# 油壓缸 Hyd.Cylinder

## 常用計算式

General Calculating Formula

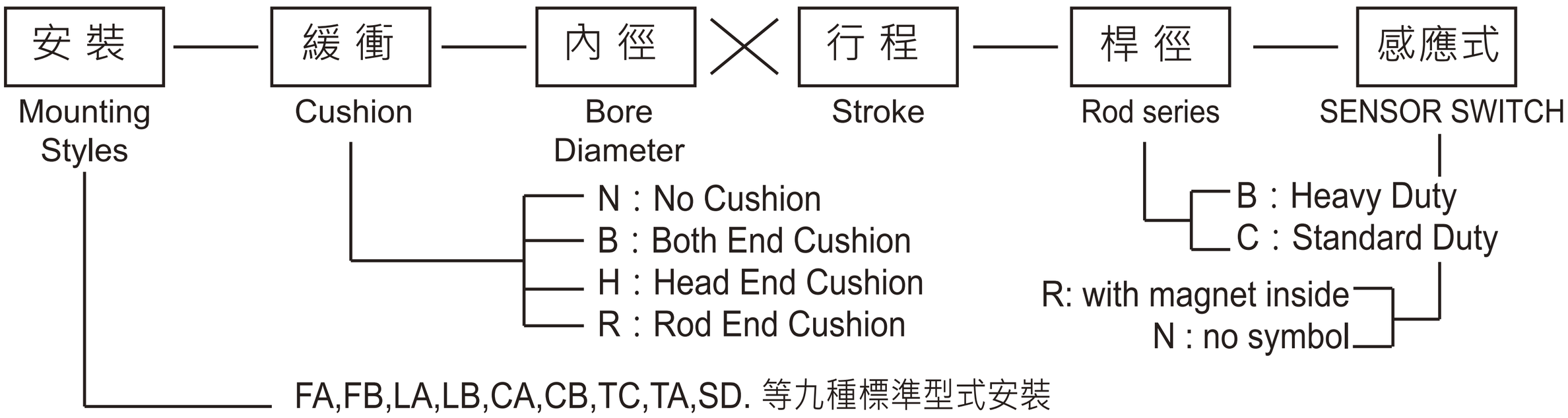
F =P×A
Q =A×V
HP=P×Q / 450
t =P×D / 2000S

F：理論出力/Theoretical Output(kgf/cm²)
Q：幫浦流量/Pump Delivery(l/min)
V：活動速度/Piston Speed(cm/min)
HP：馬達馬力/Motor Power(HP)
t：缸管內厚/Cylinder Bore Thickenss(mm)
S：/5

P：動作壓力/Action Pressure(kgf/cm²)
A：受壓面積/Under Press Area(cm²)
D：缸管內徑/Dia.of Cylinder Bore(mm)
n：油壓泵效率/Eff.of Hyd.Pump
S：抗張強度/Tension-Resistant Strength(kgf/cm²)

## 型式表示法

The Illustration For Order System




※緩衝方式，標準型為無緩衝，但如油壓缸速度在6-10m/min以上時，請考慮附加緩衝裝置，請於訂購時註明。
※當油壓缸速度要求快速或特慢速時，請特別註明，以便製作時配合之。
※The cushioning style which standard is no cushion but the hyd. cylinder action speed is at 6-10m/min and over. That must considered install cushion, installation please specified at order.
※During the hyd. cylinder action speed must implied rapid speed or much slow speed and then,specified at order and accompanied with our manufactured.

油壓缸理論出力參照表 Theoretical Output Refer Data

| 缸徑 Bore dia. | 活塞桿 Rod size | 使用壓力 Operating Pressure kgf/cm² | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 20kg | | 30kg | | 50kg | | 70kg | | 100kg | | 120kg | | 140kg | | 160kg | | 210kg | |
| | | in | out | in | out | in | out | in | out | in | out | in | out | in | out | in | out | in | out |
| Ø40 | 20 | 188 | 252 | 282 | 378 | 470 | 630 | 658 | 882 | 940 | 1260 | 1128 | 1512 | 1316 | 1764 | 1504 | 2016 | 1974 | 2646 |
| Ø50 | 25 | 294 | 392 | 441 | 588 | 435 | 980 | 1029 | 1372 | 1470 | 1960 | 1764 | 2352 | 2058 | 2744 | 2352 | 3136 | 3087 | 4116 |
| Ø63 | 30 | 482 | 624 | 723 | 936 | 1205 | 1560 | 1687 | 2184 | 2410 | 3120 | 2890 | 3744 | 3374 | 4368 | 3856 | 4992 | 5061 | 6552 |
| Ø80 | 40 | 754 | 1006 | 1131 | 1509 | 1885 | 2515 | 2633 | 3521 | 3770 | 5030 | 4524 | 6030 | 5278 | 7042 | 6032 | 8248 | 7917 | 10563 |
| Ø100 | 50 | 1178 | 1570 | 1767 | 2356 | 2946 | 3927 | 4124 | 5498 | 5891 | 7854 | 7069 | 9425 | 8247 | 11000 | 9425 | 12566 | 12370 | 16493 |
| Ø125 | 60 | 1889 | 2454 | 2833 | 3682 | 4722 | 6136 | 6611 | 8590 | 9444 | 12272 | 11333 | 14736 | 13222 | 17180 | 15110 | 19635 | 19830 | 25770 |
| Ø150 | 70 | 2764 | 3534 | 4147 | 5301 | 6911 | 8835 | 9675 | 12369 | 13822 | 17670 | 16586 | 21204 | 19351 | 24738 | 22115 | 28272 | 29026 | 37107 |
| Ø180 | 80 | 4084 | 5089 | 6126 | 7634 | 10210 | 12724 | 14295 | 17813 | 20421 | 25447 | 24505 | 30536 | 28589 | 35626 | 32674 | 40715 | 42884 | 53439 |
| Ø200 | 100 | 4712 | 6283 | 7067 | 9425 | 11781 | 15708 | 16493 | 21991 | 23562 | 31416 | 28274 | 37699 | 32987 | 43982 | 37699 | 50266 | 49480 | 65974 |
| Ø250 | 140 | 6739 | 9018 | 10108 | 14726 | 16847 | 22544 | 23586 | 31562 | 33694 | 49088 | 40433 | 58906 | 47172 | 68723 | 53910 | 72141 | 70757 | 94685 |
| Ø300 | 180 | 9048 | 14137 | 13572 | 21206 | 22620 | 35343 | 31667 | 49480 | 45239 | 70686 | 54187 | 84823 | 63335 | 98960 | 72382 | 113097 | 95002 | 118440 |

例：實際出力計算例
1.若使用壓力為50kgf/cm²，而油壓缸內徑為Ø80時，查理論出力參考表，得油壓缸推力為2515kgf/cm²
2.但實際出力則為2515×0.8=2012kgf/cm²

For Example：The calculating for practical output
1.If the operating pressure is 50kgf/cm² and the bore dia.of hyd.cylinder is Ø80mm we can from the refering data and achieve the output of hyd. cylinder is 2515 kgf/cm².
2.But the practical output which is 2515×0.8=2012kgf/cm².