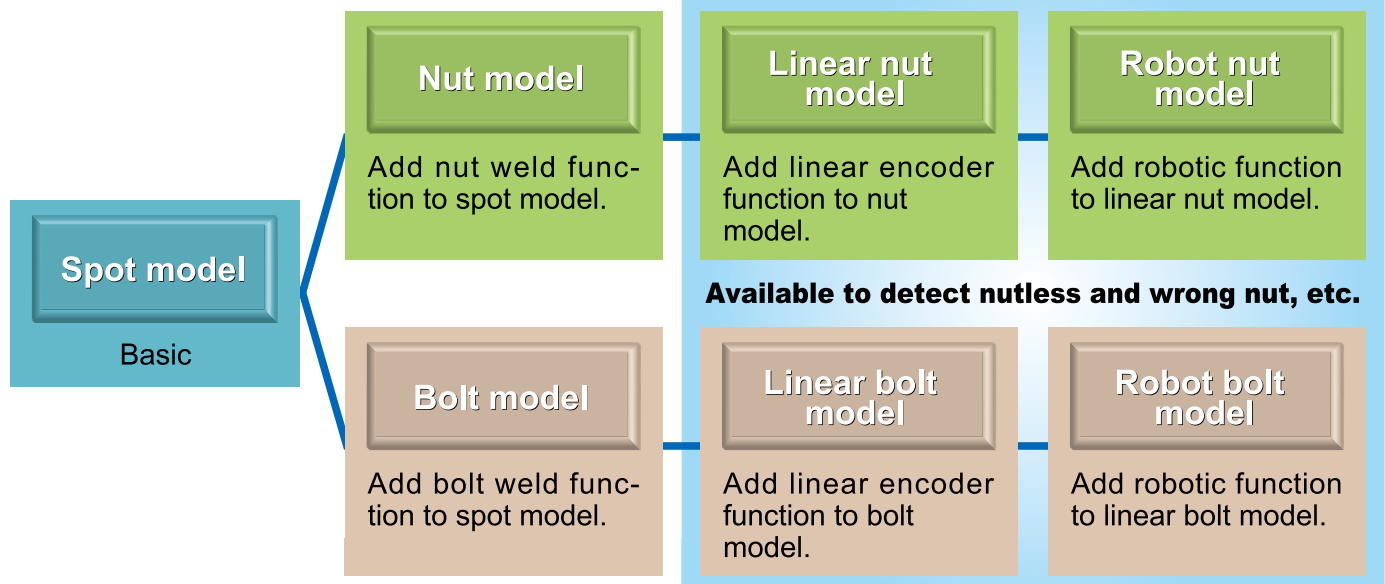


Stationary Spot Welder NDZ Series



DENGENSHA MFG.CO.,LTD.

Various lineups to meet many applications.



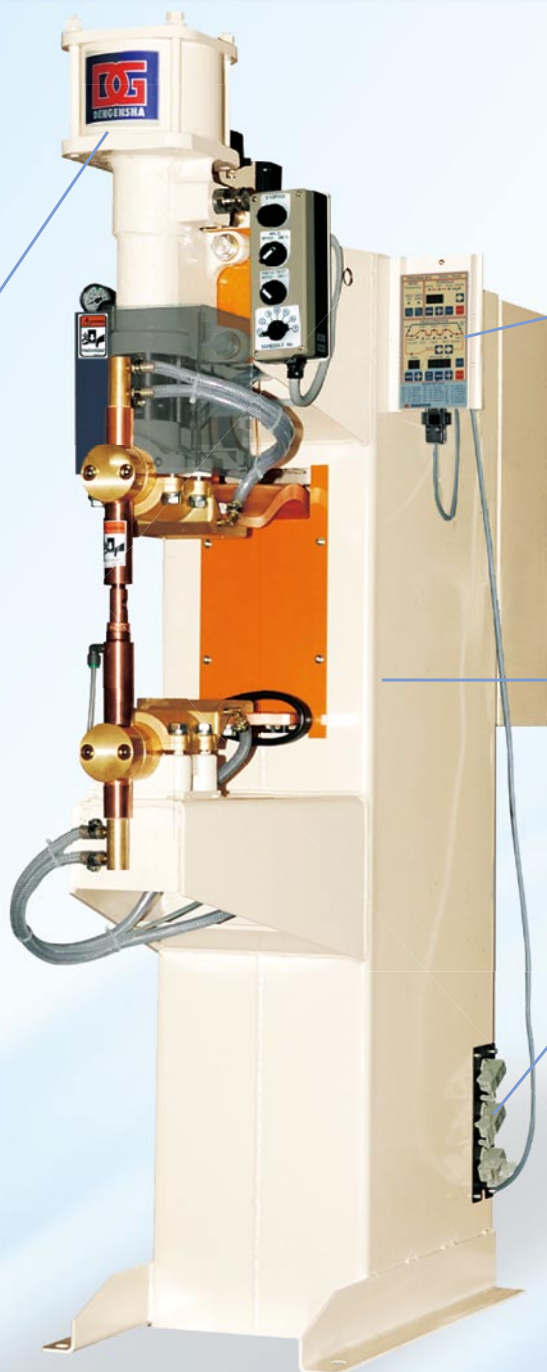
Long stroke

Add 115 mm and 155 mm stroke to standard 75 mm stroke.
Available to correspond to deep drawing panel and long shank bolt.

Non-lubrication cylinder emits clean air for the environment.

Linear encoder model checks nut presence, thickness and set down after welding.

Air exhaust at bottom for operator comfort.



Easy operation - Microprocessor based Weld Timer

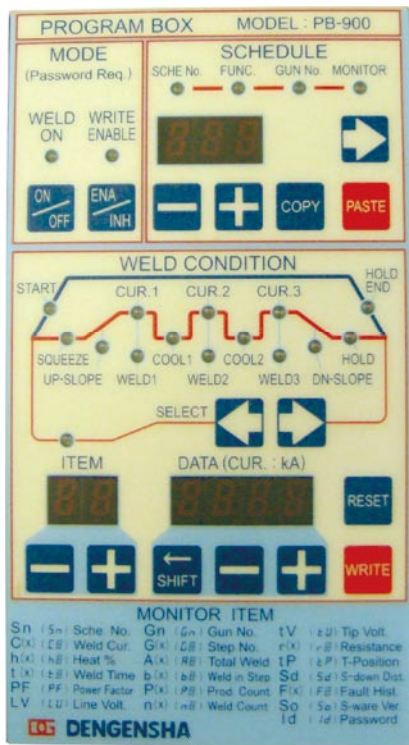
Handy Program Box has Password security and Visual chart display.
5/31/255 weld schedules
Current regulation - Voltage compensation, Constant current, and HCCL.

Rigid frame for long life and minimal deflection.

Feeder interface

Direct plug connection to Densha Parts feeder.
(Available for another manufacturer's feeders by terminal connection)

Easy operated program box.



Handheld program box.

Easy operation at work station.

Simple setting of welding schedules with indicator lights.

Counter function.

Manages the number of parts produced and number of welds made.

Data security function.

Password is needed to change weld settings.

High efficiency microcomputer timer.



High-speed weld current feedback from high-speed CPU.

Optimum weld control for spot or nut/bolt welding is available.

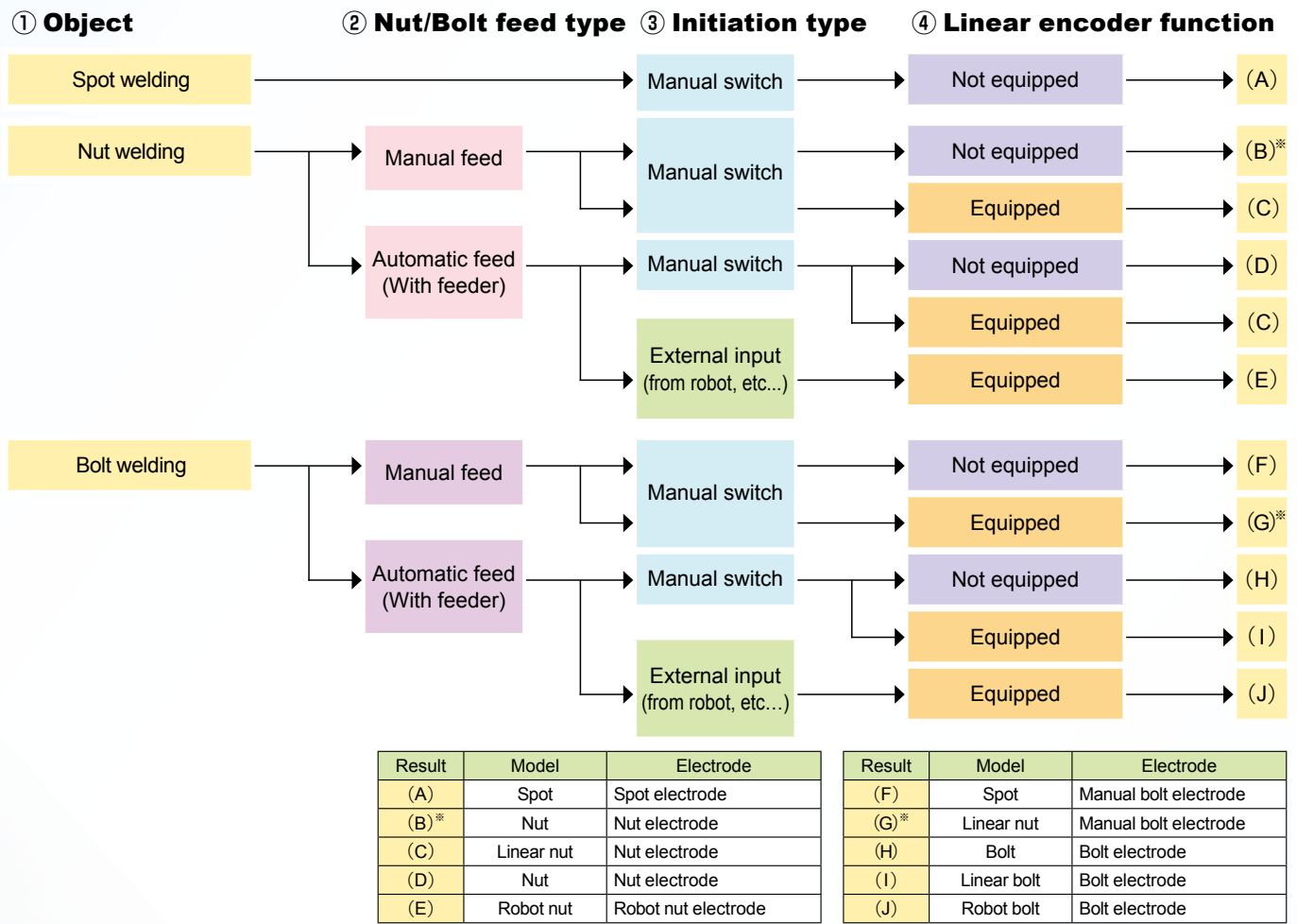
Reduce expulsion and increase welding quality.

Enhanced control function.

255 maximum weld schedules available.

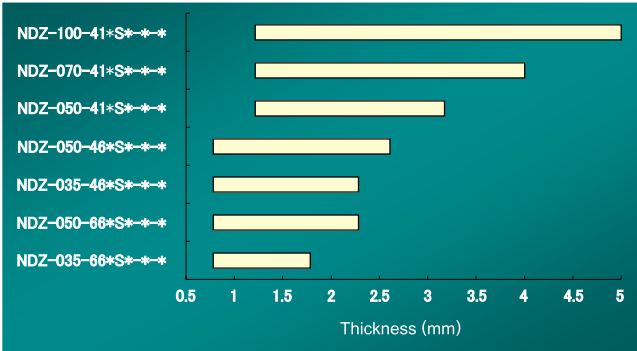
Linear encoder and robot model can detect the defect before the weld with the linear encoder system.

Use the chart below to determine which NDZ model and electrode will best fit your welding application.

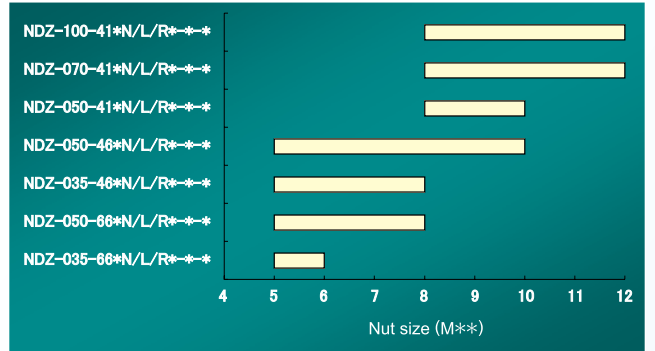


※ In case of nut or bolt welding without feeder, switch is not started without jumper.

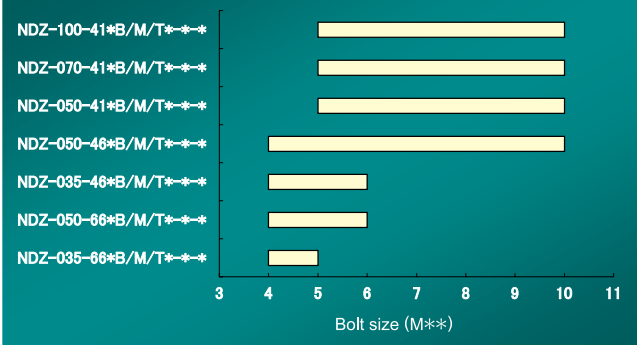
■ Weldability guide (Spot) ※1



■ Weldability guide (Nut) ※2



■ Weldability guide (Bolt) ※3



Note)

※1. This is for welding of mild steel.

※2. This is for square nut.

※3. This is for 3 projection bolt.

Basic specification list

[] dimensions show max. electrode force at 71 PSI Air.

Model common specification	Model									
	UL/CSA Spec		NDZ-035-46**U-*	NDZ-035-66**U-*	NDZ-050-46**U-*	NDZ-050-41**U-*	NDZ-050-66**U-*	NDZ-070-41**U-*	NDZ-100-41**U-*	
	Primary voltage	V	480							
	Rated frequency	Hz	60							
	Rated capacity	kVA	42		60		84		120	
	Maximum input	kVA	122	108	144	120	214	371		
	Max short circuit current	A	17000	15000	20000	17000	25000	33000		
	Allowable duty cycle	%	4.1	5.3	6.0	8.3	5.3	3.6		
	Throat depth	mm [in]	400 [15.7]	600 [23.6]	400 [15.7]	600 [23.6]	400 [15.7]			
	Throat gap	mm [in]	200 [7.9]							
	Max.electrode force (at 0.5Mpa)	kN [lbs]	6 [1520]		10 [2480]	6 [1520]	10 [2480]			
	Total stroke	mm [in]	75 [3.0] ※1							
	Retracting stroke	mm [in]	60 [2.4]							
	Working stroke	mm [in]	20 [0.8]							
	Standard working height	mm [in]	900 [35.4]							
	Horn diameter	mm [in]	60 [2.4]			70 [2.8]	60 [2.4]	70 [2.8]		
	Electrode holder diameter	mm [in]	25 [1.0]			32 [1.3]	25 [1.0]	32 [1.3]		
	Tip diameter	mm [in]	15.875 [0.6]			20 [0.8]	15.875 [0.6]	20 [0.8]		
	Electrode taper		MT#2			1/10	MT#2	1/10		
	Required water flow rate.	l/min	8							10
	Timer/Contactor		NWC-902-21 (NWC-903-21)							
	Program box		PB-900-21							
	Secondary current feed back		Toroidal coil							
	Breaker box		MCCBBOX-01					MCCBBOX-02	MCCBBOX-03	
	Power source symbol (-*)		P, R							
Approx.mass	kg [lbs]	275 [606]	325 [716]	285 [628]	290 [639]	340 [750]	330 [728]	380 [838]		

Note) ※1. Total stroke 115mm and 155mm series are in the lineup.

※2. 115mm and 155mm series are only single stroke.

※3. Robot model of 115mm and 155mm have stroke change function, working stroke is 60mm.

Specification according to the model

Equipment	Model	S	N	L	R	B	M	T
Upper holder		○	○	○	○	○	○	○
Electrode		●	●	●	●	●	●	●
Step down transformer			○	○	○	○	○	○
Feeder interface			○	○	○	○	○	○
Standard lower holder		○	○	○				
Holder with cylinder for nut +SOL (Air blow, Pin shift)					○			
Lower holder for bolt						●	●	●
Linear encoder +Linear encoder type weld control				○	○		○	○
Pressure switch and flow switch					○			○
Terminal box					○			○

Note) ○Standard equipment ●Optional equipment

Select optional items

	Name	Remark
1	Ball type flow indicator at sight glass outlet side	Confirmation of cooling water flow
2	Platen	More accurate projection welding or mount support jig
3	Start switch and feeder connector	Choose Harting or Nanaboshi connector
4	Upper and Lower electrode	
5	Start switch	Choose foot switch or antitie down stand type
6	Program box, Monitor box	Choose program box or monitor box
7	Programming cable length	Choose 3m, 5m, 10m
8	Transmitter	Available to change welding condition by PC, easy to manage weld history
9	Base	125mm height base with fork lift holes
10	Feeder assembly	Purchase our feeder, available for setup and delivery

Required utility

	Power source				Water		Air		Installation	
	Voltage (V)	Rated capacity (kVA)	Breaker (A)	Cable size (mm ²)	Flow rate (L/m)	Hose size (mm)	Compressor (kW)	Hose size (mm)	Anchor bolt (mm)	Earth cable (mm ²)
NDZ-035-66**S**	480	35	100	22 [A.W.G.4]	8	12.7 [1/2"]	1.5	12.7 [1/2"]	12	16 [A.W.G.5]
NDZ-050-66**S**		50								
NDZ-035-46**S**		35								
NDZ-050-46**S**		50								
NDZ-050-41**S**		70	150	38 [A.W.G.1]	10					35 [A.W.G.2]
NDZ-070-41**S**		100	200	60 [A.W.G.2/0]						

Model (sample)

①	②	③	④	⑤	⑥	⑦	⑧	⑨					
Model	NDZ	—	035	—	4	6	B	S	U	—	P	—	※
			035		4	6	B	S	U		P		※
			050		6	1	E	N			R		
			070				F	L					
			100				K	R					
							L	B					
								M					
								T					

①	Series name	NDZ	NDZ Series
②	Transformer rated capacity	035	35kVA
		050	50kVA
		070	70kVA
		100	100kVA
③	Throat depth	4	400mm
		6	600mm
④	Electrode force	6	6kN
		1	10kN
⑤	Pressure unit	B	75mm st Double stroke
		E	115mm st
		F	115mm st Double stroke ※
		K	155mm st
		L	155mm st Double stroke ※
		S	Spot
⑥	Model	N	Nut
		L	Linear nut
		R	Robot nut
		B	Bolt
		M	Linear bolt
		T	Robot bolt
⑦	Specification	U	North America
⑧	Power source	P	460V60Hz
		R	480V60Hz
⑨	Revision	※	D,E,F . . .

Note) ※Double stroke of 115mm and 155mm series is only for robot model

Stationary Spot Welder NDZ Series Long Stroke Type

Basic specification list

Max. electrode force shows at 71 PSI Air.

		Model					
UL/CSA Spec		NDZ-035-46**U*	NDZ-050-46**U*	NDZ-050-41**U*	NDZ-050-66**U*	NDZ-070-41**U*	NDZ-100-41**U*
Primary voltage	V	480					
Rated frequency	Hz	60					
Rated capacity	kVA	42	60			84	120
Maximum input	kVA	104	127	104	198	341	
Max short circuit current	A	14000	17000	14000	22000	30000	
Allowable duty cycle	%	8.1	11.2	16.5	9.0	6.2	
Throat depth	mm [in]	400 [15.7]	400 [15.7]	600 [23.6]	400 [15.7]		
Throat gap	mm [in]	200 [7.9]					
Max.electrode force (at 0.5MPa)	kN [lbs]	6 [1520]	10 [2480]	6 [1520]	10 [2480]		
Total stroke	mm [in]	155 [6.2] ※1 (115) [4.6] ※1					
Retracting stroke	mm [in]	140 [5.6] (100) [4.0]					
Standard working height	mm [in]	900 [35.4]					
Horn diameter	mm [in]	60 [2.4]	70 [2.8]	60 [2.4]	70 [2.8]		
Electrode holder diameter	mm [in]	25 [1.0]	32 [1.3]	25 [1.0]	32 [1.3]		
Tip diameter	mm [in]	15.875 [0.6]	20 [0.8]	15.875 [0.6]	20 [0.8]		
Electrode taper		MT#2	1/10	MT#2	1/10		
Required water flow rate.	l/min	8					10
Timer/Contactor		NWC-902-21 (NWC-903-21)					
Program box		PB-900-21					
Secondary current feed back		Toroidal coil					
Breaker box		MCCBBOX-01			MCCBBOX-02	MCCBBOX-03	
Power source symbol (-*)		P, R					
Approx.mass	kg [lbs]	290 [639]	300 [661]	305 [672]	355 [771]	345 [760]	395 [870]

Note) ※1. 115mm and 155mm series are only single stroke.

※2. Stroke change function is for 115mm and 155mm robot models only. Working stroke is 60mm.

Specification according to the model

Equipment	Model	S	N	L	R	B	M	T
Upper holder		○	○	○	○	○	○	○
Electrode		●	●	●	●	●	●	●
Step down transformer			○	○	○	○	○	○
Feeder interface			○	○	○	○	○	○
Standard lower holder		○	○	○				
Holder with cylinder for nut +SOL (Air blow, Pin shift)					○			
Lower holder for bolt						●	●	●
Linear encoder +Linear encoder type weld control				○	○		○	○
Pressure switch and flow switch					○			○
Terminal box					○			○

Note) ○ Standard equipment ● Optional equipment

Select optional items

	Name	Remark
1	Ball type flow indicator at sight glass outlet side	Confirmation of cooling water flow
2	Platen	More accurate projection welding or mount support jig
3	Start switch and feeder connector	Choose Harting or Nanaboshi connector
4	Upper and Lower electrode	Choose electrode for spot, nut or bolt.
5	Start switch	Choose foot switch or dual palm button
6	Program box, Monitor box	Choose program box or monitor box
7	Programming cable length	Choose 3m, 5m, 10m
8	Transmitter	Available to change welding condition by PC, easy to manage weld history
9	Base	125mm height base with fork lift holes
10	Feeder assembly	Purchase our feeder, available for setup and delivery

Required utility

	Power source				Water		Air		Installation	
	Voltage (V)	Rated capacity (kVA)	Breaker (A)	Cable size (mm ²)	Flow rate (L/m)	Hose size (mm)	Compressor (kW)	Hose size (mm)	Anchor bolt (mm)	Earth cable (mm ²)
NDZ-050-66***-*	480	50	100	22 [A.W.G.4]	8	12.7 [1/2"]	1.5	12.7 [1/2"]	12	16 [A.W.G.5]
NDZ-035-46***-*		35								
NDZ-050-46***-*		50								
NDZ-050-41***-*		70	150	38 [A.W.G.1]	10					35 [A.W.G.2]
NDZ-100-41***-*		100	200	60 [A.W.G.2/0]						

Model (sample)

①	②	③	④	⑤	⑥	⑦	⑧	⑨					
Model	NDZ	—	035	—	4	6	E	S	U	—	P	—	※
			035		4	6	E	S	U		P		※
			050		6	1	F	N			R		
			070				K	L					
			100				L	R					
								B					
								M					
								T					

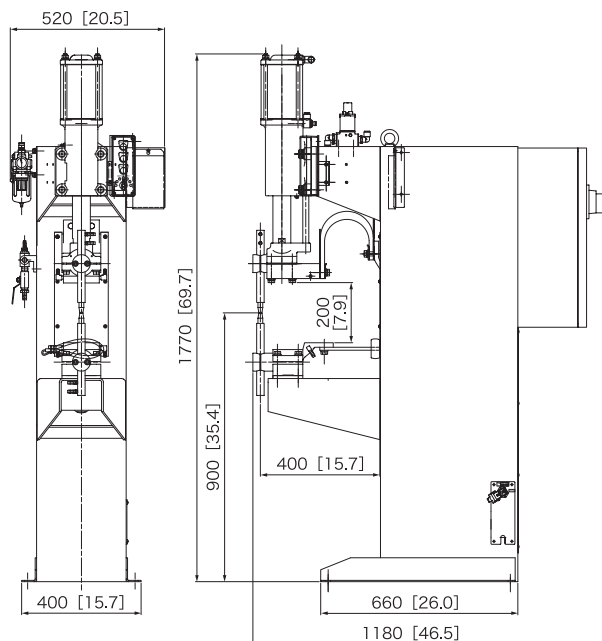
①	Series name	NDZ	NDZ Series
②	Transformer rated capacity	035	35kVA
		050	50kVA
		070	70kVA
		100	100kVA
③	Throat depth	4	400mm
		6	600mm
④	Electrode force	6	6kN
		1	10kN
⑤	Pressure unit	E	115mm st
		F	115mm double stroke ※
		K	155mm st
		L	155mm double stroke ※
⑥	Model	S	Spot
		N	Nut
		L	Linear nut
		R	Robot nut
		B	Bolt
		M	Linear bolt
		T	Robot bolt
⑦	Specification	U	North America
⑧	Power source	P	460V60Hz
		R	480V60Hz
⑨	Revision	※	D,E,F . . .

Note) ※Double stroke on 115mm and 155mm series is for robot models only.

Throat 400 Model

NDZ - 035 · 050 - 46

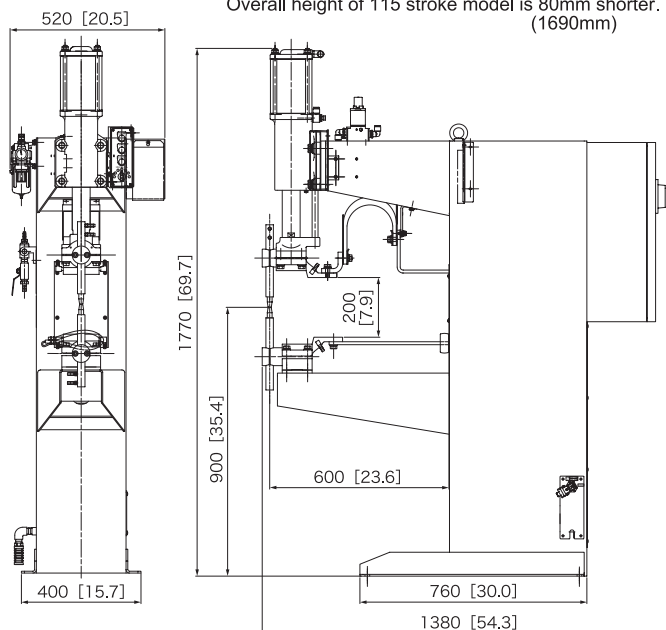
NDZ - 050 · 070 · 100 - 41



Throat 600 Model

NDZ - 050 - 66

[] dimensions show inch, other dimension show mm.
This drawing shows 155 stroke.
Overall height of 115 stroke model is 80mm shorter.
(1690mm)



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