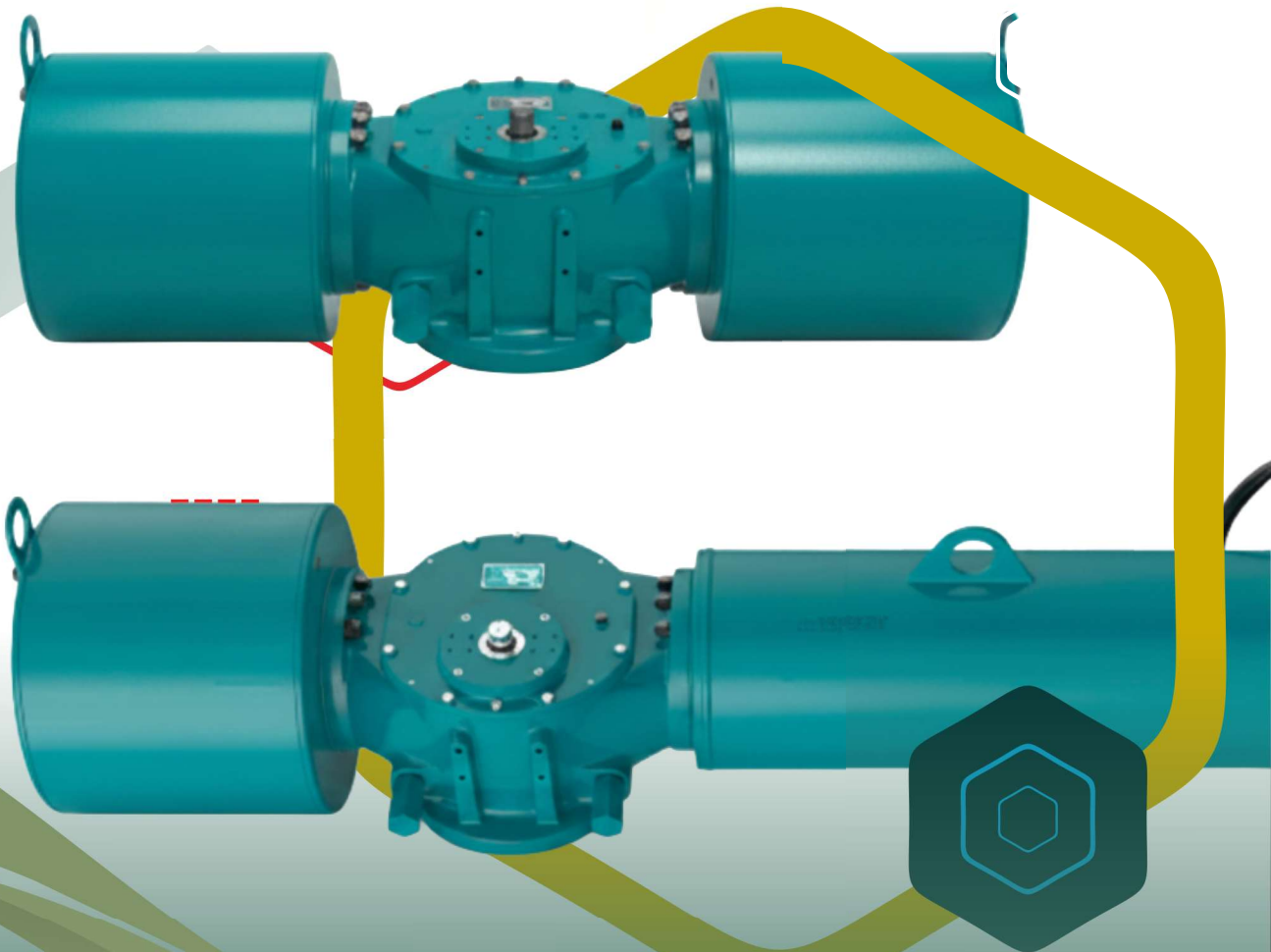


Pneumatic Actuator

Scotch Yoke

WEISSMILLER



WPA Series Pneumatic Actuator Scotch Yoke

Product Overview



Our WPA Series Heavy-duty Scotch Yoke Actuators are engineered in a diverse range of sizes, cylinder diameters, and configurations to meet your specific operational needs. Available in both Double Acting (DA) and Spring Return (SR) designs, these actuators are perfectly suited for installation on quarter-turn valves, including ball, butterfly, and plug valves. Built for durability across extensive pressure and temperature ranges, the symmetric yoke design ensures a more constant torque output at both the break and end positions.

Main Product Features

- **Weatherproof Construction**The WPA Series Scotch Actuators are engineered for both indoor and outdoor environments. We offer customizable seals and lubricants to ensure optimal performance in extreme high or low-temperature applications.
- **Self-Lubrication and Superior Durability**Featuring hard chrome plating on both guide and piston rods, our actuators deliver exceptional wear resistance. The WPA Series is permanently lubricated with high-grade materials suited for specific service conditions, eliminating the need for routine maintenance under normal operation.
- **Maximum Corrosion Protection**To withstand harsh environmental conditions, every WPA Series Heavy-duty Actuator is finished with a robust three-layer epoxy coating for long-lasting corrosion resistance

Working Pressure

- Operates from 3 bar up to 7 bar, with a maximum design pressure of 10 bar.
- Standard Operating
- Temperature -20°C to +80°C
- Low Temperature Configuration -40°C to +80°C
- High Temperature Configuration -20°C to +120°C

Standard Accessories

- Solenoid Valve
- Limit Switchboxes
- Electro-pneumatic Positioner
- Declutchable Manual Override Gearbox
- High Visibility Indicator

Industry Applications

Our WPA Series actuators are versatile solutions designed for a wide range of industrial sectors, including:

- Chemical and Petrochemical
- Food and Beverage
- HVAC Systems
- Marine and Offshore
- Mining and Minerals
- Oil and Gas
- Pulp and Paper
- Semiconductor Manufacturing
- Water and Wastewater Treatment
- Original Equipment Manufacturing (OEM)

WPA Series Pneumatic Actuator Scoth Yoke

Operational & Mechanical Features

- **Advanced Design & Reliability:** The WPA Series shift fork actuators are engineered using modern design methodologies to provide a secure and dependable driving mechanism. They are ideal for both on-off and modulating control of ball valves, butterfly valves, plug valves, and any other 0°–90° rotary mechanical equipment.
- **International Standardization:** The mounting base dimensions and torque specifications are strictly compliant with ISO 5211 standards, ensuring universal compatibility.
- **High Torque Capacity & Efficiency:** Capable of delivering a torque output of up to 250,000 Nm (184,000 foot-pounds), the specialized shift fork design minimizes lateral loads, significantly boosting overall performance and mechanical life.
- **Modular & Interchangeable Construction:** Designed with a modular architecture, the WPA Series offers high parts interchangeability. This makes the product more cost-effective and simplifies maintenance and operational procedures.
- **Adaptable Material Selection:** We offer tailored material configurations based on the specific operating temperature range of your application, ensuring the actuator thrives in diverse working environments.
- **Piston Seal Protection:** The WPA cylinder module integrates an internal guide rod to eliminate localized seal wear caused by the piston's weight and lateral forces from the shift fork. This ensures a consistent, long-term power output.
- **Manual Override Options:** For emergency or manual operation, we offer various mechanisms including handwheels, gear transmissions, and hydraulic systems.
- **Flexible Fork Designs:** Customers can choose between symmetrical or canted (tilted) shift forks to best match their specific torque requirements.
- **Enhanced Torque Adaptability:** The optimized transmission module and refined torque ratios provide superior compatibility across a wide range of valve types.
- **Maintenance-Free Bearings:** The shift fork mechanism utilizes high-performance, oil-free lubricated bearings made of aluminum bronze composite graphite for stability and extreme durability.
- **High-Precision Connections:** Selected shaft connections utilize a square shaft design to improve control accuracy, making the WPA series ideal for regulating and control valve applications.
- **Versatile Fail-Safe Modes:** Fail-open or fail-close configurations for single-acting models are easily achieved by reversing the orientation of the cylinder and spring modules.

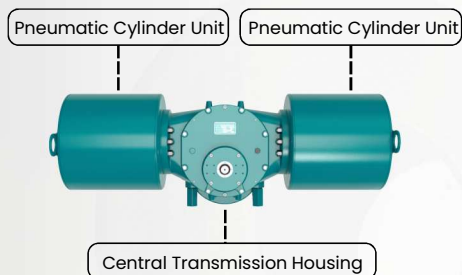
Standards & Certifications

- Protection & Enclosure
 - IP Ratings: IP66, IP66M, IP67, IP67M (EN 60529)
 - NEMA Standards: NEMA 4 & NEMA 4X (NEMA 250)
- Design & Manufacturing
 - ISO 9001 (Quality Management)
 - ISO 5211 (Valve Attachment)
 - ISO 5599 & ISO 12490
 - EN 13906-1 & EN 15714-3
- Safety & Specialized Standards
 - IEC 61508 (Functional Safety)
 - IEC 60079-0 & IEC 60721-2-1
 - ISO 12944-2 (Corrosion Protection)
- For ATEX, SIL, and GOST qualifications, please contact our technical team.

Technical Specifications

- Torque Output:
 - Double-Acting: Up to 250,000 Nm
 - Single-Acting: Pneumatic (250,000 Nm) / Spring (110,000 Nm)
 - Custom solutions available up to 800,000 Nm.
- Air Supply: 3.5 – 7 bar (Air, Nitrogen, or Inert Gases)
- Temperature Ranges:
 - Standard: -29°C to +80°C
 - Low / Ultra-Low: Down to -40°C / -60°C
 - High: Up to +160°C
- Stroke Adjustment: $\pm 6^\circ$ at 0°–90° (Total range: 80°–100°).

WPA Series Pneumatic Actuator Scoth Yoke



WPA Series: Double-Cylinder (DA)

- Dual Cylinder Design: Optimized for Double-Acting (DA) performance.
- High Performance: Built for high-torque and high-frequency operations.
- Balanced Stability: Dual-piston transmission for a more consistent and stable output.

WPA Series: Versatile Modular Architecture

- The WPA Series features a fully modular architecture, allowing for the flexible combination of various modules to achieve multiple functions. This versatile design ensures the actuator can be perfectly tailored to meet the specific requirements of diverse and challenging working conditions.



Screw rod manual module



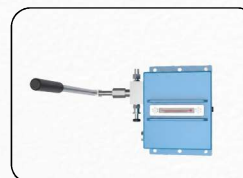
Balance rod module



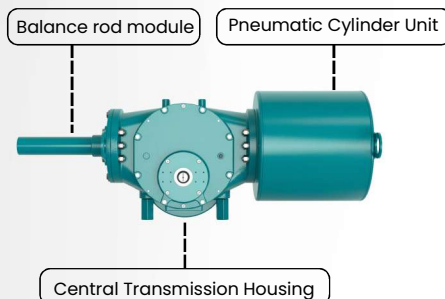
Gear Manual module



Central Transmission Housing

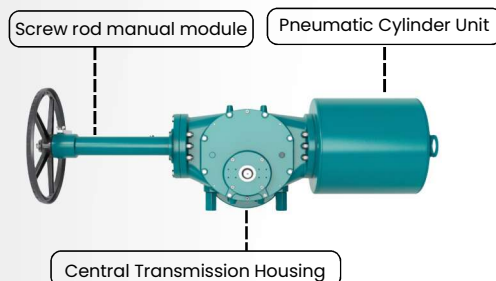


Manual Pump Module



Single Cylinder with Balance Rod

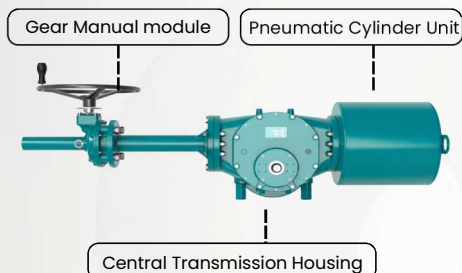
- Double-Action Design: High-efficiency single cylinder configuration.
- Balance Rod Module: Engineered to offset lateral forces from the shift fork.
- Longer Service Life: Minimizes wear for smoother output and extended operational life.



Manual Screw Rod Override

- Double-Action Integration: Equipped with a manual screw rod for emergency operation.
- Ergonomic Design: Lateral manual mechanism ensures smooth output and effortless operation.
- Enhanced Safety: Simple latch mechanism for ease of use and reduced risk of misoperation.

WPA Series Pneumatic Actuator Scoth Yoke



WPA Series: Bevel Gear Manual Override

- **Double-Action Integration:** Designed for double-acting configurations with a bevel gear manual override.
- **High-Torque Performance:** Specifically engineered to handle high-torque actuator mechanisms.
- **Labor-Saving Design:** Features a bevel gear reduction on the screw rod to significantly reduce operational effort.
- **Smooth Manual Control:** Ensures easy and efficient manual operation, even under demanding conditions.

Modular Cylinder Options for WPA Series

The WPA Series offers a comprehensive range of cylinder options to suit diverse operational needs. From our standard Pneumatic Modules to Series Connection configurations for enhanced power, and specialized Hydraulic Modules for high-pressure systems, our modular design ensures a perfect fit for any industrial requirement.



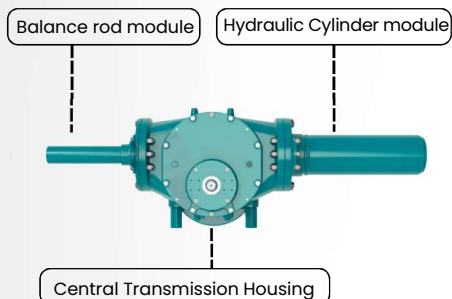
Cylinder module



Cylinder module series connection

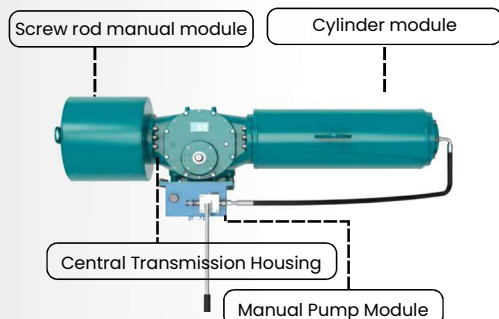


Hydraulic Cylinder module



Hydraulic Actuator Configuration

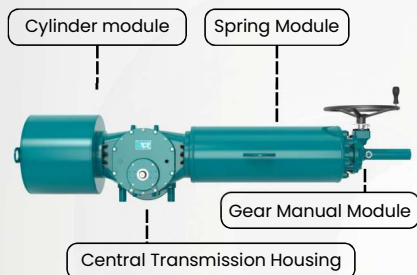
- **Double-Action Hydraulic System:** Mekanisme aktuator hidrolis berperforma tinggi untuk operasional double-acting.
- **Flexible Power Source:** Ideal untuk lokasi proyek yang sudah memiliki sumber tenaga hidrolis.
- **Seamless Interchangeability:** Modul silinder pneumatik standar dapat dengan mudah diganti ke modul hidrolis tanpa mengubah fungsi utama sistem.
- **Uniform Performance:** Memberikan keandalan dan fungsi yang setara dengan sistem pneumatik dalam format tenaga hidrolis.



Double-Action with Hydraulic Manual Override

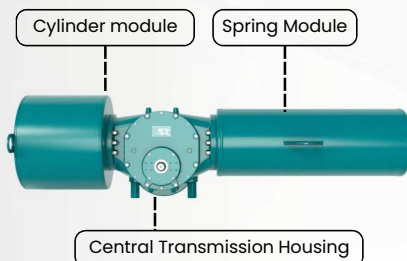
- **Hydraulic Manual Integration:** Features a lateral hydraulic cylinder for manual operation during air supply failure or emergencies.
- **3-Position Control Lever:** The manual pump includes a quick-switch lever with three settings: Valve Open, Pneumatic State, and Valve Closed.
- **Rapid Emergency Response:** Designed for fast and reliable mode switching to maintain system safety.
- **Independent Fail-Safe:** Provides robust manual control independence, ideal for maintenance or emergency override scenarios.

WPA Series Pneumatic Actuator Scotch Yoke



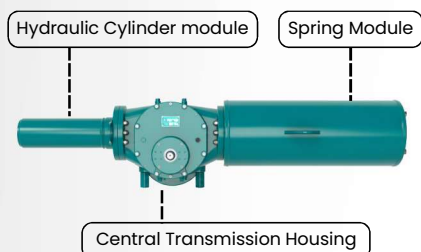
Single-Action with Bevel Gear Manual Override

- **Manual Gear Integration:** Single-action models (sizes 4K-32K) come standard with an integrated manual gear module.
- **Optimized for High-Torque:** Specifically engineered for heavy-duty actuator mechanisms requiring high torque output.
- **Effortless Manual Control:** The bevel gear reduction mechanism significantly reduces operational force for a more labor-saving experience.
- **Robust & Precise:** Delivers smooth and reliable manual override performance under demanding conditions.



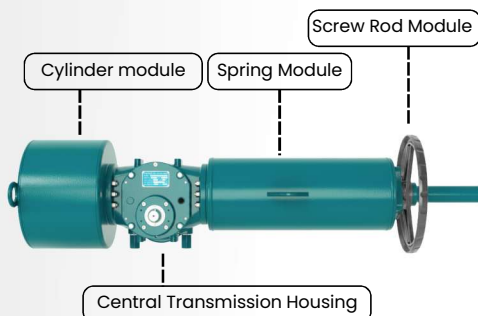
Single-Action Configuration

- **Single-Action Cylinder:** Engineered for efficient spring-return performance.
- **Enhanced Internal Airflow:** Air source is input through the transmission component, ensuring a safer, more reliable, and efficient operation.
- **Flexible Fail-Safe Modes:** Easily switch between fail-open or fail-close by reversing the position of the cylinder and spring modules.
- **Safe Transmission Design:** Optimized internal paths protect critical components during actuation.



Single-Action Hydraulic Configuration

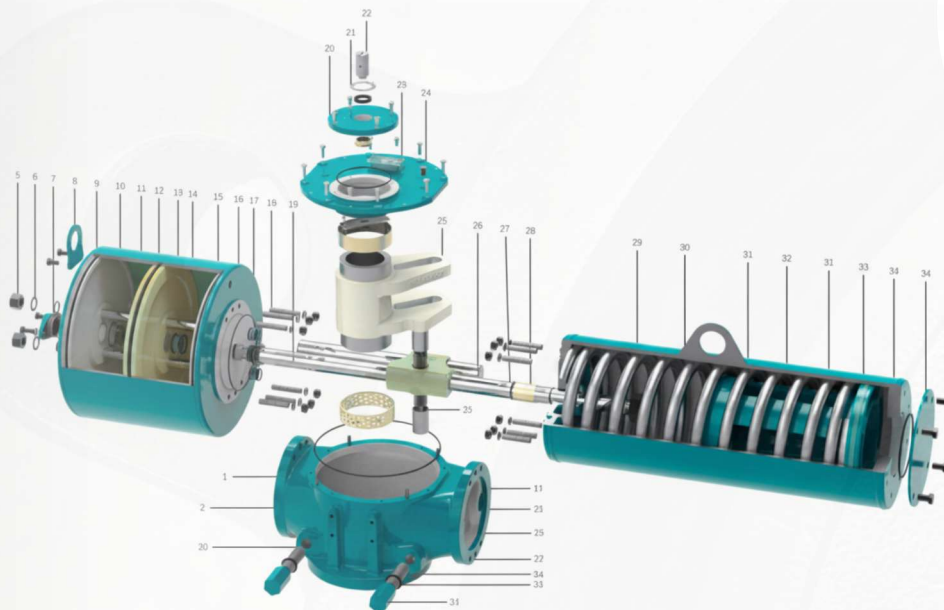
- **Single-Action Hydraulic Mechanism:** Specifically designed for robust hydraulic-driven spring return operations.
- **Adaptable Power Source:** Ideal for job sites where a hydraulic power source is available as an alternative to pneumatic systems.
- **Modular Versatility:** The standard pneumatic cylinder can be seamlessly replaced with a hydraulic module while maintaining the same core functionality.
- **Efficient Performance:** Delivers consistent and reliable torque output, optimized for heavy-duty industrial environments.



Single-Action with Screw Rod Manual

- **Integrated Manual Override:** Features a screw rod manual module for reliable emergency operation.
- **Specific Model Design:** Standard for single-action specifications including sizes 1K, 2K, and 4K.
- **Compact & Efficient:** Designed for smooth manual engagement without compromising the spring-return functionality.
- **Direct Control:** Provides a simple and robust solution for manual valve positioning when power is unavailable.

WPA Series Pneumatic Actuator Scotch Yoke



Specialized Material Configurations

The WPA Series is engineered with adaptable material configurations tailored to meet the challenges of diverse environmental conditions. By utilizing specialized low-temperature carbon steel or stainless steel for housings and internal components, and carefully accounting for material shrinkage and seal hardness in freezing climates, we have developed a robust actuator solution that ensures peak performance and reliable sealing even in ultra-low temperature and extremely cold environments.

No.	Part Name	Material	No.	Part Name	Material
1	Adjusting bolt	Alloy steel	20	Upper cap	Carbon steel
2	Cabinet	Ductile iron	21	Instruction nameplate	Stainless steel
3	Positioning pin	Carbon steel	22	Position indicator lever	Stainless steel
4	Shift fork lower bearing	Cu+ graphite	23	Nameplate	Stainless steel
5	Nut	Alloy steel	24	breathing valve	Aluminum alloy
6	Anti-rotation washer	Spring steel	25	Shift fork	Ductile iron
7	Operation port stifle	Ductile iron	26	Guide rod	Alloy steel
8	Lifting ring	Carting steel	27	Retaining ring	Spring steel
9	End cap	Carbon steel	28	Sliding sleeve	SF-2
10	Snap ring	Alloy steel	29	Spring nut	Alloy steel
11	O-ring	NBR	30	Spring	Spring steel
12	Piston	Carbon steel	31	Spring positioning sleeve	Cast carbon steel
13	Guide belt	POM	32	Spring cylinder	Carbon steel
14	Pull rod	Alloy steel	33	Spring guide belt	Copper-based wear-resistant tape
15	Cylinder block	Carbon steel	34	Spring stifle	Carbon steel
16	Front end cap	Carbon steel	35	Adjusting nut cover	Carbon steel
17	Guide belt	POM	36	Combination washer	Copper+ NBR
18	Bolt	Alloy steel	37	Rolling sleeve	Alloy steel
19	Piston rod	Alloy steel	38	Transmission pin	Alloy steel

WPA Series Pneumatic Actuator Scotch Yoke

WPA – G 2K F 300 SR 2 FO – SD – L											
Actuator type		WPA – shift fork type									
Power type		G – Pneumatic									
Frame Size		1K, 2K, 4K, 8K, 16K, 32K, 63K, 125K									
Shift fork type		Symmetrical shift fork – omitted Asymmetrical shift fork – F									
Cylinder dimensions		Cylinder/hydraulic cylinder diameter or dimensional suffix (e.g., Suffix II - Tandem double cylinder, Suffix X – Symmetrical double cylinder)									
Action type		DA – double action SR – single action spring reset									
Spring No.		1, 2, 3, 4									
Fault location		FC – Fault close FO – Fault open L – Fail-safe location (FL) LC – Fail-safe close (FLC) LO – Fail-safe open (FLO)									
Manual type		If default, no manual operation available MS – Direct screw manual SD – Nut screw manual GD – Gear manual GH – Hydraulic manual									
Temperature		Normal temperature – omitted Low temperature – L Ultra-low temperature – UL High temperature – H									

WPA Series Model Identification Guide

Additional options

The pneumatic actuator is a complex automated control instrument, composed of a variety of pneumatic components. Users can provide control requirements for Weissmiller to formulate a complete selection of air circuits

Solenoid valve:

- Single control solenoid valve / Double control solenoid valve
- Voltage used
- Explosion-proof or explosion-suppression grade

Signal feedback:

- Mechanical switch / Proximity switch / Output current signal
- Voltage used
- Explosion-proof or explosion-suppression grade
- Explosion-proof or explosion-suppression grade

Positioner:

- Electrical positioner / Pneumatic positioner
- Explosion-proof or explosion-suppression grade

Gas supply treatment:

- Filter pressure reducing valve
- Lubricator

Special connection size: The pneumatic actuator is connected by the ISO 5211 standard by default. If other sizes are required, please contact Weissmiller for customization.

WPA Series Pneumatic Actuator Scotch Yoke

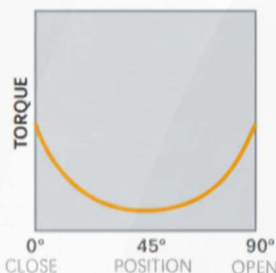
Optimized Torque Characteristics

The Weissmiller WPA-G series offers both symmetrical and asymmetrical shift fork designs to optimize performance. Symmetrical forks provide peak torque at both stroke ends, while asymmetrical versions focus torque at the end for precise demand matching. This choice often allows for a more compact, lightweight, and cost-effective actuator solution.

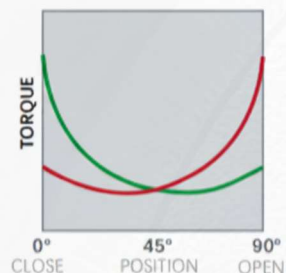
Symmetrical Shift Fork



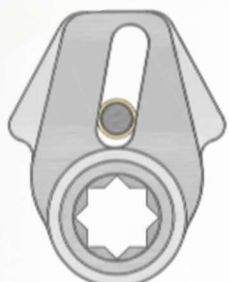
Symmetrical double-action torque curve



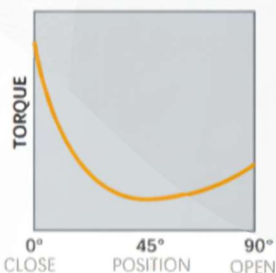
Symmetrical single-action torque curve



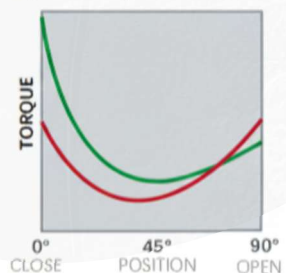
Asymmetrical Shift Fork



Asymmetric double-action torque curve



Asymmetric single-action torque curve



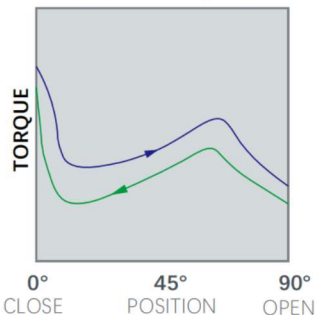
Enhanced Asymmetric Performance

The asymmetric shift fork design can theoretically boost torque output by up to 20% at one end of the stroke. For expert guidance on selecting the optimal model for your requirements, please consult Weissmiller.

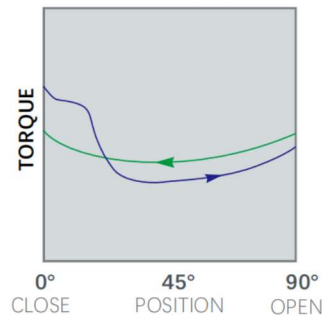
Torque Curve & Model Selection

The torque curve of Weissmiller fork-type cylinders aligns with the requirements of 90° rotary valves like ball and butterfly valves. Since actual valve torque is influenced by external factors—such as medium flow, pressure differentials, and core eccentricity—there is no fixed proportional relationship for opening torque at every position. Therefore, we recommend a comprehensive technical review of specific working conditions during model selection to ensure optimal performance.

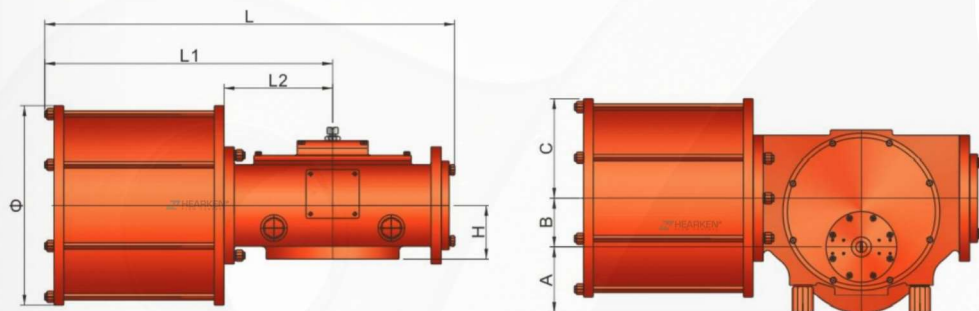
Butterfly valve torque curve



Ball valve torque curve



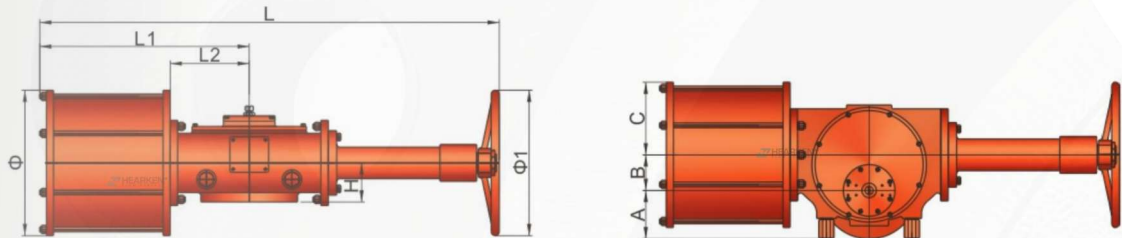
Double Acting Shape Dimensions



Unit: mm

Model	L	L1	L2	Φ	H	A	B	C
WPA-G2DA200	606	428	159	270	90	120	65	135
WPA-G2DA250	606	428	159	320	90	120	65	160
WPA-G2DA300	606	428	159	375	90	120	65	188
WPA-G2DA350	606	428	159	435	90	120	65	218
WPA-G4DA300	738	522	192	375	106	130	85	188
WPA-G4DA350	738	522	192	435	106	130	85	218
WPA-G4DA400	738	522	192	485	106	130	85	243
WPA-G4DA300	812	576	211	375	114	130	100	188
WPA-G4DA350	812	576	211	435	114	130	100	218
WPA-G4DA400	812	576	211	485	114	130	100	243
WPA-G8DA350	925	650	245	435	121	150	110	218
WPA-G8DA400	925	650	245	485	121	150	110	243
WPA-G8DA450	925	650	245	540	121	150	110	270
WPA-G16DA400	994	699	264	485	131	195	125	243
WPA-G16DA450	994	699	264	540	131	195	125	270
WPA-G16DA500	994	699	264	590	131	195	125	295
WPA-G16DA550	994	699	264	645	131	195	125	323
WPA-G16DA400	1054	746	275	485	134	208	135	243
WPA-G16DA450	1054	746	275	540	134	208	135	270
WPA-G16DA500	1054	746	275	590	134	208	135	295
WPA-G16DA550	1054	746	275	645	134	208	135	323
WPA-G32DA500	1148	806	305	590	136	226	150	295
WPA-G32DA550	1148	806	305	645	136	226	150	323
WPA-G32DA600	1148	806	305	695	136	226	150	348
WPA-G32DA650	1148	806	305	750	136	226	150	375
WPA-G63DA650	1340	946	355	750	158	254	180	375
WPA-G63DA700	1340	946	355	805	158	254	180	403
WPA-G63DA750	1340	946	355	855	158	254	180	428
WPA-G63DA800	1340	946	355	905	158	254	180	453
WPA-G125DA750	1660	1160	456	855	190	312	220	428
WPA-G125DA800	1660	1160	456	905	190	312	220	453
WPA-G125DA850	1660	1160	456	970	190	312	220	485
WPA-G125DA900	1660	1160	456	1020	190	312	220	510
WPA-G125DA1000	1660	1160	456	1120	190	312	220	560

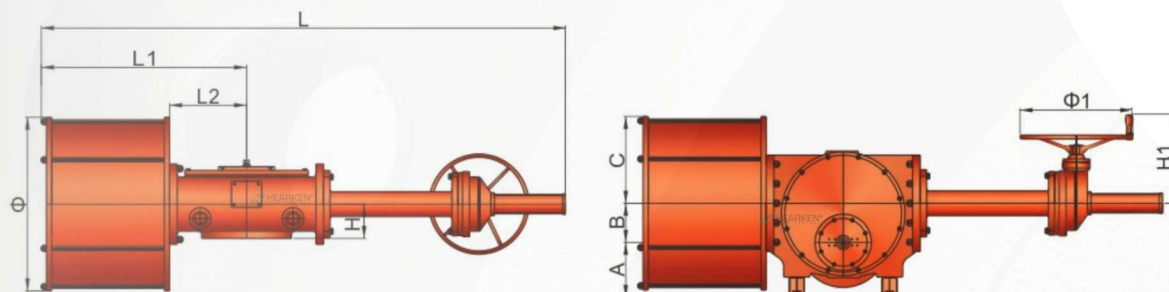
Double Acting Manual type



Unit:mm

Model	L	L1	L2	Φ	H	A	B	C	Φ1
WPA-G2DA250-SD	975	428	159	320	90	120	65	160	300
WPA-G2DA300-SD	975	428	159	375	90	120	65	188	300
WPA-G2DA350-SD	975	428	159	435	90	120	65	218	300
WPA-G4DA300-SD	1165	522	192	375	106	130	85	188	350
WPA-G4DA350-SD	1165	522	192	435	106	130	85	218	350
WPA-G4DA400-SD	1165	522	192	485 ^{HEARKEN}	106	130	85	243	350
WPA-G4DA-00-SD	1285	576	211	375	114	130	100	188	350
WPA-G4DA350-SD	1285	576	211	435	114	130	100	218	350
WPA-G4DA400-SD	1285	576	211	485	114	130	100	243	350
WPA-G8DA350-SD	1440	650	245	435	121	150	110	218	450
WPA-G8DA400-SD	1440	650	245	485	121	150	110	243	450
WPA-G8DA450-SD	1440	650	245	540	121	150	110	270	450
WPA-G16DA400-SD	1550	699	264	485	131	195	125	243	500
WPA-G16DA450-SD	1550	699	264	540	131	195	125	270	500
WPA-G16DA500-SD	1550	699	264	590	131	195	125	295	500
WPA-G16DA550-SD	1550	699	264	645	131	195	125	323	500
WPA-G16DA400-SD	1640	746	275	485	134	208	135	243	500
WPA-G16DA450-SD	1640	746	275	540	134	208	135	270	500
WPA-G16DA500-SD	1640	746	275	590	134	208	135	295	500
WPA-G16DA550-SD	1640	746	275	645	134	208	135	323	500

Double Acting Manual type



Unit:mm

Model	L	L1	L2	Ø	H	A	B	C	Ø1	H1
WPA-G32DA500-SD	2360	806	305	590	136	226	150	295	520	410
WPA-G32DA550-SD	2360	806	305	645	136	226	150	323	520	410
WPA-G32DA600-SD	2360	806	305	695	136	226	150	348	520	410
WPA-G32DA650-SD	2360	806	305	750	136	226	150	375	520	410
WPA-G63DA650-SD	2420	946	355	750	158	254	180	375	520	410
WPA-G63DA700-SD	2420	946	355	805	158	254	180	403	520	410
WPA-G63DA750-SD	2420	946	355	855	158	254	180	428	520	410
WPA-G63DA800-SD	2420	946	355	905	158	254	180	453	520	410
WPA-G125DA750-SD	2990	1160	456	855	190	312	220	428	520	490
WPA-G125DA800-SD	2990	1160	456	905	190	312	220	453	520	490
WPA-G125DA850-SD	2990	1160	456	970	190	312	220	485	520	490
WPA-G125DA900-SD	2990	1160	456	1020	190	312	220	510	520	490
WPA-G125DA1000-SD	2990	1160	456	1120	190	312	220	560	520	490

Single Acting Shape Dimensions

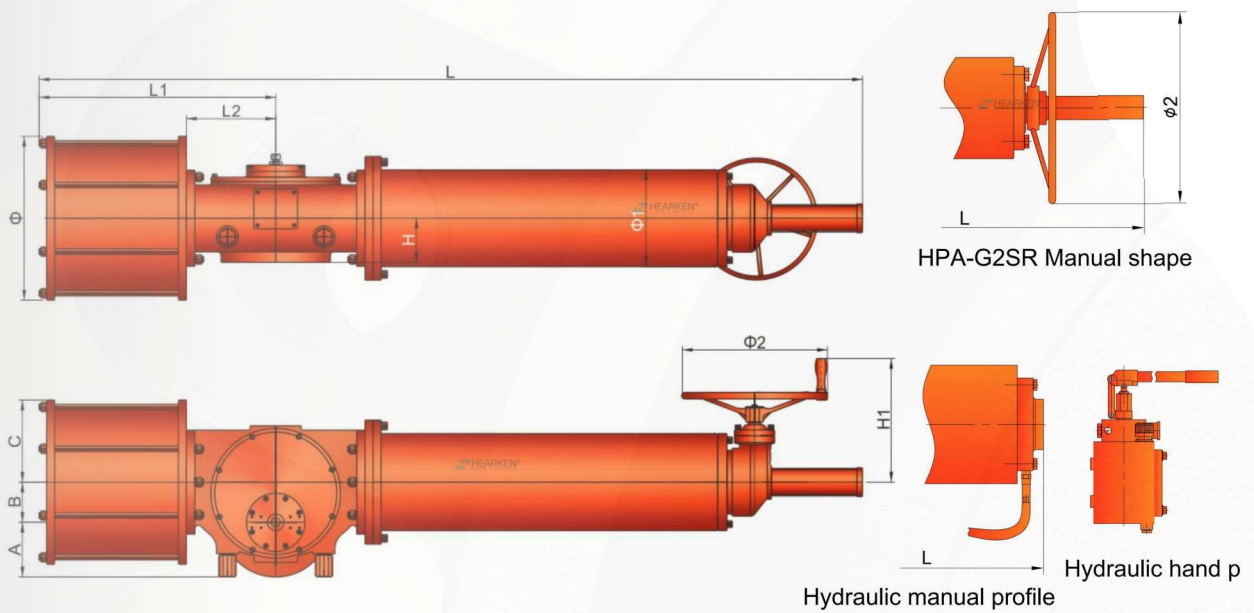


Unit:mm

Model		L	L1	L2	Φ	H	A	B	C	Φ1
WPA-G2SR250-TH	00	1180	428	159	320	90	120	65	160	213
	01	1180								
	02	1180								
	03	1255								
	04	1320								
WPA-G2SR300-TH	01	1180	428	159	375	90	120	65	188	213
	02	1180								
	03	1255								
	04	1320								
WPA-G2SR350-TH	01	1180	428	159	435	90	120	65	218	213
	02	1180								
	03	1255								
	04	1320								
WPA-G4SR300-TH	01	1410	522	192	375	106	130	85	188	235
	02	1455								
	03	1525								
	04	1525								
WPA-G4SR350-TH	01	1410	522	192	435	106	130	85	218	235
	02	1455								
	03	1525								
	04	1525								
WPA-G4SR400-TH	01	1410	522	192	485	106	130	85	243	235
	02	1455								
	03	1525								
	04	1525								
WPA-G4SR300-TH	01	1525	576	211	375	114	130	100	188	235
	02	1570								
	03	1640								
	04	1640								
WPA-G4SR350-TH	01	1525	576	211	435	114	130	100	218	235
	02	1570								
	03	1640								
	04	1640								
WPA-G4SR400-TH	01	1525	576	211	485	114	130	100	243	235
	02	1570								
	03	1640								
	04	1640								

Model		L	L1	L2	Φ	H	A	B	C	Φ1
WPA-G8SR400-TH	01	1695								
	02	1745	650	245	485	121	150	110	243	299
	03	1745								
	04	1790								
WPA-G8SR450-TH	01	1695								
	02	1745	650	245	540	121	150	110	270	299
	03	1745								
	04	1790								
WPA-G8SR500-TH	01	1695								
	02	1745	650	245	590	121	150	110	295	299
	03	1745								
	04	1790								
WPA-G16SR500-TH	01	1870								
	02	1920	699	264	590	131	195	125	295	370
	03	1950								
	04	2010								
WPA-G16SR550-TH	01	1870								
	02	1920	699	264	645	131	195	125	323	370
	03	1950								
	04	2010								
WPA-G16KaSR-600-TH	01	1870								
	02	1920	699	264	695	131	195	125	348	370
	03	1950								
	04	2010								
WPA-G16SR500-TH	01	1960								
	02	2010	746	275	590	134	208	135	295	370
	03	2040								
	04	2100								
WPA-G16SR550-TH	01	1960								
	02	2010	746	275	645	134	208	135	323	370
	03	2040								
	04	2100								
WPA-G16SR600-TH	01	1960								
	02	2010	746	275	695	134	208	135	348	370
	03	2040								
	04	2100								
WPA-G32SR600-TH	01	2240								
	02	2240	806	305	695	136	226	150	348	420
	03	2280								
	04	2400								
WPA-G32SR650-TH	01	2240								
	02	2240	806	305	750	136	226	150	375	420
	03	2280								
	04	2400								
WPA-G32SR700-TH	01	2240								
	02	2240	806	305	805	136	226	150	403	420
	03	2280								
	04	2400								

Model		L	L1	L2	Φ	H	A	B	C	Φ1
WPA-G63SR700-TH	01	2680	946	355	805	158	254	180	403	515
	02	2820								
	03	2770								
	04	2960								
WPA-G63SR750-TH	01	2680	946	355	855	158	254	180	428	515
	02	2820								
	03	2770								
	04	2960								
WPA-G 63SR800-TH	01	2680	946	355	805	158	254	180	403	515
	02	2820								
	03	2770								
	04	2960								
WPA-G 63SR850-TH	01	2680	946	355	970	158	254	180	485	515
	02	2820								
	03	2770								
	04	2960								
WPA-G 125SR800-TH	01	3240	1180	456	805	190	312	220	403	560
	02	3410								670
	03	3520								
	04	3390								
WPA-G 125SR850-TH	01	3240	1180	456	970	190	312	220	485	560
	02	3410								670
	03	3520								
	04	3390								
WPA-G 125SR900-TH	01	3240	1180	456	1020	190	312	220	510	560
	02	3410								670
	03	3520								
	04	3390								
WPA-G 125SR1000-TH	01	3240	1180	456	1120	190	312	220	560	560
	02	3410								670
	03	3520								
	04	3390								
WPA-G 125SR750II-TH	01	3920	1860	456	855	190	312	220	428	560
	02	4090								670
	03	4200								
	04	4070								
WPA-G 125SR800II-TH	01	3920	1860	456	905	190	312	220	453	560
	02	4090								670
	03	4200								
	04	4070								
WPA-G 125SR850II-TH	01	3920	1860	456	955	190	312	220	478	560
	02	4090								670
	03	4200								
	04	4070								
WPA-G 125SR900II-TH	01	3920	1860	456	1020	190	312	220	510	560
	02	4090								670
	03	4200								
	04	4070								



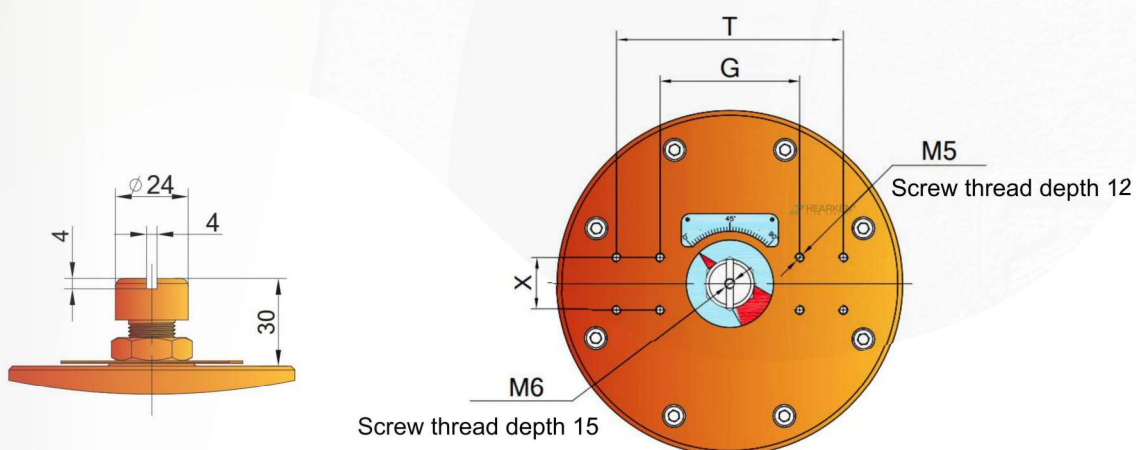
Model		L	L1	L2	Φ	H	A	B	C	Φ1	Φ2	H1
WPA-G 2SR250-TH-SD	00	1445	428	159	320	90	120	65	160	213	400	/
	01	1445										
	02	1445										
	03	1505										
	04	1570										
WPA-G 2SR300-TH-SD	01	1445	428	159	375	90	120	65	188	213	400	/
	02	1445										
	03	1445										
	04	1505										
WPA-G 2SR350-TH-SD	01	1445	428	159	435	90	120	65	218	213	400	/
	02	1445										
	03	1445										
	04	1505										
WPA-G 4SR-300TH-SD	01	1760	522	192	375	106	130	85	188	235	400	320
	02	1805										
	03	1875										
	04	1875										
WPA-G 4SR350-TH-SD	01	1760	522	192	435	106	130	85	218	235	400	320
	02	1805										
	03	1875										
	04	1875										

Model		L	L1	L2	Φ	H	A	B	C	Φ1	Φ2	H1
WPA-G4SR400-TH-SD	01	1760										
	02	1805	522	192	485	106	130	85	243	235	400	320
	03	1875										
	04	1875										
WPA-G4SR300-TH-SD	01	1890										
	02	1930	576	211	375	114	130	100	188	235	400	320
	03	2000										
	04	2000										
WPA-G4SR350-TH-SD	01	1890										
	02	1930	576	211	435	114	130	100	218	235	400	320
	03	2000										
	04	2000										
WPA-G4SR400-TH-SD	01	1890										
	02	1930	576	211	485	114	130	100	243	235	400	320
	03	2000										
	04	2000										
WPA-G8SR400-TH-SD	01	2045										
	02	2095	650	245	485	121	150	110	243	299	450	350
	03	2095										
	04	2140										
WPA-G8SR450-TH-SD	01	2045										
	02	2095	650	245	540	121	150	110	270	299	450	350
	03	2095										
	04	2140										
WPA-G8SR500-TH-SD	01	2045										
	02	2095	650	245	590	121	150	110	295	299	450	350
	03	2095										
	04	2140										
WPA-Gi6SR500-TH-SD	01	2300										
	02	2350	699	264	590	131	195	125	295	370	500	375
	03	2380										
	04	2440										
WPA-Gi6SR550-TH-SD	01	2300										
	02	2350	699	264	645	131	195	125	323	370	500	375
	03	2380										
	04	2440										
WPA-Gi6SR600-TH-SD	01	2300										
	02	2350	699	264	695	131	195	125	348	370	500	375
	03	2380										
	04	2440										

Model		L	L1	L2	Φ	H	A	B	C	Φ1	Φ2	H1
WPA-G16SR500-TH-SD	01	2420										
	02	2470	746	275	590	134	208	135	295	370	500	375
	03	2500										
	04	2560										
WPA-G16SR550-TH-SD	01	2420										
	02	2470	746	275	645	134	208	135	323	370	500	375
	03	2500										
	04	2560										
WPA-G16SR600-TH-SD	01	2420										
	02	2470	746	275	695	134	208	135	348	370	500	375
	03	2500										
	04	2560										
WPA-G32SR600-TH-SD	01	2760										
	02	2760	806	305	695	136	226	150	348	420	500	410
	03	2800										
	04	2920										
WPA-G32SR650-TH-SD	01	2760										
	02	2760	806	305	750	136	226	150	375	420	500	410
	03	2800										
	04	2920										
WPA-G32SR700-TH-SD	01	2760										
	02	2760	806	305	805	136	226	150	403	420	500	410
	03	2800										
	04	2920										
WPA-G63SR700-TH-SD	01	3380										
	02	3520	946	355	805	158	254	180	403	515	600	440
	03	3470										
	04	3660										
WPA-G63SR750-TH-SD	01	3380										
	02	3520	946	355	855	158	254	180	428	515	600	440
	03	3470										
	04	3660										
WPA-G63SR800-TH-SD	01	3380										
	02	3520	946	355	805	158	254	180	403	515	600	440
	03	3470										
	04	3660										
WPA-G63SR850-TH-SD	01	3380										
	02	3520	946	355	970	158	254	180	485	515	600	440
	03	3470										
	04	3660										

Model		L	L1	L2	Φ	H	A	B	C	Φ1	Φ2	H1
WPA-G125SR800-TH-SD	01	3340										
	02	3510	1180	456	805	190	312	220	403	560		Hydraulic manual
	03	3620										
	04	3490										
										670		
WPA-G125SR850-TH-SD	01	3340	1180	456	970	190	312	220	485	560		Hydraulic manual
	02	3510										
	03	3620										
	04	3490									670	
WPA-G125SR900-TH-SD	01	3340	1180	456	1020	190	312	220	510	560		Hydraulic manual
	02	3510										
	03	3620										
	04	3490									670	
WPA-G125SR1000-TH-SD	01	3340	1180	456	1120	190	312	220	560	560		Hydraulic manual
	02	3510										
	03	3620										
	04	3490									670	
WPA-G125SR750II-TH-SD	01	4020	1860	456	855	190	312	220	428	560		Hydraulic manual
	02	4190										
	03	4300										
	04	4170									670	
WPA-G125SR800II-TH-SD	01	4020	1860	456	905	190	312	220	453	560		Hydraulic manual
	02	4190										
	03	4300										
	04	4170									670	
WPA-G125SR850II-TH-SD	01	4020	1860	456	955	190	312	220	478	560		Hydraulic manual
	02	4190										
	03	4300										
	04	4170									670	
WPA-G125SR900II-TH-SD	01	4020	1860	456	1020	190	312	220	510	560		Hydraulic manual
	02	4190										
	03	4300										
	04	4170									670	

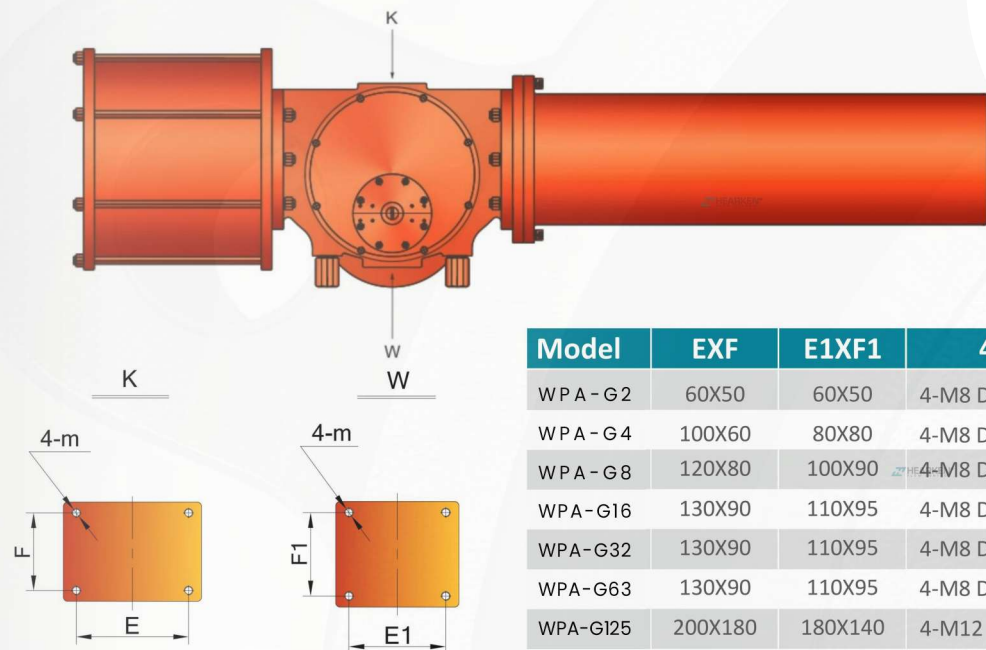
Position Indicates Platform Dimensions



Unit:mm

Model	X	G	T
WPA-G2	30	80	/
WPA-G4	30	80	/
WPA-G8	30	80	130
WPA-G16	30	80	130
WPA-G32	30	80	130
WPA-G63	30	80	130
WPA-G125	30	80	130

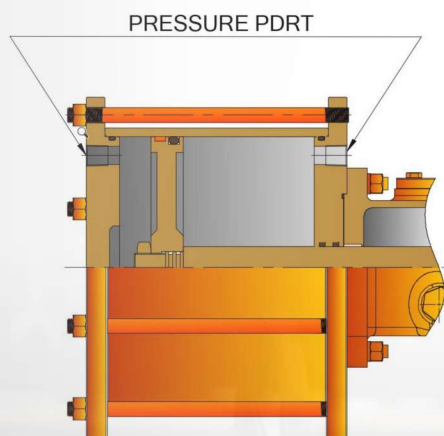
Accessories Mounting Plate Platform Dimensions



Unit:mm

Model	EXF	E1XF1	4-m
WPA-G2	60X50	60X50	4-M8 Depth 12
WPA-G4	100X60	80X80	4-M8 Depth 12
WPA-G8	120X80	100X90	4-M8 Depth 12
WPA-G16	130X90	110X95	4-M8 Depth 15
WPA-G32	130X90	110X95	4-M8 Depth 15
WPA-G63	130X90	110X95	4-M8 Depth 15
WPA-G125	200X180	180X140	4-M12 Depth 20

Cylinder End Nole Dimension

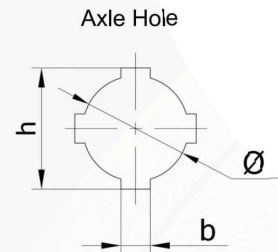
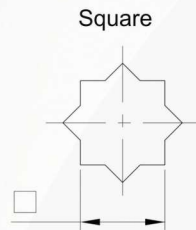
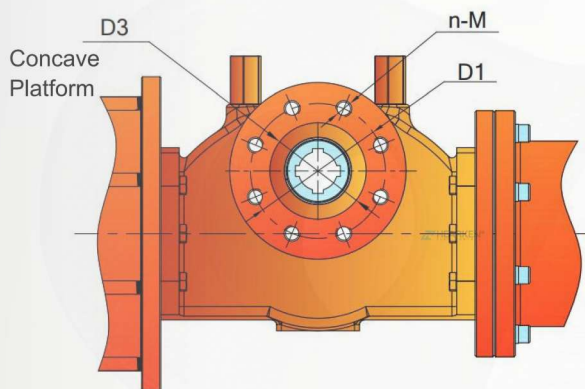


Unit:mm

Cylinder Diamter	NPT	Cylinder Diamter	NPT
200	NPT3/8"	600	NPT3/4"
250	NPT3/8"	650	NPT3/4"
300	NPT3/8"	700	NPT 1"
350	NPT1/2"	750	NPT 1"
400	NPT1/2"	800	NPT 1"
450	NPT1/2"	850	NPT 1"
500	NPT3/4"	900	NPT 1"
550	NPT3/4"	1000	NPT 1"

[Note]: The above is the size of the gas nozzle when there is no requirement in the contract clause. Actually, it can be selected according to the actual working conditions and the requirements of the accessories.

Connection Dimensions



Unit:mm

Model	ISO5211	D1	n-m	D3	Square□	Axle HoleΦ	b	h	Mouting Height
WPA-G2	F14	140	4-M16x24	100x4	27X27 36X36	/	/	/	45
WPA-G4	F16	165	4-M20x30	130x5	36X36 46X46	/	/	/	55
WPA-G4	F16	165	4-M20x30	130x5	46X46	/	/	/	65
WPA-G8	F25	254	8-M16x24	200x5	55X55	/	/	/	70
WPA-G16	F30	298	8-M20x30	230x6	60X60	/	/	/	80
WPA-G16	F30	298	8-M20x30	230x6	/	90	4-25	100.8	100
WPA-G32	F30	298	8-M20x30	230x6	/	105	4-28	117.8	120
WPA-G63	F35	356	8-M30x40	260x6	/	120	4-32	134.8	150
WPA-G125	F48	483	12-M36x50	370x8	/	160	4-40	178.8	200

Double Acting Actuator Torque

Unit:N.m

Model	0.3Bar		0.4 Bar		0.5 Bar		0.6 Bar		0.7 Bar	
	min	stat	min	stat	min	stat	min	stat	min	stat
WPA-G2DA200	551	937	735	1249	918	1561	1102	1874	1286	2186
WPA-G2DA250	861	1464	1148	1952	1435	2440	1722	2928	2009	3415
WPA-G2DA300	1240	2108	1653	2810	2067	3513	2480	4216	2893	4918
WPA-G2DA350	1688	2869	2250	3825	2813	4782	3375	5738	3938	6694
WPA-G4DA300	1621	2756	2162	3675	2702	4594	3243	5513	3783	6432
WPA-G4DA350	2207	3752	2943	5002	3678	6253	4414	7504	5150	8754
WPA-G4DA400	2883	4900	3843	6534	4804	8167	5765	9801	6726	11434
WPA-G4DA300	1908	3243	2543	4324	3179	5405	3815	6486	4451	7567
WPA-G4DA350	2596	4414	3462	5885	4327	7356	5193	8828	6058	10299
WPA-G4DA400	3391	5765	4522	7687	5652	9608	6782	11530	7913	13452
WPA-G8DA350	2856	4855	3808	6474	4760	8092	5712	9710	6664	11329
WPA-G8DA400	3730	6342	4974	8455	6217	10569	7461	12683	8704	14797
WPA-G8DA450	4721	8026	6295	10701	7869	13377	9442	16052	11016	18727
WPA-G16DA400	4239	7206	5652	9608	7065	12011	8478	14413	9891	16815
WPA-G16DA450	5365	9120	7153	12161	8942	15201	10730	18241	12518	21281
WPA-G16DA500	6623	11260	8831	15013	11039	18766	13247	22520	15455	26273
WPA-G16DA550	8014	13624	10686	18166	13357	22707	16029	27249	18700	31790
WPA-G16DA400	4578	7783	6104	10377	7630	12971	9156	15566	10682	18160
WPA-G16DA450	5794	9850	7726	13133	9657	16417	11588	19700	13520	22984
WPA-G16DA500	7153	12161	9538	16214	11922	20268	14307	24321	16691	28375
WPA-G16DA550	8656	14714	11541	19619	14426	24524	17311	29429	20196	34334
WPA-G32DA500	8478	14413	11304	19217	14130	24021	16956	28825	19782	33629
WPA-G32DA550	10258	17439	13678	23252	17097	29065	20517	34878	23936	40692
WPA-G32DA600	12208	20754	16278	27672	20347	34590	24417	41508	28486	48426
WPA-G32DA650	14328	24357	19104	32476	23880	40595	28656	48715	33432	56834
WPA-G63DA650	16567	28163	22089	37551	27611	46939	33133	56326	38655	65714
WPA-G63DA700	19213	32663	25618	43550	32022	54438	38427	65325	44831	76213
WPA-G63DA750	22056	37495	29408	49994	36760	62492	44112	74991	51464	87489
WPA-G63DA800	25095	42661	33460	56882	41825	71102	50190	85323	58555	99543
WPA-G125DA750	26229	44589	34972	59452	43715	74315	52458	89178	61201	104041
WPA-G125DA800	29843	50732	39790	67643	49738	84554	59685	101465	69633	118375
WPA-G125DA850	33689	57272	44919	76363	56149	95453	67379	114544	78609	133635
WPA-G125DA900	37769	64208	50359	85611	62949	107014	75539	128416	88129	149819
WPA-G125DA1000	46629	79269	62172	105692	77715	132116	93258	158539	108801	184962

Single Acting Actuator Torque

Unit:N.m

Model	Spring Torque			3 Bar			4 Bar			5 Bar			6 Bar		
	stat	min	end	stat	min	end	stat	min	end	stat	min	end	stat	min	end
WPA-G2-250-TH00	1080	512	800	700	340	421	1199	643	921	1699	946	1421	2199	1249	1921
WPA-G2-300-TH01	1375	650	1009	1150	586	785	1870	1023	1505	2590	1459	2225	3309	1895	2945
WPA-G2-300-TH02	1679	808	1286				1594	847	1200	2313	1283	1920	3033	1719	2640
WPA-G2-350-TH02	1679	808	1286	1654	883	1260	2633	1477	2240	3613	2071	3220	4593	2664	4200
WPA-G2-350-TH03	1960	928	1442	1497	751	980	2477	1344	1960	3456	1938	2940	4436	2532	3920
WPA-G4-300-TH01	2608	1228	1893				1872	918	1157	2813	1488	2098	3755	2059	3039
WPA-G4-350-TH01	2608	1156	1893	1950	965	1235	3232	1742	2516	4513	2518	3798	5794	3295	5079
WPA-G4-350-TH02	3203	1467	2175				2950	1476	1922	4231	2253	3203	5512	3029	4485
WPA-G4-350-TH03	3534	1653	2528				2597	1269	1591	3878	2046	2872	5160	2822	4153
WPA-G4-400-TH02	3203	1467	2175	2845	1413	1818	4518	2427	3491	6192	3441	5165	7865	4456	6838
WPA-G4-400-TH03	3534	1653	2528	2493	1206	1486	4166	2220	3160	5839	3234	4833	7513	4248	6506
WPA-G4-400-TH04	4012	1862	2816				3878	1988	2681	5551	3002	4355	7225	4016	6028
WPA-G4-300-TH01	3069	1404	2079				2351	1125	1361	3458	1796	2468	4566	2467	3576
WPA-G4-350-TH01	3069	1404	2079	2443	1181	1453	3950	2094	2960	5458	3008	4468	6965	3921	5975
WPA-G4-350-TH02	3768	1668	2346				3683	1801	2261	5190	2715	3769	6698	3628	5276
WPA-G4-400-TH03	4158	1888	2765	3141	1482	1748	5110	2675	3717	7079	3868	5686	9047	5061	7655
WPA-G4-400-TH04	4721	2124	3066				4809	2413	3154	6778	3607	5123	8747	4800	7092
WPA-G8-400-TH01	4911	2257	3367				5295	2741	3752	7461	4054	5917	9626	5366	8083
WPA-G8-400-TH02	5659	2569	3759				4904	2396	3003	7070	3709	5169	9235	5021	7335
WPA-G8-450-TH02	5659	2569	3759	4464	2130	2563	7205	3791	5304	9946	5452	8045	12687	7113	10786
WPA-G8-450-TH03	6295	2916	4398				6566	3404	4669	9307	5066	7410	12048	6727	10151
WPA-G8-450-TH04	7510	3436	5087				5876	2827	3454	8617	4488	6195	11358	6150	8936
WPA-G8-500-TH03	6295	2916	4398	5658	2906	3930	9042	4956	7314	12426	7007	10698	15810	9058	14082
WPA-G8-500-TH04	7510	3436	5087	5064	2335	2642	8448	4386	6025	11832	6437	9409	15216	8488	12793
WPA-G16-450-TH01	8532	3846	5570				6889	3277	3926	10004	5165	7041	13118	7053	10156
WPA-G16-500-TH01	8532	3846	5570	5966	2718	3003	9811	5049	6849	13657	7379	10694	17502	9709	14539
WPA-G16-500-TH02	10510	4510	7030				8753	4310	5471	12598	6641	9317	16443	8971	13162
WPA-G16-550-TH02	10510	4510	7030	7330	3448	4049	11983	6268	8701	16636	9088	13354	21288	11908	18007
WPA-G16-550-TH03	12355	5266	8124	Z ² HEARKEN®			10952	5428	6962	15604	8248	11615	20257	11068	16268
WPA-G16-550-TH04	14527	6192	9552							14258	7220	9567	18911	10040	14220
WPA-G16-600-TH03	12355	5266	8124	8952	4217	4963	14489	7573	10500	20026	10928	16037	25564	14284	21574
WPA-G16-600-TH04	14527	6192	9552				13143	6544	8452	18680	9900	13989	24217	13256	19527
WPA-G16-450-TH01	9215	4084	5760				7695	3617	4240	11059	5656	7604	14423	7694	10968
WPA-G16-500-TH01	9215	4084	5760	6698	3013	3244	10851	5530	7397	15004	8047	11550	19157	10563	15702
WPA-G16-500-TH02	10702	4794	6876				9735	4741	5909	13888	7258	10062	18041	9775	14215
WPA-G16-500-TH03	12581	5593	7928				8684	3853	4031	12837	6370	8184	16990	8887	12337
WPA-G16-550-TH03	10702	4794	6876	8199	3809	4373	13224	6855	9398	18249	9900	14423	23274	12946	19448
WPA-G16-550-TH04	12581	5593	7928				12172	5967	7519	17197	9013	12544	22222	12058	17569
WPA-G16-600-TH04	14792	6577	9322				14599	7190	9128	20579	10814	15108	26559	14439	21089
WPA-G32-550-TH01	14440	6260	8514				13819	6580	7893	19403	9963	13477	24986	13347	19060
WPA-G32-600-TH01	14440	6260	8514	11420	5125	5494	18065	9152	12138	24709	13179	18783	31354	17207	25428
WPA-G32-600-TH02	17404	7556	10300				16278	7713	9174	22923	11740	15819	29567	15767	22463
WPA-G32-650-TH02	17404	7556	10300				20892	10509	13788	28691	15236	21587	36489	19962	29385
WPA-G32-650-TH03	19865	9026	13229				17964	8876	11328	25762	13602	19126	33560	18329	26924
WPA-G32-700-TH03	19865	9026	13229	13903	6415	7267	22947	11897	16311	31992	17378	25355	41036	22859	34399
WPA-G32-700-TH04	23149	10546	15518				20658	10208	13027	29702	15689	22071	38746	21170	31115
WPA-G63-650-TH01	23733	10374	14303				23129	11160	13698	32486	16831	23056	41844	22502	32414
WPA-G63-650-TH02	27779	12155	16789				20642	9180	9652	30000	14852	19010	39358	20523	28368
WPA-G63-700-TH01	23733	10374	14303	18256	8206	8825	29109	14784	19678	39962	21361	30531	50814	27939	41384
WPA-G63-700-TH02	27779	12155	16789				26622	12804	15633	37475	19382	26485	48328	25960	37338
WPA-G63-750-TH02	27779	12155	16789				33045	16697	22056	45504	24248	34514	57963	31799	46973
WPA-G63-750-TH03	28263	13516	21294	16082	7635	9113	28540	15185	21571	40999	22736	34030	53458	30287	46489
WPA-G63-800-TH03	28263	13516	21294	21231	10756	14262	35407	19347	28437	49582	27938	42613	63757	36529	56788
WPA-G63-800-TH04	43790	18739	24918				31783	13543	12911	45958	22134	27086	60133	30725	41261
WPA-G63-850-TH04	43790	18739	24918				39092	17973	20220	55094	27672	36222	71097	37370	52225
WPA-G125-850-TH01	49568	22602	33307				44928	22301	28667	64486	34155	48225	84045	46009	67784
WPA-G125-900-TH01	49568	22602	33307				54402	28044	38141	76330	41333	60069	98257	54622	81996
WPA-G125-1000-TH02	67378	31285	47334				60949	30865	40905	88020	47271	67976	115090	63678	95046
WPA-G125-700X2-TH02	67378	31285	47334	32254	13474	12210	58783	29552	38739	85312	45631	65269	111842	61709	91798
WPA-G125-750X2-TH02	67378	31285	47334				74484	39068	54440	104939	57525	84895	135393	75983	115350
WPA-G125-800X2-TH03	100808	44250	61443				77159	34834	37794	111809	55834	72444	146460	76835	107095
WPA-G125-850X2-TH03	100808	44250	61443				95026	45662	55660	134143	69370	94778	173260	93077	133895