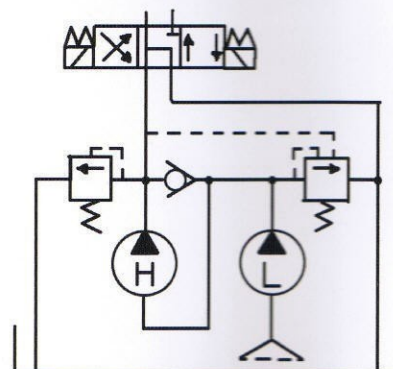


Royal Master Hydraulic Pump Units



- These high-pressure hydraulic pump units, which feature superior durability despite their small size and light weight, have an excellent track record of about 35 years serving in demanding applications as hydraulic punchers, and working under harsh conditions including civil engineering projects and foundries.
- The single-piece rotor shaft shows its strength in repeated starting and stopping.※
- Our wet-type solenoid valve (S-D4-SGS-AHB), which has extremely small leakage, suppresses heat generation and helps our high-efficiency pumps do their jobs.※
- To ensure safety, pumps with three-position, four-way solenoid valves have 24 VAC local control circuits.
- We will attach manual changeover valves, pressure gauges, pressure switches, and other components, and change pumps to your desired circuits.



three-position, four-way solenoid valves

※ The 1SW-40 has a split shaft and is equipped with a dry-type solenoid valve.

Technical note

In making holes with these punchers, hole diameter must be larger than material thickness (SS400).



D-3SW



D-2SW-4



D-1SW-4



1SW-40

| Specifications/model | | D-3SW | D-2SW-4 | D-1SW-4 | 1SW-40 |
|----------------------|---------------|---------------------------------|--------------------------------|---------------------------------|---------------------------------|
| Motor | | 2.2kw AC380V 50Hz 3Phase | 1.5kw AC380V 50Hz 3Phase | 0.75kw AC380V 50Hz 3Phase | 0.4kw AC230V 50Hz S.Phase |
| Pressure | High-Pressure | 72MPa (740kgf/cm ²) | | | |
| | Low-Pressure | 7MPa (70kgf/cm ²) | | | 3MPa |
| Discharge rate ※ | High-Pressure | 2.3L/min | 1.5L/min | 0.75L/min | 0.3L/min |
| | Low-Pressure | 5.8L/min | 3.75L/min | 3.75L/min | 1.9L/min |
| Reservoir | | 12L | 10L | 7.5L | 5L |
| Weight | | 65kg | 55kg | 38kg | 28kg |
| Solenoid-Valve | | Three-position, four-way | | | Two-position, four-way |

※ Discharge rate for 50 Hz.

Maximum punching speed

Dimensions of Royal Master Hydraulic Punchers

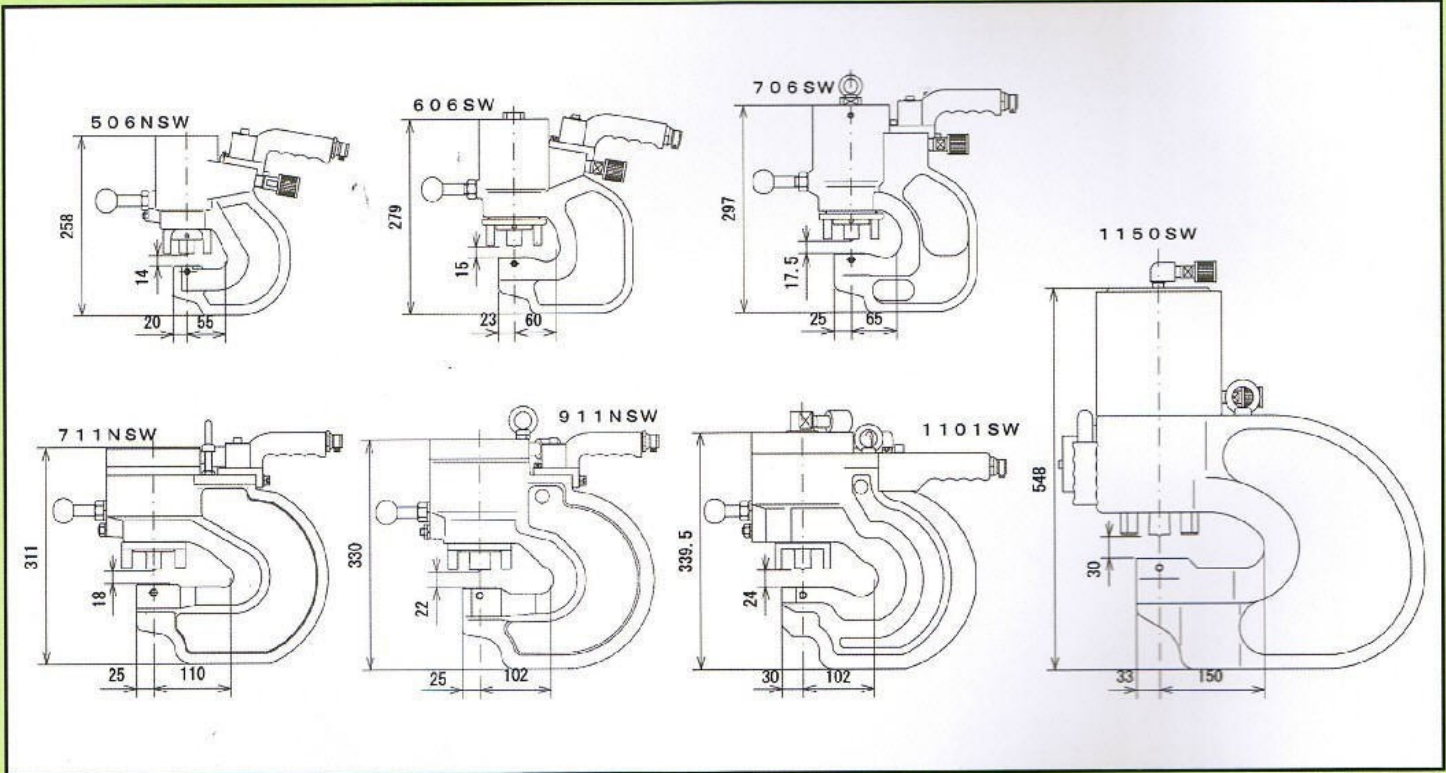
Dimensions of Royal Master Hydraulic Pumps

Maximum punching speed (keep in mind when selecting a hydraulic pump)

※ The time for one cycle is that needed for the bit to punch a hole and return (based on 60 Hz). There will be some variation depending on working conditions.

| Puncher | | 506NSW | | 606SW | | 706SW | | 711NSW | | 911NSW | | 1101SW | | 1150SW | |
|-----------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Time (s) | | Punch | Return | Punch | Return | Punch | Return | Punch | Return | Punch | Return | Punch | Return | Punch | Return |
| Hyd. pump | D-3SW | 1.0 | 0.5 | 1.3 | 0.6 | 1.6 | 0.9 | 2.3 | 1.2 | 4 | 1.4 | 4.3 | 1.8 | 6.5 | 3.8 |
| | D-2SW | 1.6 | 0.6 | 2 | 0.8 | 2.5 | 1.3 | 3.5 | 1.7 | 6 | 2.2 | 6.5 | 2.8 | 10 | 6 |
| | D-1SW | 2.7 | 0.6 | 3.2 | 0.8 | 4 | 1.3 | 6 | 1.7 | 11 | 2.2 | 11.8 | 2.8 | 13.5 | 6 |
| | 1SW-40 | 6.8 | 1.3 | 8 | 3 | 10.1 | 5 | 13 | 7 | | | | | | |

Dimensions of Royal Master Hydraulic Punchers



Dimensions of Royal Master Hydraulic Pumps

