



End Suction Volute Pump

Type FSA

APPLICATIONS

- Industrial use
- Water supply
- Hot and cold water circulation
- For swimming pool
- Sprinkling
- Air-conditioning
- Fire-fighting application

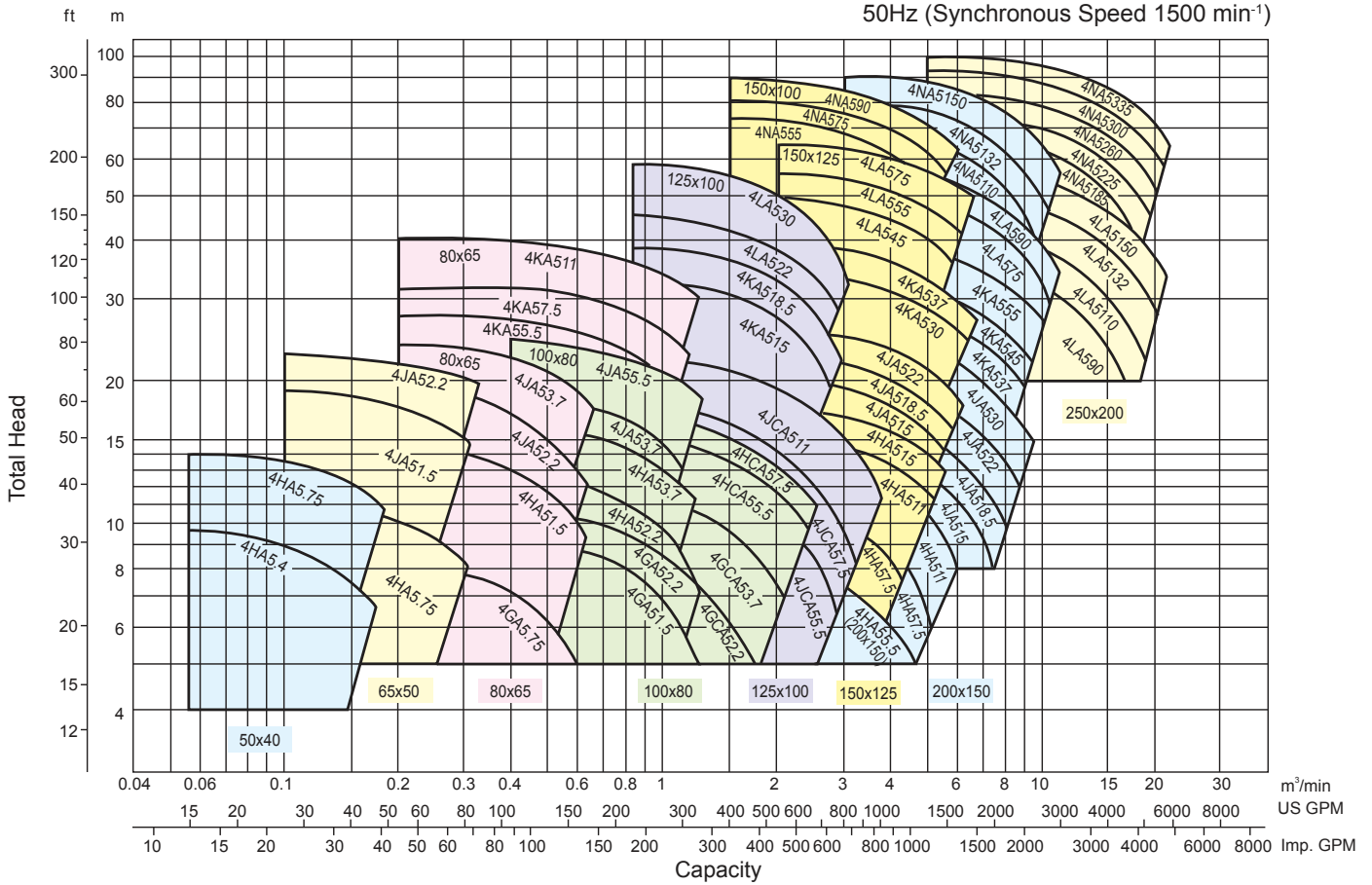
FEATURES

- Easy maintenance B.P.O (Back Pull Out) feature allows all rotating element to be removed without disconnecting the suction and discharge pipe work.
- Higher operating efficiency over a wider range of capacities, lowers operational cost.
- Non-overload design to ensure stable performance for all applications.
- Wide range application with flow capacity up to 22 m³/min.
- Higher working pressure up to 16 Bar.

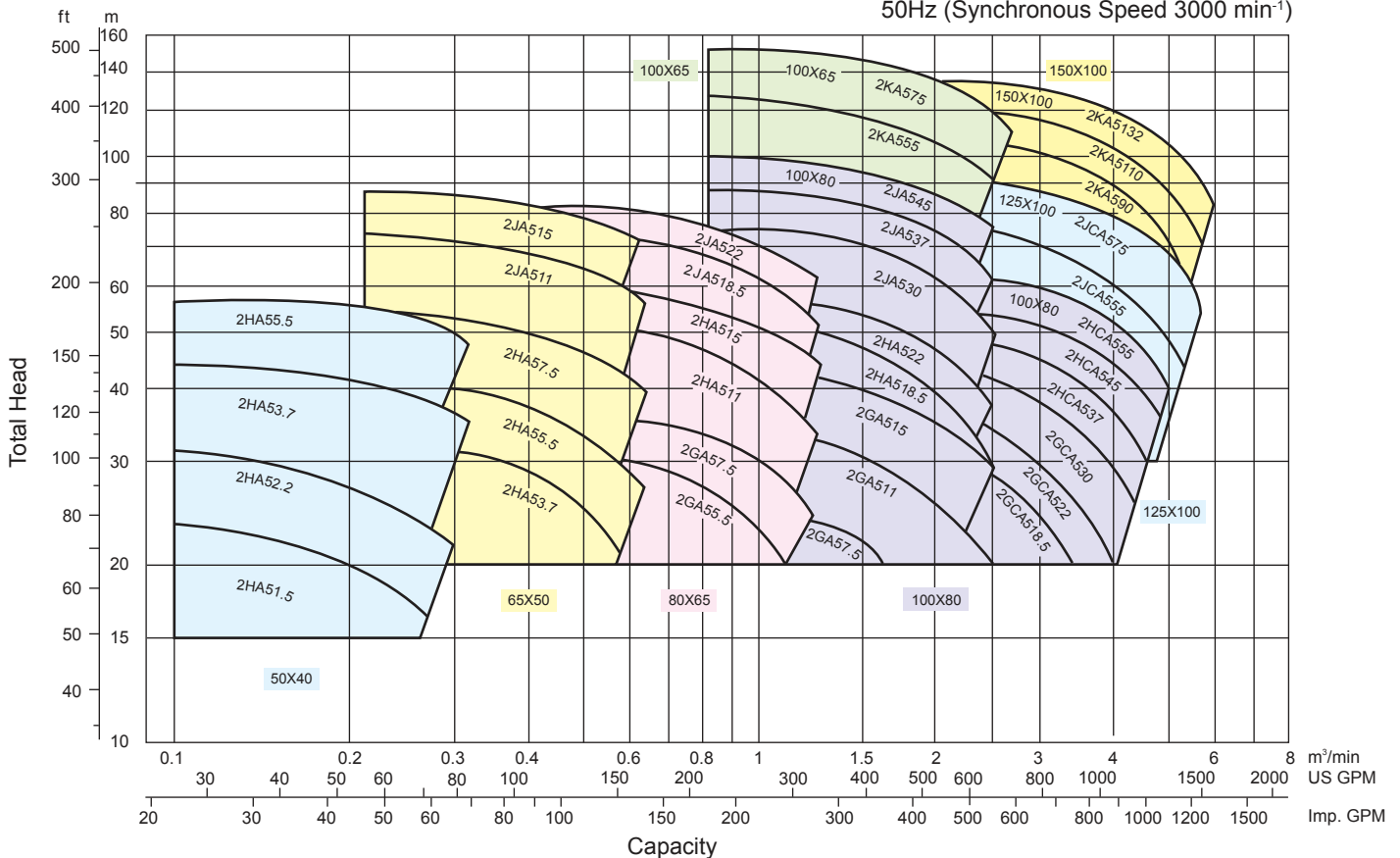


PERFORMANCE CHART

50Hz (Synchronous Speed 1500 min⁻¹)



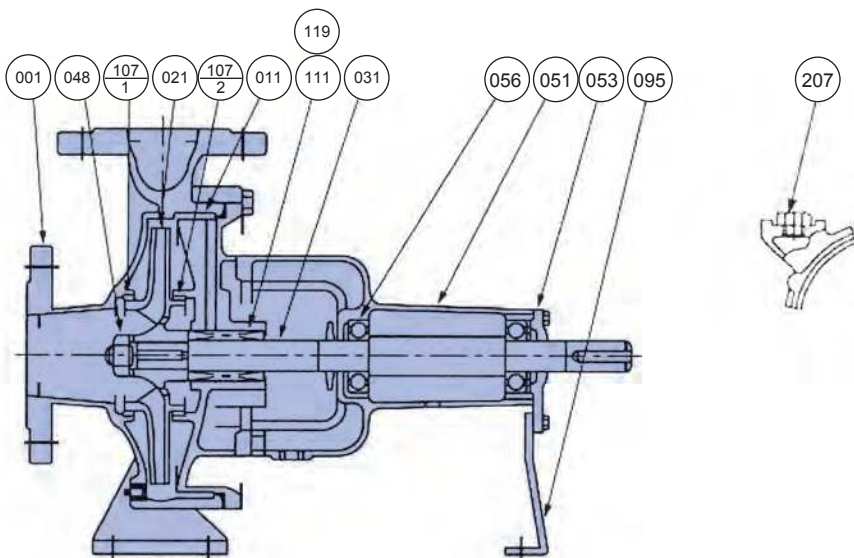
50Hz (Synchronous Speed 3000 min⁻¹)



SPECIFICATIONS

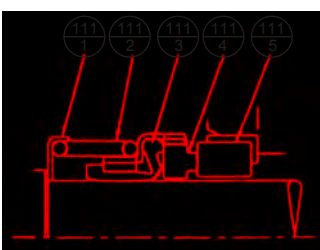
Description		Standard		Optional	
		2 poles model	4 poles model	2 poles model	4 poles model
Liquid	Name	Clean water			
	Temperature	0 to 80°C (32 to 176°F)			
Max. Working Pressure		10 bar (10.2kgf/cm ²) for standard flange JIS 10K RF 16 bar (16.3kgf/cm ²) for standard flange JIS 16K RF		16 bar (16.3 kgfcm ²)	
Synchronous Speed		3000 min ⁻¹	1500 min ⁻¹		
Installation		Indoors		Outdoors	
Construction	Impeller	Enclosed			
	Shaft seal	Mechanical seal		Gland Packing	
	Sealing	Self flushing		External flushing	
	Bearing	Sealed ball bearing		Oil bath (some models only)	
Flange	Suction & Discharge	Suction < Ø 150mm, except 100X65 FSKA	: JIS 10K RF	16 bar : JIS 16K RF ; DIN PN-16	
		100X65 FSKA	: JIS 16K RF	DIN PN-16	
		Suction = Ø 150mm, except below models	: JIS 10K RF	16 bar : JIS 16K RF ; DIN PN-16	
		150X100 FSKA; 150X100 FSNA	: JIS 16K RF	DIN PN-16	
		Suction = Ø 200mm, except below models	: JIS 10K RF	16 bar : JIS 16K RF ; DIN PN-16	
		200X150 FSLA; 200X150 FSNA	: JIS 16K RF	DIN PN-16	
Material	Casing	Cast Iron		Ductile Cast Iron (FCD)	
	Impeller	Bronze Casting (CAC406/BC6)		Cast Iron; Ductile Cast Iron (FCD), Stainless steel	
	Shaft	403 Stainless steel		304; 316 Stainless steel	
	Seal	Mechanical Seal: Ceramic/Carbon/NBR		Gland Packing : Teflon (PTFE) impregnated Mechanical seal : SiC/SiC	
Accessories	Bare shaft			Priming funnel; valve; Companion Flange	
	With motor	Common base, Coupling, Coupling guard		Priming funnel; valve; Companion Flange	

SECTIONAL VIEW



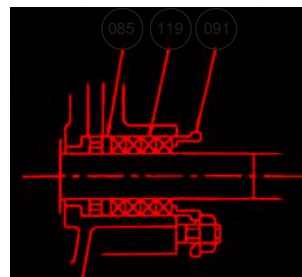
No.	Part Name	Standard Material	Qty
207	Water Inlet Plug	Steel	1
119	Gland Packing	-	-
111	Mechanical Seal	-	-
107-2	Casing Ring	Bronze	1
107-1	Casing Ring		
095	Stay	Steel	1
056	Ball Bearing	-	2
053	Bearing Cover	Cast Iron	1
051	Bearing Housing		
048	Impeller Nut	Brass	1
031	Shaft	403 Stainless Steel	
021	Impeller	Bronze	
011	Casing Cover	Cast Iron	
001	Casing		

Mechanical Seal Type (Standard)



No.	Part Name	Standard Material	Qty
111-5	Seat	Ceramic	1
111-4	Face	Carbon	
111-3	Friction Ring	NBR	
111-2	Spring	316 Stainless Steel	
111-1	Spring Holder	316 Stainless Steel	

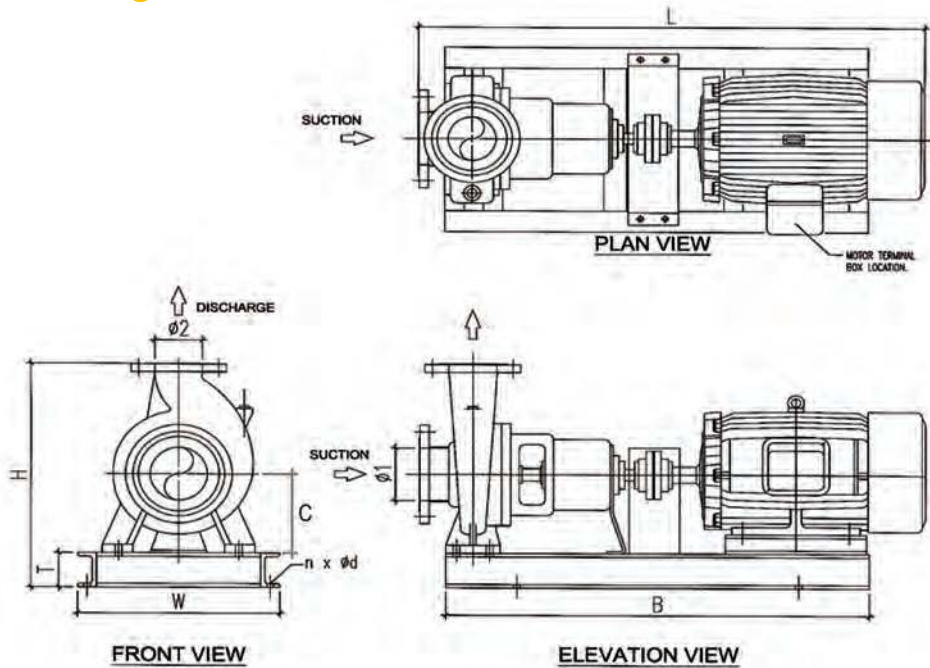
Gland Packing Type (Option)



No.	Part Name	Standard Material	Qty
119	Gland Packing	Teflon impregnated	4 or 5
091	Gland	Bronze	1
085	Lantern Ring (some models only)		

DIMENSION

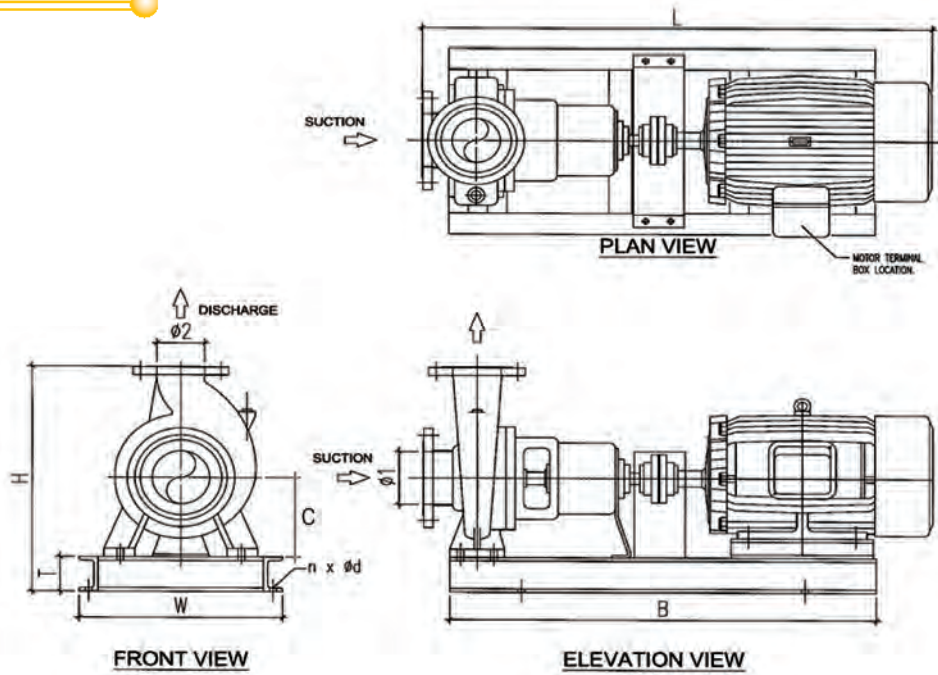
2 Poles



Model	Motor	Size (mm)		Dimension (mm)						Base		Weight (kg)
	kW	Φ1	Φ2	H	T	W	L	B	C	n	Φd	Total
50 x 40 FS2HA	1.5	50	40	415	75	350	750.5	656	160	4	16	69
	2.2	50	40	415	75	350	775.5	681	160	4	16	73
	3.7	50	40	415	75	350	834.5	713	160	4	16	93
	5.5	50	40	440	100	380	897	757	160	4	19	121
65 x 50 FS2HA	3.7	65	50	415	75	375	854.5	713	160	4	16	99
	4	65	50	415	75	375	854.5	713	160	4	16	99
	5.5	65	50	440	100	400	917	757	160	4	19	127
	7.5	65	50	440	100	400	917	757	160	4	19	127
65 x 50 FS2JA	7.5	65	50	505	100	440	917	757	180	4	19	135
	11	65	50	505	100	450	1071	888	180	4	19	204
	15	65	50	505	100	450	1071	888	180	4	19	204
80 x 65 FS2GA	5.5	80	65	440	100	400	917	757	160	4	19	123
	7.5	80	65	440	100	400	917	757	160	4	19	123
80 x 65 FS2HA	7.5	80	65	460	100	400	917	757	160	4	19	133
	11	80	65	460	100	450	1071	882	160	4	19	202
	15	80	65	460	100	430	1071	876	160	4	19	202
80 x 65 FS2JA	18.5	80	65	505	100	450	1115	932	180	4	19	243
	22	80	65	505	100	490	1135	932	180	4	19	288
100 x 80 FS2GA	7.5	100	80	460	100	430	917	769	160	4	19	135
	11	100	80	460	100	450	1071	894	160	4	19	204
	15	100	80	460	100	450	1071	894	160	4	19	204
100 x 80 FS2HA	18.5	100	80	505	100	450	1115	932	180	4	19	245
	22	100	80	505	100	490	1135	932	180	4	19	290
100 x 80 FS2JA	30	100	80	550	100	540	1233	1035	200	4	19	413
	37	100	80	575	125	570	1233	1035	200	6	22	413
	45	100	80	575	125	630	1274	1058	225	6	22	486
100 x 80 FS2GCA	18.5	100	80	505	100	450	1140	932	180	4	19	245
	22	100	80	505	100	490	1160	932	180	4	19	290
	30	100	80	525	100	540	1258	1008	200	4	19	404
100 x 80 FS2HCA	37	100	80	575	125	570	1258	1022	200	4	22	407
	45	100	80	600	125	630	1300	1052	225	6	22	481
	55	100	80	625	125	670	1371.5	1108	250	6	22	611
100 x 65 FS2KA	55	100	65	655	125	670	1371.5	1112	225	4	22	658
	75	100	65	680	150	690	1409.5	1160	225	4	25	716
125 x 100 FS2JCA	55	125	100	655	125	670	1385.5	1106	225	4	22	660
	75	125	100	680	150	690	1424.5	1160	225	6	25	719
150 x 100 FS2KA	90	150	100	745	150	770	1716	1370	250	6	25	881
	110	150	100	745	150	770	1766	1420	250	6	25	961
	132	150	100	780	150	830	1805	1440	250	6	25	1134

DIMENSION

4 Poles



Model	Motor	Size (mm)		Dimension (mm)						Base		Weight (kg)
	kW	Φ1	Φ2	H	T	W	L	B	C	n	Φd	Total
50 x 40 FS4HA	0.4	50	40	415	75	350	693.5	616	160	4	16	56
	0.75	50	40	415	75	350	725.5	640	160	4	16	66
65 x 50 FS4HA	0.75	65	50	415	75	375	745.5	640	160	4	16	71
	1.1	65	50	415	75	375	770.5	656	160	4	16	75
65 x 50 FS4JA	1.5	65	50	480	75	430	795.5	699	180	4	16	87
	2.2	65	50	480	75	430	837.5	725	180	4	16	99
80 x 65 FS4GA	0.75	80	65	415	75	375	745.5	640	160	4	16	68
	1.1	80	65	415	75	375	770.5	640	160	4	16	71
80 x 65 FS4HA	1.5	80	65	435	75	375	795.5	681	160	4	16	86
80 x 65 FS4JA	2.2	80	65	480	75	430	837.5	725	180	4	16	112
	3	80	65	480	75	430	837.5	732	180	4	16	112
	3.7	80	65	480	75	430	854.5	732	180	4	16	118
80 x 65 FS4KA	5.5	80	65	605	100	530	1052	905	225	4	19	202
	7.5	80	65	605	100	530	1090	943	225	4	19	213
	11	80	65	605	100	530	1206	1018	225	4	19	271
100 x 80 FS4GA	1.5	100	80	435	75	390	795.5	693	160	4	16	87
	2.2	100	80	435	75	390	837.5	725	160	4	16	99
100 x 80 FS4HA	2.2	100	80	480	75	430	837.5	725	180	4	16	114
	3.7	100	80	480	75	430	854.5	732	180	4	16	121
100 x 80 FS4JA	3.7	100	80	525	75	470	854.5	751	200	4	16	128
	5.5	100	80	550	100	490	917	795	200	4	19	159
	7.5	100	80	550	100	490	955	827	200	4	19	169
100 x 80 FS4GCA	2.2	100	80	480	75	430	862.5	725	180	4	16	114
	3.0	100	80	480	75	430	862.5	725	180	4	16	114
	3.7	100	80	480	75	430	879.5	732	180	4	16	121
100 x 80 FS4HCA	5.5	100	80	530	100	490	942	776	180	4	19	153
	7.5	100	80	530	100	490	980	802	180	4	19	163
125 x 100 FS4JCA	5.5	125	100	605	100	530	957	795	225	4	19	202
	7.5	125	100	605	100	530	995	833	225	4	19	213
	11	125	100	605	100	530	1111	914	225	4	19	271
125 x 100 FS4KA	11	125	100	665	100	530	1221	1024	250	4	19	294
	15	125	100	665	100	530	1265	1068	250	4	19	321
	18.5	125	100	665	100	530	1285	1068	250	4	19	358
125 x 100 FS4LA	18.5	125	100	735	100	640	1346	1143	280	4	19	404
	22	125	100	735	100	640	1384	1181	280	4	19	429
	30	125	100	735	100	640	1444	1219	280	4	19	530
	37	125	100	760	125	670	1490	1253	280	6	22	591

DIMENSION

Model	Motor	Size (mm)		Dimension (mm)						Base		Weight (kg)
	kW	Φ1	Φ2	H	T	W	L	B	C	n	Φd	Total
150 x 125 FS4HA	7.5	150	125	665	100	530	1105	943	250	4	19	227
	11	150	125	665	100	530	1221	1024	250	4	19	285
	15	150	125	665	100	530	1265	1068	250	4	19	312
150 x 125 FS4JA	15	150	125	705	100	530	1265	1068	250	4	19	320
	18.5	150	125	705	100	530	1285	1068	250	4	19	358
	22	150	125	705	100	530	1323	1106	250	4	22	383
150 x 125 FS4KA	22	150	125	735	100	640	1384	1181	280	4	19	431
	30	150	125	735	100	640	1444	1219	280	4	19	532
	37	150	125	760	125	670	1490	1253	280	6	22	593
150 x 125 FS4LA	30	150	125	815	100	640	1444	1219	315	4	19	573
	37	150	125	840	125	670	1490	1253	315	6	22	634
	45	150	125	840	125	670	1515	1279	315	6	22	661
	55	150	125	840	125	720	1556.5	1297	315	6	22	808
	75	150	125	865	150	740	1594.5	1342	315	6	25	882
150 x 100 FS4NA	45	150	100	950	125	710	1695	1420	375	6	22	845
	55	150	100	950	125	710	1736.5	1440	375	6	22	992
	75	150	100	975	150	730	1774.5	1480	375	6	25	1066
	90	150	100	975	150	790	1926	1554	375	6	25	1144
200 x 150 FS4HA	5.5	200	150	735	100	630	1087	920	280	4	19	236
	7.5	200	150	735	100	630	1125	958	280	4	19	246
	11	200	150	735	100	630	1241	1039	280	4	19	305
200 x 150 FS4JA	15	200	150	755	100	640	1345	1143	280	4	19	384
	18.5	200	150	755	100	640	1365	1143	280	4	19	421
	22	200	150	755	100	640	1404	1181	280	4	19	446
	30	200	150	755	100	640	1464	1219	280	4	19	547
	37	200	150	780	125	670	1510	1253	280	6	22	608
	37	200	150	840	125	730	1649	1394	315	6	22	653
200 x 150 FS4KA	45	200	150	840	125	730	1675	1420	315	6	22	680
	55	200	150	840	125	730	1716.5	1438	315	6	22	828
	45	200	150	902	125	730	1677	1420	327	6	22	812
200 x 150 FS4LA	55	200	150	902	125	730	1718.5	1438	327	6	22	959
	75	200	150	927	150	750	1756.5	1482	327	6	25	1033
	90	200	150	927	150	790	1908	1554	327	6	25	1111
	110	200	150	1085	150	800	1978	1754	375	6	25	1377
200 x 150 FS4NA	132	200	150	1085	150	860	2017	1620	375	6	25	1585
	150	200	150	1085	150	860	2068	1672	375	6	25	1676
	75	250	200	1095	150	860	1774.5	1540	385	6	25	1227
250 x 200 FS4LA	90	250	200	1095	150	860	1926	1610	385	6	25	1305
	110	250	200	1095	150	860	1976	1660	385	6	25	1397
	132	250	200	1095	150	860	2015	1678	385	6	25	1604
	150	250	200	1095	150	860	2066	1730	385	6	25	1696
	150	250	200	1215	150	860	2236	1890	435	6	25	1854
250 x 200 FS4NA	185	250	200	1215	150	860	2236	1890	435	6	25	1969
	225	250	200	1245	180	860	2520	2036	435	6	25	2406
	260	250	200	1245	180	860	2665	2186	435	6	25	2647
	300	250	200	1245	180	860	2665	2186	435	6	25	2877
	335	250	200	1245	180	860	2870	2386	435	6	25	2923

* Dimensional details are provided for reference only.

* All specifications are subject to change without prior notice.



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