
IKUSE YOXSQ Twin-Chamber Torque-Limiting Fluid Coupling

Overview

Twin working chambers with outer-wheel drive and two sets of pump and turbine wheels provide greater transmission capacity. Check the power, axial length and overload factor for the selected size.

Construction

Correct selection of size and fluid fill reduces starting shocks and torsional vibration and provides torque limitation under overload.

Applications

For conveyors, lifting and general industrial equipment. Consider load inertia, starting frequency, braking and connection type.

Technical specifications

Construction, mounting dimensions and technical data are provided separately for each configuration. Read power and input speed from the same row for the selected size. Do not mix models or operating conditions. Check bores, shaft lengths and additional connecting elements before installation.

Ordering information

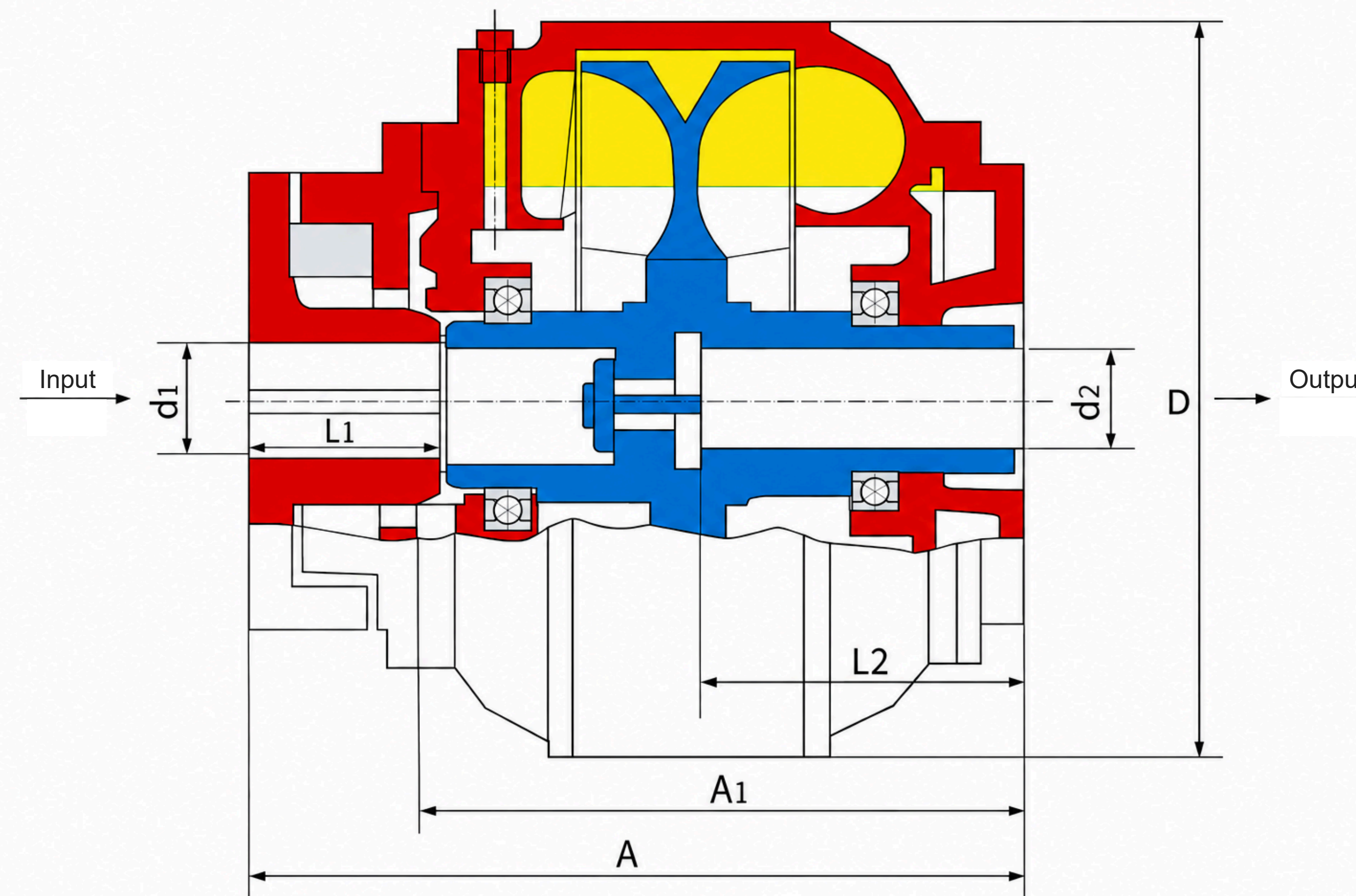
Specify motor power, input speed, driven-machine type, load and starting requirements, both shaft-end dimensions, available space and braking or speed-control requirements. Agree lubrication, cooling, brake-wheel and elastic-coupling requirements before ordering.

Drive arrangement 18

Twin working chambers, outer-wheel drive

Notes

1. Two pump wheels and two turbine wheels transmit approximately twice the power of a single-chamber design, with a slightly greater axial length and a higher overload factor.



Model and size	Input speedn (r/min)	Transmitted power rangeN (kW)	Overload factorTg	Efficiencyη	Overall dimensions (mm)			Maximum input bore diameter and length (mm) d _{1max} L _{1max}	Maximum output bore diameter and length (mm) d _{2max} L _{2max}	Oil fill volume q (L)			Mass (kg), excluding brake wheel
			Starting		D	A	A ₁			q _c 100%	q _{min} 40%	q _{max} 80%	
YOXsq220	1000	0.8-2.2	1.91	0.96	φ278	270	190	φ40/80	φ35/80	3.9	1.6	3.2	28
	1500	3-6											
YOXsq250	1000	1.6-3	1.91	0.96	φ305	290	210	φ45/80	φ40/80	5.8	2.32	4.6	32
	1500	5-11											
YOXsq280	1000	3-6	1.91	0.96	φ345	325	235	φ50/80	φ45/80	7.2	2.9	5.8	43
	1500	9-16											
YOXsq320	1000	5-11	1.91	0.96	φ380	365	265	φ55/110	φ46/110	12	4.8	9.6	60
	1500	18-37											
YOXsq360	1000	10-20	1.91	0.96	φ428	435	310	φ55/110	φ55/110	19	7.6	13.4	75
	1500	32-60											
YOXsq400	1000	16-37	1.91	0.96	φ472	470	320	φ65/140	φ60/140	27	10.8	20.8	130
	1500	56-96											
YOXsq450	1000	30-60	1.91	0.96	φ530	500	350	φ75/140	φ70/140	38	15.2	30	165
	1500	90-180											
YOXsq500	1000	50-100	1.91	0.96	φ582	575	375	φ95/170	φ90/170	53	21	42	203
	1500	136-288											
YOXsq560	1000	50-160	1.91	0.96	φ634	620	420	φ120/210	φ100/210	68	27	54	285
	1500	240-560											
YOXsq600	1000	120-230	1.91	0.96	φ695	645	450	φ120/210	φ115/210	86	34	68	335
	1500	400-720											
YOXsq650	1000	180-352	1.91	0.96	φ740	705	510	φ150/250	φ130/250	122	48	96	428
	1500	520-960											
YOXsq750	1000	340-650	1.91	0.96	φ860	820	570	φ150/250	φ140/250	173	62	124	640
	1500	760-1520											
YOXsq875	750	290-560	1.91	0.96	φ992	920	670	φ150/250	φ150/250	285	114	224	920
	1000	660-1240											
YOXsq1000	600	320-720	1.91	0.96	φ1138	1060	750	φ160/250	φ160/250	378	151	296	1310
	750	520-1180											
YOXsq1150	600	530-1230	1.91	0.96	φ1323	1150	840	φ170/300	φ170/300	432	173	340	1980
	750	1050-2390											

IKUSE YOXvs Twin-Auxiliary-Chamber Fluid Coupling

Overview

Combines an extended rear auxiliary chamber with a side auxiliary chamber to extend the starting process. The series includes YOXvs, YOXvsnz, YOXvsa, YOXvsaz and YOXvsllz.

Construction

Correct selection of size and fluid fill reduces starting shocks and torsional vibration and provides torque limitation under overload.

Applications

For conveyors, lifting and general industrial equipment. Consider load inertia, starting frequency, braking and connection type.

Technical specifications

Construction, mounting dimensions and technical data are provided separately for each configuration. Read power and input speed from the same row for the selected size. Do not mix models or operating conditions. Check bores, shaft lengths and additional connecting elements before installation.

Ordering information

Specify motor power, input speed, driven-machine type, load and starting requirements, both shaft-end dimensions, available space and braking or speed-control requirements. Agree lubrication, cooling, brake-wheel and elastic-coupling requirements before ordering.

Drive arrangement 13

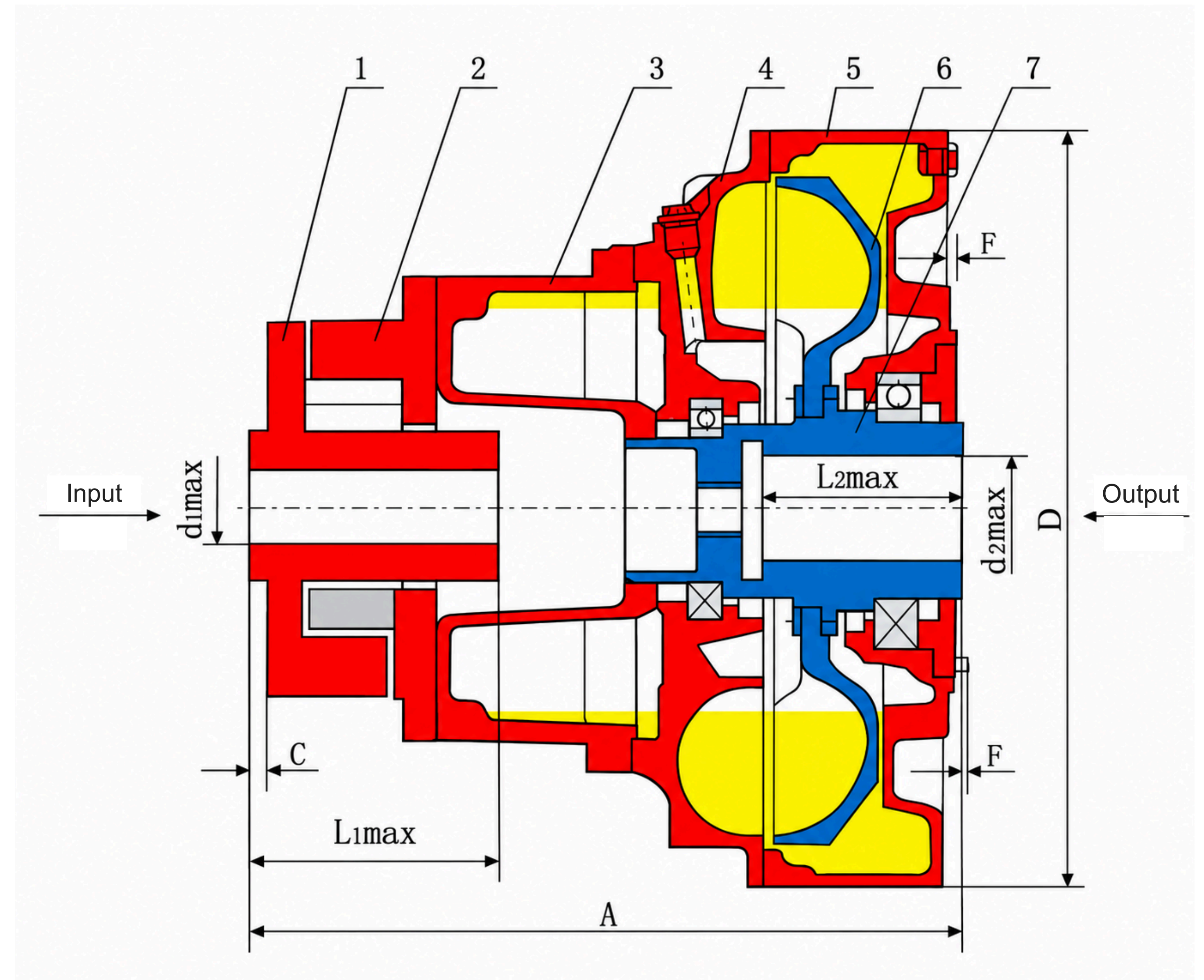
Twin auxiliary chamber type · Outer-wheel drive

Component legend

- | | |
|------------------------------------|------------------|
| 1. Driving member | 2. Driven member |
| 3. Extended rear auxiliary chamber | 4. Pump wheel |
| 5. Side auxiliary chamber | 6. Turbine wheel |
| 7. Main shaft | |

Notes

1. An extended rear auxiliary chamber and a side auxiliary chamber provide a starting time of 30–50 seconds for belt conveyors requiring a prolonged smooth start.



Model and size	Input speedn (r/min)	Transmitted power rangeN (kW)	Overload factorTg		Efficiencyη	Overall dimensions (mm)				Maximum input bore diameter and length (mm) d1max L1max	Maximum output bore diameter and length (mm) d2max L2max	Oil fill volume q (L)		Mass (kg)
			Starting	Braking		D	A	C	F			qmin 40%	qmax 70%	
YOXvs360	1000	5-10	1.1-1.35	2-2.3	0.96	φ428	358	10	3	$\frac{\phi 60}{110}$	$\frac{\phi 55}{110}$	5.3	8.8	52
	1500	16-30												
YOXvs400	1000	8-18.5	1.1-1.35	2-2.3	0.96	φ472	389	5	4	$\frac{\phi 70}{110/140}$	$\frac{\phi 60}{140}$	7.7	13.5	77
	1500	28-48												
YOXvs450	1000	15-30	1.1-1.35	2-2.3	0.96	φ530	446	10	6	$\frac{\phi 75}{140}$	$\frac{\phi 70}{140}$	11.1	19.5	96
	1500	50-90												
YOXvs500	1000	25-50	1.1-1.35	2-2.3	0.96	φ582	510	30	5	$\frac{\phi 90}{170}$	$\frac{\phi 90}{170}$	15.3	26.8	133
	1500	68-144												
YOXvs560	1000	48-80	1.1-1.35	2-2.3	0.96	φ634	532	5	7	$\frac{\phi 100}{170/210}$	$\frac{\phi 100}{210}$	19.5	34.2	185
	1500	120-270												
YOXvs600	1000	60-115	1.1-1.35	2-2.3	0.96	φ695	577	5	7	$\frac{\phi 100}{170/210}$	$\frac{\phi 115}{210}$	24.9	43.6	220
	1500	200-360												
YOXvs650	1000	90-176	1.1-1.35	2-2.3	0.96	φ760	652	25	6	$\frac{\phi 130}{210}$	$\frac{\phi 130}{210}$	35.6	62.4	260
	1500	260-480												
YOXvs750	1000	170-330	1.1-1.35	2-2.3	0.96	φ860	678	—	2	$\frac{\phi 140}{250}$	$\frac{\phi 150}{250}$	50.5	88.4	406
	1500	380-760												
YOXvs875	750	140-280	1.1-1.35	2-2.3	0.96	φ992	820	55	7	$\frac{\phi 150}{250}$	$\frac{\phi 150}{250}$	83.1	145.6	580
	1000	330-620												
YOXvs1000	600	160-300	1.1-1.35	2-2.3	0.96	φ1138	845	—	3	$\frac{\phi 150}{250}$	$\frac{\phi 150}{250}$	108.5	192.4	780
	750	260-590												

Drive arrangement 14

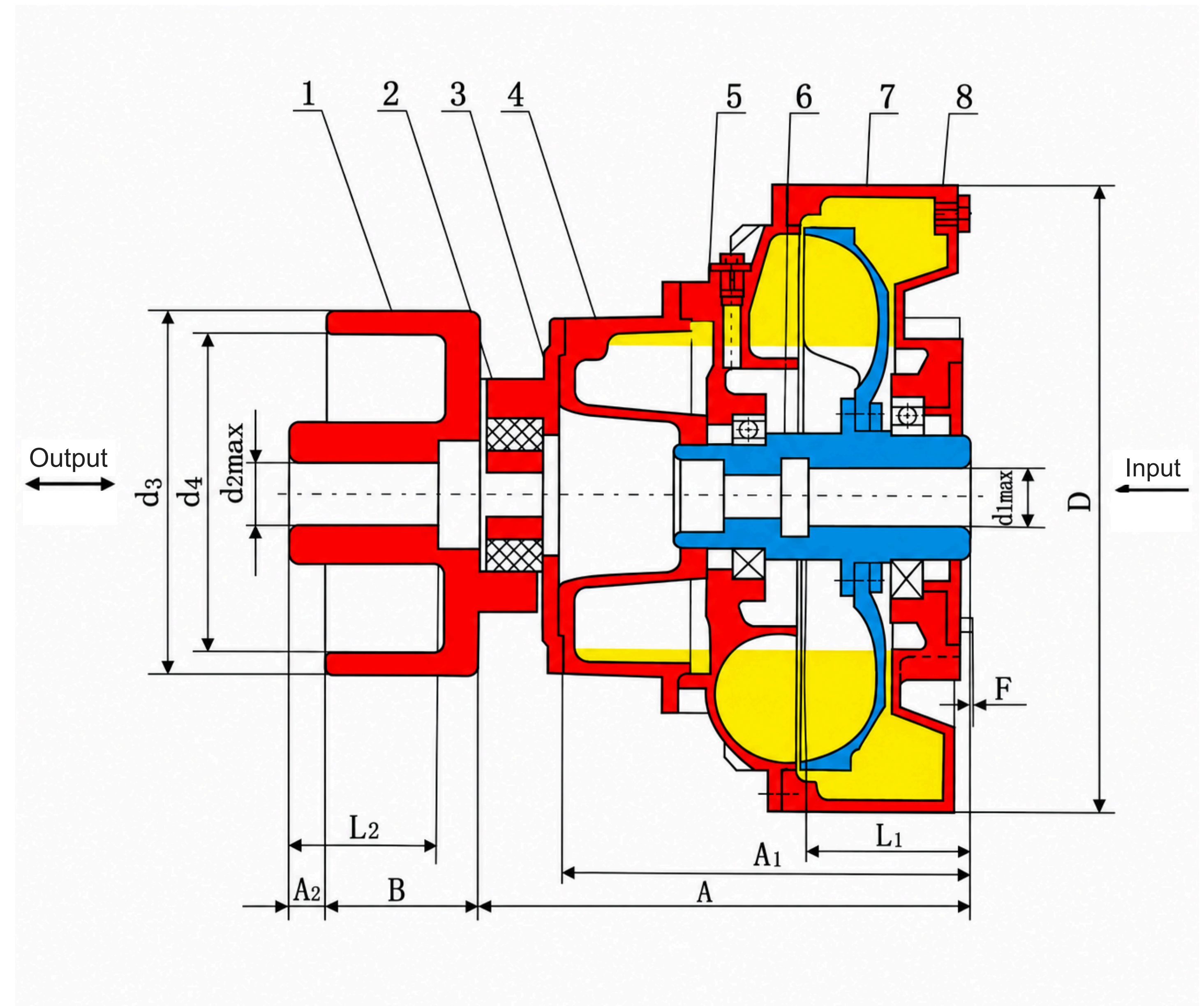
Twin auxiliary chamber type · Inner-wheel drive with brake wheel

Component legend

- | | |
|------------------|------------------------------------|
| 1. Brake wheel | 2. Elastic rubber blocks |
| 3. Driven member | 4. Extended rear auxiliary chamber |
| 5. Pump wheel | 6. Main shaft |
| 7. Turbine wheel | 8. Side auxiliary chamber |

Notes

1. An extended rear auxiliary chamber and a side auxiliary chamber provide a starting time of 30–50 seconds for belt conveyors requiring a prolonged smooth start.
2. A compact configuration with a brake wheel for drive units requiring braking.



Model and size	Input speedn (r/min)	Transmitted power rangeN (kW)	Overload factorTg		Efficiencyη	Overall dimensions (mm)					Maximum input bore diameter and length (mm) d1max L1max	Maximum output bore diameter and length (mm) d2max L2max	Brake-wheel dimensions (mm)	Oil fill volume q (L)		Mass (kg)
			Starting	Braking		D	A	A1	A2	F			d3 · d4 · B	qmin 40%	qmax 70%	
YOXvsnz360	1000	5-10	1.1-1.35	2-2.5	0.96	φ428	331	278	10	3	φ55	φ60		5.3	8.8	50
	1500	16-30									110	110				
YOXvsnz400	1000	8-18.5	1.1-1.35	2-2.5	0.96	φ472	368	308	10	4	φ60	φ70		7.7	13.5	74
	1500	28-48									120	140				
YOXvsnz450	1000	15-30	1.1-1.35	2-2.5	0.96	φ530	419	353	10	6	φ70	φ75		11.1	19.5	93.5
	1500	50-90									140	140				
YOXvsnz500	1000	25-50	1.1-1.35	2-2.5	0.96	φ582	462	391	15	5	φ90	φ90		15.3	26.8	134
	1500	68-144									170	170				
YOXvsnz560	1000	48-80	1.1-1.35	2-2.5	0.96	φ634	508	433	15	7	φ100	φ100	Machined to customer-supplied dimensions	19.5	34.2	159
	1500	120-270									210	210				
YOXvsnz600	1000	60-115	1.1-1.35	2-2.5	0.96	φ695	550	467	15	7	φ100	φ100		24.9	43.6	200
	1500	200-360									210	210				
YOXvsnz650	1000	90-176	1.1-1.35	2-2.5	0.96	φ760	605	520	15	6	φ130	φ130		35.6	62.4	257
	1500	260-480									210	210				
YOXvsnz750	1000	170-330	1.1-1.35	2-2.5	0.96	φ860	648	550	20	2	φ150	φ140		50.5	88.4	425
	1500	380-760									250	250				
YOXvsnz875	750	140-280	1.1-1.35	2-2.5	0.96	φ992	738	632	20	7	φ150	φ150		83.1	146	596
	1000	330-620									250	250				

Drive arrangement 15

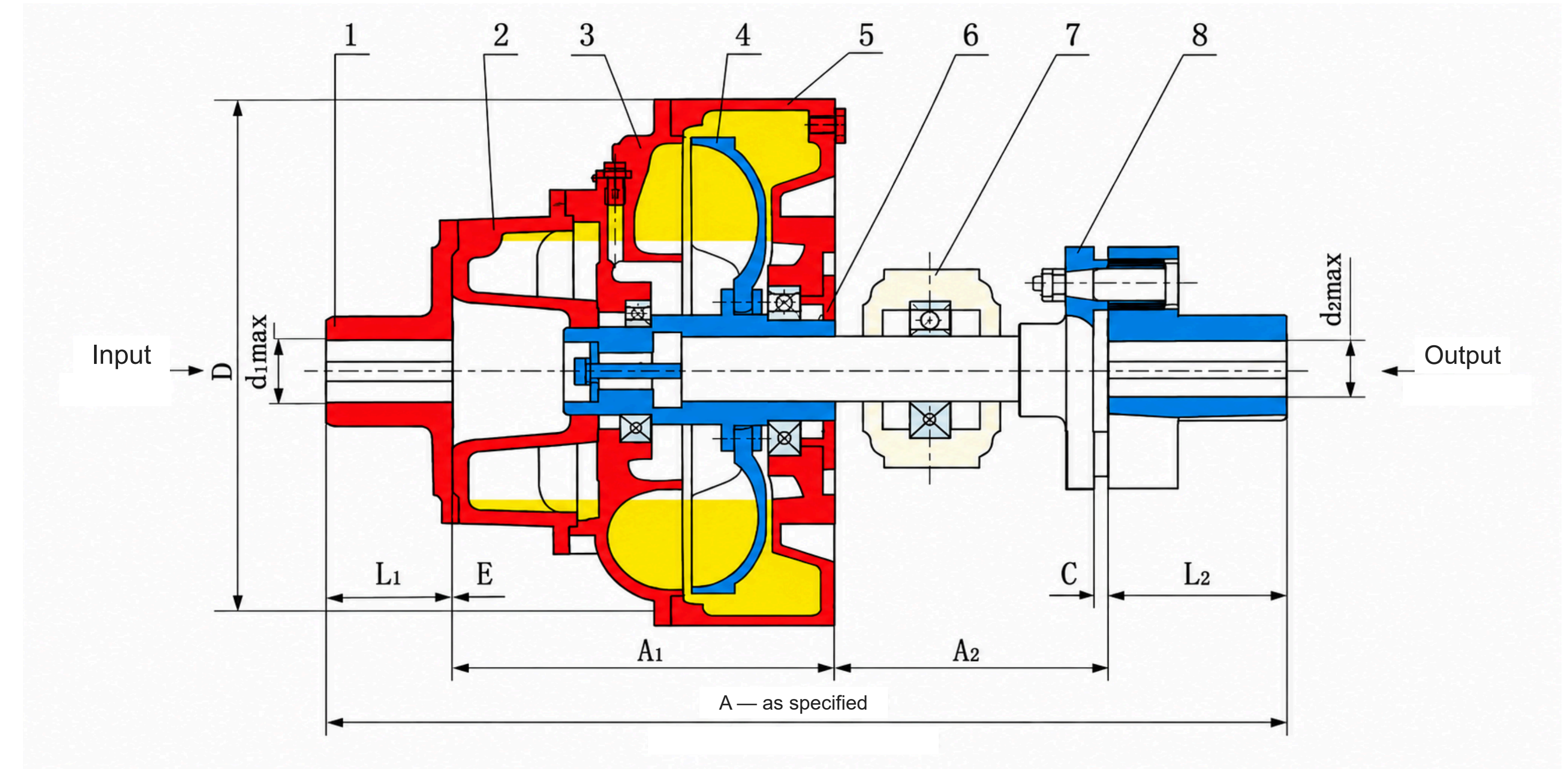
Twin auxiliary chamber type · Elastic connection

Component legend

- | | |
|--------------------------------|------------------------------------|
| 1. Connecting disc | 2. Extended rear auxiliary chamber |
| 3. Pump wheel | 4. Turbine wheel |
| 5. Side auxiliary chamber | 6. Main shaft |
| 7. Bearing pedestal (optional) | 8. Flexible pin-and-bush coupling |

Notes

1. An extended rear auxiliary chamber and a side auxiliary chamber provide a starting time of 30–50 seconds for belt conveyors requiring a prolonged smooth start.
2. Removal does not require moving the motor or gearbox. Remove the elastic pins and connecting bolts, slide the coupling toward the output end and lift it out.



Model and size	Input speedn (r/min)	Transmitted power rangeN (kW)	Overload factorTg		Efficiencyη	Overall dimensions (mm)					Maximum input bore diameter and length (mm) d ₁ max L ₁ max	Flexible pin-and-bush coupling			Oil fill volume q (L)		Mass (kg)
			Starting	Braking		D	A ₁	A ₂	C	E		Model	d ₂ max	L ₂ max	qmin 40%	qmax 70%	
YOXvsa360	1000	5-10	1.1-1.35	2-2.3	0.96	φ428	278	55	8	6	$\frac{\phi 55}{110}$	$\frac{TL5}{TL6}$	φ50	112	5.3	8.8	65
	1500	16-30															
YOXvsa400	1000	8-18.5	1.1-1.35	2-2.3	0.96	φ472	308	65	8	6	$\frac{\phi 65}{140}$	$\frac{TL6}{TL7}$	φ65	142	7.7	13.5	96
	1500	28-48															
YOXvsa450	1000	15-30	1.1-1.35	2-2.3	0.96	φ530	353	65	8	6	$\frac{\phi 75}{140}$	$\frac{TL7}{TL8}$	φ75	142	11.1	19.5	120.5
	1500	50-90															
YOXvsa500	1000	25-50	1.1-1.35	2-2.3	0.96	φ582	391	$\frac{85}{255}$	10	6	$\frac{\phi 95}{170}$	$\frac{TL8}{TL10}$	φ95	172	15.3	26.8	173.5
	1500	68-144															
YOXvsa560	1000	48-80	1.1-1.35	2-2.3	0.96	φ634	433	$\frac{85}{270}$	10	6	$\frac{\phi 120}{210}$	$\frac{TL9}{TL10}$	φ120	212	19.5	34.2	263
	1500	120-270															
YOXvsa600	1000	60-115	1.1-1.35	2-2.3	0.96	φ695	467	$\frac{110}{295}$	12	8	$\frac{\phi 120}{210}$	$\frac{TL10}{TL11}$	φ120	212	24.9	43.6	277
	1500	200-360															
YOXvsa650	1000	90-176	1.1-1.35	2-2.3	0.96	φ760	520	$\frac{110}{295}$	12	8	$\frac{\phi 150}{250}$	$\frac{TL10}{TL11}$	φ150	252	35.6	62.4	326
	1500	260-480															
YOXvsa750	1000	170-330	1.1-1.35	2-2.3	0.96	φ860	550	$\frac{125}{325}$	12	8	$\frac{\phi 150}{250}$	$\frac{TL11}{TL12}$	φ150	252	50.5	88.4	507
	1500	380-760															
YOXvsa875	750	140-280	1.1-1.35	2-2.3	0.96	φ992	632	$\frac{125}{325}$	12	8	$\frac{\phi 150}{250}$	$\frac{TL11}{TL12}$	φ150	252	83.1	145.6	729
	1000	330-620															
YOXvsa100C	600	160-300	1.1-1.35	2-2.3	0.96	φ1138	689	$\frac{150}{350}$	15	10	$\frac{\phi 150}{250}$	$\frac{TL12}{TL13}$	φ150	252	108.5	192.4	980
	750	260-590															

Drive arrangement 16

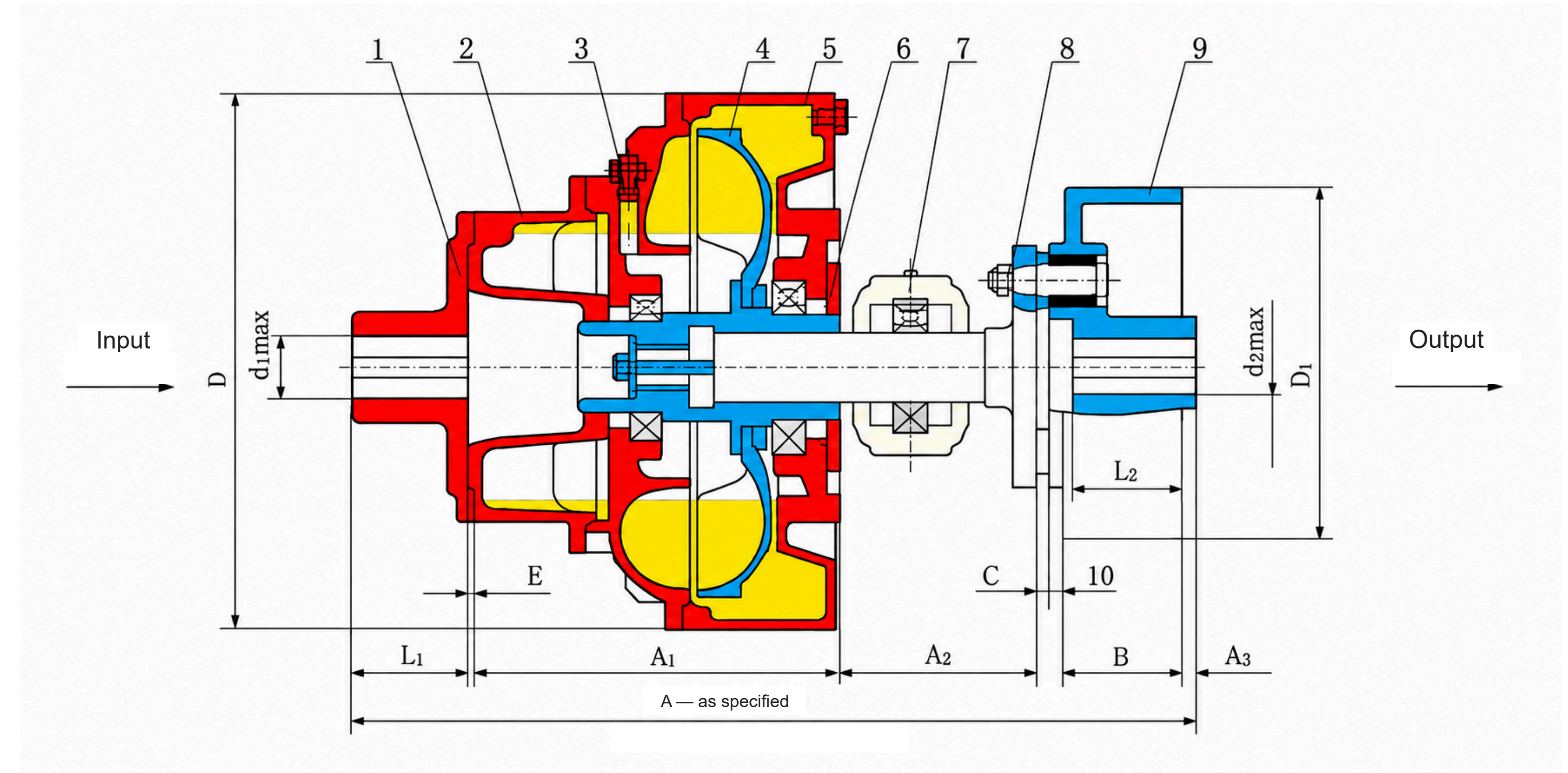
Twin auxiliary chamber type · Elastic connection with brake wheel

Component legend

- | | |
|--------------------------------|------------------------------------|
| 1. Connecting disc | 2. Extended rear auxiliary chamber |
| 3. Pump wheel | 4. Turbine wheel |
| 5. Side auxiliary chamber | 6. Main shaft |
| 7. Bearing pedestal (optional) | 8. Flexible pin-and-bush coupling |
| 9. Brake wheel | |

Notes

1. An extended rear auxiliary chamber and a side auxiliary chamber provide a starting time of 30–50 seconds for belt conveyors requiring a prolonged smooth start.
2. A compact configuration with a brake wheel for drive units requiring braking.



Model and size	Input speedn (r/min)	Transmitted power rangeN (kW)	Overload factorTg		Efficiencyη	Overall dimensions (mm)					Maximum input bore diameter and length (mm) d ₁ max L ₁ max	Flexible pin-and-bush coupling			Oil fill volume q (L)		Mass (kg)
			Starting	Braking		D	A ₁	A ₂	C	E		Model	d ₂ max	L ₂ max	qmin 40%	qmax 70%	
YOXvSAZ360	1000	5-10	1.1-1.35	2-2.3	0.96	φ428	278	55	8	6	$\frac{\phi 55}{110}$	$\frac{TL5}{TL6}$	φ55	112	5.3	8.8	65
	1500	16-30															
YOXvSAZ400	1000	8-18.5	1.1-1.35	2-2.3	0.96	φ472	308	65	8	6	$\frac{\phi 65}{140}$	$\frac{TL6}{TL7}$	φ65	142	7.7	13.5	96
	1500	28-48															
YOXvSAZ450	1000	15-30	1.1-1.35	2-2.3	0.96	φ530	353	65	8	6	$\frac{\phi 75}{140}$	$\frac{TL7}{TL8}$	φ75	142	11.1	19.5	120
	1500	50-90															
YOXvSAZ500	1000	25-50	1.1-1.35	2-2.3	0.96	φ582	391	$\frac{85}{255}$	10	6	$\frac{\phi 95}{170}$	$\frac{TL8}{TL10}$	φ95	172	15.3	26.8	167
	1500	68-144															
YOXvSAZ560	1000	48-80	1.1-1.35	2-2.3	0.96	φ634	433	$\frac{85}{270}$	10	6	$\frac{\phi 120}{210}$	$\frac{TL9}{TL10}$	φ120	212	19.5	34.2	252
	1500	120-270															
YOXvSAZ600	1000	60-115	1.1-1.35	2-2.3	0.96	φ695	467	$\frac{110}{295}$	12	8	$\frac{\phi 120}{210}$	$\frac{TL10}{TL11}$	φ120	212	24.9	43.6	302
	1500	200-360															
YOXvSAZ650	1000	90-176	1.1-1.35	2-2.3	0.96	φ760	520	$\frac{110}{295}$	12	8	$\frac{\phi 150}{250}$	$\frac{TL10}{TL11}$	φ150	252	35.6	62.4	505
	1500	260-480															
YOXvSAZ750	1000	170-330	1.1-1.35	2-2.3	0.96	φ860	550	$\frac{125}{325}$	12	8	$\frac{\phi 150}{250}$	$\frac{TL11}{TL12}$	φ150	252	50.5	88.4	510
	1500	380-760															
YOXvSAZ875	750	140-280	1.1-1.35	2-2.3	0.96	φ992	632	$\frac{125}{325}$	12	8	$\frac{\phi 150}{250}$	$\frac{TL11}{TL12}$	φ150	252	83.1	146	720
	1000	330-620															

Drive arrangement 17

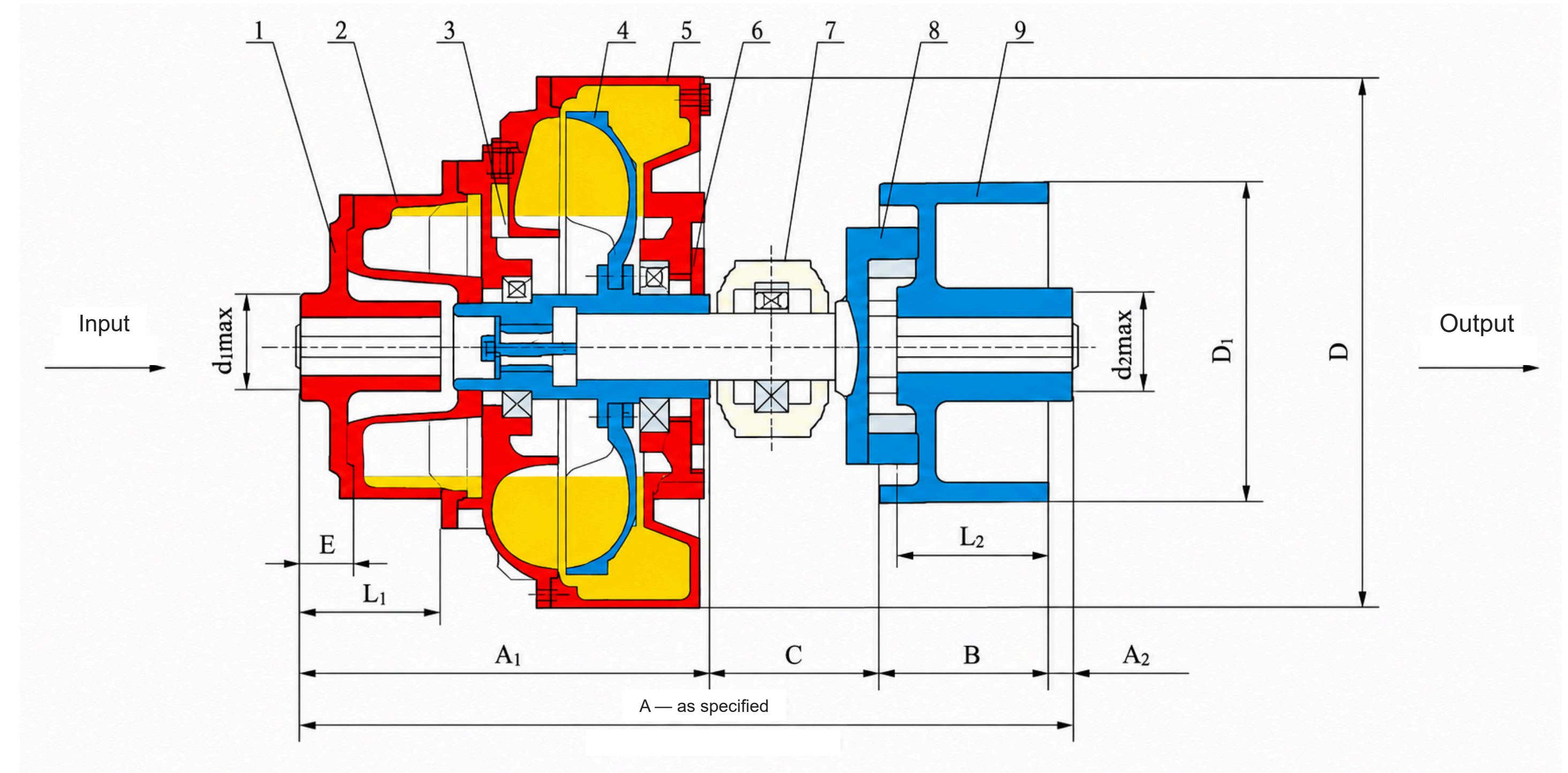
Twin auxiliary chamber type · Outer-wheel drive with brake wheel

Component legend

- | | |
|--------------------------------|------------------------------------|
| 1. Connecting disc | 2. Extended rear auxiliary chamber |
| 3. Pump wheel | 4. Turbine wheel |
| 5. Side auxiliary chamber | 6. Main shaft |
| 7. Bearing pedestal (optional) | 8. Connecting shaft |
| 9. Brake wheel | |

Notes

1. An extended rear auxiliary chamber and a side auxiliary chamber provide a starting time of 30–50 seconds for belt conveyors requiring a prolonged smooth start.
2. A compact configuration with a brake wheel for drive units requiring braking.



Model and size	Input speedn (r/min)	Transmitted power rangeN (kW)	Overload factorTg		Efficiencyη	Maximum input bore diameter and length (mm) d ₁ max L ₁ max	Maximum output bore diameter and length (mm) d ₂ max L ₂ max	Oil fill volume q (L)		Overall dimensions (mm)								Mass (kg)
			Starting	Braking				q _{min} 40%	q _{max} 72%	A	A ₁	D	B	D ₁	A ₂	C	E	
YOXvsiiz400	1000	8-18.5	1.1-1.35	2-2.3	0.96	φ65/140	φ65/140	7.7	13.5	556	358	φ472	150	φ315	10	38	50	120
	1500	28-48																
YOXvsiiz450	1000	15-30	1.1-1.35	2-2.3	0.96	φ75/140	φ75/140	11.1	19.5	581	383	φ530	150	φ315	10	38	30	135
	1500	50-90																
YOXvsiiz500	1000	25-50	1.1-1.35	2-2.3	0.96	φ90/170	φ90/170	15.3	26.8	674 /842	431	φ582	190	φ400	10	42 211	40	183
	1500	68-144																
YOXvsiiz560	1000	40-80	1.1-1.35	2-2.3	0.96	φ110/210	φ100/210	19.5	34.2	745 /933	503	φ634	190	φ400	10	42 230	70	240
	1500	120-270																
YOXvsiiz600	1000	60-115	1.1-1.35	2-2.3	0.96	φ110/210	φ110/210	24.9	43.6	787 /972	517	φ695	210	φ500	15	45 230	50	370
	1500	200-360																
YOXvsiiz650	1000	90-176	1.1-1.35	2-2.3	0.96	φ120/210	φ120/210	35.6	62.4	825 /1010	555	φ760	210	φ500	15	45 230	35	415
	1500	260-480																
YOXvsiiz750	1000	170-330	1.1-1.35	2-2.3	0.96	φ130/120	φ130/120	50.5	88.4	920 /1120	590	φ860	265	φ630	15	50 250	40	544
	1500	380-760																
YOXvsiiz875	750	140-280	1.1-1.35	2-2.3	0.96	φ140/250	φ140/250	83.1	145.6	1032 /1232	672	φ992	265	φ630	20	75 275	40	740
	1000	330-620																