

KNB CORPORATION

2014

**Stainless Steel  
Impeller Borehole  
Pump - 60Hz**



# WS

combine the quality materials with superior hydraulic design. They work with great efficiency during periods of high demand – an efficiency which lasts even after years of operation.

## Product Features

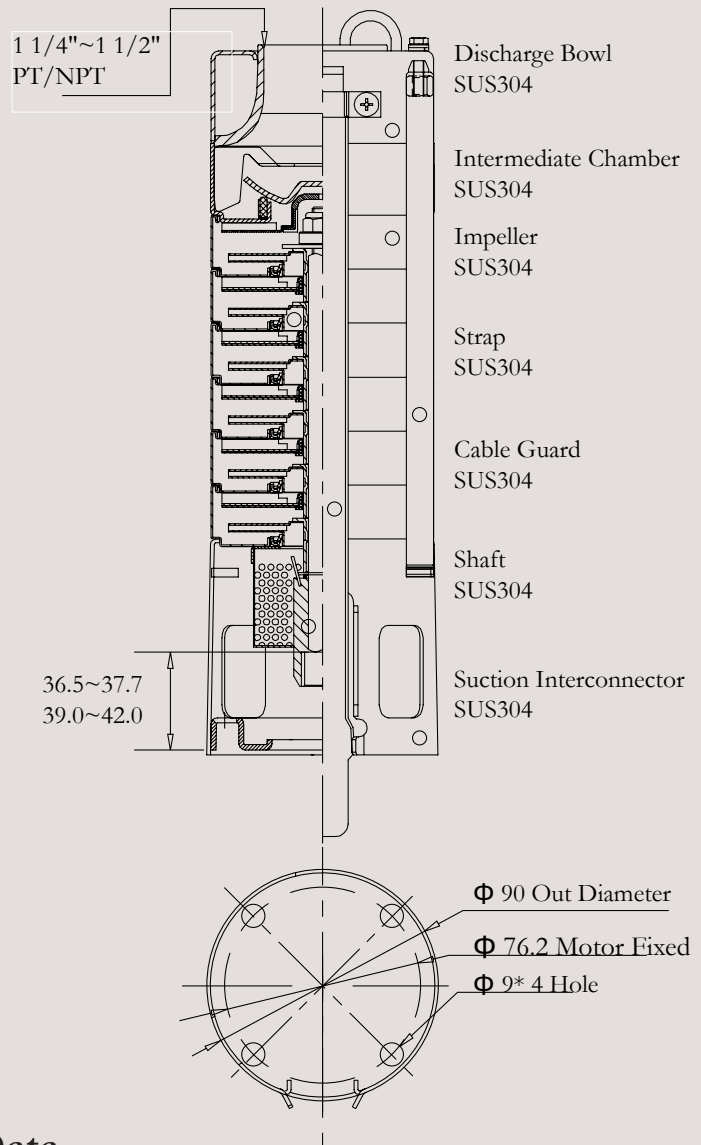
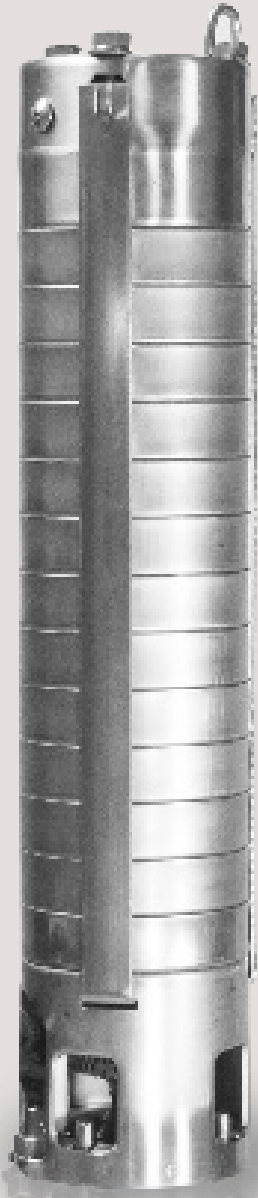
- 100% SUS 304 stainless steel made
- Superior hydraulics, reliability and pumping efficiency
- Longer lifetime
- Strong, stainless-steel quality
- Sand resistance

## Product Range

1. 4”stainless steel submersible borehole pump  
WS-01/02/03/05/08/14
2. 6”stainless steel submersible borehole pump  
WS-17/30/46/60
3. 8”stainless steel submersible borehole pump  
WS-77/95/
  - 50 Hz version:  
Capable of handling flows up to 60 m<sup>3</sup>/h - Head up to 300 m
  - 60 Hz version:  
Capable of handling flows up to 60 m<sup>3</sup>/h - Head up to 420 m



# WS-01/02/03/05 SERIES CONSTRUCTIONS/APPLICATIONS



## Technical Data

- Max. sand content: 50g/m<sup>3</sup>
- pH values: 6 to 8
- Liquid Temp. up to 35°C
- Material:
  1. Impellers/Diffusers - SUS 304
  2. Shaft -SUS304

## Applications

- Irrigation/ water supply
- Groundwater intake/ water supply
- Dewatering (pasturage, sump, pond, and mining drainage, etc.)
- Fountains
- Pressure boosting

**Top bearing with sand channel**  
Avoid shaft swing and sand damage while operating



**Ω- shape Hook**  
Non-welding method avoids material damaged

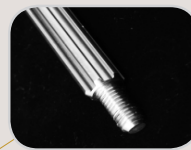
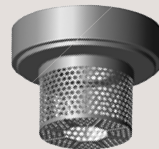


**260HV Strap**  
Intensity against pumping pressure

**N-shape design in diffuser**  
18kg water pressure resistance to prevent leakage



**R-angle suction interconnector inlet**  
200 kg tensile strength against outside impacts



**Flower-shape shaft**  
Robustness Leads superior hydraulics

**S-shape suction interconnector plate**  
900 kg tensile strength leads better sustainability



**Coupling with 35HRC Forged coupling** to avoid abrasion and perfectly fitted into different types of motors

**Sand flush vane**  
To prevent sand block

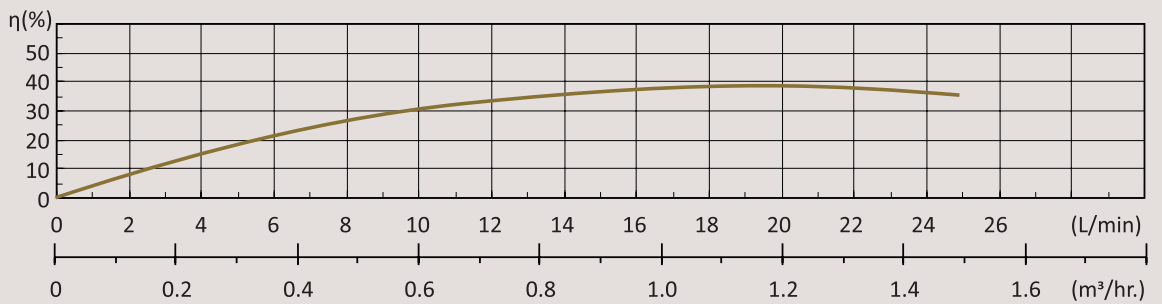
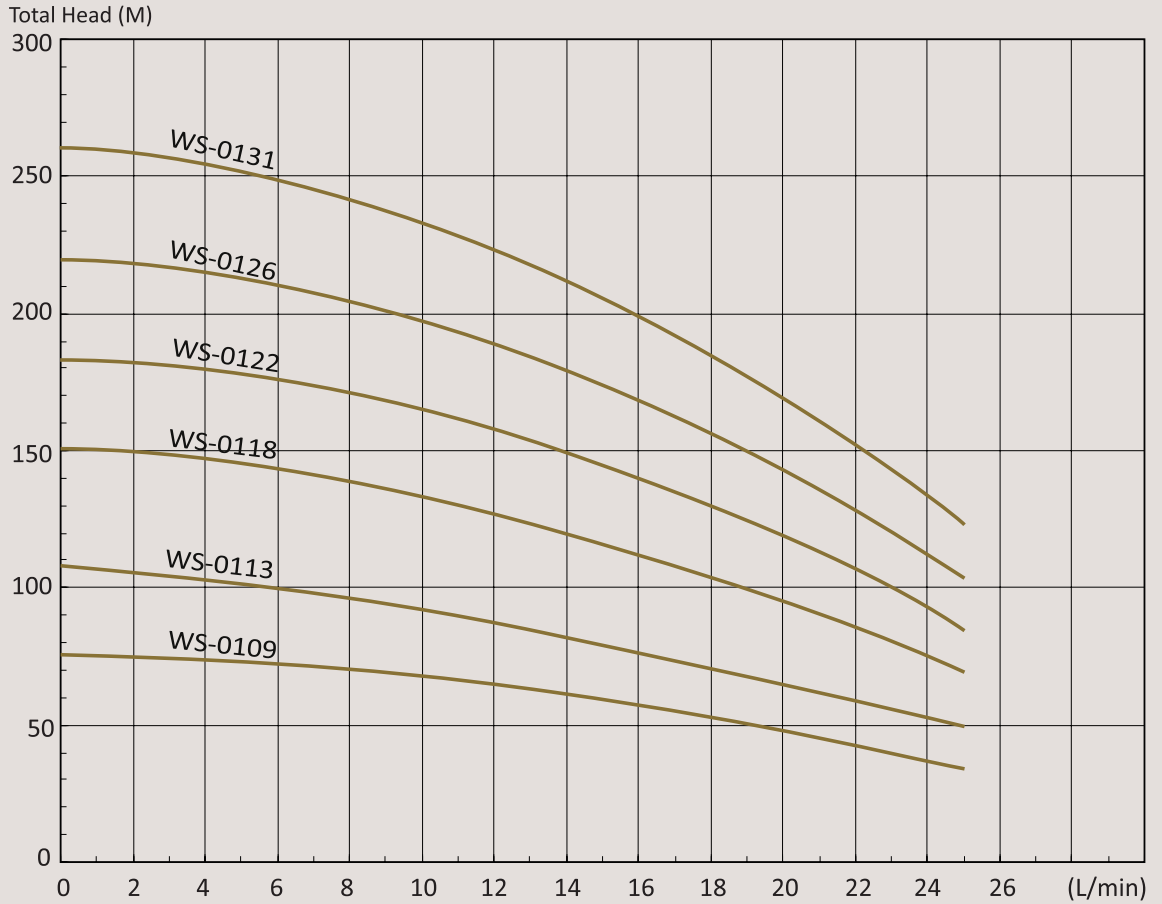
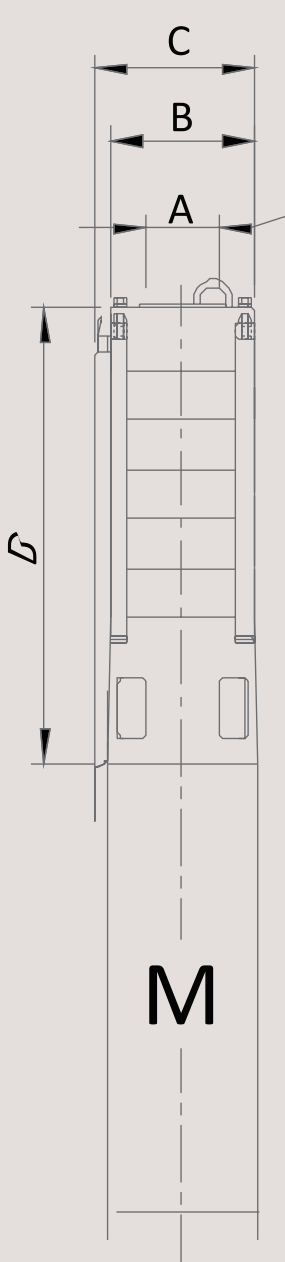


**WS-01/02/03/05 SERIES  
FEATURES**

# WS-01 series / 4 Inch / 60Hz

## Specifications & Performance Curve

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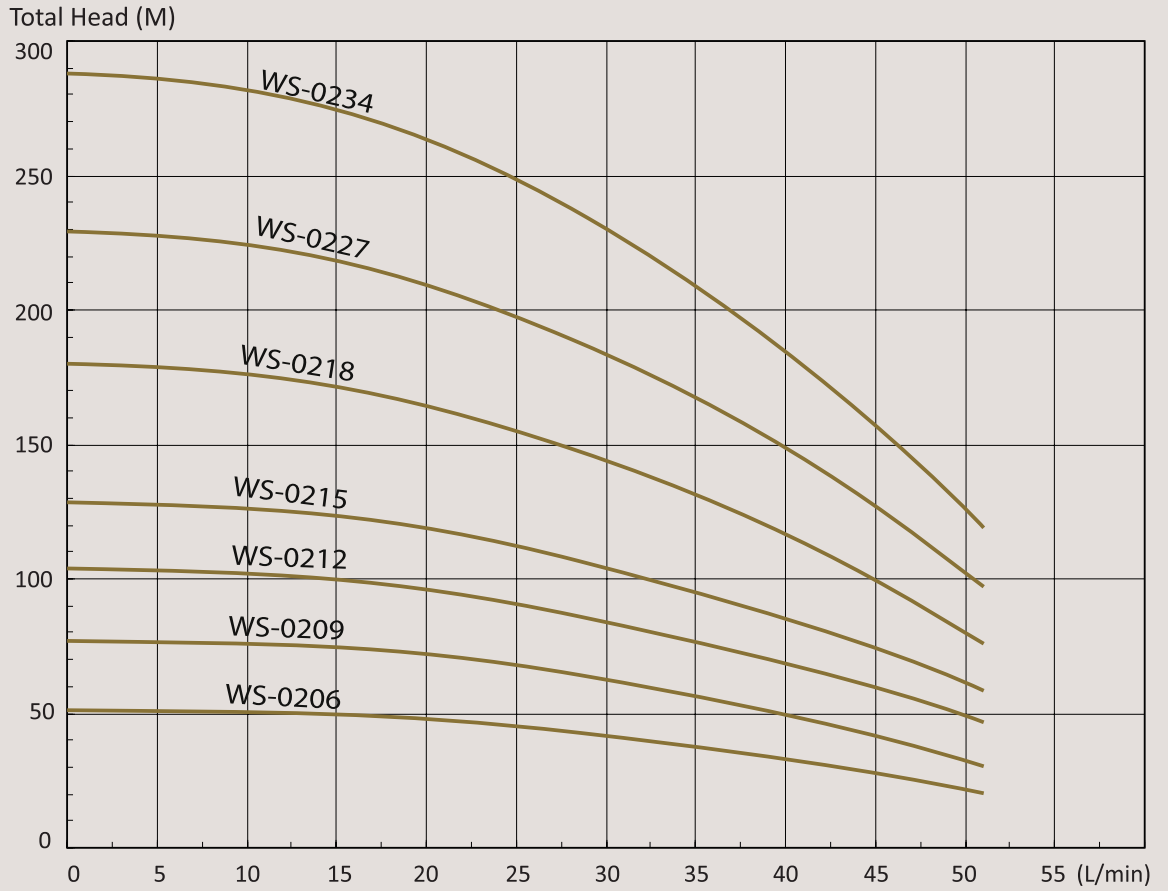
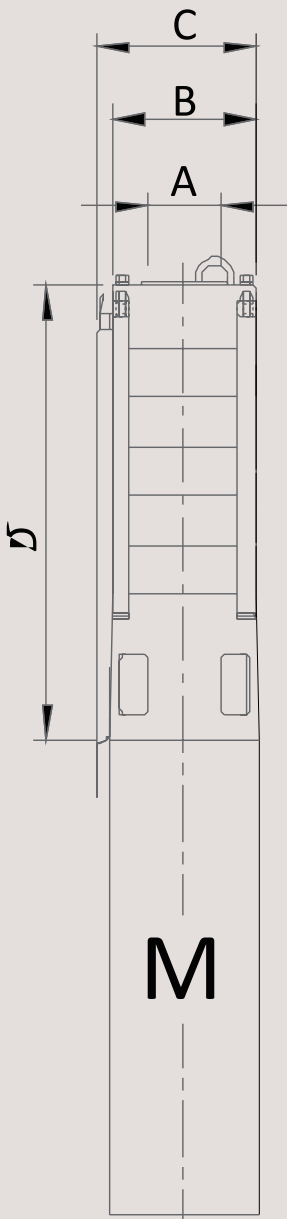
Efficiency

MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch		
	GPM	m³/hr	HP	kW		HEAD (m)	m³/hr	0	0.3	0.6	0.9		1.2	1.5
							GPM	0	1.3	2.6	4.0		5.3	6.6
WS-0109			0.5	0.37	9	76	72	68	59	48	34			
WS-0113			0.5	0.37	13	108	102	95	74	68	49			
WS-0118	5	1	1	0.75	18	151	144	133	117	96	69	1-1/4"		
WS-0122			1	0.75	22	183	177	165	145	117	85			
WS-0126			1.5	1.1	26	220	209	196	175	142	102			
WS-0131			1.5	1.1	31	260	249	233	205	167	122			

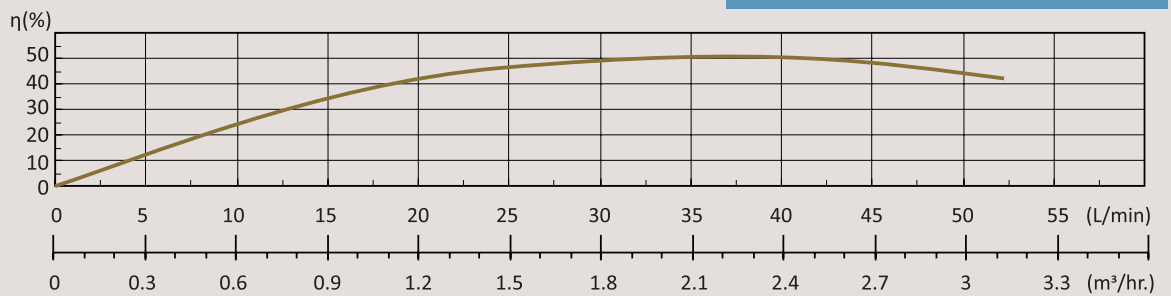
# WS-02 series / 4 Inch / 60Hz

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## Specifications & Performance Curve



### Efficiency

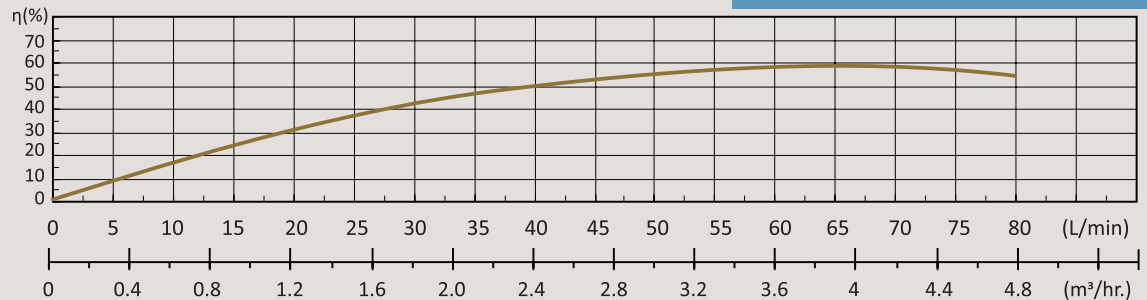
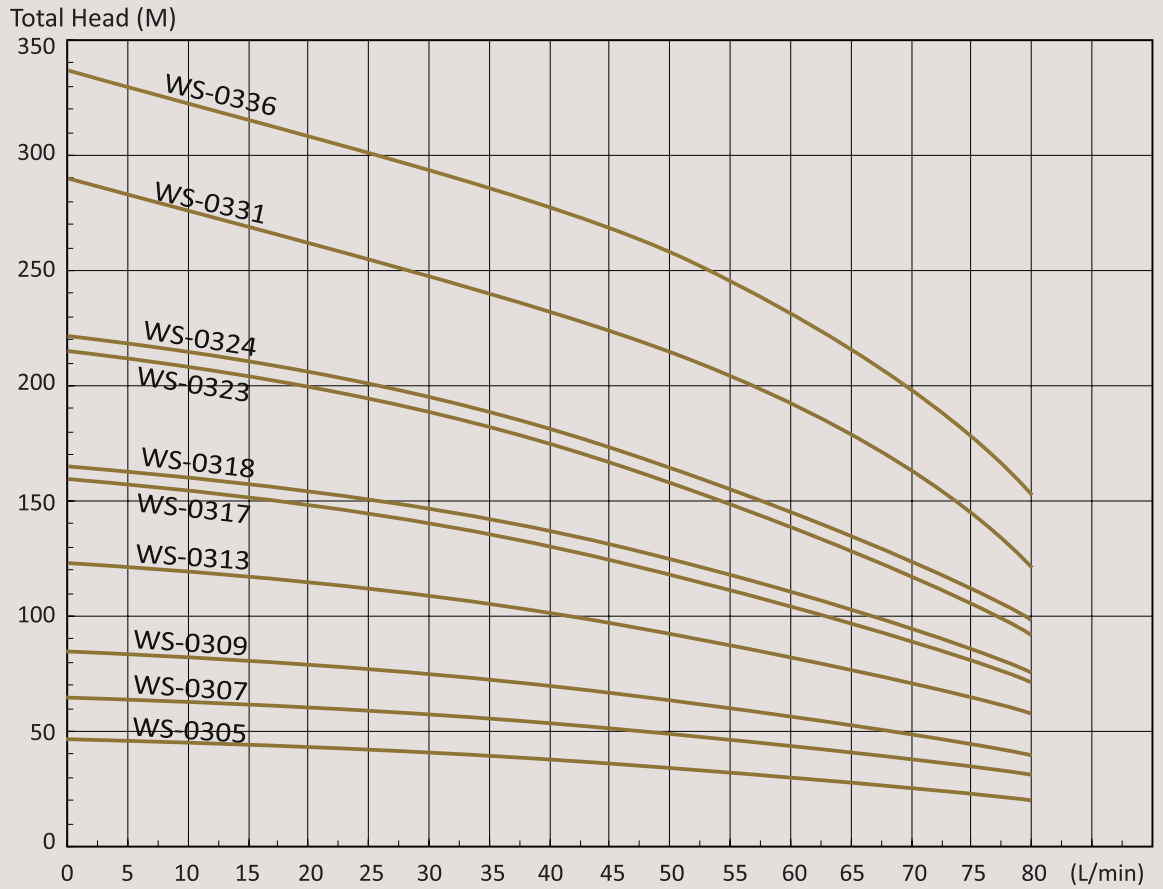
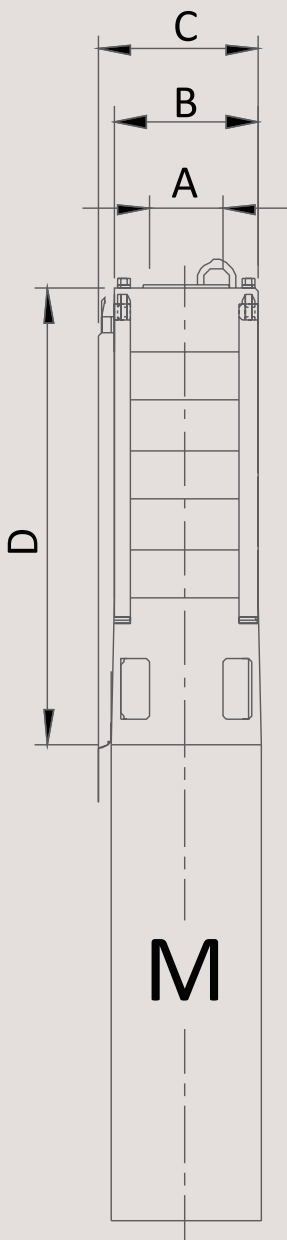


MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch		
	GPM	$m^3/hr$	HP	kW		$m^3/hr$	0	1.2	1.8	2.1	2.4		3.0	
							GPM	0	5.3	7.9	9.2		10.6	13.2
							LPM	0	20	30	35		40	50
WS-0206			0.5	0.37	6	51	46	40	37	33	22	1-1/4"		
WS-0209			0.5	0.37	9	77	69	61	56	50	33			
WS-0212			1.0	0.75	12	103	94	83	76	69	49			
WS-0215	10	2	1.0	0.75	15	128	115	102	95	85	61			
WS-0221			1.5	1.1	21	179	160	141	130	117	79			
WS-0227			2.0	1.5	27	229	201	180	166	148	101			
WS-0234			3.0	2.2	34	287	255	225	207	183	126			

# WS-03 series / 4 Inch / 60Hz

## Specifications & Performance Curve

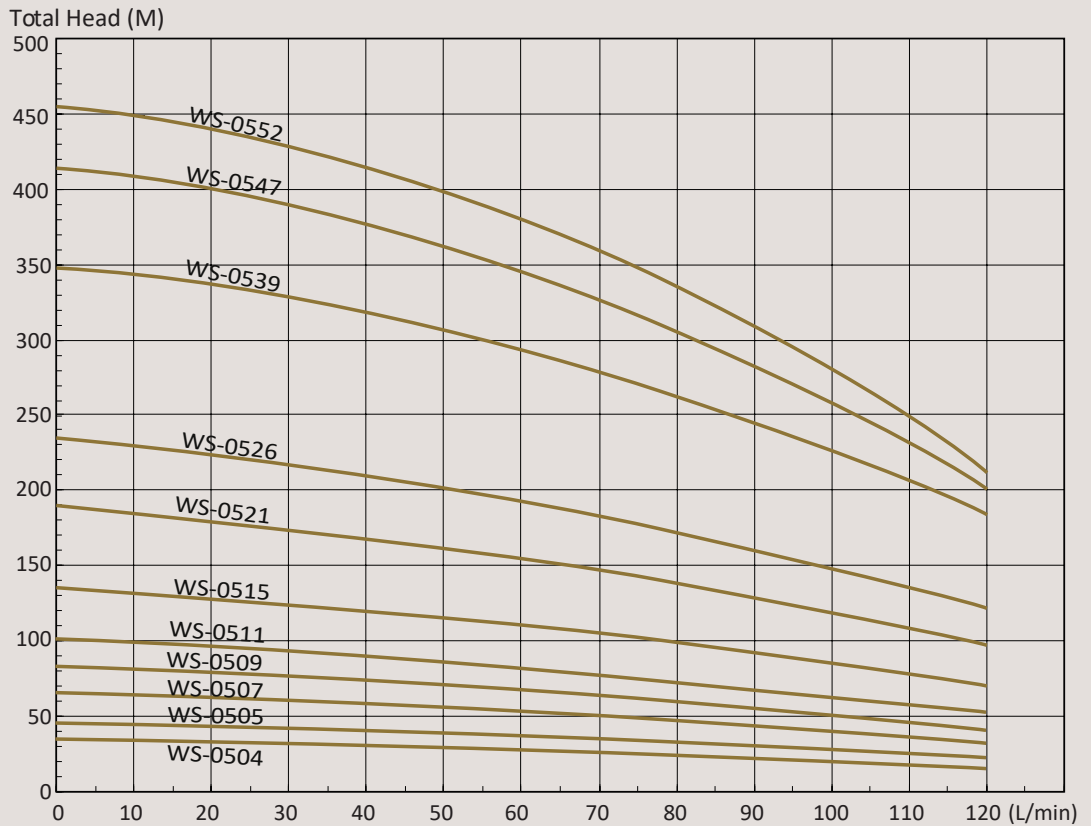
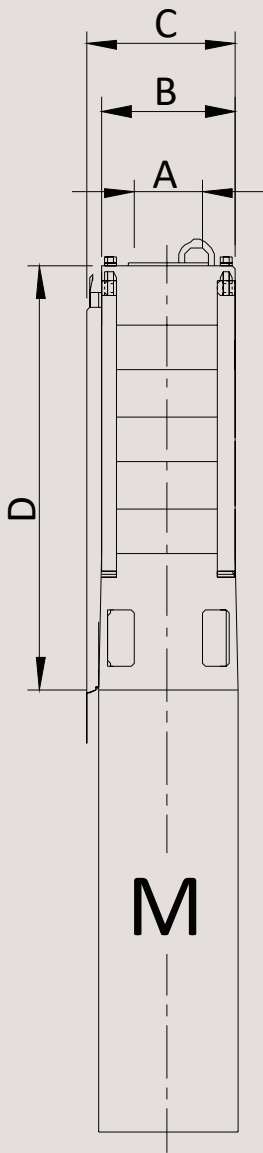
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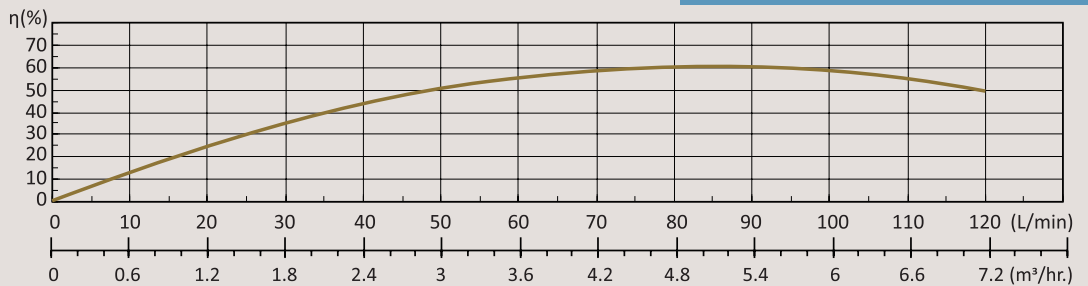
Efficiency

MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch		
	GPM	m³/hr	HP	kW		HEAD (m)	m³/hr	0	2.1	2.4	3.0		3.6	4.8
							GPM	0	9.2	10.6	13.2		15.9	21.1
WS-0305			0.5	0.37	5	47	39	38	36	31	20			
WS-0307			1	0.75	7	66	54	53	51	46	31			
WS-0309			1	0.75	9	85	71	70	65	58	39			
WS-0313			1.5	1.1	13	123	103	101	94	84	57			
WS-0317	18	3	2	1.5	17	160	133	129	120	108	70	1-1/4"		
WS-0318			2	1.5	18	165	140	137	125	112	75			
WS-0323			3	2.2	23	216	177	173	160	143	90			
WS-0324			3	2.2	24	222	185	180	165	153	95			
WS-0331			4	3	31	290	239	232	214	193	122			
WS-0336			5	3.7	36	337	285	277	256	230	152			



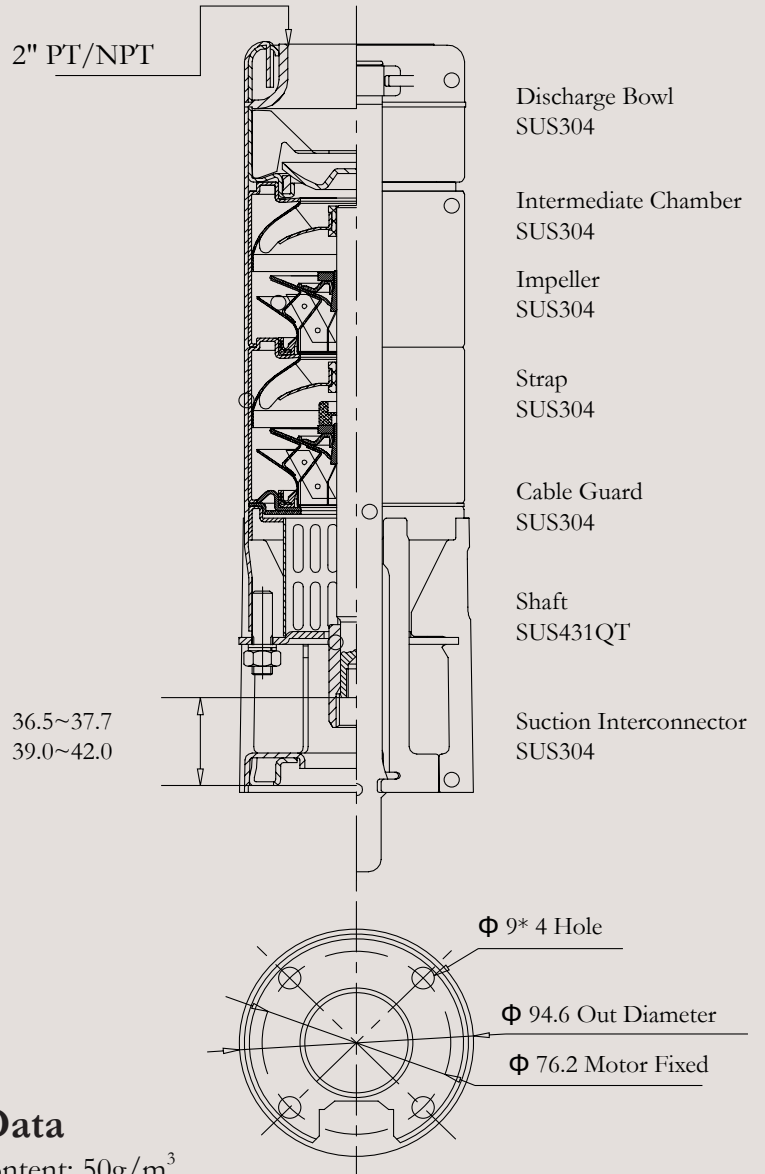


Efficiency



MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch	
	GPM	m <sup>3</sup> /hr	HP	kW		m <sup>3</sup> /hr	0	3.6	4.2	4.8	5.4		7.2
							GPM	0	15.9	18.5	21.1		23.8
						LPM	0	60	70	80	90	120	
WS-0504			0.5	0.37	3	HEAD (m)	36	30	28	26	24	17	1-1/2"
WS-0505			1	0.75	5		46	38	36	33	31	22	
WS-0507			1	0.75	7		64	52	49	46	42	30	
WS-0509			1.5	1.1	9		82	68	63	59	55	40	
WS-0511			2	1.5	11		100	83	79	73	69	51	
WS-0515	25	5	3	2.2	15		136	110	105	98	92	70	
WS-0521			4	3	21		190	153	146	137	128	97	
WS-0526			5	3.7	26		236	192	183	172	162	121	
WS-0539			7.5	5.5	39		348	290	278	262	246	183	
WS-0547			10	7.5	47		414	340	326	308	288	199	
WS-0552			10	7.5	52		456	375	356	337	314	209	

# WS-08/14 SERIES CONSTRUCTIONS/APPLICATIONS



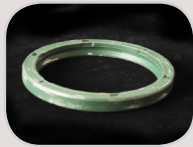
## Technical Data

- Max. sand content: 50g/m<sup>3</sup>
- pH values: 6 to 8
- Liquid Temp. up to 35°C
- Material:
  1. Impellers/Diffusers - SUS 304
  2. Shaft -SUS431 QT

## Applications

- Irrigation/ water supply
- Groundwater intake/ water supply
- Dewatering (pastorage, sump, pond, and mining drainage, etc.)
- Fountains
- Pressure boosting

**Neck ring with inner pressure coarctation**  
To prevent water back flow



**260HV Strap**  
Intensity against pumping pressure



**Impeller and guide vane with "straight-line" design**  
Increase pumping efficiency



**Round-shape shaft**  
Robustness leads superior hydraulics



**Coupling with 35HRC Forged coupling** to avoid abrasion and perfectly fitted into different types of motors

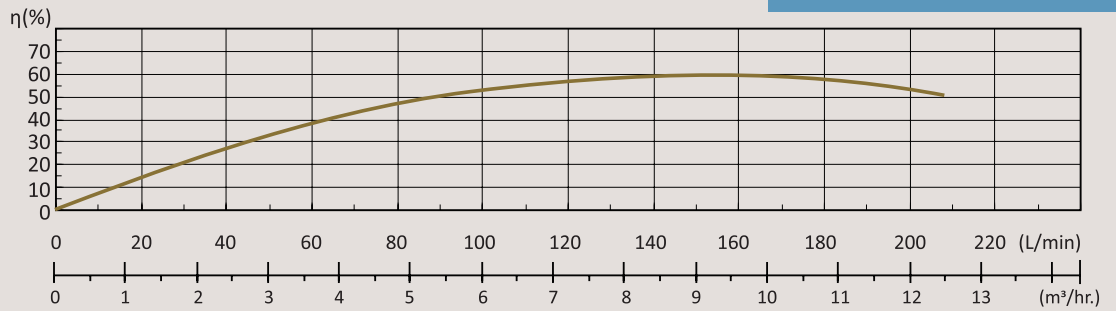
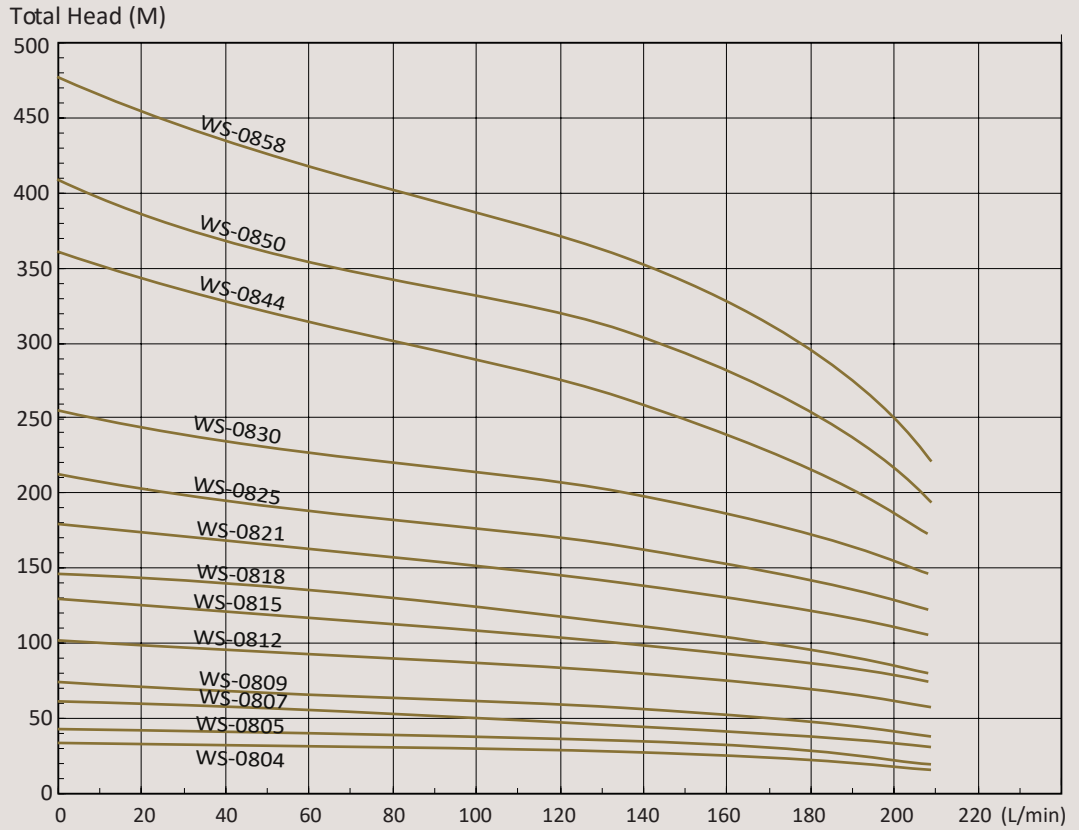
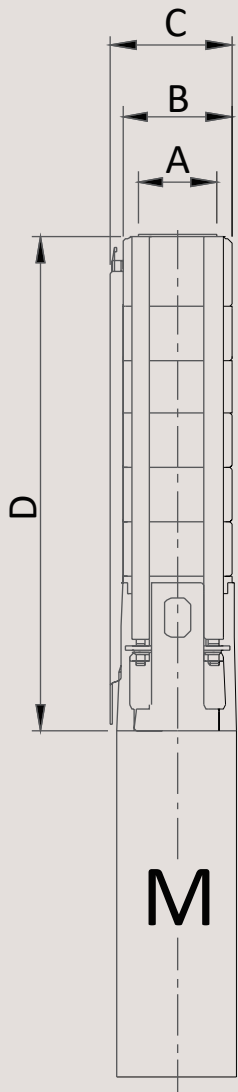


**WS-08/14 SERIES  
FEATURES**

# WS-08 series / 4 Inch / 60Hz

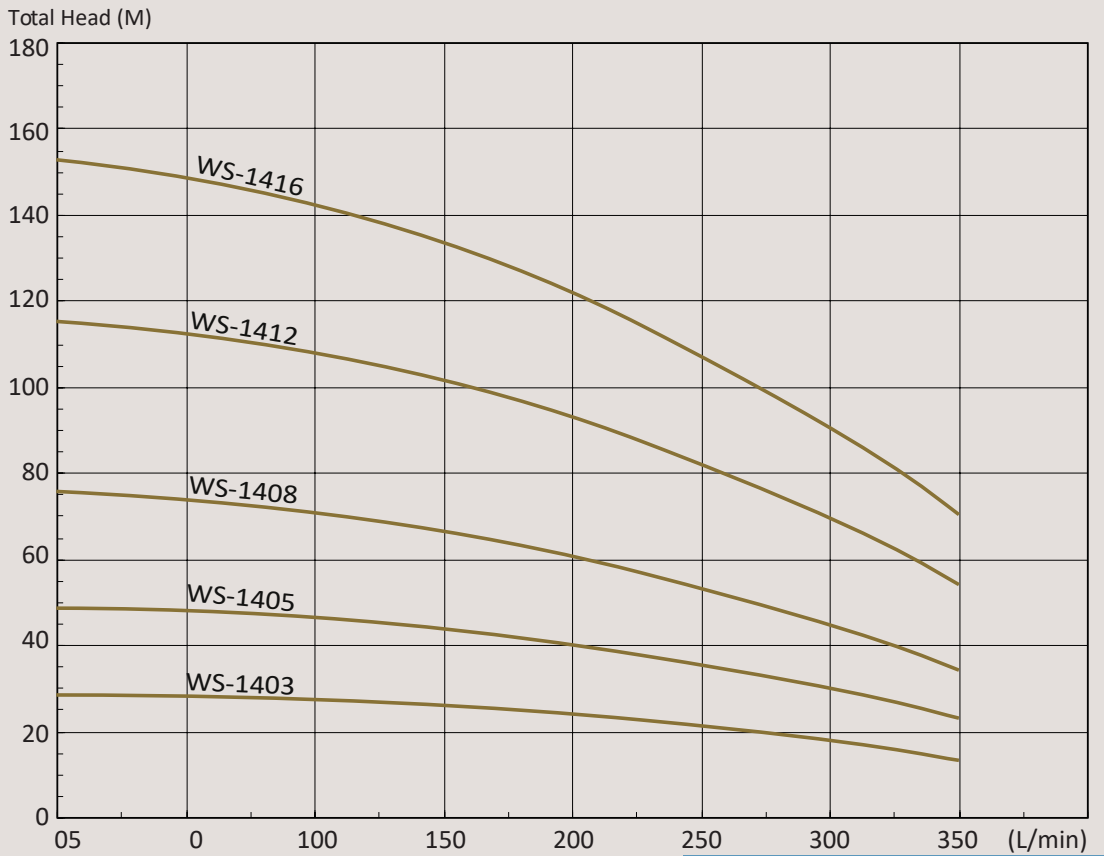
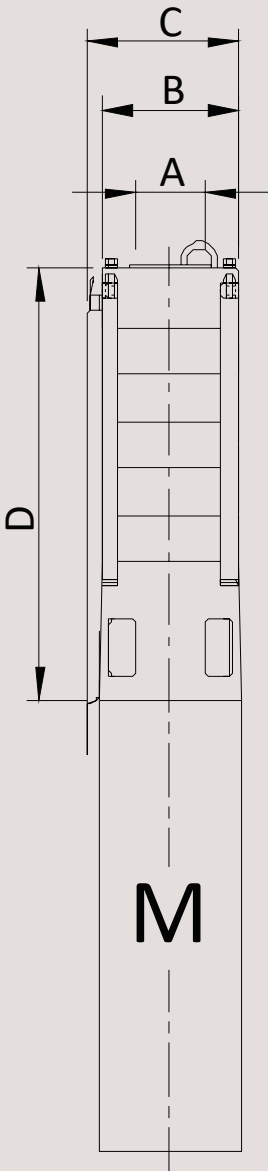
## Specifications & Performance Curve

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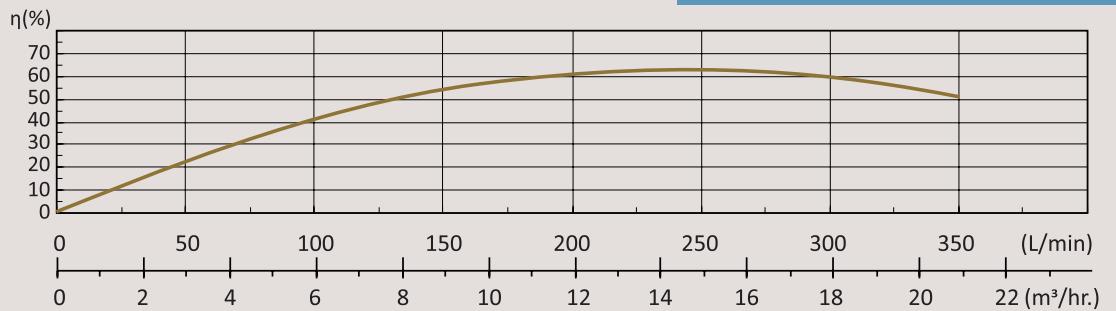


Efficiency

MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch	
	GPM	m <sup>3</sup> /hr	HP	kW		m <sup>3</sup> /hr	0	4.8	5.4	8.4	10.8		12.5
						GPM	0	21.1	23.8	37.0	40.0	55.0	
						LPM	0	80	90	140	180	208	
WS-0804			1	0.75	4	HEAD (m)	34	31	30	27	22	16	2"
WS-0805			1.5	1.1	5	43	39	38	34	27	20		
WS-0807			2	1.5	7	60	52	51	44	39	30		
WS-0809			3	2.2	9	77	64	62	57	49	40		
WS-0812			4	3	12	102	90	89	80	70	58		
WS-0815			5	3.7	15	129	112	110	99	88	75		
WS-0818	25	5	7.5	5.5	18	147	131	124	112	95	79.8		
WS-0821			7.5	5.5	21	179	157	153	138	121	105		
WS-0825			7.5	5.5	25	213	183	180	163	142	122		
WS-0830			10	7.5	30	255	220	217	197	171	145		
WS-0844			15	11	44	361	304	295	257	219	171		
WS-0850			18	13	50	409	344	337	304	252	197		
WS-0858			20	15	58	477	401	392	352	295	223		

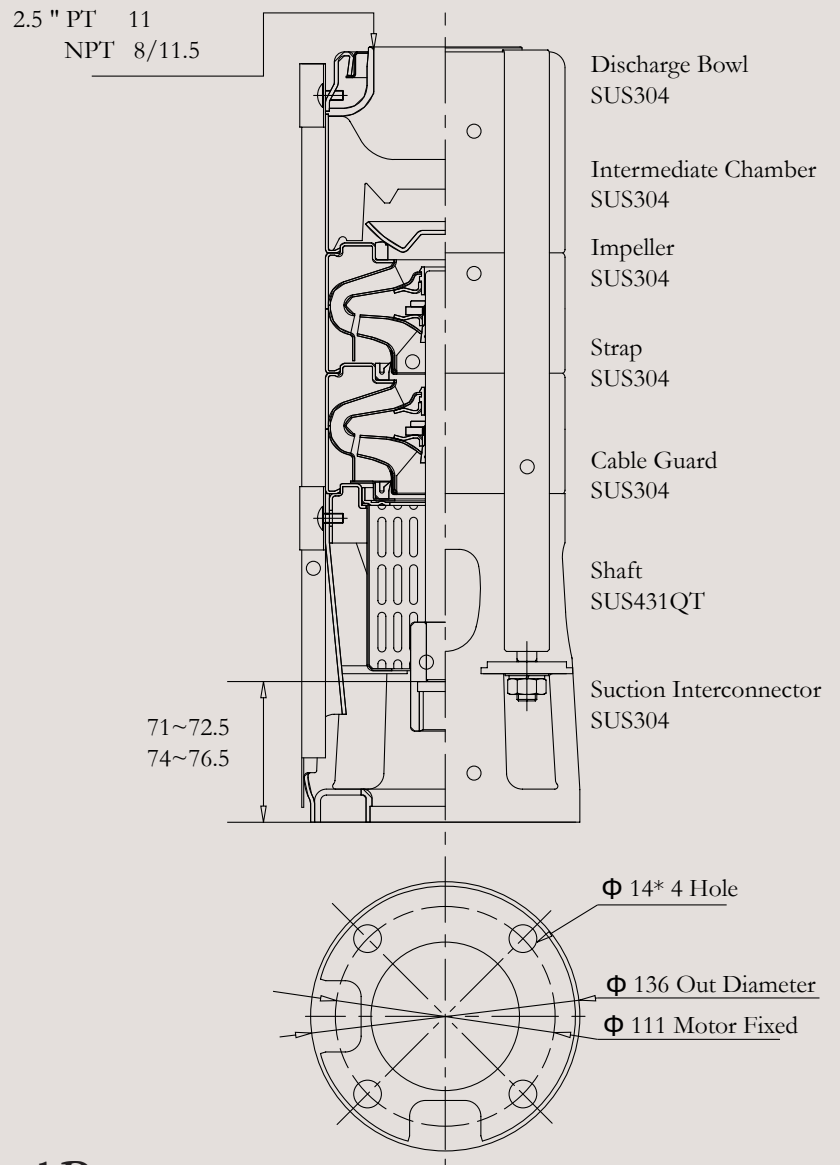
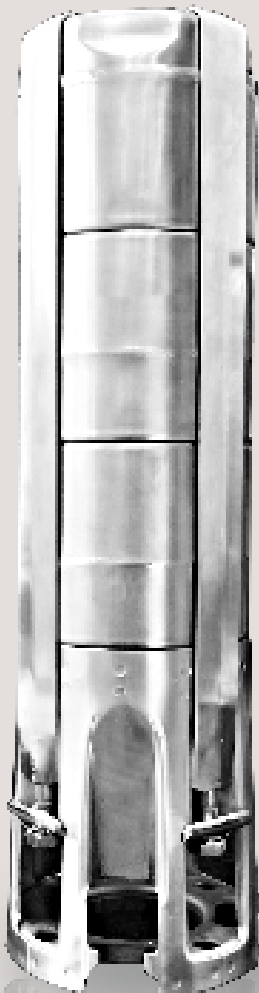


Efficiency



MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch	
	GPM	$m^3/hr$	HP	kW		$m^3/hr$	0	8.4	10.8	12	15		21
						GPM	0	37	48	53	66		92
						LPM	0	140	180	200	250		350
WS-1403			2	1.5	3	HEAD (m)	29	26	25	24	22	13	
WS-1405			3	2.2	5	48	41	40	39	37	21		
WS-1408	75	14	5	3.7	8	77	65	63	62	57	34	2"	
WS-1412			7.5	5.5	12	115	100	96	93	84	52		
WS-1416			10	7.5	16	154	131	126	123	112	69		

# WS-17/30 SERIES CONSTRUCTIONS/APPLICATIONS

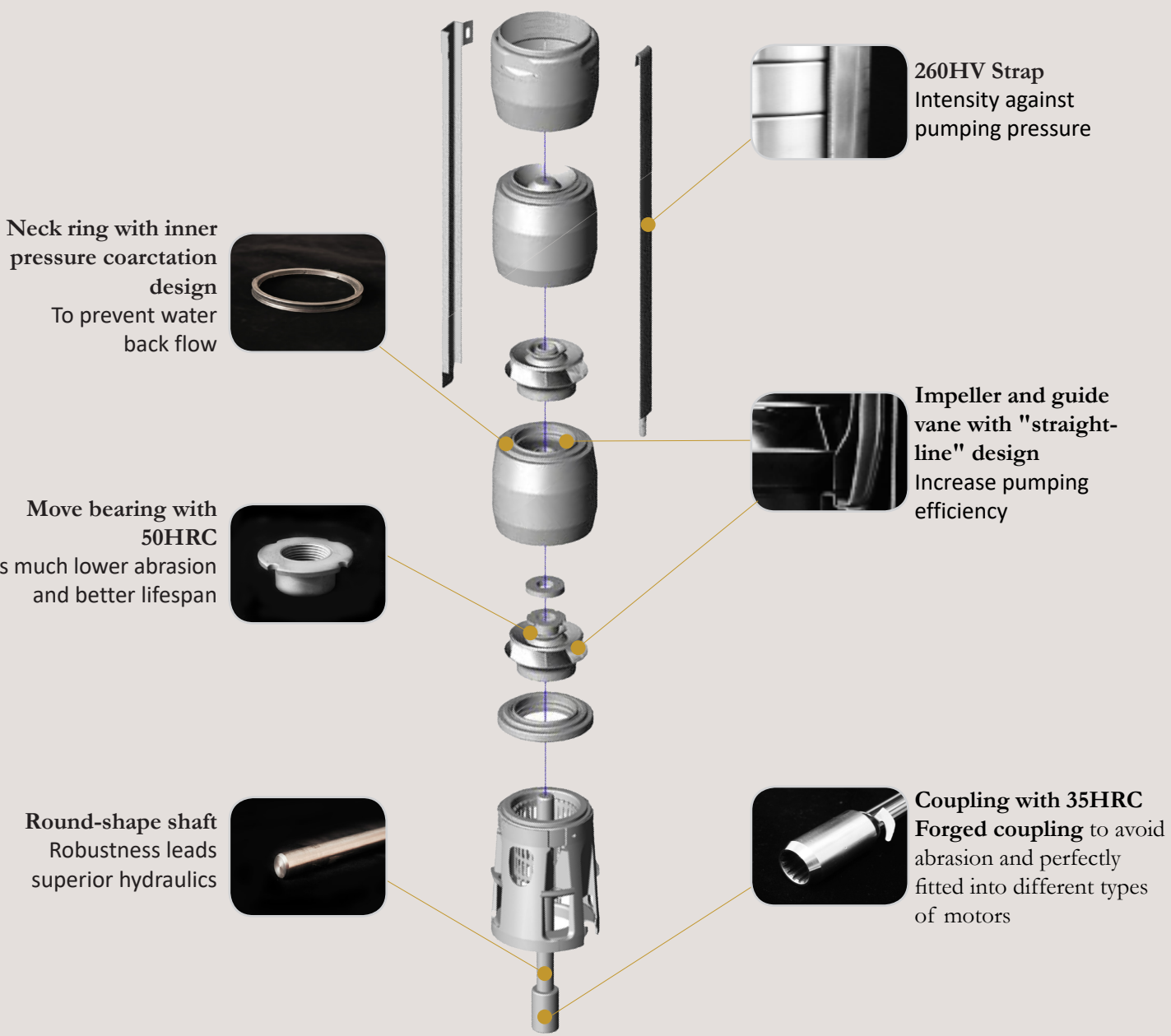


## Technical Data

- Max. sand content: 50g/m<sup>3</sup>
- pH values: 6 to 8
- Liquid Temp. up to 35°C
- Material:
  1. Impellers/Diffusers - SUS 304
  2. Shaft -SUS431 QT

## Applications

- Irrigation/ water supply
- Groundwater intake/ water supply
- Dewatering (pastorage, sump, pond, and mining drainage, etc.)
- Fountains
- Pressure boosting

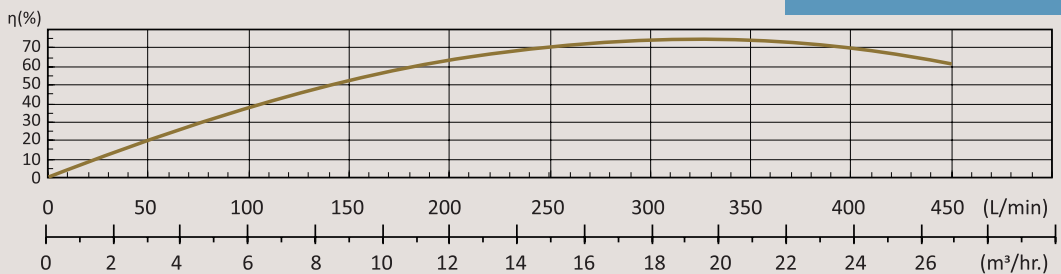
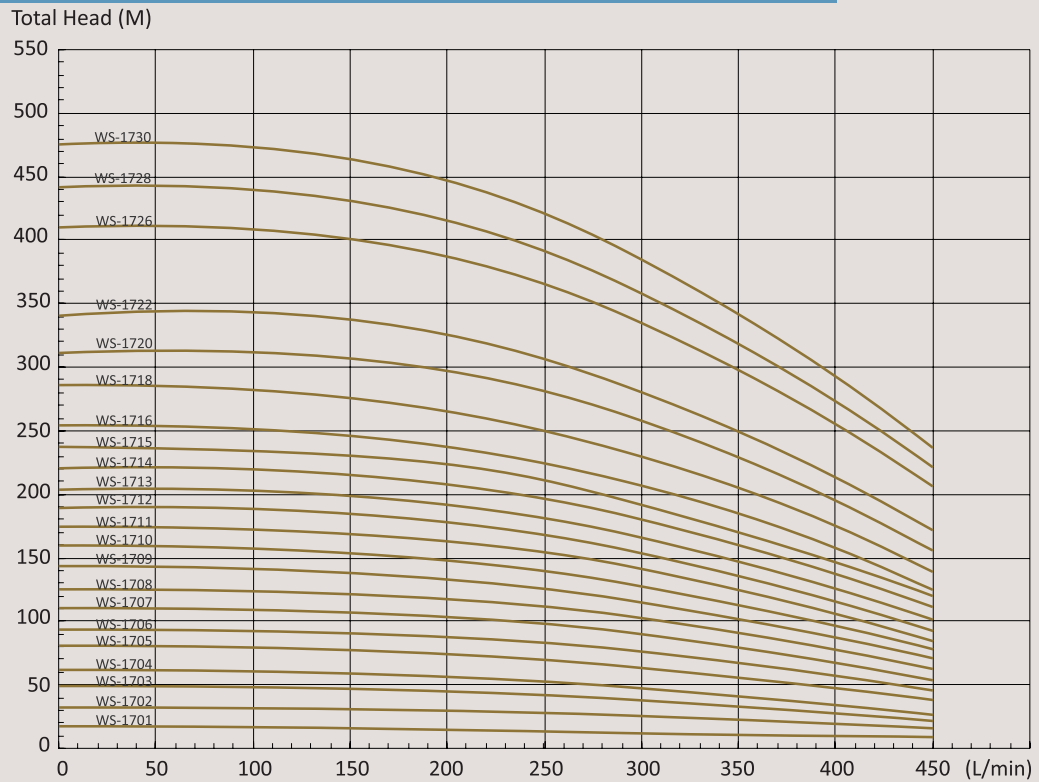
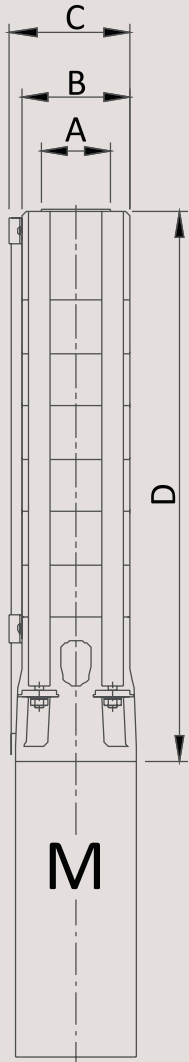


**WS-17/30 SERIES  
FEATURES**

# WS-17 series / 6 Inch / 60Hz

## Specifications & Performance Curve

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Efficiency

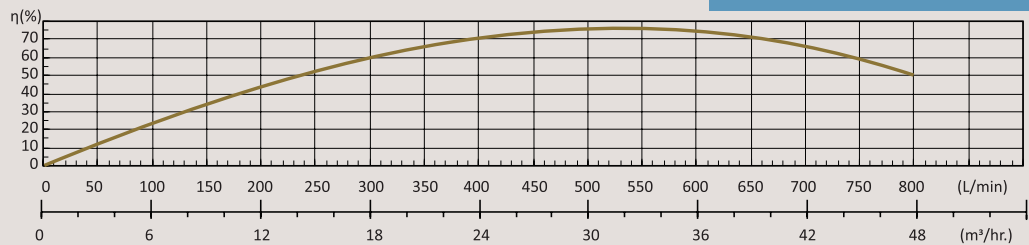
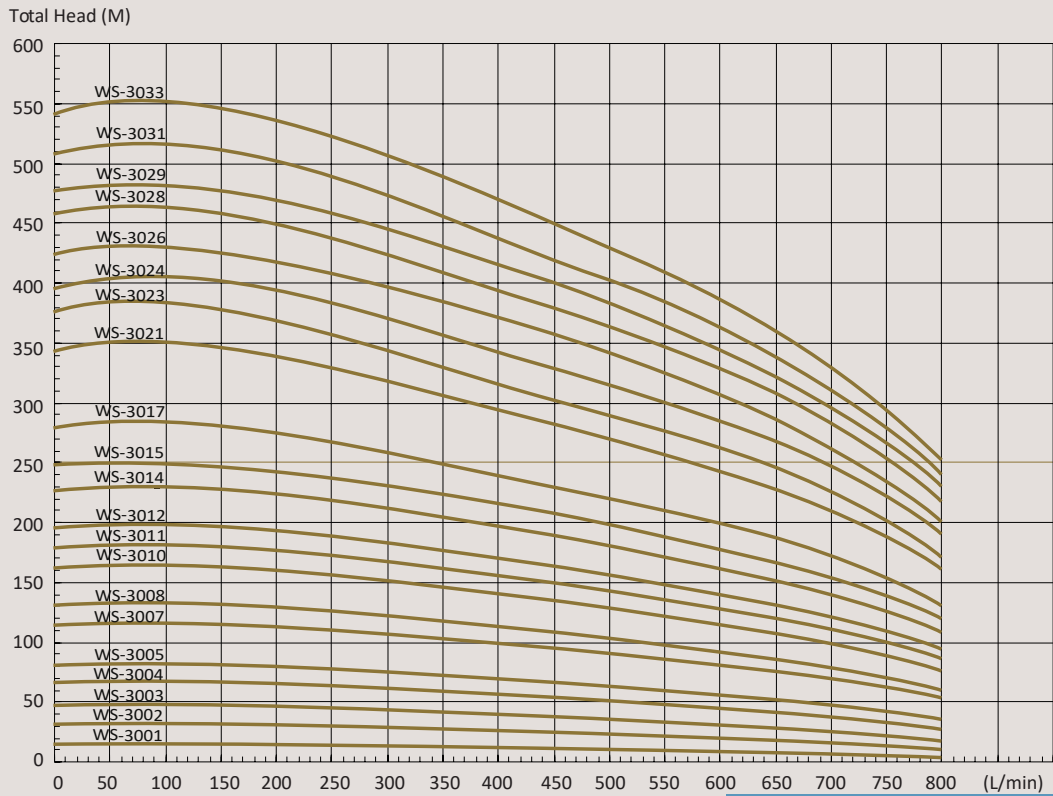
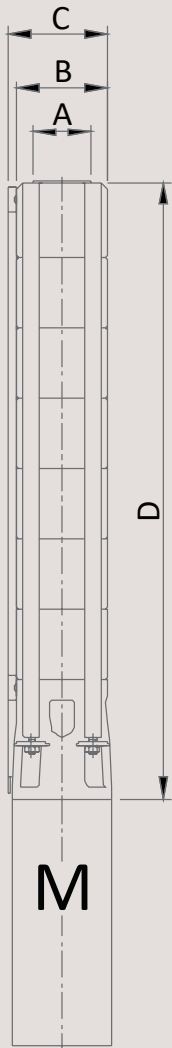
MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch	
	GPM	m <sup>3</sup> /hr	HP	kW		m <sup>3</sup> /hr	0	12	15	18	21		27
							GPM	0	53	66	79		92
						LPM	0	200	250	300	350	450	
WS-1701			1.5	1.1	1		18	14	13	12	11	8	
WS-1702			3	2.2	2		32	29	28	25	23	16	
WS-1703			4	3	3		48	44	41	38	33	22	
WS-1704			5	3.7	4		63	58	55	50	45	28	
WS-1705			7.5	5.5	5		80	75	70	63	57	37	
WS-1706			7.5	5.5	6		93	88	83	76	68	46	
WS-1707			10	7.5	7		110	103	98	89	79	53	
WS-1708			10	7.5	8		125	118	112	102	91	62	
WS-1709			10	7.5	9		142	133	125	115	102	70	
WS-1710			12.5	9.3	10		158	148	140	128	115	78	
WS-1711	85	17	12.5	9.3	11	HEAD (m)	173	162	153	140	125	84	2 1/2"
WS-1712			15	11	12		189	177	167	154	138	93	
WS-1713			15	11	13		204	190	179	165	147	100	
WS-1714			17.5	13	14		220	208	195	179	160	110	
WS-1715			17.5	13	15		237	223	210	192	170	119	
WS-1716			20	15	16		254	237	224	206	184	126	
WS-1718			20	15	18		284	266	250	230	205	140	
WS-1720			25	18.5	20		312	297	280	258	229	155	
WS-1722			25	18.5	22		343	325	308	282	254	170	
WS-1726			30	22	26		410	386	365	336	298	205	
WS-1728	35	26	28	443	415	392	360	320	220				
WS-1730	35	26	30	475	446	420	385	343	236				



# WS-30 series / 6 Inch / 60Hz

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## Specifications & Performance Curve



Efficiency

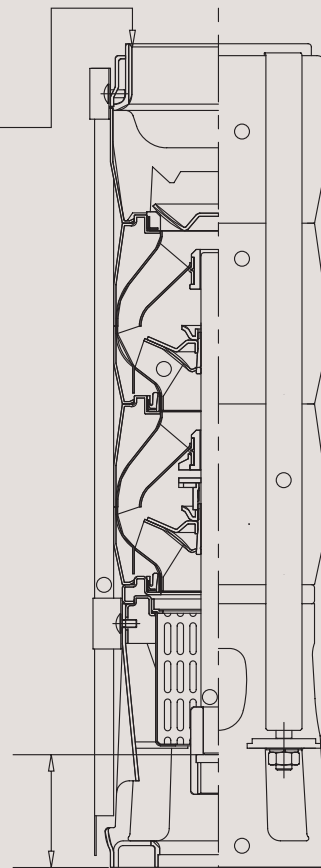
MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch	
	GPM	m³/hr	HP	kW		m³/hr	0	18	27	30	39		48
WS-3001			2	1.5	1	18	15	13	12	9	5		
WS-3002			4	3	2	32	29	26	24	20	13		
WS-3003			6	4	3	48	45	38	36	29	18		
WS-3004			7.5	5.5	4	67	59	53	50	41	28		
WS-3005			10	7.5	5	80	75	67	64	53	36		
WS-3007			12.5	9.3	7	115	106	94	91	77	55		
WS-3008			15	11	8	130	121	108	104	87	61		
WS-3010			17.5	13	10	163	152	136	130	110	77		
WS-3011			20	15	11	180	167	148	143	120	86		
WS-3012			25	18.5	12	197	184	166	158	133	95		
WS-3014	150	30	25	18.5	14	HEAD (m)	227	210	189	183	156	107	3"
WS-3015			30	22	15	247	230	207	198	167	120		
WS-3017			30	22	17	278	256	227	219	187	130		
WS-3021			40	30	21	342	318	280	269	227	162		
WS-3023			40	30	23	378	346	305	292	248	175		
WS-3024			50	37	24	396	370	328	315	267	190		
WS-3026			50	37	26	425	396	356	341	286	200		
WS-3028			50	37	28	458	424	377	363	306	218		
WS-3029			60	45	29	478	445	399	383	322	230		
WS-3031			60	45	31	508	472	420	403	340	240		
WS-3033			60	45	33	540	505	449	429	360	250		

# WS-46/60 SERIES CONSTRUCTIONS/APPLICATIONS



3/4" PT 11  
NPT 8/11.5

71~72.5  
74~76.5



Discharge Bowl  
SUS304

Intermediate Chamber  
SUS304

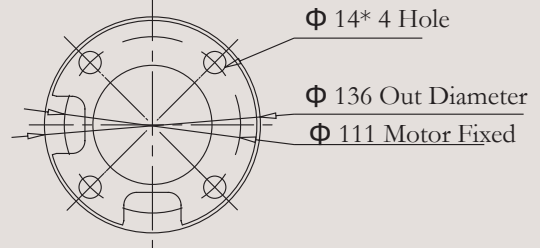
Impeller  
SUS304

Strap  
SUS304

Cable Guard  
SUS304

Shaft  
SUS431QT

Suction Interconnector  
SUS304



## Technical Data

- Max. sand content: 50g/m<sup>3</sup>
- pH values: 6 to 8
- Liquid Temp. up to 35°C
- Material:
  1. Impellers/Diffusers - SUS 304
  2. Shaft -SUS431 QT

## Applications

- Irrigation/ water supply
- Groundwater intake/ water supply
- Dewatering (pasturage, sump, pond, and mining drainage, etc.)
- Fountains
- Pressure boosting

Neck ring with inner pressure coarctation design  
To prevent water back flow

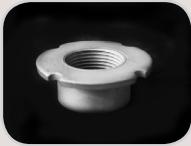


260HV Strap  
Intensity against pumping pressure



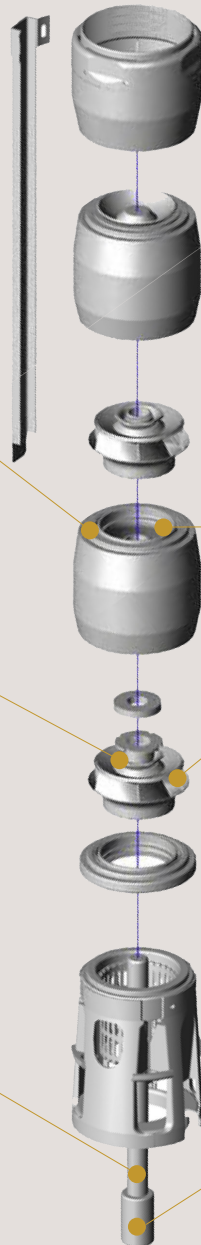
Impeller and guide vane with "straight-line" design  
Increase pumping efficiency

Move bearing with 50HRC  
Leads much lower abrasion and better lifespan



Coupling with 35HRC Forged coupling to avoid abrasion and perfectly fitted into different types of motors

Round-shape shaft  
Robustness leads superior hydraulics

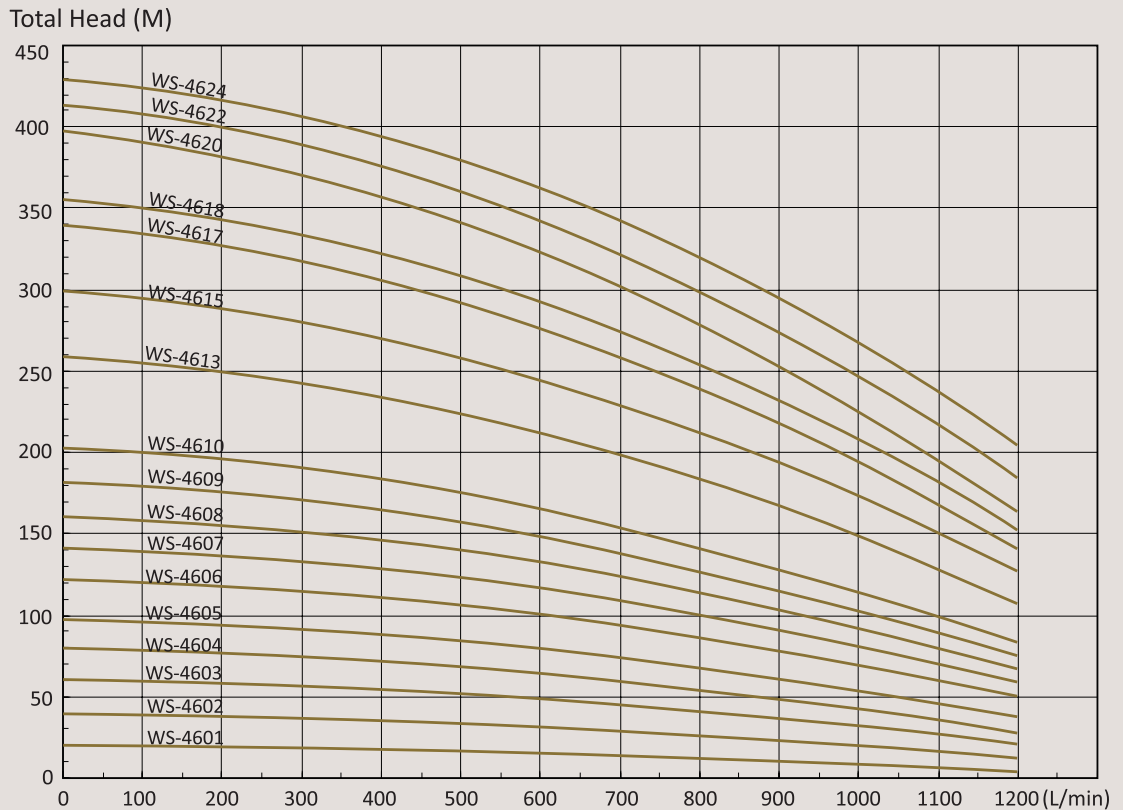
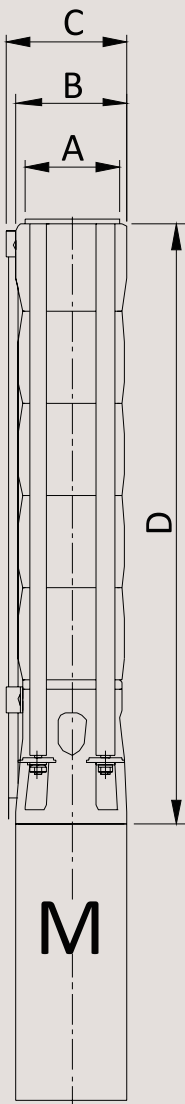


WS-46/60 SERIES  
FEATURES

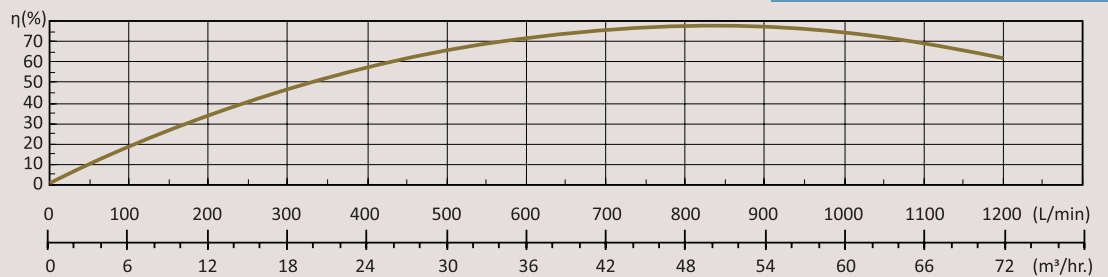
# WS-46 series / 6 Inch / 60Hz

## Specifications & Performance Curve

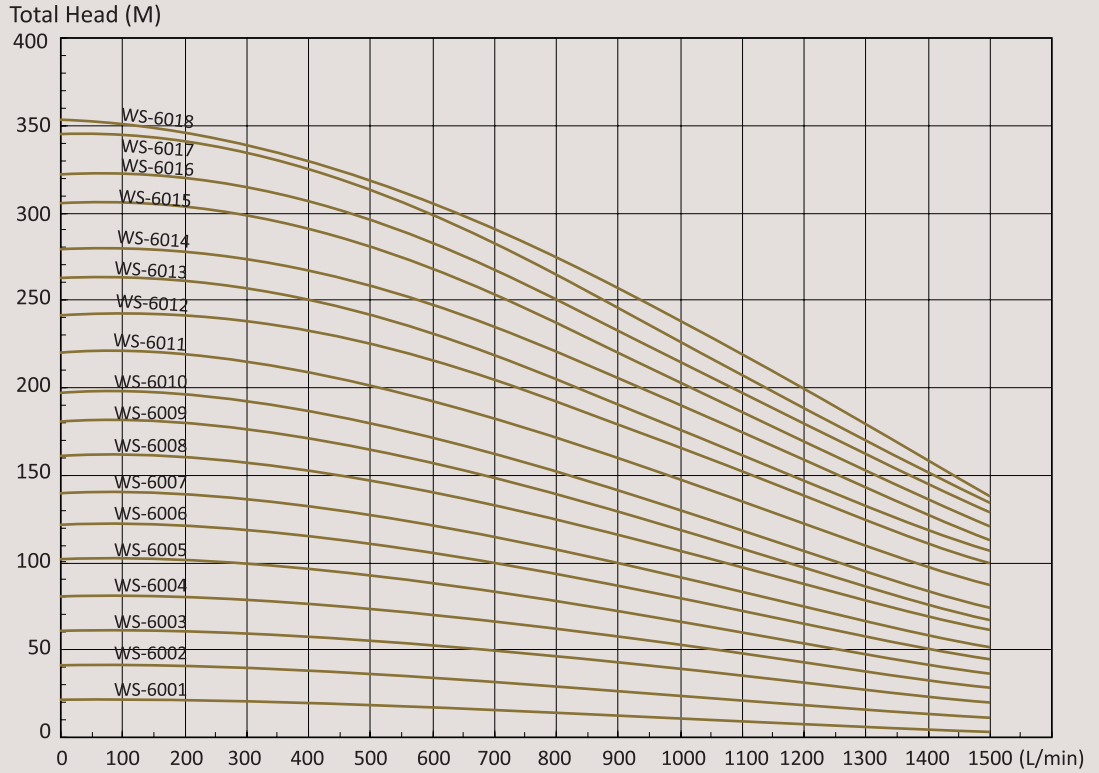
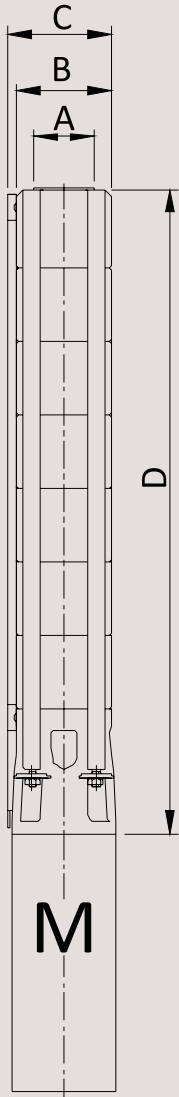
20



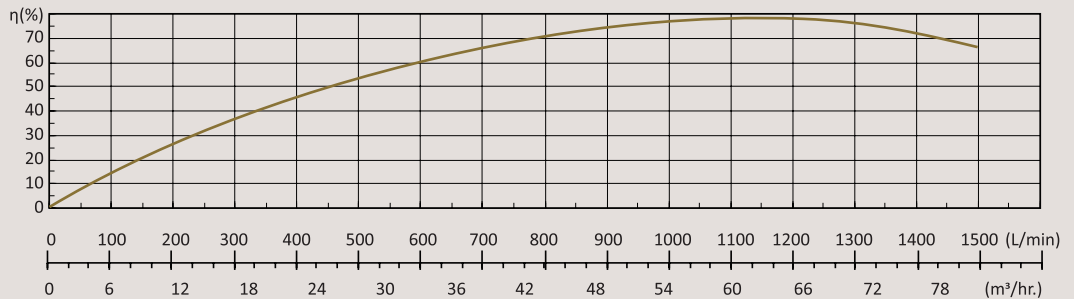
Efficiency



MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch		
	GPM	$m^3/hr$	HP	kW		HEAD (m)	$m^3/hr$	0	18	30	48		60	72
							GPM	0	79	132	211		264	317
						LPM	0	300	500	800	1000	1200		
WS-4601			4	3	1		21	18	16	12	8	4		
WS-4602			7.5	5.5	2		38	36	32	26	21	13		
WS-4603			10	7.5	3		60	57	51	40	33	21		
WS-4604			12.5	9.3	4		80	76	67	55	44	28		
WS-4605			17.5	13	5		97	93	83	68	56	37		
WS-4606			20	15	6		122	117	104	85	70	50		
WS-4607			25	18.5	7		141	136	121	97	83	57		
WS-4608			25	18.5	8		160	153	137	113	94	66		
WS-4609	85	17	30	22	9		180	172	154	126	105	74		
WS-4610			30	22	10		202	194	172	141	117	83		
WS-4613			40	30	13		258	247	220	182	153	105		
WS-4615			50	37	15		299	285	254	212	177	125		
WS-4617			50	37	17		338	322	287	237	194	140		
WS-4618			60	45	18		355	337	305	252	214	150		
WS-4620			60	45	20		397	376	335	276	230	161		
WS-4622			85	63	22		415	385	359	299	250	181		
WS-4624			85	63	24		433	394	383	322	270	201		



Efficiency

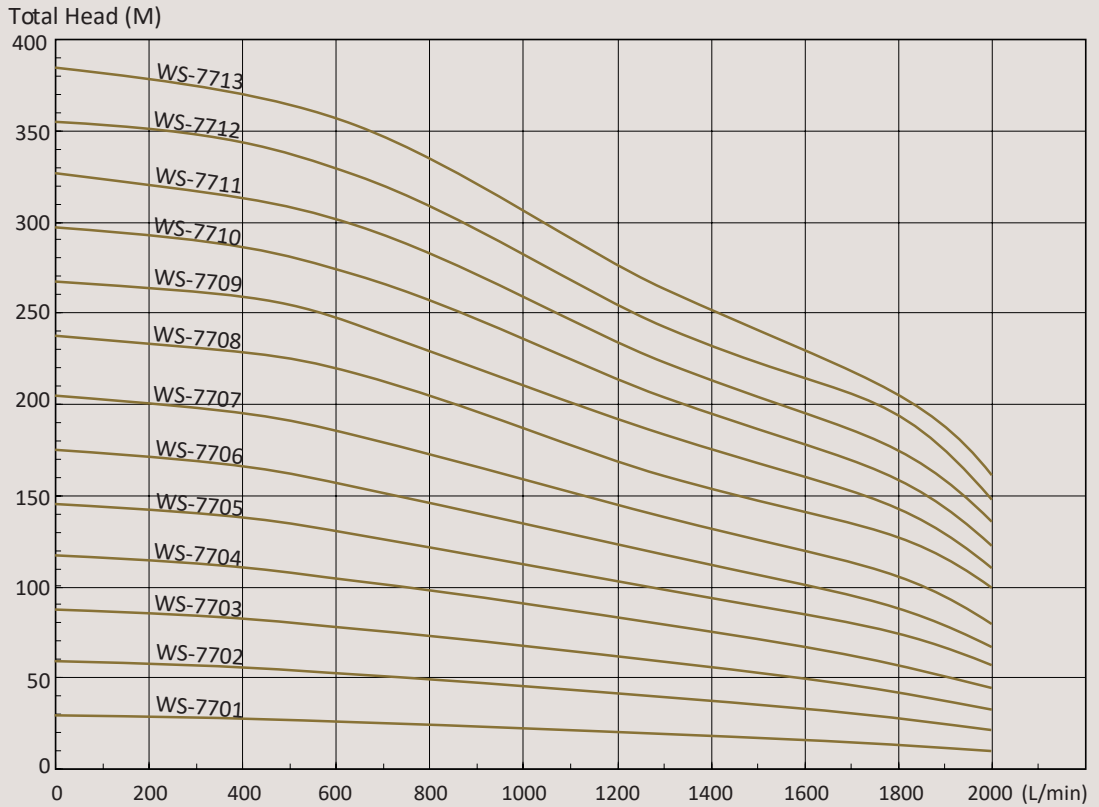
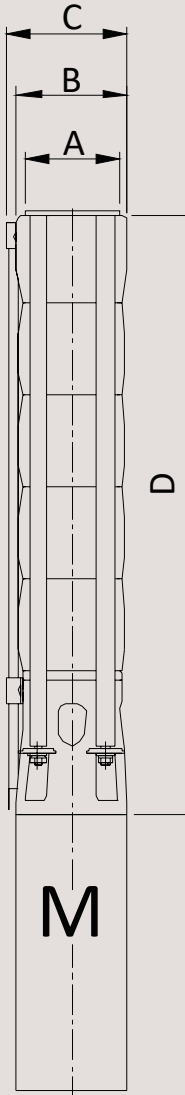


MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch	
	GPM	m³/hr	HP	kW		m³/hr	0	24	42	60	78		90
							GPM	0	120	210	300		390
						LPM	0	400	700	1000	1300	1500	
WS-6001			5	3.7	1	HEAD (m)	21	19	14	10	7	3	
WS-6002			7.5	5.5	2		41	38	31	24	17	11	
WS-6003			12.5	9.3	3		60	59	49	38	29	20	
WS-6004			15	11	4		80	77	65	51	39	28	
WS-6005			17.5	13	5		101	98	82	66	50	36	
WS-6006			25	18.5	6		121	117	97	78	60	43	
WS-6007			25	18.5	7		139	134	113	91	70	51	
WS-6008			30	22	8		160	156	131	106	83	61	
WS-6009	300	60	35	26	9		180	174	146	117	90	65	
WS-6010			35	26	10		196	189	160	129	99	72	
WS-6011			40	30	11		220	214	177	146	114	84	
WS-6012			50	37	12		240	236	200	164	129	97	
WS-6013			50	37	13		262	255	215	174	138	104	
WS-6014			50	37	14		278	272	230	187	149	109	
WS-6015			60	45	15		305	294	249	200	158	118	
WS-6016			60	45	16		321	309	266	212	166	126	
WS-6017			60	45	17		344	328	279	223	175	131	
WS-6018			75	55	18		353	334	285	238	181	135	

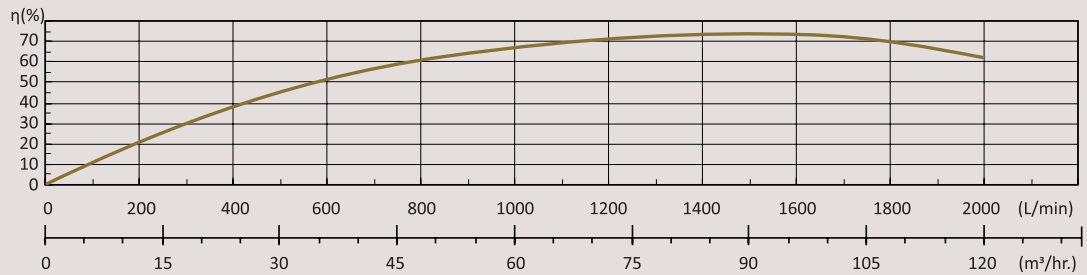
# WS-77series / 8 Inch / 60Hz

## Specifications & Performance Curve

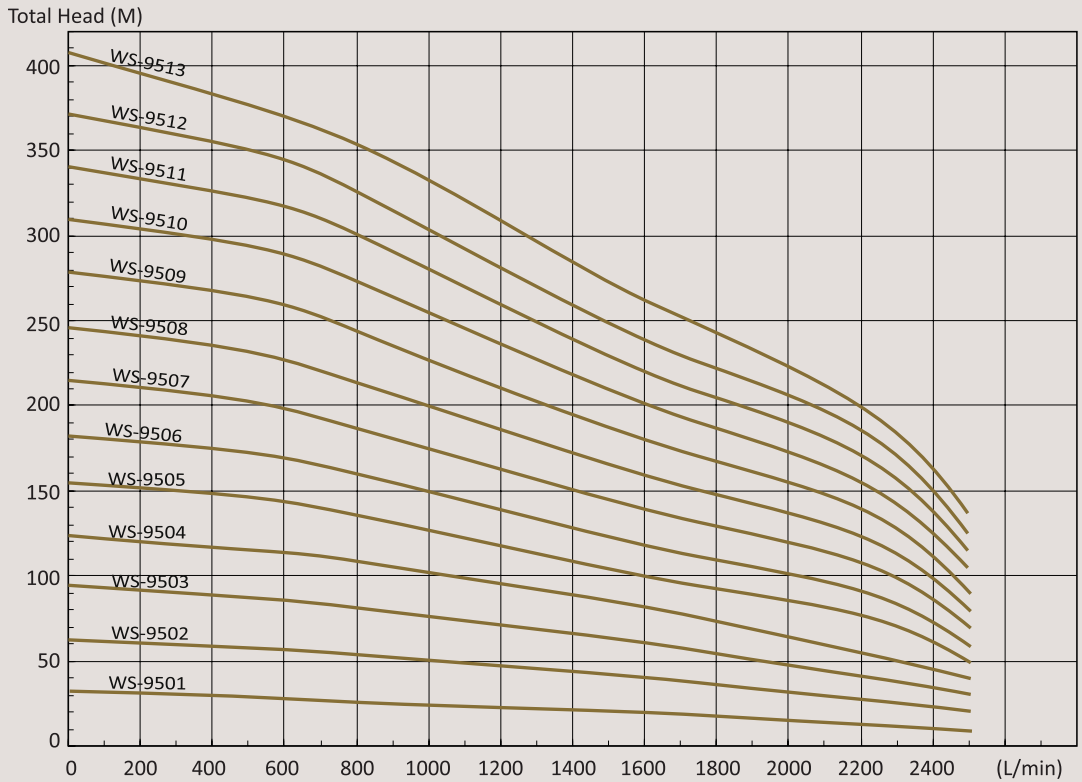
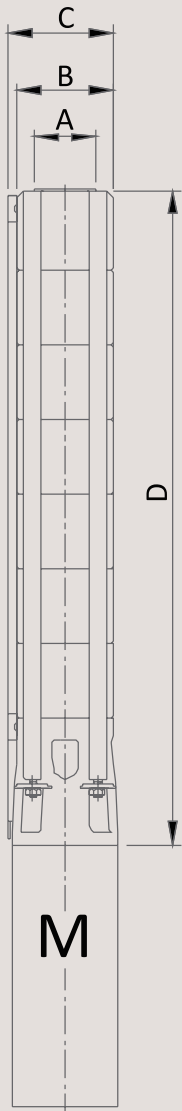
22



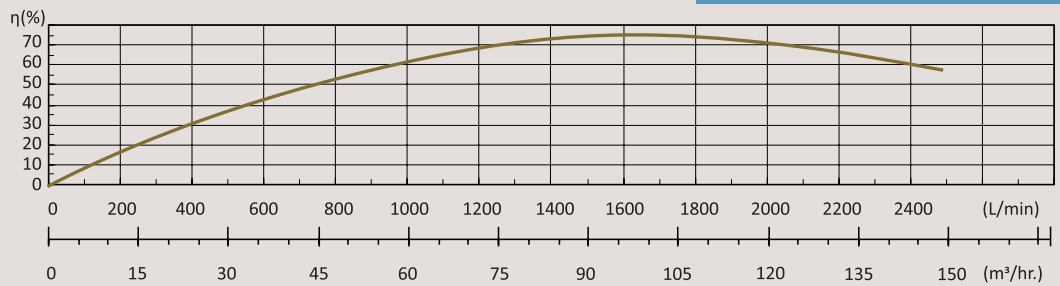
Efficiency



MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch	
	GPM	m <sup>3</sup> /hr	HP	kW		m <sup>3</sup> /hr	0	18	36	60	96		120
							GPM	0	79	159	264		423
						LPM	0	300	600	1000	1600	2000	
WS-7701			7.5	5.5	1	HEAD (m)	30	28	25	21	16	10	
WS-7702			15	11	2		59	56	52	44	33	22	
WS-7703			20	15	3		87	84	78	66	50	33	
WS-7704			30	22	4		117	113	106	89	68	44	
WS-7705			35	26	5		146	141	131	112	85	56	
WS-7706			50	37	6		175	169	157	134	101	67	
WS-7707	385	77	50	37	7		204	198	186	159	120	80	5"
WS-7708			60	45	8		237	231	220	187	141	98	
WS-7709			75	55	9		267	262	247	210	160	110	
WS-7710			75	55	10		297	290	274	235	178	123	
WS-7711			85	63	11		327	317	301	258	196	135	
WS-7712			85	63	12		355	347	330	280	215	147	
WS-7713			100	75	13		385	375	357	305	230	160	



Efficiency



MODEL	CAPACITY		POWER		Stages	CAPACITY						Disch	
	GPM	$m^3/hr$	HP	kW		$m^3/hr$	0	18	42	78	114		150
						$m^3/hr$	0	18	42	78	114	150	
						GPM	0	79	185	343	502	660	
						LPM	0	300	700	1300	1900	2500	
WS-9501			10	7.5	1	HEAD (m)	32	30	26	21	17	9	
WS-9502			17.5	13	2		62	60	55	44	36	19	
WS-9503			30	22	3		93	91	84	66	54	30	
WS-9504			35	26	4		123	120	111	89	71	40	
WS-9505			50	37	5		155	150	139	112	90	50	
WS-9506			50	37	6		182	178	165	132	106	59	
WS-9507	475	95	60	45	7		215	209	192	156	126	71	5"
WS-9508			75	55	8		245	239	221	179	143	80	
WS-9509			85	63	9		278	271	251	201	161	90	
WS-9510			85	63	10		310	302	281	227	180	103	
WS-9511			100	75	11		341	331	310	250	198	114	
WS-9512			125	93	12		372	360	336	270	214	124	
WS-9513			155	93	13		407	390	362	296	233	136	

**WS-01 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-0109	354	3.1
WS-0113	438	3.8
WS-0118	543	4.7
WS-0122	627	5.6
WS-0126	711	6.4
WS-0131	816	7.4

**WS-02 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-0206	291	2.6
WS-0209	354	3.2
WS-0212	417	3.8
WS-0215	480	4.4
WS-0221	606	5.7
WS-0227	732	7
WS-0234	879	8.3

**WS-03 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-0305	270	2.4
WS-0307	312	2.7
WS-0309	354	3.1
WS-0313	438	3.8
WS-0317	522	4.5
WS-0318	543	4.7
WS-0323	648	5.6
WS-0324	669	5.8
WS-0331	816	7.4
WS-0336	921	8.6

**WS-05 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-0504	249	2.2
WS-0505	270	2.4
WS-0507	312	2.8
WS-0509	354	3.2
WS-0511	396	3.6
WS-0515	480	4.4
WS-0521	606	5.6
WS-0526	711	6.6
WS-0539	984	9.2
WS-0547	1152	10.8
WS-0552	1257	11.8

**WS-08 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-0804	343	3.6
WS-0805	385	4.1
WS-0807	469	5.1
WS-0809	553	6.1
WS-0812	679	7.6
WS-0815	805	9.1
WS-0825	1225	14.1
WS-0830	1435	16.6
WS-0844	2023	23.6
WS-0850	2611	26.6
WS-0858	2947	30.6

**WS-14 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-1403	373	4.7
WS-1405	503	5.8
WS-1408	698	7.7
WS-1412	958	10.1
WS-1416	1218	12.5

**WS-17 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-1701	317	4.6
WS-1702	377	5.9
WS-1703	437	7.2
WS-1704	497	8.5
WS-1705	557	9.8
WS-1706	617	11.1
WS-1707	677	12.4
WS-1708	737	13.7
WS-1709	797	15
WS-1710	857	16.1
WS-1711	917	17.5
WS-1712	977	18.9
WS-1713	1037	20.3
WS-1714	1097	21.6
WS-1715	1157	22.9
WS-1716	1217	24.2
WS-1718	1337	26.7
WS-1720	1457	29.2
WS-1722	1577	31.8
WS-1726	1817	36.9
WS-1728	1937	38.2
WS-1730	2057	39.5



**WS-30 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-3001	353	4.8
WS-3002	449	6.5
WS-3003	545	8.2
WS-3004	641	9.9
WS-3005	737	11.6
WS-3007	929	15.6
WS-3008	1025	17.3
WS-3010	1121	20.9
WS-3011	1217	22.7
WS-3012	1409	24.5
WS-3014	1601	27.9
WS-3015	1697	29.6
WS-3017	1889	33
WS-3021	2273	39.8
WS-3023	2465	43.2
WS-3024	2561	44.9
WS-3026	2753	48.3
WS-3028	2945	51.7
WS-3029	3041	53.4
WS-3031	3233	56.8
WS-3033	3425	60.2

**WS-46 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-4601	391	6.3
WS-4602	504	8.5
WS-4603	617	10.7
WS-4604	730	12.9
WS-4605	843	15.1
WS-4606	956	17.3
WS-4607	1069	19.5
WS-4608	1182	21.7
WS-4609	1295	23.9
WS-4610	1408	26.1
WS-4613	1747	33
WS-4615	1973	37.6
WS-4617	2199	42.2
WS-4618	2312	44.5
WS-4620	2538	49.1
WS-4622	2764	53.5
WS-4624	2990	57.9

**WS-60 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-6001	391	6.4
WS-6002	504	8.7
WS-6003	617	11
WS-6004	730	13.3
WS-6005	843	15.6
WS-6006	956	17.9
WS-6007	1069	20.2
WS-6008	1182	22.5
WS-6009	1295	24.8
WS-6010	1408	27.1
WS-6011	1521	29.4
WS-6012	1634	31.7
WS-6013	1747	34
WS-6014	1860	36.3
WS-6015	1973	38.6
WS-6016	2086	40.9
WS-6017	2199	43.2
WS-6018	2312	45.5

**WS-77 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-7701	618	25.1
WS-7702	746	28.7
WS-7703	874	32.3
WS-7704	1003	35.9
WS-7705	1131	39.5
WS-7706	1259	43
WS-7707	1387	46.6
WS-7708	1527	51.6
WS-7709	1655	55.2
WS-7710	1783	58.8
WS-7711	1911	62.4
WS-7712	2039	66
WS-7713	2168	69.6

**WS-95 Series**

MODEL	LENGTH	WEIGHT
	mm	KG
WS-9501	618	25.1
WS-9502	746	28.7
WS-9503	874	32.3
WS-9504	1003	35.9
WS-9505	1131	39.5
WS-9506	1259	43
WS-9507	1398	48
WS-9508	1527	51.6
WS-9509	1655	55.2
WS-9510	1783	58.8
WS-9511	1911	62.4
WS-9512	2039	66
WS-9513	2168	69.6



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