5"	158	205	618	25,1		
ASP-7702	10	7,5	41	24	41	37	33	28	23	13				746	28,7		
ASP-7703	15	11	61	35	61	57	50	43	35	20				874	32,3		
ASP-7704	20	15	80	47	80	76	67	58	46	27				1003	35,9		
ASP-7705	25	18,5	100	60	100	94	84	73	57	33				1131	39,5		
ASP-7706	30	22	121	71	121	113	101	88	70	40				1259	43		
ASP-7707	30	22	142	82	142	133	120	104	81	47				1387	46,6		
ASP-7708	40	30	159	95	159	150	135	117	93	53				1515	50,2		
ASP-7709	40	30	177	107	177	167	152	131	104	58				1644	53,8		
ASP-7710	50	37	200	118	200	188	168	145	117	68				1772	57,4		
ASP-7711	50	37	218	123	218	207	186	159	128	74				1900	61		
ASP-7712	60	45	249	142	249	240	217	190	154	99				2039	66		
ASP-7713	75	55	269	159	269	259	235	205	166	107				2168	69,6		
ASP-7715	75	55	308	184	308	298	273	237	191	120				2424	76,8		
ASP-7716	85	63	328	199	328	318	290	252	202	132				2552	80,4		
ASP-7718	85	63	372	223	372	359	328	285	230	147				2809	87,6		
ASP-7720	100	75	410	243	410	397	364	315	254	159				3065	94,8		

# Performance Curve

**ASP-95**


TYPE	Motor		TOTAL HEAD	HEAD	CAPACITY						Dimensions(mm)				Weight
					M <sup>3</sup> /hr										
	HP	Kw	M	M	0	18	36	60	96	120	A	B	C	D	KG
					L/min										
HEAD IN METERS															
ASP-9501	7,5	5,5	22	12	22	21	18	15	12	8	5"	158	205	618	25,1
ASP-9502	12,5	9,3	43	24	43	41	37	31	23	15				746	28,7
ASP-9503	15	11	65	34	65	62	57	47	35	23				874	32,3
ASP-9504	25	18,5	84	48	84	82	75	62	47	30				1003	35,9
ASP-9505	30	22	106	58	106	102	94	77	59	38				1131	39,5
ASP-9506	40	30	128	71	128	123	114	94	72	46				1259	43
ASP-9507	40	30	147	84	147	143	132	110	83	53				1387	46,6
ASP-9508	50	37	170	92	170	164	152	126	95	62				1515	50,2
ASP-9509	50	37	190	105	190	182	169	140	106	68				1644	53,8
ASP-9510	60	45	215	119	215	206	190	162	124	82				1783	58,8
ASP-9511	75	55	238	136	238	230	212	180	137	90				1911	62,4
ASP-9512	75	55	260	146	260	250	231	197	150	99				2039	66
ASP-9513	75	55	280	155	280	268	250	210	160	106				2168	69,6
ASP-9514	85	63	301	170	301	291	271	230	174	116				2296	73,2
ASP-9515	100	75	325	184	325	312	292	248	190	126				2424	76,7
ASP-9517	100	75	365	204	365	350	327	277	212	140				2680	84
ASP-9518	125	93	388	218	388	372	350	296	227	150				2809	87,6
ASP-9520	125	93	431	238	431	412	388	333	251	166				3065	94,8

## Friction Loss - Equivalent Length (meter of Straight Pipe)

Fitting	Nominal Pipe Size (inches)												
	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	6	8	10	12
90° Elbow, long sweep radius	0.5	0.6	0.8	1.2	1.2	1.7	2.1	2.4	3.7	5.5	6.7	7.9	9.8
90° Elbow, standard sharp inside radius	1.1	1.4	1.6	2.0	2.3	2.6		3.4	4.0				
45° Elbow	0.2	0.3	0.4	0.5	0.6	0.8	0.9	1.2	1.6	2.4	3.2	4.1	4.7
Gatevalve	0.1	0.1	0.2	0.2	0.3	0.5	0.6	0.9					
Tee Flow - Run	0.3	0.4	0.5	0.7	0.8	1.3	1.6	1.9	2.5	3.8	5.0	5.3	6.1
Tee Flow - Branch	1.2	1.5	1.8	2.1	2.4	3.7	4.6	4.9	6.7	10.0	14.9	17.4	20.4
Male/Female Adapter	0.3	0.5	0.6	0.9	1.1	1.4	1.7	2.0	2.7	4.3			

## Friction Loss Table

Head Loss in mWC / 100 m Pipe Due to Friction (C = 150)

C = 150 for High Density Polyethylene Pipe (HDPE)

Flow			Fr Loss & Velocity	Pipe Diameter (Inch)													
GPM	M3/H	L/sec		½"	¾"	1"	1-¼"	1-½"	2"	2-½"	3"	4"	5"	6"	8"	10"	12"
0.5	0.1	0.0	Friction loss (m WC)	0.8	0.1												
		0.0	Velocity (m/s)	0.25	0.11	0.06											
1	0.2	0.1	Friction loss (m WC)	2.9	0.4	0.1											
		0.1	Velocity (m/s)	0.50	0.22	0.12	0.08										
2	0.5	0.1	Friction loss (m WC)	10.5	1.5	0.4	0.1										
		0.1	Velocity (m/s)	1.00	0.44	0.25	0.16										
3	0.7	0.2	Friction loss (m WC)	22.2	3.1	0.8	0.3	0.1									
		0.2	Velocity (m/s)	1.49	0.66	0.37	0.24	0.17									
4	0.9	0.3	Friction loss (m WC)	37.9	5.3	1.3	0.4	0.2									
		0.3	Velocity (m/s)	1.99	0.89	0.50	0.32	0.22									
5	1.1	0.3	Friction loss (m WC)	57.2	7.9	2.0	0.7	0.3	0.1								
		0.3	Velocity (m/s)	2.49	1.11	0.62	0.40	0.28	0.16								
10	2.3	0.6	Friction loss (m WC)		28.6	7.1	2.4	1.0	0.2	0.1							
		0.6	Velocity (m/s)		2.21	1.24	0.80	0.55	0.31	0.20							
15	3.4	0.9	Friction loss (m WC)		60.6	14.9	5.0	2.1	0.5	0.2	0.1						
		0.9	Velocity (m/s)		3.32	1.87	1.19	0.83	0.47	0.30	0.21						
20	4.5	1.3	Friction loss (m WC)			25.4	8.6	3.5	0.9	0.3	0.1						
		1.3	Velocity (m/s)			2.49	1.59	1.11	0.62	0.40	0.28						
30	6.8	1.9	Friction loss (m WC)				18.2	7.5	1.8	0.6	0.3	0.1					
		1.9	Velocity (m/s)				2.39	1.66	0.93	0.60	0.41	0.23					
40	9.1	2.5	Friction loss (m WC)				30.9	12.7	3.1	1.1	0.4	0.1					
		2.5	Velocity (m/s)				3.19	2.21	1.24	0.80	0.55	0.31					
50	11.4	3.2	Friction loss (m WC)				46.7	19.2	4.7	1.6	0.7	0.2	0.1				
		3.2	Velocity (m/s)				3.98	2.77	1.56	1.00	0.69	0.39	0.25				
60	13.6	3.8	Friction loss (m WC)				65.5	26.9	6.6	2.2	0.9	0.2	0.1				
		3.8	Velocity (m/s)				4.78	3.32	1.87	1.19	0.83	0.47	0.30				
70	15.9	4.4	Friction loss (m WC)					35.8	8.8	3.0	1.2	0.3	0.1				
		4.4	Velocity (m/s)					3.87	2.18	1.39	0.97	0.54	0.35				
80	18.2	5.0	Friction loss (m WC)					45.9	11.3	3.8	1.6	0.4	0.1	0.1			
		5.0	Velocity (m/s)					4.43	2.49	1.59	1.11	0.62	0.40	0.28			
90	20.4	5.7	Friction loss (m WC)						14.1	4.7	2.0	0.5	0.2	0.1			
		5.7	Velocity (m/s)						2.80	1.79	1.24	0.70	0.45	0.31			
100	22.7	6.3	Friction loss (m WC)						17.1	5.8	2.4	0.6	0.2	0.1			
		6.3	Velocity (m/s)						3.11	1.99	1.38	0.78	0.50	0.35			
150	34.1	9.5	Friction loss (m WC)						36.1	12.2	5.0	1.2	0.4	0.2			
		9.5	Velocity (m/s)						4.67	2.99	2.07	1.17	0.75	0.52			
200	45.4	12.6	Friction loss (m WC)						20.8	8.5	2.1	0.7	0.3	0.1			
		12.6	Velocity (m/s)						3.98	2.77	1.56	1.00	0.69	0.39			
250	56.8	15.8	Friction loss (m WC)						12.9	3.2	1.1	0.4	0.1				
		15.8	Velocity (m/s)						3.46	1.94	1.24	0.86	0.49				
300	68.1	18.9	Friction loss (m WC)						18.1	4.5	1.5	0.6	0.2	0.1			
		18.9	Velocity (m/s)						4.15	2.33	1.49	1.04	0.58	0.37			
400	90.8	25.2	Friction loss (m WC)						7.6	2.6	1.1	0.3	0.1				
		25.2	Velocity (m/s)						3.11	1.99	1.38	0.78	0.50				
500	113.6	31.5	Friction loss (m WC)						11.5	3.9	1.6	0.4	0.1	0.1			
		31.5	Velocity (m/s)						3.89	2.49	1.73	0.97	0.62	0.43			
600	136.3	37.9	Friction loss (m WC)							5.4	2.2	0.5	0.2	0.1			
		37.9	Velocity (m/s)							2.99	2.07	1.17	0.75	0.52			
700	159.0	44.2	Friction loss (m WC)							7.2	3.0	0.7	0.2	0.1			
		44.2	Velocity (m/s)							3.48	2.42	1.36	0.87	0.61			
800	181.7	50.5	Friction loss (m WC)							9.2	3.8	0.9	0.3	0.1			
		50.5	Velocity (m/s)							3.98	2.77	1.56	1.00	0.69			
900	204.4	56.8	Friction loss (m WC)							4.7	1.2	0.4	0.2				
		56.8	Velocity (m/s)							3.11	1.75	1.12	0.78				
1000	227.1	63.1	Friction loss (m WC)							5.7	1.4	0.5	0.2				
		63.1	Velocity (m/s)							3.46	1.94	1.24	0.86				
1200	272.5	75.7	Friction loss (m WC)							8.0	2.0	0.7	0.3				
		75.7	Velocity (m/s)							4.15	2.33	1.49	1.04				
1500	340.7	94.6	Friction loss (m WC)							12.1	3.0	1.0	0.4				
		94.6	Velocity (m/s)							5.19	2.92	1.87	1.30				
2000	454.2	126.2	Friction loss (m WC)								5.1	1.7	0.7				
		126.2	Velocity (m/s)								3.89	2.49	1.73				
3000	681.4	189.3	Friction loss (m WC)									3.6	1.5				
		189.3	Velocity (m/s)									3.73	2.59				

Notes:

1. Values shown above are used in the Hazen-Williams Equation for flow in pipes. Feet of head loss values shown in the tables were developed using the Hazen-Williams equation.

2. Feet of head loss values are subject to the following conditions:

- a) Pipes carrying clear water at approximately 60° F (15.6° C).
- b) Pipes are flowing full.

c) Velocities of water are generally less than 3 m/sec.

Note: HDPE is commonly sized by outside diameter. If in doubt, use the next smaller pipe size.



P u m p S o l u t i o n P r o v i d e r

