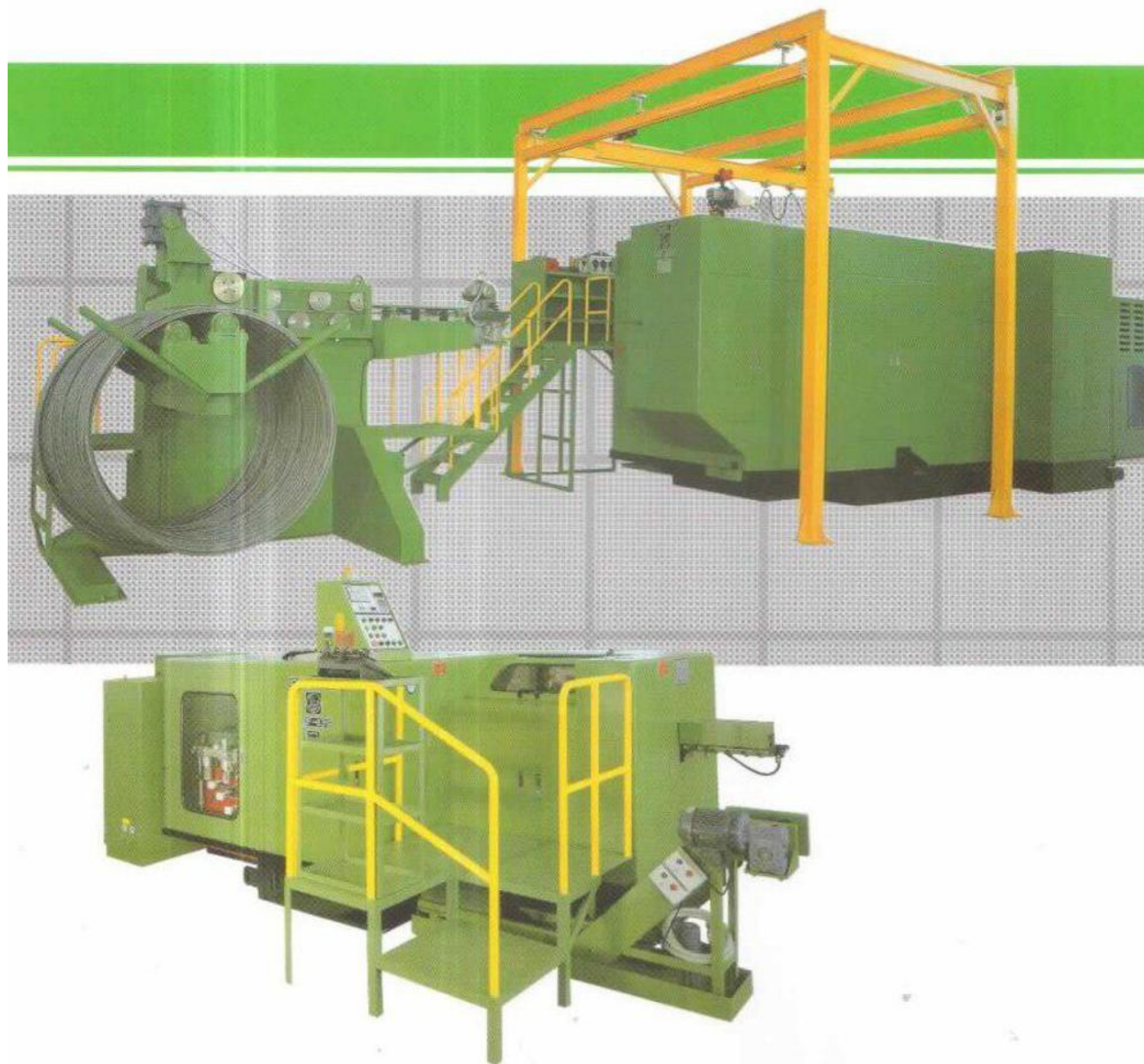


CBF/CBP/CNF/CNP/CPF Series Bolt Former, Nut Former & Part Former



上海春日機械
CHUN ZU

SINCE 1973

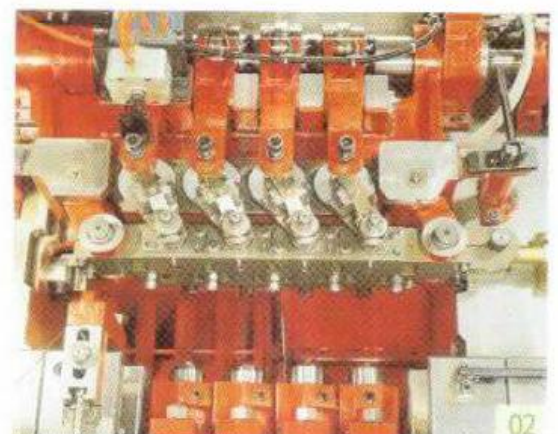


Main Features

- Equipped with air clutch system allowing operation modes of "Inching", "Single Stroke" and "Continuous Running"
- The main ram always stops at its rear position while the machine is operated under "Single Stroke" and "Continuous Running" modes.
- Enclosure cutting off die and knife delivery a clear and perfect cross section of blank for forming.
- The cutting off cam follower is designed at the center of the cut off rod to avoid eccentric force occurred on the cam follower pin and maintain the rigidity and longevity of the machine.
- With the positive punch knock out cam which is designed by computer for high simplicity and precision, the punch knock out time coincides with the withdraw movement of the main ram to prevent spill-out of the forged parts from forming die before being knock out.
- The machine main frame and ram etc have been heat treated for releasing the internal stress and normalized after casting to avoid any deformation in long term operation and keep a stable precision.
- All cams are designed with aid of computer and machined with CNC machine center to achieve smooth movement of the driven parts.
- The "Over Arm" design of the main ram installed with harden alloy steel sliding plates can maintain a high and stable precision and rigidity of the main ram for long term operation.
- A PLC controlled safety checking system can monitor the performance of key system and display and alarm any abnormality.
- As an optional, Q.T.C. touch tone control system can be equipped which can adjust individually and digitally length of rear knock out thread pipe, cutting length stopper and feeding length and has a memory capacity of 99 digital modules for fast change over of toolings. Besides, a easy lock and loosen die block can also be equipped as an optional accessory.
- Imported inverter is equipped for easy adjustment of stepless output speed.

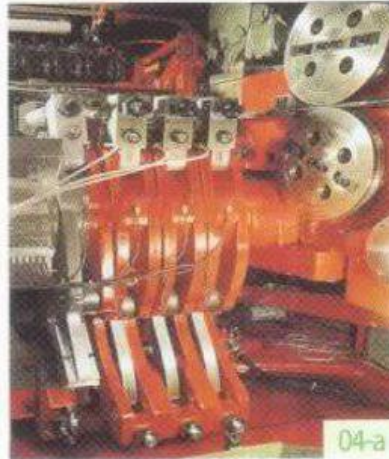
01 Independent and 180° rotary nut type and large bolt type gripper transfer cassette for CBP and CNP series part formers.

02 Rocker motion type gripper transfer mechanism supported by 4 guarding bars and air driven grippers for forged parts for stable holding force suitable for higher speed.

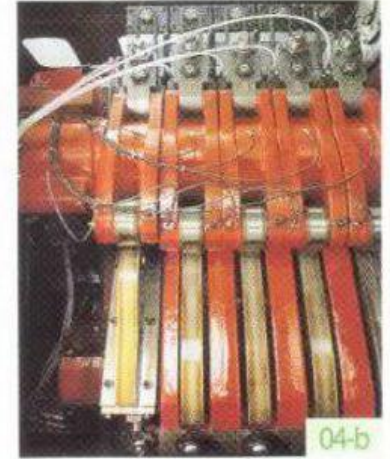




03



04-a



04-b

- 03** The transmission mechanism consisting of bevel gears drives and conjugate cam etc. to make sure the fixed and reliable motion of forth and back of gripper transfer cassette as well as opening and closing timing of gripper.
- 04** Two types of knock out mechanism for CBF, CBP and CNP series as showed in Figure 04-a for CBF and CBP and Figure 04-b for CBF-L and CBP-L. Knock out stroke of each station is individually adjustable and the front position of stroke of all the station remains unchanged while the stroke is adjusted. Meanwhile, the trimming and knock out at last station use a same cam for models below and including CBF-134L and the adjustment of the cam for changing the usage is very easy and time saving. Besides, hand wheel type knock out stroke adjustment mechanism with digital readout or adjustment by motorized NC system for some models can be available as optional accessories.
- 05** Optional K.O. stroke adjustment mechanism by NC system adopts step motors to realize a precise and quick adjustment and positioning.
- 06** Timed P.K.O. mechanism with overload safety bolt knocks out forged parts positively from punch and the knocking out is synchronal with the return stroke of the main ram from front dead center to ensure a perfect forming process. Over load safety bolt can stop machine immediately when any exceeding knocking force occurs. Figure 06-a and Figure 06-b shows respectively the P.K.O. mechanism of CBF and CBP series.



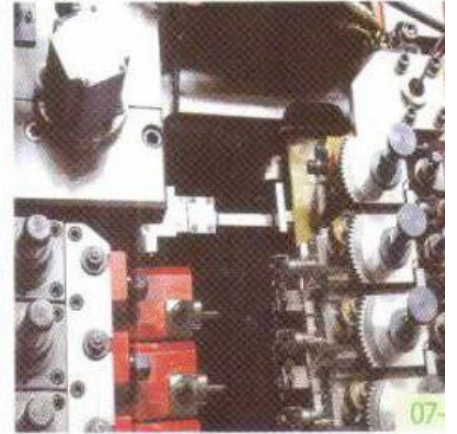
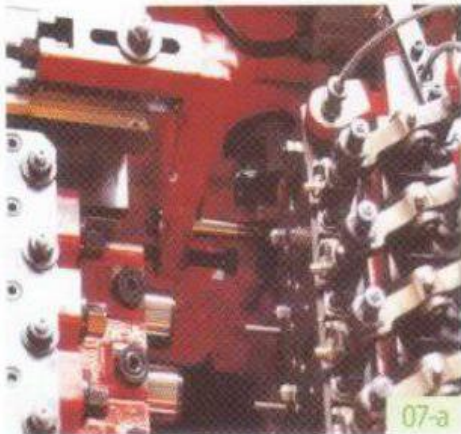
05



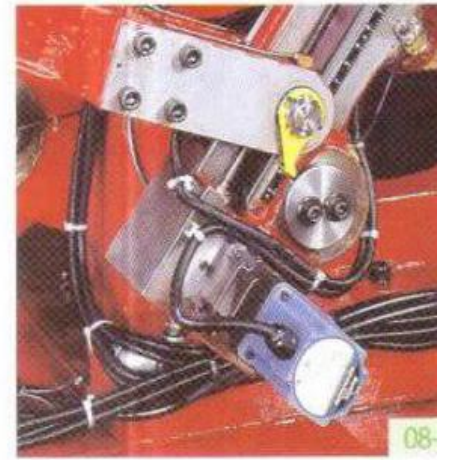
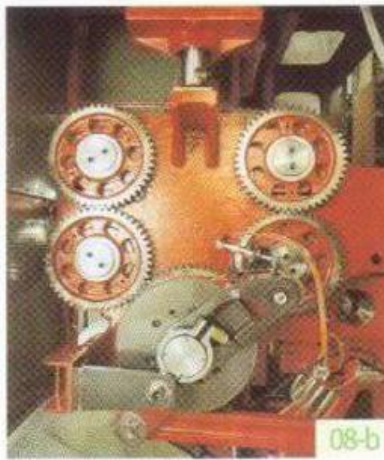
06-a



06-b



- 07** Standard, hand wheel type and NC controlled type wire feeding stopper adjustment mechanism for some of the models of CBF, CBP, CNP etc. as showed in Figure 07-a, 07-b and Figure 07-c.
- 08** Wire feeding mechanism equipped with air driven ratchet pawl with automatic lifting-up in its returning stroke and incorporates a feeding length adjustment together with a brake to prevent wire reversing problem. Figure 08-a, 08-b and 08-c show the wire feeding mechanism respectively for models for forming of parts with max. length dia. less than M12 mm, equal and bigger than M12 mm and NC control of CBF, CBP and CNP series.



- 09** Figure 09-a shows the optional touch tone control system for Q.T.C. which provides numerical adjustment and has a capacity of 99 memory modules. Figure 09-b shows the optional lifting mechanism for easy and labour saving change of die block.



CBF Series Bolt Former Specifications 3 Forging Stations

Model	Unit	CBF-43S	CBF-63S	CBF-83S	CBF-83L
Forging station	No.	3	3	3	3
Forging force	kgs	16,000	35,000	60,000	60,000
Max. cut-off dia.	mm	φ 5	φ 8	φ 10	φ 10
Max. cut-off length	mm	66	80	75	135
Speed Range	pcs/min	180-300	160-260	140-240	110-180
P.K.O. Stroke	mm	10	12	12	16
K.O. Stroke	mm	56	65	52	115
Main slider stroke	mm	114	110	106	192
Main motor	kw	7.5	11	15	18.5
Cut-off die. dia.	mm	φ 38*30L	φ 30*45L	φ 53*56L	φ 30*50L
Punch die. dia.	mm	φ 31*65L	φ 40*90L	φ 45*95L	φ 45*140L
Main die. dia.	mm	φ 38*85L	φ 50*85L	φ 60*80L	φ 60*150L
Die pitch	mm	46	60	70	70
Approx. weight	kgs	5,600	7,500	10,000	14,000
Normal bolt size	mm	2-4	3-6	5-8	5-8
Shank length of blank	mm	6-50	10-65	15-50	25-107

Model	Unit	CBF-103S	CBF-103L	CBF-133S	CBF-133L
Forging station	No.	3	3	3	3
Forging force	kgs	80,000	80,000	115,000	115,000
Max. cut-off dia.	mm	φ 12	φ 12	φ 15	φ 15
Max. cut-off length	mm	105	192	145	250
Speed Range	pcs/min	120-200	85-140	100-160	60-100
P.K.O. Stroke	mm	15	15	26	25
K.O. Stroke	mm	80	162	102	230
Main slider stroke	mm	150	280	200	350
Main motor	kw	18.5	22	30	30
Cut-off die. dia.	mm	φ 45*59L	φ 45*59L	φ 63*69L	φ 55*70L
Punch die. dia.	mm	φ 53*115L	φ 53*112L	φ 60*130L	φ 60*179L
Main die. dia.	mm	φ 75*108L	φ 75*200L	φ 86*135L	φ 86*265L
Die pitch	mm	90	90	98	110
Approx. weight	kgs	14,000	19,500	19,500	31,000
Normal bolt size	mm	6-10	6-10	8-12.7	8-12.7
Shank length of blank	mm	15-70	30-152	20-100	70-210

Remarks

1. Modification is subjected to be made without prior notice.
2. Applicable output speed may differ depending upon shape, size and material of the forged parts.
3. The material of cut-off and forming shown above are for low and medium carbon steel and high tensile alloy steel (Grade 10.9).



CBF Series Bolt Former Specifications 4 Forging Stations

Model	Unit	CBF-44S	CBF-64S	CBF-84S	CBF-104S	CBF-104L	CBF-134L	CBF-134LL
Forging station	No.	4	4	4	4	4	4	4
Forging force	kgs	16,000	40,000	60,000	80,000	80,000	120,000	120,000
Max. cut-off dia.	mm	φ5	φ8	φ10	φ12	φ12	φ15	φ15
Max. cut-off length	mm	66	95	100	133	185	190	285
Speed Range	pcs/min	180-300	140-240	120-200	95-160	90-150	75-120	50-80
P.K.O. Stroke	mm	10	12	19	20	30	30	30
K.O. Stroke	mm	56	80	85	110	160	160	280
Main slider stroke	mm	114	136	140	190	262	270	380
Main motor	kw	7.5	15	22	30	30	37	37
Cut-off die. dia.	mm	φ 42*30L	φ 30*45L	φ 35*50L	φ 45*59L	φ 45*59L	φ 63*69L	φ 55*70L
Punch die. dia.	mm	φ 31*65L	φ 40*90L	φ 45*115L	φ 53*115L	φ 53*115L	φ 60*130L	φ 60*229L
Main die. dia.	mm	φ 38*85L	φ 50*110L	φ 60*120L	φ 75*135L	φ 75*185L	φ 86*190L	φ 86*305L
Die pitch	mm	46	60	80	94	94	110	110
Approx. weight	kgs	6,500	10,000	14,500	18,000	21,000	26,000	38,000
Normal bolt size	mm	2-4	3-6	5-8	6-10	6-10	8-12.7	8-12.7
Shank length of blank	mm	6-50	10-75	15-77	15-102	20-152	25-152	75-262

Model	Unit	CBF-164S	CBF-164LL	CBF-204L	CBF-204LL	CBF-254S	CBF-254L
Forging station	No.	4	4	4	4	4	4
Forging force	kgs	210,000	210,000	350,000	350,000	430,000	430,000
Max. cut-off dia.	mm	φ18	φ18	φ23	φ23	φ26	φ30
Max. cut-off length	mm	195	350	240	360	253	320
Speed Range	pcs/min	70-110	40-70	50-80	40-65	40-70	35-62
P.K.O. Stroke	mm	40	46	46	46	40	46
K.O. Stroke	mm	170	320	220	325	175	280
Main slider stroke	mm	260	490	346	496	330	446
Main motor	kw	45	55	55	75	90	90
Cut-off die. dia.	mm	φ 60*90L	φ 64*100L	φ 75*120L	φ 75*120L	φ 80*130L	φ 99*150L
Punch die. dia.	mm	φ 75*185L	φ 75*185L	φ 90*215L	φ 90*215L	φ 120*270L	φ 120*270L
Main die. dia.	mm	φ 100*190L	φ 100*345L	φ 125*240L	φ 125*345L	φ 140*250L	φ 148*300L
Die pitch	mm	120	120	140	140	160	160
Approx. weight	kgs	43,000	60,000	62,000	75,000	105,000	131,000
Normal bolt size	mm	10-16	10-16	12-20	12-20	14-25.4	16-25.4
Shank length of blank	mm	20-152	100-305	25-200	100-305	Hex 35-175 Socket 35-165	60-254

Remarks

1. Modification is subjected to be made without prior notice.
2. Applicable output speed may differ depending upon shape, size and material of the forged parts.
3. The material of cut-off and forming shown above are for low and medium carbon steel and alloy steel (Grade 10.9).

CBP Series Part Former Specifications 5 Forging Stations

Model	Unit	CBP-45S	CBP-65S	CBP-85S	CBP-105S	CBP-135L
Forging station	No.	5	5	5	5	5
Forging force	kgs	16,000	40,000	80,000	90,000	130,000
Max. cut-off dia.	mm	φ5	φ8	φ10	φ12	φ15
Max. cut-off length	mm	66	95	100	133	190
Speed Range	pcs/min	135-220	120-200	95-160	90-150	60-105
P.K.O. Stroke	mm	10	15	26	20	30
K.O. Stroke	mm	51	80	85	110	160
Main slider stroke	mm	114	136	140	190	270
Main motor	kw	7.5	15	22	22	37
Cut-off die. dia.	mm	φ42*30L	φ30*45L	φ35*62L	φ45*59L	φ63*69L
Punch die. dia.	mm	φ31*65L	φ40*90L	φ45*115L	φ53*115L	φ60*130L
Main die. dia.	mm	φ38*71L	φ50*110L	φ60*120L	φ75*135L	φ86*190L
Die pitch	mm	46	60	80	94	110
Approx. weight	kgs	8,000	13,000	16,000	20,000	31,000
Normal bolt size	mm	2-4	3-6	5-8	6-10	8-12, 7
Shank length of blank	mm	10-51	10-75	15-77	15-102	20-152

Model	Unit	CBP-165S	CBP-205L	CBP-255L	CBP-255LL	CBP-305L
Forging station	No.	5	5	5	5	5
Forging force	kgs	220,000	350,000	440,000	440,000	550,000
Max. cut-off dia.	mm	φ23	φ23	φ30	φ32	φ36
Max. cut-off length	mm	190	240	370	450	420
Speed Range	pcs/min	55-95	45-75	35-55	30-50	25-45
P.K.O. Stroke	mm	35	46	45	60	60
K.O. Stroke	mm	165	220	315	400	380
Main slider stroke	mm	280	346	510	620	580
Main motor	kw	55	75	110	110	132
Cut-off die. dia.	mm	φ64*100L	φ75*120L	φ99*150L	φ99*150L	φ118*150L
Punch die. dia.	mm	φ75*185L	φ90*215L	φ120*270L	φ120*270L	φ140*300L
Main die. dia.	mm	φ108*200L	φ125*240L	φ148*355L	φ148*450L	φ168*420L
Die pitch	mm	129	140	160	160	180
Approx. weight	kgs	52,000	75,000	140,000	155,000	200,000
Normal bolt size	mm	10-16	12-20	16-25.4	16-25.4	24-30
Shank length of blank	mm	25-152	25-200	60-305	120-375	100-350

Remarks

1. Modification is subjected to be made without prior notice.
2. Applicable output speed may differ depending upon shape, size and material of the forged parts.
3. The maximum cut-off and forging shown above are for low and medium carbon steel and high tensile alloy steel (Grade 10.9).



CBP Series Part Former Specifications 6 Forging Stations

Model	Unit	CBP-46S	CBP-66S	CBP-86S	CBP-106S	CBP-136S
Forging station	No.	6	6	6	6	6
Forging force	kgs	24,000	50,000	90,000	110,000	140,000
Max. cut-off dia.	mm	φ7	φ10	φ13	φ16	φ18
Max. cut-off length	mm	66	100	100	133	140
Speed Range	pcs/min	125-210	110-180	90-150	85-140	60-105
P.K.O. Stroke	mm	10	26	26	26	26
K.O. Stroke	mm	51	85	85	110	110
Main slider stroke	mm	114	140	140	190	206
Main motor	kw	11	18.5	22	30	45
Cut-off die. dia.	mm	φ 24*35L	φ 32*45L	φ 42*60L	φ 52*75L	φ 58*80L
Punch die. dia.	mm	φ 31*65L	φ 40*90L	φ 45*115L	φ 53*115L	φ 60*130
Main die. dia.	mm	φ 38*85L	φ 50*120L	φ 60*120L	φ 75*135L	φ 94*190
Die pitch	mm	46	64	80	94	110
Approx. weight	kgs	9,000	16,000	20,000	24,000	35,000
Open upset dia.	mm	φ10	φ14	φ18	φ22	φ25
Normal size of bolt	mm	2-4	3-6	5-8	6-10	8-12.7
Shank length of blank	mm	6-50	15-75	15-77	15-102	20-100

Model	Unit	CBP-136L	CBP-136LL	CBP-166S	CBP-206S	CBP-206L
Forging station	No.	6	6	6	6	6
Forging force	kgs	140,000	140,000	230,000	390,000	390,000
Max. cut-off dia.	mm	φ18	φ18	φ23	φ30	φ30
Max. cut-off length	mm	190	240	190	195	240
Speed Range	pcs/min	60-100	55-90	55-90	50-80	40-70
P.K.O. Stroke	mm	30	40	35	46	46
K.O. Stroke	mm	160	210	165	180	220
Main slider stroke	mm	270	320	280	280	346
Main motor	kw	45	45	75	90	90
Cut-off die. dia.	mm	φ 58*80L	φ 58*80L	φ 74*105L	φ 94*130L	φ 94*130
Punch die. dia.	mm	φ 60*130L	φ 60*130L	φ 75*185L	φ 90*215L	φ 90*215
Main die. dia.	mm	φ 94*190L	φ 94*240L	φ 108*200L	φ 125*200L	φ 125*240
Die pitch	mm	110	110	129	140	140
Approx. weight	kgs	35,000	42,000	56,000	80,000	80,000
Open upset dia.	mm	φ25	φ25	φ32	φ44	φ44
Normal size of bolt	mm	8-12.7	8-12.7	10-16	12-20	12-20
Shank length of blank	mm	20-152	40-200	25-152	25-152	25-200

Remarks

1. Modification is subjected to be made without prior notice.
2. Applicable output speed may differ depending upon shape, size and material of the forged parts.
3. The material of cut-off and forming shown above are for low and medium carbon steel and high tensile alloy steel (Grade 10.9).

CNF Series Nut Former Specifications 5 & 6 Forging Stations

Model	Unit	CNF-65SP	CNF-65LP	CNF-85SP	CNF-85LP	CNF-105SP	CNF-105LP	CNF-145SP
Forging station	No.	5	5	5	5	5	5	5
Forging force	kgs	52,000	52,000	70,000	70,000	105,000	105,000	190,000
Max. cut-off dia.	mm	φ10	φ10	φ14	φ14	φ17	φ17	φ22
Max. cut-off length	mm	8	15	12	20	14	21	17
Speed Range	pcs/min	180-300	120-200	140-230	90-150	115-190	75-125	90-150
P.K.O. Stroke	mm	8	10	10	12	12	15	15
K.O. Stroke	mm	11	35	16	40	20	38	24
Main slider stroke	mm	70	100	84	120	100	130	134
Main motor	kw	11	15	15	18.5	22	30	30
Cut-off die. dia.	mm	φ40	φ40	φ50	φ50	φ60	φ60	φ80
Punch die. dia.	mm	φ35	φ35	φ50	φ50	φ60	φ60	φ75
Main die. dia.	mm	φ50	φ50	φ60	φ60	φ75	φ75	φ100
Die pitch	mm	58	58	70	70	84	84	108
Approx. weight	kgs	7,800	8,500	8,500	10,000	16,000	16,500	26,000
Max size of hex.nut across	mm	11	11	13	13	17	17	22

Model	Unit	CNF-145SMP	CNF-165SP	CNF-165LP	CNF-205SP	CNF-106SP	CNF-106LP
Forging station	No.	5	5	5	5	6	6
Forging force	kgs	190,000	260,000	260,000	400,000	105,000	105,000
Max. cut-off dia.	mm	φ22	φ26	φ26	φ32	φ17	φ17
Max. cut-off length	mm	21	25	40	35	14	21
Speed Range	pcs/min	70-120	70-120	60-100	60-100	105-175	70-115
P.K.O. Stroke	mm	20	25	35	25	12	15
K.O. Stroke	mm	54	55	80	45	20	38
Main slider stroke	mm	160	160	230	160	100	130
Main motor	kw	37	55	55	75	22	30
Cut-off die. dia.	mm	φ80	φ89	φ89	φ92	φ60	φ60
Punch die. dia.	mm	φ75	φ85	φ85	φ90	φ60	φ60
Main die. dia.	mm	φ100	φ118	φ118	φ143	φ75	φ75
Die pitch	mm	108	129	129	148	84	84
Approx. weight	kgs	28,000	42,000	42,000	45,000	16,100	16,100
Max size of hex.nut across	mm	22	26	26	32	17	17

1. Modification is subjected to be made without prior notice
2. The minimum nut size should be determined on customer's request
3. Applicable output speed may differ depending upon shape, size and material of the forged parts
4. The material of cut-off and forming shown above are for low and medium carbon steel and high tensile alloy steel (Grade 10.9)



CNP Series Part Former Specifications 5 & 6 Forging Stations

Model	Unit	CNP		CNP		CNP		CNP		CNP	
		45S	46S	65S	66S	85S	86S	105S	106S	145S	146S
Forging station	No.	5	6	5	6	5	6	5	6	5	6
Forging force	kgs	24,000		50,000		75,000		110,000		190,000	
Max. cut-off dia.	mm	φ7		φ10		φ13		φ16		φ22	
Max. cut-off length	mm	40		45		60		60		80	
Speed Range	pcs/min	130-220		110-180		100-160		90-150		70-120	
P.K.O. Stroke	mm	10		15		20		21		25	
K.O. Stroke	mm	50		60		80		80		110	
Main slider stroke	mm	100		110		140		176		210	
Main motor	kw	11		18.5		22		30		55	
Cut-off die. dia.	mm	φ 24*35L		φ 32*45L		φ 42*60L		φ 70*75L		φ 70*100L	
Punch die. dia.	mm	φ 31*65L		φ 40*90L		φ 45*115L		φ 60*115L		φ 70*130L	
Main die. dia.	mm	φ 38*85L		φ 50*95L		φ 60*115L		φ 75*130L		φ 94*220L	
Die pitch	mm	46		60		80		94		110	
Approx. weight	Ton	9	10	14	16	18	20	22	25	35	40
Max open upset dia.	mm	φ 10		φ 14		φ 18		φ 22		φ 32	

Model	Unit	CNP		CNP		CNP		CNP		CNP	
		165S	166S	205S	206S	255S	256S	275S	276S	305S	306S
Forging station	No.	5	6	5	6	5	6	5	6	5	6
Forging force	kgs	260,000		390,000		500,000		730,000		880,000	
Max. cut-off dia.	mm	φ 26		φ 30		φ 35		φ 41		φ 45	
Max. cut-off length	mm	80		100		140		160		180	
Speed Range	pcs/min	60-100		50-80		40-70		35-60		30-55	
P.K.O. Stroke	mm	35		35		40		45		45	
K.O. Stroke	mm	110		125		150		165		185	
Main slider stroke	mm	210		250		280		300		320	
Main motor	kw	75		90		132		185		220	
Cut-off die. dia.	mm	φ 84*120L		φ 94*130L		φ 109*150L		φ 129*180L		φ 139*195L	
Punch die. dia.	mm	φ 85*160L		φ 95*180L		φ 120*230L		φ 138*270L		φ 158*290L	
Main die. dia.	mm	φ 108*220L		φ 125*200L		φ 148*250L		φ 178*270L		φ 195*290L	
Die pitch	mm	129		140		160		190		210	
Approx. weight	Ton	52	60	80	95	110	135	130	150	155	180
Max open upset dia.	mm	φ 38		φ 44		φ 50		φ 60		φ 65	

Remarks

1. Modification is subjected to be made without prior notice.
2. Applicable output speed may differ depending upon shape, size and material of the forged parts.
3. The material of cut-off and forming shown above are for low and medium carbon steel and high tensile alloy steel (Grade 10.9).

CPF Series Part Former Specifications 5 & 6 Forging Stations

Model	Unit	CPF-035	CPF-036	CPF-66S
Forging station	No.	5	6	6
Forging force	kgs	10,000	13,000	60,000
Max. cut-off dia.	mm	φ3	φ5	φ10
Max. cut-off length	mm	28	30	100
Speed Range	pcs/min	120-200	120-200	110-180
P.K.O. Stroke	mm	10	15	26
K.O. Stroke	mm	23	28	85
Main slider stroke	mm	80	100	140
Main motor	kw	3.7	5.5	22
Cut-off die. dia.	mm	φ 25*30L	φ 30*35L	φ 35*62L
Punch die. dia.	mm	φ 22.7*63L	φ 25*55L	φ 45*90L
Main die. dia.	mm	φ 30*57.7L	φ 25*65L	φ 50*120L
Die pitch	mm	36	36	80
Approx. weight	kgs	1,500	2,000	16,000
Open upset dia.	mm	φ 7	φ 7	φ 13.5

Remarks

1. Modification is subjected to be made without prior notice.
2. Applicable output speed may differ depending upon shape, size and material of the forged parts.
3. The material of cut-off and forming shown above are for low and medium carbon steel and high tensile alloy steel (Grade 10 B).

Note:

Products Range

- Multi-station bolt former (M2-25.4 mm, 3-4 stations)
- Multi-station nut former (M6-20 mm, 5-6 stations)
- Multi-station part former (M6-30 mm, 5-6 stations)
- 1 die 2 blow header (M2-30 mm)
- 2 die 2 blow header (M5-8 mm, 2 stations)
- Flat die thread roller (M2-31.75 mm)
- Cold forming toolings & thread rolling dies

Application

Cold forming or forging and thread rolling of all kinds of screws, bolts, nuts, rivets, standard or none standard metal parts used for buildings, steel structures, furniture, electric & electronic, machinery & instruments, automotive, motorcycle & rail train etc. industries.



★ Remarks: All the photos are for reference only & delivery are as per contract.

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