



Technical Catalogue



FSNSCL-X Series

Centrifugal (Sanitary Motor)

FSNSCL-X SERIES

SERIES CENTRIFUGAL PUMP

Solution for high efficiency, low noise, stainless steel motor, IP69 proof, diving, clamp pump head, easy to clean, whole machine washable, simple and economical maintenance, high purity



Flugo FSNSCL-X series centrifugal pump is upgraded from SKS in ss whole, including motor, not only optimize the internal structure, such as impeller design, dead angle treatment, mechanical seal is designed as pressure balance and completely in flushing area, but also optimize external sanitation of the pump, which makes internal absolute sanitation and reduce external dead angle. Since there is no dead angle area, it is easy to be cleaned by CIP and sterilized by SIP. In addition, FSNSCL-X series pump, has kept the maximum flexibility of combined applications, for example, the pump outlet angle can be arbitrarily adjusted from 0° to 360°, Pump cover is connected by a clamp, which keeps high efficiency in the maintenance of the pump and replacement of mechanical seal without special tool, and reduces the highly professional requirements to maintenance personnel. Therefore, the FSNSCL-X series centrifugal pump has achieved the goal of high efficiency, hygiene, high reliability and low cost, making it a high performance pump.

Technical Specifications

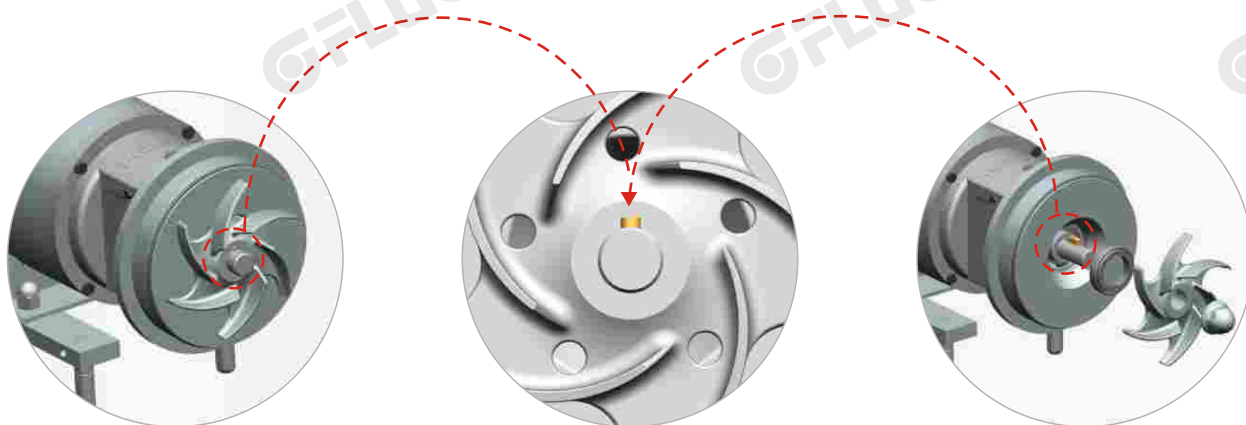
Flow	120m³/h		
Head	70M		
Temperature	From -20℃ to 140℃		
Power	0.37KW-22KW		
Material	304 /316L, 1.4301/1.4404, ASME BPE 316L, 1.4435 BN2 Fe≤0.5%	Dual-phase steel 2205,	Hastelloy alloy C276
Surface treatment	≤ Ra0.8 μm, ≤ Ra0.6 μm, EP≤ Ra0.4 μm		
Mechanical seal	Single mechanical seal, double mechanical seal, details see configuration table		
Inlet/Outlet Connection	Thread, Clamp, Flange, Aseptic flange		
Certification	3-A-02-12(N.O.1579); MD/06/42-EC(N.O.70521616101-00); FDA 177.2600; USP CLASS-II; EG/VO1935/2004		

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Very simple maintenance, no special tools required, no professionals required



Technical Advantages

- ◆ Maintenance disassembly and installation can be completed without professional staff and special tools.
- ◆ Initial use of installation debugging, even if a short reverse rotation will not be damaged.
- ◆ Impeller and shaft are connected by keyway; impeller and mechanical seal rotating ring are connected by pin; mechanical seal static ring and pump body are connected by special-shaped flange.
- ◆ Compatible with single and double machine seal, only need to change machine seal.

FSNSCL-X SERIES

CENTRIFUGAL PUMP VARIOUS CONFIGURATIONS



Clamp Inlet/Outlet



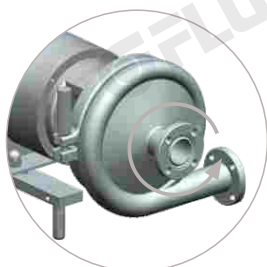
Thread Inlet/Outlet



Union Inlet/Outlet



Aseptic Flange (DIN 11864)
Inlet/Outlet



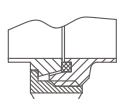
The exit can be adjusted to any angle -0-360°



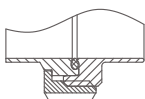
Pump Inlet/outlet Connection Standard

Connection: Threaded, Clamped, Flanged, Aseptic flange, KF, etc.

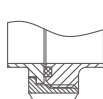
Standard: DIN SMS ISO IDF RJT ASME BPE 3A I-line.



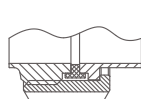
DIN11851



DIN11864-1-A



SMS



ISO/IDF



RJT



DIN11864-2



Flange



DIN11864-3



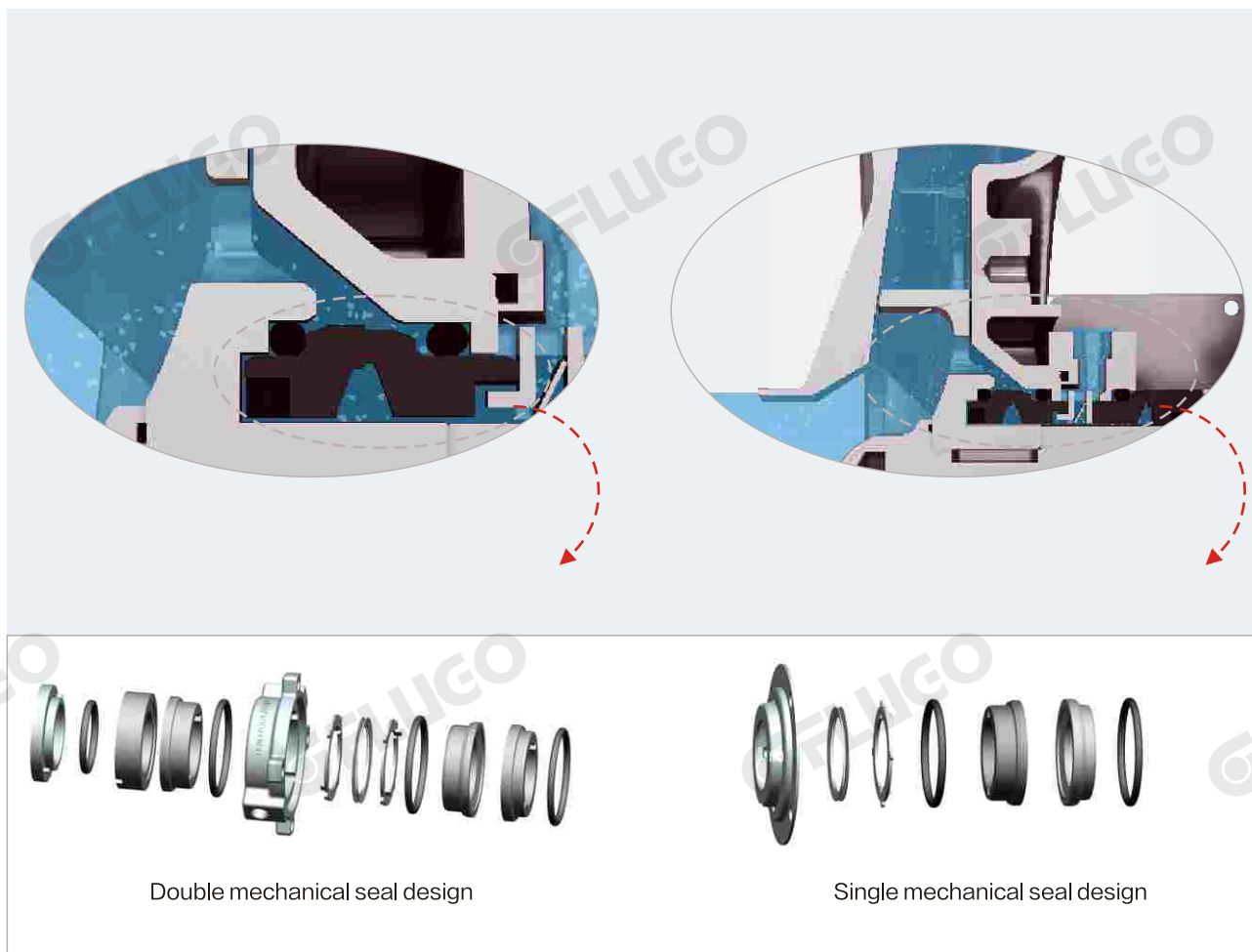
DIN32676
ISO2852



ISO2861

FSNSCL-X SERIES

CENTRIFUGAL PUMP MECHANICAL SEAL DESIGN



Mechanical Seal Features

Flugo FSNSCL-X series centrifugal pump mechanical seal is researched and developed together with European Swedish famous company. The mechanical seal is designed with pressure balance and super long working life, can be disassembled and maintained easily without special tools. The sanitary purity is according to EU EHEDG, USA 3-A-02-12, FDA1772600 and so on, and has lots of configuration.

Mechanical Seal Configuration

1)SIC/C/EPDM	Standard
2)SIC/C/FKM	Optional
3)SIC/C/HNBR	
4)SIC/SIC/EPDM	
5)SIC/SIC/FKM	
6)SIC/SIC/HNBR	
7)TC/TC/EPDM	
8)TC/TC/FKM	Optional
9)TC/TC/HNBR	

Note: Above configurations is suitable for single and double mechanical seal

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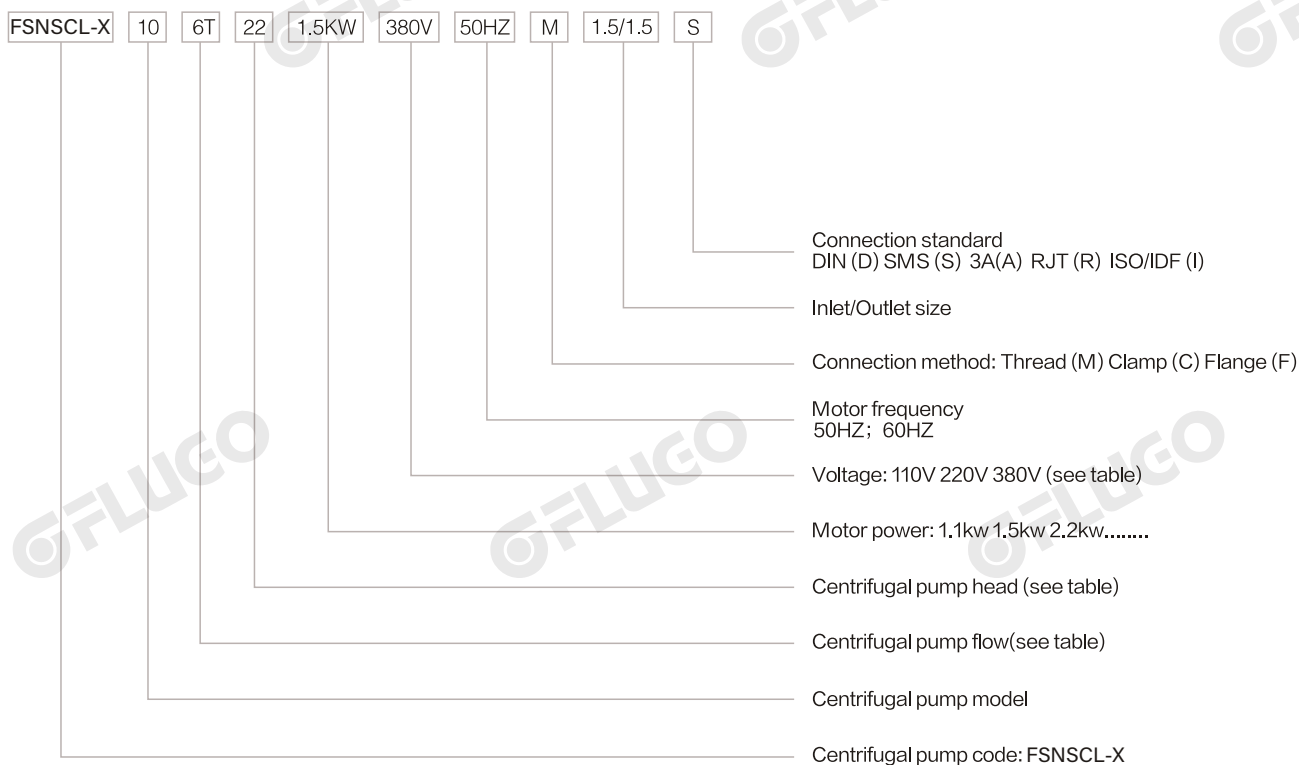
CENTRIFUGAL PUMP MECHANICAL SEAL DESIGN



The FSNSCL-X series is equipped with a clamp-type pump head connection, which is very flexible for disassembly, repair, pipe connection and various application combinations.

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CENTRIFUGAL PUMP MODEL INSTRUCTION



For example:
FSNSCL-X-10-6T-22-1.5KW-380V-50HZ-M-1.5"/1.5"-S

FSNSCL-X SERIES

CENTRIFUGAL PUMP SELECTION TABLE

Selection table

Model	Power	(m³/h) Flow	(M) Head	Inlet/Outlet	(KG)
FSNSCL-X-10	1,1KW	3	22	1.5"/1.5"	36,1
	1,1KW	5	22		36,1
	1,5KW	3	22		45,1
	1,5KW	5	22		45,1
	1,5KW	8	22		45,1
	1,5KW	9	22		45,1
	1,5KW	12	20		45,1
	1,5KW	15	18		45,1
	2,2KW				45,8
	2,2KW	18	16		45,8
FSNSCL-X-15	1,5KW	3	28	2"/1.5"	48,5
	1,5KW	5	28		48,5
	1,5KW	8	26		48,5
	2,2KW				48,5
	2,2KW	10	25		48,5
	2,2KW	15	22		48,5
	2,2KW	18	18		48,5
	3,0KW				58
	2,2KW	20	16		48,5
	3,0KW				58
FSNSCL-X-20-1	2,2KW	5	36	2"/2"	30,0
	3,0KW				60,0
	3,0KW	10	36		60,0
	4,0KW				70,4
	4,0KW	15	35		70,4
	4,0KW	20	33		70,4
	4,0KW	25	30		70,4
	5,5KW				112,0
	5,5KW	30	30	2.5"/2"	112,0
	5,5KW	38	22		112,0
FSNSCL-X-20-2	5,5KW	20	40	2"/2"	111,0
	5,5KW	25	37		111,0
	5,5KW	30	36	2.5"/2"	111,0
	5,5KW	36	32		111,0
	7,5KW	40	30		111,0
	7,5KW	45	28		111,0
FSNSCL-X-25	4,0KW	5	50	2.5"/1.5"	70,3
	5,5KW	10	50		111,0
	5,5KW	15	48		111,0
	5,5KW	20	45		111,0

FSNSCL-X SERIES

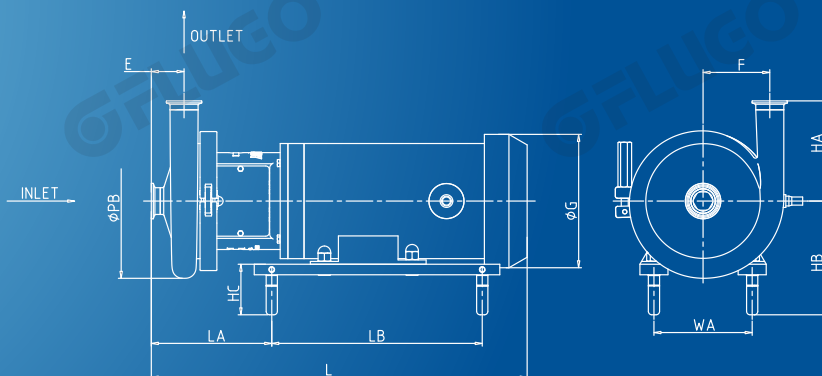
CENTRIFUGAL PUMP SELECTION TABLE

Selection table

Model	Power	(m³/h) Flow	(M) Head	Inlet/Outlet	(KG)
FSNSCL-X-30	5.5KW	10	60	2.5"/1.5"	111
	5.5KW	15	55		111
	7.5KW	20	50		112
	7.5KW	25	45		112
	7.5KW	30	40		112
FSNSCL-X-35-1	11KW	10	70	3"/1.5"	146
	11KW	15	65		146
	11KW	20	65		146
	11KW	25	60		146
	11KW	30	60		146
	11KW	35	55		146
	15KW	40	50		159
	15KW	45	50		159
	15KW	50	45		159
FSNSCL-X-35-2	15KW	20	70	3"/1.5"	159
	15KW	25	70		159
	15KW	30	70		159
	15KW	35	65		159
	15KW	40	65		159
	18.5KW	45	60		174
	18.5KW	50	55		174
FSNSCL-X-40-1	11KW	45	42	3"/2.5"	143
	11KW	50	42		143
	15KW	60	40		156
	15KW	65	40		156
	15KW	70	38		156
	15KW	80	35		156
	15KW	90	33		156
	18.5KW	100	30		172
	18.5KW	110	28		172
FSNSCL-X-40-2	15KW	50	50	3"/2.5"	164
	15KW	60	48		164
	18.5KW	70	47		189
	18.5KW	80	46		189
	22KW	85	45		219
	22KW	90	44		219
	22KW	100	43		219
	22KW	110	40		219
	22KW	120	35		219

FSNSCL-X SERIES

CENTRIFUGAL PUMP DATA CHART

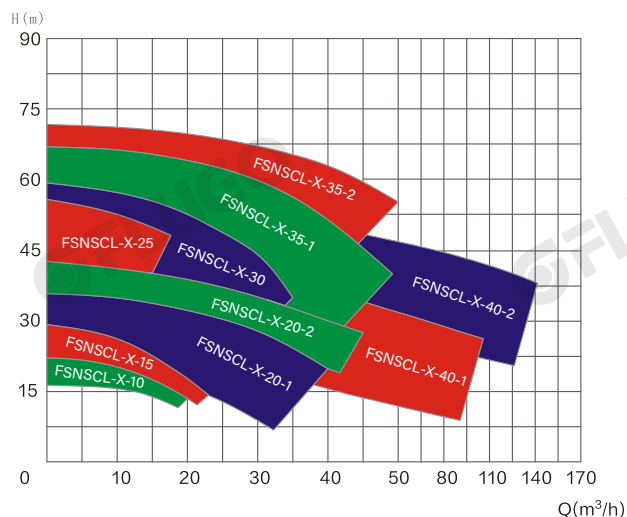


Model	Power (KW)	Pump head dimension		Assembly dimension						Inlet / outlet connection											
		Inlet/Outlet	PB	F	LB	G	HB	HC	WA	SMS (Thread)				INCH (Clamp)				DIN (Thread)			
										E	LA	HA	L	E	LA	HA	L	E	LA	HA	L
FSNSCL-X10	1.1kw	1.5"/1.5"	220	93	300	165	152	72	125	51	119	150	484	43	111	143	476	51	119	150	484
	1.5-2.2KW	1.5"/1.5"	220	93	300	190	162	72	140	51	170	150	529	43	162	143	521	51	170	150	529
FSNSCL-X15	1.5-2.2KW	2"/1.5"	265	114	300	190	162	72	140	45	165	180	529	38	157	173	521	46	166	180	530
	3KW	2"/1.5"	265	114	300	196	172	72	160	45	183	180	585	38	176	173	577	46	184	180	586
FSNSCL-X20-1	3KW	2"/2"	265	109	300	196	172	72	160	41.5	176	200	579	34	168	193	572	42.5	177	201	580
	4KW	2"/2"	265	109	350	240	184	72	190	41.5	155	200	610	34	148	193	603	42.5	156	201	611
FSNSCL-X20-2	5.5-7.5KW	2"/2"	265	109	450	240	204	72	216	41.5	182	200	760	34	174	193	752	42.5	183	201	761
	5.5-7.5KW	2.5"/2"	265	109	450	240	204	72	216	45.5	186	200	764	34	174	193	752	44.5	185	201	763
FSNSCL-X25	4KW	2.5"/1.5"	322	142	350	240	184	72	190	44.5	152	210	607	33	141	203	596	43.5	151	210	606
	5.5-7.5KW	2.5"/1.5"	322	142	450	240	204	72	216	44.5	174	210	752	33	163	203	741	43.5	173	210	751
FSNSCL-X30	5.5-7.5KW	2.5"/1.5"	322	142	450	240	204	72	216	44.5	174	210	752	33	163	203	741	43.5	173	210	751
FSNSCL-X35-1	11-15KW	3"/1.5"	363	162	550	330	232	72	254	49.5	202	235	877	37	189	228	786	49.5	202	235	877
	15KW	3"/1.5"	363	162	550	330	232	72	254	49.5	202	235	877	37	189	228	786	49.5	202	235	877
FSNSCL-X35-2	18.5KW	3"/1.5"	363	162	550	330	232	72	254	49.5	202	235	877	37	189	228	791	49.5	202	235	877
	11-15KW	3"/2.5"	328	137	550	330	232	72	254	62	219	239	892	60	207	228	880	62	219	238	892
FSNSCL-X40-1	18.5KW	3"/2.5"	328	137	550	330	232	72	254	62	219	239	892	60	207	228	880	62	219	238	892
	22KW	3"/2.5"	328	137	550	355	252	72	279	62	233	239	913	60	221	228	901	62	233	238	913

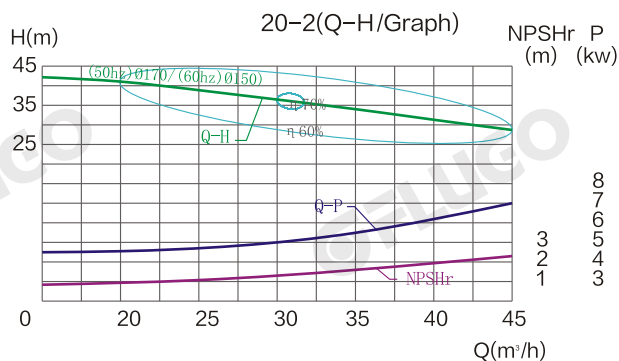
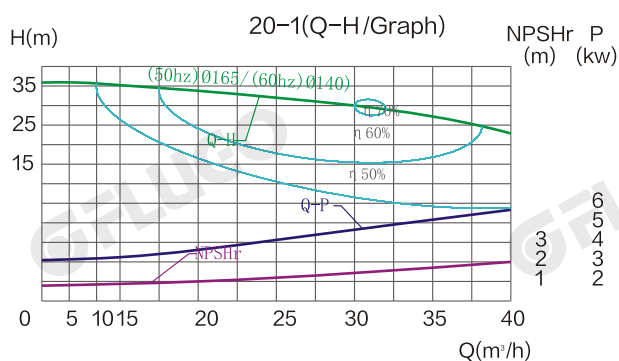
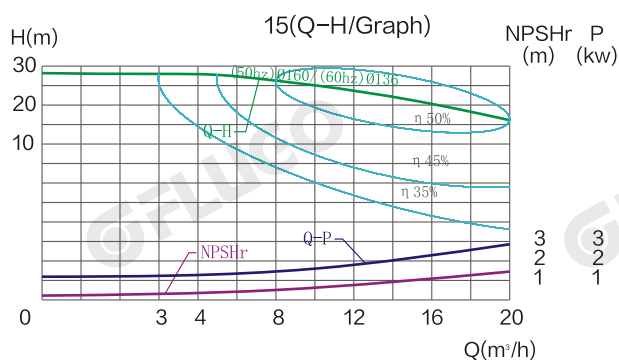
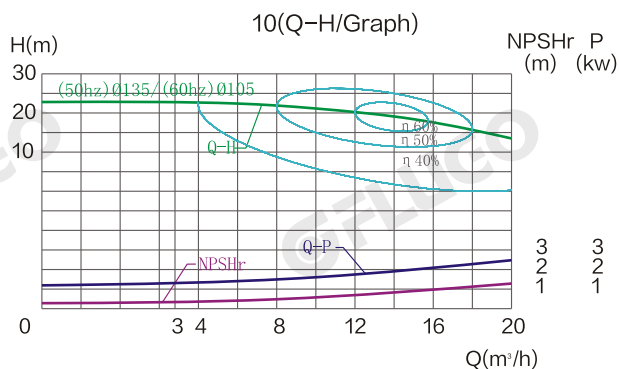
Note: The relevant dimensions of the above data diagrams are not regarded as the final basis of the actual object. Flugo reserves the right to update the data without further notice.

FSNSCL-X SERIES

CENTRIFUGAL PUMP GRAPH



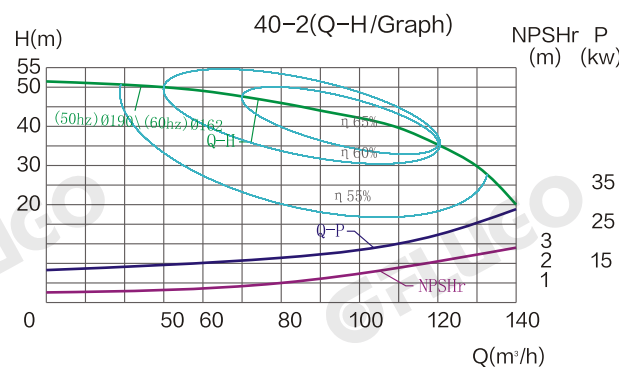
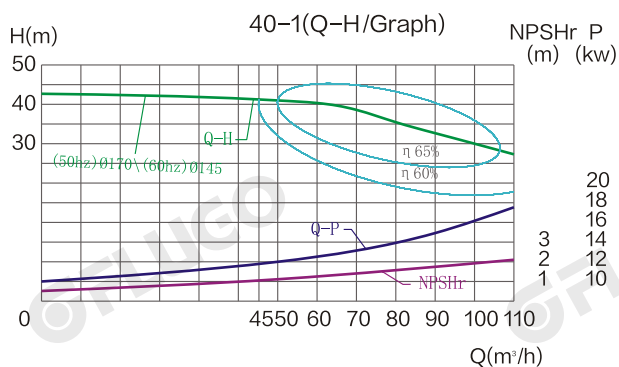
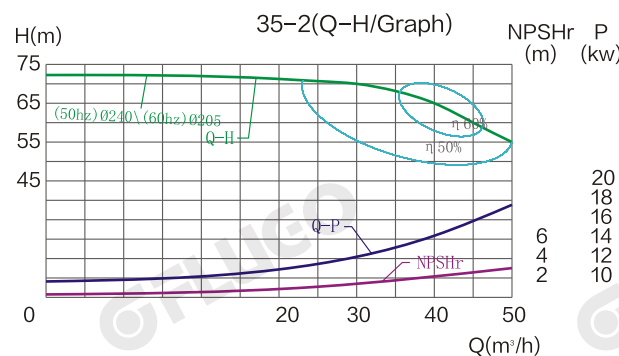
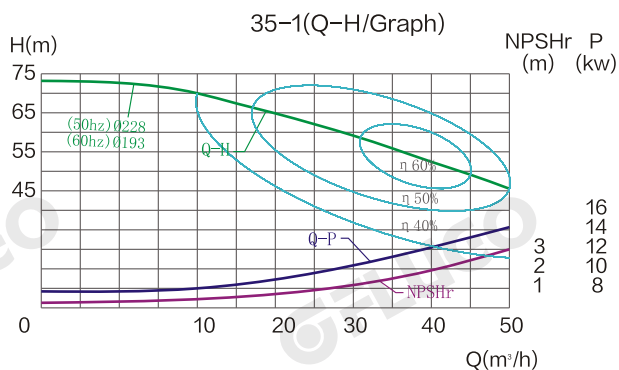
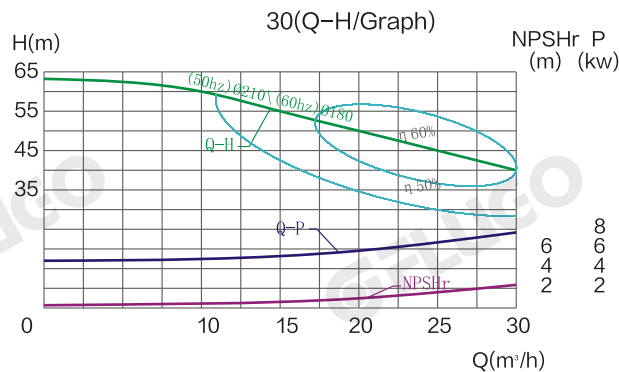
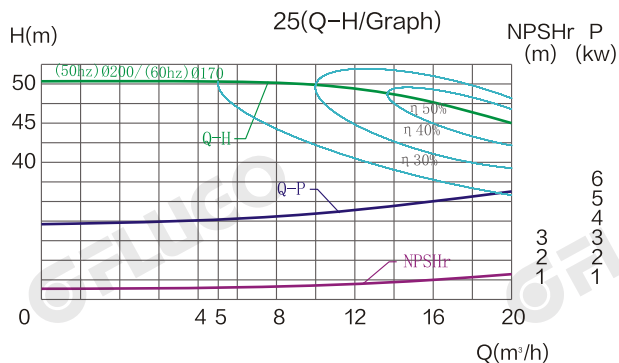
Testing condition:
medium water, temperature 20 °C, impeller speed 2900 RPM
(This graph also applies to motor 60HZ, impeller speed 3600RPM) Q-Flow rate (m^3/H), H-head(meter), P-power (KW), η % pump efficiency



Testing condition: medium water, temperature 20 °C, impeller speed 2900 RPM (This graph also applies to motor 60HZ, impeller speed 3600RPM) Q-Flow rate (m^3/H), H-head (meter), P-power (KW), η % pump efficiency

FSNSCL-X SERIES

CENTRIFUGAL PUMP GRAPH



Testing condition: medium water, temperature 20 °C, impeller speed 2900 RPM (This graph also applies to motor 60HZ, impeller speed 3600RPM) Q-Flow rate (m³/h), H-head (meter), P-power (KW), η % pump efficiency



FSNSCL-X Series - Centrifugal Pump

