


**Submersible Pumps**  
**Hydra Series - Plastic Floating Impellers**





## Submersible Pumps

Hydra Series  
50 HZ

### DESCRIPTION

ZIRANTEC Hydra series submersible pumps are built with thermoplastic impellers, diffusers and inbuilt check valve. All vital components of these pumps are made of corrosive resistance thermoplastic and the shaft is of AISI 304 / 33. Pumps are multistage centrifugal type. The optimal design of impellers and diffusers enables the best possible hydraulic efficiency.

The pumps is firmly coupled with electric motor which operates submerged beneath the surface of water. Built in check valve prevents backflow and reduces the risk of water hammer. All mounting dimensions of pumps are in accordance with NEMA standard.

### FEATURES

- Residential
- Irrigation
- Civil Water Supply
- Fountains
- Industrial and Rural Water Supply
- Fire Fighting
- Pressure Boosting Units | Gardens | Sprinkler Systems

### APPLICATIONS

- Best operating efficiency
- Floating Impeller design to handle sand
- S.S. 304/Ceramic top bearing
- Highly durable
- Can be easily dismantled and repaired
- Can handle more upthrust loads
- Wearing ring in diffuser for long life.

## PUMPED LIQUIDS

Clean, thin, non-aggressive, non explosive, clear, cold, fresh water without abrasives, solid particles or fibre having the following characteristics

- a) Temperature (max) ..... 33 °C (max.)
- b) Permissible amount of sand ..... 3" - 25g/m<sup>3</sup>
- c) Chlorine ion density ..... 500 ppm (max.)
- d) Allowable solids ..... 3000 ppm (max.)
- e) Specific gravity ..... 1,004 (max.)
- f) Hardness (Drinking water) ..... 300 (max.)
- g) Viscosity ..... 1,75 x 10<sup>-6</sup>m<sup>2</sup>/sec (max.)
- h) Turbidity ..... 50 ppm silica scale(max.)
- i) pH ..... 6,5 to 8,5

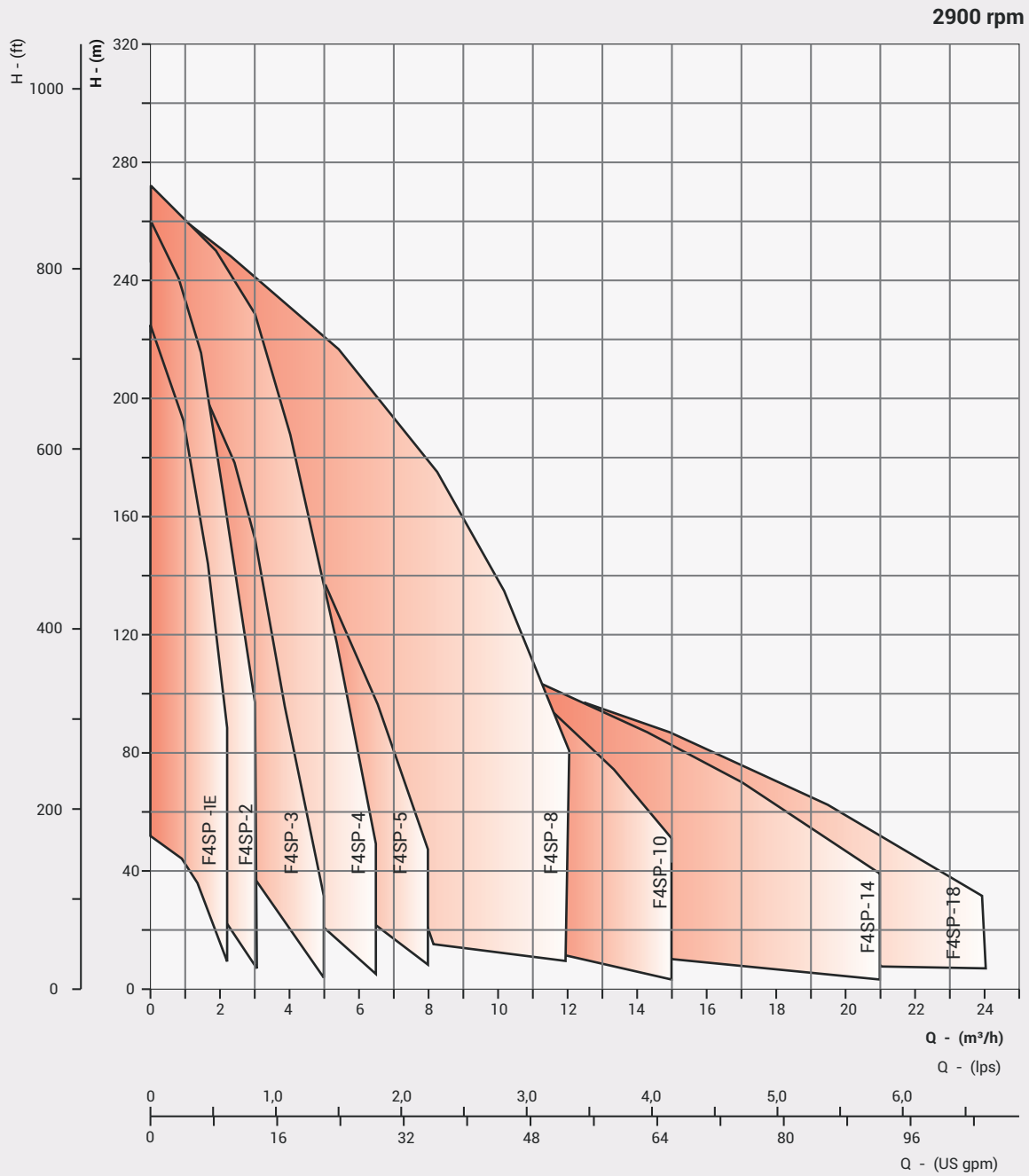
PUMP OPERATING LIMITATIONS		
Nominal Diameter	4" (100mm)	
Power Range	0,37 - 7,5 kW	
Speed	2900 rpm	
Discharge Range	m <sup>3</sup> /h	0,75 - 24
	lps	0,20 - 6,66
Total head range	m	4,0 - 250
	ft	13,0 - 820
Outlet size in inches	1 ¼, 1 ½ & 2	

### Maximum temperature of Pumped liquid

Motor	Minimum cooling flow along the motor	Vertical installation	Horizontal installation (minimum 30° angle)	MAXIMUM OPERATING PRESSURE	
				4" Submersible pump	2,5 Mpa (25 bar)
4"	0,15 m/s	33 °C	33 °C		

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

# GROUP PERFORMANCE CURVES - 4" (Floating Impeller Model)



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## MATERIAL OF CONSTRUCTION

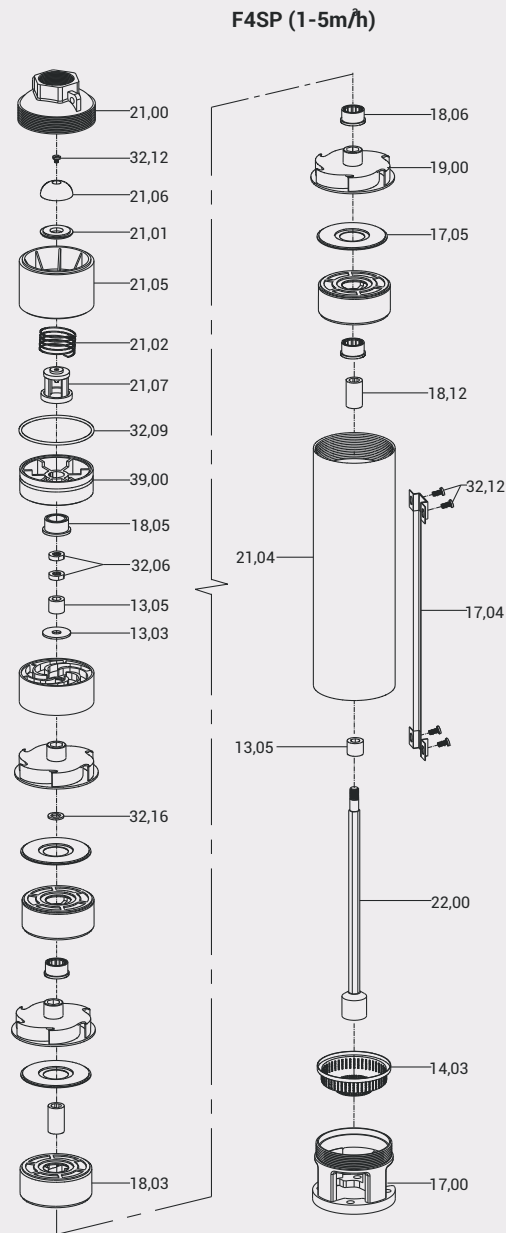
PART NAME	PART No.	NOMINAL DIA. 4"
		TYPE - P
Check Valve Housing	21,00	S.S. - 304
Check Valve	21,07	DELRIN
Check Valve Seat	21,01	NBR
Outer Shell	21,04	S.S. - 304
Impeller	19,00	NORYL*/ DELRIN/ LEXAN**
Diffuser Chamber	18,03	NORYL*/ LEXAN**
Stop Ring	13,03	HYLEM
Intermediate Bearing (Sleeve / Bush)	18,06	S.S. - 304 / NBR BRONZE
Suction Inter Connector	17,00	S.S. - 304
Inlet Screen	14,03	S.S. - 304
Pump Shaft Hexagonal	22,00	S.S. - 431
Cable Guard	17,04	S.S. - 304
*Coupling Splines	--	S.S. - 329

\*Friction welded with shaft

DELRIN is Registered Trade Mark of Dupont.

\*NORYL and \*\*LEXAN are Registered Trade Mark of G.E Plastics.

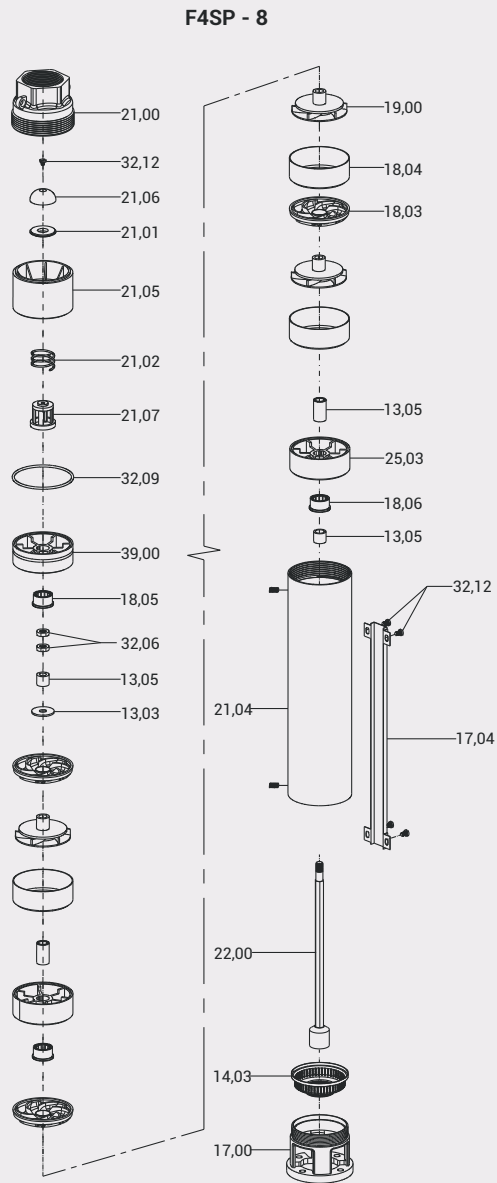
## EXPLODED VIEW



PART NO.	PART NAME	PART NO.	PART NAME	PART NO.	PART NAME
13,03	Upthrust Washer / Stop Ring	18,06	Bush-Diffuser Chamber	21,06	Check Valve Disc
13,05	Sleeve	18,12	Spacer Sleeve	21,07	Check valve
14,03	Inlet Screen	19,00	Impeller	22,00	Pump Shaft with Coupling
17,00	Suction Inter-Connector	21,00	Check Valve Housing	32,06	Lock Nut
17,04	Cable Guard	21,01	Check Valve Seat	32,09	O-Ring
17,05	Diffuser Plate	21,02	Check Valve Spring	32,12	Screw
18,03	Diffuser Chamber	21,04	Outer Shell	32,16	Washer
18,05	Bush - CT Pad	21,05	Check Valve Bracket	39,00	Chamber-Bracket

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## EXPLODED VIEW



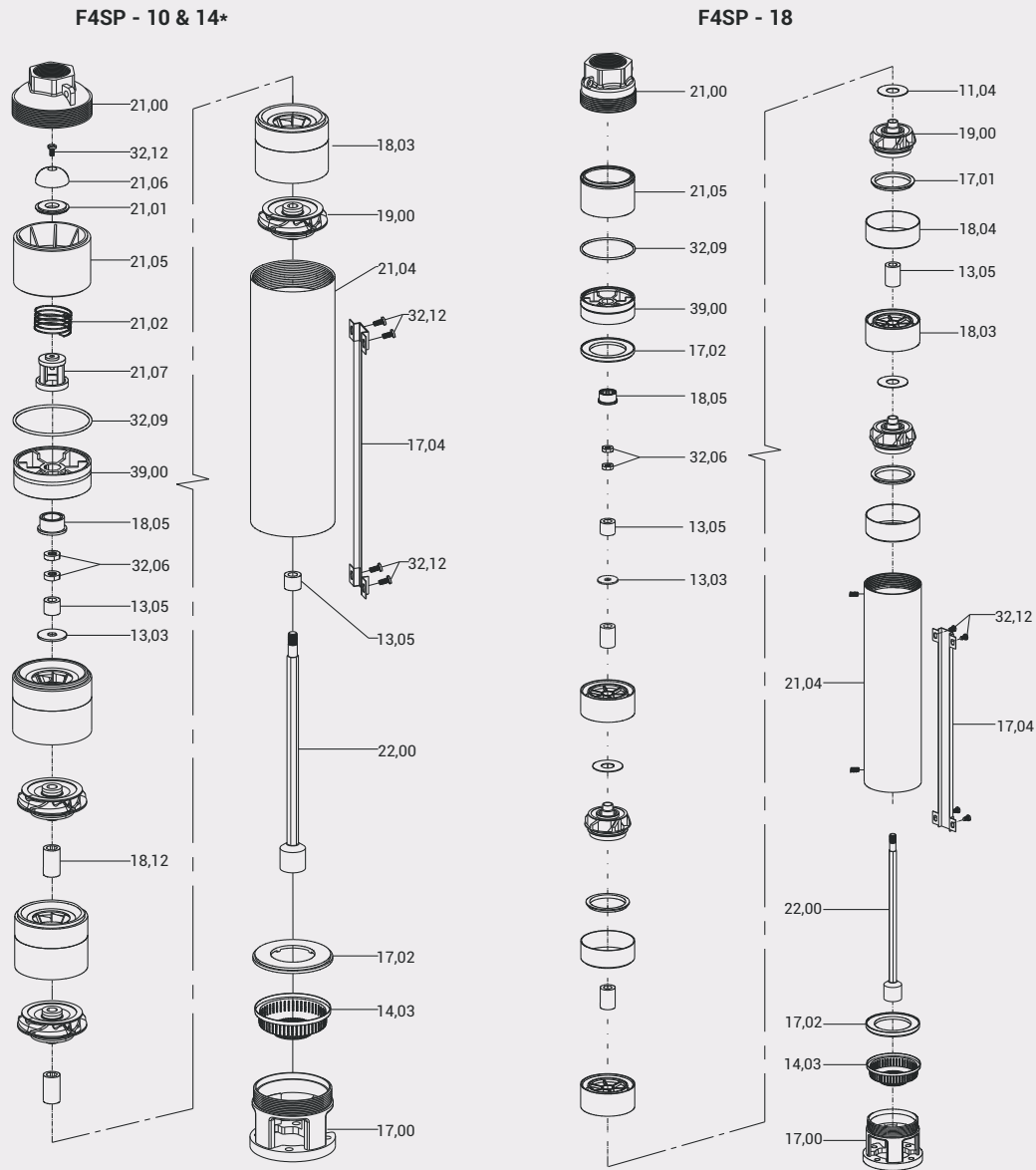
PART NO.	PART NAME
13,03	upthrust Washer / Stop Ring
13,05	Spacer Sleeve
14,03	Inlet Screen
17,00	Suction Inter-connector
17,04	Cable Guard
18,03	Diffuser
18,04	Chamber
18,05	Bush - CT Pad

PART NO.	PART NAME
18,06	Bush-Diffuser Chamber
19,00	Impeller
21,00	Check Valve Housing
21,01	Check Valve Seat
21,02	Check Valve Spring
21,04	Outer Shell
21,05	Check Valve Bracket
21,06	Check Valve Disc

PART NO.	PART NAME
21,07	Check Valve
22,00	Pump Shaft with Coupling
39,00	Chamber-Bracket
32,06	Lock Nut
32,09	O-Ring
32,12	Screw
32,16	Washer

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# EXPLODED VIEW



PART NO.	PART NAME
11,04	Thrust Pad
13,01	Bush - CT Pad
13,03	Upthrust Washer / Stop Ring
13,05	Sleeve
14,03	Inlet Screen
17,00	Suction Inter-Connector
17,01	Wear ring / Seal
17,02	Suction Inter-Connector plate
17,04	Cable Guard

PART NO.	PART NAME
18,03	Diffuser Chamber
18,04	Chamber
18,05	Bush-Diffuser Chamber
18,12	Spacer Sleeve
19,00	Impeller
21,00	Check Valve Housing
21,01	Check Valve Seat
21,02	Check Valve Spring
21,04	Outer Shell

PART NO.	PART NAME
21,05	Check Valve Bracket
21,06	Check Valve Disc
21,07	Check Valve
22,00	Pump Shaft with Coupling
39,00	Chamber Bracket
32,06	Lock Nut
32,09	O-Ring
32,12	Screw
32,16	Washer

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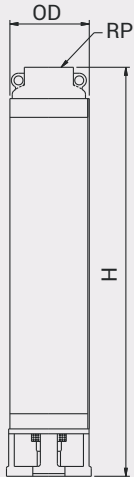


## DIMENSIONS & WEIGHT 4" HYDRA SERIES

Nominal Diameter : 4"

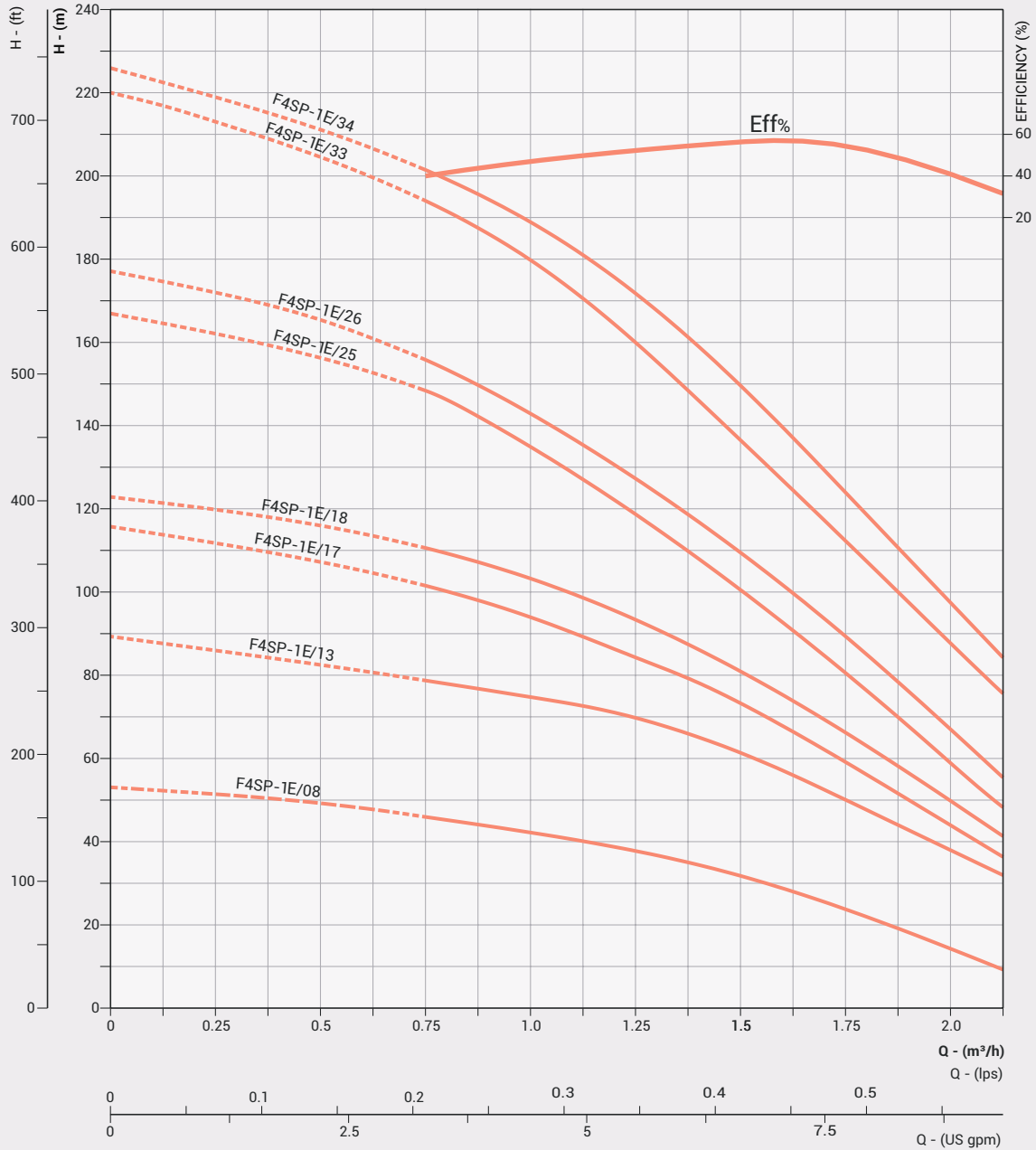
Nominal Flow : 1,5m<sup>3</sup>/h

Outlet Size : 1 ¼"



PUMP MODEL	REQUIRED MOTOR POWER		DIMENSIONS (mm)			APPROX NETT. WEIGHT (kg)
	kW	HP	#OD	RP	H	
F4SP-1E/08	0,37	0,5	98	32	414	3,3
F4SP-1E/13	0,55	0,75	98	32	524	4,2
F4SP-1E/17	0,75	1	98	32	654	5,0
F4SP-1E/18	0,75	1	98	32	679	5,3
F4SP-1E/25	1,1	1,5	98	32	860	8,8
F4SP-1E/26	1,1	1,5	98	32	882	9,0
F4SP-1E/33	1,5	2	98	32	1036	11,6
F4SP-1E/34	1,5	2	98	32	1058	12,0

# PERFORMANCE CURVES 4" HYDRA SERIES



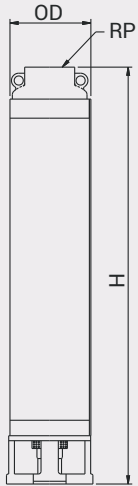
Refer General Information for performance curve conditions and for more details.  
 Curve tolerance according to ISO : 9906, Grade - 3B

## DIMENSIONS & WEIGHT 4" HYDRA SERIES

Nominal Diameter : 4"

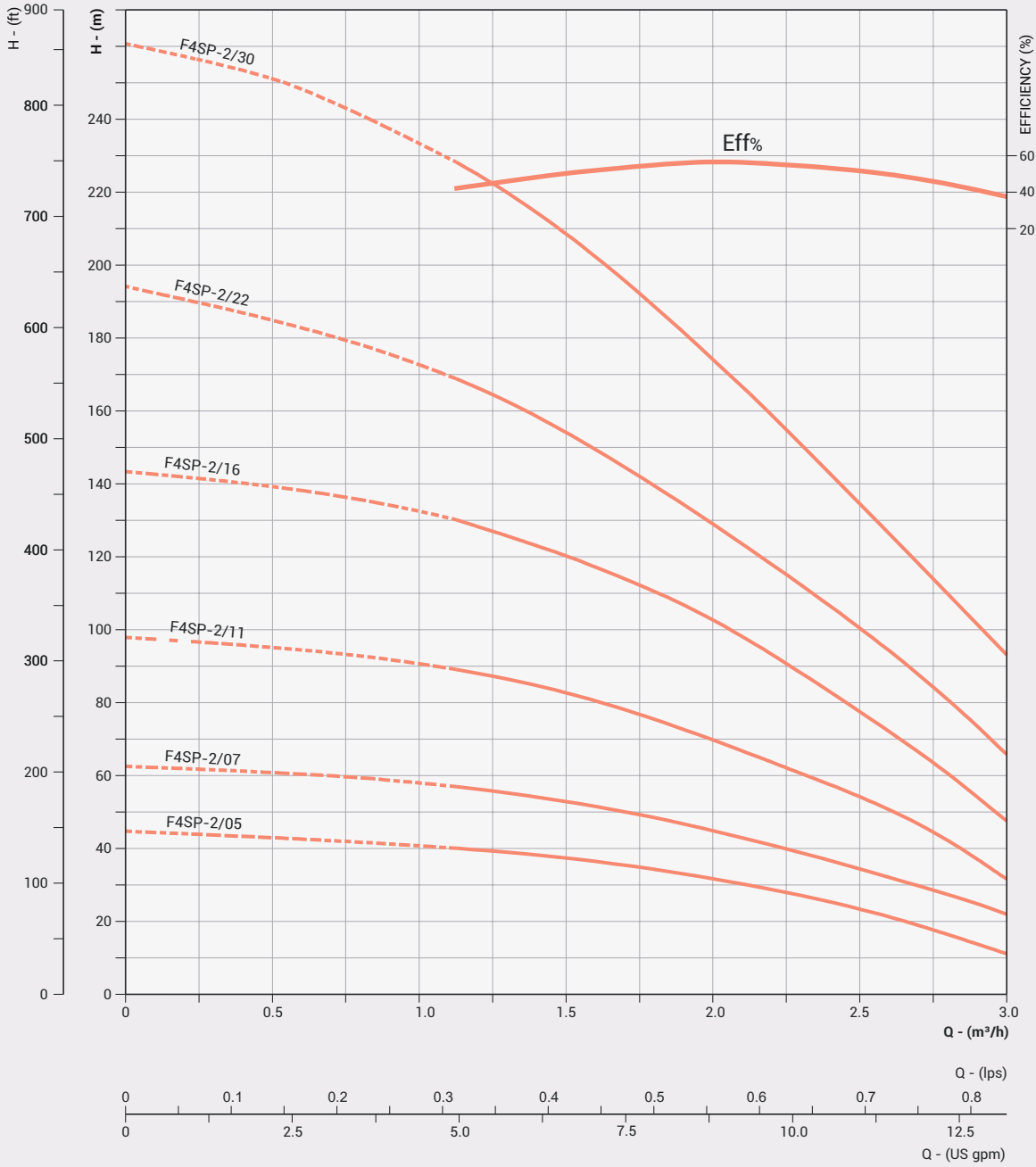
Nominal Flow : 2m<sup>3</sup>/h

Outlet Size : 1 1/4"



PUMP MODEL	REQUIRED MOTOR POWER		DIMENSIONS (mm)			APPROX NETT, WEIGHT (kg)
	kW	HP	#OD	RP	H	
F4SP-2/05	0,37	0,5	98	32	354	2,8
F4SP-2/07	0,55	0,75	98	32	400	3,1
F4SP-2/11	0,75	1	98	32	493	3,8
F4SP-2/16	1,1	1,5	98	32	651	6,5
F4SP-2/22	1,5	2	98	32	790	7,7
F4SP-2/30	2,2	3	98	32	1006	10,5

# PERFORMANCE CURVES 4" HYDRA SERIES



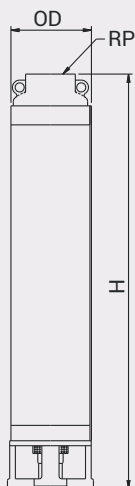
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 Curve tolerance according to ISO : 9906, Grade - 3B

## DIMENSIONS & WEIGHT 4" HYDRA SERIES

Nominal Diameter : 4"

Nominal Flow : 3m<sup>3</sup>/h

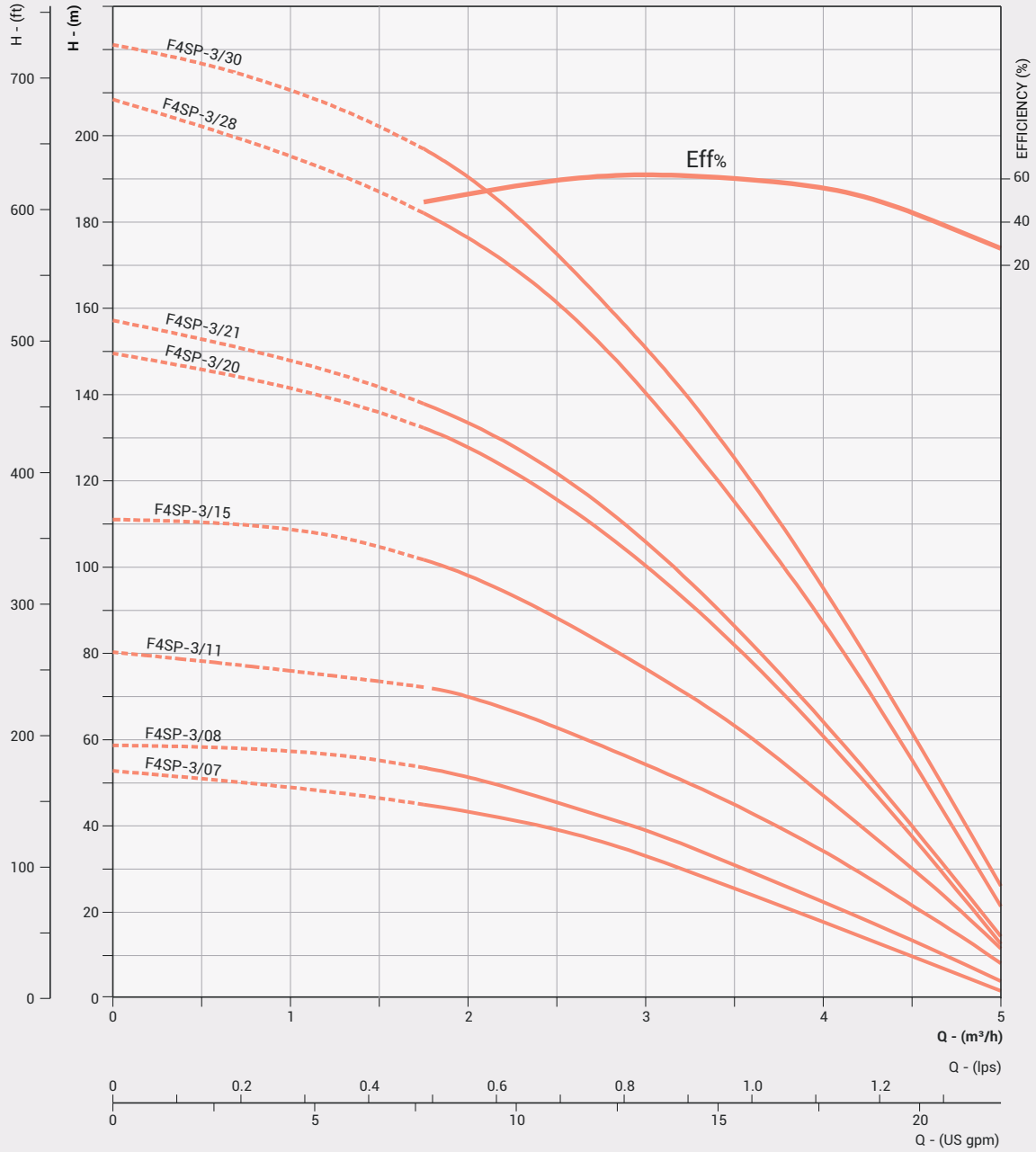
Outlet Size : 1 1/4"



PUMP MODEL	REQUIRED MOTOR POWER		DIMENSIONS (mm)			APPROX NETT. WEIGHT (kg)
	kW	HP	#OD	RP	H	
F4SP-3/07	0,55	0,75	98	32	426	2,8
F4SP-3/08	0,55	0,75	98	32	453	3,4
F4SP-3/11	0,75	1	98	32	533	3,9
F4SP-3/15	1,1	1,5	98	32	671	4,9
F4SP-3/20	1,5	2	98	32	818	7,9
F4SP-3/21	1,5	2	98	32	844	8,2
F4SP-3/28	2,2	3	98	32	1063	10,9
F4SP-3/30	2,2	3	98	32	1117	11,7

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# PERFORMANCE CURVES 4" HYDRA SERIES



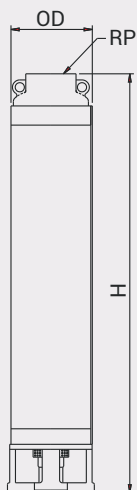
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## DIMENSIONS & WEIGHT 4" HYDRA SERIES

Nominal Diameter : 4"

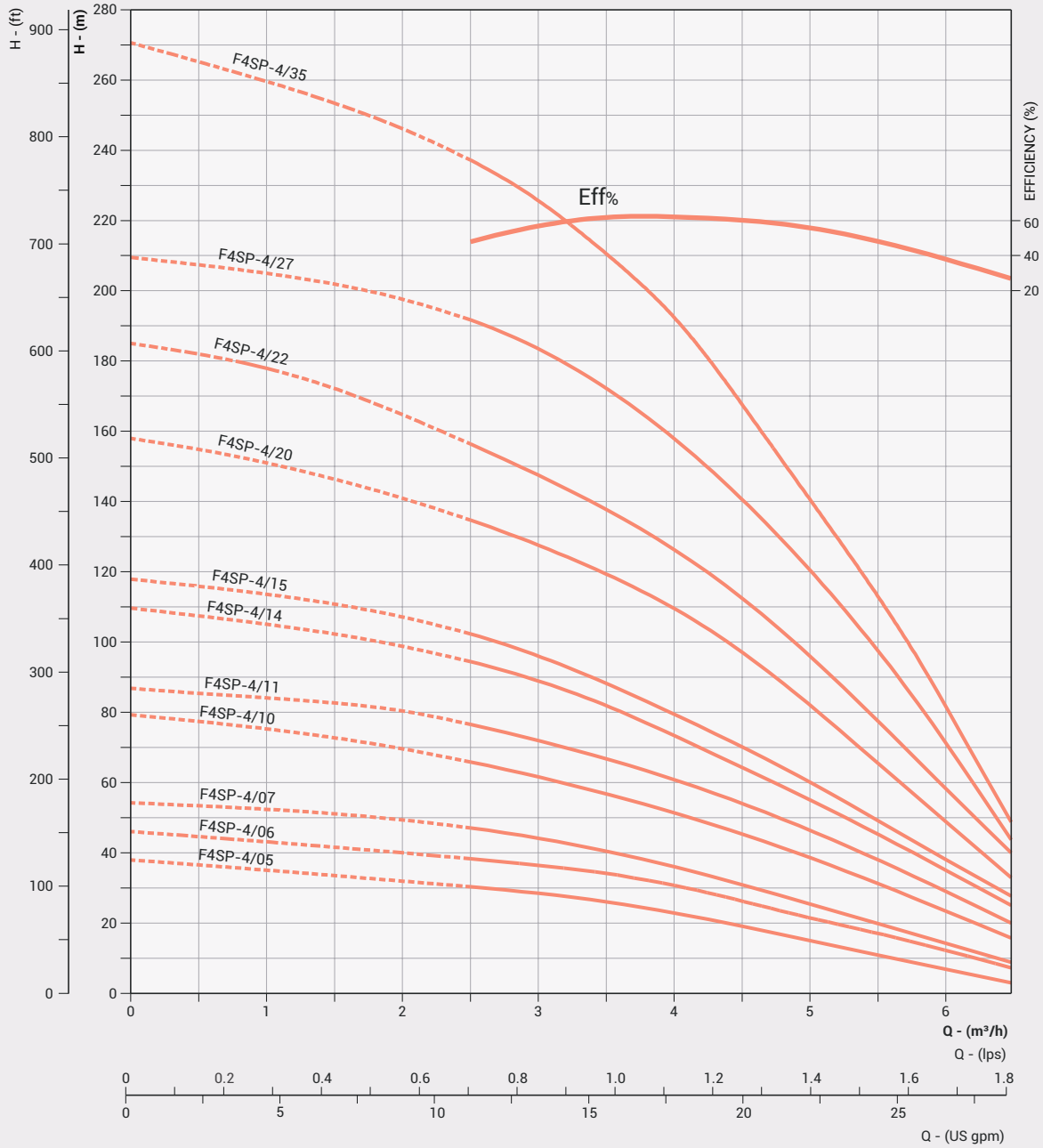
Nominal Flow : 4m<sup>3</sup>/h

Outlet Size : 1 1/4"



PUMP MODEL	REQUIRED MOTOR POWER		DIMENSIONS (mm)			APPROX NETT. WEIGHT (kg)
	kW	HP	#OD	RP	H	
F4SP-4/05	0,55	0,75	98	32	383	1,9
F4SP-4/06	0,55	0,75	98	32	412	2,4
F4SP-4/07	0,75	1	98	32	441	3,3
F4SP-4/10	1,1	1,5	98	32	528	4,0
F4SP-4/11	1,1	1,5	98	32	557	4,4
F4SP-4/14	1,5	2	98	32	674	5,6
F4SP-4/15	1,5	2	98	32	703	6,0
F4SP-4/20	2,2	3	98	32	860	8,0
F4SP-4/22	2,2	3	98	32	918	8,8
F4SP-4/27	3	4	98	32	1093	10,8
F4SP-4/35	3,7	5	98	32	1325	14,0

# PERFORMANCE CURVES 4" HYDRA SERIES



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 Curve tolerance according to ISO : 9906, Grade - 3B

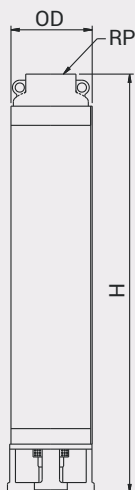


## DIMENSIONS & WEIGHT 4" HYDRA SERIES

Nominal Diameter : 4"

Nominal Flow : 5m<sup>3</sup>/h

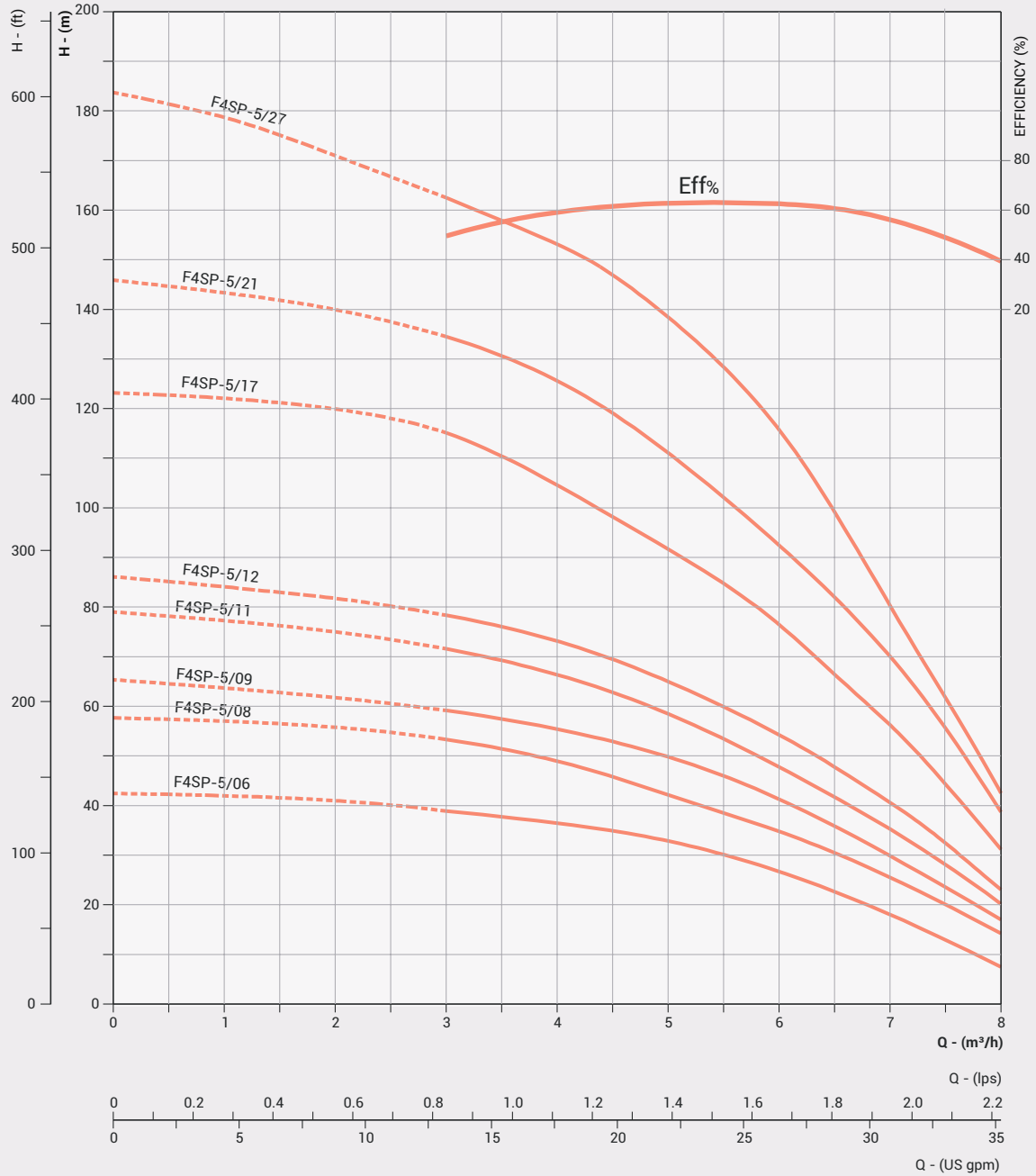
Outlet Size : 1 ½"



PUMP MODEL	REQUIRED MOTOR POWER		DIMENSIONS (mm)			APPROX NETT. WEIGHT (kg)
	kW	HP	#OD	RP	H	
F4SP-5/06	0,75	1	98	40	459	3,4
F4SP-5/08	1,1	1,5	98	40	533	3,0
F4SP-5/09	1,1	1,5	98	40	570	3,5
F4SP-5/11	1,5	2	98	40	643	4,3
F4SP-5/12	1,5	2	98	40	680	4,8
F4SP-5/17	2,2	3	98	40	907	6,6
F4SP-5/21	3,0	4	98	40	1054	8,2
F4SP-5/27	3,7	5	98	40	1306	10,5

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# PERFORMANCE CURVES 4" HYDRA SERIES



\* These Models are available in Type - 'V' construction as well.

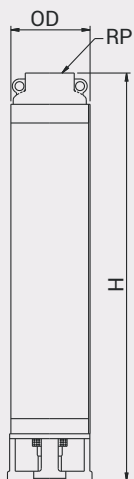
Refer General Information for performance curve conditions and for more details.  
Curve tolerance according to ISO : 9906, Grade - 3B

## DIMENSIONS & WEIGHT 4" HYDRA SERIES

Nominal Diameter : 4"

Nominal Flow : 8m<sup>3</sup>/h

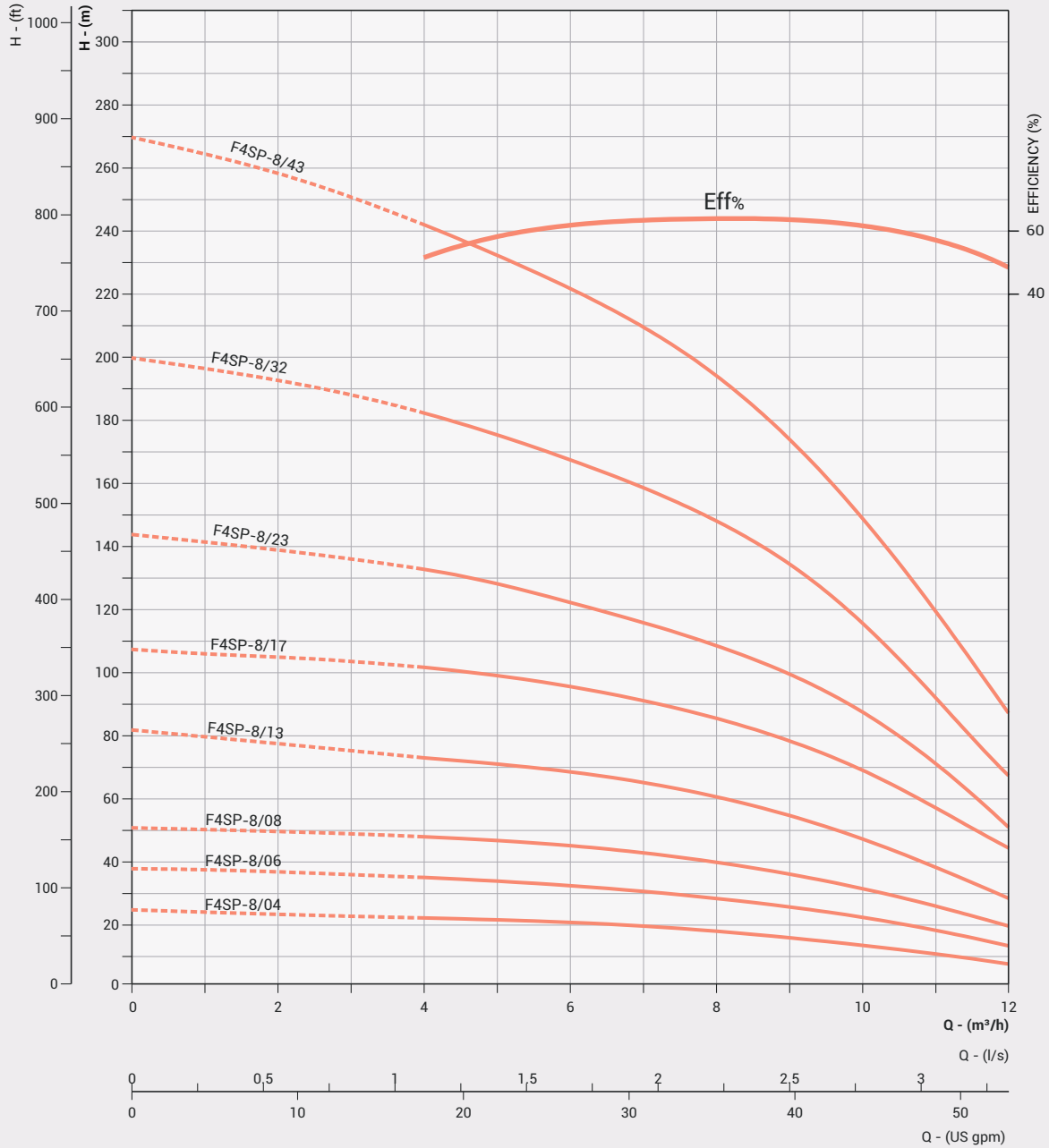
Outlet Size : 2"



PUMP MODEL	REQUIRED MOTOR POWER		DIMENSIONS (mm)			APPROX NETT. WEIGHT (kg)
	kW	HP	#OD	RP	H	
F4SP-8/04	0,75	1,0	98	50	374	3,8
F4SP-8/06	1,1	1,5	98	50	436	4,4
F4SP-8/08	1,5	2,0	98	50	498	3,2
F4SP-8/13	2,2	3,0	98	50	653	6,5
F4SP-8/17	3,0	4,0	98	50	807	7,9
F4SP-8/23	4,0	5,5	98	50	993	10,0
F4SP-8/32	5,5	7,5	98	50	1302	13,0
F4SP-8/43	7,5	10	98	50	1643	17,5

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# PERFORMANCE CURVES 4" HYDRA SERIES



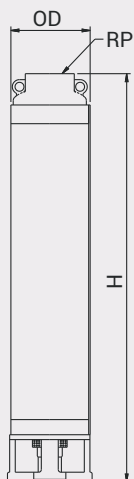
Refer General Information for performance curve conditions and for more details.  
 Curve tolerance according to ISO : 9906, Grade - 3B

## DIMENSIONS & WEIGHT 4" HYDRA SERIES

Nominal Diameter : 4"

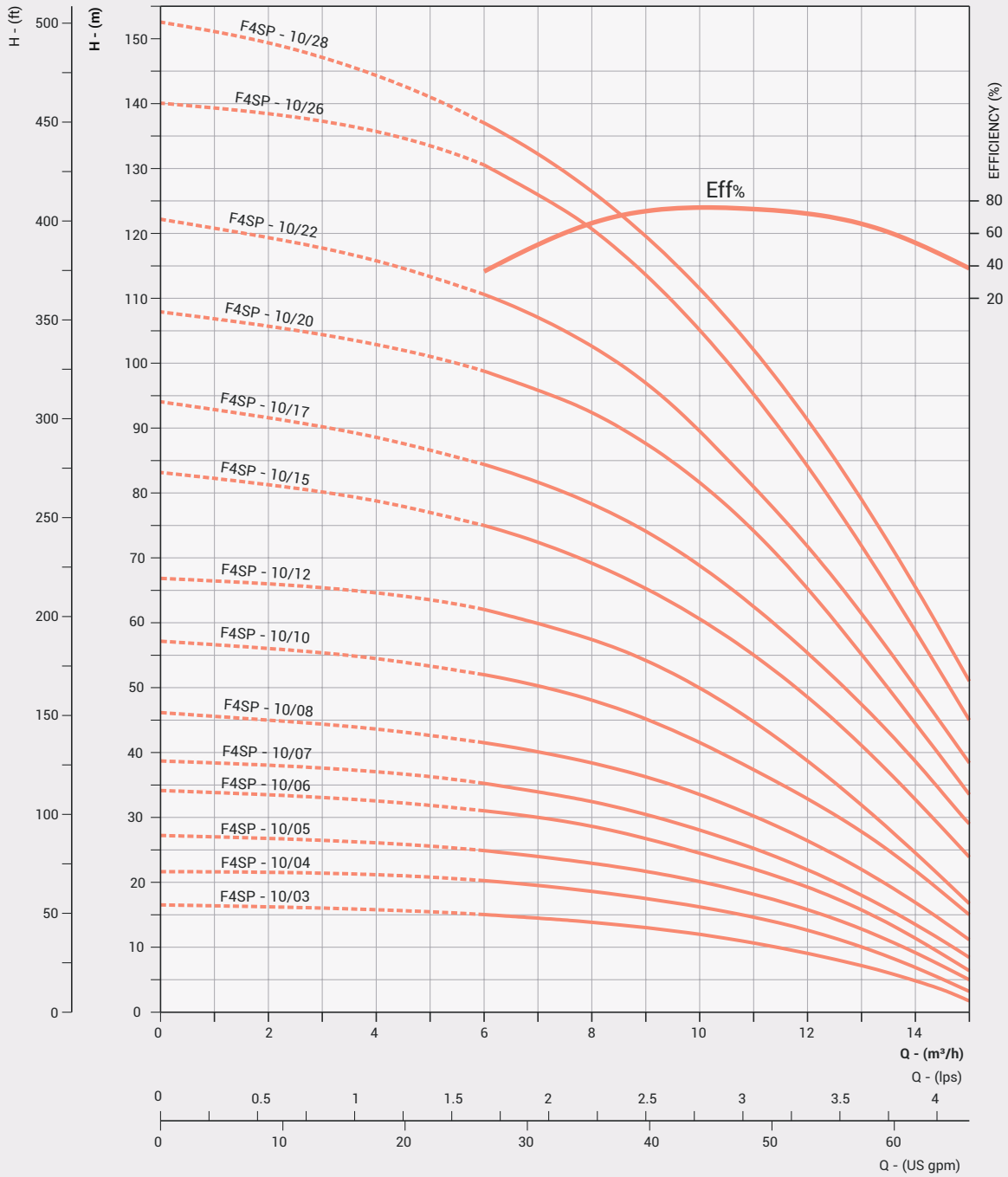
Nominal Flow : 10m<sup>3</sup>/h

Outlet Size : 2"



PUMP MODEL	REQUIRED MOTOR POWER		DIMENSIONS (mm)			APPROX NETT. WEIGHT (kg)
	kW	HP	#OD	RP	H	
F4SP-10/03	0,75	1	98	50	448	2,7
F4SP-10/04	0,75	1	98	50	450	3,0
F4SP-10/05	1,1	1,5	98	50	562	3,8
F4SP-10/06	1,1	1,5	98	50	570	4,5
F4SP-10/07	1,5	2	98	50	676	5,3
F4SP-10/08	1,5	2	98	50	690	6,0
F4SP-10/10	2,2	3	98	50	790	7,6
F4SP-10/12	2,2	3	98	50	904	9,1
F4SP-10/15	3	4	98	50	1075	11,3
F4SP-10/17	3	4	98	50	1189	12,8
F4SP-10/20	4	5,5	98	50	1360	15,0
F4SP-10/22	4	5,5	98	50	1474	16,6
F4SP-10/26	5,5	7,5	98	50	1702	19,6
F4SP-10/28	5,5	7,5	98	50	1816	21,1

# PERFORMANCE CURVES 4" HYDRA SERIES



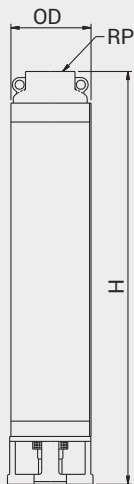
Refer General Information for performance curve conditions and for more details.  
 Curve tolerance according to ISO : 9906, Grade - 3B

## DIMENSIONS & WEIGHT 4" HYDRA SERIES

Nominal Diameter : 4"

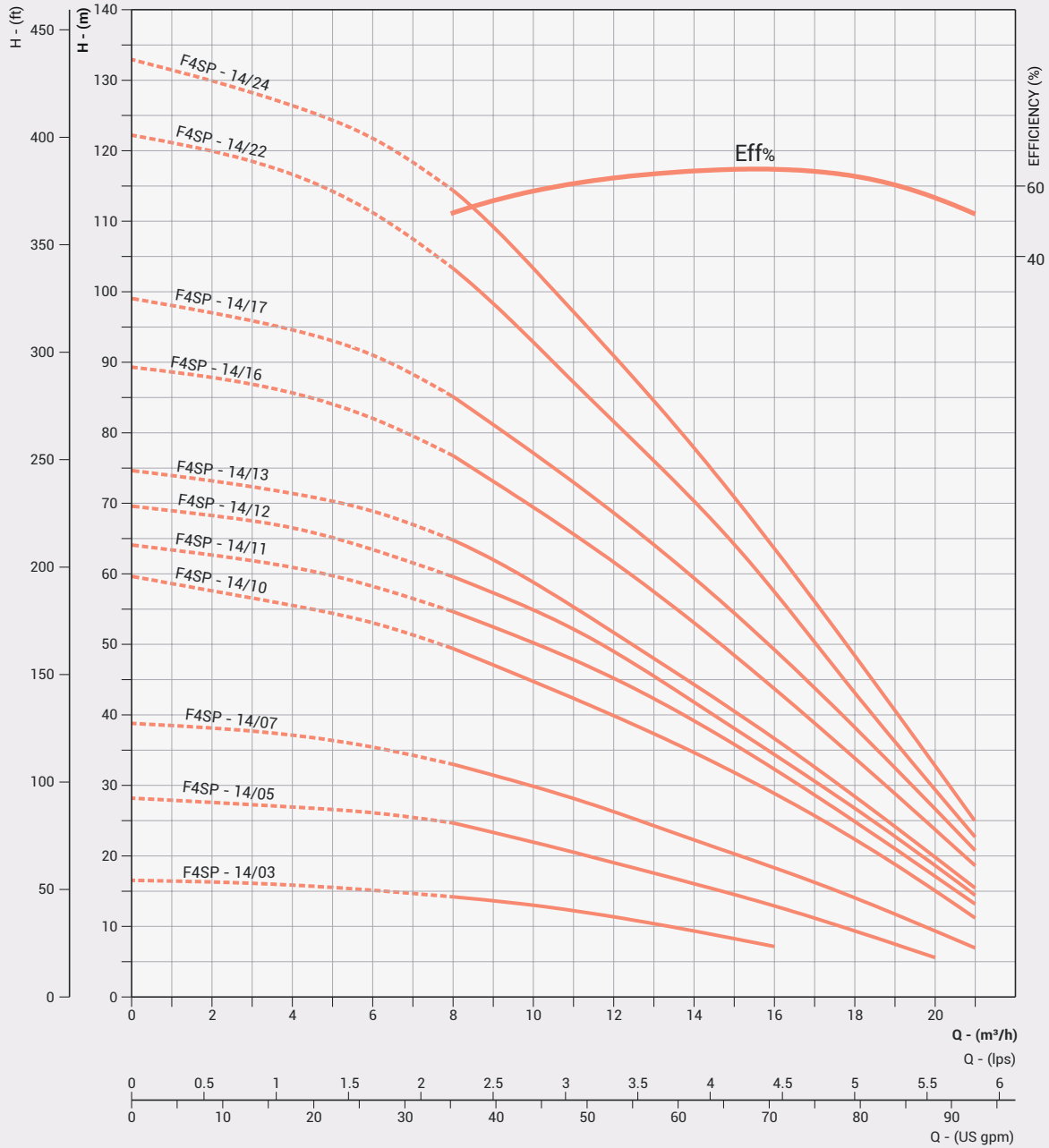
Nominal Flow : 14m<sup>3</sup>/h

Outlet Size : 2"



PUMP MODEL	REQUIRED MOTOR POWER		DIMENSIONS (mm)			APPROX NETT. WEIGHT (kg)
	kW	HP	#OD	RP	H	
F4SP-14/03	0,75	1	98	50	463	2,6
F4SP-14/05	1,1	1,5	98	50	610	4,3
F4SP-14/07	1,5	2	98	50	775	6,0
F4SP-14/10	2,2	3	98	50	1009	8,5
F4SP-14/11	2,2	3	98	50	1087	9,7
F4SP-14/12	3,0	4	98	50	1165	10,2
F4SP-14/13	3,0	4	98	50	1243	11,0
F4SP-14/16	3,7	5	98	50	1477	13,6
F4SP-14/17	3,7	5	98	50	1555	14,4
F4SP-14/22	5,5	7,5	98	50	1945	29,0
F4SP-14/24	5,5	7,5	98	50	2101	33,0

# PERFORMANCE CURVES 4" HYDRA SERIES



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 Curve tolerance according to ISO : 9906, Grade - 3B

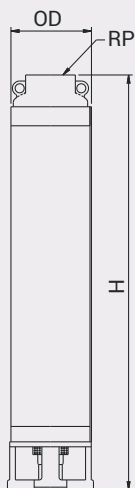


## DIMENSIONS & WEIGHT 4" HYDRA SERIES

Nominal Diameter : 4"

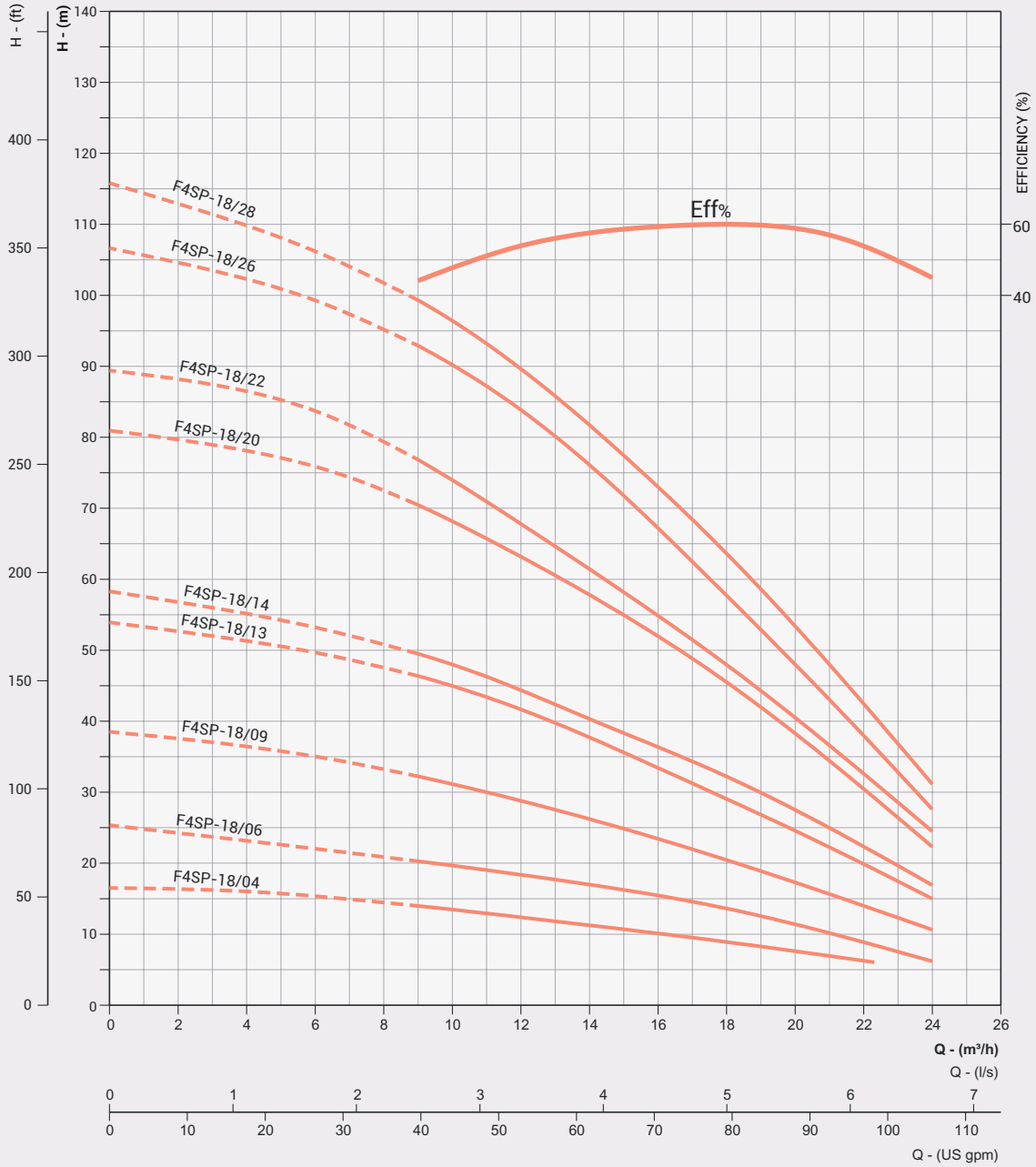
Nominal Flow : 18m<sup>3</sup>/h

Outlet Size : 2"



PUMP MODEL	REQUIRED MOTOR POWER		DIMENSIONS (mm)			APPROX NETT. WEIGHT (kg)
	kW	HP	#OD	RP	H	
F4SP-18/04	1,1	1,5	98	50	407	3,8
F4SP-18/06	1,5	2,0	98	50	648	5,0
F4SP-18/09	2,2	3,0	98	50	860	6,5
F4SP-18/13	3,7	5,0	98	50	1142	9,8
F4SP-18/14	4,0	5,5	98	50	1213	10,5
F4SP-18/20	5,5	7,5	98	50	1637	15,5
F4SP-18/22	5,5	7,5	98	50	1778	18,0
F4SP-18/26	7,5	10,0	98	50	2060	19,1
F4SP-18/28	7,5	10,0	98	50	2201	22,0

# PERFORMANCE CURVES 4" HYDRA SERIES



Refer General Information for performance curve conditions and for more details.  
Curve tolerance according to ISO : 9906, Grade - 3B