

# EKH Series PET / UPVC



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## EKH Series PET / UPVC Special Injection Moulding Machine

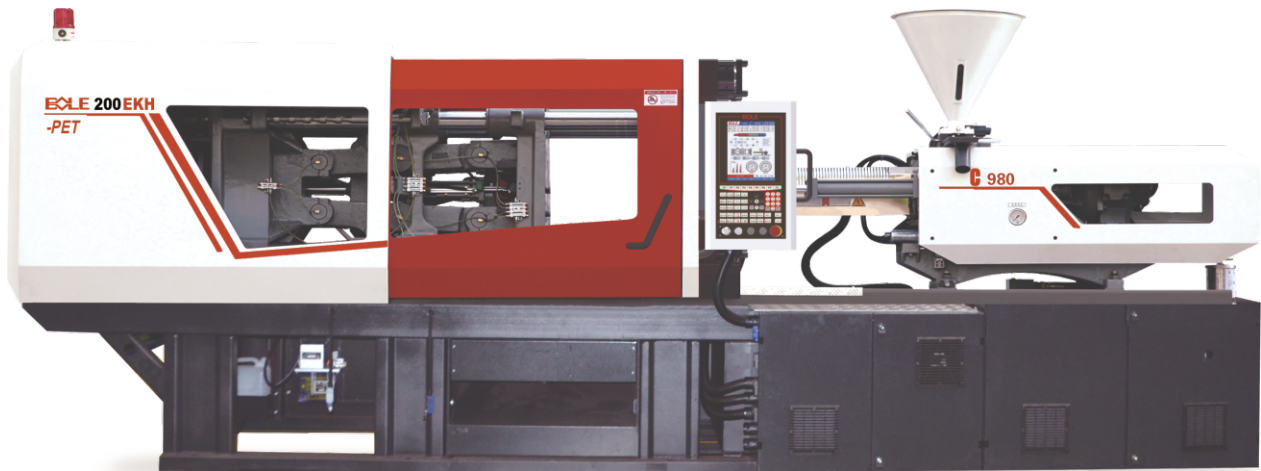


Injection Moulding Machine



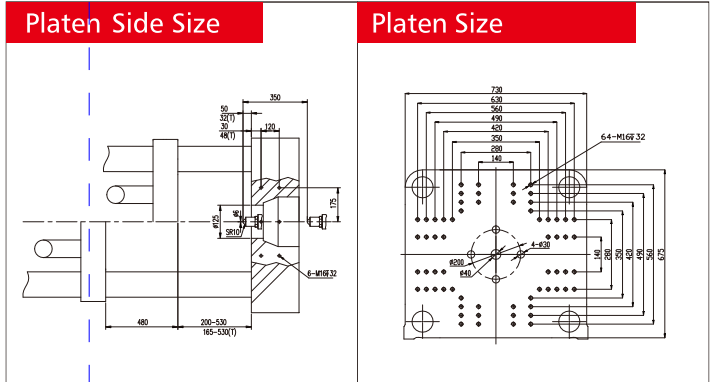
# EKH Series PET

## Special Injection Moulding Machine

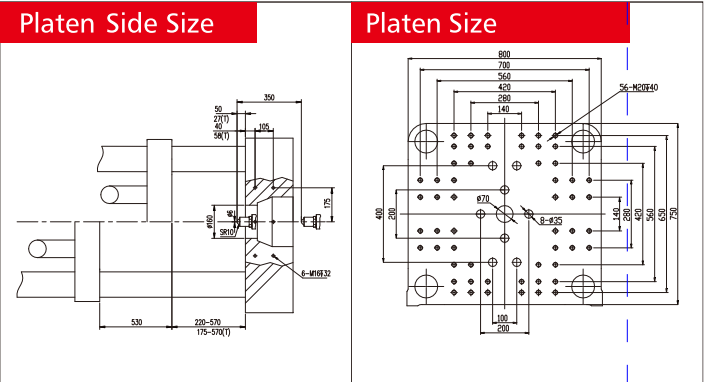


### BL200EKH-BL600EKH

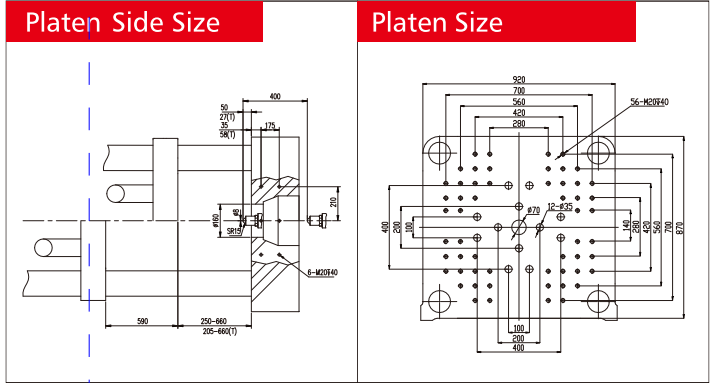
| DESCRIPTION                    | UNIT                | BL200EKH /C980 / PET | BL250EKH /C1600 / PET | BL300EKH /C2400 / PET | BL400EKH /C3100 / PET | BL450EKH /C4000 / PET | BL530EKH /C4700 / PET | BL600EKH /C5800 / PET |
|--------------------------------|---------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| International specification    |                     | 980                  | 1600                  | 2400                  | 3100                  | 4000                  | 4700                  | 5800                  |
| Screw diameter                 | Screw specification | customized for PET   | customized for PET    | customized for PET    | customized for PET    | customized for PET    | customized for PET    | customized for PET    |
|                                | mm                  | 50                   | 60                    | 70                    | 80                    | 85                    | 95                    | 100                   |
| Screw L/D ratio                |                     | 25                   | 25                    | 25                    | 25                    | 25                    | 25                    | 25                    |
| Theoretical injection capacity | cm³                 | 530                  | 890                   | 1385                  | 1909                  | 2496                  | 3224                  | 3925                  |
| Shot weight(PET)               | g                   | 609                  | 1033                  | 1606                  | 2215                  | 2895                  | 3739                  | 4553                  |
|                                | oz                  | 21. 5                | 36. 5                 | 56. 8                 | 78. 3                 | 102. 3                | 132. 1                | 160. 9                |
| Injection rate into Air        | cm³/s               | 247                  | 317                   | 425                   | 561                   | 672                   | 873                   | 980                   |
| Injection rate into Air        | g/S                 | 225                  | 289                   | 387                   | 511                   | 611                   | 794                   | 892                   |
| Injection pressure             | MPa                 | 186                  | 184                   | 171                   | 162                   | 163                   | 146                   | 149                   |
|                                | g/S (PET)           | 35                   | 55                    | 70                    | 90                    | 110                   | 140                   | 150                   |
| Injection stroke               | mm                  | 270                  | 315                   | 360                   | 380                   | 440                   | 455                   | 500                   |
| Max. injection speed           | mm/s                | 126                  | 112                   | 111                   | 112                   | 118                   | 123                   | 125                   |
| Screw speed                    | r/min               | 221                  | 187                   | 162                   | 131                   | 131                   | 131                   | 135                   |
| Sys. Pressure                  | MPa                 | 17. 5                | 17. 5                 | 17. 5                 | 17. 5                 | 17. 5                 | 17. 5                 | 17. 5                 |
| Pump Motor(Min-Max)            | kW                  | 20.5~22.4            | 26.7~29.9             | 37~40.9               | 47.2~50.7             | 60.5~65               | 75.1~81.8             | 75.1~81.8             |
| Number of Motors               | PC                  | 1                    | 1                     | 1                     | 1                     | 2                     | 2                     | 2                     |
| Heater power                   | kW                  | 15                   | 22. 75                | 24. 05                | 27. 35                | 32                    | 36. 1                 | 43                    |
| Number of temp. control zones  |                     | 3+1                  | 4+1                   | 4+1                   | 4+1                   | 4+1                   | 4+1                   | 5+1                   |
| Clamping force                 | kN                  | 2000                 | 2500                  | 3000                  | 4000                  | 4500                  | 5300                  | 6000                  |
| Opening stroke                 | mm                  | 480                  | 530                   | 590                   | 660                   | 750                   | 850                   | 900                   |
| Space between tie bar          | mm×mm               | 505×455              | 555×505               | 655×605               | 710×660               | 760×710               | 860×800               | 910×855               |
| Min. mould height              | mm                  | 200 (165)            | 220 (175)             | 250 (205)             | 270 (225)             | 330                   | 330                   | 380                   |
| Max. mould height              | mm                  | 530 (530)            | 570 (570)             | 660 (660)             | 710 (710)             | 780                   | 850                   | 910                   |
| Max. daylight                  | mm                  | 1010 (1010)          | 1100 (1100)           | 1250 (1250)           | 1370 (1370)           | 1530                  | 1700                  | 1810                  |
| Ejector stroke                 | mm                  | 150                  | 150                   | 190                   | 190                   | 210                   | 210                   | 220                   |
| Ejector force forward          | kN                  | 67                   | 123                   | 123                   | 166                   | 166                   | 166                   | 166                   |
| Ejector force back             | kN                  | 39                   | 82                    | 82                    | 117                   | 117                   | 117                   | 117                   |
| Number of ejector bar          | PC                  | 5                    | 9                     | 13                    | 13                    | 13                    | 13                    | 21                    |
| Dry cycle time                 | S                   | 2. 5                 | 3. 3                  | 2. 8                  | 3. 6                  | 3. 7                  | 4. 3                  | 4. 4                  |
| Energy consumption             | kW. h/kg            | ≤0. 5                | ≤0. 5                 | ≤0. 5                 | ≤0. 5                 | ≤0. 5                 | ≤0. 5                 | ≤0. 5                 |
| Hopper capacity                | kg                  | 25                   | 50                    | 50                    | 50                    | 50                    | 100                   | 100                   |
| Oil tank capacity              | L                   | 205                  | 255                   | 345                   | 375                   | 430                   | 600                   | 810                   |
| Machine dimensions(L×W×H)      | m×m×m               | 5. 1x1. 4x2. 2       | 6x1. 5x2. 4           | 6. 4x1. 7x2. 4        | 7. 4x1. 8x2. 4        | 8x1. 77x2. 3          | 8. 8x2x2. 5           | 9x2. 2x2. 75          |
| Machine weight                 | Ton                 | 5. 5                 | 6. 6                  | 8. 5                  | 13. 5                 | 14. 5                 | 19. 5                 | 22                    |



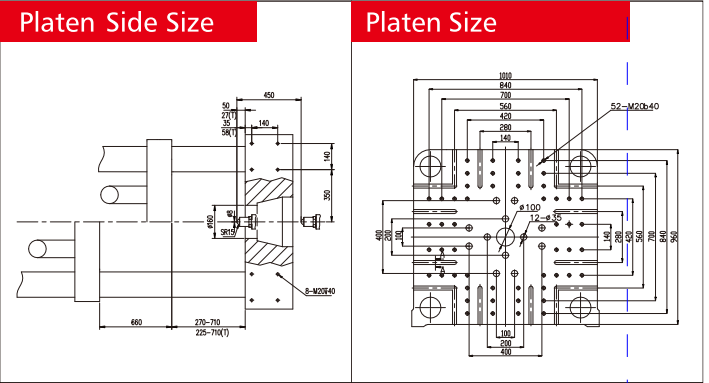
**BL200EKH/C980/PET**



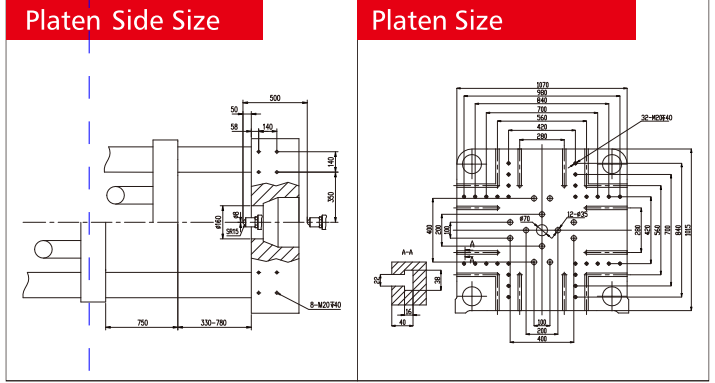
**BL250EKH/C1600/PET**



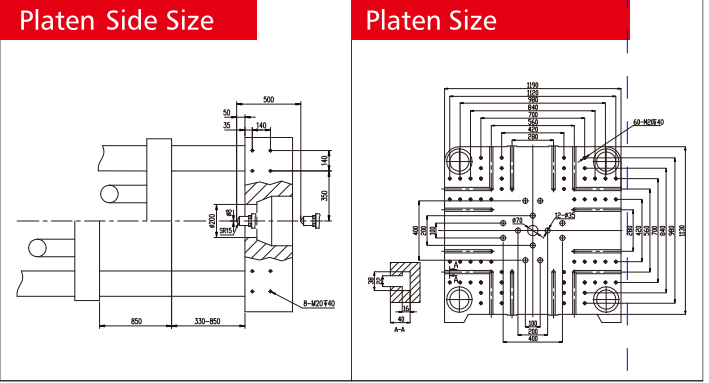
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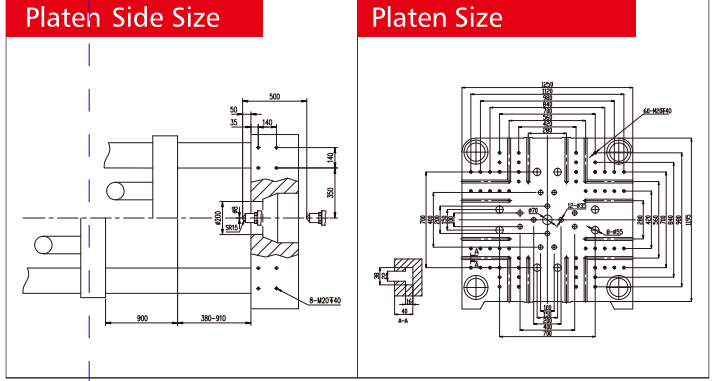
**BL400EKH/C3100/PET**



**BL450EKH/C4000/PET**

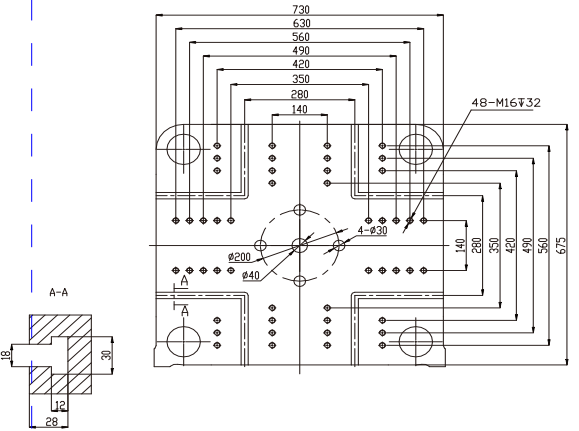


**BL530EKH/C4700/PET**

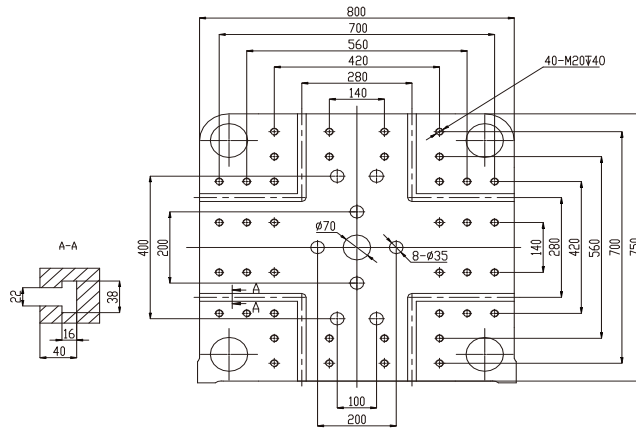


**BL600EKH/C5800/PET**

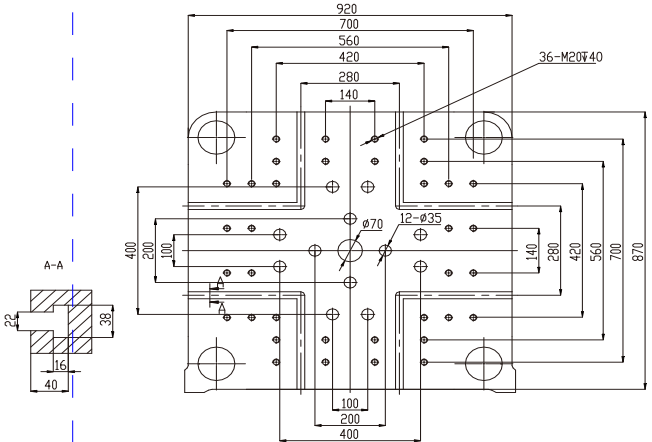
# 200-400 EKH Platen Dimensions Optional



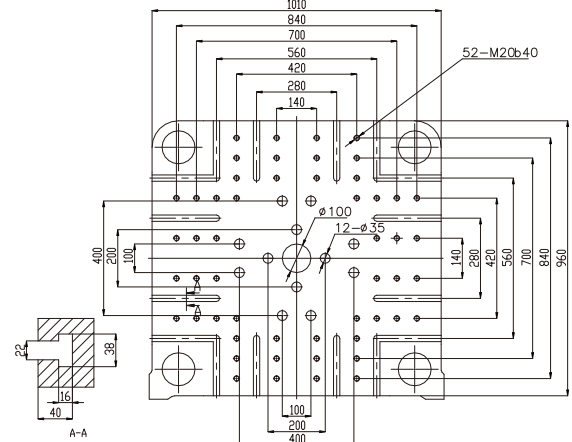
**BL200EKH**



**BL250EKH**



**BL300EKH**



**BL400EKH**

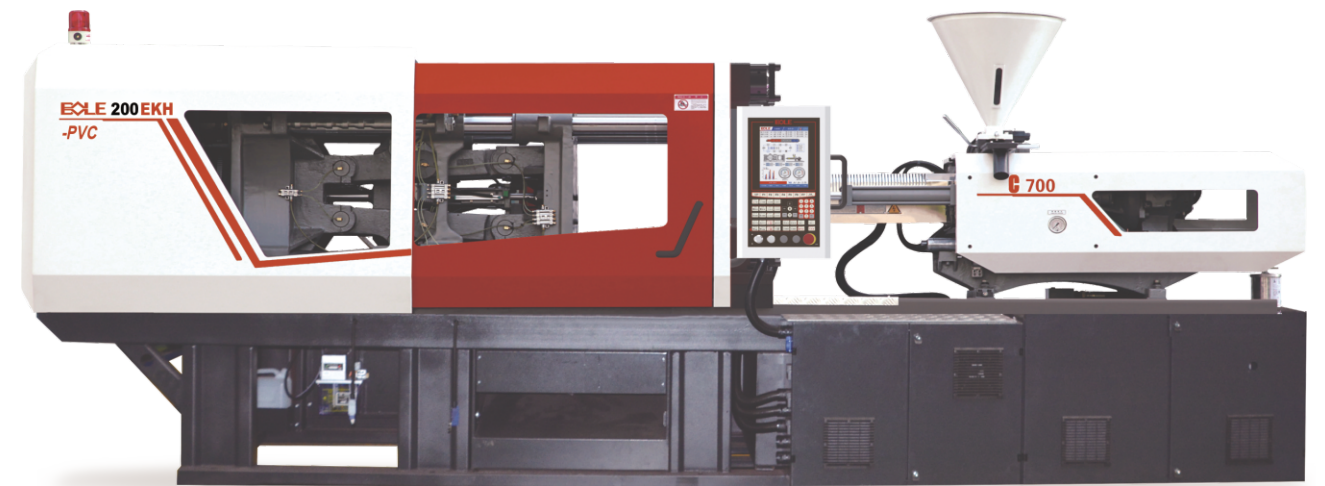
# APPLICATION



## Features:

- 1.Enlarged hydraulic system and pump servo motor
- 2.Enlarged the torque of the plasticization motor
- 3.Enlarged ejector force
- 4.Advance injection screw design for PET
- 5.Chrome plated injection screw and barrel flange

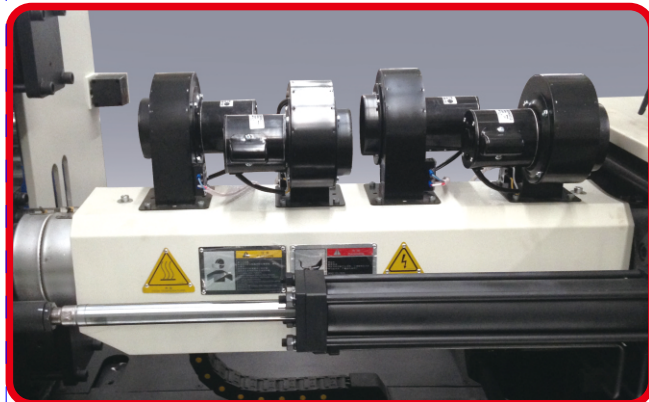
## EKH Series UPVC Special Injection Moulding Machine





■ Special screw with particular thread design, for rigid PVC, UPVC, CPVC, powered PVC, without backstop ring and thrust ring, plasticizing efficiency will be highly improved, with better stability, the product will be more perfect.

■ The screw surface will be processed with hard chrome plating, the hardness can be above HRC65. With good smooth surface, wear resistance and corrosion resistance, the working life will be longer.

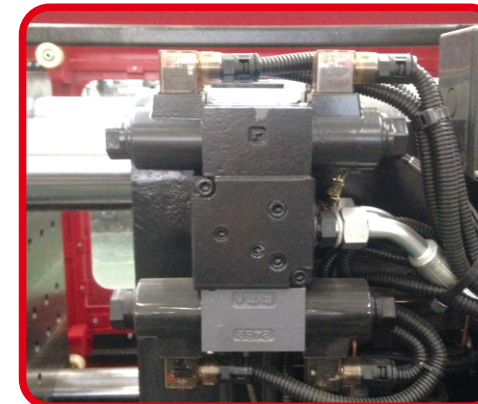


■ On the barrel equipped with multistage air fan unit to ensure the temperature precise of melting, highly improved the qualified rate.

■ Enlarge the hydraulic charging motor in order to improve the torque force and slow down the speed, providing better conditions for the production.



■ Specially extended width of guard door for the design of PVC fitting mould (specially for the mould with core-pulling oil cylinder), spacious space and wider application for the mould, effectively reduce the customers' investment.



■ Equipped with core & pulling device to meet the requirements of fittings eject out from the mould.

### Standard characteristics

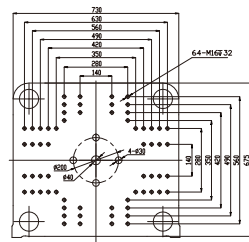
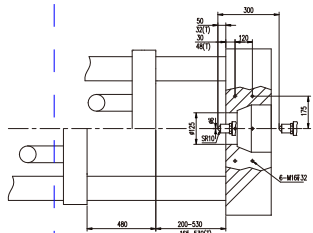
1. 5 Points vertical double toggle mechanism
2. Dual-cylinder balance injection system
3. Multi-stage pressure & speed injection
4. Back-pressure adjustment device
5. Low-pressure mold protection(Optional)
6. Multiple hydraulic ejector knock-outs
7. Mechanical and electrical safety devices
8. Concentrate lubrication system
9. Hydraulic proportional control
10. Mechanical leveling pad
11. Optimized composition hydraulic of the famous brands control
12. Hydraulic safety device
13. Linear transducer control
14. Multiple options of computer CPU systems

BOLE PVC rigid Series Specification

| DESCRIPTION                                | UNIT                | BL200EKH / C700 / UPVC | BL250EKH / C980 / UPVC | BL300EKH / C1600 / UPVC | BL400EKH / C2400 / UPVC | BL450EKH / C3100 / UPVC | BL530EKH / C4000 / UPVC | BL600EKH / C4700 / UPVC | BL700EKH / C5800 / UPVC | BL800EKH / C8600 / UPVC | BL900EKH / C8600 / UPVC | BL1000EKH / C10500 / UPVC | BL1200EKH / C10500 / UPVC | BL1400EKH / C13000 / UPVC | BL1600EKH / C16000 / UPVC |
|--------------------------------------------|---------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| International specification                |                     | 700                    | 980                    | 1600                    | 2400                    | 3100                    | 4000                    | 4700                    | 5800                    | 8600                    | 8600                    | 10500                     | 10500                     | 13000                     | 16000                     |
| Screw diameter                             | Screw specification | customized for PVC     | customized for PVC     | customized for PVC      | customized for PVC      | customized for PVC      | customized for PVC      | customized for PVC      | customized for PVC      | customized for PVC      | customized for PVC      | customized for PVC        | customized for PVC        | customized for PVC        | customized for PVC        |
|                                            | mm                  | 45                     | 50                     | 60                      | 68                      | 75                      | 80                      | 90                      | 95                      | 105                     | 110                     | 120                       | 120                       | 130                       | 140                       |
| Screw L/D ratio                            |                     | 20.0                   | 20.0                   | 21.0                    | 21.0                    | 21.0                    | 21.0                    | 21.0                    | 21.0                    | 21.0                    | 21.0                    | 21.0                      | 21.0                      | 21.0                      | 21.0                      |
| Theoretical injection capacity             | cm³                 | 382                    | 530                    | 890                     | 1307                    | 1678                    | 2211                    | 2893                    | 3542                    | 4717                    | 5177                    | 6726                      | 6726                      | 8491                      | 10462                     |
| Shot weight (UPVC)                         | g                   | 458                    | 636                    | 1068                    | 1568                    | 2014                    | 2653                    | 3472                    | 4251                    | 5660                    | 6212                    | 8071                      | 8071                      | 10189                     | 12555                     |
|                                            | oz                  | 16.2                   | 22.5                   | 37.7                    | 55.4                    | 71.1                    | 93.7                    | 122.7                   | 150.2                   | 200.0                   | 219.5                   | 285.2                     | 285.2                     | 360.0                     | 443.6                     |
| Injection rate into Air                    | cm³/s               | 197                    | 247                    | 317                     | 401                     | 493                     | 595                     | 783                     | 884                     | 897                     | 985                     | 1172                      | 1172                      | 1420                      | 1647                      |
|                                            | g/S                 | 236                    | 296                    | 381                     | 482                     | 592                     | 714                     | 940                     | 1061                    | 1077                    | 1182                    | 1406                      | 1406                      | 1704                      | 1976                      |
| Injection pressure                         | MPa                 | 185                    | 186                    | 184                     | 182                     | 185                     | 184                     | 163                     | 165                     | 183                     | 167                     | 156                       | 156                       | 154                       | 155                       |
| Theoretical plasticization rate            | g/S (UPVC)          | 17                     | 25                     | 43                      | 48                      | 60                      | 80                      | 81                      | 91                      | 116                     | 116                     | 140                       | 140                       | 144                       | 144                       |
| Injection stroke                           | mm                  | 240                    | 270                    | 315                     | 360                     | 380                     | 440                     | 455                     | 500                     | 545                     | 545                     | 595                       | 595                       | 640                       | 680                       |
| Max. injection speed                       | mm/s                | 124                    | 126                    | 112                     | 111                     | 112                     | 118                     | 123                     | 125                     | 104                     | 104                     | 104                       | 104                       | 107                       | 107                       |
| Screw speed                                | r/min               | 130                    | 130                    | 130                     | 130                     | 100                     | 100                     | 100                     | 100                     | 100                     | 100                     | 70                        | 70                        | 65                        | 65                        |
| Sys. Pressure                              | MPa                 | 17.5                   | 17.5                   | 17.5                    | 17.5                    | 17.5                    | 17.5                    | 17.5                    | 17.5                    | 17.5                    | 17.5                    | 17.5                      | 17.5                      | 17.5                      | 17.5                      |
| Pump Motor (Min~Max)                       | kW                  | 16.4~17.1              | 20.5~22.4              | 26.7~29.9               | 37~40.9                 | 47.2~50.7               | 60.5~65                 | 75.1~81.8               | 75.1~81.8               | 92.6~101.4              | 92.6~101.4              | 92.6~101.4                | 92.6~101.4                | 117.5~121                 | 140.1~142.3               |
| Number of Motors                           | PC                  | 1                      | 1                      | 1                       | 1                       | 1                       | 2                       | 2                       | 2                       | 2                       | 2                       | 2                         | 2                         | 3                         | 3                         |
| Heater power                               | kW                  | 12.2                   | 13.72                  | 19.55                   | 24.05                   | 27.35                   | 32                      | 36.1                    | 43                      | 50.1                    | 53                      | 56.2                      | 56.2                      | 74.6                      | 79.7                      |
| Number of temp. control zones              |                     | 3+1                    | 4+1                    | 4+1                     | 4+1                     | 4+1                     | 4+1                     | 5+1                     | 5+1                     | 5+1                     | 5+1                     | 6+1                       | 6+1                       | 6+1                       | 6+1                       |
| Clamping force                             | kN                  | 2000                   | 2500                   | 3000                    | 4000                    | 4500                    | 5300                    | 6000                    | 7000                    | 8000                    | 9000                    | 10000                     | 12000                     | 14000                     | 16000                     |
| Opening stroke                             | mm                  | 480                    | 530                    | 590                     | 660                     | 750                     | 850                     | 900                     | 970                     | 1050                    | 1120                    | 1150                      | 1320                      | 1450                      | 1550                      |
| Space between tie bar                      | mm x mm             | 505×455                | 555×505                | 655×605                 | 710×660                 | 760×710                 | 860×800                 | 910×855                 | 955×855                 | 1055×955                | 1110×1010               | 1160×1060                 | 1260×1120                 | 1420×1220                 | 1520×1320                 |
| Min. mould height                          | mm                  | 200 (165)              | 220 (175)              | 250 (205)               | 270 (225)               | 330                     | 330                     | 380                     | 400                     | 450                     | 450                     | 480                       | 500                       | 580                       | 680                       |
| Max. mould height                          | mm                  | 530 (530)              | 570 (570)              | 660 (660)               | 710 (710)               | 780                     | 850                     | 910                     | 960                     | 1000                    | 1100                    | 1160                      | 1200                      | 1300                      | 1450                      |
| Max. daylight                              | mm                  | 1010 (1010)            | 1100 (1100)            | 1250 (1250)             | 1370 (1370)             | 1530                    | 1700                    | 1810                    | 1930                    | 2050                    | 2220                    | 2310                      | 2520                      | 2750                      | 3000                      |
| Ejector stroke                             | mm                  | 150                    | 150                    | 190                     | 190                     | 210                     | 210                     | 220                     | 260                     | 270                     | 300                     | 300                       | 350                       | 350                       | 400                       |
| Ejector force forward                      | kN                  | 49                     | 67                     | 67                      | 123                     | 123                     | 123                     | 123                     | 166                     | 166                     | 232                     | 248                       | 248                       | 248                       | 363                       |
| Ejector force back                         | kN                  | 37                     | 39                     | 39                      | 82                      | 82                      | 82                      | 82                      | 117                     | 117                     | 132                     | 165                       | 165                       | 165                       | 280                       |
| Number of ejector bar                      | PC                  | 5                      | 9                      | 13                      | 13                      | 13                      | 13                      | 21                      | 21                      | 21                      | 21                      | 21                        | 21                        | 29                        | 29                        |
| Dry cycle time                             | S                   | 2.5                    | 3.3                    | 2.8                     | 3.6                     | 3.7                     | 4.3                     | 4.4                     | 3.8                     | 4.5                     | 5.6                     | 7                         | 8                         | 8                         | 9                         |
| Energy consumption                         | kW.h/kg             | ≤0.5                   | ≤0.5                   | ≤0.5                    | ≤0.5                    | ≤0.5                    | ≤0.5                    | ≤0.5                    | ≤0.5                    | ≤0.5                    | ≤0.5                    | ≤0.5                      | ≤0.5                      | ≤0.5                      | ≤0.5                      |
| Hopper capacity                            | kg                  | 25                     | 50                     | 50                      | 50                      | 50                      | 100                     | 100                     | 100                     | 100                     | 100                     | 100                       | 200                       | 200                       | 200                       |
| Oil tank capacity                          | L                   | 205                    | 255                    | 345                     | 375                     | 430                     | 600                     | 810                     | 890                     | 960                     | 960                     | 1320                      | 1320                      | 1600                      | 1650                      |
| Machine dimensions (L×W×H)                 | m x m x m           | 5.2x1.4x2.2            | 5.7x1.5x2.4            | 6.2x1.7x2.5             | 7x1.8x2.5               | 7.7x1.9x2.6             | 8.3x2.1x2.9             | 9.1x2.2x2.9             | 9.6x2.3x3               | 10.4x2.5x3.1            | 10.8x2.6x3.1            | 10.9x2.9x4.2              | 11.4x3x4.2                | 12.3x3.3x4.1              | 13.4x3.4x4.3              |
| Machine weight                             | Ton                 | 4.9                    | 6.3                    | 8.3                     | 12                      | 12.5                    | 16.9                    | 22                      | 25                      | 30                      | 38                      | 45                        | 52                        | 67                        | 90                        |
| Widen safety gate Optionally (single side) | mm                  | 100                    | 100                    | 150                     | 200                     | 200                     | 250                     | 250                     | 250                     | 250                     | 250                     | 250                       | 250                       | 250                       | 250                       |
| Machine dimensions (L×W×H)                 | m x m x m           | 5.2x1.6x2.2            | 5.7x1.7x2.4            | 6.2x2x2.5               | 7x2.2x2.5               | 7.7x2.3x2.6             | 8.3x2.6x2.9             | 9.1x2.7x2.9             | 9.6x2.8x3               | 10.4x3x3.1              | 10.8x3.1x3.1            | 10.9x3.4x4.2              | 11.4x3.5x4.2              | 12.3x3.8x4.1              | 13.4x3.9x4.3              |

Platen Side Size

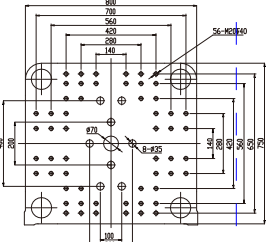
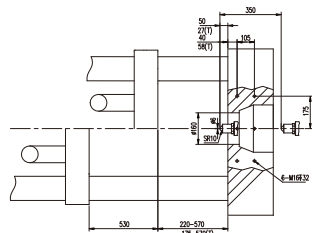
Platen Size



BL200EKH/C700/UPVC

Platen Side Size

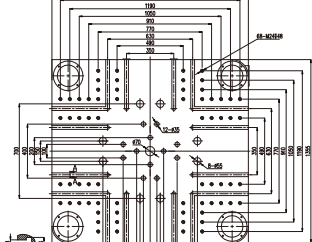
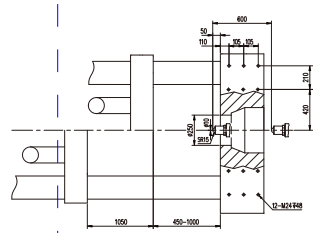
Platen Size



BL250EKH/C980/UPVC

Platen Side Size

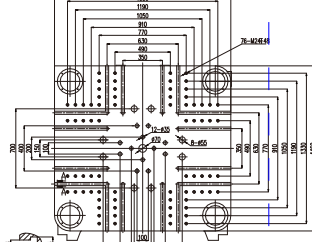
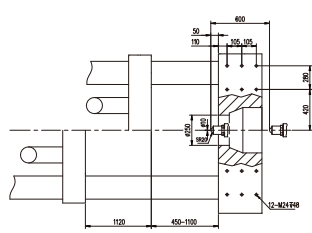
Platen Size



BL800EKH/C8600/UPVC

Platen Side Size

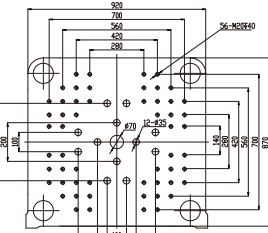
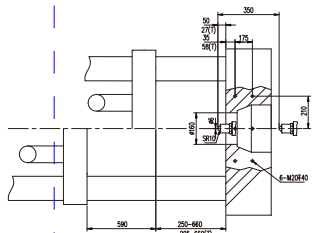
Platen Size



BL900EKH/C8600/UPVC

Platen Side Size

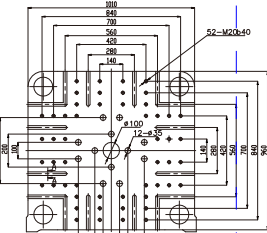
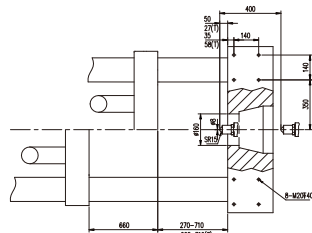
Platen Size



BL300EKH/C1600/UPVC

Platen Side Size

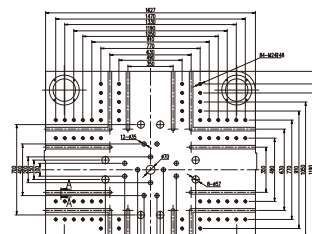
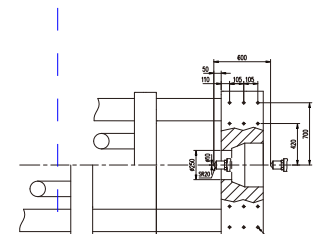
Platen Size



BL400EKH/C2400/UPVC

Platen Side Size

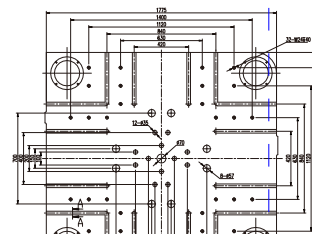
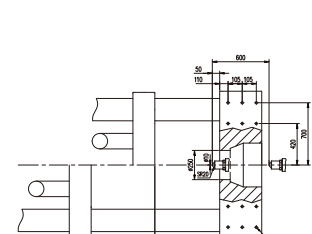
Platen Size



BL1000EKH/C10500/UPVC

Platen Side Size

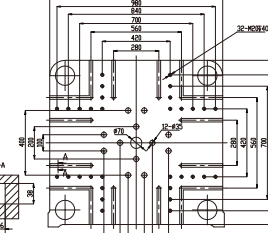
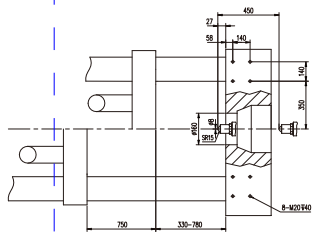
Platen Size



BL1200EKH/C10500/UPVC

Platen Side Size

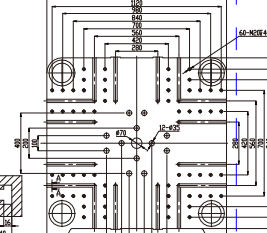
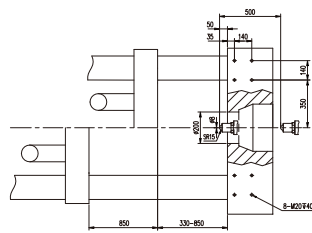
Platen Size



BL450EKH/C3100/UPVC

Platen Side Size

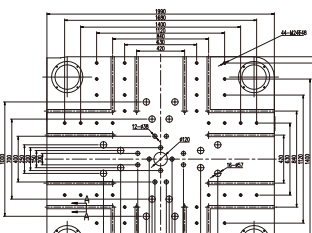
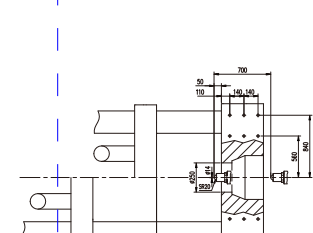
Platen Size



BL530EKH/C4000/UPVC

Platen Side Size

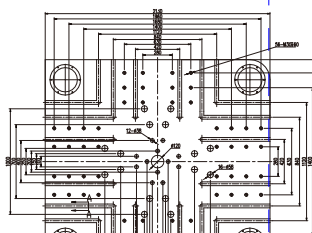
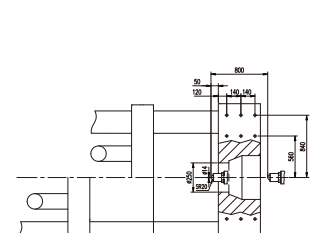
Platen Size



BL1400EKH/C13000/UPVC

Platen Side Size

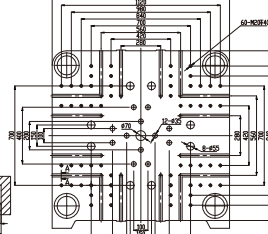
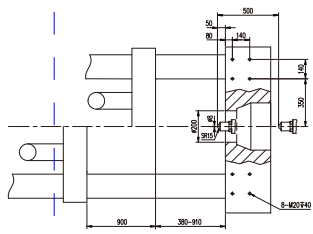
Platen Size



BL1600EKH/C16000/UPVC

Platen Side Size

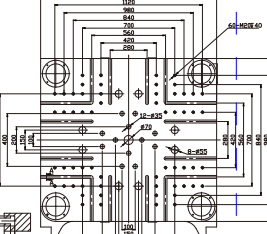
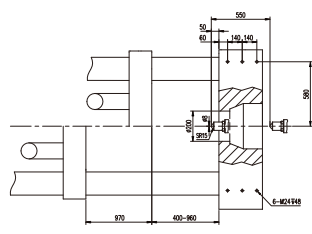
Platen Size



BL600EKH/C4700/UPVC

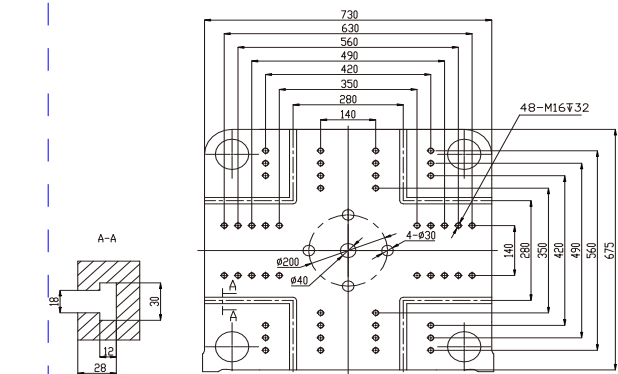
Platen Side Size

Platen Size

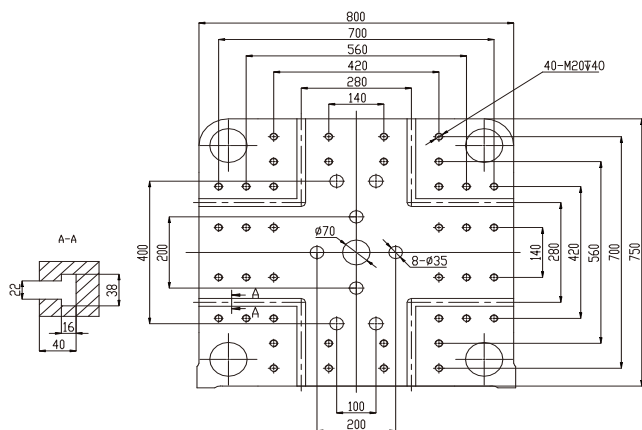


BL700EKH/C5800/UPVC

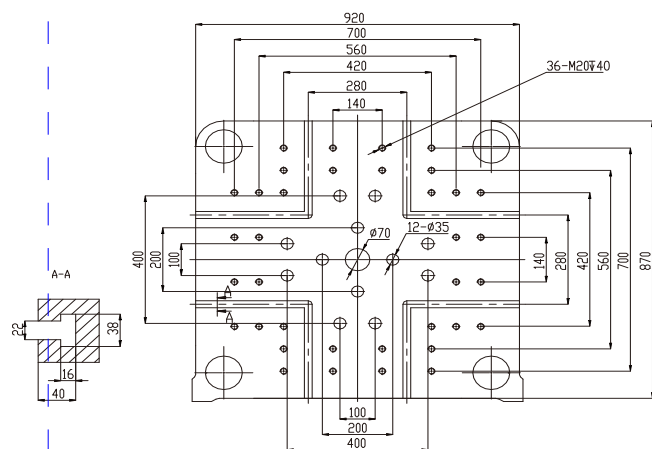
200-400 EKH Platen Dimensions Optional



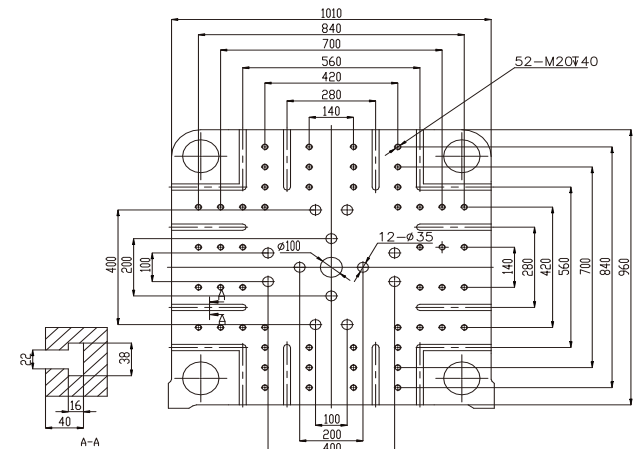
BL200EKH



BL250EKH



BL300EKH



BL400EKH

Fittings

|                             |                                     |                                            |                                      |                                  |                                               |                                               |                         |                                          |
|-----------------------------|-------------------------------------|--------------------------------------------|--------------------------------------|----------------------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|------------------------------------------|
| COUPLING                    | FITTING CLEANOUT ADAPTER            | SPIGOT ADAPTER, CAST IRON SOIL PIPE        | LONG SWEEP 1/4 BEND                  | VENT ELL                         | DOUBLE SANITARY TEE,REDUCING                  | COMBINATION WYE & 1/8 BEND REDUCING (TWO PC.) | COTTAGE WYE, LH INLET   | CLOSET FLANGE W/O(ONE PC.)               |
| FEMALE ADAPTER              | FITTING CLEANOUT ADAPTER W/C.O.PLUG | HUB ADAPTER,CAST IRON SOIL PIPE            | LONG SWEEP 1/4 BEND W/LOW HEEL INLET | VENT ELL                         | DOUBLE SANITARY TEE,STREET                    | DOUBLE COMBINATION WYE & 1/8 BEND             | COTTAGE WYE, RH INLET   | CLOSET FLANGE, ADJUSTABLE (W/METAL RING) |
| REDUCING COUPLING           | CLEANOUT PLUG W/RAISED NUT          | HUB ADAPTER, CAST IRON SOIL PIPE INCREASER | LONG SWEEP 1/4 BEND                  | VENT ELL, STREET                 | DOUBLE SANITARY TEE W/SIDE INLET              | DOUBLE FIXTURE FITTING                        | RETURN BEND             | CLOSET FLANGE, ADJUSTABLE (W/METAL RING) |
| TRAP ADAPTER-MALE           | CLEANOUT PLUG-FLUSH                 | REPAIR COUPLING                            | 1/6 BEND                             | SANITARY TEE                     | DOUBLE SANITARY TEE W/R & L SIDE INLETS       | WYE                                           | P-TRAP                  | CLOSET FLANGE, FLUSH (W/O)               |
| TRAP ADAPTER-MALE           | FLUSH BUSHING                       | TEST CAP INSERT TYPE                       | 1/8 BEND                             | SANITARY TEE, REDUCING           | VENT TE                                       | WYE, REDUCING                                 | P-TRAP LOW PROFILE HxH  | OFFSET CLOSET FLANGE                     |
| TRAP ADAPTER-MALE           | FLUSH BUSHING                       | TEST CAP-PIPE                              | 1/8 BEND, STREET                     | SANITARY TEE, STREET             | CLEANOUT TE W/C.O. PLUG                       | WYE, STREET                                   | P-TRAP W/CLEANOUT       |                                          |
| TRAP ADAPTER-FEMALE         | MALE ADAPTER                        | 1/4 BEND, STREET W/LOW HEEL INLET          | 1/16 BEND                            | SANITARY TEE, STREET, REDUCING   | FLUSH C.O. TEE                                | WYE, STREET, REDUCING                         | P-TRAP-UNION            |                                          |
| TRAP ADAPTER-FEMALE         | CAP                                 | 1/4 BEND                                   | 1/16 BEND, STREET                    | SANITARY TEE, W/LEFT SIDE INLET  | TWO-WAY CLEANOUT                              | UPRIGHT COMBINATION WYE & 1/8 BEND(TWO PC.)   | L.A.PATTERN P-TRAP      |                                          |
| TRAP ADAPTER-FEMALE         | ADAPTER COUPLING                    | 1/4 BEND W/SIDE INLET                      | DOUBLE 1/4 BEND                      | SANITARY TEE, W/RIGHT SIDE INLET | COMBINATION WYE & 1/8 BEND-LONG TURN(ONE PC.) | DOUBLE COTTAGE WYE W/2" INLET                 | DRUM TRAP               |                                          |
| EXPANSION JOING (W/ PISTON) | ADAPTER BUSHING                     | 1/4 BEND, STREET                           | CLOSET BEND, REDUCING                | SANITARY TEE W/R & L SIDE INLETS | COMBINATION WYE 1/8 BEND-LONG TURN            | DOUBLE WYE                                    | CLOSET FLANGE (ONE PC.) |                                          |
| EXPANSION JOING (W/ PISTON) | NO-HUB ADAPTER                      | 1/4 BEND, W/LOW HEEL INLET                 | CLOSET BEND, REDUCING                | DOUBLE SANITARY TEE              | COMBINATION WYE & 1/8 BEND (TWO PIECE)        | DOUBLE WYE, REDUCING                          | CLOSET FLANGE (ONE PC.) |                                          |
|                             |                                     |                                            |                                      |                                  |                                               |                                               |                         |                                          |