

MACHINE PERFORMANCE

HIGHLY ENERGY EFFICIENT

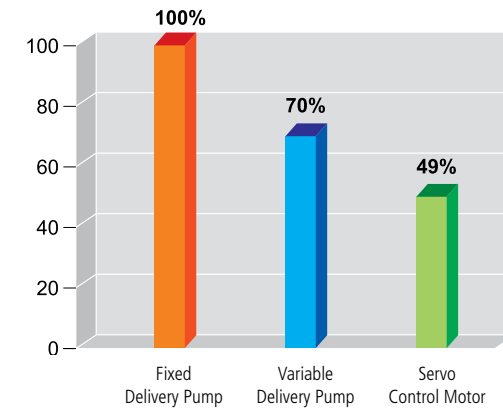


SERVO SYSTEM

Advanced SVP system saves energy. The energy saving is more observed during pressure holding and cooling stage. It has faster response speed. It needs 30 milli seconds to achieve the maximum flow rate. This effectively shortens the cycle time and thus improves efficiency. The servomotor gives better part quality and dimensional stability.

Armour series of machine achieves more than 50% energy saving compared to conventional hydraulic machine with fix pump. In armour machines, function wise energy consumption is displayed on screen which helps in optimizing the machine cycle for lower energy demand.

ENERGY CONSUMPTION



MAJOR APPLICATIONS



HIKON

INNOVATING PLASTIC TECHNOLOGY

INJECTION MOULDING MACHINE



Contact :

HIKON
H. K. INDUSTRIES

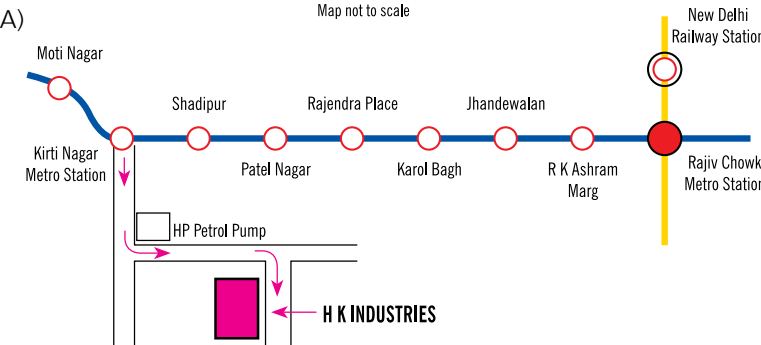
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LOCATION MAP

Map not to scale



H.K. Industries is involved in continuous and innovative development to produce the latest technology plant. As such plant specification and design are subject to change.

H.K. INDUSTRIES
MANUFACTURER OF PLASTIC PROCESSING
MACHINERIES AND EQUIPMENTS

HIKON INJECTION MOULDING MACHINE

STANDARD FEATURES

CLAMP UNIT

- 5 - point double toggle system
- Mechanical and electrical safety devices
- Low pressure mould protection
- Multi-stage control of pressure, speed and position of mold open/close
- Fast mould clamping with differential device
- Robust casting construction with strengthened tie bar for maximum service life and best moulding results
- Automatic mould height adjustment
- Variable mode of ejector movement
- Automatic central lubrication

HYDRAULIC SYSTEM

- Efficient and sound reduced hydraulic pump
- Hydraulic proportional control
- Hydraulic elements by well-known brand, with high reliability and long service life
- Oil temperature alarm

INJECTION UNIT

- Two drive cylinder for screw injection
- Multi - stage of injection pressure, speed and position
- Multi - stage of holding pressure, speed and time
- Multi - stage of charging speed, position and time
- PID barrel temperature control
- Screw Plasticizing back pressure control
- Suck back function
- Plasticizing cold start prevention
- Screw speed inspection
- Self purging function
- Efficient plasticizing device with strong torque motor

CONTROL UNIT

- With LCD Screen
- Mold data storage
- Linear transducer for clamping / injection / ejection control
- English, Spanish, Portuguese and other language options



Controller with LCD colour screen



Mould platens have been designed using FINITE ELEMENT ANALYSIS for optimum rigidity.



Automatic mould height adjustment ensure the time and cost saving during the mould changing.



The energy saving hydraulics are made of high-quality components. They allow much greater forces to be transferred and enable very uniform and precision movements of the machine.



The 5-point double toggle provides short locking time and high opening force.

OPTIONS

- Servo motor system
- Special screw for PET/PC/PA/PMMA
- Unscrew device
- Additional core pulling
- Air blow device
- Shut-off nozzle
- By-pass filter
- Euromap-12 robot interface
- T slot platen
- Variable pump system
- Sandwich/interval injection system
- Accumulator assisted injection system
- Auxiliary machine (hopper dryer, auto loader, belt conveyer dehumidifier, mould temperature controller, granulator, mixer chiller, cooling tower, robot)



Variable pump system



Accumulator assisted injection



Sandwich/interval injection

TECHNICAL PARAMETER FOR PLASTIC INJECTION MOULDING MACHINE - NS SERIES

| SPECIFICATION | HIKON NS 50 | | | HIKON NS 70 | | | HIKON NS 100 | | | HIKON NS 130 | | | HIKON NS 160 | | | HIKON NS 220 | | | HIKON NS 270 | | | |
|----------------------------|-----------------|-------------|-----|-------------|--------------|-----|--------------|-------------|------|--------------|-------------|-----|--------------|------------|-----|--------------|-------------|-----|--------------|-------------|------|------|
| INJECTION UNIT | | | | | | | | | | | | | | | | | | | | | | |
| Screw Diameter | mm | A | B | C | A | B | C | A | B | C | A | B | C | A | B | C | A | B | C | A | B | C |
| Screw L/D Ratio | | 22.4 | 20 | 18.6 | 23.4 | 22 | 20 | 24 | 21.5 | 19 | 22 | 21 | 19.5 | 22.5 | 21 | 19.7 | 23.2 | 21 | 19.1 | 21.5 | 19.7 | 18.2 |
| Short Volume (Theoretical) | cm ³ | 48 | 60 | 69 | 84 | 96 | 115 | 150 | 189 | 234 | 248 | 273 | 313 | 312 | 358 | 407 | 412 | 508 | 615 | 707 | 841 | 987 |
| Injection Weight(PS) | g | 38 | 54 | 62 | 76 | 88 | 104 | 136 | 172 | 213 | 225 | 248 | 285 | 280 | 322 | 366 | 370 | 458 | 554 | 636 | 756 | 888 |
| Injection pressure | Mpa | 204 | 163 | 142 | 214 | 188 | 157 | 232 | 183 | 149 | 202 | 183 | 159 | 203 | 177 | 156 | 240 | 195 | 160 | 216 | 182 | 155 |
| Screw stroke | mm | 100 | | | 140 | | | 175 | | | 195 | | | 245 | | | 275 | | | 310 | | |
| Screw Speed | r/min | 210 | | | 210 | | | 210 | | | 210 | | | 200 | | | 180 | | | 180 | | |
| CLAMPING UNIT | | | | | | | | | | | | | | | | | | | | | | |
| Clamp Tonnage | KN | 500 | | | 700 | | | 1000 | | | 1300 | | | 1600 | | | 2200 | | | 2700 | | |
| Toggle Stroke | mm | 255 | | | 270 | | | 340 | | | 380 | | | 430 | | | 470 | | | 550 | | |
| Space Between Tie Bars | mm | 280X260 | | | 315X315 | | | 375X375 | | | 425X405 | | | 460X460 | | | 510X510 | | | 580X580 | | |
| Max. Mold Height | mm | 340 | | | 320 | | | 400 | | | 450 | | | 500 | | | 530 | | | 620 | | |
| Min. Mold Height | mm | 120 | | | 125 | | | 160 | | | 170 | | | 180 | | | 200 | | | 220 | | |
| Ejector Stroke | mm | 65 | | | 80 | | | 95 | | | 120 | | | 130 | | | 130 | | | 145 | | |
| Ejector Tonnage | KN | 25 | | | 27 | | | 30 | | | 33 | | | 45 | | | 70 | | | 70 | | |
| Ejector No. | pc | 1 | | | 1 | | | 5 | | | 5 | | | 5 | | | 9 | | | 9 | | |
| OTHERS | | | | | | | | | | | | | | | | | | | | | | |
| Max. Pump Pressure | Mpa | 16 | | | 16 | | | 16 | | | 16 | | | 16 | | | 16 | | | 16 | | |
| Pump Motor Power | KW | 5.6 | | | 7.5 | | | 11 | | | 15 | | | 15 | | | 18.5 | | | 22 | | |
| Heater Power | KW | 4.9 | | | 6.2 | | | 6.5 | | | 9 | | | 9.5 | | | 14 | | | 15.5 | | |
| Machine Dimension (LXWXH) | m | 3.2X1.1X1.5 | | | 3.8X1.15X1.6 | | | 4.2X1.2X1.7 | | | 4.5X1.3X1.8 | | | 5X1.35X1.9 | | | 5.8X1.5X2.1 | | | 6.1X1.7X2.2 | | |
| Machine Weight | t | 1.5 | | | 2.6 | | | 3.2 | | | 3.8 | | | 5 | | | 6.9 | | | 8.5 | | |
| Oil Tank Capacity | L | 140 | | | 160 | | | 210 | | | 260 | | | 280 | | | 420 | | | 560 | | |

| SPECIFICATION | HIKON NS 360 | | | | HIKON NS 390 | | | | HIKON NS 520 | | | | HIKON NS 620 | | | | HIKON NS 730 | | | | HIKON NS 880 | | | | HIKON NS 1100 | | | | |
|----------------------------|-----------------|-------------|------|------|--------------|-------------|------|------|--------------|-------------|------|------|--------------|-------------|------|------|--------------|--------------|------|------|--------------|--------------|------|------|---------------|--------------|------|---|--|
| INJECTION UNIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Screw Diameter | mm | A | B | C | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D | |
| Screw L/D Ratio | | 22.8 | 21 | 19.5 | 22 | 20.4 | 19 | 18 | 22.3 | 21 | 19.8 | 22.3 | 21 | 19.9 | 18.9 | 24.8 | 22 | 19.8 | 18 | 24.4 | 22 | 20 | 18.3 | 21.5 | 20 | 19.2 | 18.4 | | |
| Short Volume (Theoretical) | cm ³ | 895 | 1050 | 1218 | 1210 | 1403 | 1610 | 1832 | 2141 | 2418 | 2710 | 2298 | 2576 | 2870 | 3181 | 2161 | 2736 | 3377 | 4086 | 2900 | 3581 | 4334 | 5157 | 4430 | 4850 | 5251 | 5706 | | |
| Injection Weight(PS) | g | 805 | 945 | 1097 | 1089 | 1262 | 1450 | 1650 | 1948 | 2200 | 2466 | 2091 | 2344 | 2611 | 2895 | 1967 | 2489 | 3073 | 3719 | 2639 | 3258 | 3944 | 4693 | 4031 | 4413 | 4778 | 5241 | | |
| Injection pressure | Mpa | 213 | 182 | 157 | 236 | 203 | 177 | 156 | 188 | 167 | 149 | 206 | 184 | 164 | 149 | 224 | 177 | 143 | 118 | 228 | 184 | 152 | 128 | 186 | 170 | 156 | 144 | | |
| Screw stroke | mm | 340 | | | | 395 | | | | 440 | | | | 450 | | | | 430 | | | | 455 | | | | 465 | | | |
| Screw Speed | r/min | 180 | | | | 165 | | | | 150 | | | | 125 | | | | 0-130 | | | | 0-110 | | | | 0-100 | | | |
| CLAMPING UNIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clamp Tonnage | KN | 3600 | | | | 3900 | | | | 5200 | | | | 6200 | | | | 7300 | | | | 8800 | | | | 10800 | | | |
| Toggle Stroke | mm | 650 | | | | 700 | | | | 820 | | | | 870 | | | | 930 | | | | 980 | | | | 1100 | | | |
| Space Between Tie Bars | mm | 660X660 | | | | 720X720 | | | | 810X810 | | | | 850X850 | | | | 910X910 | | | | 980X980 | | | | 1100X1100 | | | |
| Max. Mold Height | mm | 700 | | | | 820 | | | | 820 | | | | 900 | | | | 950 | | | | 1000 | | | | 1150 | | | |
| Min. Mold Height | mm | 230 | | | | 280 | | | | 350 | | | | 350 | | | | 380 | | | | 400 | | | | 520 | | | |
| Ejector Stroke | mm | 150 | | | | 180 | | | | 210 | | | | 260 | | | | 260 | | | | 280 | | | | 320 | | | |
| Ejector Tonnage | KN | 120 | | | | 126 | | | | 150 | | | | 200 | | | | 181 | | | | 212 | | | | 235 | | | |
| Ejector No. | pc | 13 | | | | 13 | | | | 13 | | | | 17 | | | | 17 | | | | 21 | | | | 21 | | | |
| OTHERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. Pump Pressure | Mpa | 16 | | | | 16 | | | | 16 | | | | 16 | | | | 16 | | | | 16 | | | | 16 | | | |
| Pump Motor Power | KW | 30 | | | | 37 | | | | 55 | | | | 55 | | | | 30+30 | | | | 37+45 | | | | 45+45 | | | |
| Heater Power | KW | 20 | | | | 22.5 | | | | 33 | | | | 37.5 | | | | 47.5 | | | | 60.3 | | | | 70 | | | |
| Machine Dimension (LXWXH) | m | 6.6X1.8X2.5 | | | | 7.1X2.1X2.9 | | | | 8.4X2.2X2.6 | | | | 9.3X2.3X3.7 | | | | 9.5X2.45X3.7 | | | | 10.2X2.9X3.3 | | | | 12.3X2.9X3.3 | | | |
| Machine Weight | t | 11 | | | | 13.5 | | | | 23 | | | | 31 | | | | 38 | | | | 45 | | | | 60 | | | |
| Oil Tank Capacity | L | 630 | | | | 900 | | | | 1000 | | | | 1200 | | | | 1600 | | | | 1700 | | | | 1750 | | | |

TECHNICAL PARAMETER FOR PLASTIC INJECTION MOULDING MACHINE - ES SERIES

| SPECIFICATION | HIKON ES 100 | | | HIKON ES 130 | | | HIKON ES 160 | | | HIKON ES 220 | | | |
|----------------------------|-----------------|------------------|------|--------------|--------------------|-----|--------------|--------------------|-----|--------------|--------------------|-----|------|
| INJECTION UNIT | | | | | | | | | | | | | |
| Screw Diameter | Unit | A | B | C | A | B | C | A | B | C | A | B | C |
| Screw L/D Ratio | L/D | 22 | 20.1 | 18.5 | 22.1 | 20 | 18.6 | 20 | 18 | 16.3 | 24.2 | 22 | 20.2 |
| Short Volume (Theoretical) | cm ³ | 133 | 158 | 187 | 193 | 235 | 270 | 334 | 412 | 499 | 455 | 550 | 655 |
| Injection Weight (PS) | g | 121 | 144 | 170 | 176 | 216 | 246 | 301 | 372 | 449 | 416 | 503 | 600 |
| Plasticizing Capacity | g/s | 81 | 97 | 115 | 94 | 115 | 132 | 120 | 148 | 179 | 187 | 227 | 270 |
| Injection Pressure | Mpa | 203 | 170 | 144 | 205 | 170 | 147 | 207 | 168 | 138 | 205 | 169 | 142 |
| Screw Speed | r/min | 240 | | | 190 | | | 180 | | | 180 | | |
| CLAMPING UNIT | | | | | | | | | | | | | |
| Clamping Force | KN | 1000 | | | 1300 | | | 1600 | | | 2200 | | |
| Toggle Stroke | mm | 360 | | | 435 | | | 475 | | | 540 | | |
| Space Between Tie-Bars | mm | 420 X 380 | | | 480 X 480 | | | 530 X 530 | | | 580 X 580 | | |
| Max. Mold Height | mm | 420 | | | 520 | | | 530 | | | 550 | | |
| Min. Mold Height | mm | 150 | | | 180 | | | 200 | | | 200 | | |
| Ejector Stroke | mm | 120 | | | 135 | | | 140 | | | 150 | | |
| Ejector Tonnage/ Force | KN | 40 | | | 50 | | | 70 | | | 70 | | |
| OTHERS | | | | | | | | | | | | | |
| Max. Pump Pressure | Mpa | 16 | | | 16 | | | 16 | | | 16 | | |
| Pump Motor Power | KW | 11 | | | 15 | | | 15 | | | 22 | | |
| Heater Power | KW | 7.5 | | | 9 | | | 12 | | | 15 | | |
| Machine Dimension (LXWXH) | m | 4.4 X 1.36 X 1.8 | | | 5.16 X 1.45 X 2.12 | | | 5.92 X 1.55 X 2.14 | | | 6.14 X 1.65 X 2.25 | | |
| Machine Weight | t | 3.8 | | | 6.3 | | | 7.3 | | | 9 | | |
| Oil Tank Capacity | L | 210 | | | 270 | | | 300 | | | 380 | | |

| SPECIFICATION | HIKON ES 270 | | | | HIKON ES 360 | | | | HIKON ES 420 | | | | HIKON ES 500 | | | | HIKON ES 650 | | | | |
|----------------------------|-----------------|-----------|-----|------|--------------|-----------|------|------|--------------|-----------|------|------|--------------|-----------|------|------|--------------|-----------|---|---|--|
| INJECTION UNIT | | | | | | | | | | | | | | | | | | | | | |
| Screw Diameter | Unit | A | B | C | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D | |
| Screw L/D Ratio | L/D | 25.9 | 21 | 19.3 | 23 | 22 | 20.5 | 23.6 | 22 | 20.6 | 22.7 | 21 | 20 | 23.7 | 22 | 20.7 | 19.5 | | | | |
| Short Volume (Theoretical) | cm ³ | 641 | 763 | 895 | 1181 | 1289 | 1480 | 1500 | 1723 | 1960 | 1727 | 1965 | 2218 | 2544 | 2835 | 3140 | 3461 | | | | |
| Injection Weight (PS) | g | 589 | 702 | 823 | 1076 | 1175 | 1349 | 1365 | 1567 | 1784 | 1560 | 1788 | 2018 | 2315 | 2580 | 2858 | 314 | | | | |
| Plasticizing Capacity | g/s | 201 | 230 | 259 | 337 | 368 | 422 | 344 | 395 | 449 | 386 | 442 | 499 | 552 | 612 | 679 | 748 | | | | |
| Injection Pressure | Mpa | 169 | 142 | 121 | 186 | 170 | 148 | 199 | 173 | 152 | 191 | 168 | 148 | 184 | 165 | 149 | 135 | | | | |
| Screw Speed | r/min | 165 | | | | 160 | | | | 130 | | | | 150 | | | | | | | |
| CLAMPING UNIT | | | | | | | | | | | | | | | | | | | | | |
| Clamping Force | KN | 2700 | | | | 3600 | | | | 4200 | | | | 5000 | | | | 6800 | | | |
| Toggle Stroke | mm | 660 | | | | 700 | | | | 740 | | | | 770 | | | | 920 | | | |
| Space Between Tie-Bars | mm | 680 X 680 | | | | 725 X 725 | | | | 760 X 760 | | | | 830 X 830 | | | | 920 x 920 | | | |
| Max. Mold Height | mm | 720 | | | | 780 | | | | 810 | | | | 850 | | | | 920 | | | |
| Min. Mold Height | mm | 250 | | | | 280 | | | | 300 | | | | 330 | | | | 350 | | | |
| Ejector Stroke | mm | 160 | | | | 180 | | | | 200 | | | | 240 | | | | 250 | | | |
| Ejector Tonnage/ Force | KN | 70 | | | | 126 | | | | 110 | | | | 150 | | | | 150 | | | |
| OTHERS | | | | | | | | | | | | | | | | | | | | | |
| Max. Pump Pressure | Mpa | 16 | | | | 16 | | | | 16 | | | | 16 | | | | 16 | | | |
| Pump Motor Power | KW | 30 | | | | 37 | | | | 45 | | | | 55 | | | | 30 + 30 | | | |
| Heater Power | KW | 21 | | | | 23.5 | | | | 29.3 | | | | 31.4 | | | | 47 | | | |
| Machine | | | | | | | | | | | | | | | | | | | | | |