



# SUBMERSIBLE PUMPS

(THERMOPLASTIC IMPELLERS)

50Hz  
CATALOGUE





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## SUBMERSIBLE PUMPS

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## Powering a Greener Tomorrow

At Duke Plasto Technique Pvt. Ltd. we use the latest technology to deliver consistently high quality products. With our innovative pumping solutions we are touching million hearts every day.

Founded by Shri Prabhudas Patel, Shri Shantibhai Patel, Shri Dineshbhai Patel & Shri Rameshbhai Patel in the year 1989, Duke Plasto Technique Pvt. Ltd. has been a pioneer in providing quality pumping solutions to valued patrons spread worldwide. Since the last two decades, we have earned an outstanding reputation for providing unique solutions to cater to the diverse needs of the industry. Our success is the result of our

understanding of our customers, our technical expertise, our continuous innovation and our ability to infuse creative ideas and newer ways in delivering superior products. Not surprisingly, our customers have complete trust in us and have rated us the highest in customer satisfaction. Recognizing our commitment for quality, the Government of India has awarded us the National Quality Award in 2007.

Today, brand Duke has carved a niche for itself as a reliable water solutions provider. We are proud to gain the trust of our valued patrons.

## Tradition of Excellence for Quality Products

Duke Plasto Technique Pvt. Ltd. offers a wide range of high quality products, combined with exceptional services to customers searching for consistent quality and dependable services. Duke offers an extensive range of high quality uPVC

Casing Pipes, Column Pipes, Pressure Pipes, Elastomeric Sealing Ring Pipes, SWR Pipes and all types of PVC fittings and Energy Efficient Submersible Pumps & Motors, Monoblock Pumps, Centrifugal and Pressure Booster Pumps.

## Manufacturing setup with the Best Infrastructure

Harnessing the power of knowledge, expertise and an excellent infrastructure setup has kept us at the pinnacle of success. We, at Duke Plasto Technique Pvt. Ltd proudly boast of a manufacturing capability comparable to any world class facility around the globe. Latest, state-of-the-art, fully automated machinery has been procured from the no. 1 manufacturer of the world. We have successfully implemented state-of-the-art systems from Japan like KANBAN, KAIZEN, SQC, SPC & 5S, etc. The whole operation including the control panel and CNC machines are monitored through a

fully computerized setup. The manufacturing set is also equipped with all the safety measures as laid down by the Factory Act. Our commitment to deliver nothing but the best doesn't stop just here, from time to time, we continuously upgrade our world-class facilities to keep ourselves at the forefront.

Besides this, to provide a comfortable workplace for our employees, we have a Conference Hall, Rest Rooms, Library & Canteen facilities at our factory.

### MODEL IDENTIFICATION CODE



# GENERAL INFORMATION

Duke's **DSP4RFE / DSP4MFE - Series** pumps are Stainless Steel jacketed, Thermo-plastic (Noryl) Impeller, Borehole/ Deep well Submersible pumps suitable for clear water, high head applications. These Pumps are of Multistage Centrifugal types, accommodating Radial / Mixed flow impellers according to the required Head & Flow. The mounting dimensions are according to **NEMA** Standard which enables the pumps to be coupled with any NEMA standard submersible motors. The precise design, materials combination, manufacturing process and stringent quality assurance procedures ensure high quality performance and durability of the pumps.

## Liquid Characteristics

Max. Liquid Temperature	33 °C
Max. Water Hardness	300 ppm
Max. Permissible amount of sand	50 g/m <sup>3</sup>
Max. Allowable Solids	3000 ppm
pH Range	6.5 - 8.5
Max. Specific Gravity	1.004
General Characteristics	Non-Aggressive, Non-Explosive

## Technical Specification

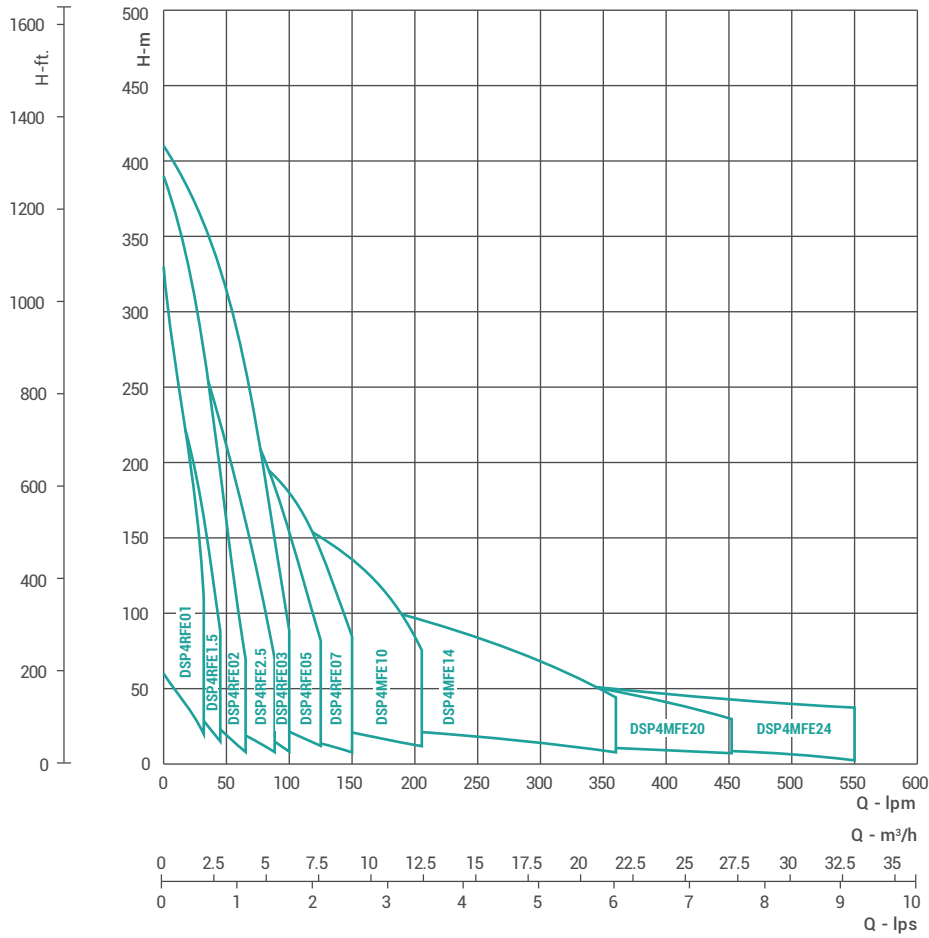
Nominal Diameter	4" (100 mm)
Power Range	0.37 - 5.5 kW
	0.5 - 7.5 HP
Nominal Speed	2900 rpm
Flow Range	0.4 - 33 m <sup>3</sup> /h
Shut-off Head	410 m
Outlet sizes	1¼", 1½", 2", 2½"
Shaft Coupling	Splines
Mounting Standard	NEMA
Max. Operating Pressure	40 bar
Outlet Thread Standard	BSP

## Features

- | Optimal Design
- | Easy to handle & Repair
- | Hygiene
- | Precisely made parts
- | NEMA mounting standard
- | Compact Design
- | High Operating efficiency
- | Good resistance to salt

# GENERAL INFORMATION

## Group Curves



## Curve Conditions

The given performances are for the clear water of specific gravity 1 | The given the performances are for the ideal conditions the actual performance may vary according the field parameters | The performances are applicable for the nominal speed of 2900rpm | In-built non-return valve losses included in the performance. Actual friction & fitting losses to be considered while calculating the system head. The curve tolerance according to ISO 9906, Grade-3B | The Group performance curves are just an indicative and to locate the tentative family curve | Refer the individual curves for prompt selection of models | Hydraulic Performances of the pumps are same for all types Materials of constructions

## APPLICATIONS



RESIDENTIAL



GARDENING



SPRINGER  
SYSTEM



SOLAR



DOMESTIC  
WATER SUPPLY



SMALL IRRIGATION



FOUNTAIN



SMALL INDUSTRIES



DOMESTIC HYDRO  
PNEUMATIC SYSTEMS



HIGH PRESSURE  
APPLICATION

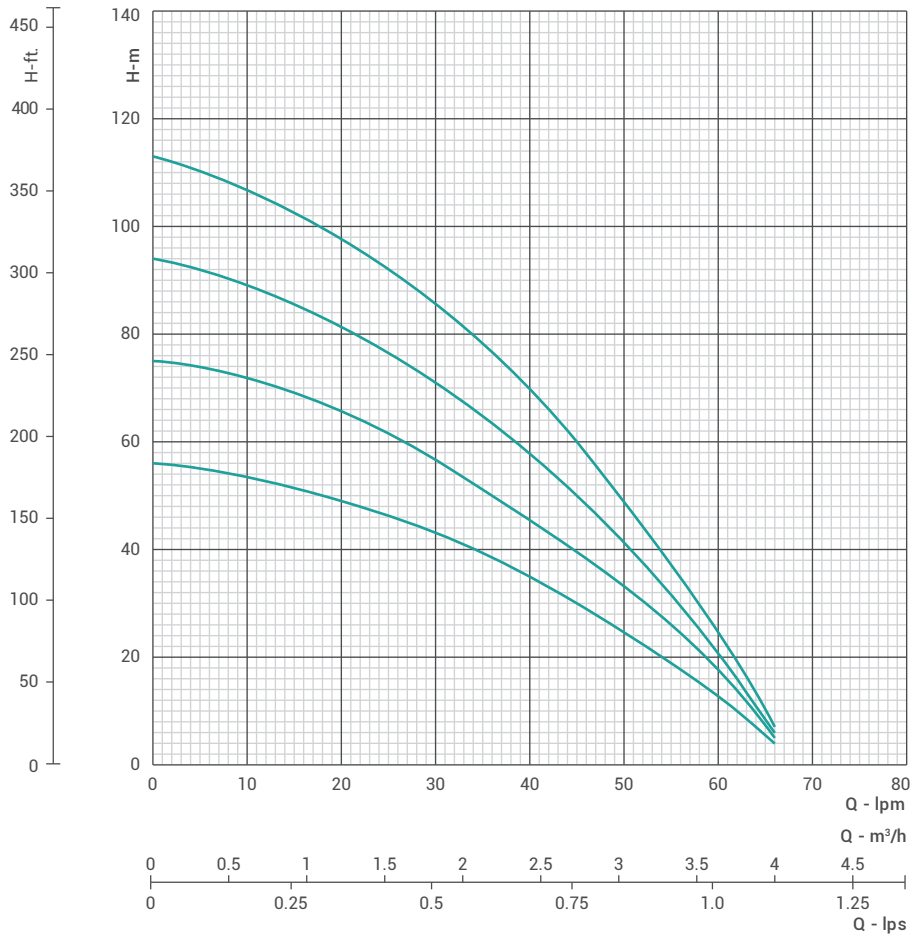


HOTEL



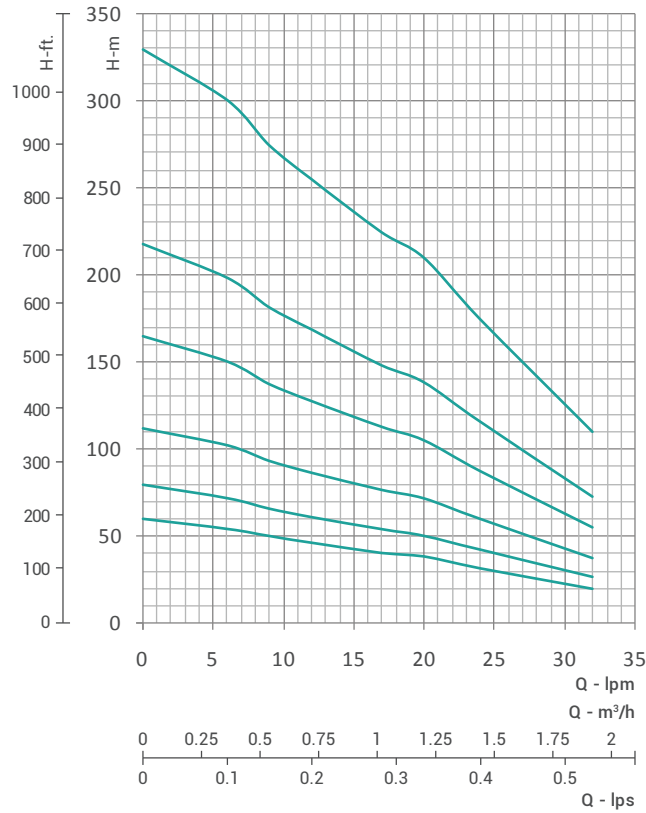
FOOD PROCESSING  
INDUSTRY

## DSP3RF04 HH



Motor Rating		STAGE	Outlet size 32mm (1.25")					50Hz			
			Discharge								
kW	HP		m³/h	0	0.4	0.5	0.7	1.0	1.2	1.4	1.9
			lps	0	0.10	0.15	0.20	0.28	0.33	0.40	0.53
		lpm	0	6	9	12	17	20	24	32	
0.37	0.5	9	Head in Meters	59	54	50	46	41	38	32	20
0.55	0.75	12		79	72	66	61	54	50	42	26
0.75	1	17		112	102	94	87	77	71	60	37
1.1	1.5	25		165	150	138	128	113	105	88	55
1.5	2	33		218	198	182	168	149	139	116	73
2.2	3	50		330	300	275	255	225	210	175	110

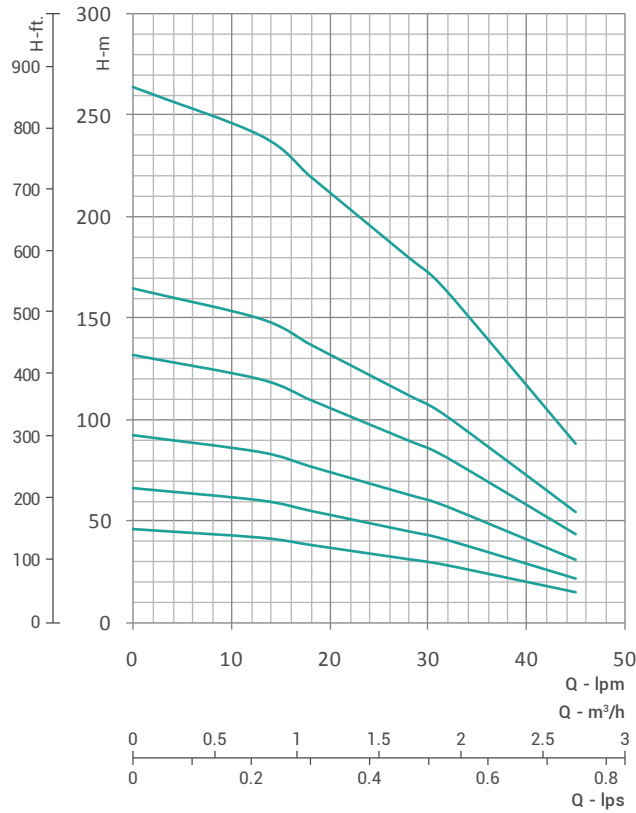
DSP4RFE01



Motor Rating		STAGE	Outlet size 32mm (1.25")					50Hz			
			Discharge								
kW	HP		m³/h	0	0.4	0.5	0.7	1.0	1.2	1.4	1.9
			lps	0	0.10	0.15	0.20	0.28	0.33	0.40	0.53
		lpm	0	6	9	12	17	20	24	32	
0.37	0.5	9	Head in Meters	59	54	50	46	41	38	32	20
0.55	0.75	12		79	72	66	61	54	50	42	26
0.75	1	17		112	102	94	87	77	71	60	37
1.1	1.5	25		165	150	138	128	113	105	88	55
1.5	2	33		218	198	182	168	149	139	116	73
2.2	3	50		330	300	275	255	225	210	175	110

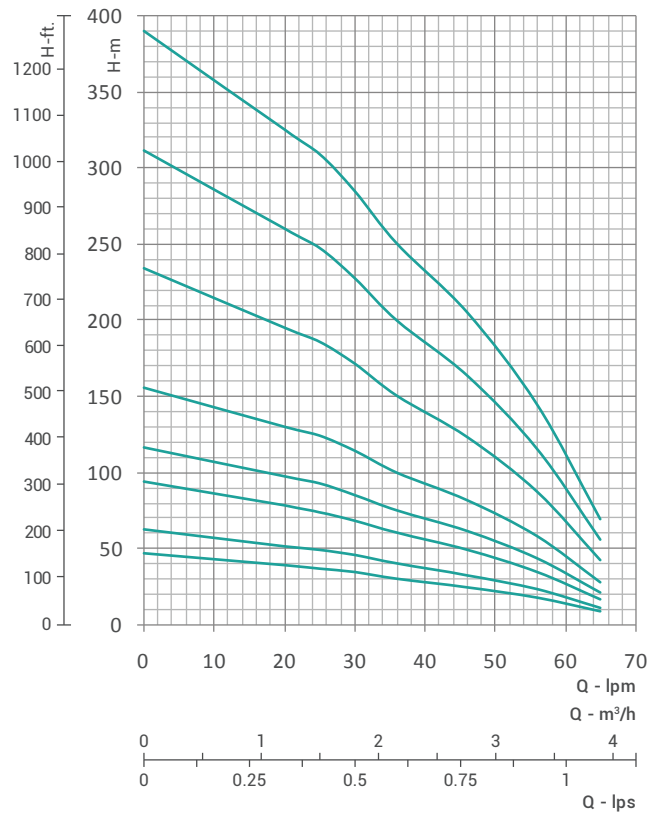


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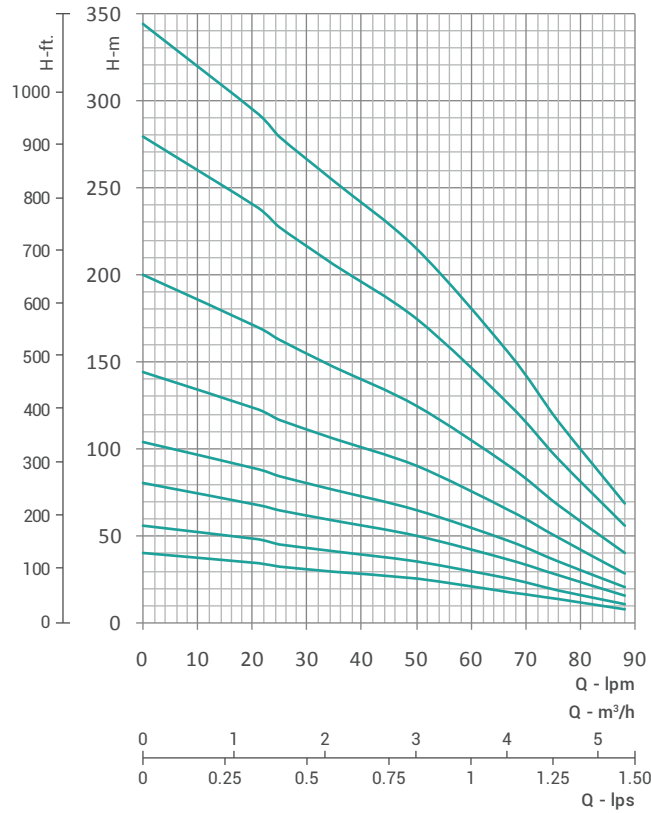
Motor Rating		STAGE	Outlet size 32mm (1.25")					50Hz			
			Discharge								
kW	HP		m³/h	0	0.8	1.1	1.3	1.7	1.9	2.2	2.7
			lps	0	0.22	0.30	0.37	0.47	0.52	0.60	0.75
		lpm	0	13	18	22	28	31	36	45	
0.37	0.5	7	Head in Meters	46	42	39	36	32	29	25	15
0.55	0.75	10		66	60	55	51	45	42	35	22
0.75	1	14		92	84	77	71	63	59	49	31
1.1	1.5	20		132	120	110	102	90	84	70	44
1.5	2	25		165	150	138	128	113	105	88	55
2.2	3	40		264	240	220	204	180	168	140	88

DSP4RFE02



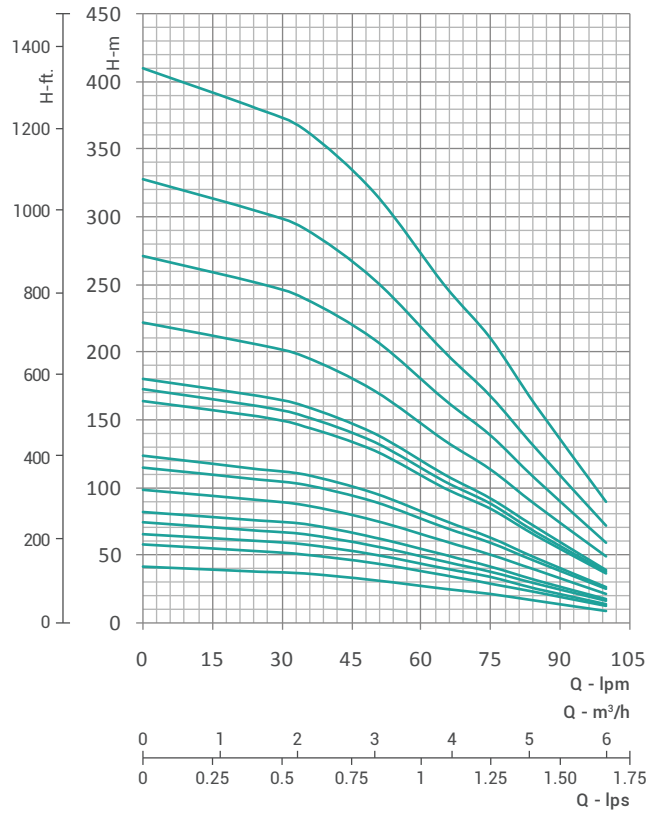
Motor Rating		STAGE	Outlet size 32mm (1.25")					50Hz			
			Discharge								
kW	HP		m³/h	0	1.2	1.5	1.8	2.16	2.76	3.36	3.9
			lps	0	0.33	0.42	0.50	0.60	0.77	0.93	1.08
		lpm	0	20	25	30	36	46	56	65	
0.37	0.5	6	Head in Meters	47	39	37	34	30	25	17	8
0.55	0.75	8		62	52	50	46	40	33	23	11
0.75	1	12		94	78	74	68	60	49	35	17
1.1	1.5	15		117	98	93	86	75	62	44	21
1.5	2	20		156	130	124	114	100	82	58	28
2.2	3	30		234	195	186	171	150	123	87	42
3	4	40		312	260	248	228	200	164	116	56
3.7	5	50		390	325	310	285	250	205	145	70

DSP4RFE2.5



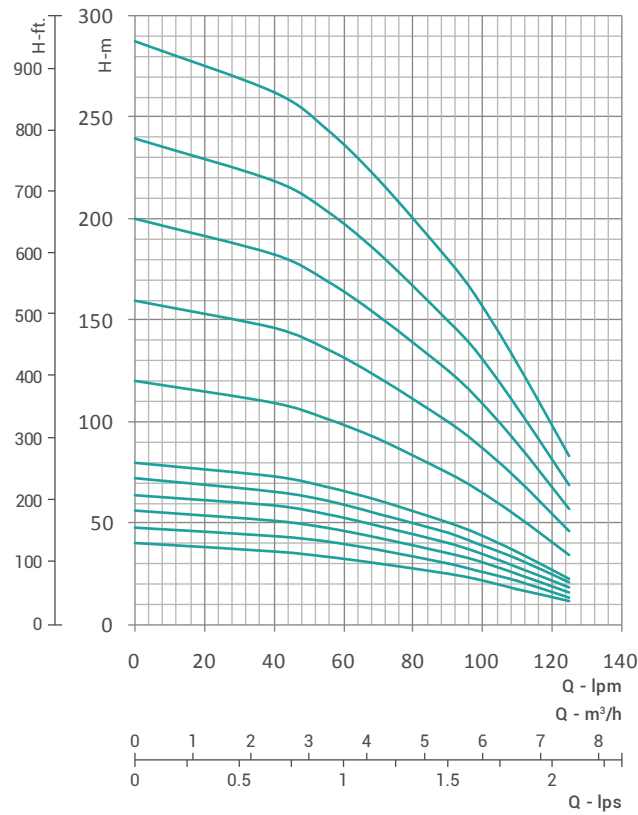
Motor Rating		STAGE	Outlet size 32mm (1.25")					50Hz			
			Discharge								
kW	HP		m³/h	0	1.26	1.5	2.1	3	4.02	4.56	5.28
			lps	0	0.35	0.42	0.58	0.83	1.12	1.27	1.47
		lpm	0	21	25	35	50	67	76	88	
0.37	0.5	5	Head in Meters	40	34	33	30	25	18	14	8
0.55	0.75	7		56	48	46	41	35	25	19	11
0.75	1	10		80	68	65	59	50	36	27	16
1.1	1.5	13		104	88	85	77	65	47	35	21
1.5	2	18		144	122	117	106	90	65	49	29
2.2	3	25		200	170	163	148	125	90	68	40
3	4	35		280	238	228	207	175	126	95	56
3.7	5	43		344	292	280	254	215	155	116	69

DSP4RFE03



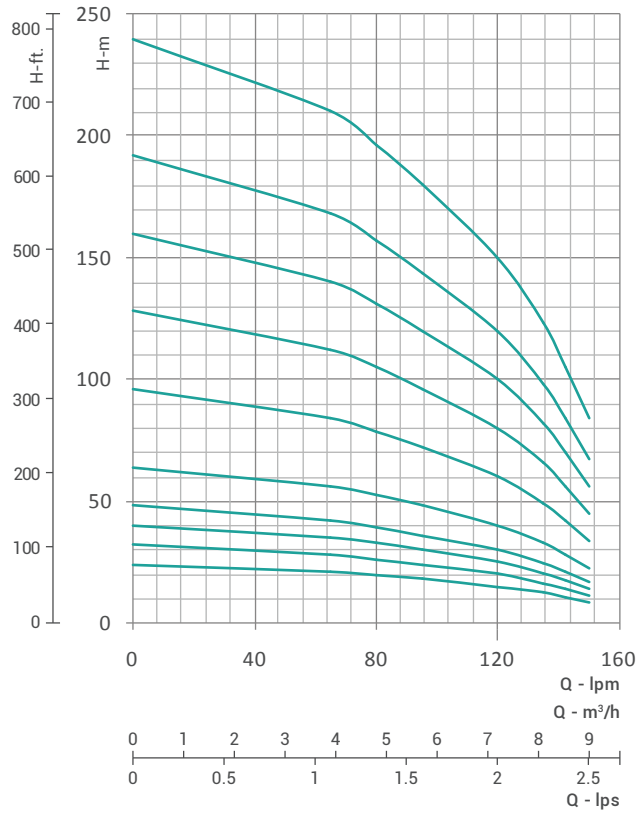
Motor Rating		STAGE	Outlet size 32mm (1.25")					50Hz			
kW	HP		Discharge								
			m³/h	0	1.5	2.1	3.00	3.90	4.50	5.1	6
			lps	0	0.42	0.6	0.83	1.08	1.25	1.42	1.67
lpm	0	25	35	50	65	75	85	100			
0.55	0.75	5	Head in Meters	41	38	36	32	25	21	16	9
0.75	1	7		57	53	51	44	35	29	22	13
0.75	1	8		66	61	58	51	40	34	26	14
1.1	1.5	9		74	68	66	57	45	38	29	16
1.1	1.5	10		82	76	73	64	50	42	32	18
1.1	1.5	12		98	91	87	76	60	50	38	22
1.5	2	14		115	106	102	89	70	59	45	25
1.5	2	15		123	114	109	95	75	63	48	27
2.2	3	20		164	152	146	127	100	84	64	36
2.2	3	21		172	160	153	133	105	88	67	38
2.2	3	22		180	167	160	140	110	92	70	40
3	4	27		221	205	197	171	135	113	86	49
3.7	5	33		271	251	240	210	165	139	106	59
4.5	6	40		328	304	291	254	200	168	128	72
5.5	7.5	50	410	380	364	318	250	210	160	90	

DSP4RFE05



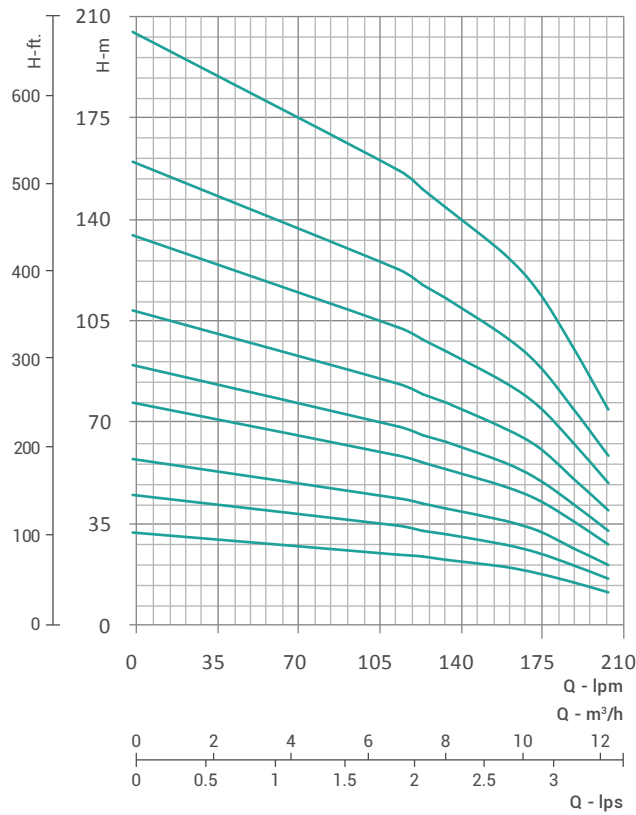
Motor Rating		STAGE	Outlet size 40mm (1.5")					50Hz			
			Discharge								
kW	HP		m³/h	0	2.4	3.3	4.2	5.4	5.88	6.6	7.5
			lps	0	0.67	0.92	1.17	1.50	1.63	1.83	2.08
		lpm	0	40	55	70	90	98	110	125	
0.75	1	5	Head in Meters	40	37	34	31	25	23	18	12
0.75	1	6		48	44	41	37	30	27	22	14
1.1	1.5	7		56	51	48	43	35	32	25	16
1.1	1.5	8		64	58	54	49	40	36	29	18
1.1	1.5	9		72	66	61	55	45	41	32	21
1.5	2	10		80	73	68	61	50	45	36	23
2.2	3	15		120	110	102	92	75	68	54	35
3	4	20		160	146	136	122	100	90	72	46
3.7	5	25		200	183	170	153	125	113	90	58
4.5	6	30		240	219	204	183	150	135	108	69
5.5	7.5	36	288	263	245	220	180	162	130	83	

DSP4RFE07



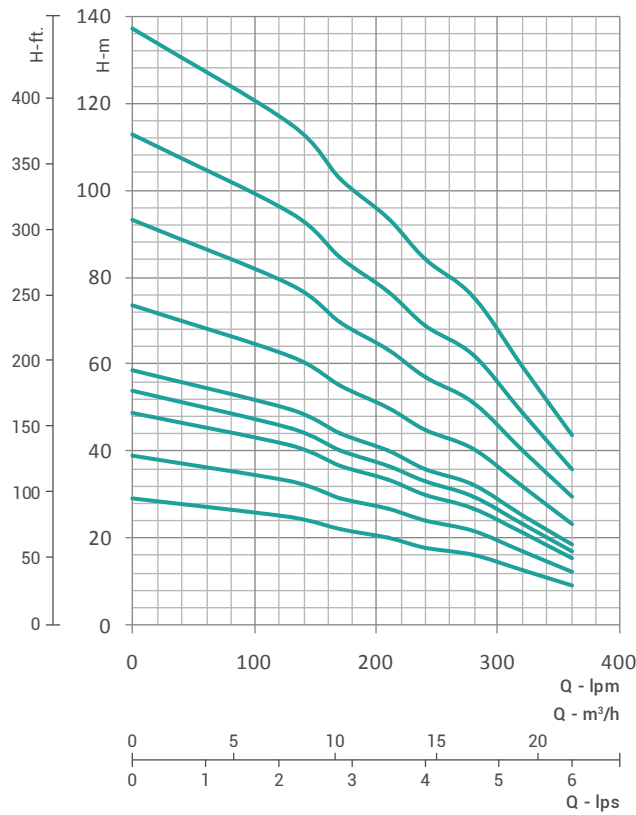
Motor Rating		STAGE	Outlet size 40mm (1.5")					50Hz			
			Discharge								
kW	HP		m³/h	0	3.9	4.8	5.7	7.2	8.1	8.52	9
			lps	0	1.08	1.33	1.58	2.00	2.25	2.37	2.50
		lpm	0	65	80	95	120	135	142	150	
0.55	0.75	3	Head in Meters	24	21	20	18	15	12	11	8
0.75	1	4		32	28	26	24	20	16	14	11
0.75	1	5		40	35	33	30	25	21	18	14
1.1	1.5	6		48	42	39	36	30	25	21	17
1.5	2	8		64	56	52	48	40	33	28	22
2.2	3	12		96	84	79	72	60	49	42	34
3	4	16		128	112	105	96	80	66	56	45
3.7	5	20		160	140	131	120	100	82	70	56
4.5	6	24		192	168	157	144	120	98	84	67
5.5	7.5	30		240	210	197	180	150	123	105	84

DSP4MFE10



Motor Rating		STAGE	Outlet size 50mm (2")					50Hz			
kW	HP		Discharge								
			m³/h	0	6.9	7.5	8.1	9.6	10.5	11.4	12.3
			lps	0	1.9	2.1	2.3	2.7	2.9	3.2	3.4
lpm	0	115	125	135	160	175	190	205			
0.75	1	5	Head in Meters	32	25	24	23	20	18	15	12
1.1	1.5	7		45	34	33	32	28	25	21	16
1.5	2	9		58	44	42	41	36	32	27	21
2.2	3	12		77	59	56	54	48	43	36	28
2.2	3	14		90	69	66	63	56	50	42	33
3	4	17		109	83	80	77	68	61	51	40
3.7	5	21		134	103	99	95	84	76	63	49
4.5	6	25		160	123	118	113	100	90	75	58
5.5	7.5	32		205	157	150	144	128	115	96	75

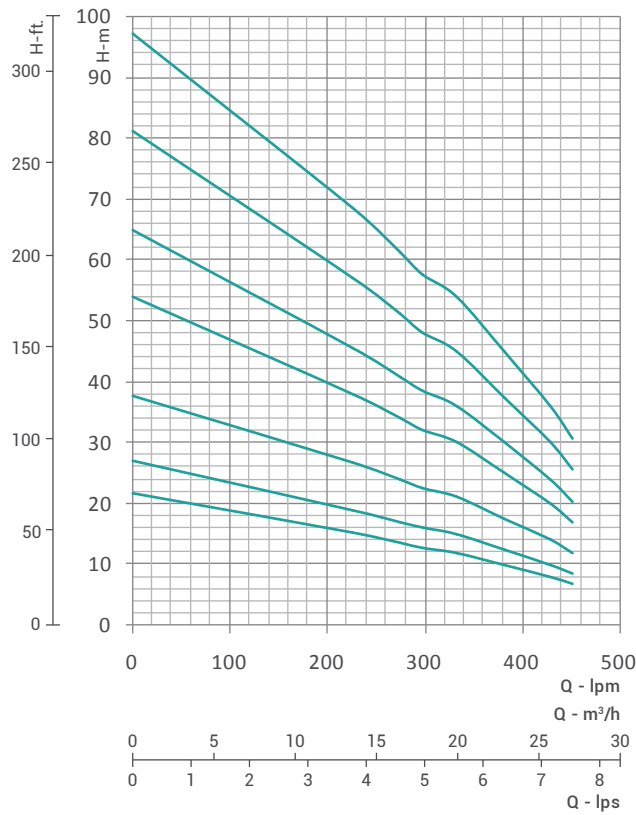
DSP4MFE14



Motor Rating		STAGE	Outlet size 50mm (2")					50Hz			
			Discharge								
kW	HP		m³/h	0	7.8	10.2	12.6	14.4	16.8	19.2	21.6
			lps	0	2.2	2.8	3.5	4.0	4.7	5.3	6.0
		lpm	0	130	170	210	240	280	320	360	
1.1	1.5	6	Head in Meters	29	25	22	20	18	16	13	9
1.5	2	8		39	33	29	27	24	22	17	12
2.2	3	10		49	41	37	33	30	27	21	16
2.2	3	11		54	45	40	37	33	30	23	17
2.2	3	12		59	49	44	40	36	32	25	19
3	4	15		74	62	55	50	45	41	32	23
3.7	5	19		93	78	70	63	57	51	40	30
4.5	6	23		113	95	84	77	69	62	49	36
5.5	7.5	28		137	115	103	94	84	76	59	44

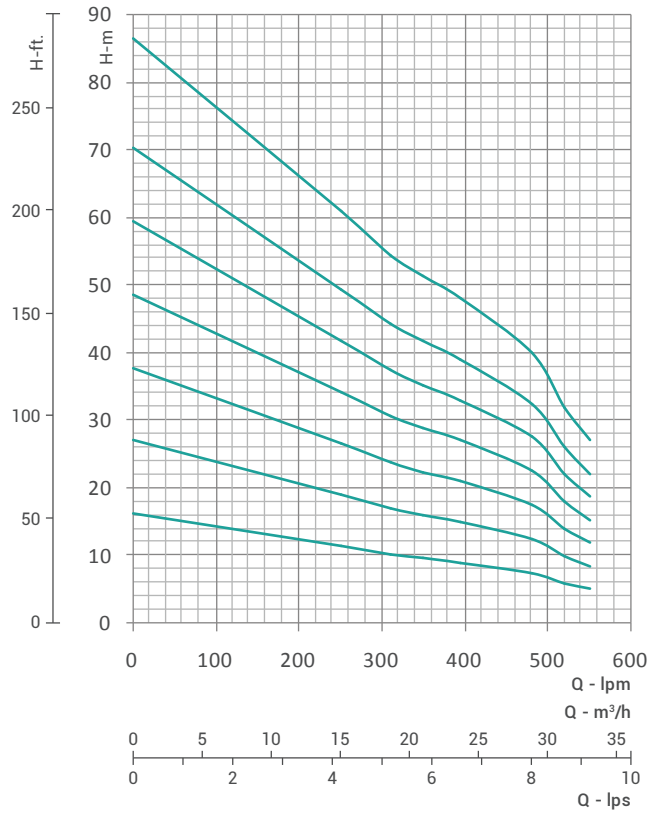


DSP4MFE20



Motor Rating		STAGE	Outlet size 65mm (2.5")					50Hz			
			Discharge								
kW	HP		m³/h	0	13.6	16.4	17.9	20.0	22.9	25.7	27.1
			lps	0	3.8	4.6	5.0	5.6	6.4	7.2	7.5
		lpm	0	226	274	298	333	381	429	452	
1.1	1.5	4	Head in Meters	22	15	14	13	12	10	8	7
1.5	2	5		27	19	17	16	15	13	10	9
2.2	3	7		38	27	24	22	21	18	14	12
3	4	10		54	38	34	32	30	25	20	17
3.7	5	12		65	46	41	38	36	30	24	20
4.5	6	15		81	57	51	48	45	38	30	26
5.5	7.5	18		97	68	61	58	54	45	36	31

DSP4MFE24



Motor Rating		STAGE	Outlet size 65mm (2.5")					50Hz			
			Discharge								
kW	HP		m³/h	0	15.0	18.6	21.0	23.7	28.8	31.2	33.0
			lps	0	4.2	5.2	5.8	6.6	8.0	8.7	9.2
		lpm	0	250	310	350	395	480	520	550	
1.1	1.5	3	Head in Meters	16	11	10	10	9	8	6	5
1.5	2	5		27	19	17	16	15	13	10	9
2.2	3	7		38	27	24	22	21	18	14	12
3	4	9		49	34	31	29	27	23	18	15
3.7	5	11		59	42	37	35	33	28	22	19
4.5	6	13		70	49	44	42	39	33	26	22
5.5	7.5	16		86	61	54	51	48	40	32	27



**Duke Plasto Technique Private Limited**

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