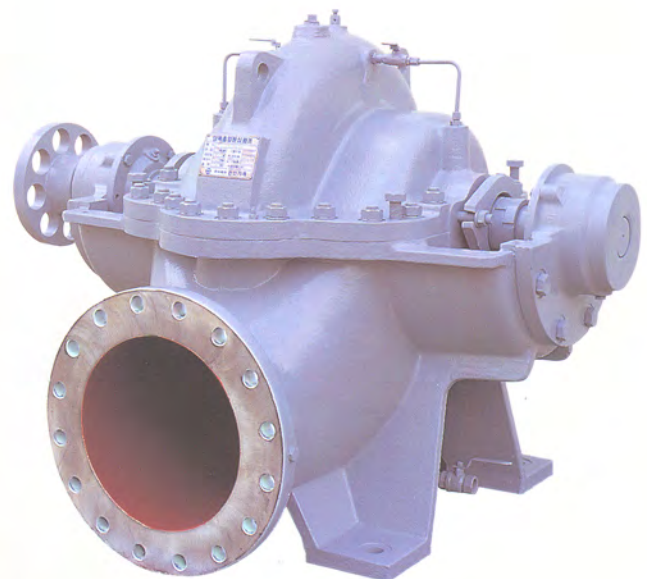


SHINSHIN

HORIZONTAL, DOUBLE SUCTION, CENTRIFUGAL PUMPS

NDV



 **SHIN SHIN
MACHINERY CO., LTD.**



Certificate NO. 942848

횡축, 단단, 양흡입, 볼류트 케이싱 원심 펌프

Horizontal, Single Stage, Double Suction, Volute Casing Centrifugal Pumps

up to 105°C, ~ 12~18kg/cm² working pressure

10 Bar~16 Bar

PN 10 Bar~16 Bar

용도 및 적용 분야

청수, 해수, 원유, 펄프수, 정유 중간공정 제품등의 펌핑용으로서
급수 플랜트, 정유, 제지 펄프 공업, 제철, 관개, 파이프라인
스테이션, 탱크장, 발전소 등에서 순환, 보조수, 배수, 급수, 발라스트
G/S ...용으로 사용된다.

Usages and applications

For clean water, sea water, crude oil, pulp water, intermediate
refinery products etc.
Services such as ballast, circulation, general service, auxiliary
water, drainage, supply etc. in the water supply plants, refinery,
pulp and paper industry, steel industry, irrigation, pipeline
stations, tank installations, power plants, distillation plants.

설계 및 구조적 특징

- 넓은 사용 영역에 걸쳐 효율이 높고, 운전이 정숙하며, 고장이 적다.
- 케이싱 상하 분할형으로서 정비 작업이 용이하다.
- 플랜지는 흡토출 공히 KS또는 JIS10~16kg/cm²급, FF이다.
- 동평형 및 수력 평형된 임펠러.
- Fan type 임펠러 장착 가능. (option)
- 충분한 크기의 볼베어링을 사용하며, 그리스 윤활방식을 표준으로 한다.
오일윤활도 가능
- 베어링 하우징은 케이싱에 플랜지 붙임하고, 핀으로 위치를
고정시켜 정밀한 재심내기가 가능하다.
- 주축의 베어링간 거리를 짧게 하여 힘을 적게 하였다.
- 무냉각 스타핑박스. 팩킹링이 표준. 기계칼 씌일 방식도 가능.
- 구동측에서 보아 우회전.
- 상하면을 기계가공한, 용접구조의 강제 베이스 플레이트.
- 부품의 정밀 가공.

Design and operation features

- Good efficiency, smooth operation, and trouble free operation
throughout a wide range of hydraulic coverage.
- Axially split casing enables easy maintenance.
- Flanges are KS or JIS 10~16kg/cm² ratings, FF.
- Dynamically and hydraulically balanced impeller.
- Possible to fit with fan type impeller (option)
- Generously sized ball bearing are used. Grease lubrication.
(Standard) Oil lubrication (option)
- Bearing housings are flange mounted and doweled to the
casing to the casing to provide accurate realignment.
- Short bearing span minimizes deflection.
- Uncooled stuffing box. Packing ring. Possible also
mechanical seal.
- Clockwise(CW) rotation when viewed from the driver end.
- Welded steel base plate, machined both up side and
bottom side.
- Precision machining of parts.

형식 표시 방법

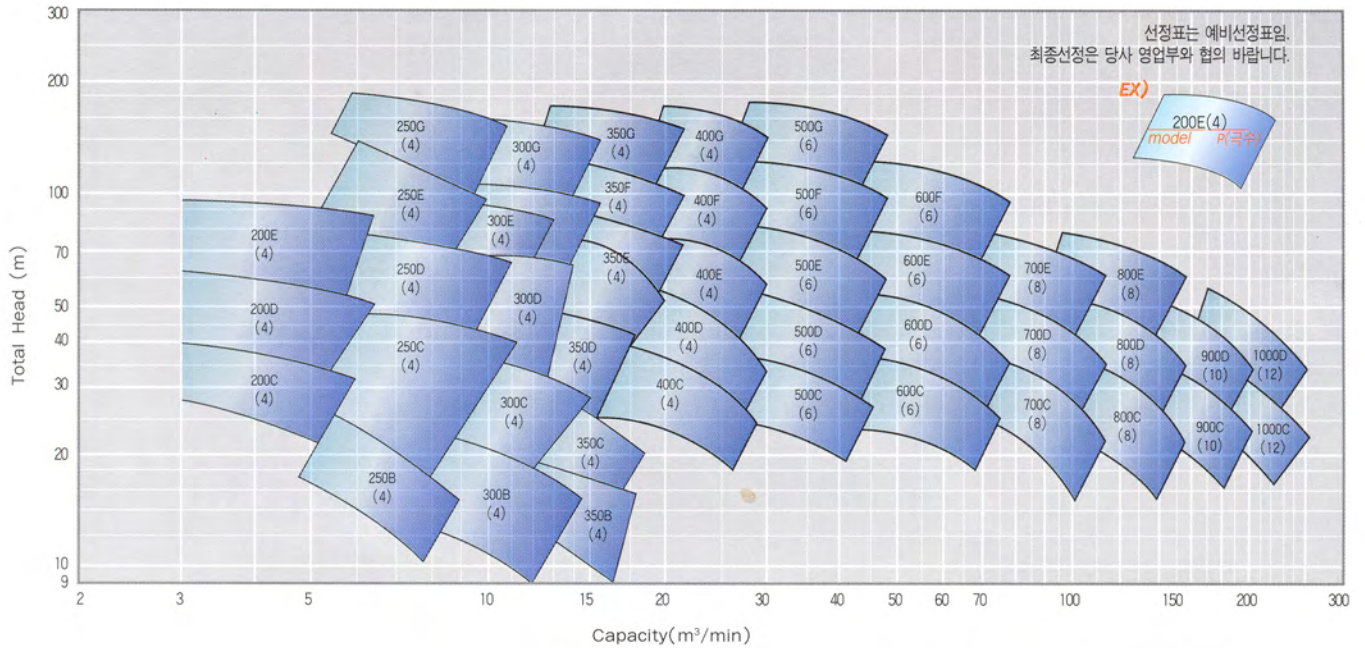
Type nomenclature

NDV - 300D(4)

- 시리즈 (Series) _____
- 사이즈/흡입공칭구경 (Size/Nominal dia. of suction nozzle) _____
- 양정 등급 (Head ratings): A,B,C..... _____
- 전동기 극수 (Number of poles, electric motor) _____

선정표(60Hz에서)

Performance selection chart(60Hz)



팬 타입 임펠라의 장점

NDV MODEL에는 두가지 타입의 임펠라 장착이 가능하게 설계되어 있다. 그 중 팬 타입 임펠라의 장점은 과도한 맥동압력의 발생이 적기 때문에 정속한 운전이 요구되는 특수한 경우에 적합하다.

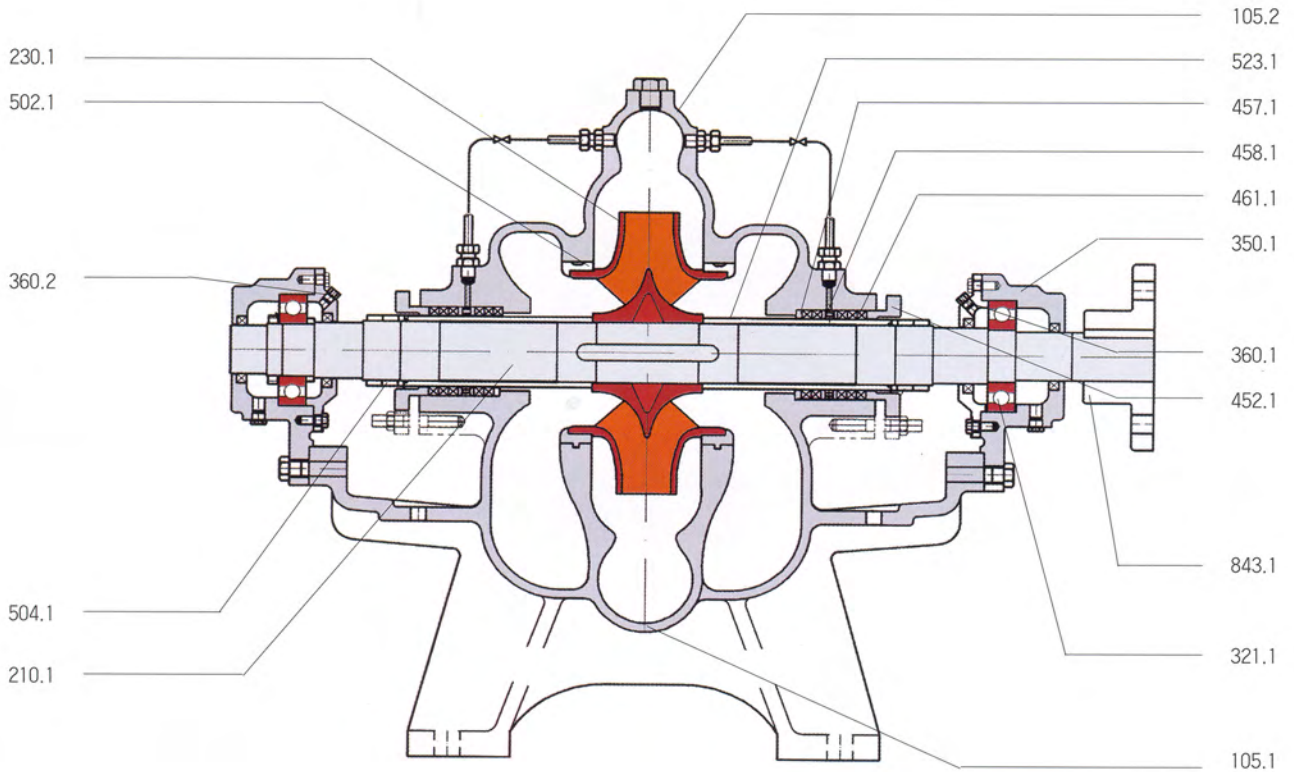
FAN TYPE IMPELLER

The NDV series features a double-suction impeller with staggered vanes.

So, NDV series are available for the special duty which meet the demand by generation a very smooth flow with extremely low pressure pulsation.

조립 단면도

Sectional drawing



NO.	NAME	MATERIAL										Q' ty	
		CLASS1	CLASS2	CLASS3	CLASS4	CLASS5	CLASS6	CLASS7	CLASS8	CLASS9	CLASS10		
105.1	LOWER CASING											1	
105.2	UPPER CASING	GC200					BC6	SSC13	SSC14	SSC16	GCD45		
210.1	SHAFT	SM 45C				STS 304				STS316	STS316L	STS304	1
230.1	IMPELLER	GC200	BC6	SSC13	BC6	SSC13	BC6	SSC13	SSC14	SSC16	SSC13	1	
321.1	BALL BEARING	STB2										2	
350.1	BEARING HOUSING	GC200										2	
360.1	BEARING COVER	GC200										1	
360.2	BEARING COVER	GC200										1	
452.1	PACKING GLAND	GC200					BC6	SSC13	SSC14	SSC16	GC200	2	
457.1	PACKING BUSH	BC6					SSC13 SSC14 SSC16 BC6					2	
458.1	LANTERN RING	BC6					SSC13 SSC14 SSC16 BC6					2	
461.1	PACKING	NON METALLIC										2set	
*433.1	MECHANICAL SEAL											2	
*471.1	SEAL COVER	STS 304							STS316	STS316L	STS304	2	
502.1	CASING WEAR RING	BC6	SSC13	BC6	SSC13	BC6	SSC13	SSC14	SSC16	SSC13	2		
504.1	SPACER RING	SM45C										1	
523.1	SLEEVE	BC6					SSC13 SSC14 SSC16 SSC13					2	
843.1	COUPLING	GC200										1	

*: OPTION

외형 치수도

Outline dimensions

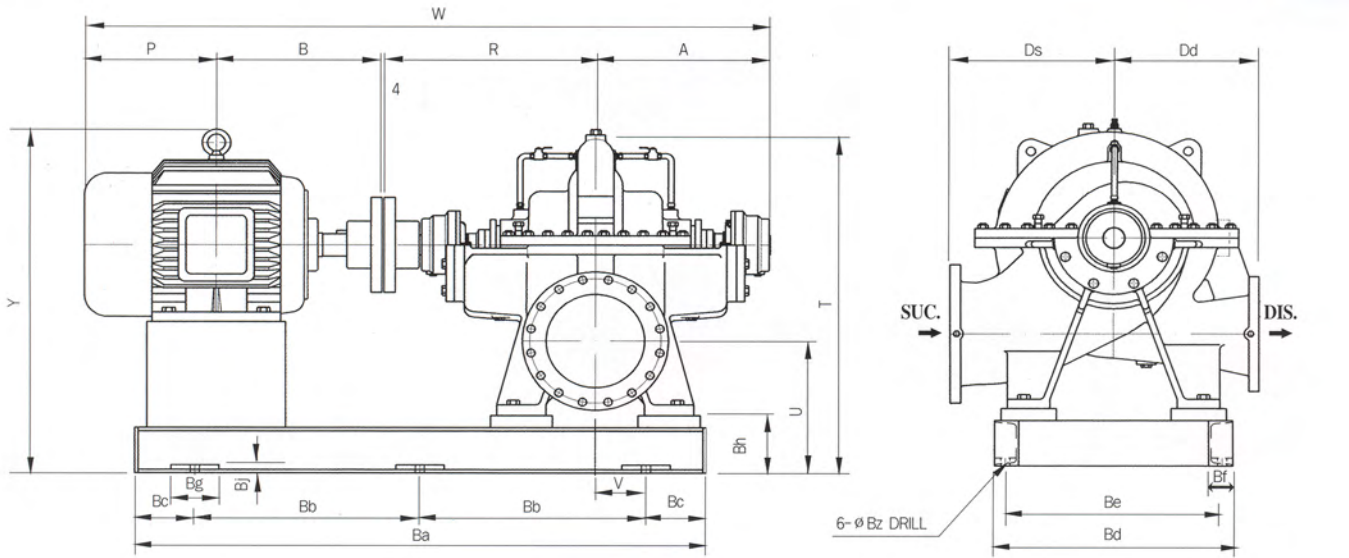


Fig "A"

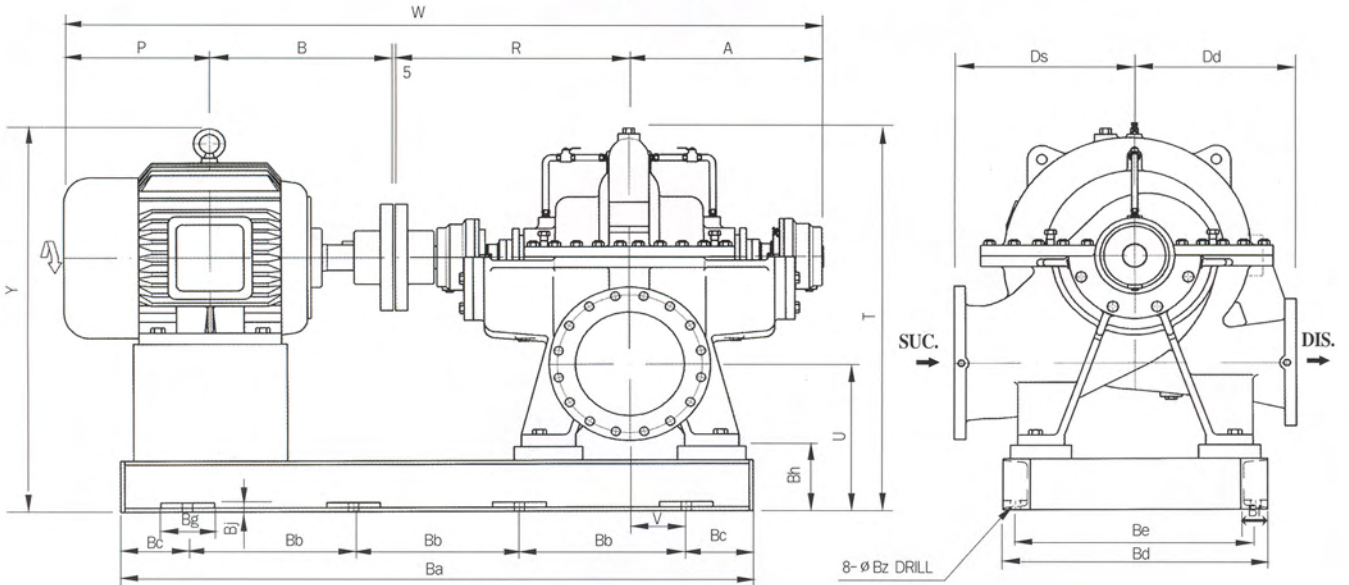


Fig "B"

TYPE	MOTOR		Bore		Size(mm)										Base(mm)						Weight(kg)								
	kw	rpm	Suc	Dis	A	B	Ds	Dd	P	R	T	U	V	W	Y	Ba	Bb	Bc	Bd	Be	Bf	Bg	Bh	Bj	Bz	PUMP	Motor	Base	Total
NDV 200C	30	1800	200	150	440	377	370	350	331	530	784	310	35	1682	766	1300	500	150	520	460	65	130	140	30	23	320	250	110	680
	37					396			351				60	1721	811	1350	550	125									277		707
	45					432			385				60	1791	811	1350	550	125									380		810
NDV 200D	37	1800	200	150	440	370	350	351	530	784	310	60	1721	811	1350	550	125	520	460	65	130	140	30	23	370	277	110	757	
	45							432				385	60	1791	811	1350	550									125		380	860
	55							445				397	35	1816	867	1400	550									150		420	904
	75							452				442	35	1869	873	1400	550									150		575	114

◆치수는 참고용임.

NDV

Series

TYPE	MOTOR		Bore		Size(mm)										Base(mm)								Weight(kg)						
	kw	rpm	Suc	Dis	A	B	Ds	Dd	P	R	T	U	V	W	Y	Ba	Bb	Bc	Bd	Be	Bf	Bg	Bh	Bj	Bz	PUMP	Motor	Base	Total
NDV 200E	75	1800	200	150	452	505	450	400	442	595	899	340	35	1998	943	1500	550	200	580	520	65	130	140	30	23	380	575	118	1073
	95				514				500				35	2118	1004	1600	600	200	75		150	170	750				165	1295	
	110				540				525				60	2169	1004	1650	650	175	590		590	890	172				1442		
	150				584				570				10	2258	1004	1750	650	225	1070		194	1644							
NDV 250B	30	1800	250	250	377	460	400	350	331	550	875	345	110	1722	826	1350	550	125	580	520	65	130	140	30	23	340	250	110	700
	37				396				351				85	1761	871	1400	550	150									277	110	727
	45				432				385				85	1831	871	1400	550	150									380	114	834
NDV 250C	45	1800	250	200	432	495	430	340	385	585	862	310	60	1901	851	1450	550	175	580	520	65	130	140	30	23	350	380	117	847
	55				445				397				35	1926	882	1500	550	200									420	118	888
	75				452				442				35	1978	913	1500	550	200									575	118	1043
	95				514				500				35	2098	974	1600	600	200									750	165	1265
	110				540				525				60	2149	974	1650	650	175									890	172	1412
NDV 250D	55	1800	250	200	445	495	430	340	397	585	900	330	35	1926	912	1500	550	200	580	520	65	130	140	30	23	560	420	114	1094
	75				452				442				35	1978	943	1500	550	200									575	114	1249
	95				514				500				35	2098	1005	1600	600	200									750	165	1475
	110				540				525				60	2149	1005	1650	650	175									890	172	1622
	150				584				570				10	2230	1005	1750	650	225									1070	194	1824
	190				647				634				980	441	10	2365	1055	1850									700	225	600
NDV 250E	150	1800	250	200	584	530	500	400	570	645	1091	440	85	2333	1124	1850	700	225	640	560	80	200	220	30	27	680	1070	212	1962
	190				647				634				60	2460	1124	2000	750	250									1280	244	2204
	220				858				757				60	2794	1180	2300	900	250									2470	275	3425
NDV 300B	19	1800	300	300	352	540	370	350	295	630	975	375	60	1821	886	1450	550	175	580	520	65	130	140	30	23	420	161	114	695
	22				371				314				60	1859	886	1450	550	175									177	114	711
	30				377				331				35	1882	935	1500	550	200									250	118	788
	37				396				351				35	1921	935	1500	550	200									277	118	815
	45				432				385				35	1991	962	1500	550	200									380	118	918
NDV 300C	55	1800	300	250	445	530	460	400	397	620	1008	405	60	1996	992	1550	600	175	590	520	75	150	170	30	23	480	522	118	1120
	75				452				442				60	2048	1023	1550	600	175									575	118	1173
	95				514				500				35	2168	1054	1600	600	200									750	172	1402
NDV 300D	95	1800	300	200	514	530	500	400	500	645	1014	400	110	2193	1054	1700	650	200	730	660	75	150	170	30	23	670	750	194	1614
	110				540				525				85	2244	1054	1750	650	225	890								194	1754	
	150				584				570				85	2333	1054	1850	700	225	1070								212	1952	
	190				647				634				60	2460	1054	2000	750	250	1320								244	2234	
NDV 300E	75	1800	300	200	452	530	500	400	442	645	1077	410	135	2073	1083	1650	650	175	730	660	75	150	170	30	23	880	575	189	1644
	95				514				500				110	2193	1114	1700	650	200									750	194	1824
	110				540				525				110	2244	1114	1800	700	200									890	206	1976
	150				584				570				85	2333	1124	1850	700	225									1070	212	2162
	190				647				634				60	2460	1124	2000	750	250									1280	244	2404
NDV 350B	37	1800	350	350	396	555	550	450	351	645	1130	420	110	1951	1041	1600	600	200	730	660	75	150	170	30	23	820	277	118	1215
	45				432				385				110	2021	1103	1600	600	200									380	118	1318
	55				445				397				110	2046	1103	1700	650	200									420	194	1434
	75				452				442				85	2098	1134	1750	650	225									575	194	1589
NDV 350C	45	1800	350	300	432	555	500	400	385	645	1054	445	135	2021	1011	1600	600	200	730	660	75	150	170	30	23	900	380	118	1398
	55				445				397				135	2046	1042	1650	650	175									420	118	1438
	75				452				442				160	2098	1042	1650	650	175									575	189	1664
	95				514				500				110	2218	1104	1750	650	225									750	194	1844
NDV 350D	55	1800	350	300	445	550	520	420	397	665	1087	420	135	2041	1062	1650	650	175	730	660	75	150	170	30	23	900	522	189	1611
	75				452				442				135	2073	1093	1650	650	175									575	189	1664
	95				514				500				85	2193	1125	1750	650	225									750	194	1844
	110				550				665				110	2244	1114	1800	700	200									890	206	1996
	150				584				570				60	2333	1124	1900	700	250									1070	212	2182
	190				647				634				60	2460	1124	2000	750	250									1280	244	2424
NDV 350E	55	1800	350	250	445	605	600	470	397	745	1111	420	85	2186	1062	1700	650	200	780	710	75	150	170	30	23	941	522	194	1657
	75				452				442				85	2238	1093	1700	650	200									575	194	1710
	95				514				500				85	2358	1175	1800	700	200									750	206	1897
	110				540				525				60	2409	1175	1850	700	225									890	212	2043
	150				584				570				60	2498	1175	1950	750	225									1070	224	2235
	190				647				634				60	2625	1175	2050	800	225									1280	236	2457

◆치수는 참고용임.

TYPE	MOTOR		Inn		Size(mm)										Base(mm)						Weight(kg)															
	kw	rpm	Suc	Dis	A	B	De	Di	ρ	R	T	U	V	W	Y	Ba	Bc	Bc	Bd	Be	Bf	Bg	Bh	Bi	Bz	PUMP	Motor	Base	Total							
NDV 400C	75				452				442				135	2253	1249	1850	700	225													575	206	1381			
	95				514				500				135	2373	1249	1950	750	225													750	212	1802			
	113	1200	400	350	620	540	590	460	525	735	1290	515	110	2424	1249	2000	750	280	740	660	80	200	220	30	27	960				890	215	2065				
	150				584				570				135	2513	1249	2100	850	225													1070	222	2252			
	190				647				634				110	2640	1305	2500	1000	250														1280	241	2481		
NDV 400D	150				795				724				110	2953	1420	2300	900	250														1365	370	3295		
	190				858				757				85	3049	1500	2450	950	275	800	740	80	200	220	30	27	960				2470	400	3630				
	225	1200	400	350	620	656	570	460	527	735	1290	515	85	3049	1500	2450	950	275														2470	400	3630		
	260				858				757				85	3049	1500	2450	950	275														2470	400	3630		
	325				858				757				85	3239	1570	2600	700	250															2470	400	4170	
NDV 400E	260				858				757				85	3239	1570	2600	700	250	900	850	80	200	220	30	27	1300					2810	450	4560			
	300	1800	400	300	770	900	600	500	608	850	1390	520	125	3341	1370	2300	700	300														3150	500	4950		
	330				960				858				185	3443	1370	2600	800	250															4585	600	5485	
	370				1072				908				135	3542	1412	2900	800	250															750	380	2110	
	450				114				500				160	2998	1334	2200	850	250	800	740	80	200	220	30	27	960					890	400	2770			
NDV 400F	110	900	450	450	723	540	680	550	525	860	1425	500	135	2649	1334	2300	900	275															1070	400	2460	
	150				584				570				160	2738	1390	2600	700	250																2470	450	4300
	260				858				757				110	3049	1380	2300	700	300	900	850	80	200	220	30	27	1400					2810	500	4710			
NDV 400G	305	1200	450	350	735	900	700	600	808	850	1410	540	210	3351	1380	2600	800	200															3150	600	5130	
	335				960				858				160	3453	1431	2900	800	250																1965	400	4885
	450				114				500				160	2738	1364	2600	700	250	900	850	80	200	220	30	27	1300					2470	400	4770			
NDV 500C	190	1200	500	400	720	630	500	634	570	860	1408	595	135	3190	1410	2600	700	275																2470	400	4770
	220				858				757				135	3190	1410	2600	700	275																2470	400	4770
	260				858				757				135	3190	1410	2600	700	275																2470	400	4770
NDV 800C	220				858				757				210	3319	1535	2750	750	250	1200	1120	80	200	220	30	27	2400					2470	522	5392			
	260				858				757				210	3319	1535	2750	750	250															2470	522	5392	
	305	1200	600	500	765	920	800	700	808	935	1670	645	210	3421	1535	2850	800	225															3420	537	6367	
	325				960				858				235	3523	1535	3000	850	275																3770	572	6742
	370				1070				908				210	3522	1577	3050	850	250																4170	584	7154
450				1210				958				210	3522	1577	3050	850	250																4730	584	7154	

■ Fig A : Ba 치수 2600이하

■ Fig B : Ba 치수 2600초과

◆ 치수는 참고용임.



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 신신기계에 관한 모든것을 경험할 수 있습니다.
 ”



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